

Expression analysis - linear model

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6.6.9	Vitvi02g00160	296
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6.12.3	Vitvi04g00516	482
6.12.4	Vitvi18g02996	487
6.12.5	Vitvi04g00444	492
6.12.6	Vitvi18g02548	497
6.12.7	Vitvi04g00290	502
6.12.8	Vitvi03g00267	507
6.12.9	Vitvi19g00477	512
6.12.10	Vitvi06g00573	517
6.12.11	Vitvi14g00102	522
6.12.12	Vitvi07g02267	527
6.12.13	Vitvi03g00539	532
6.12.14	Vitvi05g02124	537
6.12.15	Vitvi07g02459	542
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6.12.17	Vitvi13g01649	552
6.12.18	Vitvi01g00830	557
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6.12.20	Vitvi05g00097	567
6.12.21	Vitvi13g01749	572
6.12.22	Vitvi01g00988	577
6.12.23	Vitvi01g01968	582
6.12.24	Vitvi17g00953	587
6.12.25	Vitvi14g02475	592
6.12.26	Vitvi11g00193	597
6.12.27	Vitvi08g00983	602
6.12.28	Vitvi07g00387	607
6.12.29	Vitvi02g01001	612
6.12.30	Vitvi06g00111	617
6.12.31	Vitvi01g01529	622
6.12.32	Vitvi11g00262	627
6.12.33	Vitvi16g01857	632
6.12.34	Vitvi12g01553	637
6.12.35	Vitvi01g00190	642
6.12.36	Vitvi03g00169	647
6.12.37	Vitvi15g01106	652
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6.12.39 Vitvi08g01780	662
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6.12.43 Vitvi11g01671	682
6.12.44 Vitvi07g01930	687
6.12.45 Vitvi02g00097	692
6.12.46 Vitvi18g00258	697
6.12.47 Vitvi02g01139	702
6.12.48 Vitvi01g00993	707
6.12.49 Vitvi04g00793	712
6.12.50 Vitvi03g00639	717
6.12.51 Vitvi03g00224	722
6.12.52 Vitvi11g01244	727
6.12.53 Vitvi11g00011	732
6.12.54 Vitvi05g01420	737
6.12.55 Vitvi02g01393	742
6.12.56 Vitvi09g01716	747
6.12.57 Vitvi10g01458	752
6.12.58 Vitvi05g01153	757
6.12.59 Vitvi12g00050	762
6.12.60 Vitvi12g02368	767
6.12.61 Vitvi04g00757	772
6.12.62 Vitvi14g01764	777
6.12.63 Vitvi01g01548	782
6.12.64 Vitvi07g01747	787
6.12.65 Vitvi19g00073	792
6.12.66 Vitvi15g00004	797
6.12.67 Vitvi13g00351	802
6.12.68 Vitvi13g00590	807
6.12.69 Vitvi13g01061	812
6.12.70 Vitvi07g01984	817
6.12.71 Vitvi18g00996	822
6.12.72 Vitvi18g00192	827
6.12.73 Vitvi19g01663	832
6.12.74 Vitvi05g00347	837
6.12.75 Vitvi08g00894	842
6.12.76 Vitvi15g01627	847
6.12.77 Vitvi04g01366	852
6.12.78 Vitvi19g00260	857
6.12.79 Vitvi14g03093	862
6.12.80 Vitvi01g00698	867
6.12.81 Vitvi10g01839	872
6.12.82 Vitvi06g00632	877
6.12.83 Vitvi13g00027	882
6.12.84 Vitvi15g00831	887
6.12.85 Vitvi14g01742	892
6.12.86 Vitvi04g00888	897
6.12.87 Vitvi10g00740	902
6.12.88 Vitvi14g00658	907

6.12.89	Vitvi18g02230	912
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6.12.91	Vitvi07g00205	922
6.12.92	Vitvi06g00134	927
6.12.93	Vitvi18g00157	932
6.12.94	Vitvi11g01137	937
6.12.95	Vitvi10g00280	942
6.12.96	Vitvi02g00037	947
6.12.97	Vitvi18g02686	952
6.12.98	Vitvi11g01651	957
6.12.99	Vitvi03g00508	962
6.12.100	Vitvi18g01619	967
6.12.101	Vitvi05g00120	972
6.12.102	Vitvi06g00302	977
6.12.103	Vitvi09g00387	982
6.12.104	Vitvi15g00377	987
6.12.105	Vitvi07g00043	992
6.12.106	Vitvi12g00535	997
6.12.107	Vitvi02g00187	1002
6.12.108	Vitvi08g00665	1007
6.12.109	Vitvi11g00188	1012
6.12.110	Vitvi19g01718	1017
6.12.111	Vitvi18g01726	1022
6.12.112	Vitvi08g01696	1027
6.12.113	Vitvi03g00087	1032
6.12.114	Vitvi05g01489	1037
6.12.115	Vitvi18g00583	1042
6.12.116	Vitvi18g02592	1047
6.12.117	Vitvi19g02032	1052
6.12.118	Vitvi12g02209	1057
6.12.119	Vitvi04g01197	1062
6.12.120	Vitvi14g00216	1067
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8.1.2	Vitvi19g01988	1129
8.1.3	Vitvi07g01569	1134
8.1.4	Vitvi15g00172	1139
8.1.5	Vitvi19g01601	1144

8.1.6	Vitvi07g02615	1149
8.1.7	Vitvi16g01449	1154
8.1.8	Vitvi19g00048	1159
8.1.9	Vitvi07g01975	1164
8.1.10	Vitvi19g00049	1169
8.2	day44	1174
8.2.1	Vitvi04g01470	1175
8.2.2	Vitvi02g00080	1180
8.2.3	Vitvi06g00215	1185
8.2.4	Vitvi07g03003	1190
8.2.5	Vitvi17g00936	1195
8.2.6	Vitvi10g00336	1200
8.2.7	Vitvi11g01295	1205
8.2.8	Vitvi03g00509	1210
8.2.9	Vitvi13g01745	1215
8.2.10	Vitvi13g01779	1220
8.3	treatWS	1225
8.3.1	Vitvi13g00114	1226
8.3.2	Vitvi08g00853	1231
8.3.3	Vitvi17g01515	1236
8.3.4	Vitvi13g01997	1241
8.3.5	Vitvi17g00670	1246
8.3.6	Vitvi00g02313	1251
8.3.7	Vitvi17g00964	1256
8.3.8	Vitvi16g02100	1261
8.3.9	Vitvi07g00259	1266
8.3.10	Vitvi08g00768	1271
8.4	varietyF:day44	1276
8.4.1	Vitvi07g03003	1277
8.4.2	Vitvi07g02479	1282
8.4.3	Vitvi05g01427	1287
8.5	varietyF:treatWS	1292
8.5.1	NA	1293
8.6	day44:treatWS	1298
8.6.1	Vitvi18g02652	1299
8.6.2	Vitvi06g01508	1304
8.6.3	Vitvi07g00914	1309
8.6.4	Vitvi14g01339	1314
8.6.5	Vitvi04g01470	1319
8.6.6	Vitvi02g01172	1324
8.6.7	Vitvi08g00047	1329
8.6.8	Vitvi18g02840	1334
8.6.9	Vitvi06g00811	1339
8.6.10	Vitvi14g02007	1344
8.7	varietyF:day44:treatWS	1349
8.7.1	NA	1350
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1 Task

Final document in folder /reports:

```
> fileName(outputFile)  
[1] "20_Expression-lm_"
```

2 Information from pISA

Data directory

```
> .inroot
```

```
[1] "../..input"
```

Results directory

```
> .oroot
```

```
[1] "../..output/20_Expression-lm-"
```

```
project:      _p_VinskaTrta
```

```
Investigation: _I_EnViRoS
```

```
Study:        _S_01_Integ
```

```
Assay:        _A_01_Desc-R
```

3 Data

Priporočljivo je najprej prebrati phenodata in feature-data, potem pa podatke. To omogoča izbor spremenljivk in vzorcev takoj za tem, ko podatke preberemo.

```
> cat(knit_child(file.path(".", "10a_Read-Data.Rnw"), quiet=TRUE))
```

List of data objects:

```
> my.objects
```

	name	description	class	length	ncol
1	t18	Transcripts for 2018	data.frame	15242	48
2	t19	Transcripts for 2019	data.frame	15242	32
3	t1819	Transcripts for 2018 and 2019	data.frame	15242	80
4	pdata18	Phenodata for 2018	data.frame	48	21
5	pdata19	Phenodata for 2019	data.frame	32	21
6	pdata1819	Phenodata for 2018 and 2019	data.frame	80	21

4 Expression analysis

5 Linear models 2018

```
> library(limma)
```

```
Warning: package 'limma' was built under R version 4.0.3
```

```
Attaching package: 'limma'
```

```
The following object is masked from 'package:BiocGenerics':
```

```
plotMA
```

```
> exprs <- t18
```

```
> pd <- pdata18
```

Zanimivi:

```
> izbor <- c(
```

```
+ "Vitvi14g01639",
```

```
+ "Vitvi07g02767"
```

```
+ )
```

```
> cat(knit_child(file.path(".", "20a_limma-fit.Rnw"), quiet=TRUE))
```

5.1 Data

```
> exprs[1:5,1:5] # expression data
      C18_11d_WS1 C18_11d_WS2 C18_11d_WS3
Vitvi15g01736    4.6646023    4.109897    4.4482203
Vitvi07g02832   -2.4786650   -1.601359   -1.4274193
Vitvi07g02830   -1.8506337   -2.218030   -1.0648492
Vitvi07g02812   -0.5805446   -1.266940   -0.3278837
Vitvi07g02811    2.2762225    1.823447    1.9550503
      C18_11d_WS4 C18_11d_WW1
Vitvi15g01736    4.013955    4.717536
Vitvi07g02832   -2.066419   -2.608485
Vitvi07g02830   -1.580992   -1.544354
Vitvi07g02812   -1.019113   -0.858463
Vitvi07g02811    1.648742    2.086902
> pd[1:5,1:5] # phenodata
      ID Variety Date variety
C18_11d_WS1 C18_11d_WS1 Cabernet Volos 12.06.2018 C
C18_11d_WS2 C18_11d_WS2 Cabernet Volos 12.06.2018 C
C18_11d_WS3 C18_11d_WS3 Cabernet Volos 12.06.2018 C
C18_11d_WS4 C18_11d_WS4 Cabernet Volos 12.06.2018 C
C18_11d_WW1 C18_11d_WW1 Cabernet Volos 12.06.2018 C
      year
C18_11d_WS1 18
C18_11d_WS2 18
C18_11d_WS3 18
C18_11d_WS4 18
C18_11d_WW1 18
> pd <- pd[,c("variety", "year", "day", "treat", "rep")]
> pd[1:5,1:5]
      variety year day treat rep
C18_11d_WS1      C   18  11    WS   1
C18_11d_WS2      C   18  11    WS   2
C18_11d_WS3      C   18  11    WS   3
C18_11d_WS4      C   18  11    WS   4
C18_11d_WW1      C   18  11    WW   1
> y <- t(as.matrix(exprs))

> dim(exprs)
[1] 15242 48
> dim(pd)
[1] 48 5
> pd <- pd[colnames(exprs),]
> dim(pd)
[1] 48 5
> all(rownames(pd) == colnames(exprs))
[1] TRUE
```

Factors:

```
> names(pd)
[1] "variety" "year" "day" "treat" "rep"
> str(pd)
'data.frame': 48 obs. of 5 variables:
 $ variety: Factor w/ 2 levels "C","F": 1 1 1 1 1 1 1 1 1 1 ...
 $ year : Factor w/ 1 level "18": 1 1 1 1 1 1 1 1 1 1 ...
 $ day : Factor w/ 3 levels "11","34","67": 1 1 1 1 1 1 1 1 2 2 ...
 $ treat : Factor w/ 2 levels "WW","WS": 2 2 2 2 1 1 1 1 2 2 ...
 $ rep : Factor w/ 4 levels "1","2","3","4": 1 2 3 4 1 2 3 4 1 2 ...
> summary(pd)
variety year day treat rep
C:24 18:48 11:16 WW:24 1:12
F:24 34:16 WS:24 2:12
67:16 3:12
4:12
```


5.2 Model design

```
> design <- with(pd, model.matrix(~ variety * day * treat))
> head(design)
```

```
(Intercept) varietyF day34 day67 treatWS varietyF:day34
1           1         0    0    0         1           0
2           1         0    0    0         1           0
3           1         0    0    0         1           0
4           1         0    0    0         1           0
5           1         0    0    0         0           0
6           1         0    0    0         0           0
varietyF:day67 varietyF:treatWS day34:treatWS
1           0                 0           0
2           0                 0           0
3           0                 0           0
4           0                 0           0
5           0                 0           0
6           0                 0           0
day67:treatWS varietyF:day34:treatWS
1           0                 0
2           0                 0
3           0                 0
4           0                 0
5           0                 0
6           0                 0
varietyF:day67:treatWS
1           0
2           0
3           0
4           0
5           0
6           0
```

Explanation of coefficients

```
> colnames(design)

[1] "(Intercept)" "varietyF"
[3] "day34"       "day67"
[5] "treatWS"     "varietyF:day34"
[7] "varietyF:day67" "varietyF:treatWS"
[9] "day34:treatWS" "day67:treatWS"
[11] "varietyF:day34:treatWS" "varietyF:day67:treatWS"

> comp <- c(
+ "C-WW-11vs0",
+ "F-WW-11vsC-WW-11",
+ "C-WW-34vsC-WW-11",
+ "C-WW-67vsC-WW-11",
+ "C-WS-11vsC-WW-11",
+ "(F-WW-34vsF-WW-11) vs (C-WW-34vsC-WW-11)",
+ "(F-WW-67vsF-WW-11) vs (C-WW-67vsC-WW-11)",
+ "(F-WS-11vsF-WW-11) vs (C-WS-11vsC-WW-11)",
+ "C-WS-34vsEC-34|S",
+ "C-WS-67vsEC-67|S",
```

```

+ " (F-WS-34vsF-WW-34) vs (C-WS-34vsC-WW-34) ",
+ " (F-WS-67vsF-WW-67) vs (C-WS-67vsC-WW-67) "
+ )
> cbind(colnames(design), comp)

[1,] " (Intercept) "
[2,] "varietyF"
[3,] "day34"
[4,] "day67"
[5,] "treatWS"
[6,] "varietyF:day34"
[7,] "varietyF:day67"
[8,] "varietyF:treatWS"
[9,] "day34:treatWS"
[10,] "day67:treatWS"
[11,] "varietyF:day34:treatWS"
[12,] "varietyF:day67:treatWS"
      comp
[1,] "C-WW-11vs0"
[2,] "F-WW-11vsC-WW-11"
[3,] "C-WW-34vsC-WW-11"
[4,] "C-WW-67vsC-WW-11"
[5,] "C-WS-11vsC-WW-11"
[6,] " (F-WW-34vsF-WW-11) vs (C-WW-34vsC-WW-11) "
[7,] " (F-WW-67vsF-WW-11) vs (C-WW-67vsC-WW-11) "
[8,] " (F-WS-11vsF-WW-11) vs (C-WS-11vsC-WW-11) "
[9,] "C-WS-34vsEC-34|S"
[10,] "C-WS-67vsEC-67|S"
[11,] " (F-WS-34vsF-WW-34) vs (C-WS-34vsC-WW-34) "
[12,] " (F-WS-67vsF-WW-67) vs (C-WS-67vsC-WW-67) "

> comp <- gsub("-", "", comp)
> comp <- gsub("\\\\)vs\\\\(", "", comp)
> comp <- gsub("vs", ":", comp)
> comps <- data.frame(colnames(design), comp)
> comps

      colnames.design.      comp
1      (Intercept)      CWW11:0
2      varietyF      FWW11:CWW11
3      day34      CWW34:CWW11
4      day67      CWW67:CWW11
5      treatWS      CWS11:CWW11
6      varietyF:day34 (FWW34:FWW11) - (CWW34:CWW11)
7      varietyF:day67 (FWW67:FWW11) - (CWW67:CWW11)
8      varietyF:treatWS (FWS11:FWW11) - (CWS11:CWW11)
9      day34:treatWS      CWS34:EC34|S
10     day67:treatWS      CWS67:EC67|S
11     varietyF:day34:treatWS (FWS34:FWW34) - (CWS34:CWW34)
12     varietyF:day67:treatWS (FWS67:FWW67) - (CWS67:CWW67)

> fit1 <- lmFit(exprs, design)
> fit1 <- eBayes(fit1)
> head(fit1[1:6,]$coefficients)

```

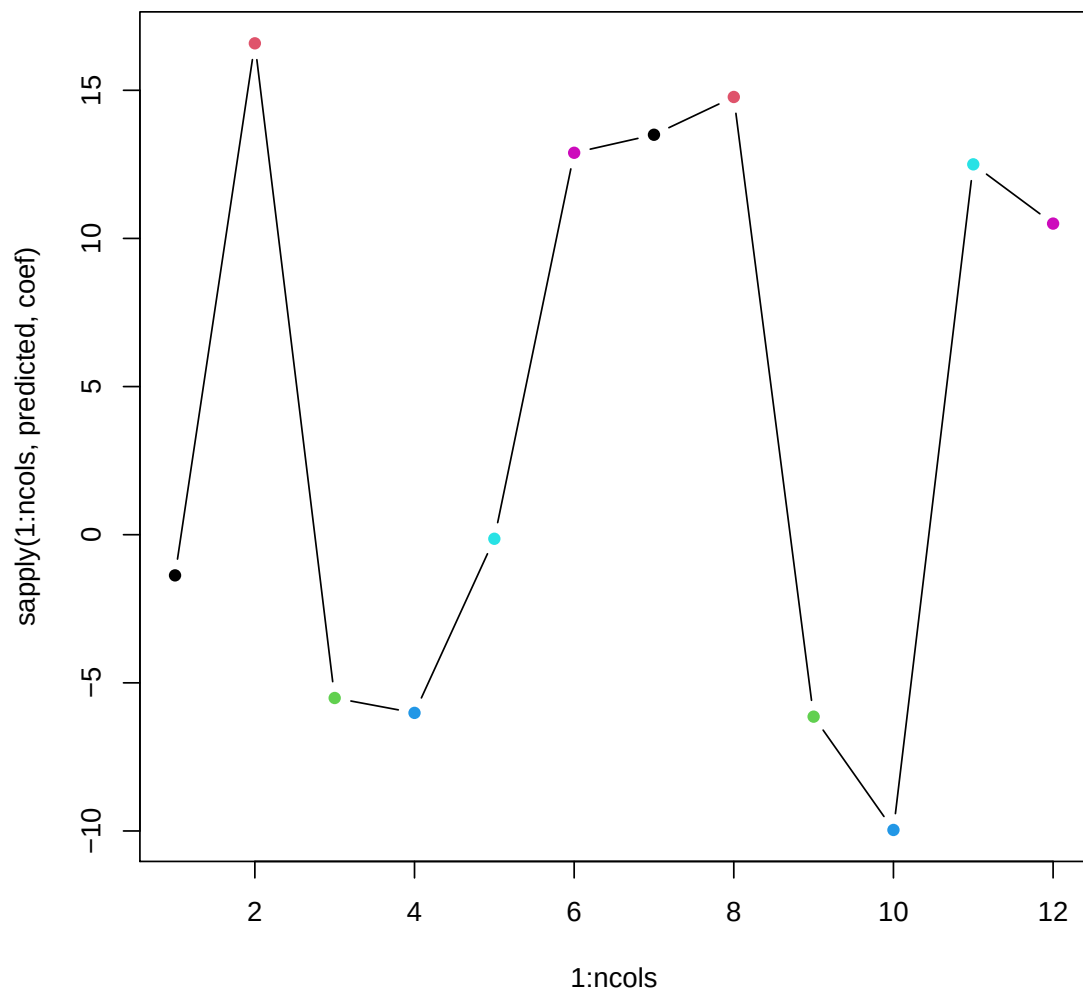
	(Intercept)	varietyF	day34	day67
Vitvi15g01736	4.453375	0.6488543	0.7000890	-0.72557686
Vitvi07g02832	-2.469881	5.2838914	-0.9767561	-0.81279703
Vitvi07g02830	-1.521647	4.0375050	-0.9937673	-1.02090888
Vitvi07g02812	-0.893648	2.1304584	-1.5372371	-1.54493648
Vitvi07g02811	2.058979	1.5705907	-0.7632762	-0.52084490
Vitvi09g02033	-2.999837	4.2863893	-0.5681572	-0.01659674
	treatWS	varietyF:day34	varietyF:day67	
Vitvi15g01736	-0.14420627	-1.38495580	-0.4020354	
Vitvi07g02832	0.57641599	-0.04999007	0.5374075	
Vitvi07g02830	-0.15697917	0.48601017	0.8308427	
Vitvi07g02812	0.09502777	0.45026274	0.4172419	
Vitvi07g02811	-0.13311327	0.04760979	-0.1197370	
Vitvi09g02033	0.99789753	0.89589300	0.2918332	
	varietyF:treatWS	day34:treatWS	day67:treatWS	
Vitvi15g01736	-0.04500531	-0.51049297	-1.1217518	
Vitvi07g02832	-0.90980988	-0.73965503	-1.6106276	
Vitvi07g02830	0.01265130	-0.24175759	-0.2626575	
Vitvi07g02812	-0.63433743	-0.48384226	0.1127406	
Vitvi07g02811	-0.09726581	-0.03866461	-0.7102873	
Vitvi09g02033	-1.37171762	0.15002838	-1.5938824	
	varietyF:day34:treatWS	varietyF:day67:treatWS		
Vitvi15g01736	0.70332175	-0.04645408		
Vitvi07g02832	1.29000342	1.46276367		
Vitvi07g02830	0.42878812	-0.08962062		
Vitvi07g02812	0.62469987	0.46828348		
Vitvi07g02811	0.17984399	0.45662557		
Vitvi09g02033	0.05762989	1.74705813		

5.2.1 Interaction plot

```
> predicted <- function(i, coef){
+ #tst(i)
+ #tst(coef)
+ nm <- colnames(coef)
+ if(length(i)==1) {
+ ( nm0=nm[i])
+ ( nm1=strsplit(nm0,":")[[1]])
+ ( nm2=outer(nm1,nm1,paste,sep=":") )
+ ( nm2=nm2[upper.tri(nm2)])
+ ( nm3 <- c("(Intercept)",nm1,nm2,nm0) )
+ ( nm3 <- unique(nm3) )
+ ( coef[,nm3])
+ nm3
+ value <- sum(coef[,nm3])
+ names(value) <- colnames(coef)[i]
+ } else { value=sapply(i, predicted, coef=coef) }
+ return(value)
+ }
> coef <- fit1[1:6,]$coefficients
> ncols <- ncol(coef)
> for( i in 1:ncols) print(predicted(i,coef))

(Intercept)
-1.37266
varietyF
16.58503
    day34
-5.511765
    day67
-6.014321
    treatWS
-0.1376177
varietyF:day34
    12.89075
varietyF:day67
    13.49892
varietyF:treatWS
    14.77459
day34:treatWS
    -6.141107
day67:treatWS
    -9.965745
varietyF:day34:treatWS
    12.50021
varietyF:day67:treatWS
    10.50067

> plot(1:ncols, sapply(1:ncols, predicted, coef), type="b", col=1:6, pch=16)
```



```
> predicted(1:3,coef)
(Intercept)    varietyF      day34
   -1.372660    16.585029   -5.511765

> .testing <- TRUE
> tst <- function(x) {
+   if(.testing) {
+     cat("-->", deparse(substitute(x)), "\n")
+     print(x)
+   }
+   invisible(x)
+ }
> coef <- fit1[1:6,]$coefficients[1:2,]
> tst(coef)
--> coef
              (Intercept)  varietyF      day34      day67
Vitvi15g01736    4.453375  0.6488543  0.7000890 -0.7255769
Vitvi07g02832   -2.469881  5.2838914 -0.9767561 -0.8127970
              treatWS varietyF:day34 varietyF:day67
Vitvi15g01736 -0.1442063   -1.38495580   -0.4020354
Vitvi07g02832  0.5764160   -0.04999007    0.5374075
```

```

        varietyF:treatWS day34:treatWS day67:treatWS
Vitvi15g01736      -0.04500531    -0.510493    -1.121752
Vitvi07g02832      -0.90980988    -0.739655    -1.610628
        varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi15g01736              0.7033217    -0.04645408
Vitvi07g02832              1.2900034      1.46276367

> .testing <- FALSE

> # ver 6
> .testing <- !TRUE
> plot.interactions <- function(varname, phdata=pd, data=exprs, coef=NULL, coe
+ tst(dim(phdata))
+ tst(dim(data))
+ phdata <- phdata[colnames(data), ]
+ days <- levels(factor(phdata$day))
+ ndays <- length(days)
+ ntreat <- length(levels(phdata$treat))
+ lv <- levels(phdata$variety)
+ nvar <- length(lv)
+ d <- 0.05
+ par(mfrow=c(1, length(lv)), mar=c(7, 4, 4, 3))
+ # Factors
+ #
+ fct <- data.frame(f1=phdata$day,
+                   f2=phdata$treat,
+                   f3=phdata$variety,
+                   row.names=rownames(phdata)
+                   )
+ head(fct)
+ #
+ #for(i in 1:ncol(y)){
+ #  varname <- colnames(y)[i]
+ #  y <- as.numeric(data[varname, ])
+ #  if(is.null(ylim)) ylim <- range(y, na.rm=TRUE) else
+ #  if(is.na(ylim)[1]) ylim <- range(data, na.rm=TRUE)
+ #  for(var in levels(phdata$variety)){
+ #    sel <- phdata$variety %in% var
+ #    with(phdata[sel, ], {
+ #      interaction.plot(day, treat, y[sel], ylim=ylim, type="b", col=1:2, lty=2
+ #      tst(aggregate(y[sel], list(day, treat), mean))
+ #      if(is.null(coef)) {
+ #        rng <- (by(y[sel], list(treat, day), range))
+ #        x0 <- as.numeric(day) + (as.numeric(treat) - 1.5) / 7
+ #        for(va in 1:nrow(rng))
+ #          for(dy in 1:ncol(rng))
+ #            segments(dy + (va - 1.5) / 7, rng[[va, dy]][1],
+ #                    dy + (va - 1.5) / 7, rng[[va, dy]][2],
+ #                    lwd=1,
+ #                    col=va)
+ #        points(x0, y[sel], pch=21, bg="white", col=as.numeric(treat))
+ #      }
+ #    }
+ #    if(any(diff(as.numeric(levels(day))) < 0)) {

```

```

+         abline(v=which(diff(as.numeric(levels(day)))<0)+0.5,col=8)
+
+     }
+     title(paste(varname,"\\n", var))
+   })
+ # coefficients plot
+   if(!is.null(coef)){
+     ind <- grep(lv[2],colnames(coef))
+     tst(predicted((1:length(colnames(coef)))[-ind],coef))
+     tst(predicted(ind,coef))
+     tst(c((1:length(colnames(coef)))[-ind],ind))
+     grind <- array(c((1:length(colnames(coef)))[-ind],ind), dim=c(ndays, ntr
+       dimnames <- list(days,levels(phdata$treat),levels(phdata$var))
+     )
+     tst(grind)
+     tst(with(fct,
+       grind[levels(f1)[1],levels(f2)[1],levels(f3)[1]]))
+     #ind <- grep(lv[2],colnames(coef))
+     if(var!=lv[2]) ind <- -ind
+     #abline(h=sum(cf[c(1)]),xpd=NA,col=1)
+     #abline(h=sum(cf[c(1,3)]),xpd=NA,col=2)
+     #tst(ind)
+     cf <- coef[,ind]
+     cF <- cf
+     cc <- coef[-ind]
+     if(var==lv[2]) { cf <- coef[,ind]+coef[, -ind]
+       #tst(colnames(coef)[ind])
+       #tst(colnames(coef)[-ind])
+       names(cf) <- colnames(coef)[ind]
+       coefs <- data.frame(cC=coef[-ind], cF.model=coef[ind], cF.plus.C =
+       rownames(coefs) <- colnames(coef)[-ind]
+     }
+     abline(h=cf[1],col=8,lwd=1)
+     lwda <- 2
+   ##
+   ### First level
+   #
+     if(var!=lv[2]) {
+   if(FALSE){
+
+     arrows(0.95,min(exprs),0.95,cf[1],col=1,length=0.08,lwd=3)
+     for(ii in 2:ndays){
+       e <- cf[1]
+     #       points(ii-d,e,col=ii)
+     #       arrows(ii-d,e,ii-d,e+cf[ii],col=ii,length=0.08,lwd=lwda)
+     #       abline(h=sum(cf[c(1,4)]),xpd=NA,col=3)
+     #       e <- cf[1]
+     #       points(3,e,col=3)
+     #       arrows(3,e,3,e+cf[3],col=3,length=0.08, lwd=lwda)
+     #       abline(h=sum(cf[c(1,5)]),xpd=NA, col=4)
+     #     }
+     ii <- ndays+1
+     e <- cf[1]

```

```

+           points(1,e,col=ii)
+         arrows(1,e,1,e+cf[ii],col=ii,length=0.08, lwd=lwda)
+         lines(1:ndays,cf[1]+cf[ii]+c(0,cf[2:ndays]),col=2,type="b",lwd=1,lty=
+         #abline(h=sum(cf[c(1,3,5,9)]),xpd=NA, col=5)
+         for(jj in 2:ndays){
+           e <- sum(cf[c(1,jj,(ndays+1))])
+           arrows(jj+d,e,jj+d,e + cf[ndays+jj],col=ndays+jj,length=0.08, lwd=lwda)
+         }
+       #
+     }
+     eind <- grind[,1,1] #c(1,3,4)
+     tst(eind)
+     cl <- 0
+     esF <- predicted(eind,coef)
+     es <- esF-coef[,eind]
+     #     lines(1:ndays,es,col=7,lwd=3)
+     #     lines(1:ndays,esF,col=7,lwd=3)
+     #     lines(1:ndays,es,col=8,type="b",lwd=1,lty=3)
+     #
+     arrows(1:ndays-d,es,1:ndays-d,esF,col=cl+1:ndays,length=0.08, lwd=1)
+     #
+     eind <- grind[,2,1] #c(5,9,10)
+     tst(eind)
+     cl <- ndays
+     esF <- predicted(eind,coef)
+     es <- esF-coef[,eind]
+     #     lines(1:ndays,es,col=7,lwd=3)
+     #     lines(1:ndays,esF,col=7,lwd=3)
+     delta <- c(coef[,eind[1]],rep(0,length(eind)-1))
+     lines(1:ndays,delta+es,col=2,type="b",lwd=1,lty=3)
+     #
+     arrows(1:ndays+d,es,1:ndays+d,esF,col=cl+1:ndays,length=0.08, lwd=1)
+     cfs <- 1:(ndays*ntreat)
+     ltext <- paste(sprintf("% .1f",cf[cfs]),"|",names(cf)[cfs])
+     legend("topleft",col=cfs,lwd=2,legend=ltext, bty="n",cex=0.75)
+   } else {
+     #
+     ### second level
+     #
+     if(FALSE){
+       cF <- coef[,ind]
+       abline(h=cc[1], col=8)
+       # expected for C
+       #       lines(1:ndays,cc[1]+cF[1]+c(0,cc[2:ndays]),col=8,type="b",lwd=1,lty=3)
+       #
+       e <- cc[1]
+       points(0.95,e,col=1)
+       arrows(0.95,e,0.95,e+cF[1],col=1,length=0.08, lwd=lwda)
+       for(ii in 2:ndays){
+         e <- sum(cc[c(1,ii)])+cF[1]
+         #       points(ii-d,e,col=ii)
+         #       arrows(ii-d,e,ii-d,e+cF[ii],col=ii,length=0.08, lwd=lwda)
+         #       e <- sum(cc[c(1,3)])+cF[1]

```



```

+ #           points(3,e,col=3)
+ #           arrows(3,e,3,e+cF[3],col=3,length=0.08, lwd=lwda)
+       }
+       eind <- grind[ ,1,2] #c(2,6,7)
+       tst(eind)
+       esF <- predicted(eind,coef)
+       es <- esF-coef[,eind]
+       lines(1:ndays,es,col=7,lwd=3)
+       lines(1:ndays,esF,col=7,lwd=3)
+       lines(1:ndays,es,col=8,type="b",lwd=1,lty=3)
+ #
+       arrows(1:ndays,es,1:ndays,esF,col=1:ndays,length=0.08, lwd=lwda)
+ #
+
+       ii <- ndays+1
+       e <- cc[1]+cF[1]
+ #       points(1,e,col=ii,cex=2)
+ #       arrows(1,e,1,e+cf[ii],col=ii,length=0.08, lwd=lwda)
+       es <- predicted(8,coef)-coef[,8]+c(0,coef[,c(9,10)])
+       es <- predicted(2,coef)+coef[,5]+c(0,coef[,c(3,4)])
+       lines(1:ndays,es,col=7,lwd=1,lty=4,type="b")
+       es <- es+c(0,coef[,c(9,10)])
+       lines(1:ndays,es,col=7+1,lwd=1,lty=4,type="b")
+       es <- es+c(0,coef[,c(6,7)])
+       lines(1:ndays,es,col=7+1+1,lwd=1,lty=4,type="b")
+       es <- es+c(0,coef[,c(9,10)])
+       lines(1:ndays,es,col=7+1+1+1,lwd=2,lty=4,type="b")
+       esF <- predicted(c(8,11,12),coef)
+       es <- esF-coef[c(8,11,12)]
+ #       lines(1:ndays,cf[1]+cf[ii]+c(0,cf[2:ndays]),col=2,lwd=1,lty=2)
+       lines(1:ndays,es,col=2,lwd=1,lty=3,type="b")
+ #       lines(1:ndays,esF,col=7,lwd=1,lty=4,type="b")
+
+ #       eC <- predicted(c(5,9,10),coef)
+ #       lines(1:ndays,eC-eC[1]+es[1],col=8,lwd=1,lty=2,type="b")
+ #       es <- eC-eC[1]+es[1]
+       for(jj in 1:ndays){
+         tst(jj)
+ #         e <- sum(cf[c(1,jj,(ndays+1))])
+         e <- predicted(abs(ind[ndays+jj]), coef)
+       tst(e)
+         arrows(jj+d,es[jj],jj+d,e,col=ndays+jj,length=0.08, lwd=lwda)
+       }
+
+       eind <- grind[ ,1,2] # c(2,6,7)
+       tst(eind)
+       cl <- 0
+       esF <- predicted(eind,coef)
+       es <- esF-coef[,eind]
+ #       lines(1:ndays,es,col=7,lwd=3)
+ #       lines(1:ndays,esF,col=7,lwd=3)
+       abline(h=predicted(1,coef),lwd=0.5,col=8)

```

```

+ delta <- c(coef[,eind[1]], rep(0, length(eind)-1))
+       lines(1:ndays, delta+es, col=8, type="b", lwd=1, lty=3)
+ #
+       arrows(1:ndays-d, es, 1:ndays-d, esF, col=c1+1:ndays, length=0.08, lwd=1
+ #
+       eind <- grind[ ,2,2] #c(8,11,12)
+       c1 <- ndays
+       esF <- predicted(eind, coef)
+       es <- esF-coef[,eind]
+ #       lines(1:ndays, es, col=7, lwd=3)
+ #       lines(1:ndays, esF, col=7, lwd=3)
+       lines(1:ndays, es, col=2, type="b", lwd=1, lty=3)
+ #
+       arrows(1:ndays+d, es, 1:ndays+d, esF, col=c1+1:ndays, length=0.08, lwd=1
+
+       cfs <- 1:(ndays*ntreat)
+       ltext <- paste(sprintf("% .1f", cF[cfs]), "|", names(cF)[cfs])
+       legend("topleft", col=cfs, lwd=2, legend=ltext, bty="n", cex=0.75)
+       }
+       #abline(h=sum(cf[c(1,4,5,10)]), xpd=NA, col=6)
+ #       e <- sum(cf[c(1,3,4)])
+ #       points(3,e, col=6)
+ #       arrows(3,e,3,e+cf[6], col=6, length=0.08, lwd=lwda)
+
+       }
+   }
+ #
+ #####          arrows(3+2*d, predicted(12, coef)-coef[12], 3+2*d, predi
+ #ind <- c(8,11,12)
+ #indc <- c(5,9,10)
+ #for(i in 1:3){
+ #   tst(predicted(ind[i], coef))
+ #   tst(predicted(indc[i], coef))
+ #   arrows(i+2*d, predicted(ind[i], coef)-coef[ind[i]],
+ #   i+2*d, predicted(ind[i], coef), lwd=4, col=7)
+ #   }
+ #####
+ #abline(h=c(4,4.06))
+   if(coef.plt) {
+     par(mfrow=c(6,7), mar=c(1,1,2,2), new=TRUE)
+     with(coefs, {
+       xlim <- range(c(cC[-1], cF[-1]))
+       plot(cC[-1], cF[-1], col=2:nrow(coefs),
+       xlim = xlim,
+       ylim = xlim,
+       pty = "s",
+       pch=16, new=TRUE, axes=FALSE, asp=1)
+       axis(3)
+       axis(4)
+       mtext("C", side=1, cex=0.7, line=0)
+       mtext("F", side=2, cex=0.7, las = 2, line=0.3)
+       abline(h=0, v=0, lwd=0.5, col=8)
+       box()

```

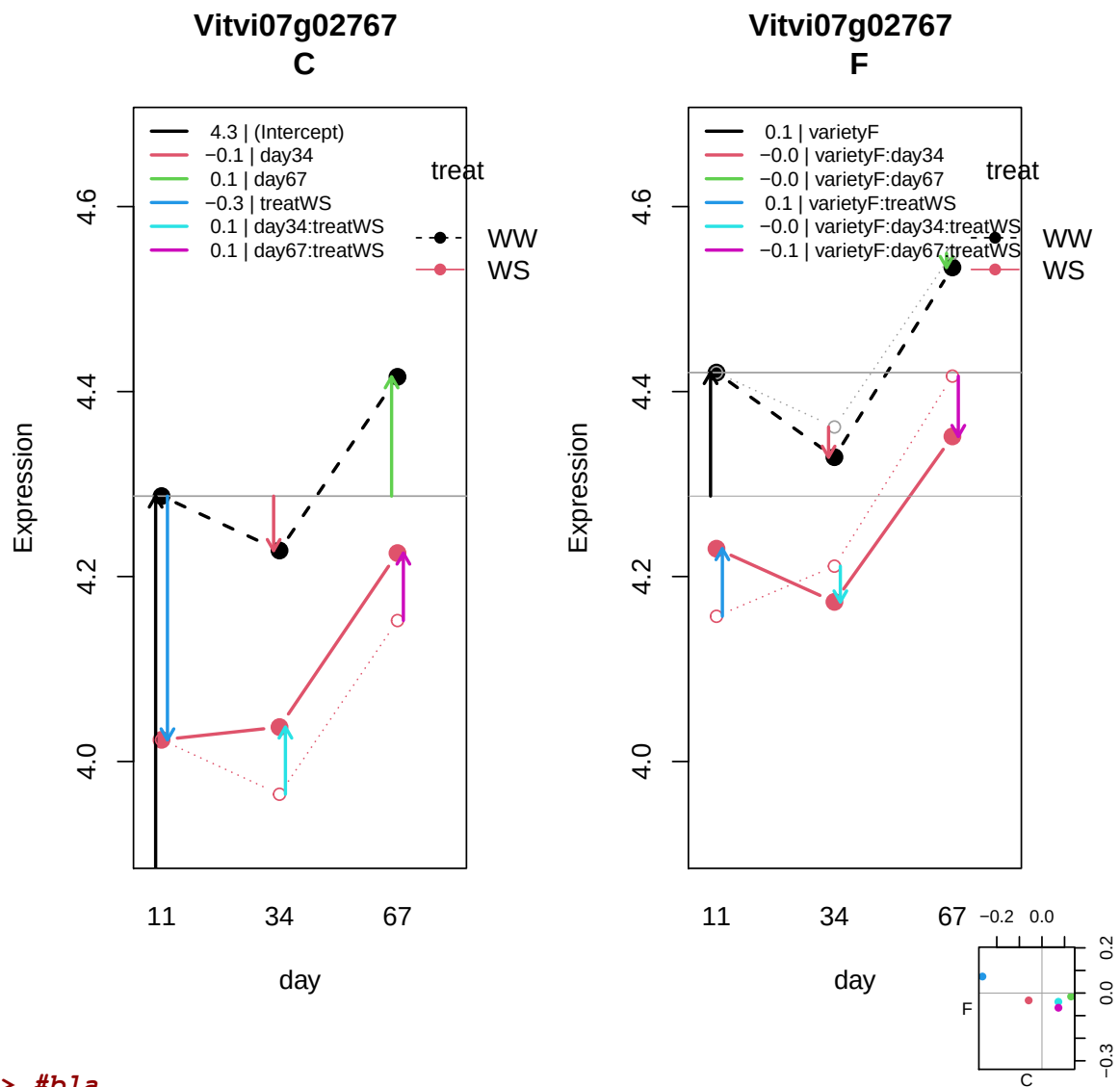
```

+      #abline(c(0,1),col=8)
+    }
+  )
+ }
+ invisible(coefs)
+ }
> varname <- rownames(exprs)[10]#[13]
> t(fit1[varname,]$coefficients)

               Vitvi07g02767
(Intercept)      4.28696103
varietyF          0.13356152
day34             -0.05882567
day67             0.12895806
treatWS           -0.26351934
varietyF:day34    -0.03265016
varietyF:day67    -0.01528187
varietyF:treatWS  0.07310070
day34:treatWS     0.07258675
day67:treatWS     0.07293413
varietyF:day34:treatWS -0.03863533
varietyF:day67:treatWS -0.06521242

> coef=fit1[varname,]$coefficients
> bla <- plot.interactions(varname, coef=fit1[varname,]$coefficients,
+   coef.plt=TRUE)

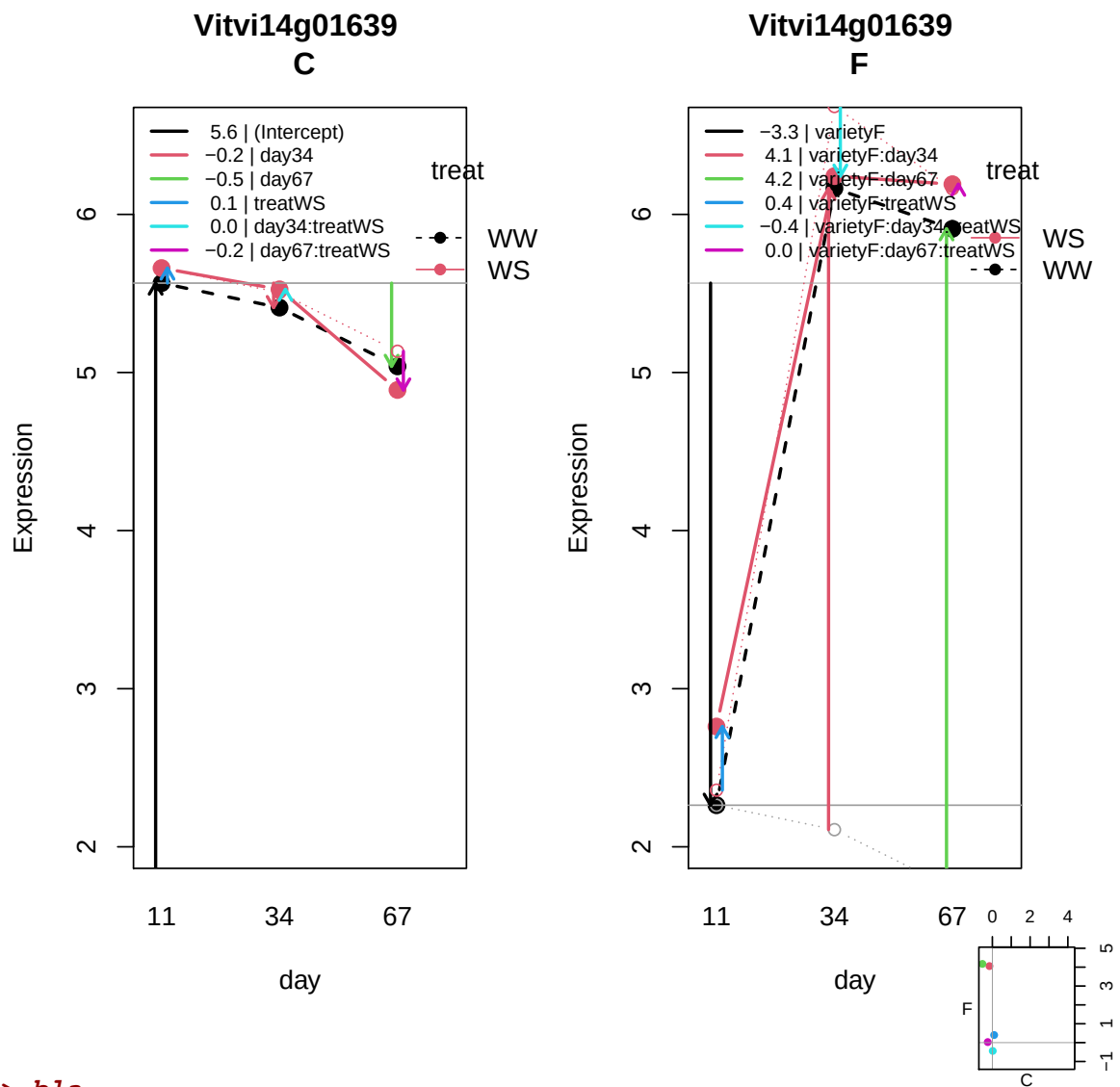
```



```
> #bla
> #predicted(1, coef)
> #predicted(1:12, coef)
> cbind(t(coef), 1:ncol(coef))
      Vitvi07g02767
(Intercept)      4.28696103  1
varietyF        0.13356152  2
day34          -0.05882567  3
day67           0.12895806  4
treatWS        -0.26351934  5
varietyF:day34  -0.03265016  6
varietyF:day67  -0.01528187  7
varietyF:treatWS 0.07310070  8
day34:treatWS   0.07258675  9
day67:treatWS   0.07293413 10
varietyF:day34:treatWS -0.03863533 11
varietyF:day67:treatWS -0.06521242 12
```

Inspect the varietyF:day67

```
> varname <- "Vitvi14g01639"
> bla <- plot.interactions(varname, coef=fit1[varname,]$coefficients,
+   coef.plt=TRUE)
```

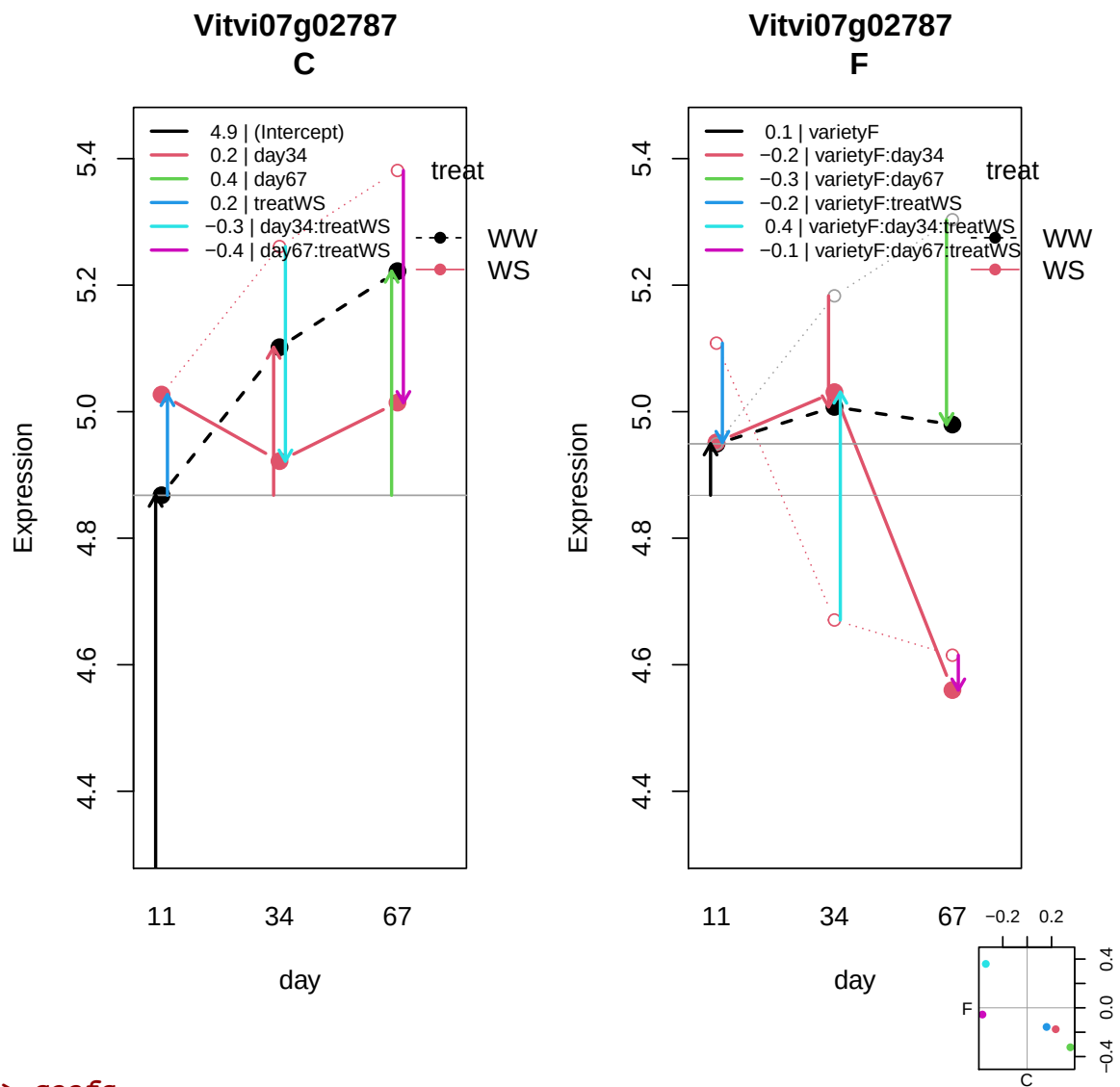


> bla

	cC	cF.model	cF.plus.C
(Intercept)	5.56527864	-3.30234543	2.2629332
day34	-0.15468641	4.05640617	3.9017198
day67	-0.52640004	4.17222330	3.6458233
treatWS	0.09522752	0.40243097	0.4976585
day34:treatWS	0.02011723	-0.44046362	-0.4203464
day67:treatWS	-0.24461914	0.02886853	-0.2157506

Graphical interpretation of coefficients:

```
> varname <- rownames(exprs)[13]
> coef=fit1[varname,]$coefficients
> coefs <- plot.interactions(varname, coef=fit1[varname,]$coefficients,
+   coef.plt=TRUE)
```

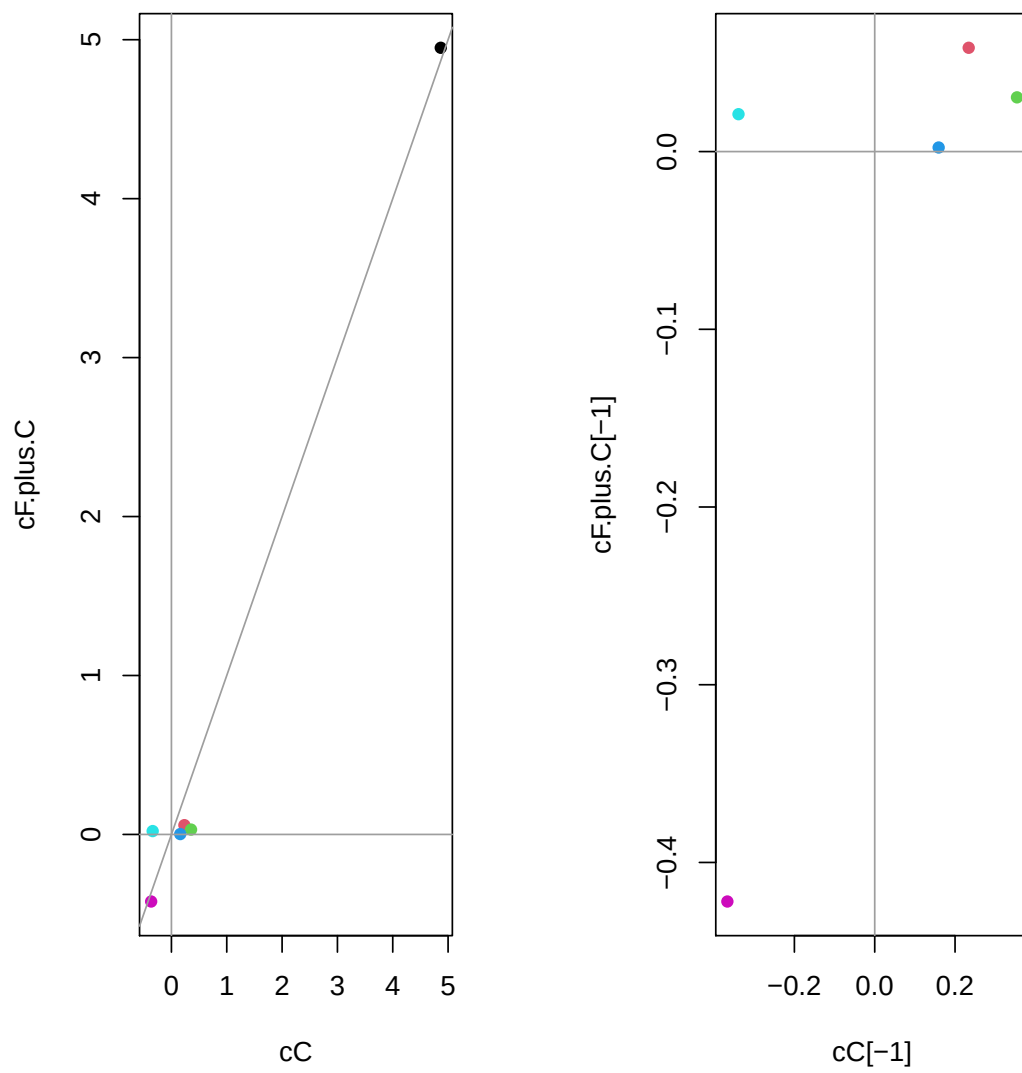


> *coefs*

	cC	cF.model	cF.plus.C
(Intercept)	4.8678457	0.08131074	4.949156401
day34	0.2339580	-0.17555784	0.058400134
day67	0.3542204	-0.32370683	0.030513561
treatWS	0.1591715	-0.15687647	0.002295045
day34:treatWS	-0.3391525	0.36019448	0.021041936
day67:treatWS	-0.3668925	-0.05508440	-0.421976927

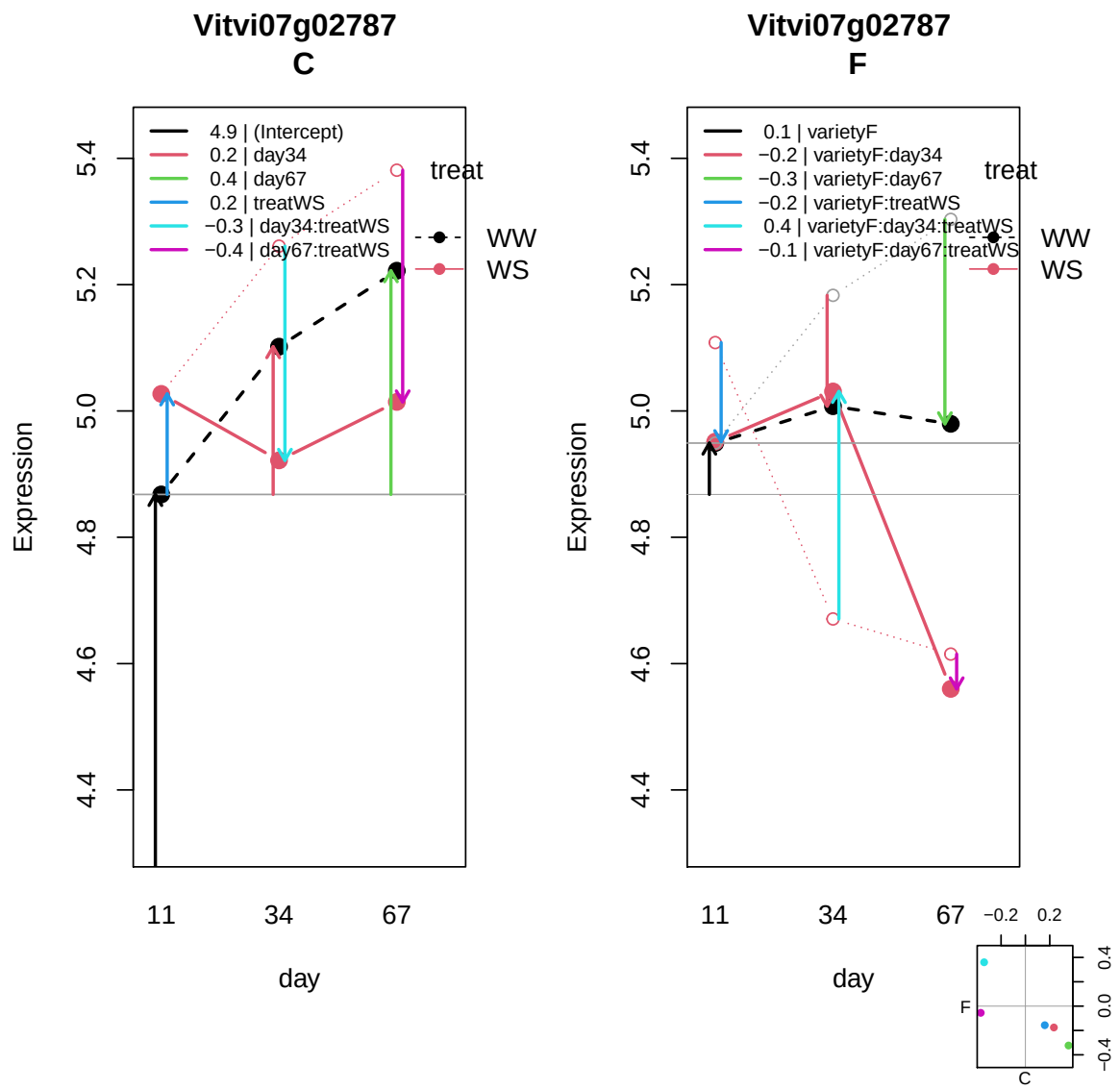
Plot coefficients

```
> par(mfrow=c(1,2),mar=c(4,5,3,3))
> with(coefs, plot(cC, cF.plus.C, col=1:nrow(coefs), pch=16))
> abline(h=0,v=0,col=8)
> abline(c(0,1),col=8)
> with(coefs, plot(cC[-1], cF.plus.C[-1], col=2:nrow(coefs), pch=16))
> abline(h=0,v=0,col=8)
```

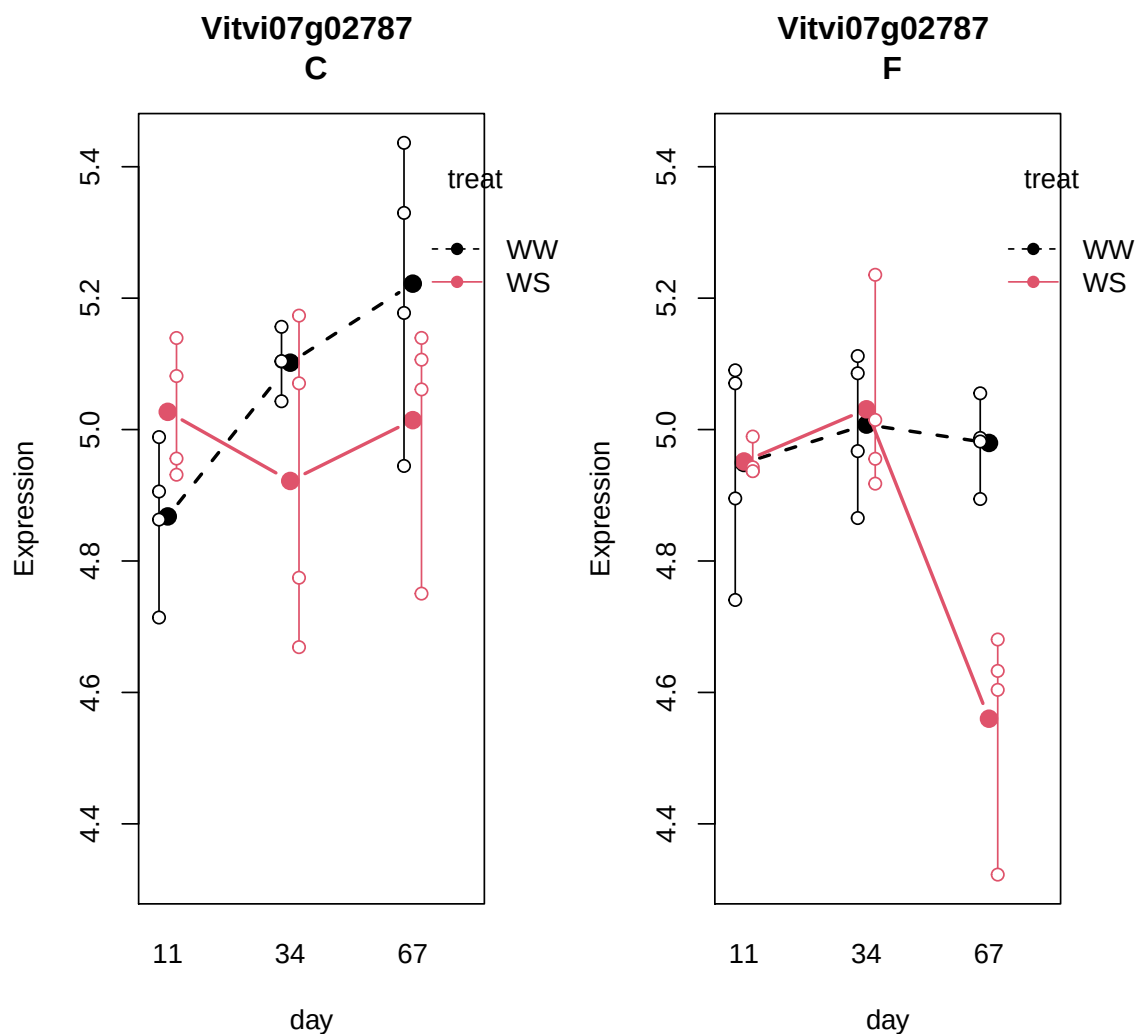


Combined plot

```
> plot.interactions(varname, coef=fit1[varname,]$coefficients,
+   coef.plt = TRUE )
```



```
> plot.interactions(varname)
```

5.3 Top tables

```
> tt <- topTable(fit1)
```

Removing intercept from test coefficients

```
> tt
```

	varietyF	day34	day67
Vitvi07g02615	-8.392433	0.38536708	0.89414904
Vitvi19g00049	-8.282582	0.12427416	-0.04343288
Vitvi19g01601	-7.640521	-0.17009254	0.69374544
Vitvi10g00361	8.006162	0.03624569	-0.15569508
Vitvi12g00921	7.666762	0.03624569	-0.15569508
Vitvi11g00990	-7.365798	-0.42931210	0.92460236
Vitvi00g00950	-6.862557	0.25571656	0.22434754
Vitvi02g00516	-6.452996	0.31245651	0.23579551
Vitvi09g01029	9.061493	0.03624569	-0.15569508
Vitvi02g01540	-8.601666	-0.41508707	-0.58396590
	treatWS	varietyF.day34	varietyF.day67
Vitvi07g02615	0.045847269	-0.239704680	-0.84986260

Vitvi19g00049	-0.037061991	0.021388243	0.08771932	
Vitvi19g01601	0.313090881	0.315754945	-0.64945900	
Vitvi10g00361	0.111266753	-0.427475900	-0.21815032	
Vitvi12g00921	0.111266753	-0.009688064	0.10411149	
Vitvi11g00990	0.009571755	0.574974496	-0.88031592	
Vitvi00g00950	0.103865974	-0.110054156	-0.18006110	
Vitvi02g00516	0.291196030	-0.166794108	-0.19150907	
Vitvi09g01029	0.111266753	-0.211051478	-0.45485567	
Vitvi02g01540	-0.032751887	0.956990093	0.62825234	
varietyF.treatWS day34.treatWS day67.treatWS				
Vitvi07g02615	-0.02592060	0.03446559	-0.16369103	
Vitvi19g00049	0.05698866	-0.18513484	-0.33007627	
Vitvi19g01601	-0.29316421	0.08467925	-0.78167340	
Vitvi10g00361	-0.31937517	-0.02532272	0.08522965	
Vitvi12g00921	-0.56474245	-0.02532272	0.08522965	
Vitvi11g00990	0.01035492	0.28295748	0.76462013	
Vitvi00g00950	-0.08393930	-0.01430723	-0.79958624	
Vitvi02g00516	-0.27126936	-0.46928178	0.35989184	
Vitvi09g01029	-0.18821552	-0.02532272	0.48147028	
Vitvi02g01540	0.05267856	0.17600006	-0.52095392	
varietyF.day34.treatWS varietyF.day67.treatWS				
Vitvi07g02615	-0.02465625		0.03959792	
Vitvi19g00049	0.19494419		0.20598316	
Vitvi19g01601	-0.07486991		0.65758029	
Vitvi10g00361	0.22007645		0.33292211	
Vitvi12g00921	0.13901188		0.36110470	
Vitvi11g00990	-0.27314814		-0.88871324	
Vitvi00g00950	0.02411658		0.67549313	
Vitvi02g00516	0.47909113		-0.48398494	
Vitvi09g01029	-0.03680668		-0.54400870	
Vitvi02g01540	-0.56243134		0.39686081	
AveExpr F P.Value adj.P.Val				
Vitvi07g02615	-1.753338	3671.7923	7.412784e-55	1.129857e-50
Vitvi19g00049	-2.060936	2426.9931	2.223530e-51	1.694552e-47
Vitvi19g01601	-2.235775	2368.7442	3.556237e-51	1.806805e-47
Vitvi10g00361	-2.187765	1448.3928	4.768727e-47	1.817123e-43
Vitvi12g00921	-2.299872	1398.6730	9.360421e-47	2.853431e-43
Vitvi11g00990	-2.308363	1288.0251	4.594189e-46	1.167077e-42
Vitvi00g00950	-2.694070	1221.4658	1.279155e-45	2.785268e-42
Vitvi02g00516	-2.781944	1072.4498	1.574199e-44	2.999242e-41
Vitvi09g01029	-1.659134	1019.2766	4.197517e-44	7.108729e-41
Vitvi02g01540	-2.033091	835.3346	1.945377e-42	2.965144e-39

Top table for difference of variety reaction to stress in day 67

```
> comps[12,]
```

```

      colnames.design.      comp
12 varietyF:day67:treatWS (FWS67:FWW67) - (CWS67:CWW67)

> tt <- topTable(fit1,coef=12)
> head(tt)
```

	logFC	AveExpr	t	P.Value
Vitvi18g00412	1.192538	7.790681	5.862035	8.244817e-07
Vitvi04g01151	-1.719143	4.610617	-5.722900	1.284651e-06
Vitvi04g00516	-1.199862	4.940625	-5.626454	1.746680e-06
Vitvi18g02996	1.816026	5.423452	5.578034	2.037797e-06
Vitvi04g00444	1.030873	3.650504	5.434365	3.218083e-06
Vitvi18g02548	-1.121847	6.801621	-5.376667	3.865282e-06

	adj.P.Val	B
Vitvi18g00412	0.007765025	5.549510
Vitvi04g01151	0.007765025	5.156719
Vitvi04g00516	0.007765025	4.884319
Vitvi18g02996	0.007765025	4.747558
Vitvi04g00444	0.009288349	4.341895
Vitvi18g02548	0.009288349	4.179087

```
> varname <- rownames(tt)[1]
> fit1[varname,]$coefficients
```

	(Intercept)	varietyF	day34
Vitvi18g00412	8.040546	-0.08600379	-0.3256205

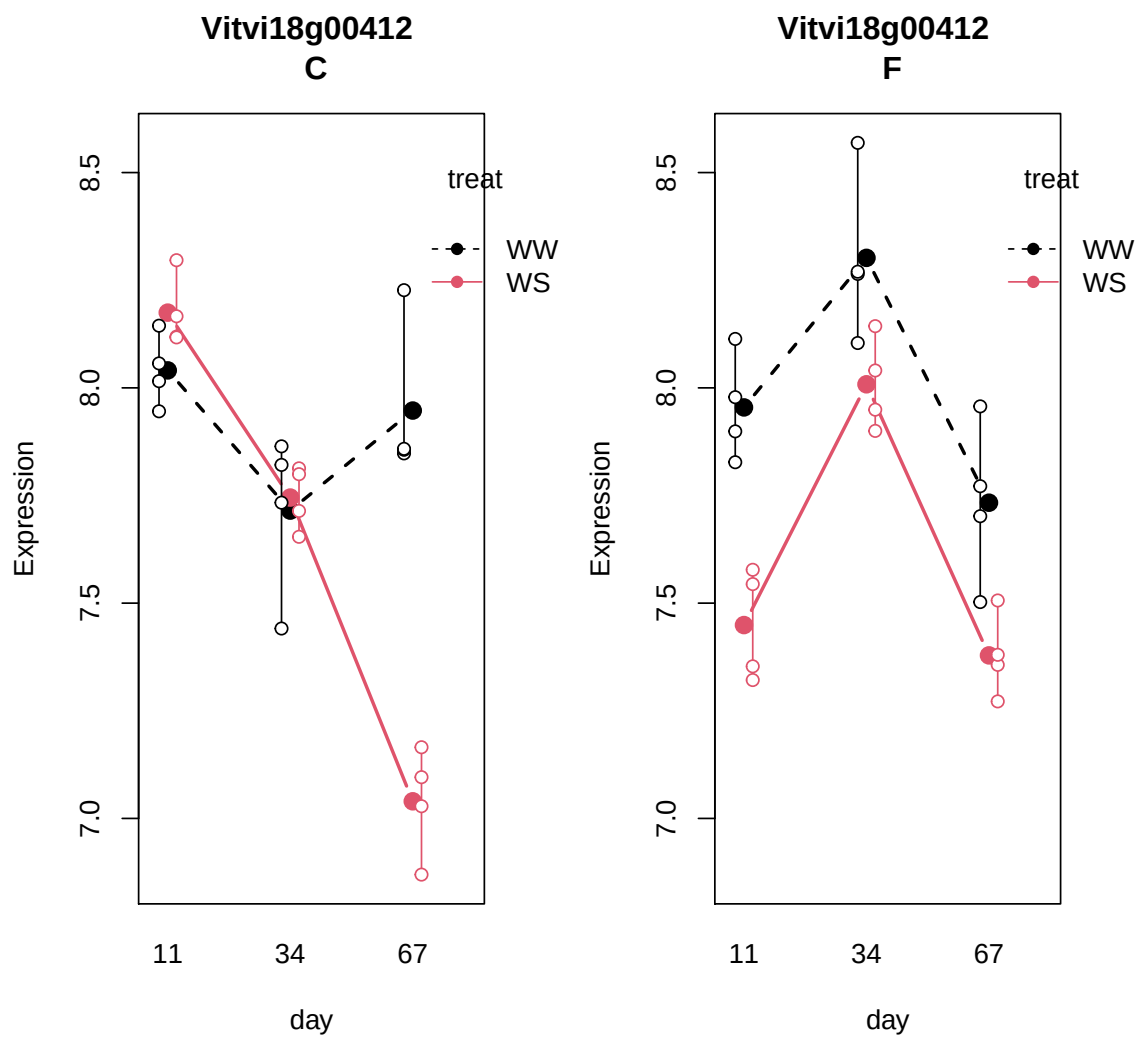
	day67	treatWS	varietyF:day34
Vitvi18g00412	-0.09324598	0.1341617	0.6729616

	varietyF:day67	varietyF:treatWS	day34:treatWS
Vitvi18g00412	-0.128028	-0.6396099	-0.1038779

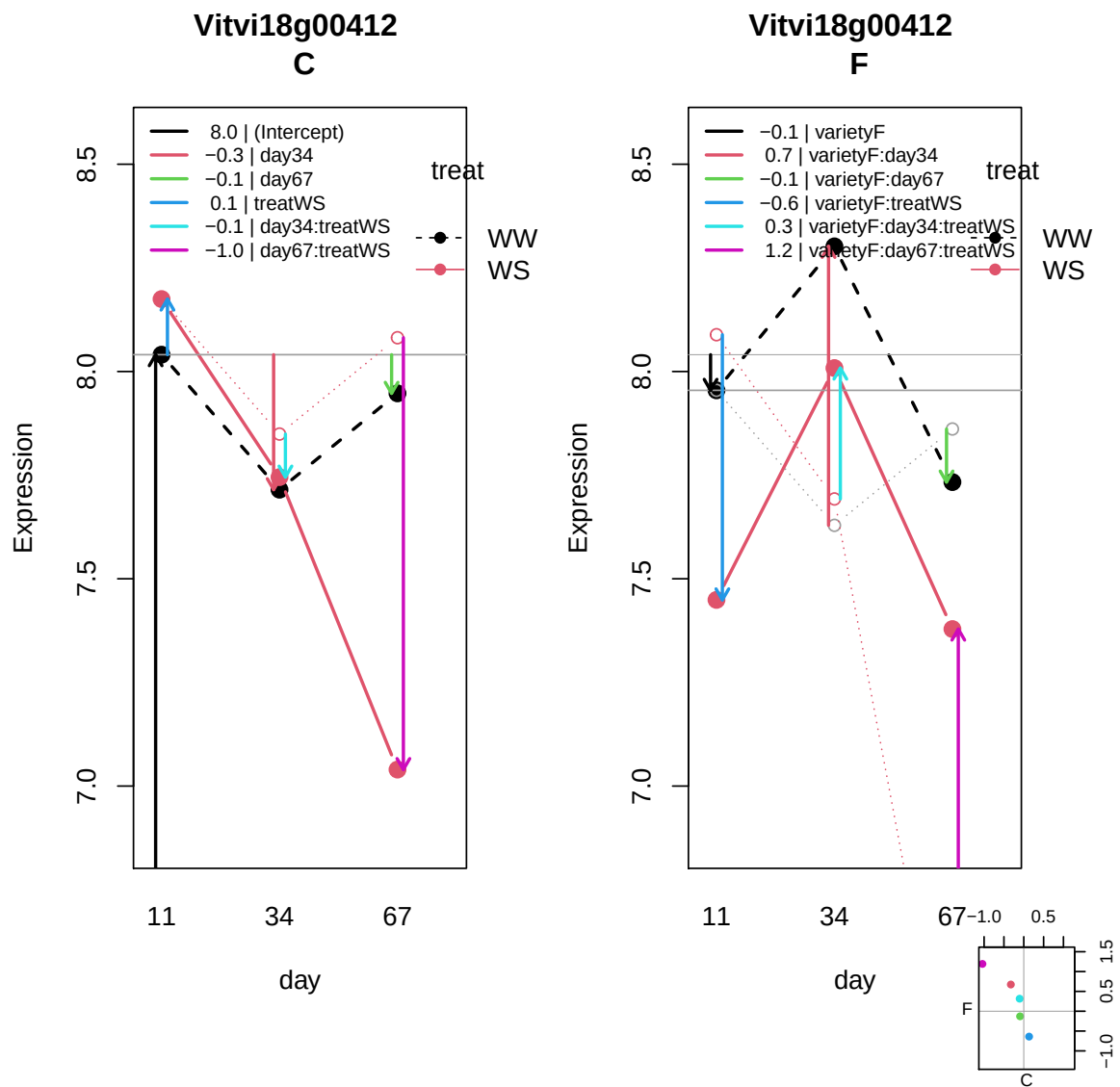
	day67:treatWS	varietyF:day34:treatWS
Vitvi18g00412	-1.041682	0.315688

	varietyF:day67:treatWS
Vitvi18g00412	1.192538

```
> plot.interactions(varname)
```



```
> plot.interactions(varname, coef=fit1[varname,]$coefficients, coef.plt=TRUE)
```

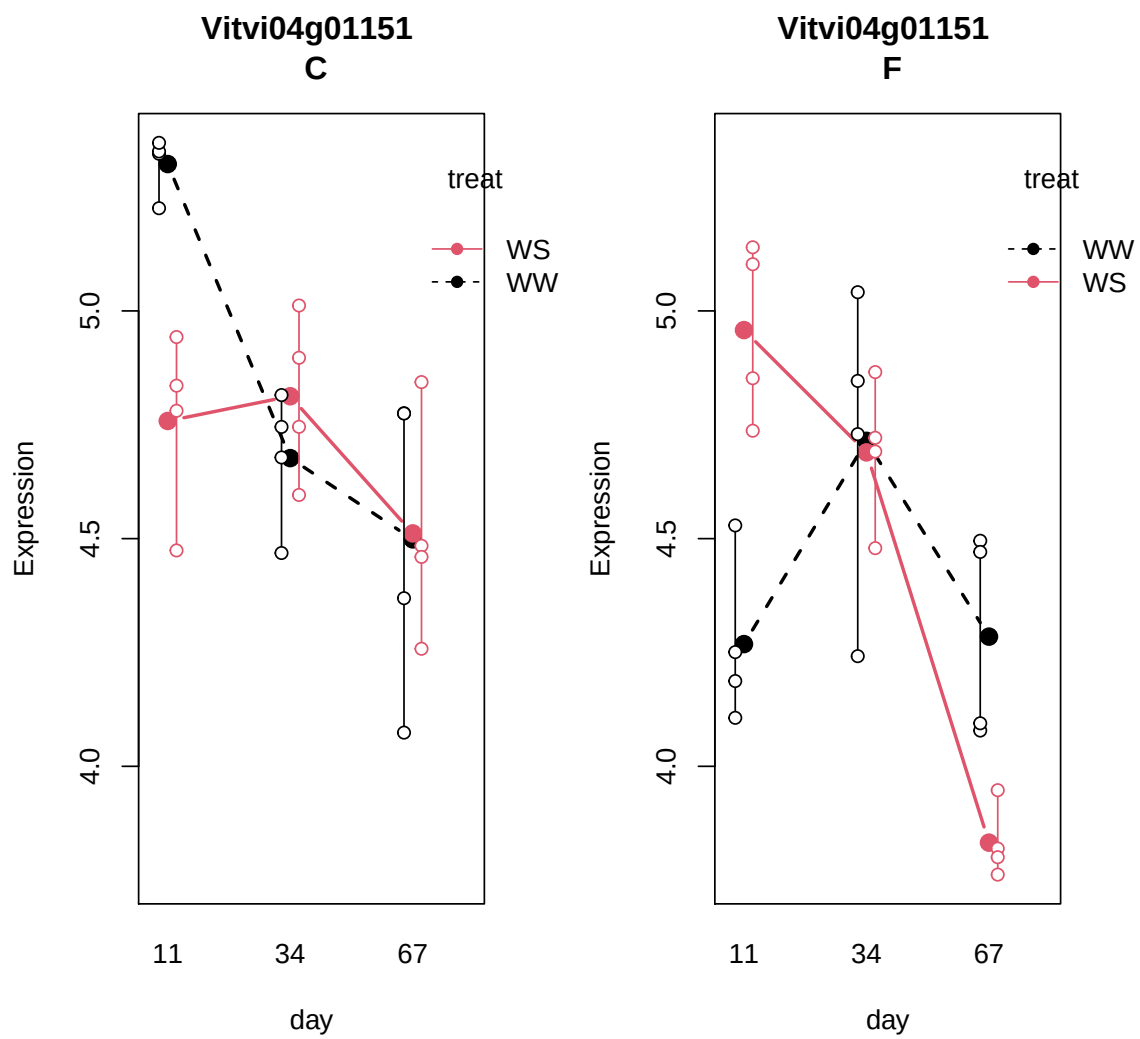


```
> varname <- rownames(tt)[2]
> fit1[varname,]$coefficients
```

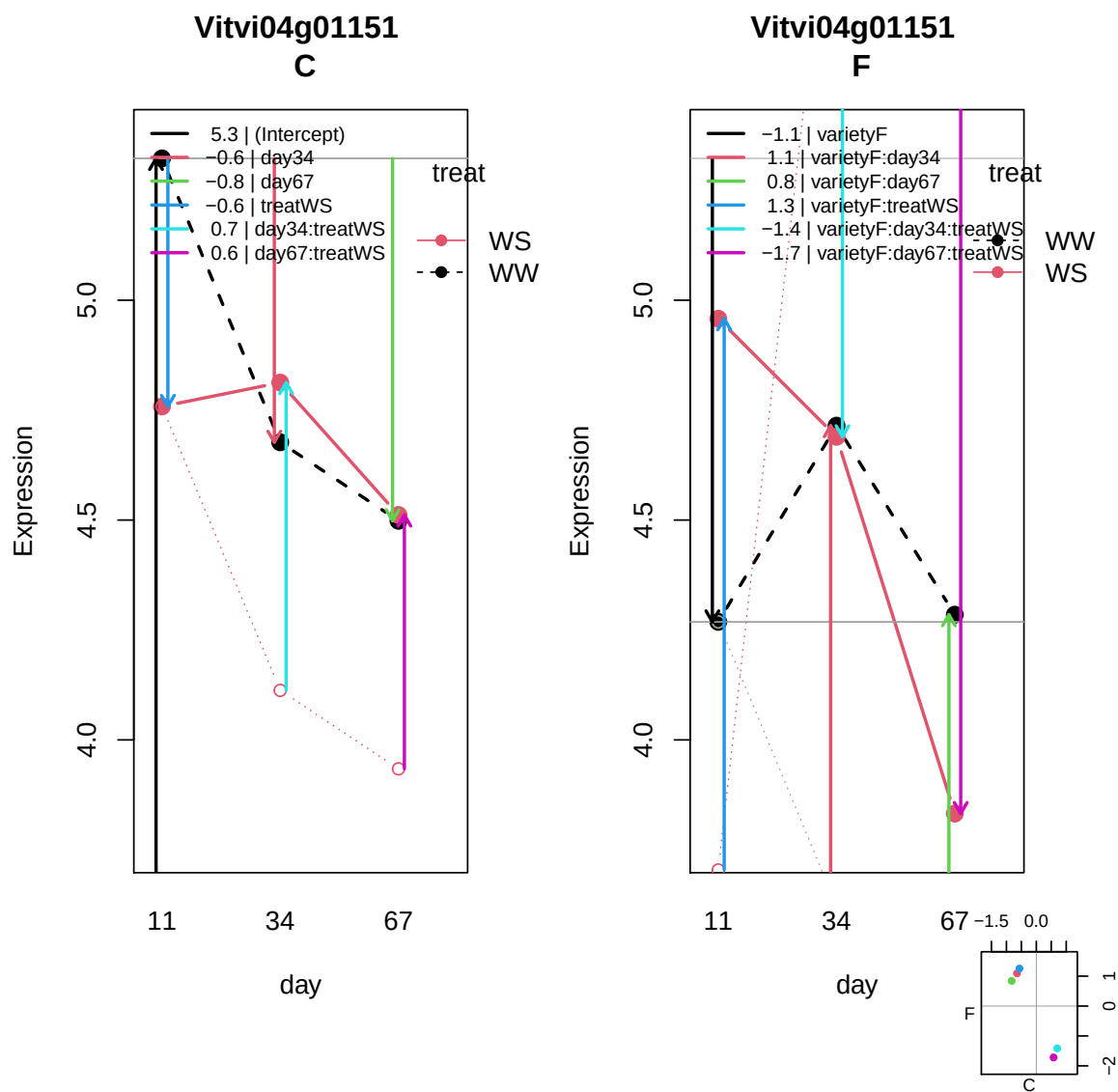
	(Intercept)	varietyF	day34	day67
Vitvi04g01151	5.322487	-1.054111	-0.6457074	-0.8241672

```

treatWS varietyF:day34 varietyF:day67
Vitvi04g01151 -0.5641574 1.092011 0.8405768
varietyF:treatWS day34:treatWS day67:treatWS
Vitvi04g01151 1.253631 0.6999694 0.5772996
varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi04g01151 -1.414795 -1.719143
> plot.interactions(varname)
```



```
> plot.interactions(varname, coef=fit1[varname,]$coefficients, coef.plt=TRUE)
```



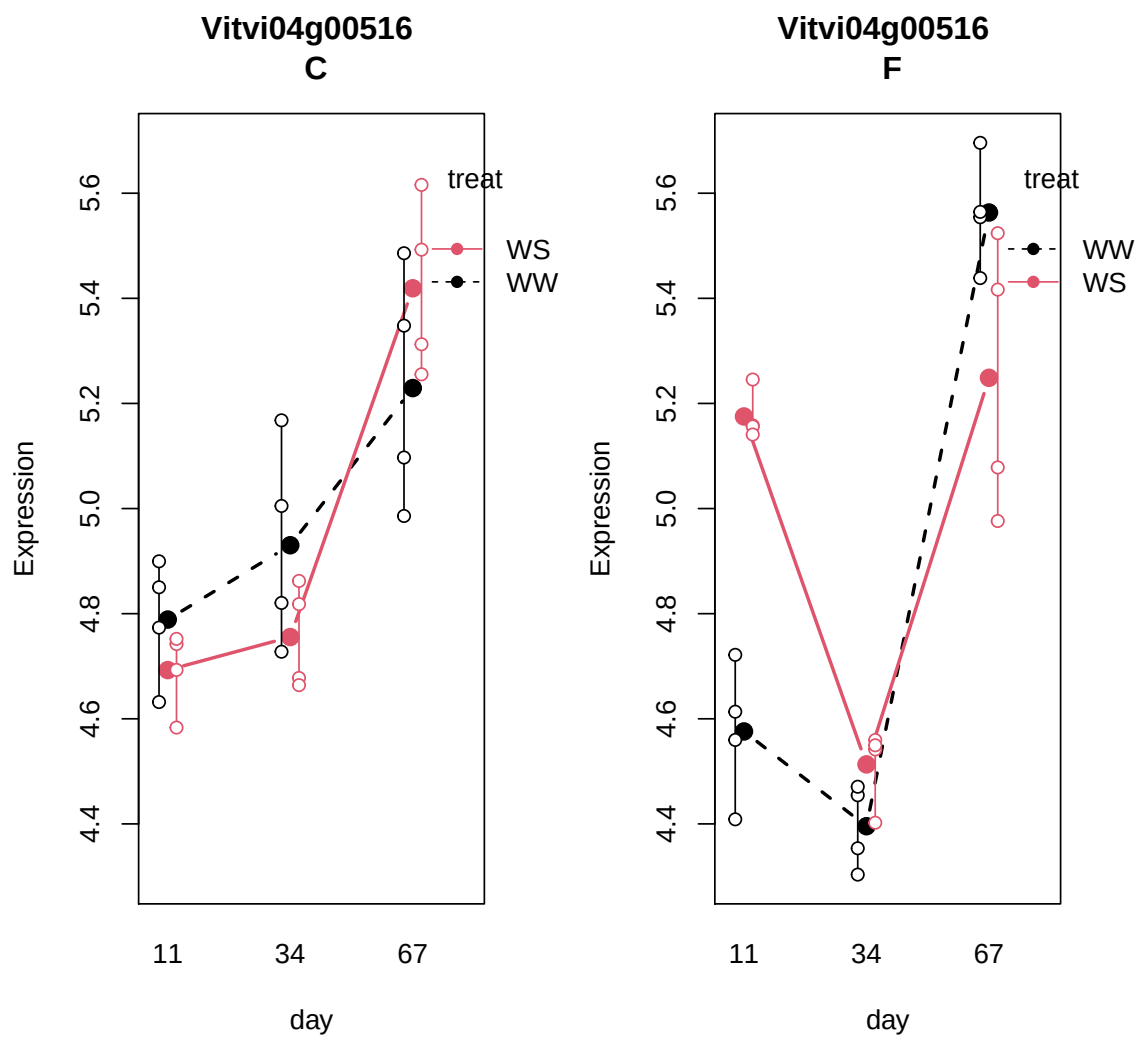
```
> varname <- rownames(tt)[3]
> fit1[varname,]$coefficients
```

	(Intercept)	varietyF	day34	day67
Vitvi04g00516	4.788785	-0.2128839	0.141422	0.4404113

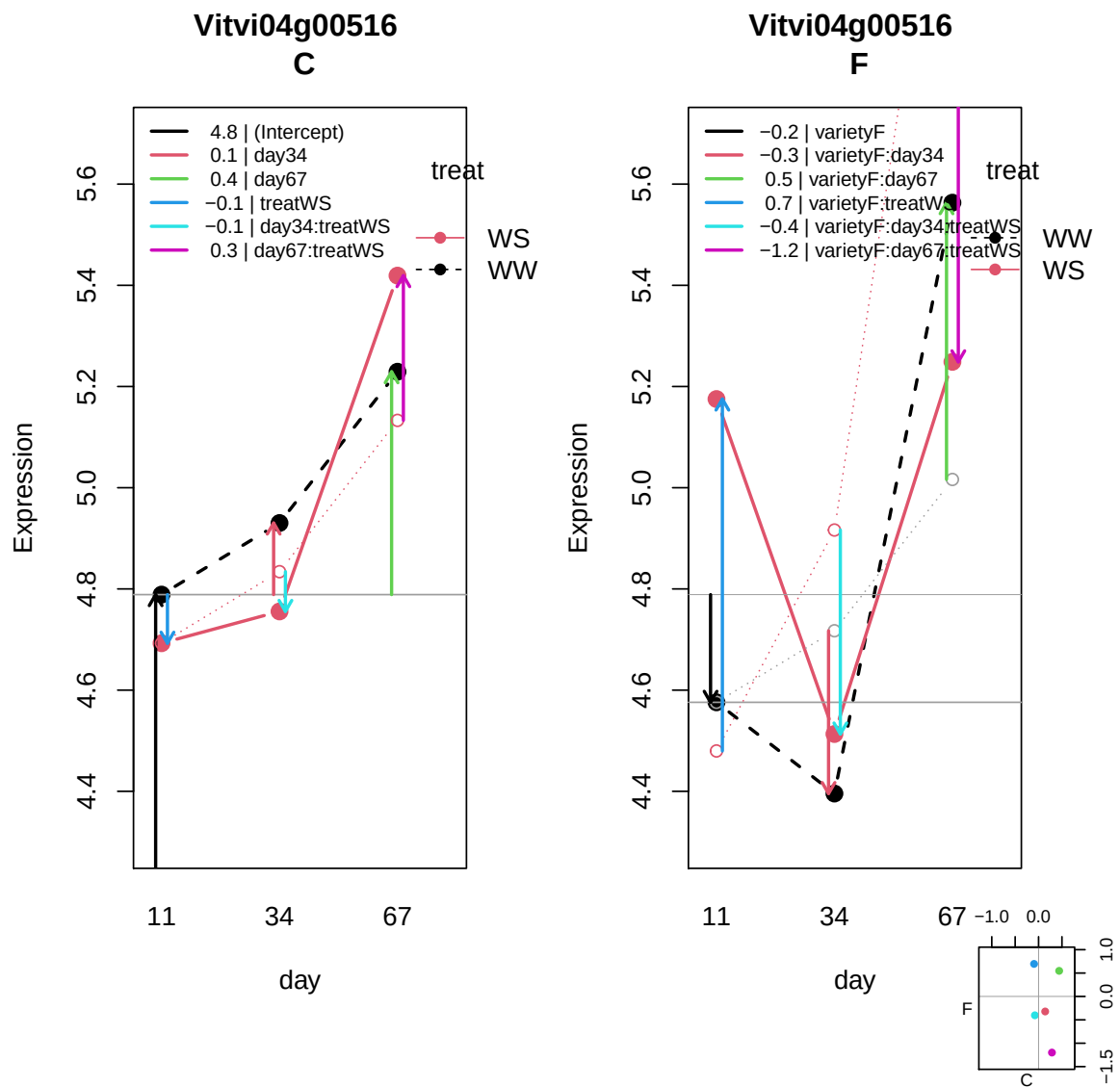
```

treatWS varietyF:day34 varietyF:day67
Vitvi04g00516 -0.09612852 -0.3217211 0.5469517
varietyF:treatWS day34:treatWS day67:treatWS
Vitvi04g00516 0.695423 -0.0785396 0.2860656
varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi04g00516 -0.4030931 -1.199862
```

```
> plot.interactions(varname)
```



```
> plot.interactions(varname, coef=fit1[varname,]$coefficients, coef.plt=TRUE)
```

```

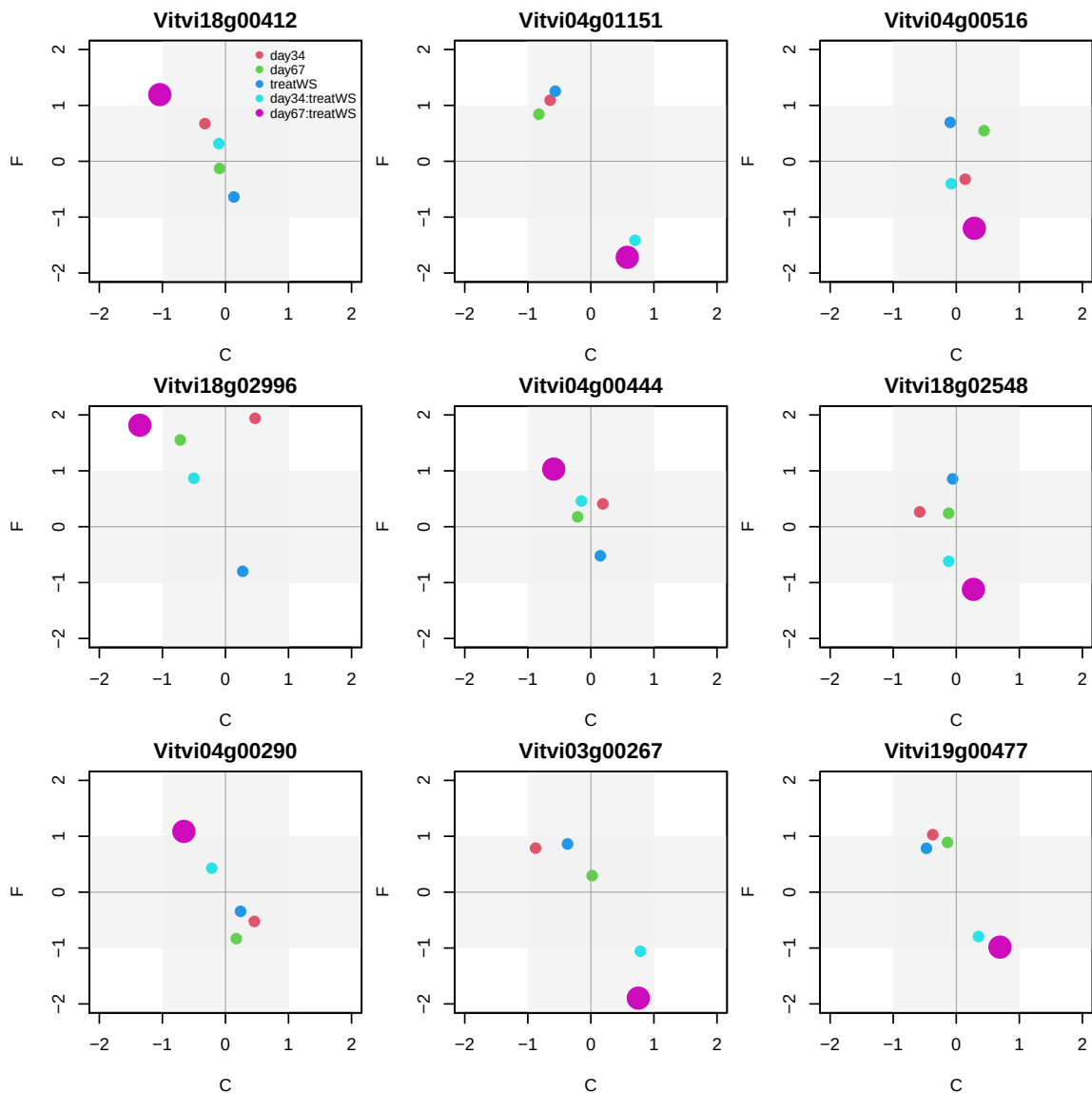
> par(mfrow=c(3,3),mar=c(4,4,2,0.5))
> select <- 2:6
> for(i in 1:9){
+   varname <- rownames(tt)[i]
+   coef <- fit1[varname,]$coefficients
+   ind <- grep("F",colnames(coef))
+   coef[-ind]
+   coef[ind]
+   plot(coef[-ind][select],coef[ind][select],col=select,
+     pch=16,
+     xlab="C",ylab="F",
+     ylim=c(-2,2),
+     xlim=c(-2,2),
+     type="n"
+   )
+   rect(-3,-1,3,1, col=rgb(.95,.95,.95,.80),border=NA)
+   rect(-1,-3,1,3, col=rgb(.95,.95,.95,.80),border=NA)
+   points(coef[-ind][select],coef[ind][select],col=select,
+     pch=16,

```

```

+       cex=c(1,1,1,1,2)*1.5
+     )
+ title(varname)
+ if(i==1) legend("topright", bty="n", col=select, pch=rep(16,5), legend=colnames(tt))
+ abline(v=0, h=0, col=8, lwd=0.5)
+ box()
+ #polygon(c(-2,-1,-1, 1, 1, 2, 2, 1, 1,-1,-1,-2,-2),
+ #       c(-1,-1,-2,-2,-1,-1, 1, 1, 2, 2, 1, 1,-1),
+ #       col=rgb(.95,.95,.95,.50))
+
+
+ #abline(h=-1:1, v=-1:1, col=8)
+ #abline(h=0, v=0)
+ }

```



```

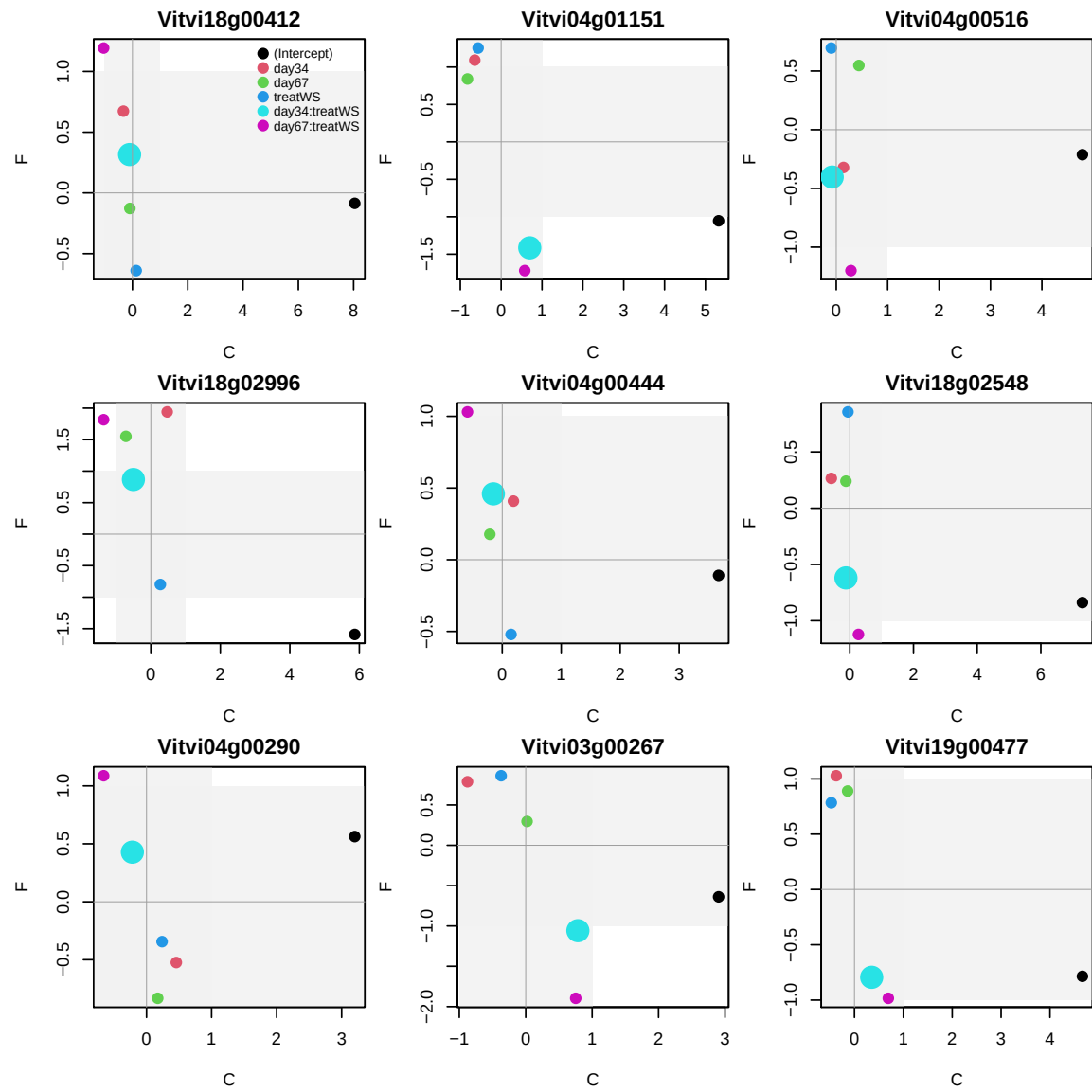
> par(mfrow=c(3,3), mar=c(4,4,2,0.5))
> select <- 1:6
> for(i in 1:9){
+   varname <- rownames(tt)[i]
+   coef <- fit1[varname,]$coefficients

```

```

+ ind <- grep("F", colnames(coef))
+ coef[-ind]
+ coef[ind]
+ plot(coef[-ind][select], coef[ind][select], col=select,
+      pch=16,
+      xlab="C", ylab="F",
+      # ylim=c(-2, 2),
+      # xlim=c(-2, 2),
+      type="n"
+      )
+ rect(-10, -1, 10, 1, col=rgb(.95, .95, .95, .90), border=NA)
+ rect(-1, -10, 1, 10, col=rgb(.95, .95, .95, .90), border=NA)
+ box()
+ points(coef[-ind][select], coef[ind][select], col=select,
+        pch=16,
+        cex=c(1, 1, 1, 1, 2) * 1.5
+        )
+ title(varname)
+ if(i==1) legend("topright", bty="n", col=select, pch=rep(16, 5) , legend=colnames (
+ abline(v=0, h=0, col=8, lwd=0.5)
+ #polygon(c(-2, -1, -1, 1, 1, 2, 2, 1, 1, -1, -1, -2, -2),
+ #        c(-1, -1, -2, -2, -1, -1, 1, 1, 2, 2, 1, 1, -1),
+ #        col=rgb(.95, .95, .95, .50))
+
+
+ #abline(h=-1:1, v=-1:1, col=8)
+ #abline(h=0, v=0)
+ }

```



6 Coefficients

Model design

```
> design <- with(pd, model.matrix(~ variety * day * treat))
> head(design)
      (Intercept) varietyF day34 day67 treatWS varietyF:day34
1             1         0     0     0         1             0
2             1         0     0     0         1             0
3             1         0     0     0         1             0
4             1         0     0     0         1             0
5             1         0     0     0         0             0
6             1         0     0     0         0             0
      varietyF:day67 varietyF:treatWS day34:treatWS
1             0             0             0
2             0             0             0
3             0             0             0
4             0             0             0
5             0             0             0
6             0             0             0
      day67:treatWS varietyF:day34:treatWS
1             0             0
2             0             0
3             0             0
4             0             0
5             0             0
6             0             0
      varietyF:day67:treatWS
1             0
2             0
3             0
4             0
5             0
6             0
```

Linear models

```
> fit1 <- lmFit(exprs, design)
> fit1 <- eBayes(fit1)
> head(fit1[1:6,]$coefficients)
      (Intercept) varietyF      day34      day67
Vitvi15g01736   4.453375 0.6488543 0.7000890 -0.72557686
Vitvi07g02832  -2.469881 5.2838914 -0.9767561 -0.81279703
Vitvi07g02830  -1.521647 4.0375050 -0.9937673 -1.02090888
Vitvi07g02812  -0.893648 2.1304584 -1.5372371 -1.54493648
Vitvi07g02811   2.058979 1.5705907 -0.7632762 -0.52084490
Vitvi09g02033  -2.999837 4.2863893 -0.5681572 -0.01659674
      treatWS varietyF:day34 varietyF:day67
Vitvi15g01736 -0.14420627 -1.38495580 -0.4020354
Vitvi07g02832  0.57641599 -0.04999007  0.5374075
Vitvi07g02830 -0.15697917  0.48601017  0.8308427
Vitvi07g02812  0.09502777  0.45026274  0.4172419
Vitvi07g02811 -0.13311327  0.04760979 -0.1197370
Vitvi09g02033  0.99789753  0.89589300  0.2918332
```

	varietyF:treatWS	day34:treatWS	day67:treatWS
Vitvi15g01736	-0.04500531	-0.51049297	-1.1217518
Vitvi07g02832	-0.90980988	-0.73965503	-1.6106276
Vitvi07g02830	0.01265130	-0.24175759	-0.2626575
Vitvi07g02812	-0.63433743	-0.48384226	0.1127406
Vitvi07g02811	-0.09726581	-0.03866461	-0.7102873
Vitvi09g02033	-1.37171762	0.15002838	-1.5938824

	varietyF:day34:treatWS	varietyF:day67:treatWS
Vitvi15g01736	0.70332175	-0.04645408
Vitvi07g02832	1.29000342	1.46276367
Vitvi07g02830	0.42878812	-0.08962062
Vitvi07g02812	0.62469987	0.46828348
Vitvi07g02811	0.17984399	0.45662557
Vitvi09g02033	0.05762989	1.74705813

```

> which <- ncol(fit1$coefficients)
> cname <- colnames(fit1$coefficients)[which]
> cnames <- colnames(fit1$coefficients)
> ind <- grep("varietyF", cnames)
> cname <- cnames[-ind]

```

Expressions in `exprs`, phenodata in `pd`.

```
> alpha <- 0.01
> maxnames <- 10
> out <- ""
> cnames <- colnames(fit1$coefficients)
> which <- 2
> for(which in 2:ncol(fit1[1:6,]$coefficients)){
+   cname <- cnames[which]
+   out <- paste(out,
+     "\\clearpage\\n\\subsection{",cname," }\n")
+   #comps[8,]
+   tt <- topTable(fit1,coef=which, number=Inf)
+   cat("\n----- ",cname, alpha,"\n")
+   filter <- tt$adj.P.Val < alpha
+   print(table(filter))
+   cat("\n\n")
+   head(tt)
+   varnames <- rownames(tt)[filter][1:min(maxnames,sum(filter))]
+   varnames
+   # varname <- varnames[1]
+   for (varname in varnames)
+     out <- paste(out,knit_child("20aa_interaction-plots.rnw",quiet=TRUE))
+ }
```

```
-----    varietyF 0.01
filter
FALSE  TRUE
 8178   7064
```

```
-----    day34 0.01
filter
FALSE  TRUE
13856  1386
```

Warning in `doTryCatch(return(expr), name, parentenv, handler)`: zero-length argument

```
-----    day67 0.01
filter
FALSE  TRUE
10098   5144
```

```
-----    treatWS 0.01
filter
FALSE
15242
```

```
-----    varietyF:day34 0.01
filter
FALSE  TRUE
12018   3224
```

```

----- varietyF:day67 0.01
filter
FALSE TRUE
10860 4382

----- varietyF:treatWS 0.01
filter
FALSE TRUE
15140 102

----- day34:treatWS 0.01
filter
FALSE
15242

----- day67:treatWS 0.01
filter
FALSE TRUE
15042 200

----- varietyF:day34:treatWS 0.01
filter
FALSE
15242

----- varietyF:day67:treatWS 0.01
filter
FALSE TRUE
15232 10

```

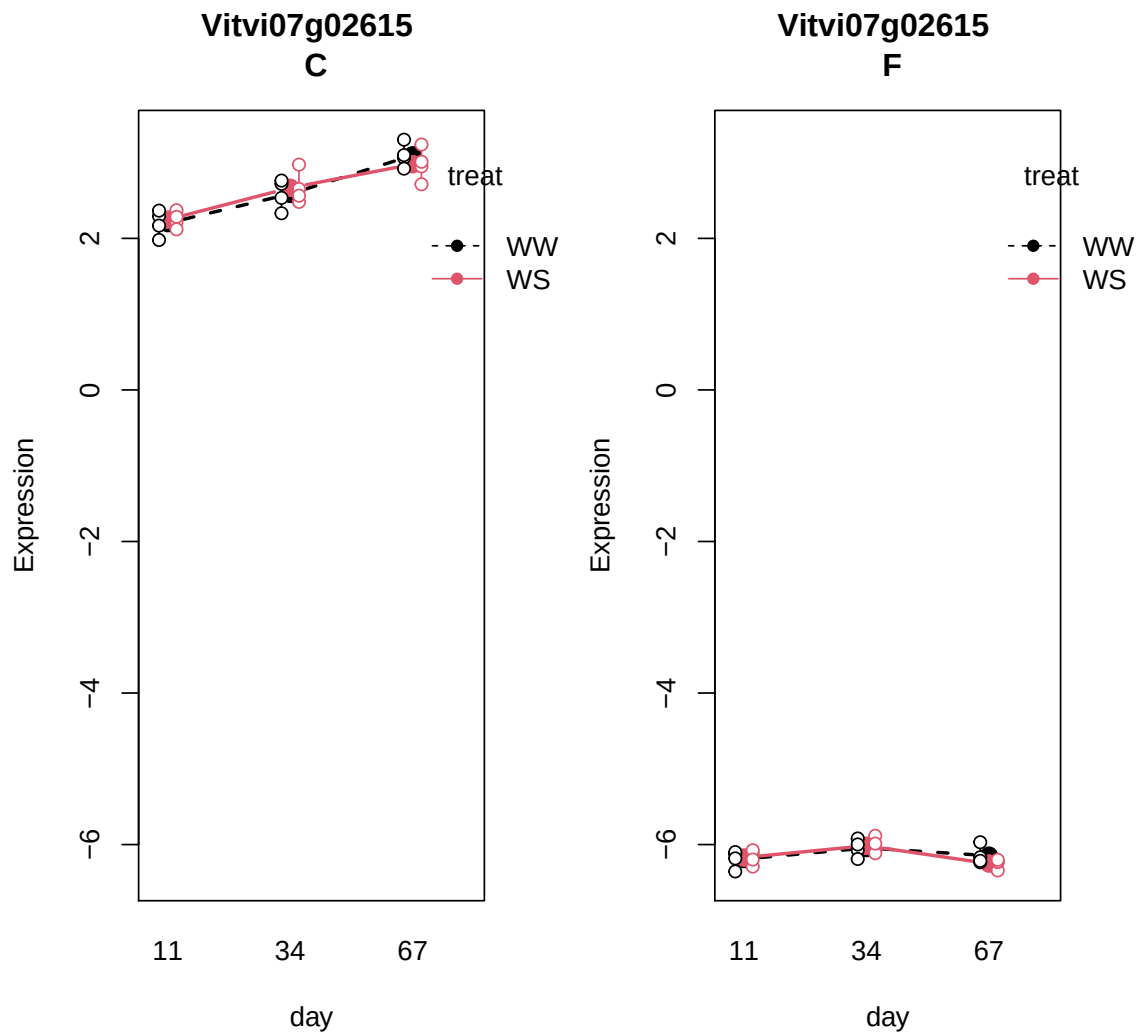

6.1 varietyF

6.1.1 Vitvi07g02615

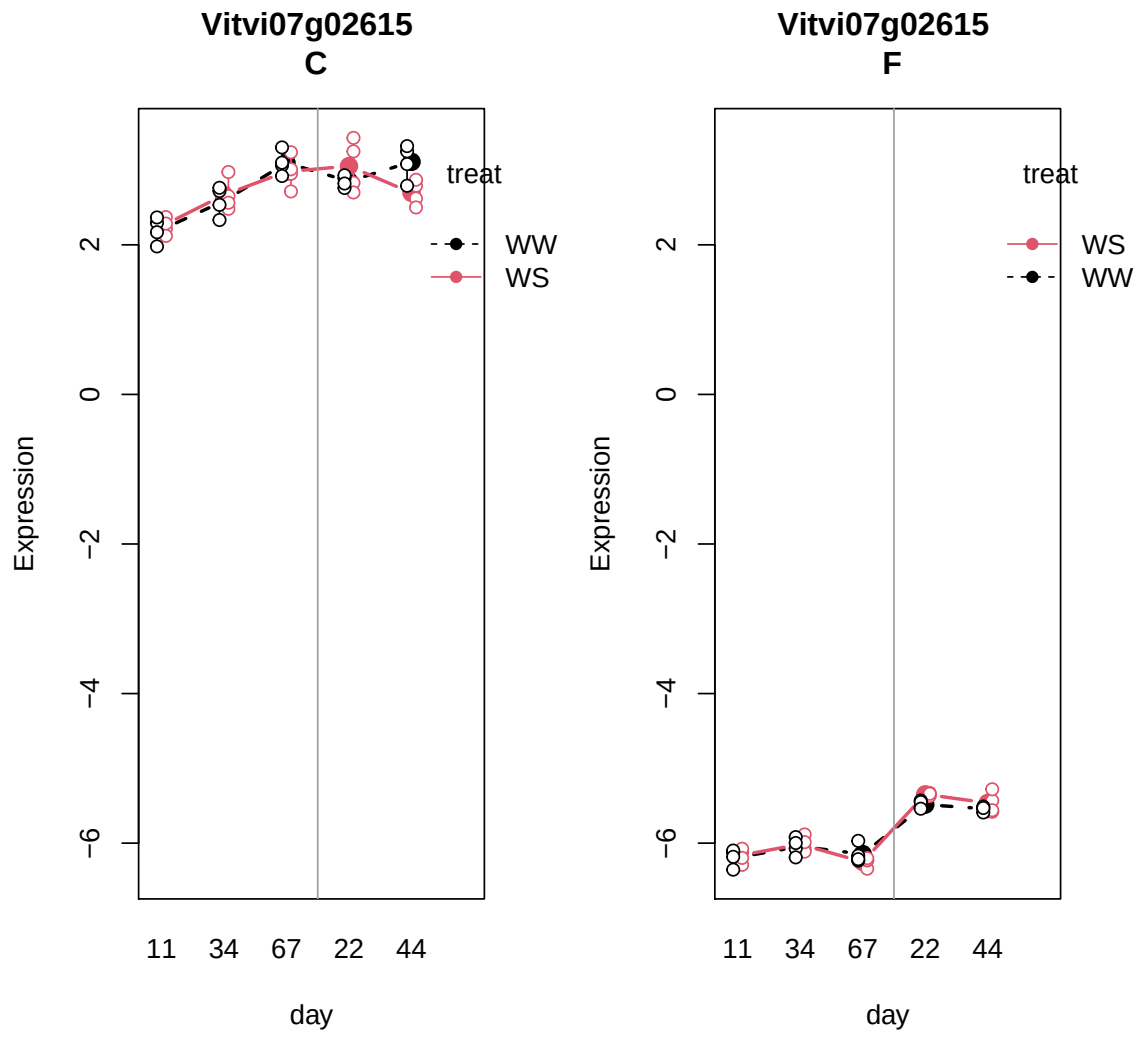
Coefficient varietyF for Vitvi07g02615.

```
> tt[varname,]
      logFC  AveExpr      t    P.Value
Vitvi07g02615 -8.392433 -1.753338 -78.42826 2.70586e-44
      adj.P.Val      B
Vitvi07g02615 4.124271e-40 88.57781

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

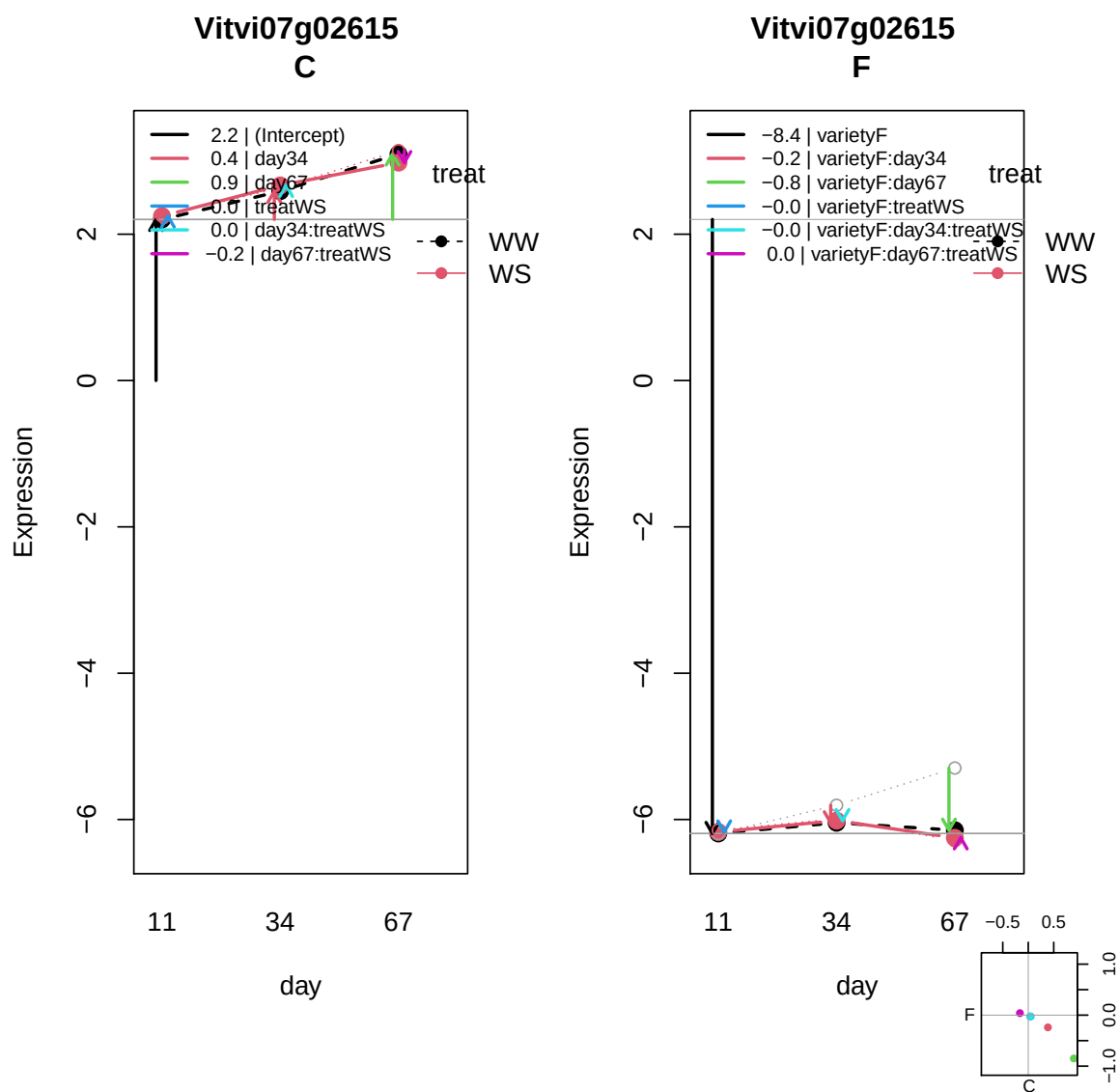
      (Intercept)  varietyF    day34    day67
Vitvi07g02615    2.201816 -8.392433 0.3853671 0.894149
      treatWS varietyF:day34 varietyF:day67
Vitvi07g02615  0.04584727   -0.2397047   -0.8498626
      varietyF:treatWS day34:treatWS day67:treatWS
Vitvi07g02615   -0.0259206   0.03446559   -0.163691
      varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi07g02615   -0.02465625   0.03959792

```

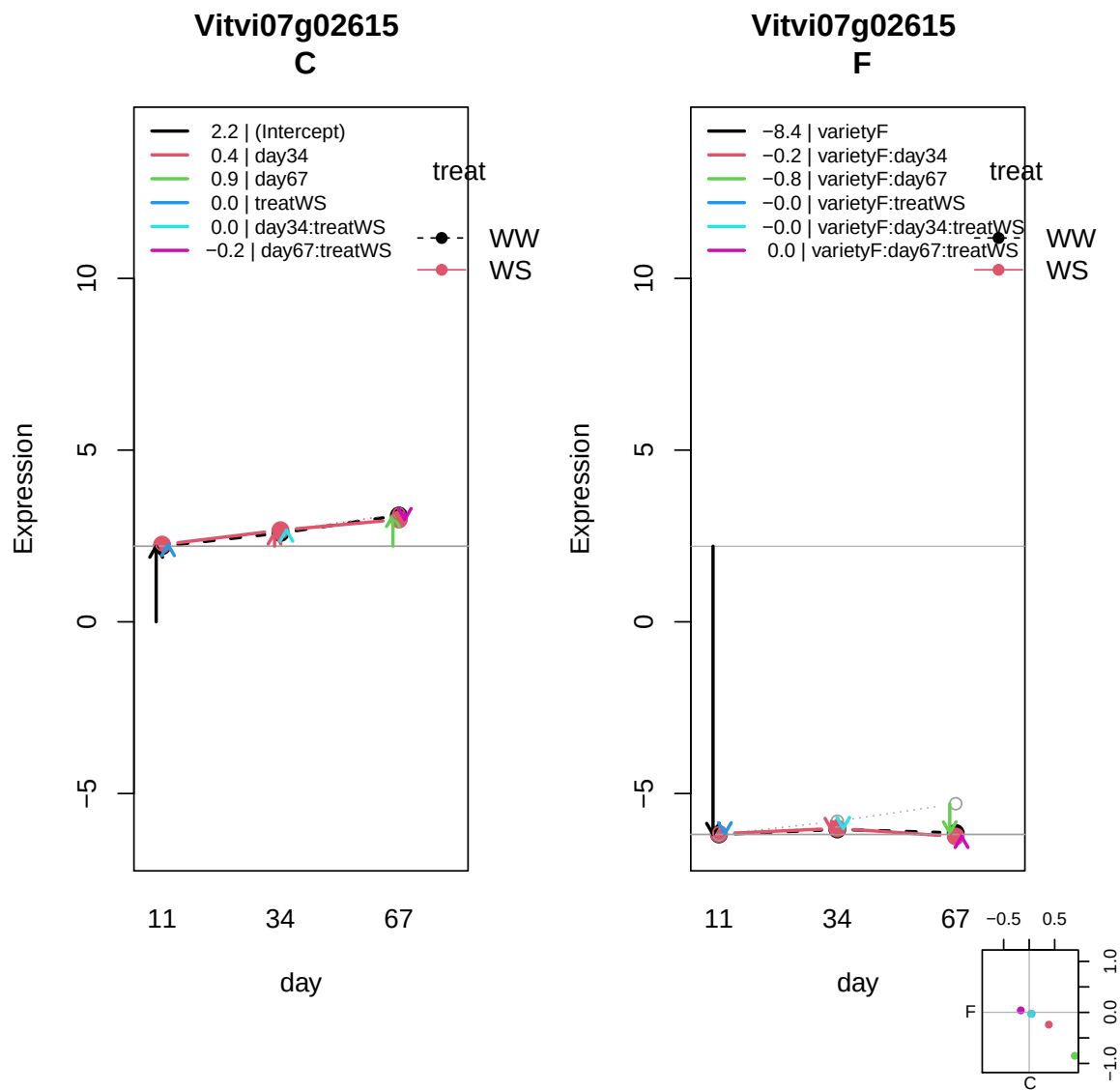
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

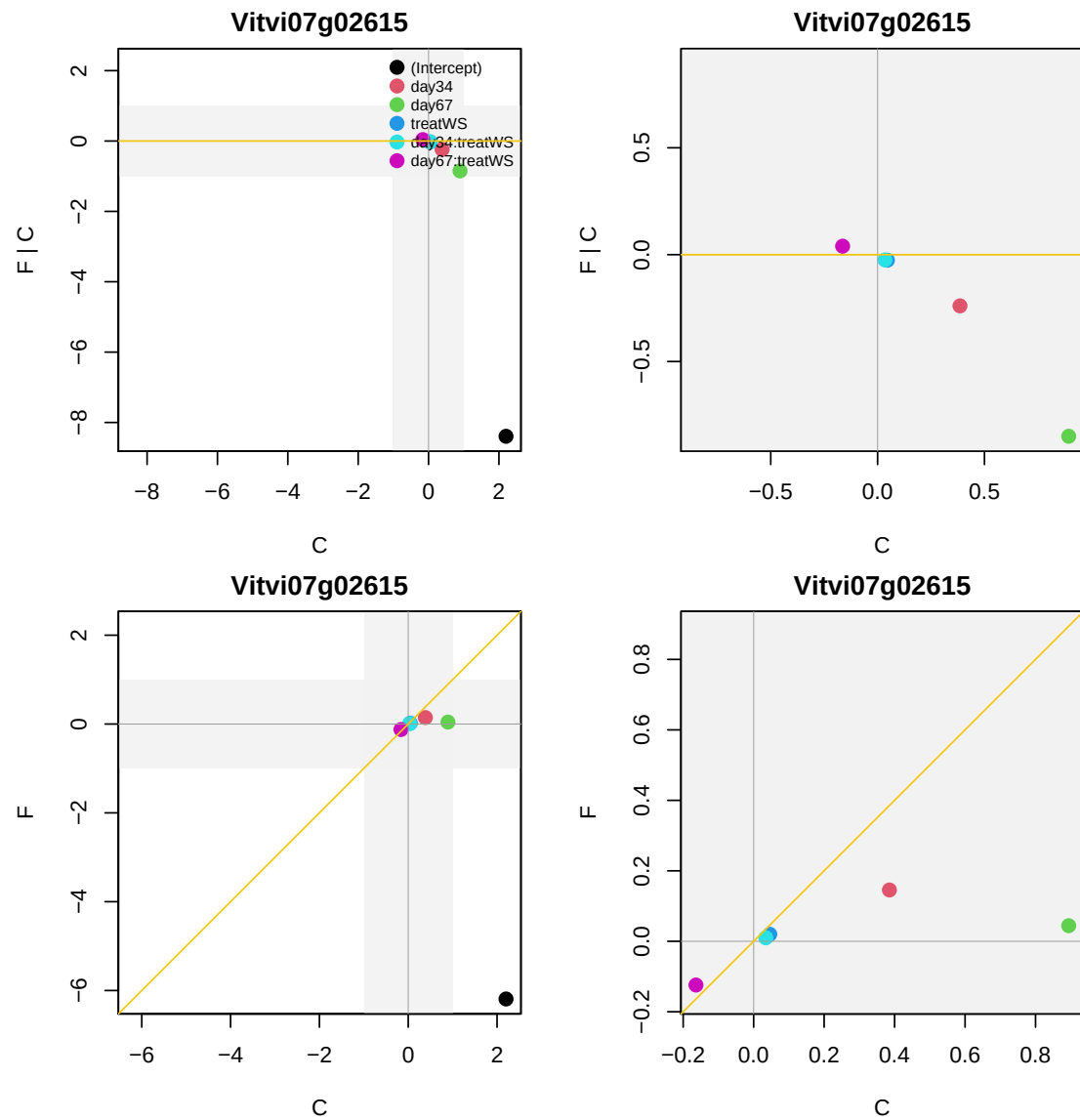


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

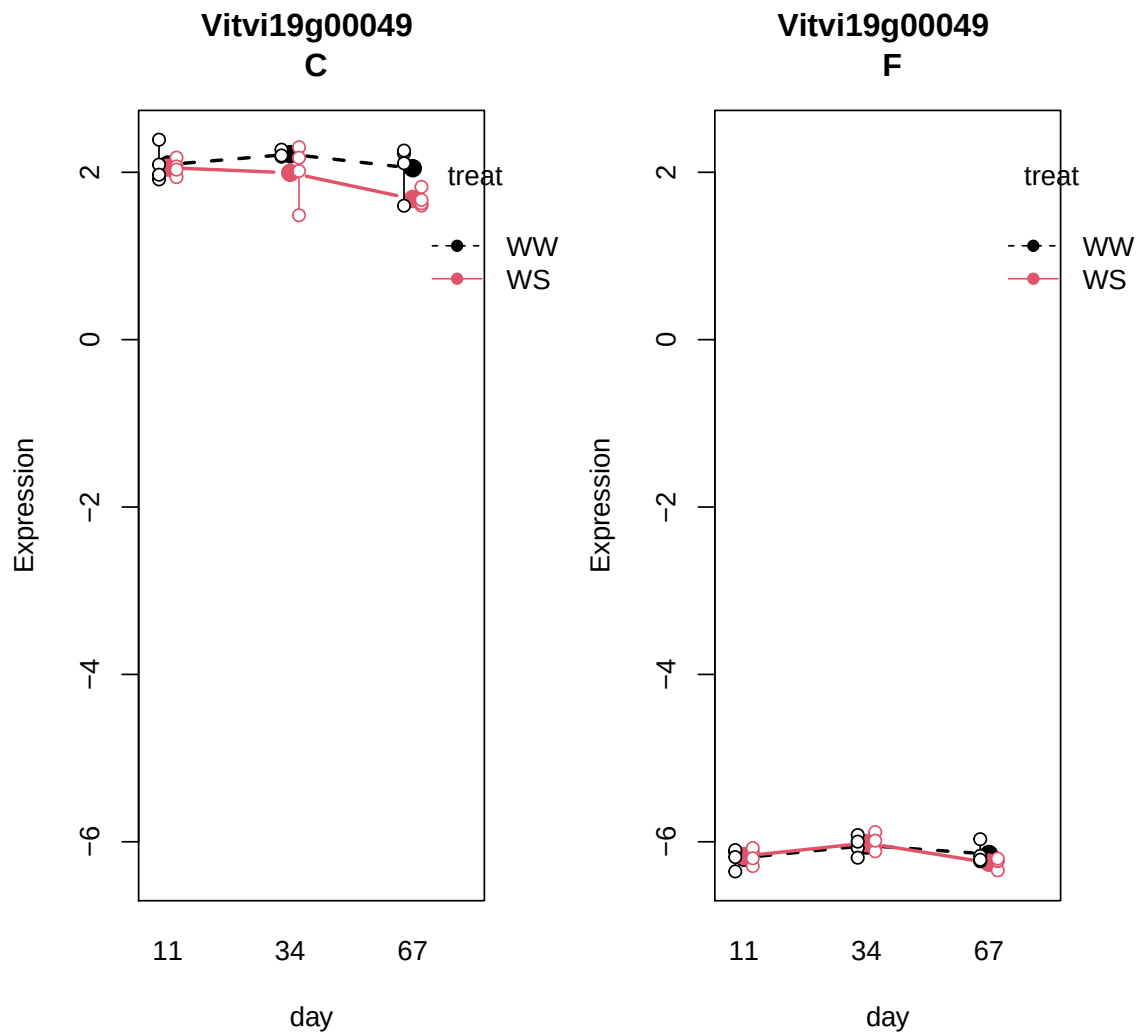
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



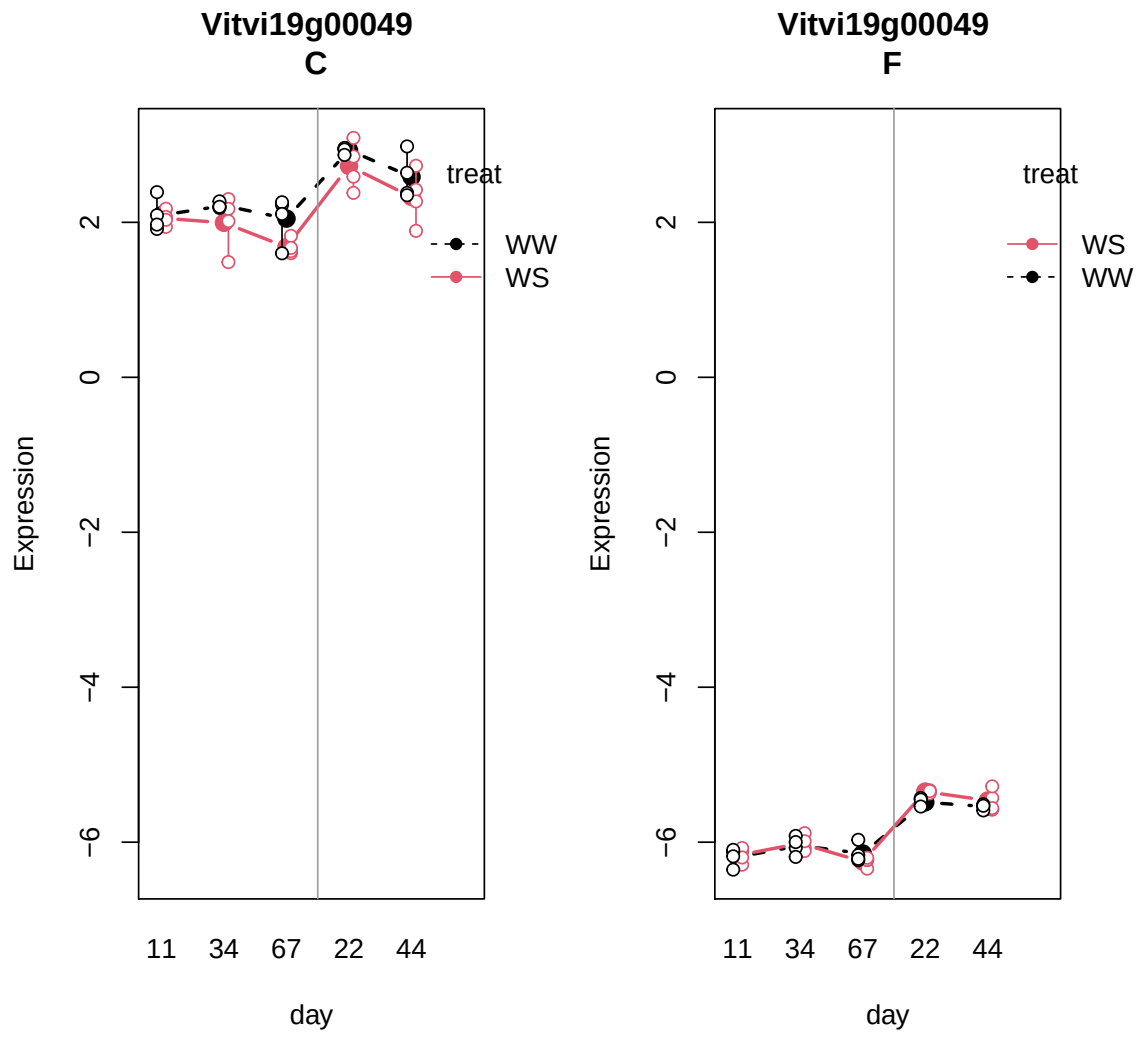
6.1.2 Vitvi19g00049

Coefficient varietyF for Vitvi19g00049.

```
> tt[varname,]  
           logFC  AveExpr      t      P.Value  
Vitvi19g00049 -8.282582 -2.060936 -67.74797 7.537723e-42  
           adj.P.Val      B  
Vitvi19g00049 5.744498e-38 83.83015  
  
> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```




```
> fit1[varname,]$coefficients
```

```

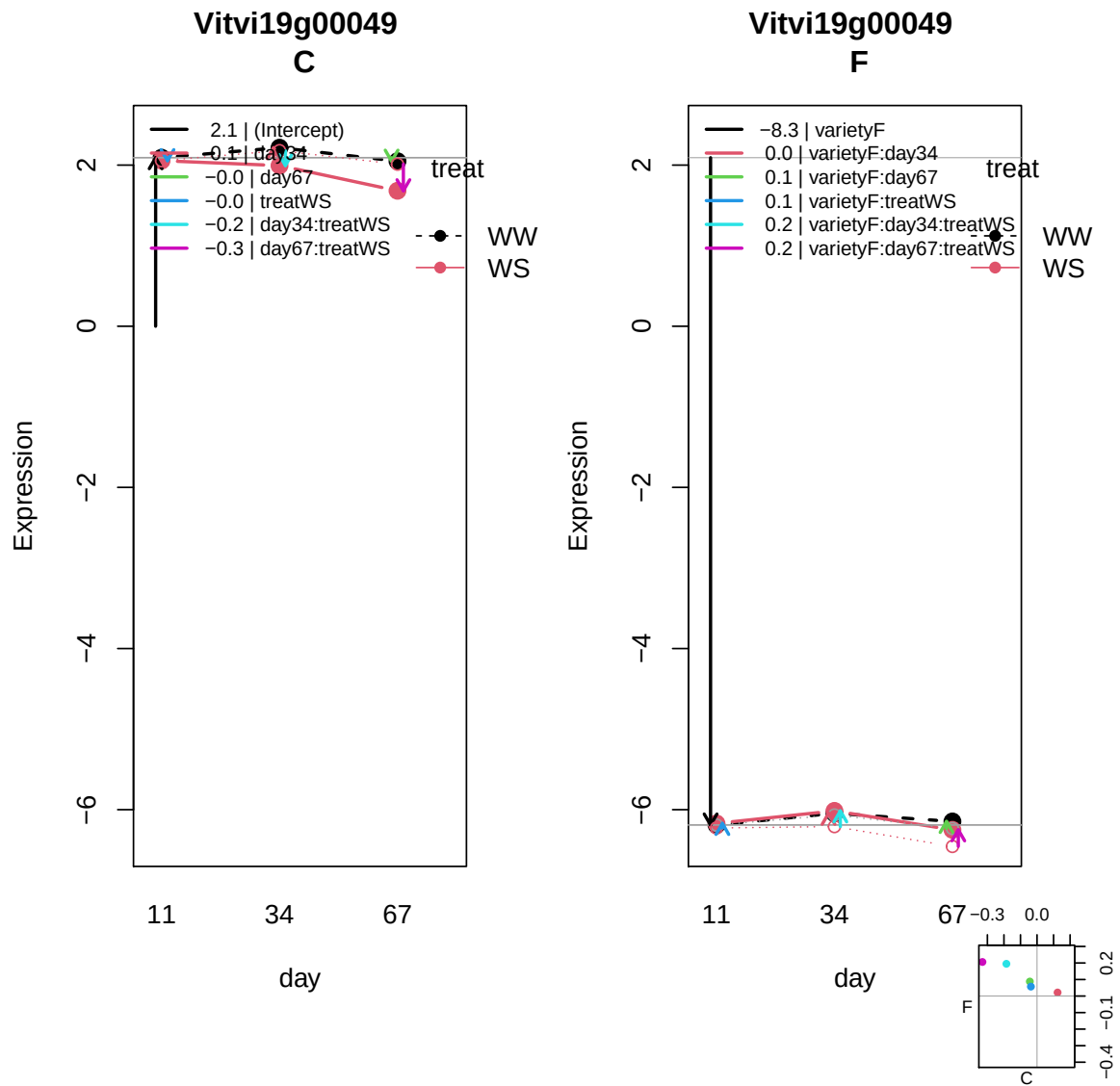
              (Intercept)  varietyF      day34      day67
Vitvi19g00049      2.091965 -8.282582  0.1242742 -0.04343288
              treatWS  varietyF:day34  varietyF:day67
Vitvi19g00049 -0.03706199      0.02138824      0.08771932
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi19g00049      0.05698866      -0.1851348      -0.3300763
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi19g00049      0.1949442      0.2059832

```

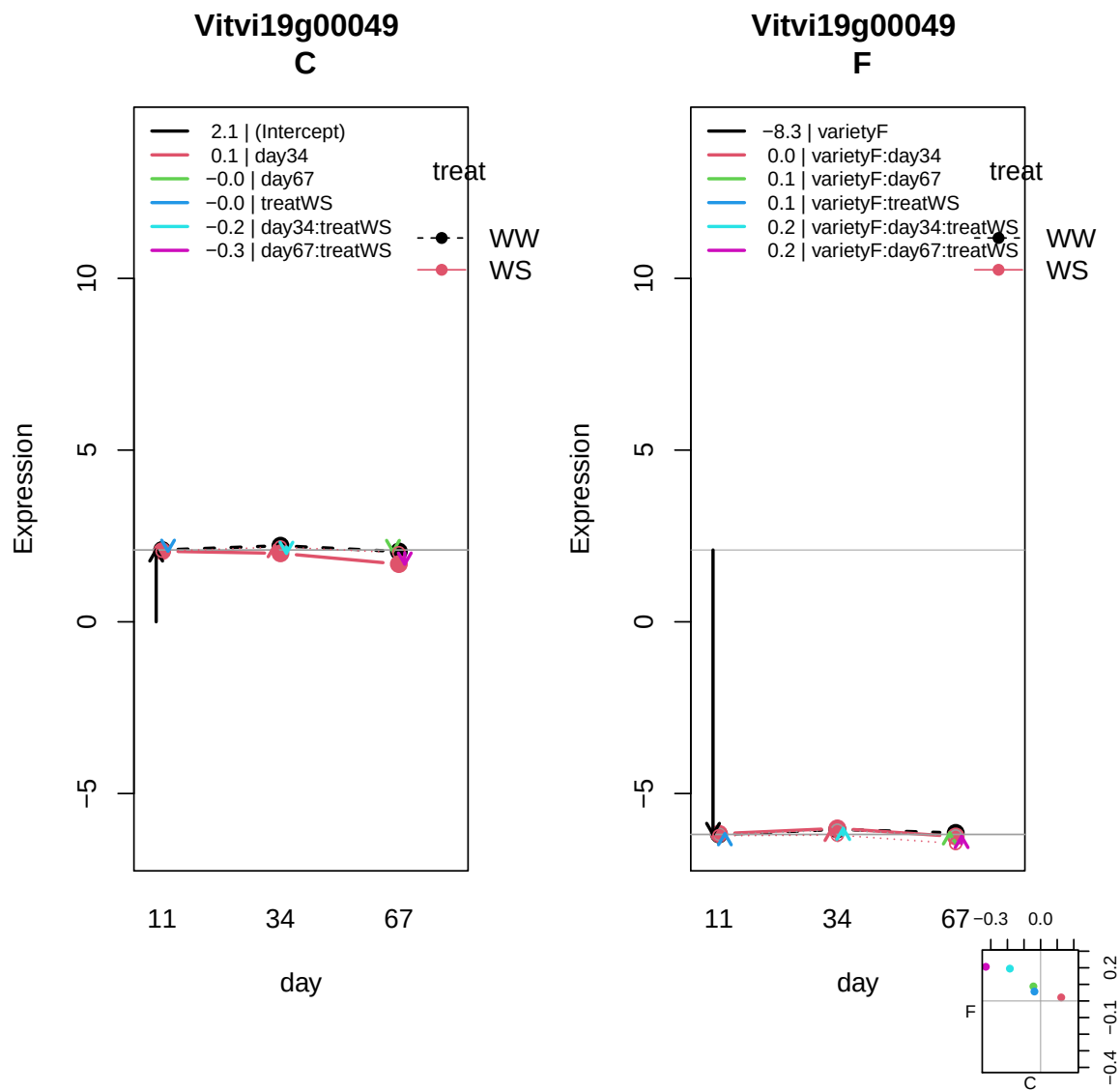
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

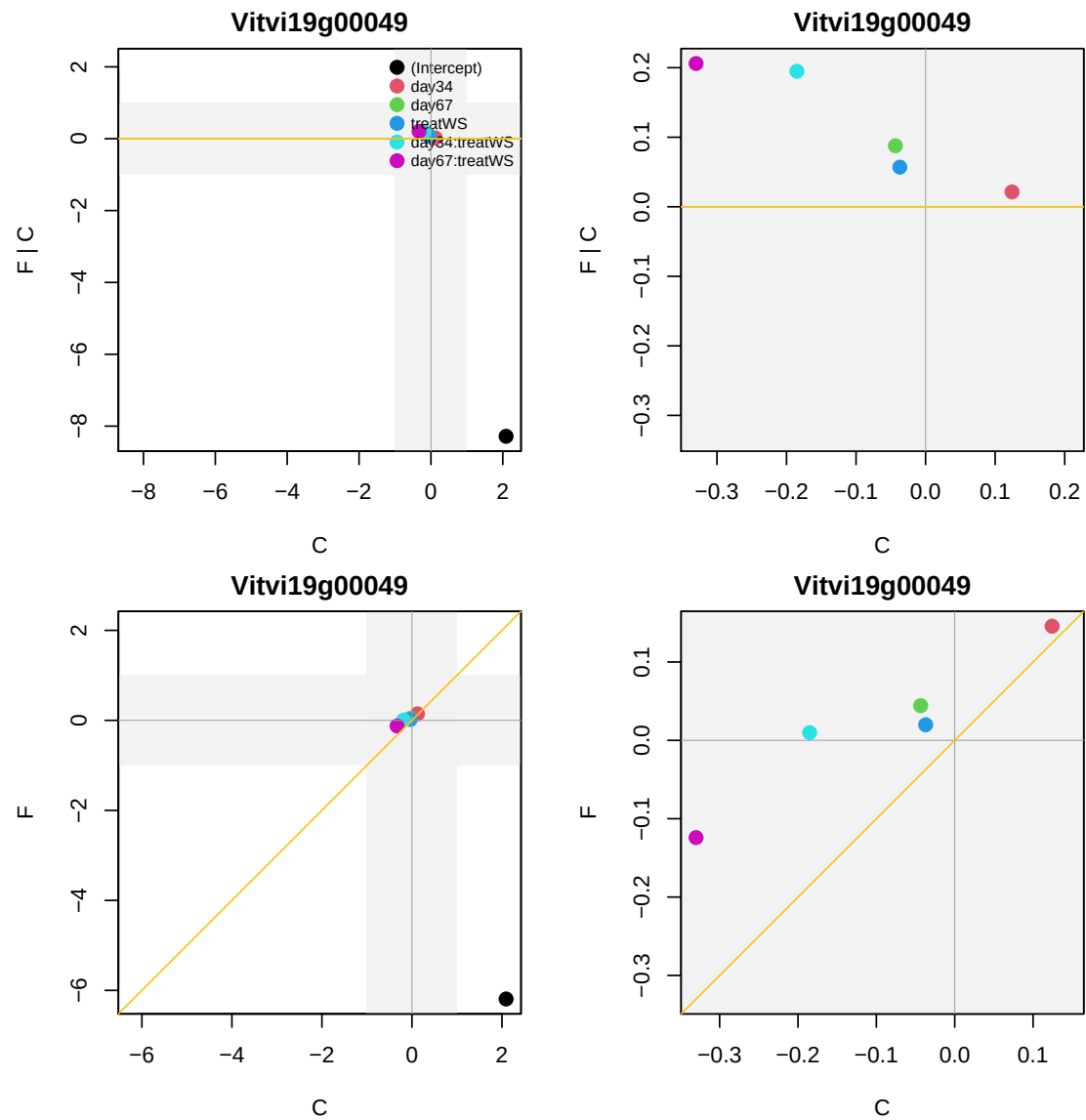


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

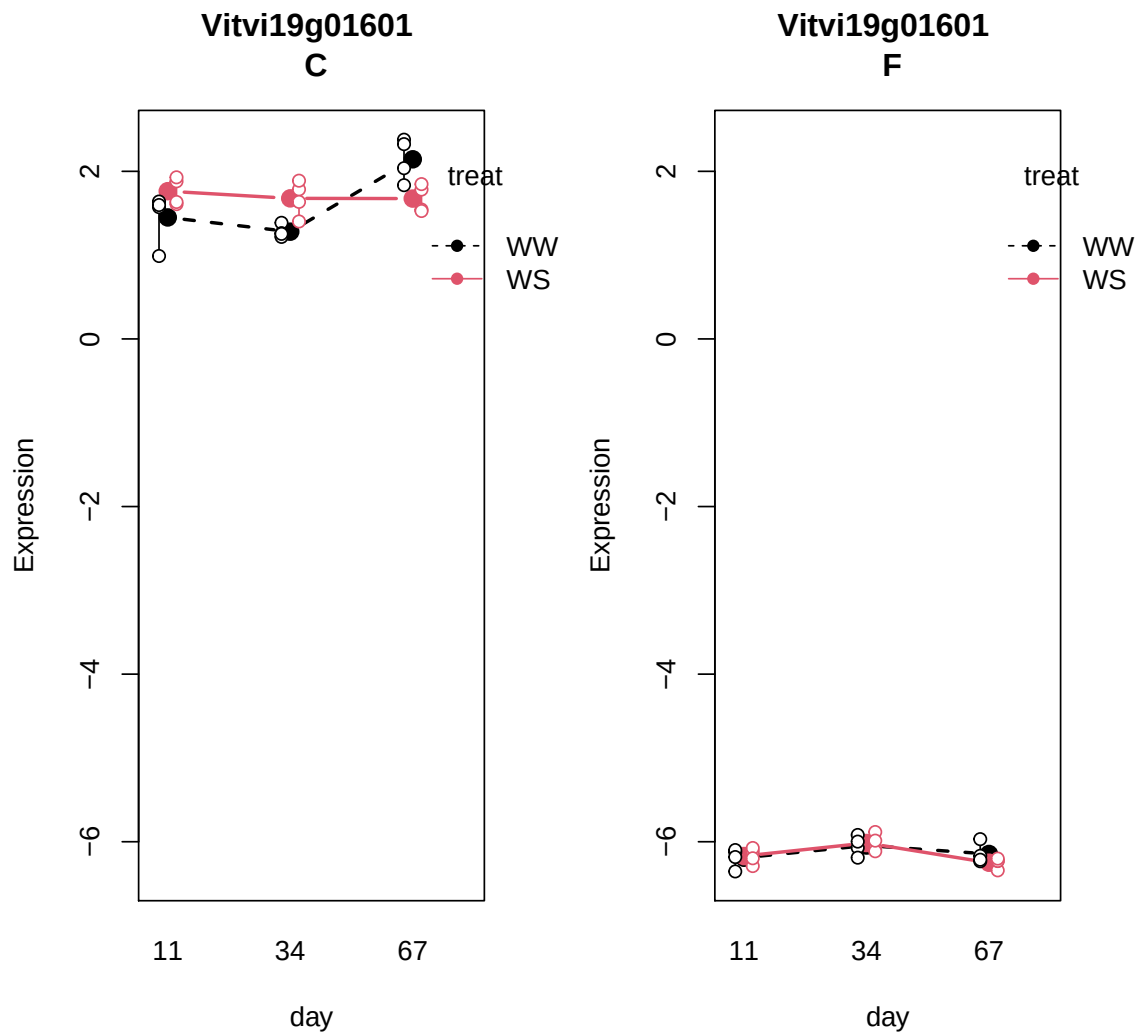
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



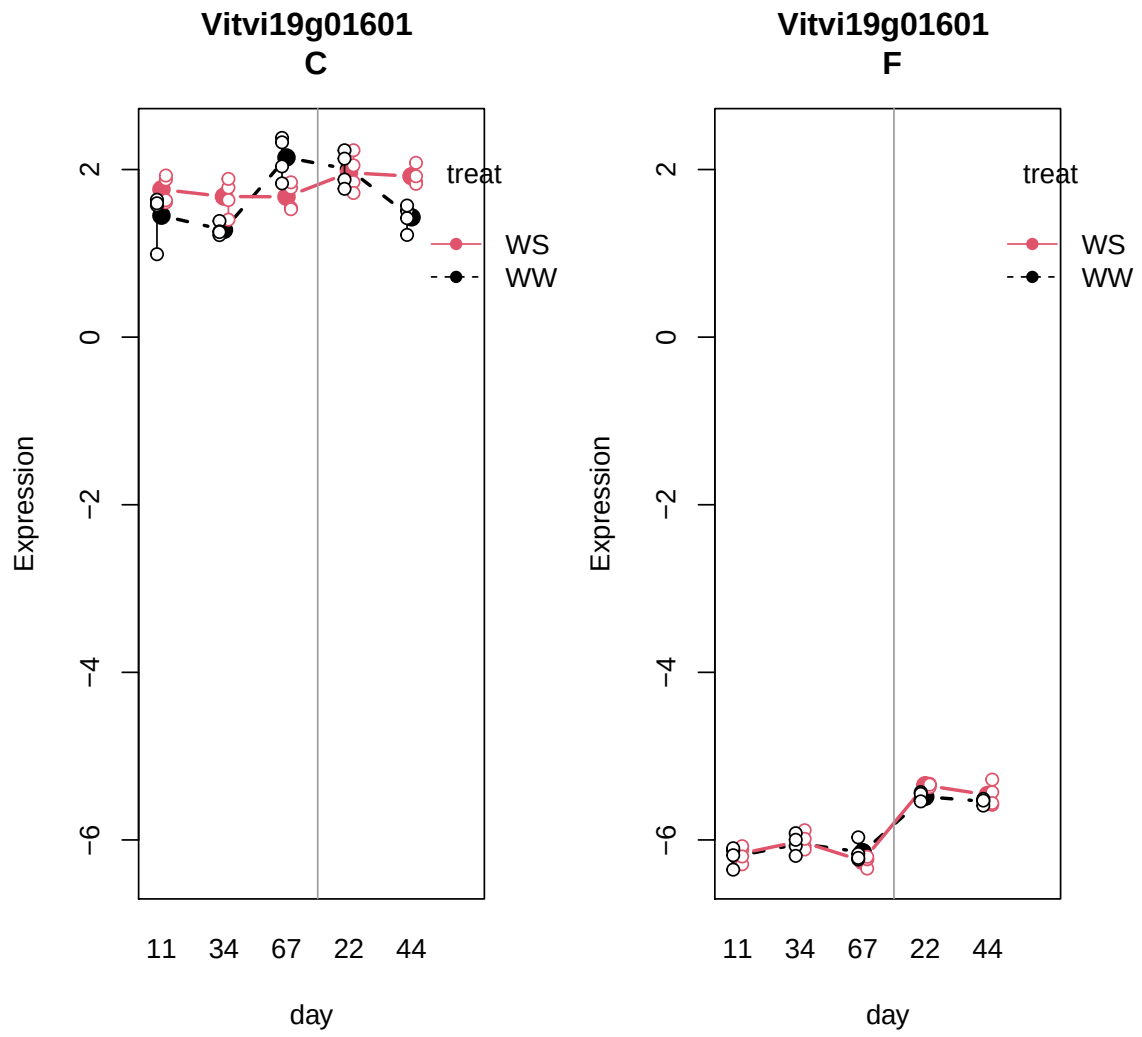
6.1.3 Vitvi19g01601

Coefficient varietyF for Vitvi19g01601.

```
> tt[varname,]
              logFC  AveExpr          t      P.Value
Vitvi19g01601 -7.640521 -2.235775 -64.45809 5.097747e-41
              adj.P.Val      B
Vitvi19g01601 2.589995e-37 82.1654
> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

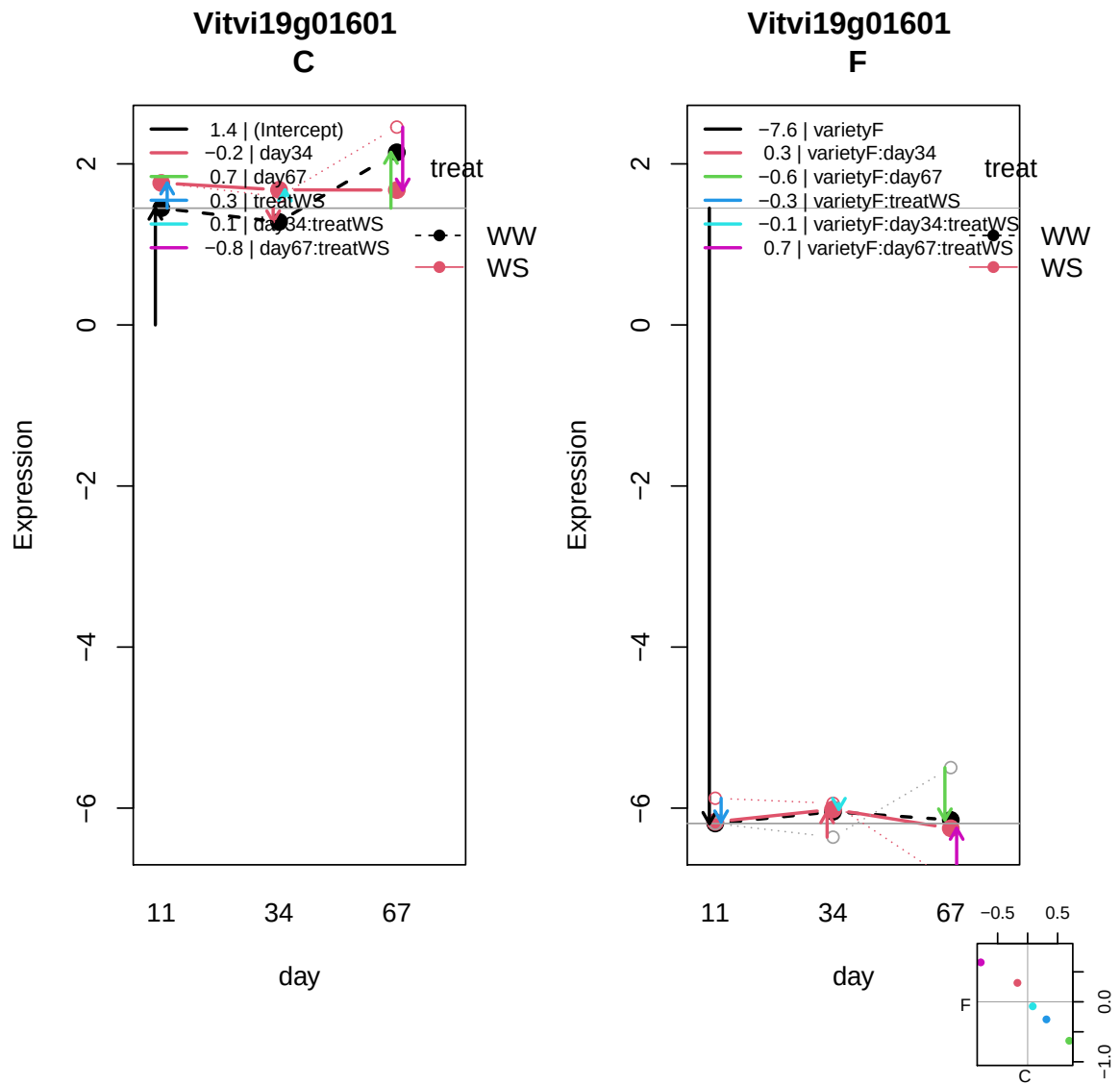
              (Intercept)  varietyF      day34      day67
Vitvi19g01601      1.449904 -7.640521 -0.1700925 0.6937454
              treatWS  varietyF:day34  varietyF:day67
Vitvi19g01601  0.3130909      0.3157549      -0.649459
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi19g01601      -0.2931642      0.08467925      -0.7816734
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi19g01601      -0.07486991      0.6575803

```

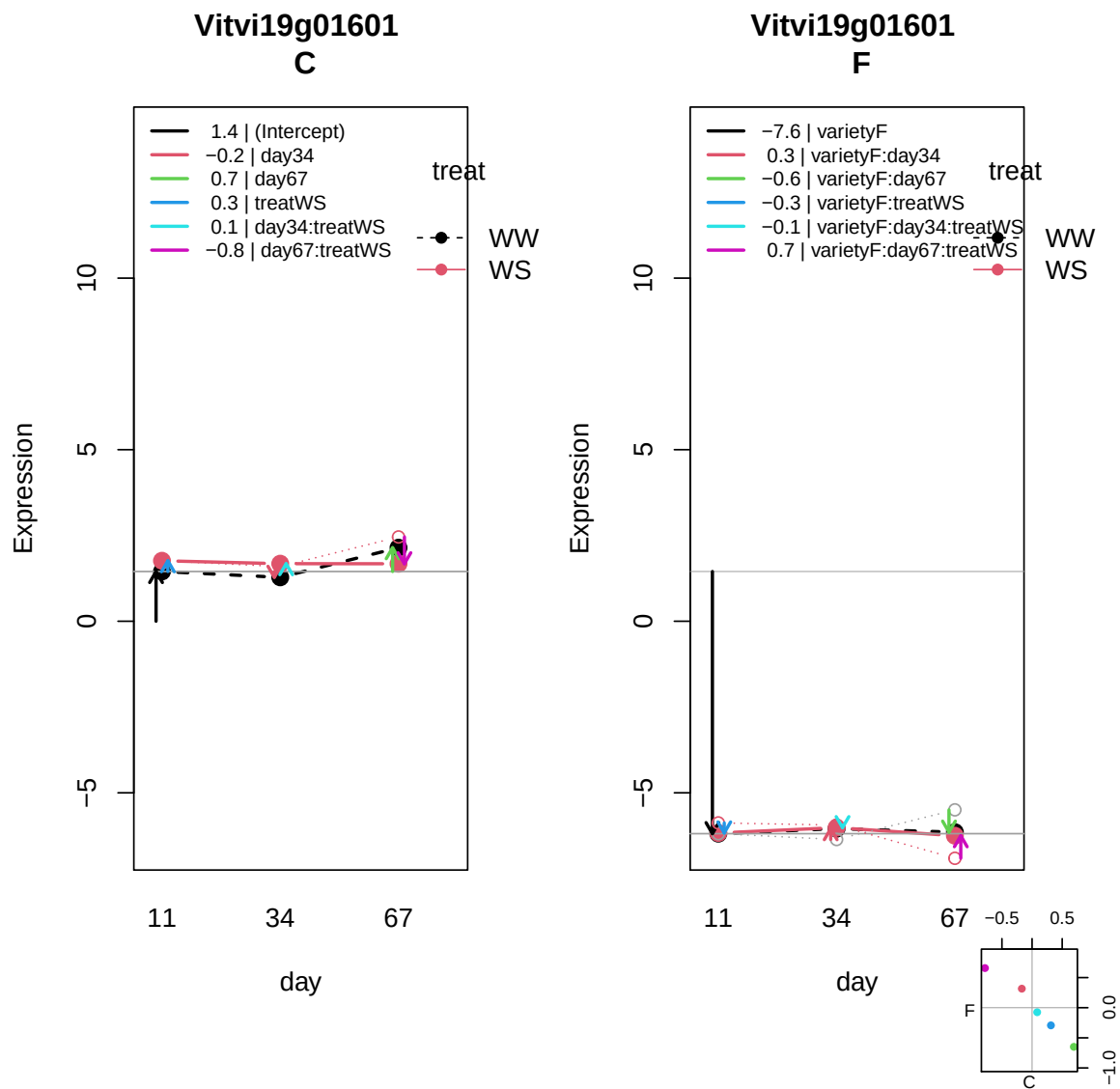
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

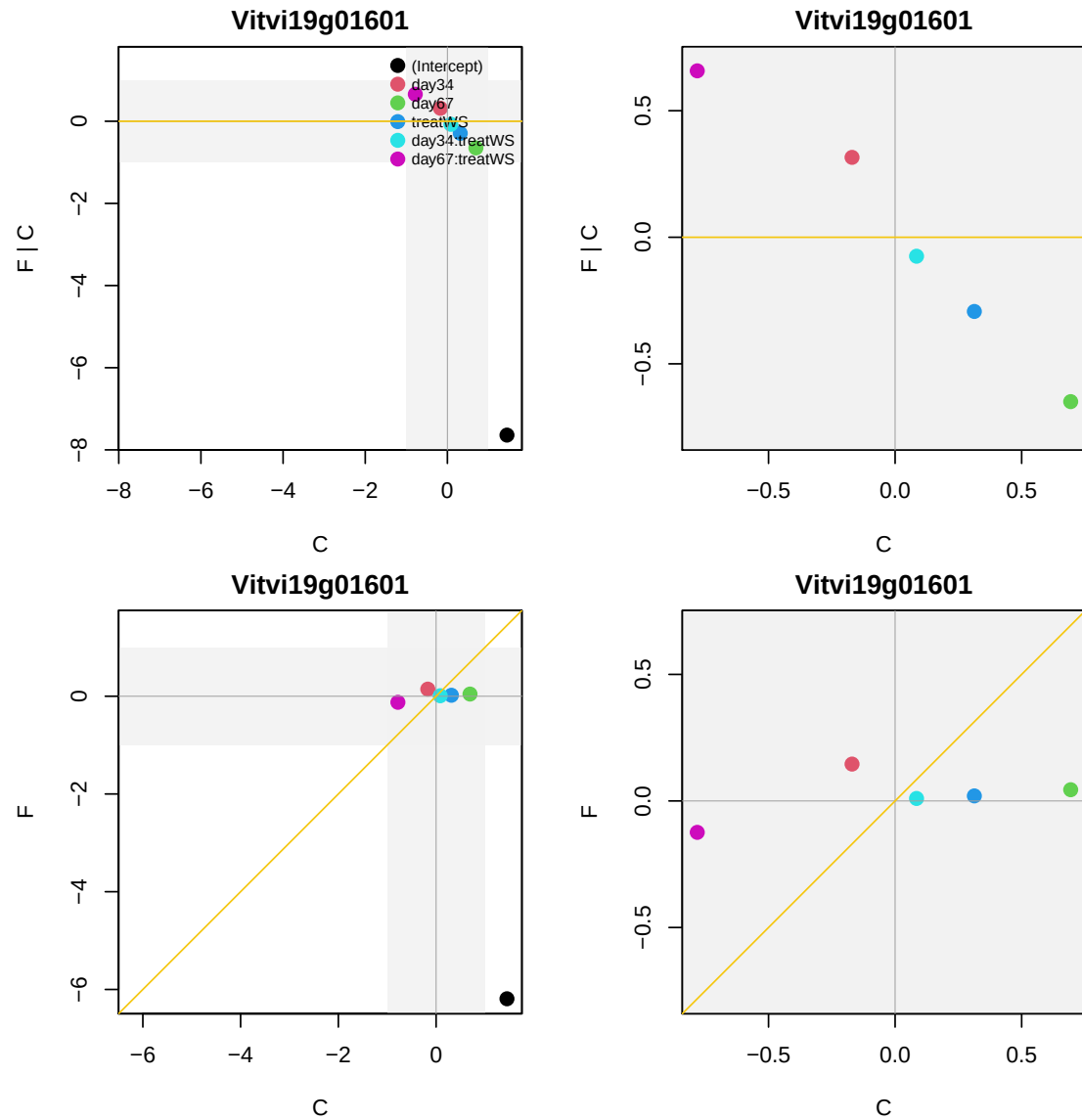


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

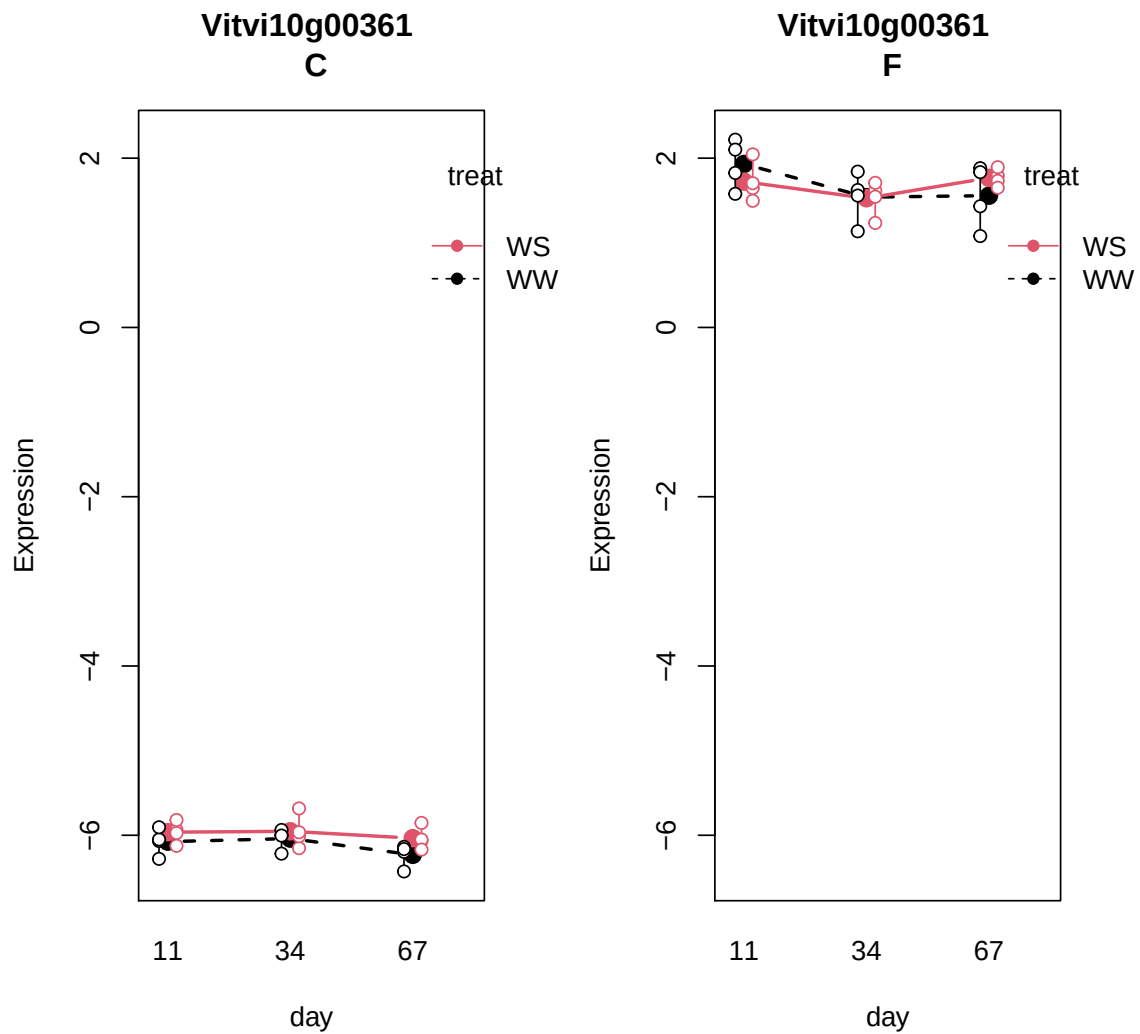
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



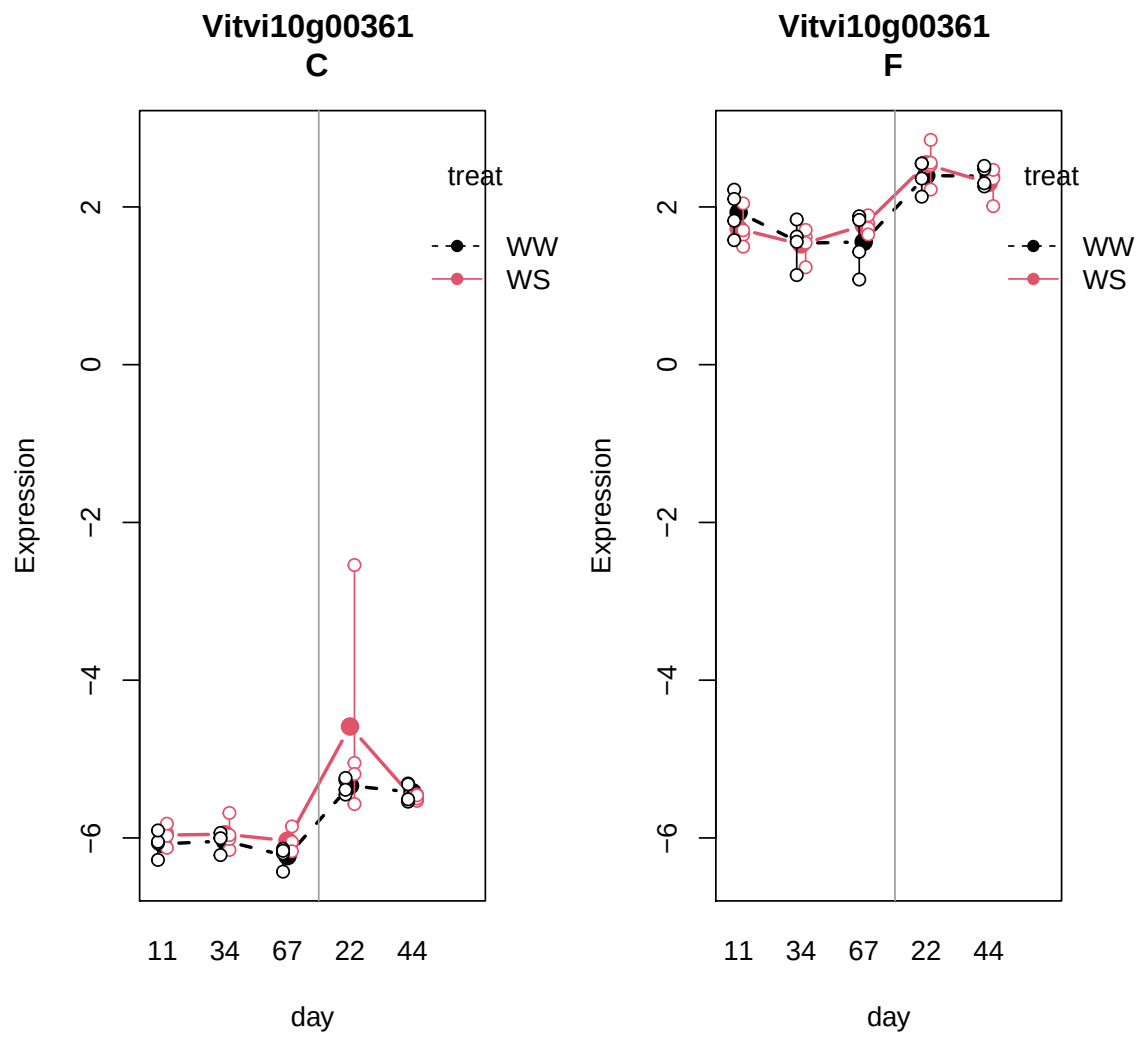
6.1.4 Vitvi10g00361

Coefficient varietyF for Vitvi10g00361.

```
> tt[varname,]  
          logFC  AveExpr      t    P.Value  
Vitvi10g00361 8.006162 -2.187765 53.3898 6.94575e-38  
          adj.P.Val      B  
Vitvi10g00361 2.646678e-34 75.67796  
  
> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

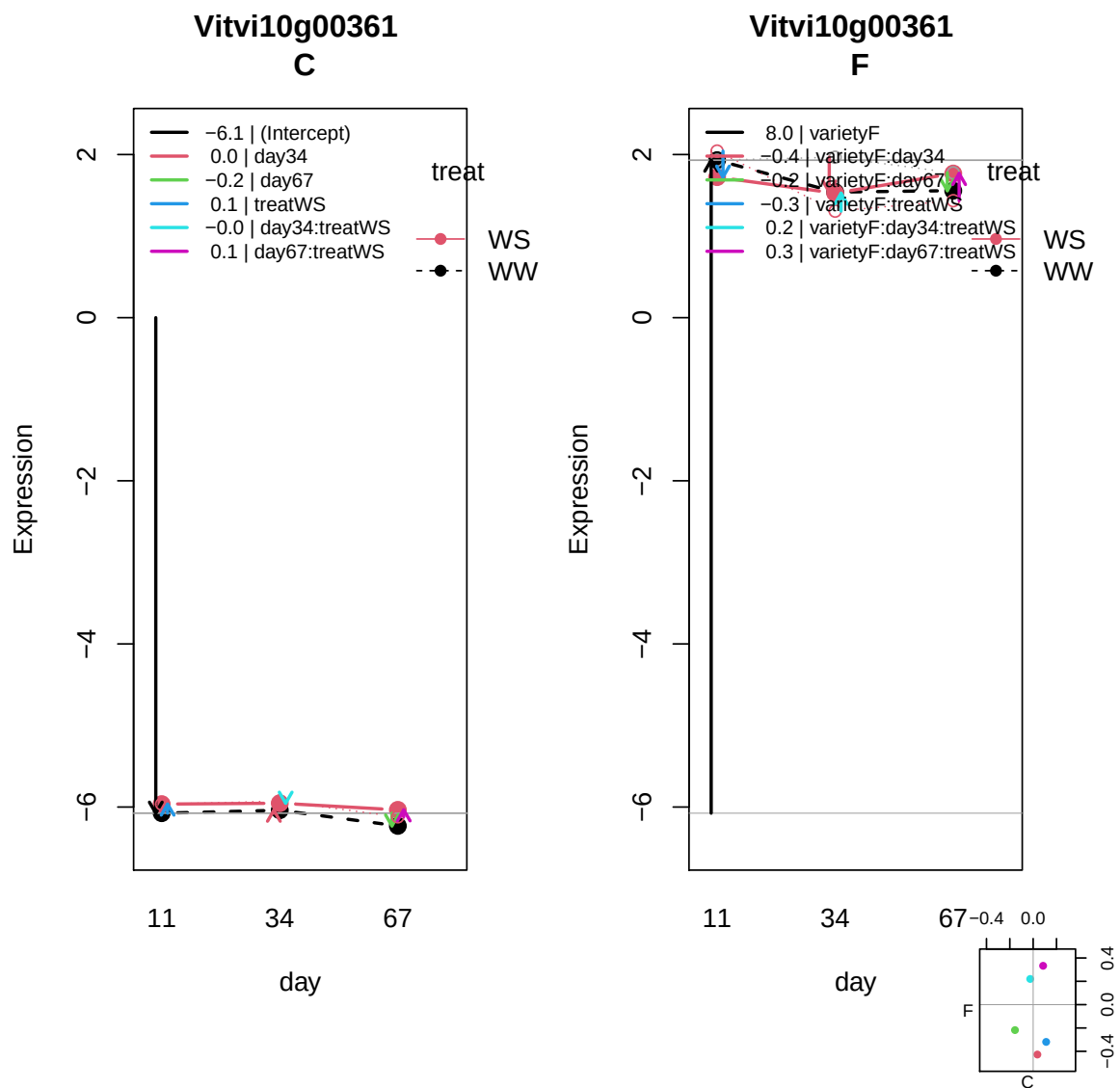


```

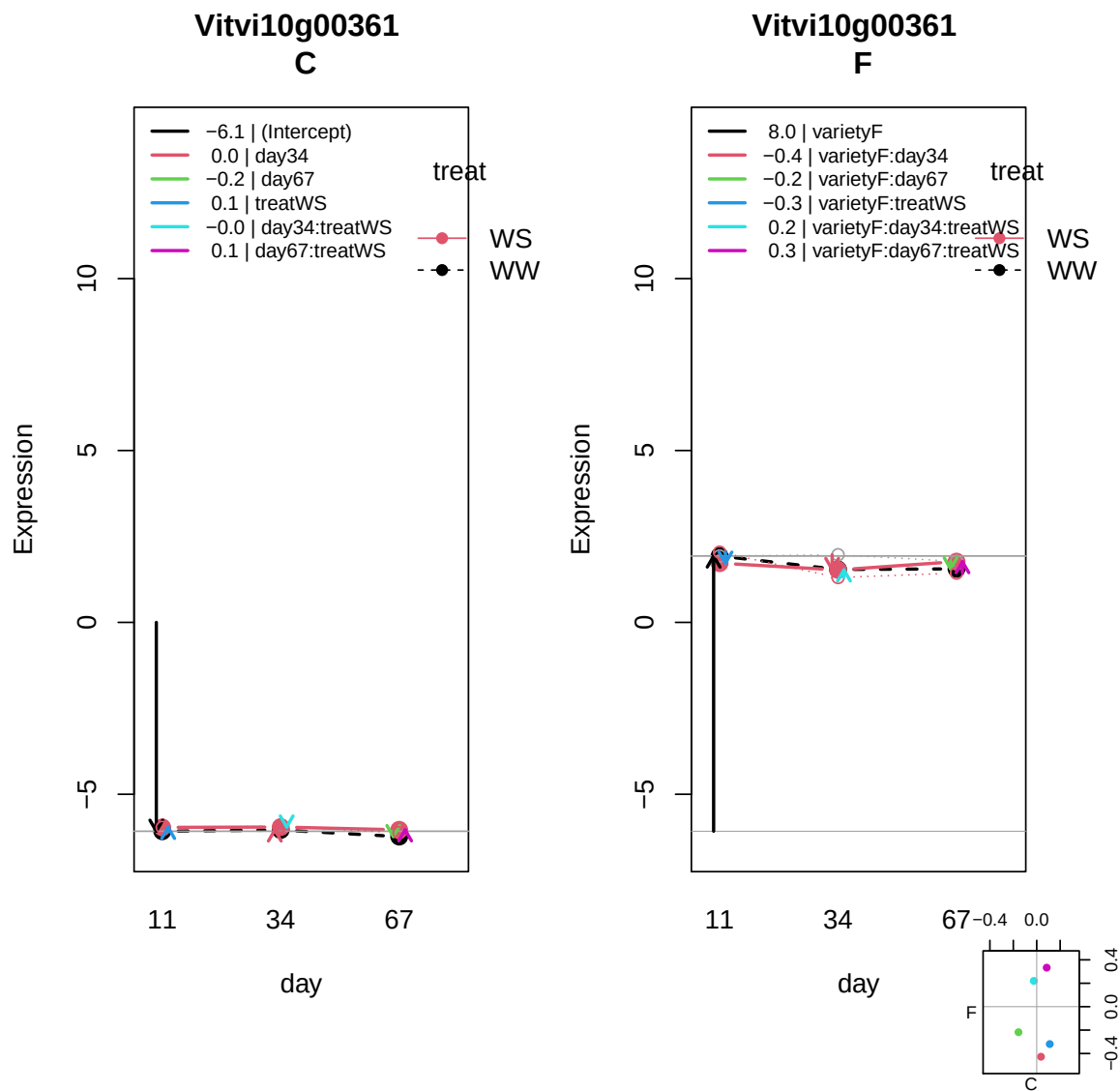
> fit1[varname,]$coefficients
              (Intercept)  varietyF      day34      day67
Vitvi10g00361    -6.075283  8.006162  0.03624569 -0.1556951
              treatWS  varietyF:day34  varietyF:day67
Vitvi10g00361  0.1112668    -0.4274759    -0.2181503
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi10g00361    -0.3193752    -0.02532272    0.08522965
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi10g00361          0.2200764          0.3329221

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

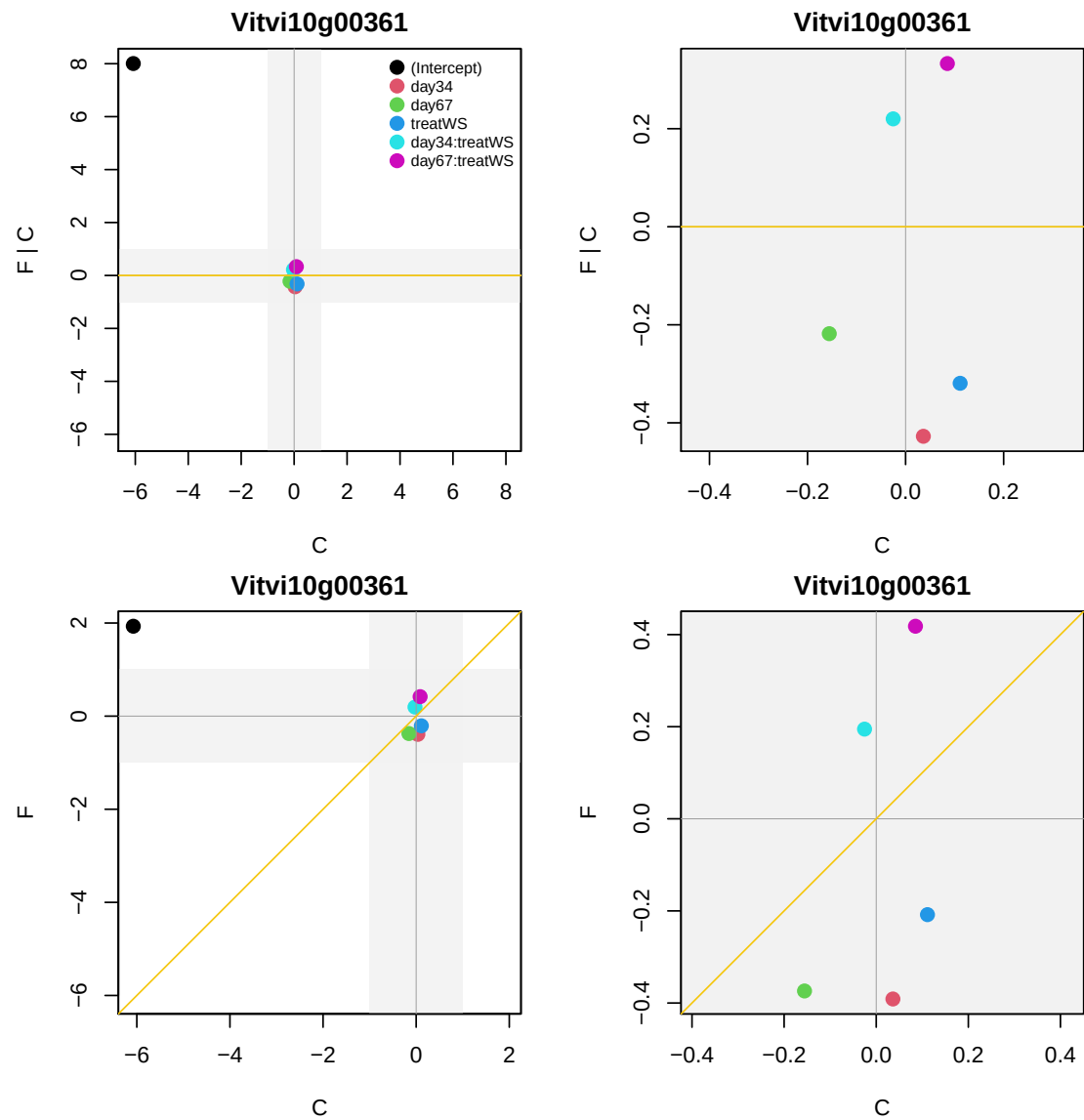


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

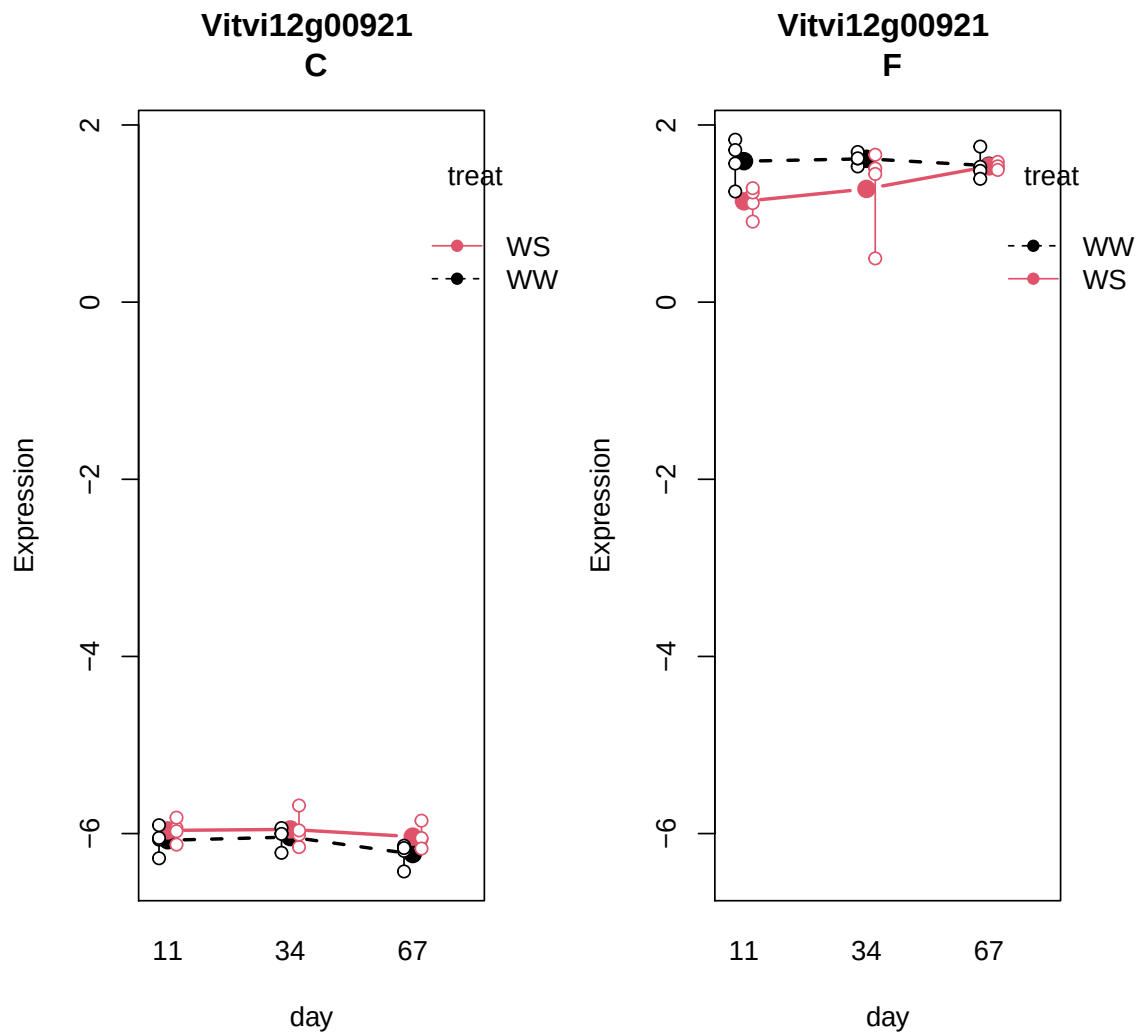
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



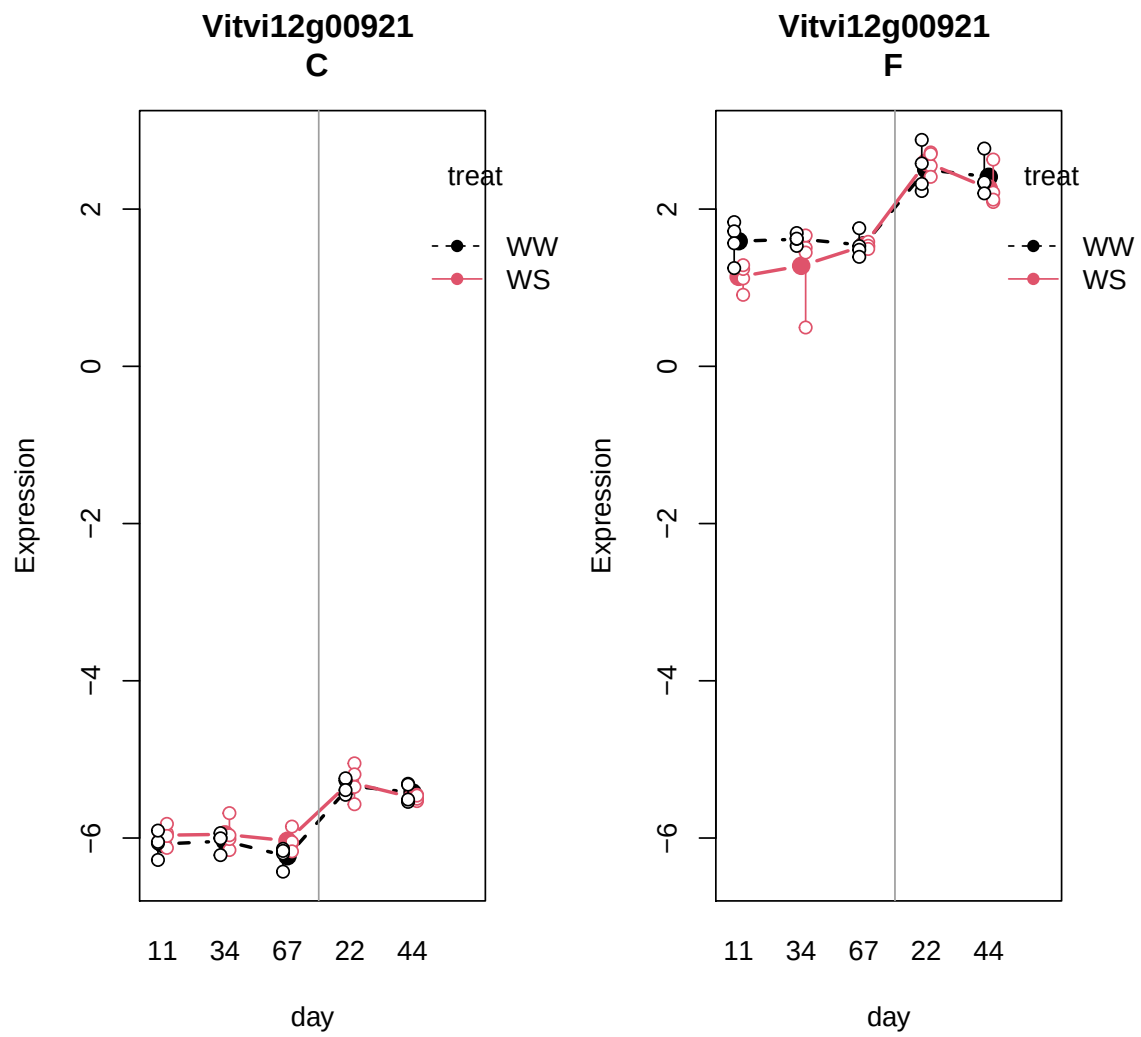
6.1.5 Vitvi12g00921

Coefficient varietyF for Vitvi12g00921.

```
> tt[varname,]
      logFC  AveExpr      t    P.Value
Vitvi12g00921 7.666762 -2.299872 51.73273 2.316875e-37
      adj.P.Val      B
Vitvi12g00921 7.062761e-34 74.5679
> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

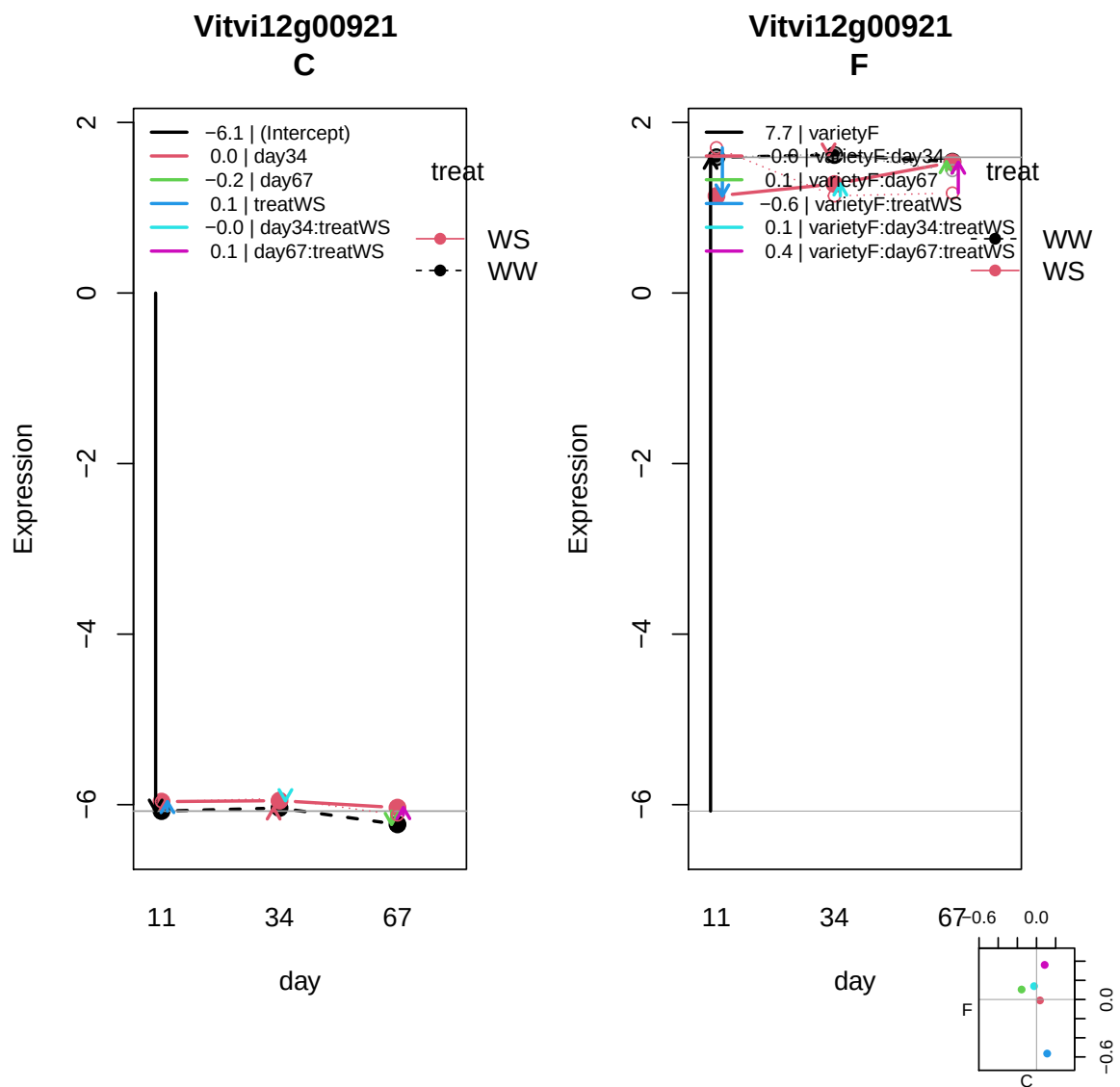
      (Intercept) varietyF      day34      day67
Vitvi12g00921  -6.075283 7.666762 0.03624569 -0.1556951
      treatWS varietyF:day34 varietyF:day67
Vitvi12g00921  0.1112668 -0.009688064      0.1041115
      varietyF:treatWS day34:treatWS day67:treatWS
Vitvi12g00921      -0.5647425 -0.02532272      0.08522965
      varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi12g00921      0.1390119      0.3611047

```

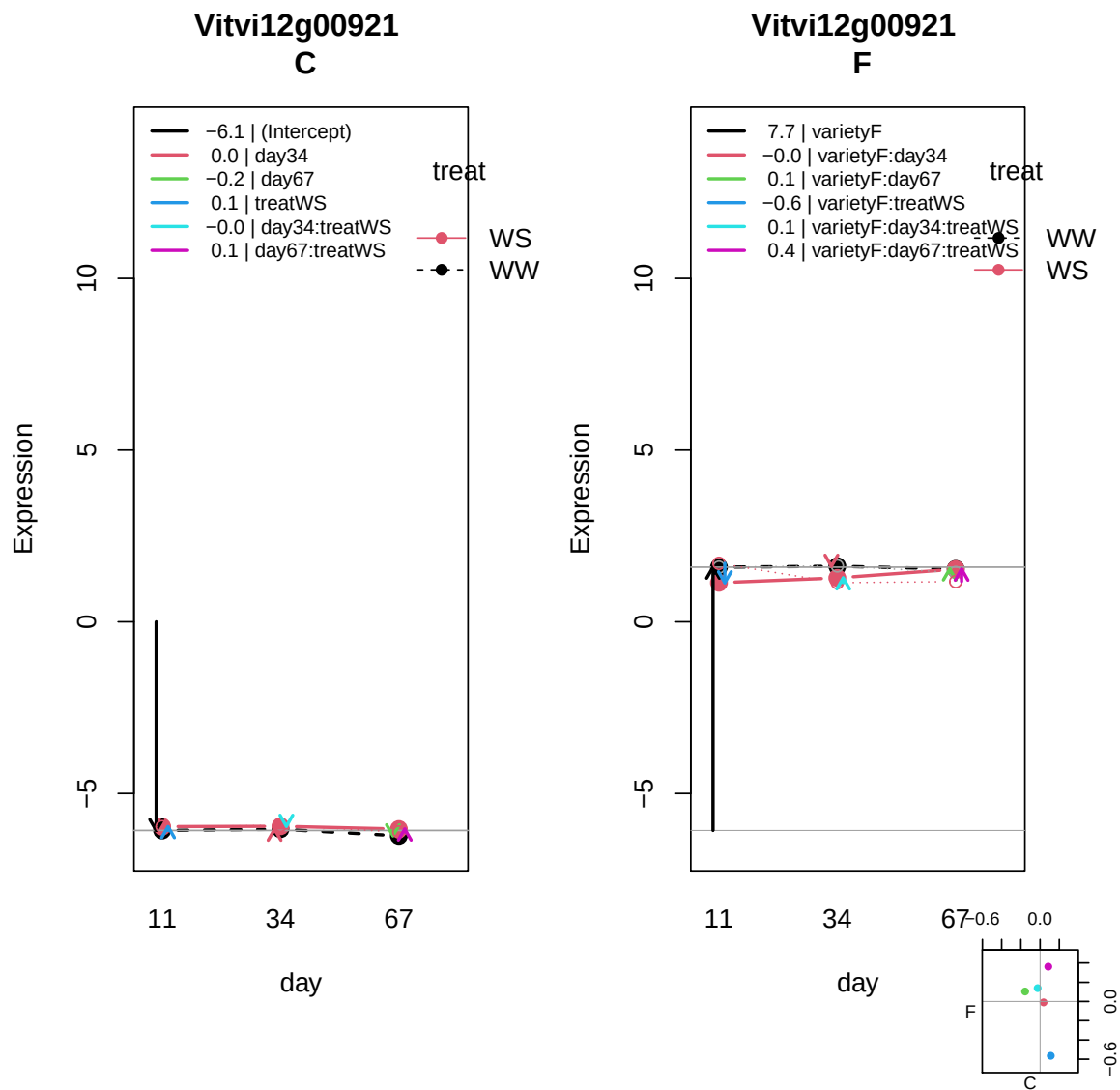
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

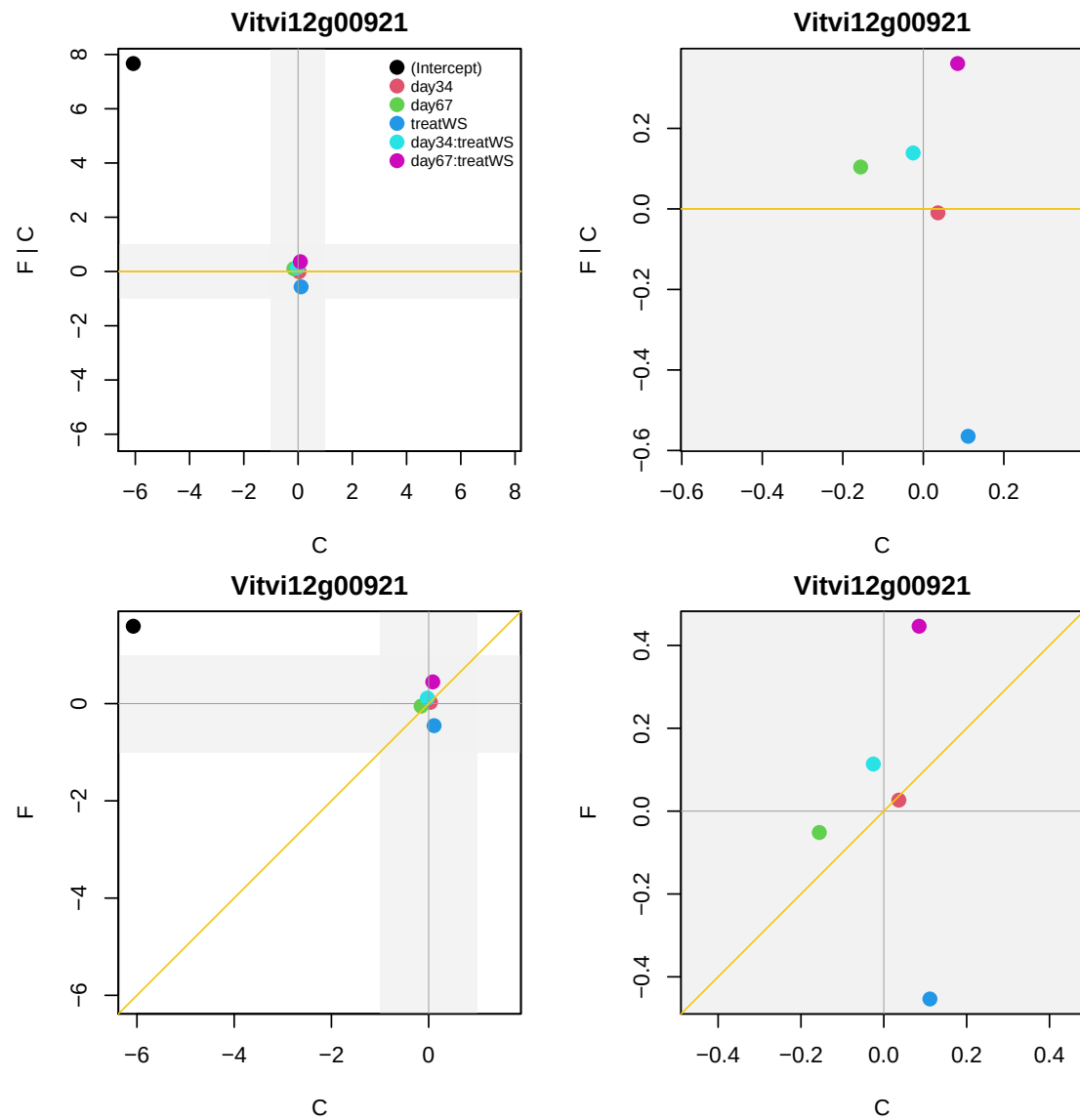



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

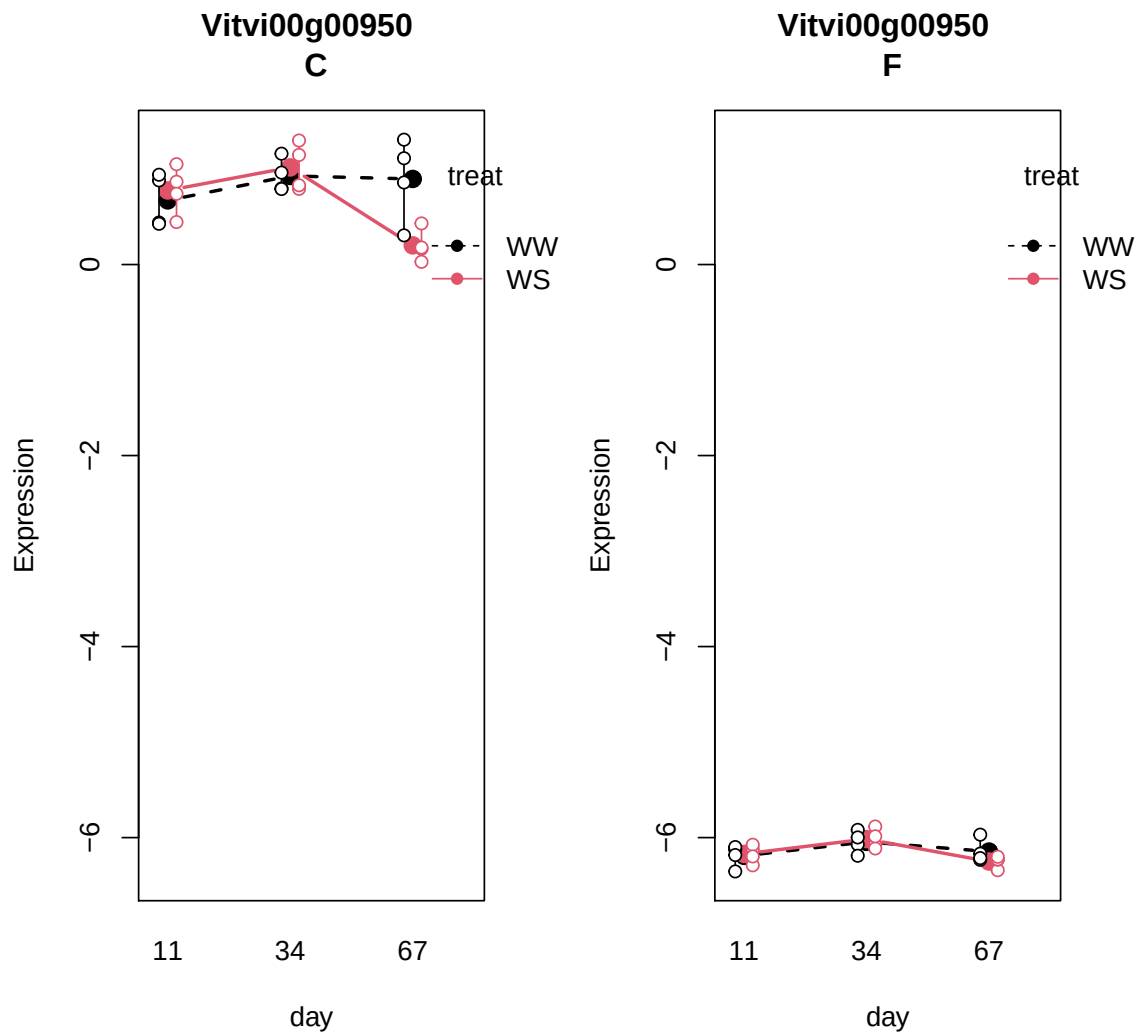


6.1.6 Vitvi00g00950

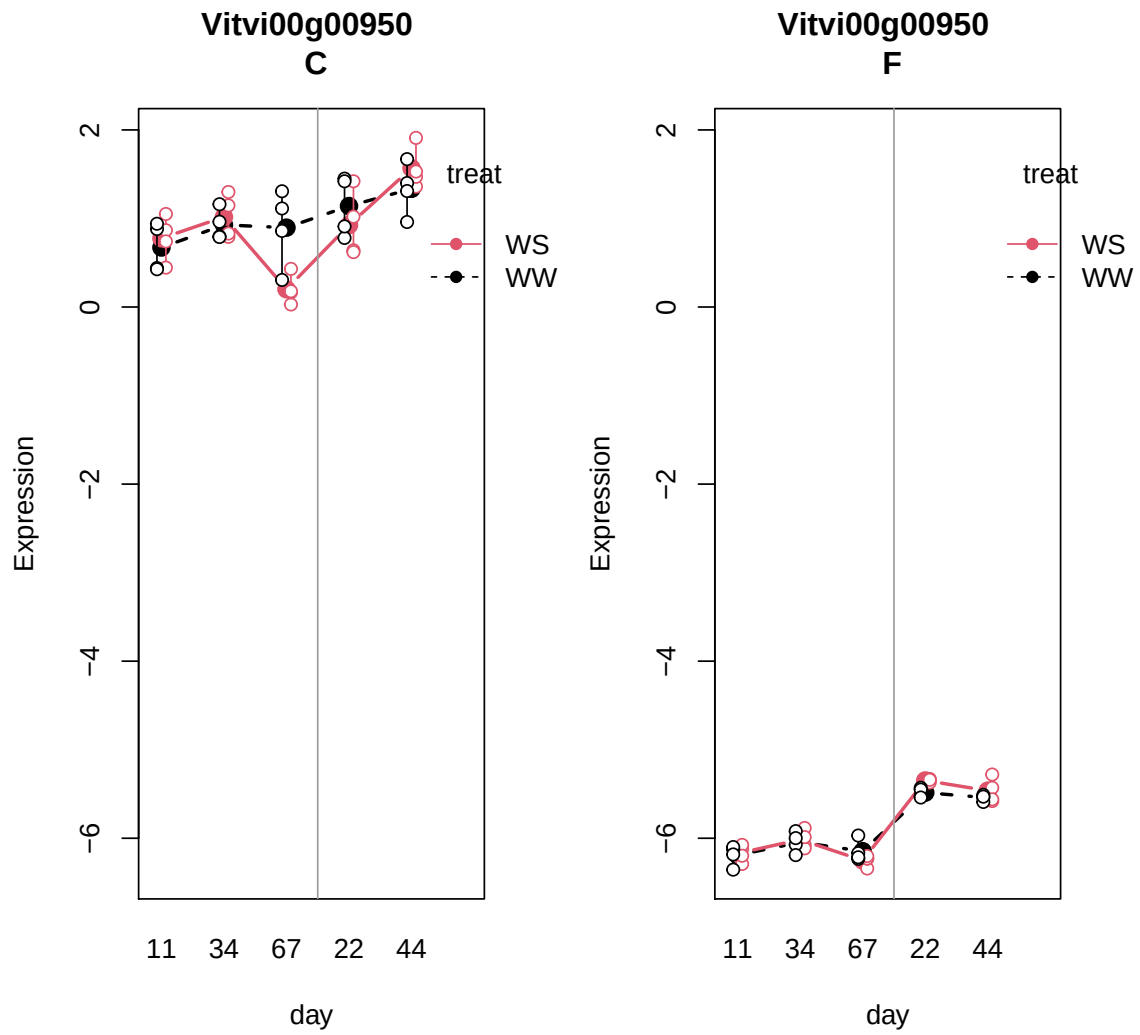
Coefficient varietyF for Vitvi00g00950.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi00g00950 -6.862557 -2.69407 -47.09179 8.351092e-36
      adj.P.Val      B
Vitvi00g00950 2.121456e-32 71.22575

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

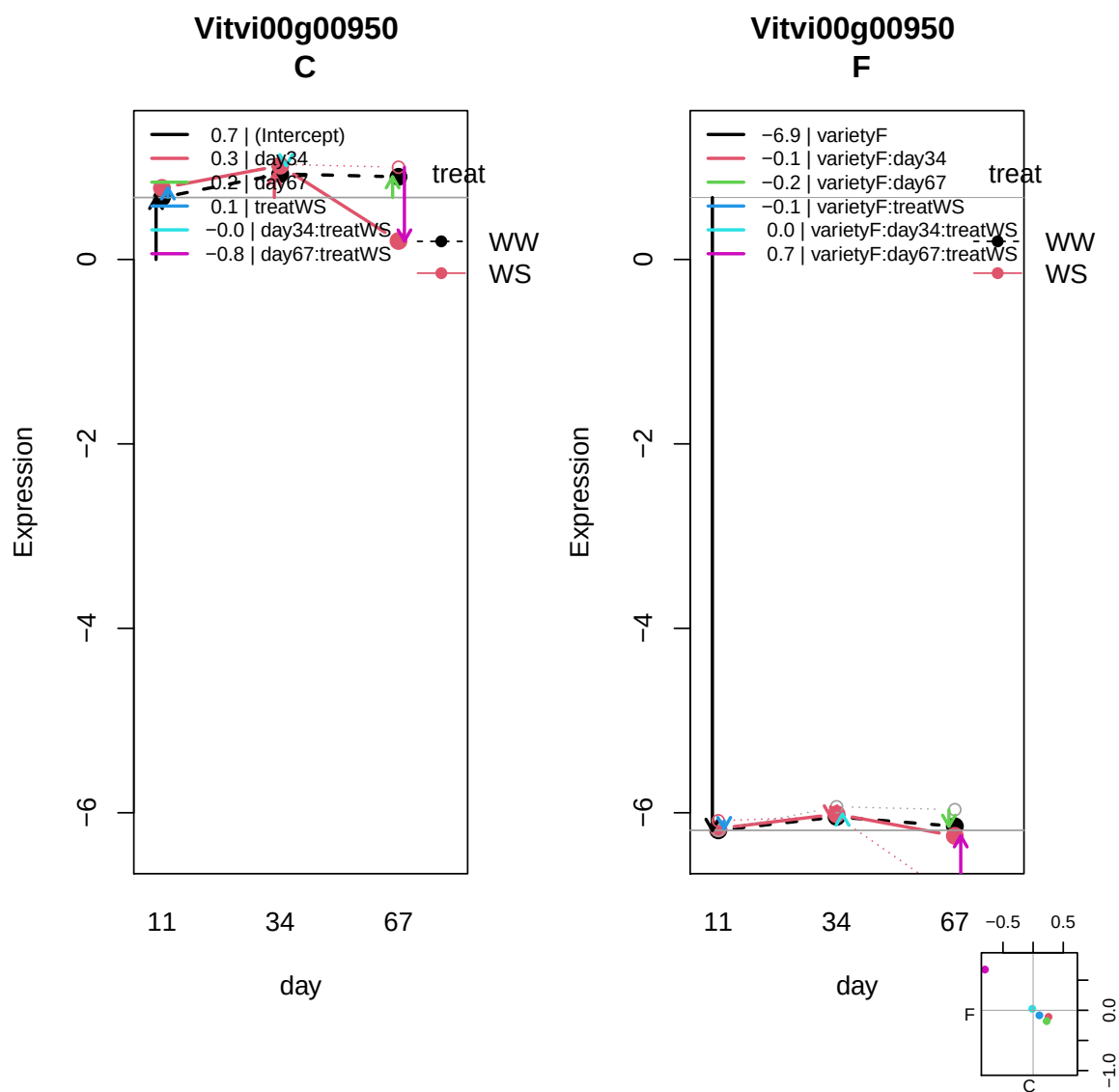
      (Intercept)  varietyF    day34    day67
Vitvi00g00950    0.6719397 -6.862557 0.2557166 0.2243475
      treatWS varietyF:day34 varietyF:day67
Vitvi00g00950  0.103866   -0.1100542   -0.1800611
      varietyF:treatWS day34:treatWS day67:treatWS
Vitvi00g00950      -0.0839393   -0.01430723   -0.7995862
      varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi00g00950           0.02411658           0.6754931

```

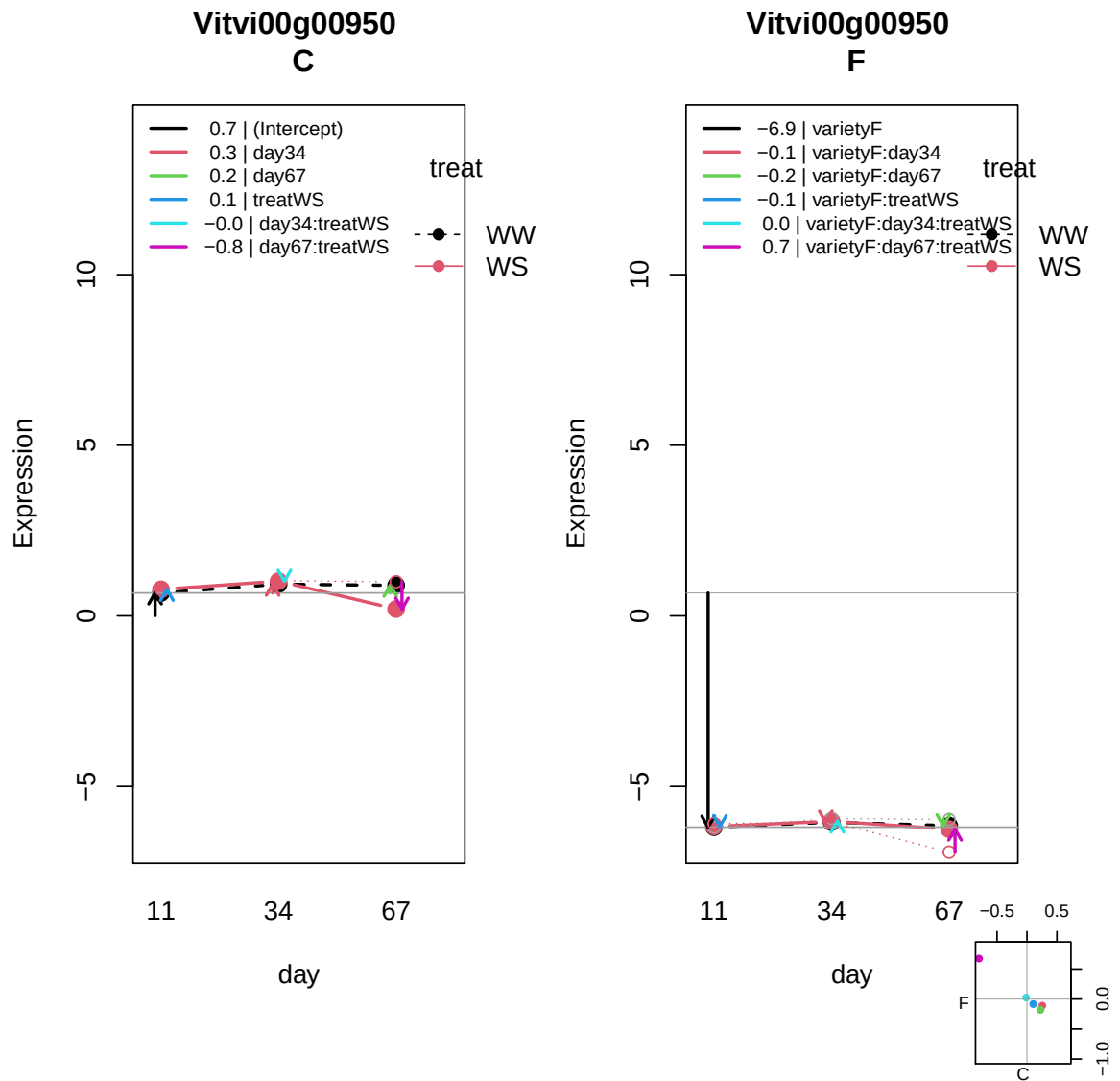
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

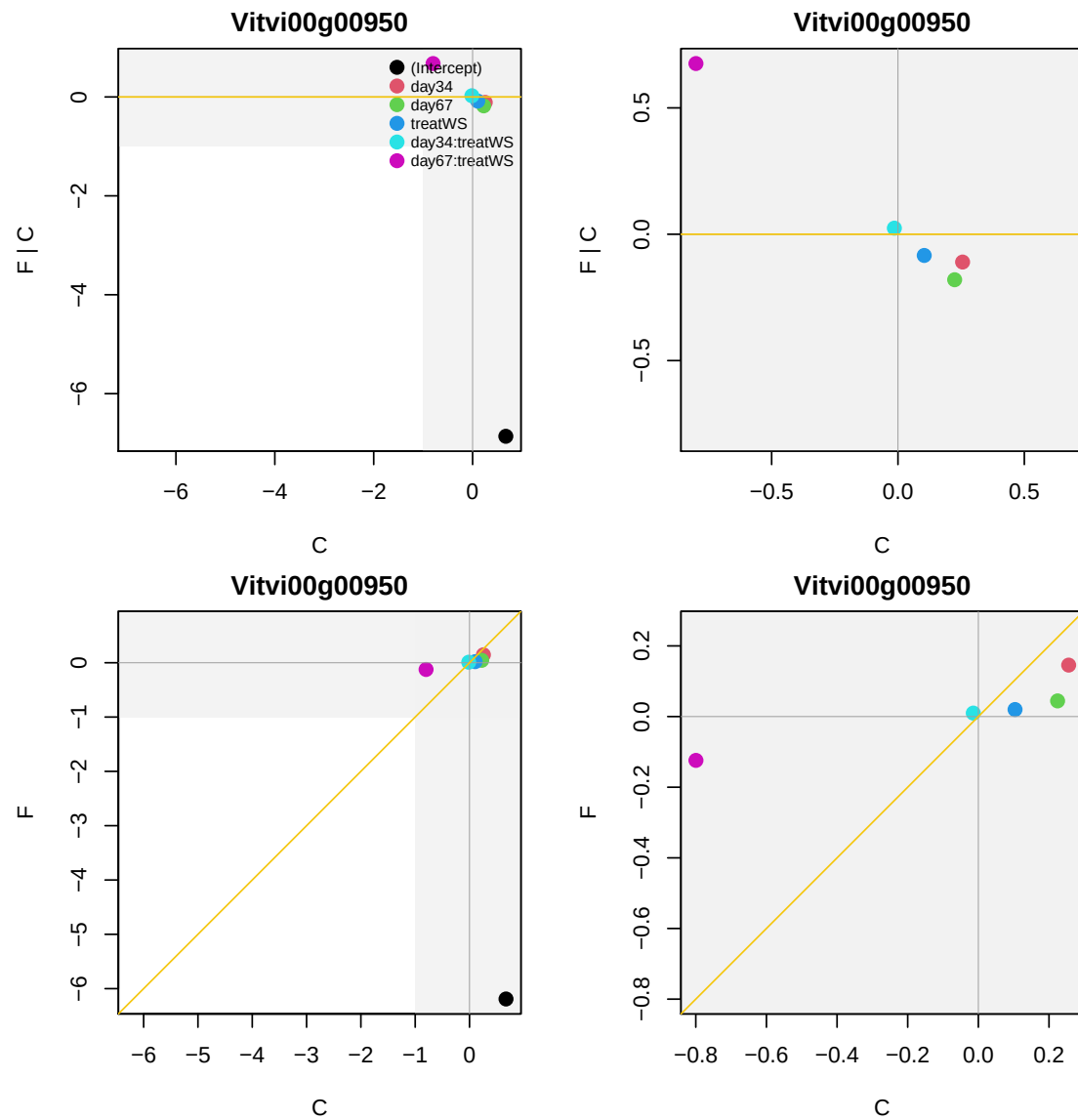


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

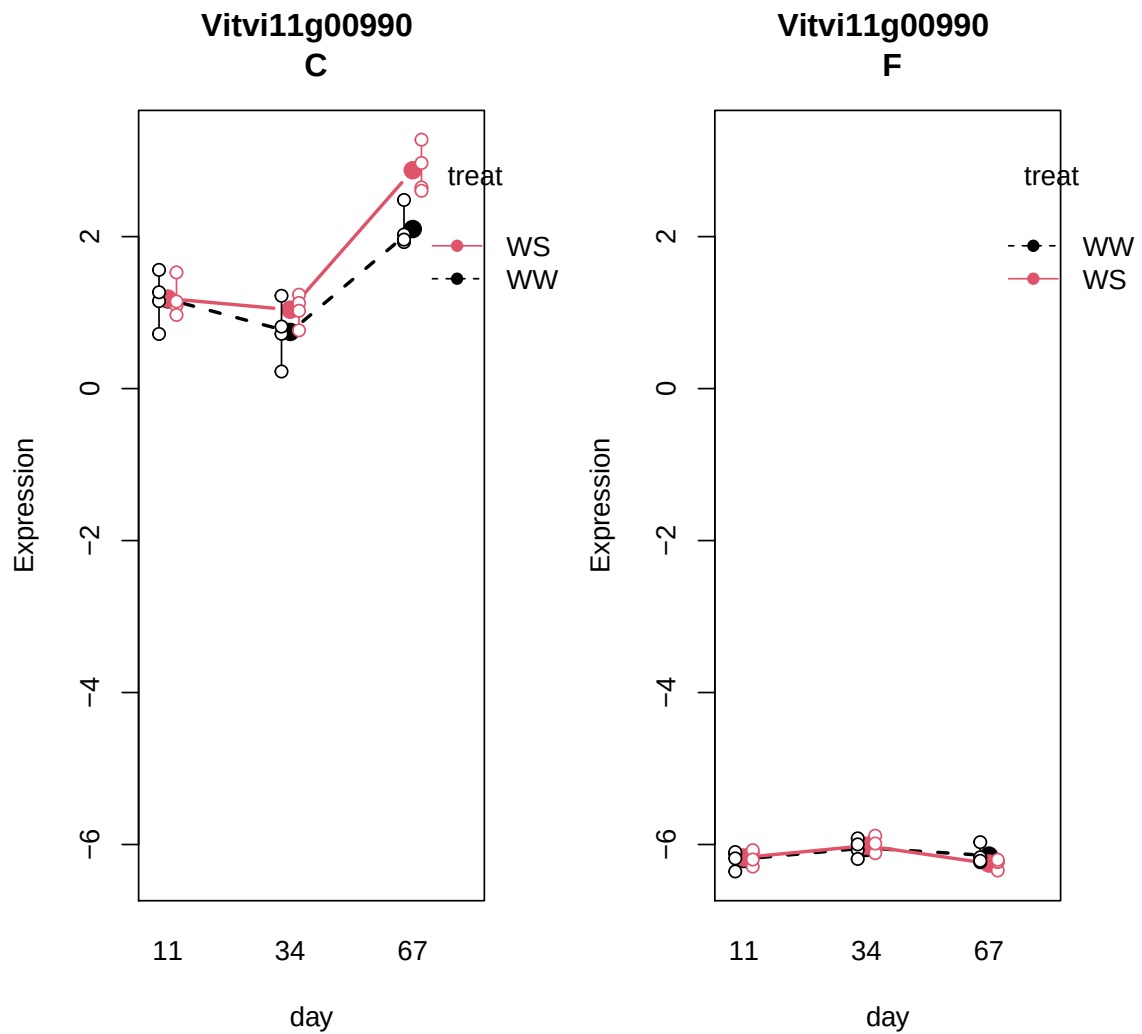


6.1.7 Vitvi11g00990

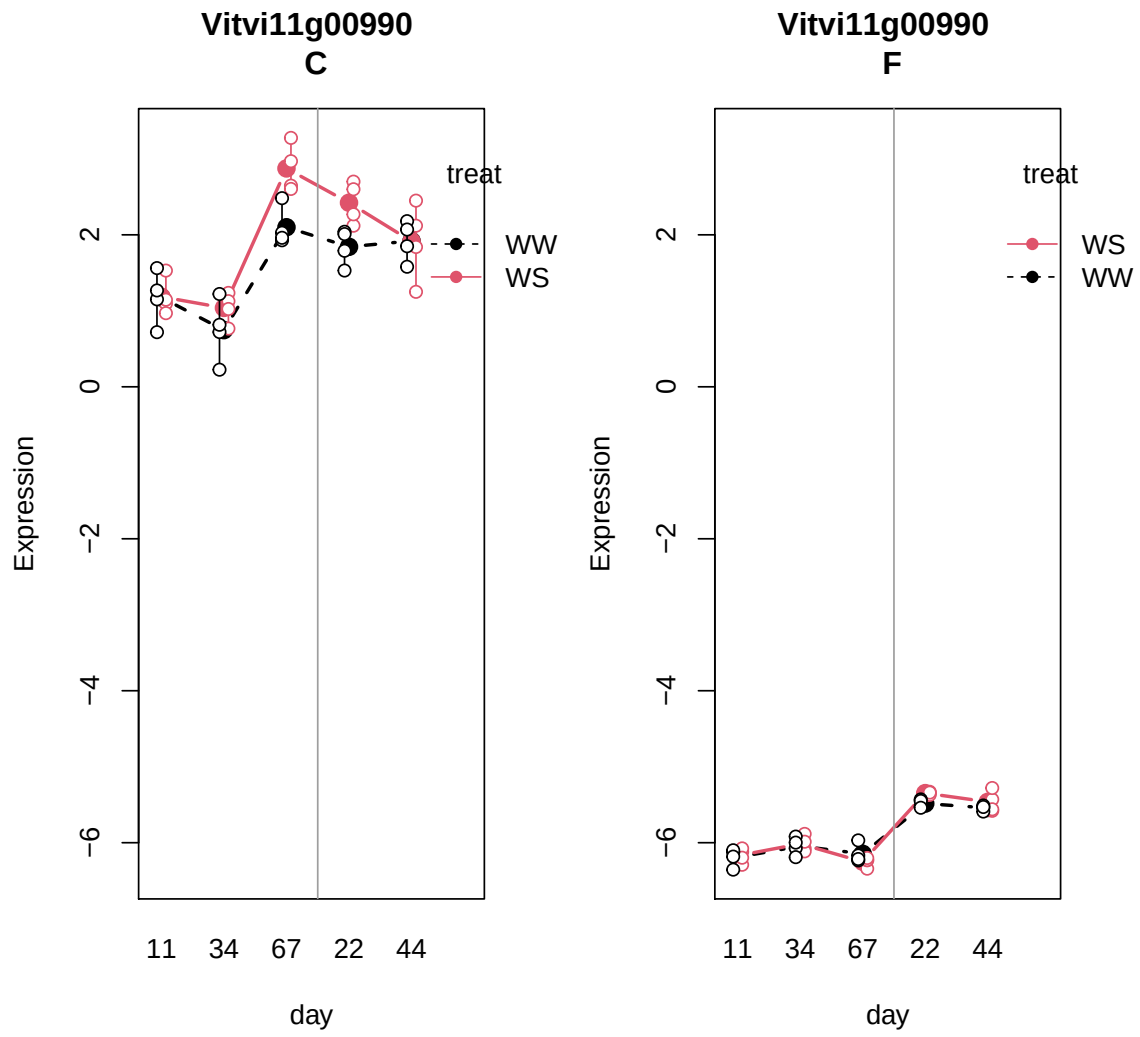
Coefficient varietyF for Vitvi11g00990.

```
> tt[varname,]
      logFC  AveExpr      t    P.Value
Vitvi11g00990 -7.365798 -2.308363 -46.32278 1.563076e-35
      adj.P.Val      B
Vitvi11g00990 3.403487e-32 70.63578

> plot.interactions(varname, phdata=pd, data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

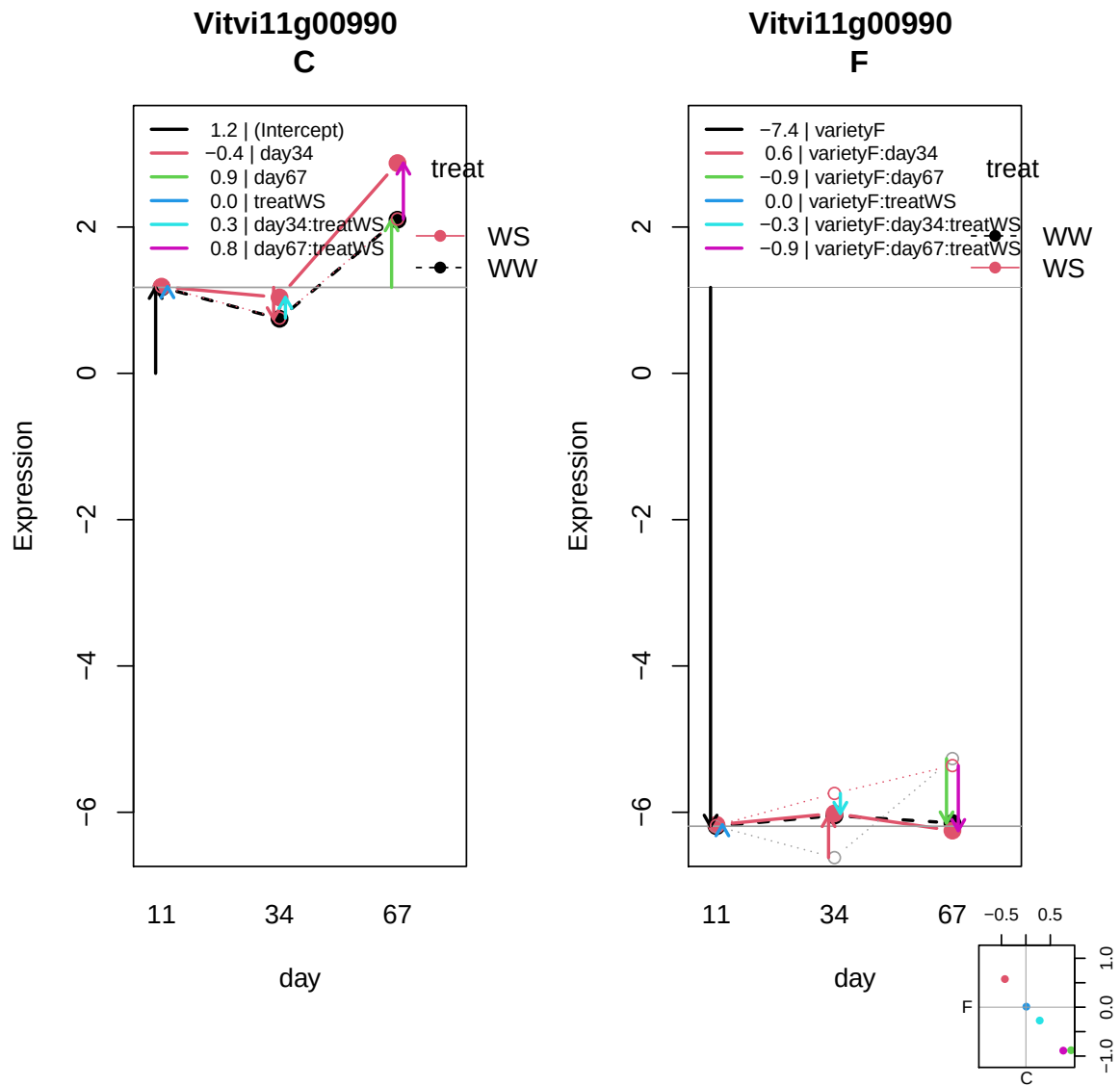
              (Intercept)  varietyF      day34      day67
Vitvi11g00990      1.175181 -7.365798 -0.4293121 0.9246024
              treatWS  varietyF:day34  varietyF:day67
Vitvi11g00990 0.009571755      0.5749745      -0.8803159
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi11g00990      0.01035492      0.2829575      0.7646201
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi11g00990      -0.2731481      -0.8887132

```

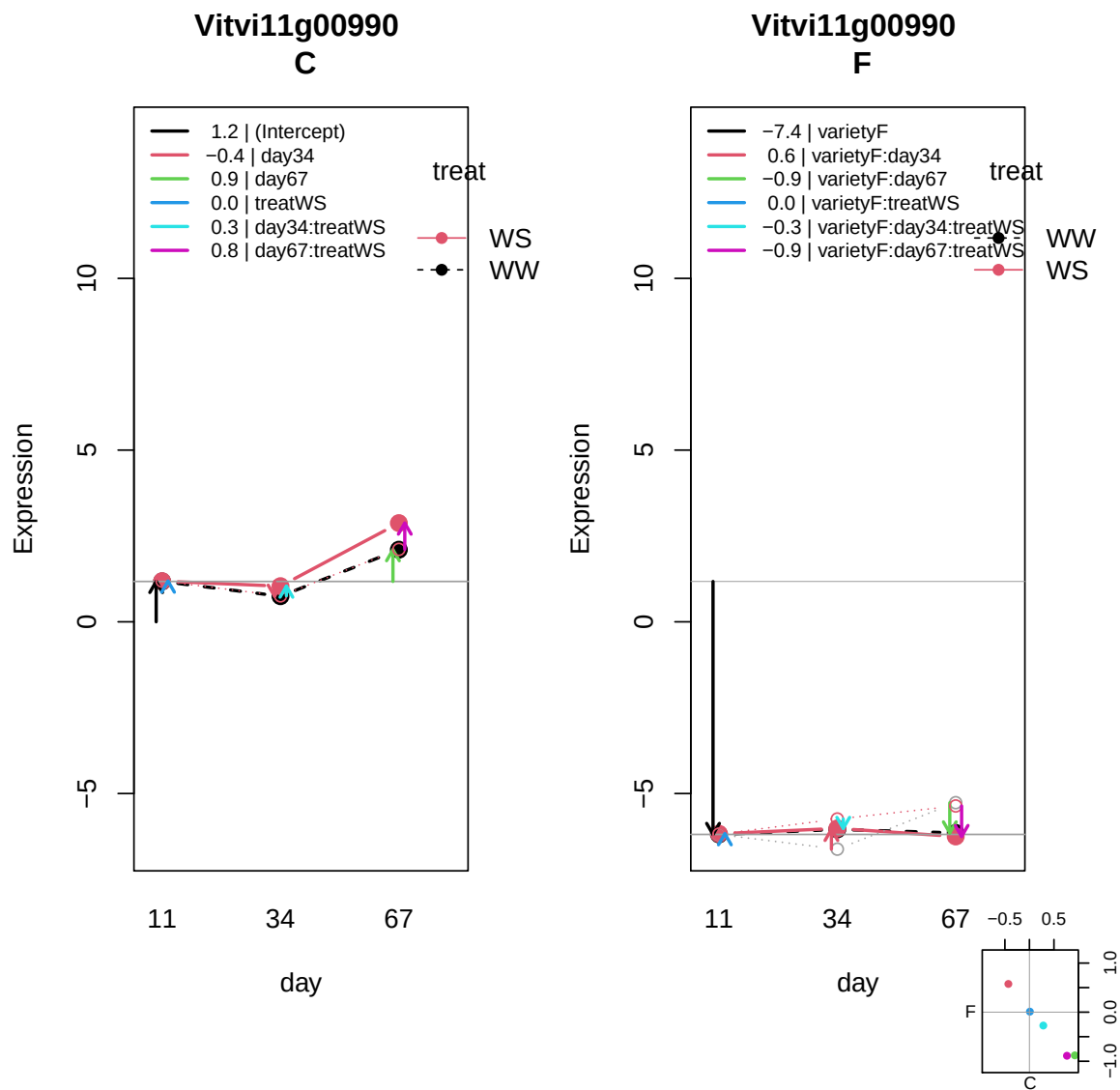
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

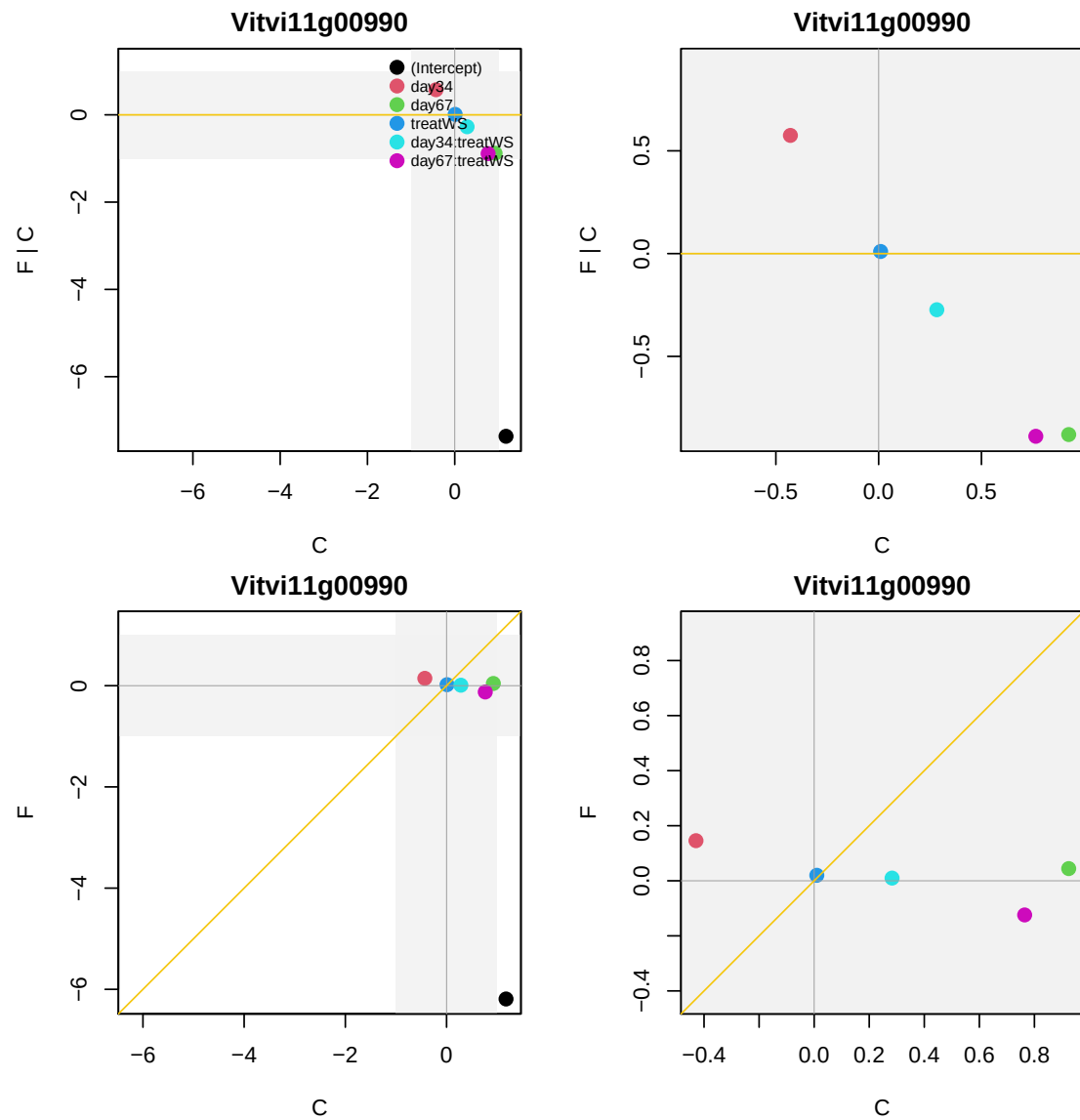


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

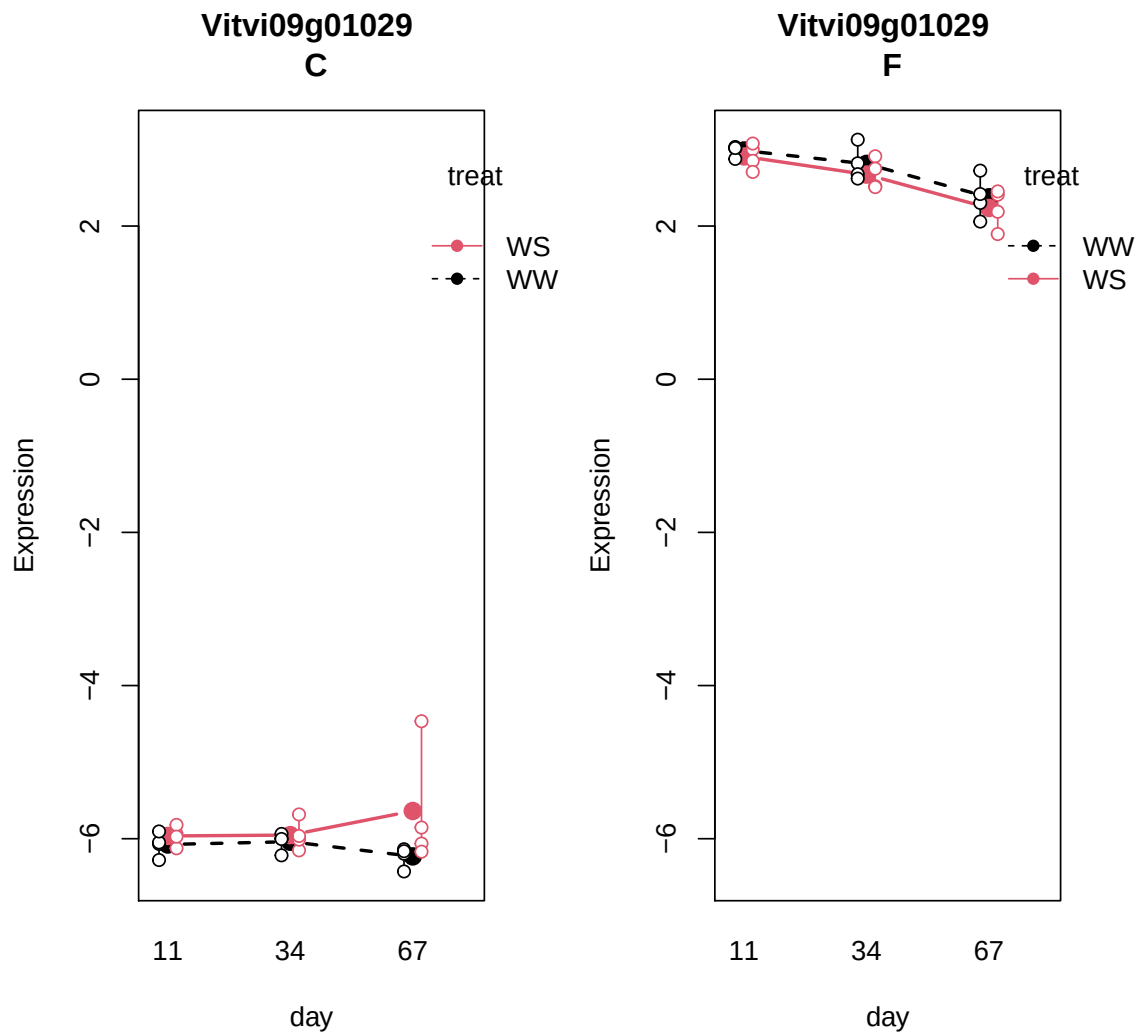


6.1.8 Vitvi09g01029

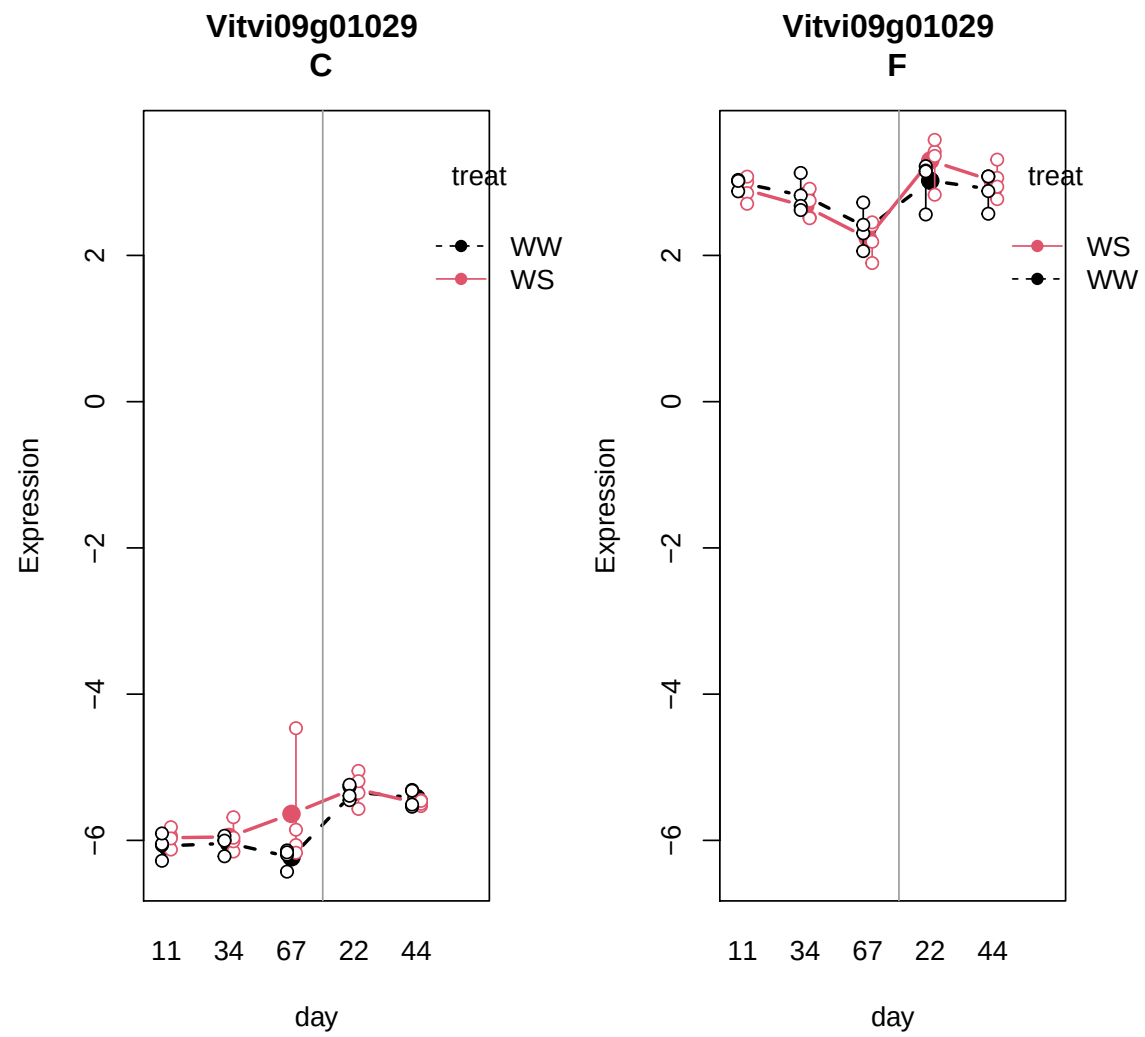
Coefficient varietyF for Vitvi09g01029.

```
> tt[varname,]
           logFC  AveExpr      t      P.Value
Vitvi09g01029  9.061493 -1.659134 45.22687 3.886662e-35
           adj.P.Val      B
Vitvi09g01029  7.405063e-32 69.77575

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

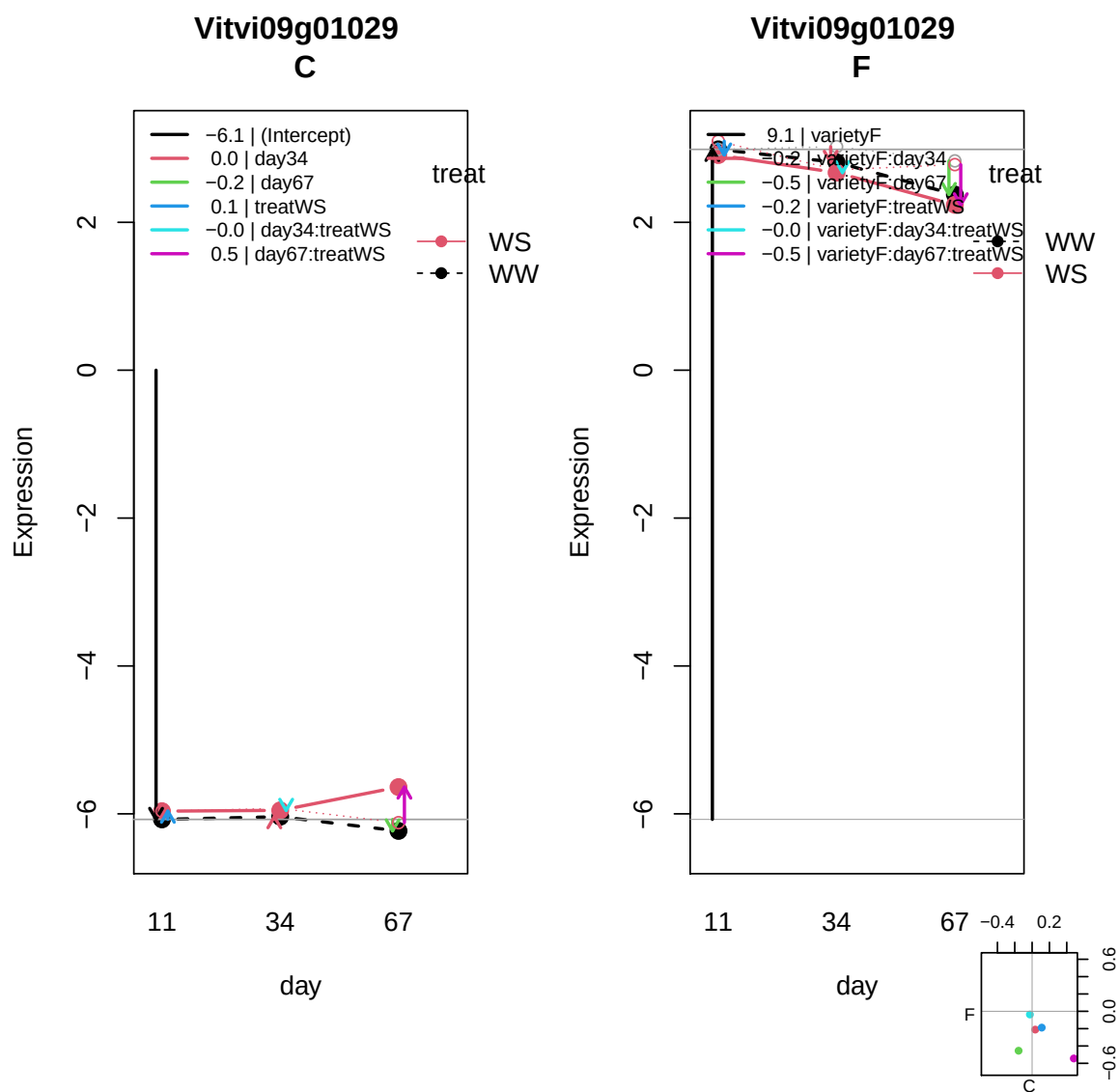
              (Intercept)  varietyF      day34      day67
Vitvi09g01029    -6.075283  9.061493  0.03624569 -0.1556951
              treatWS  varietyF:day34  varietyF:day67
Vitvi09g01029  0.1112668    -0.2110515    -0.4548557
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi09g01029    -0.1882155    -0.02532272     0.4814703
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi09g01029    -0.03680668    -0.5440087

```

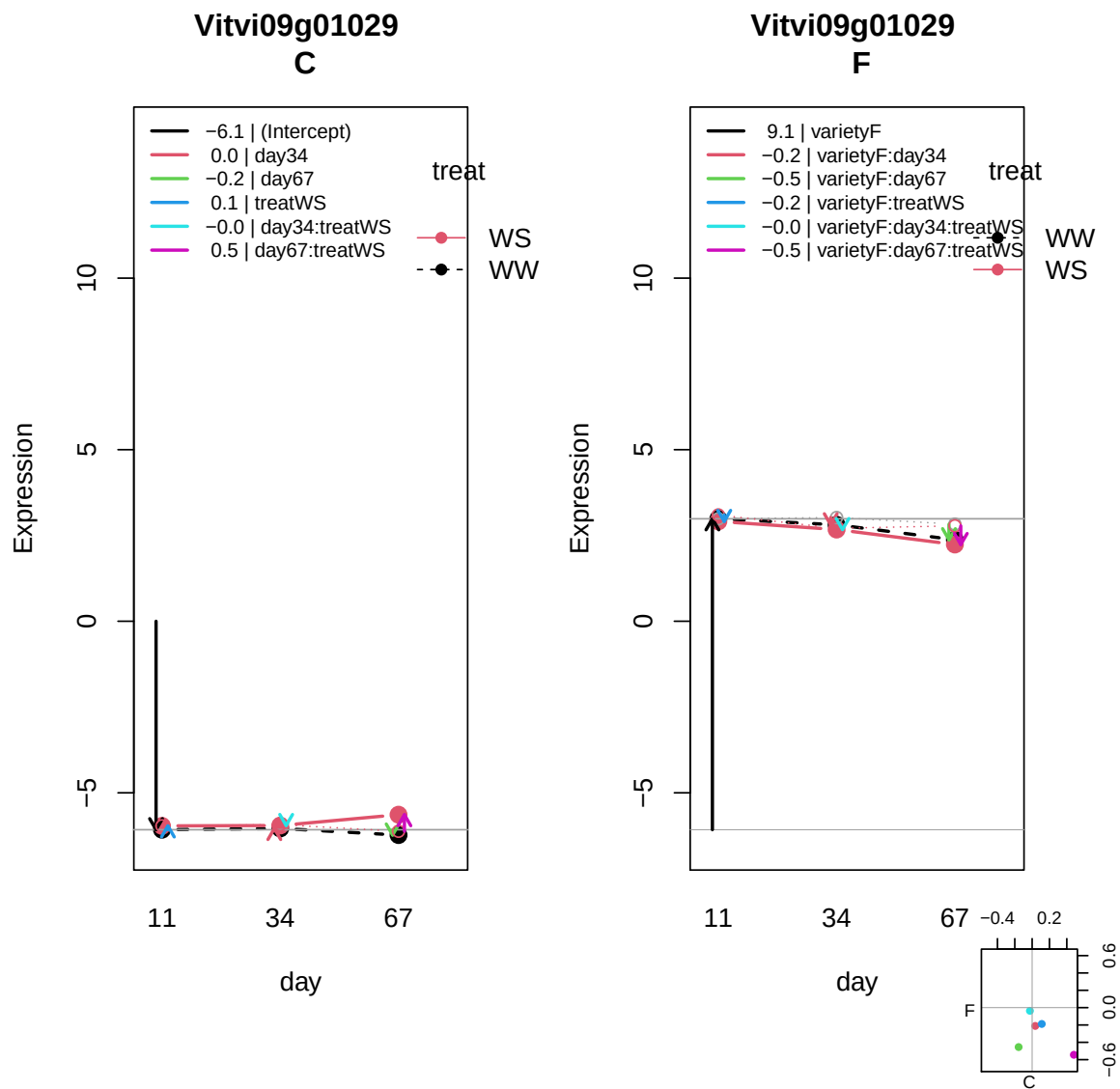
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

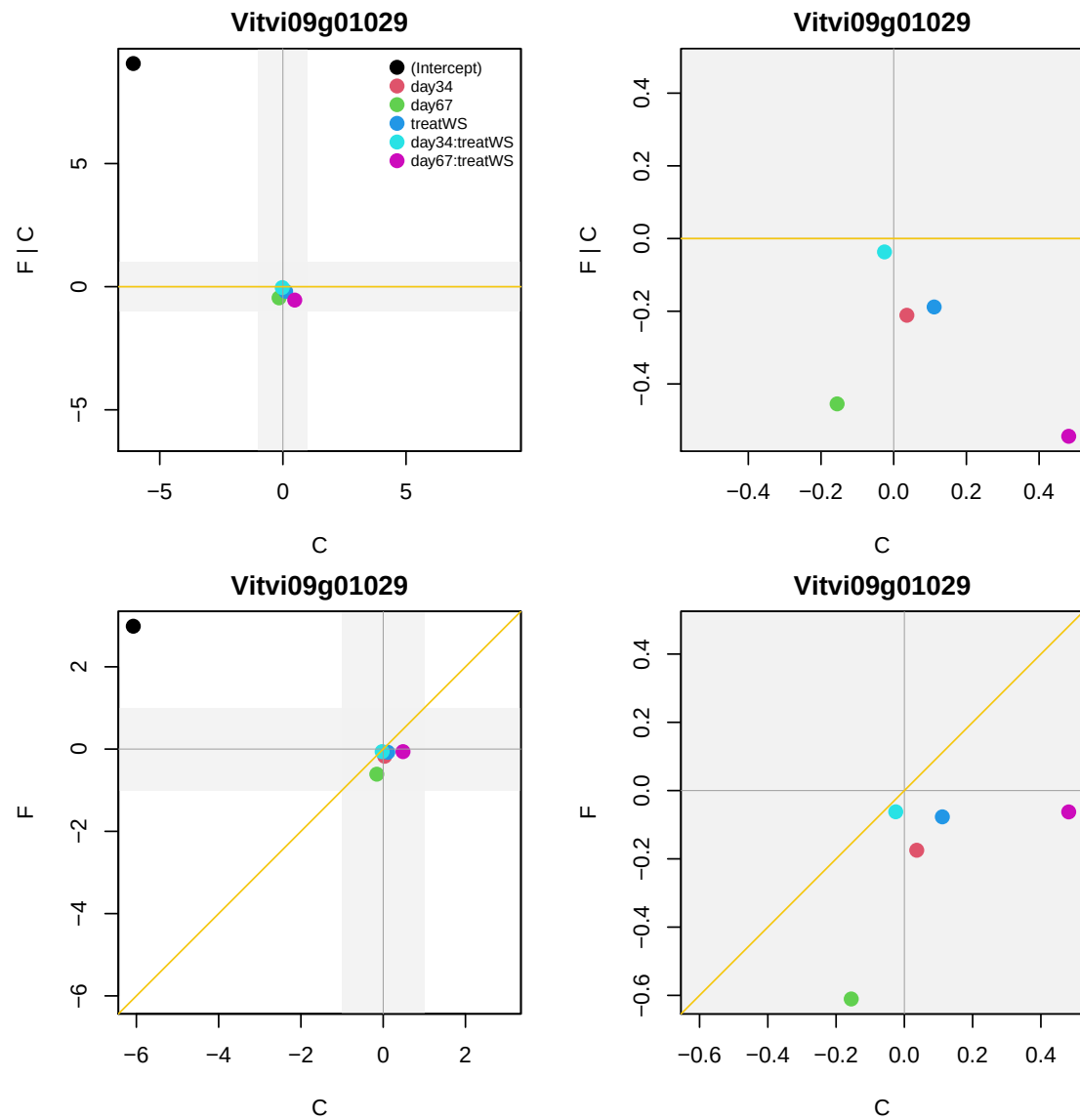


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

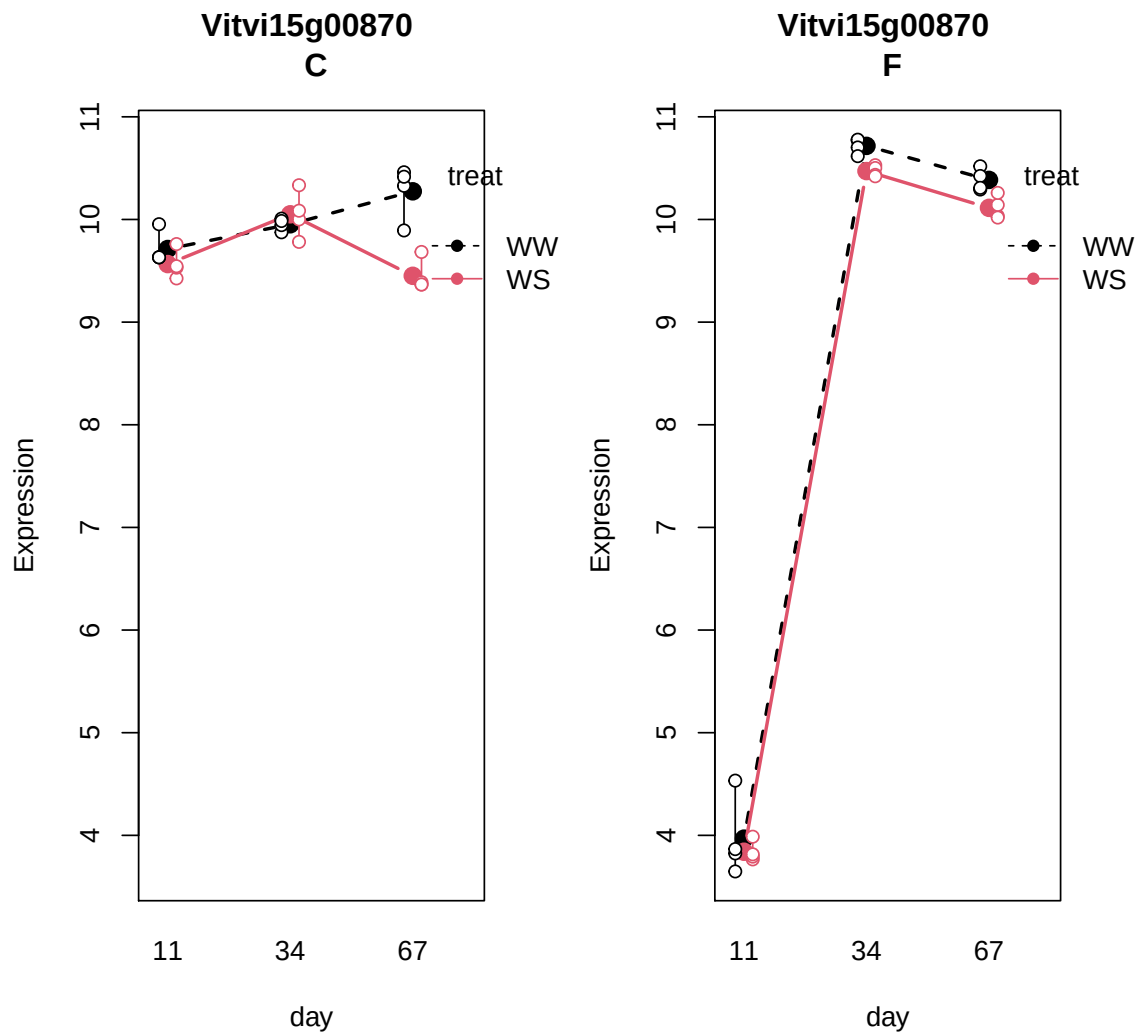


6.1.9 Vitvi15g00870

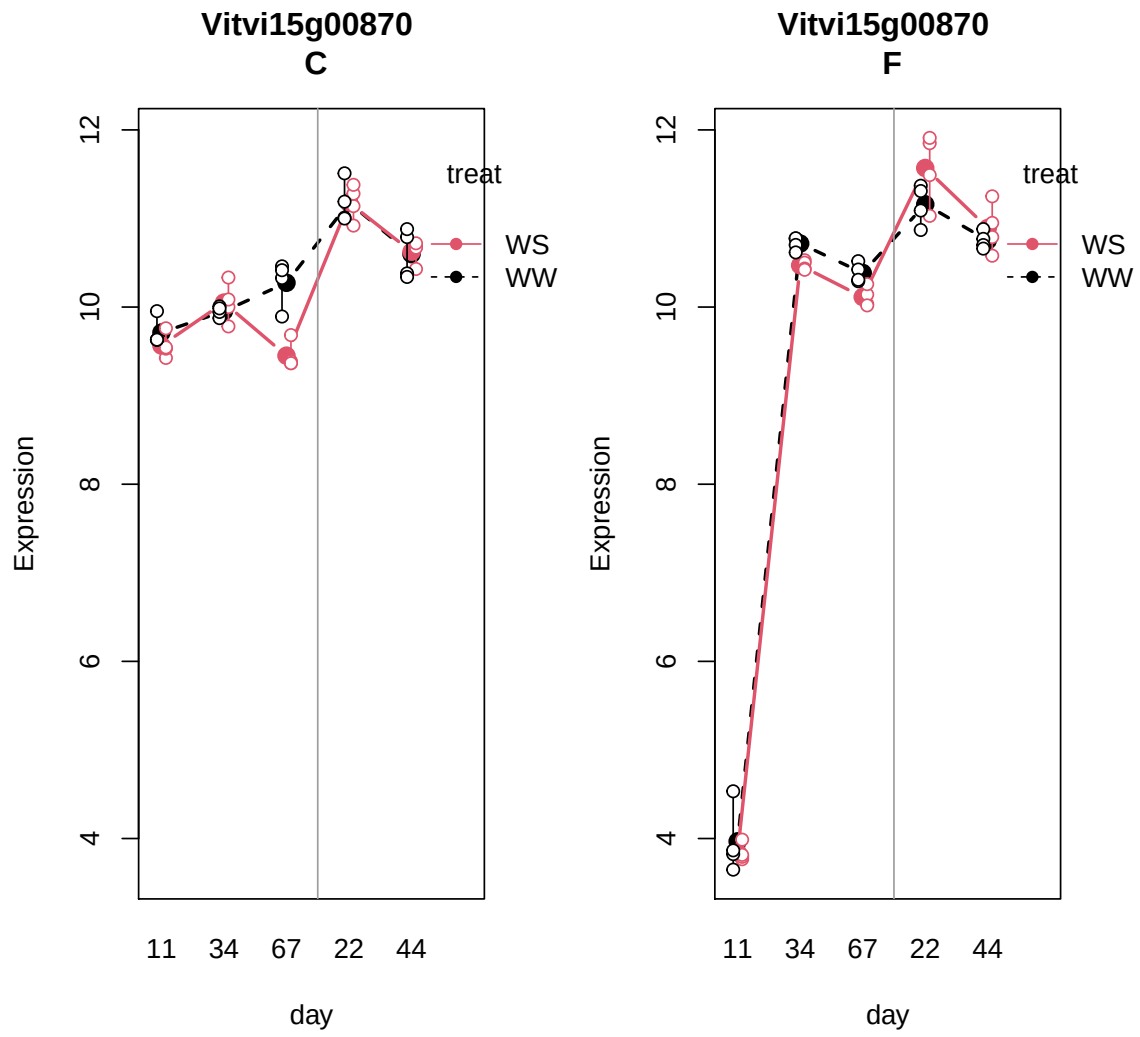
Coefficient varietyF for Vitvi15g00870.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi15g00870 -5.744264 9.041797 -45.02355 4.613037e-35
      adj.P.Val      B
Vitvi15g00870 7.812435e-32 69.61363

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

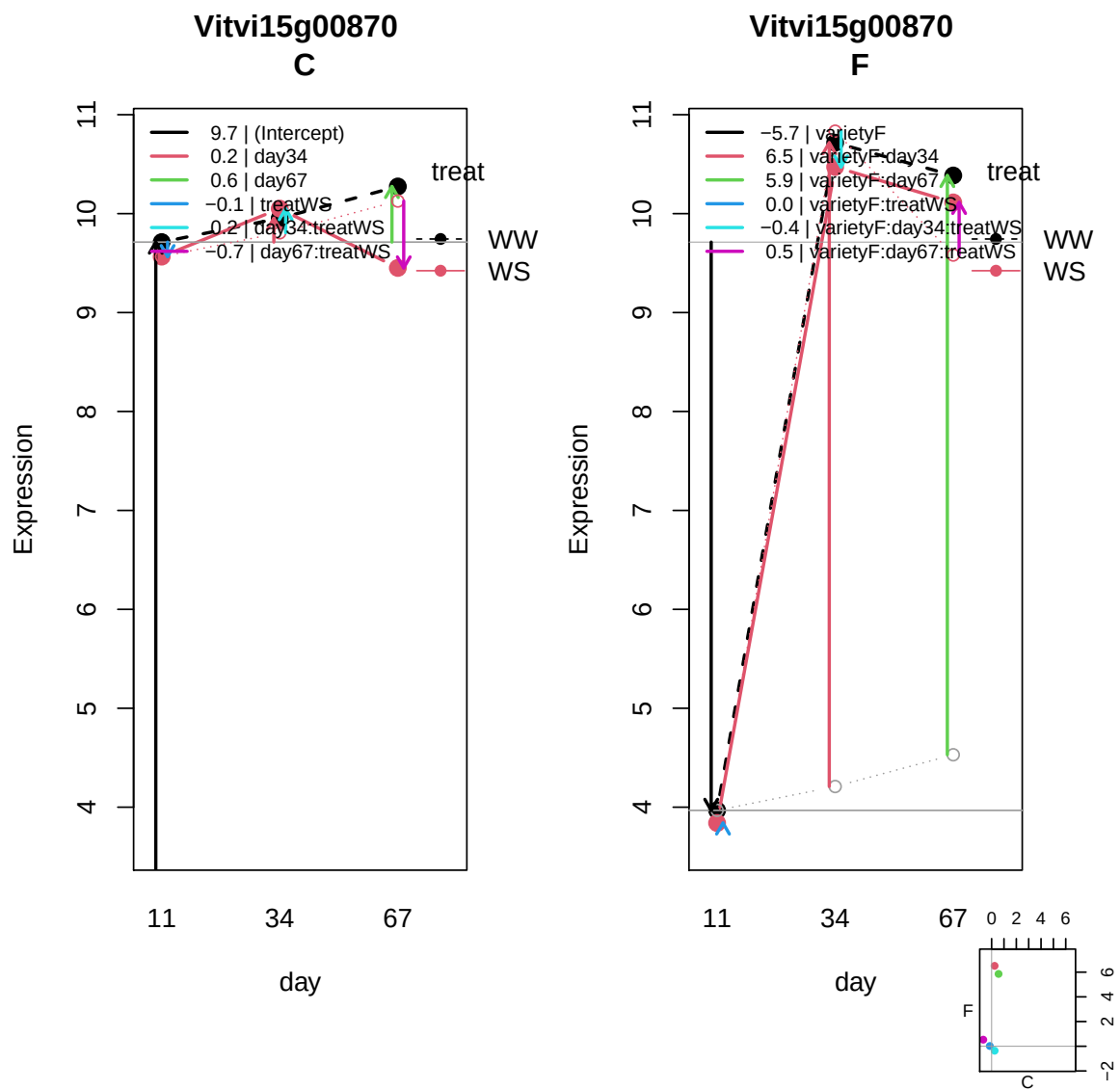
              (Intercept)  varietyF    day34    day67
Vitvi15g00870      9.712176 -5.744264 0.2411027 0.5620365
              treatWS varietyF:day34 varietyF:day67
Vitvi15g00870    -0.1468785      6.50791      5.855476
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi15g00870      0.01930059  0.2438981     -0.6761894
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi15g00870      -0.3619446                      0.5316046

```

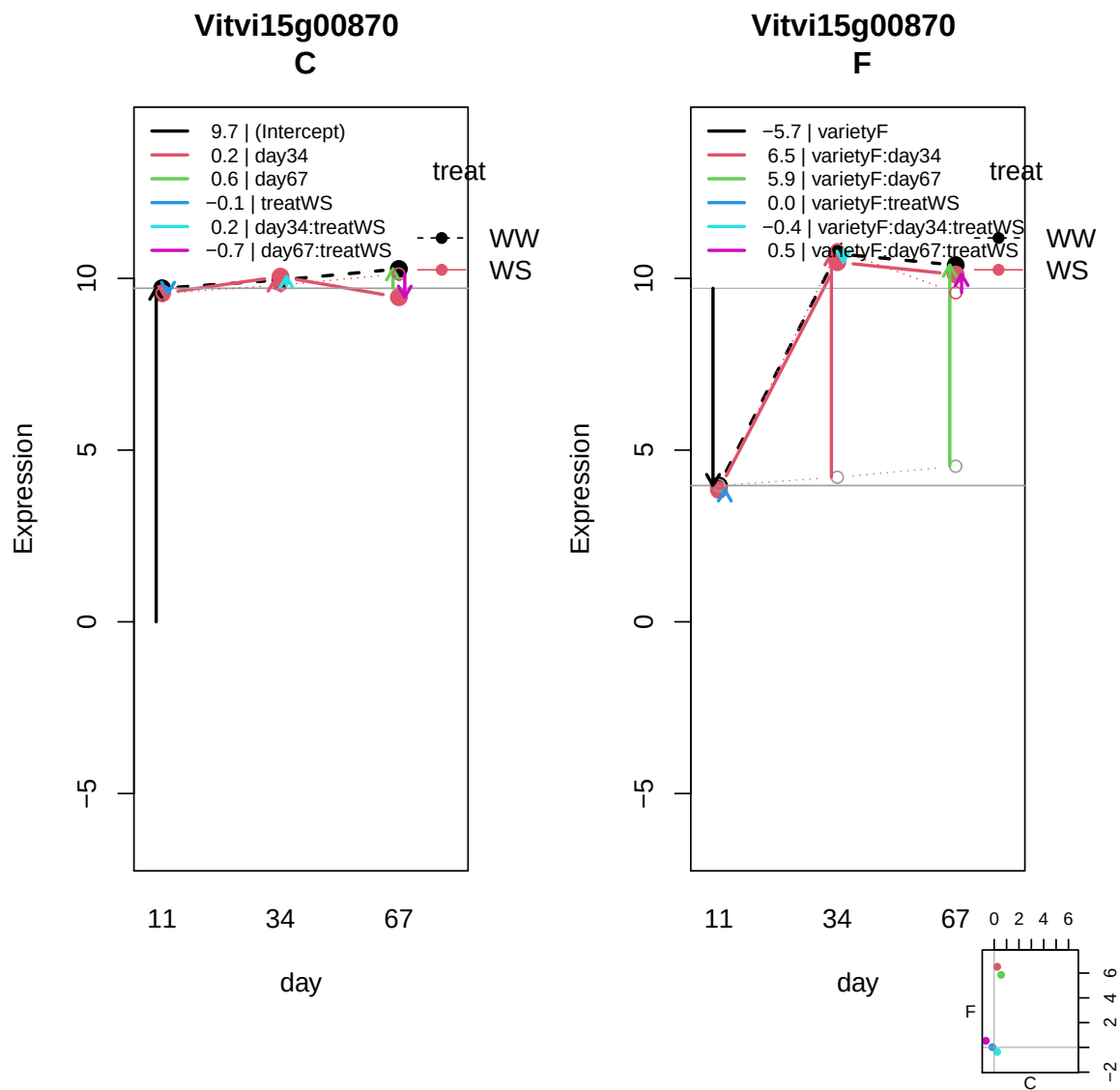
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

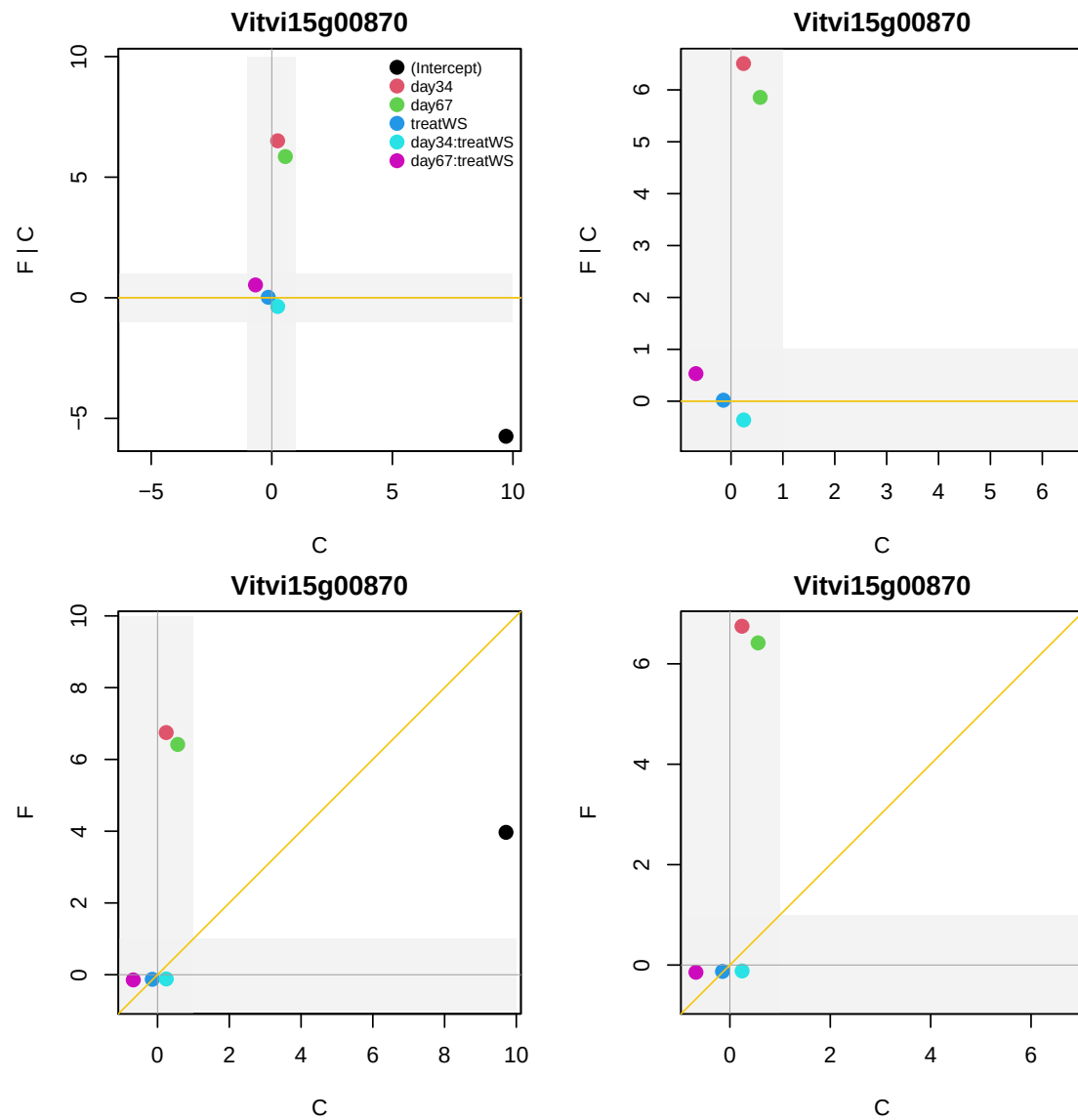


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

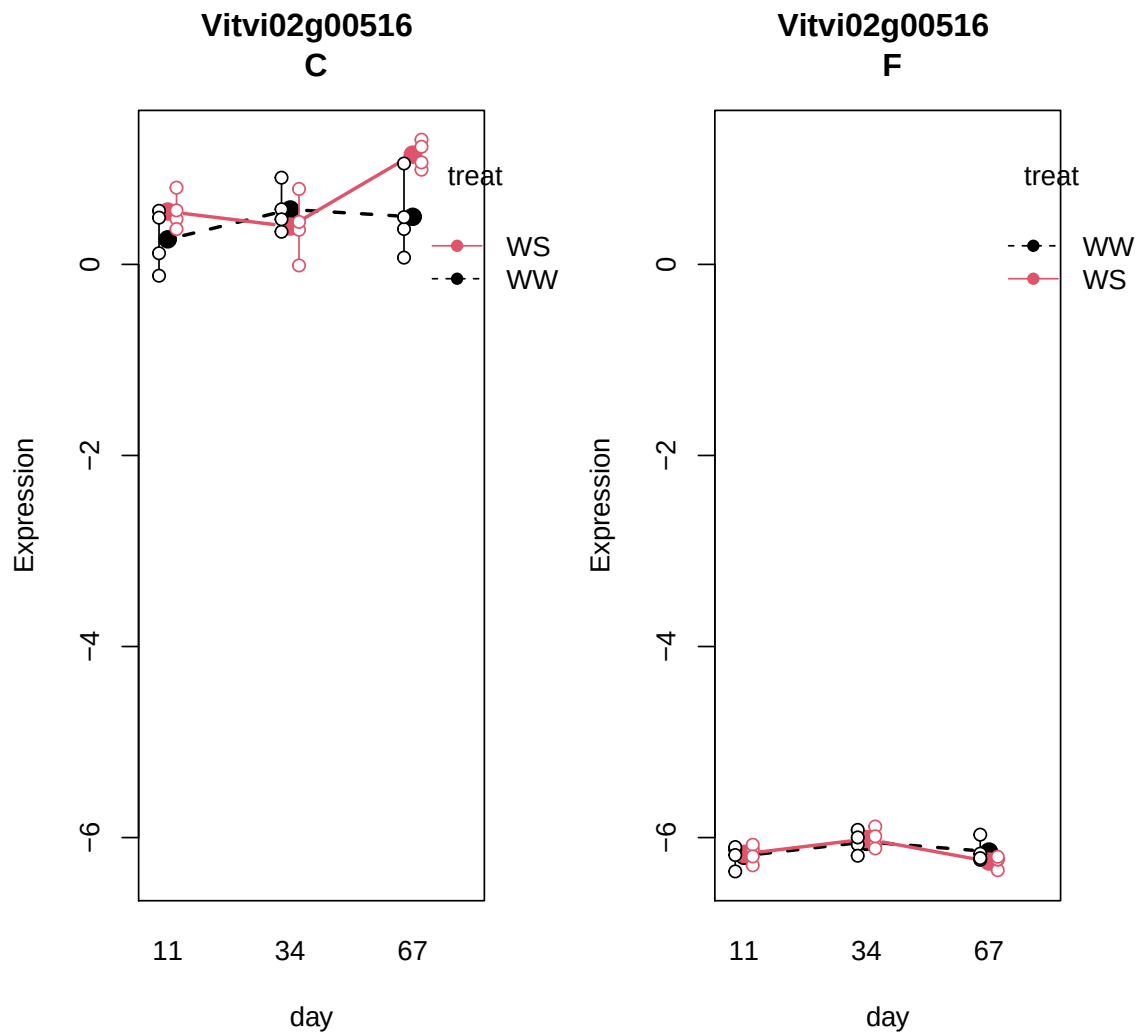


6.1.10 Vitvi02g00516

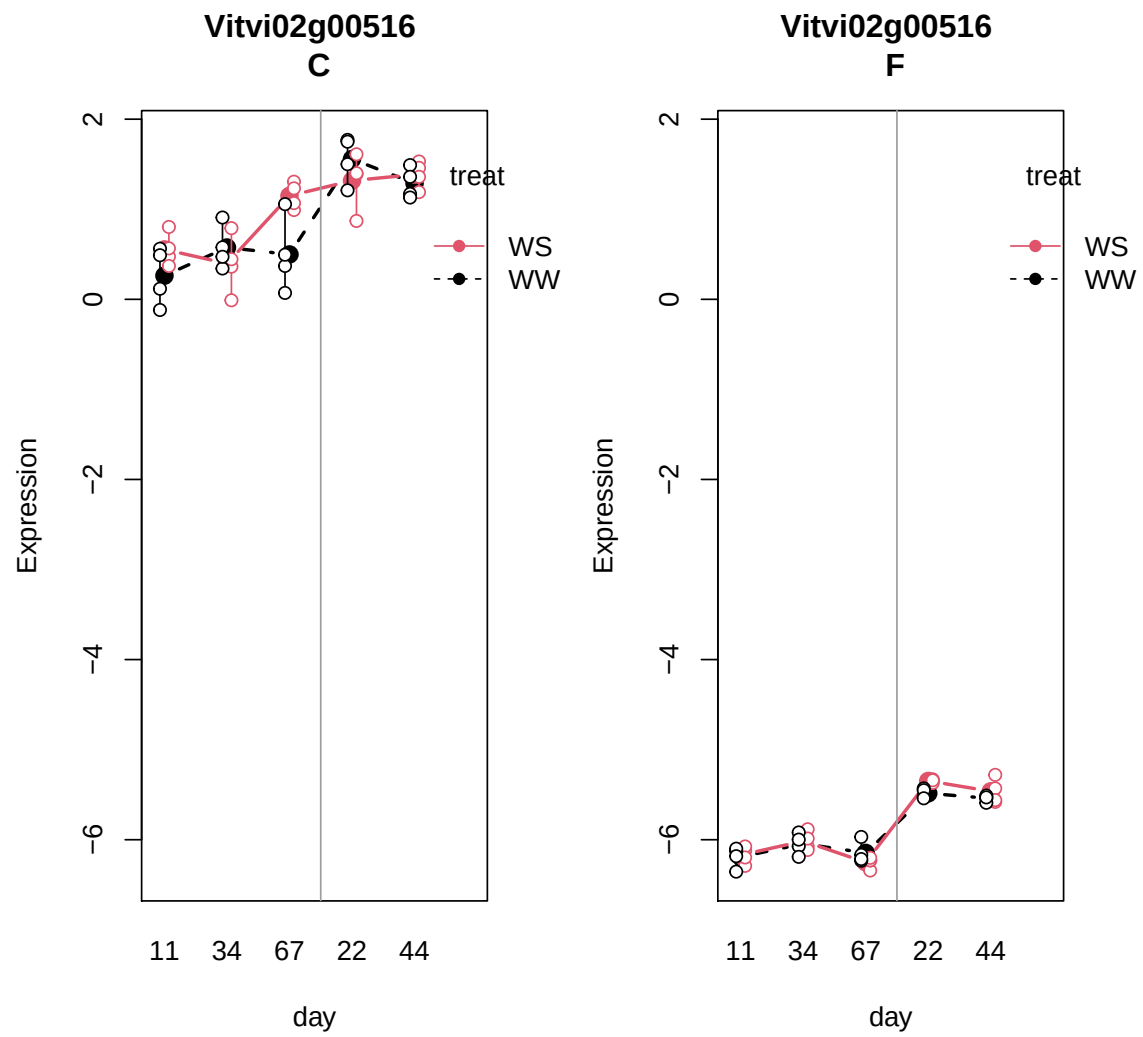
Coefficient varietyF for Vitvi02g00516.

```
> tt[varname,]
      logFC  AveExpr      t    P.Value
Vitvi02g00516 -6.452996 -2.781944 -42.57047 3.873858e-34
      adj.P.Val      B
Vitvi02g00516 5.904534e-31 67.59125

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```




```
> fit1[varname,]$coefficients
```

```

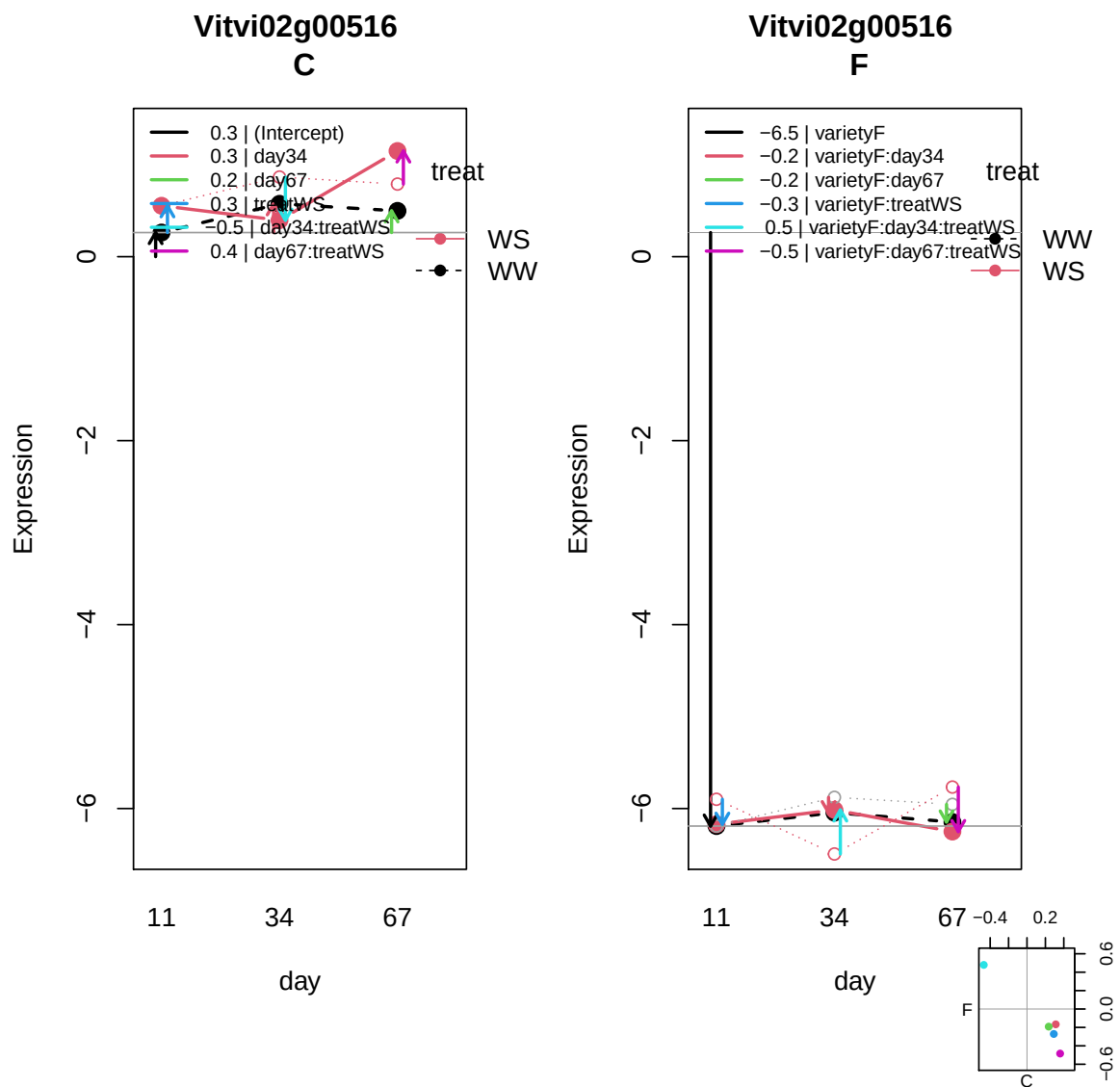
      (Intercept)  varietyF    day34    day67
Vitvi02g00516    0.2623789 -6.452996 0.3124565 0.2357955
      treatWS varietyF:day34 varietyF:day67
Vitvi02g00516 0.291196    -0.1667941    -0.1915091
      varietyF:treatWS day34:treatWS day67:treatWS
Vitvi02g00516    -0.2712694    -0.4692818    0.3598918
      varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi02g00516          0.4790911          -0.4839849

```

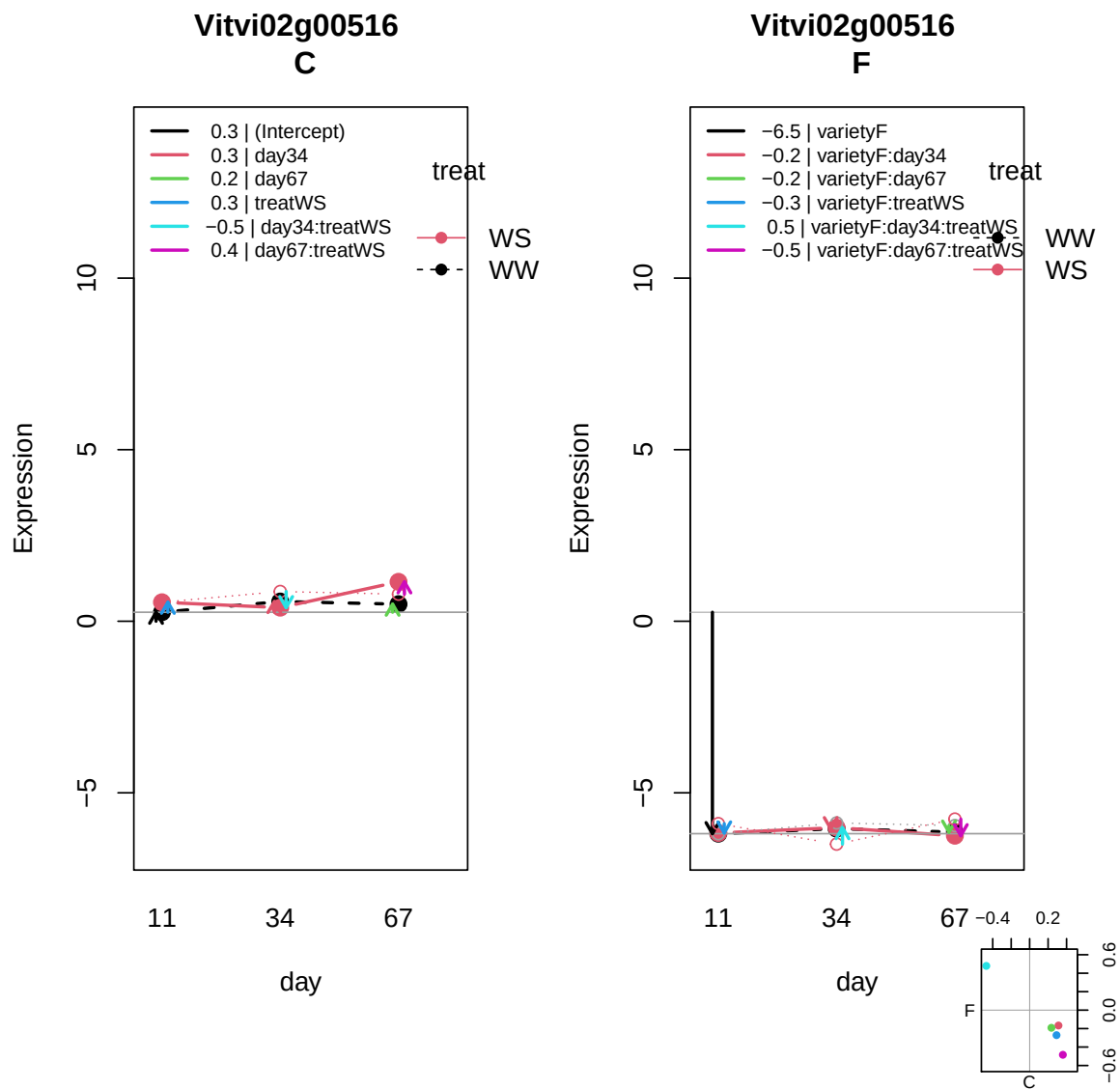
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

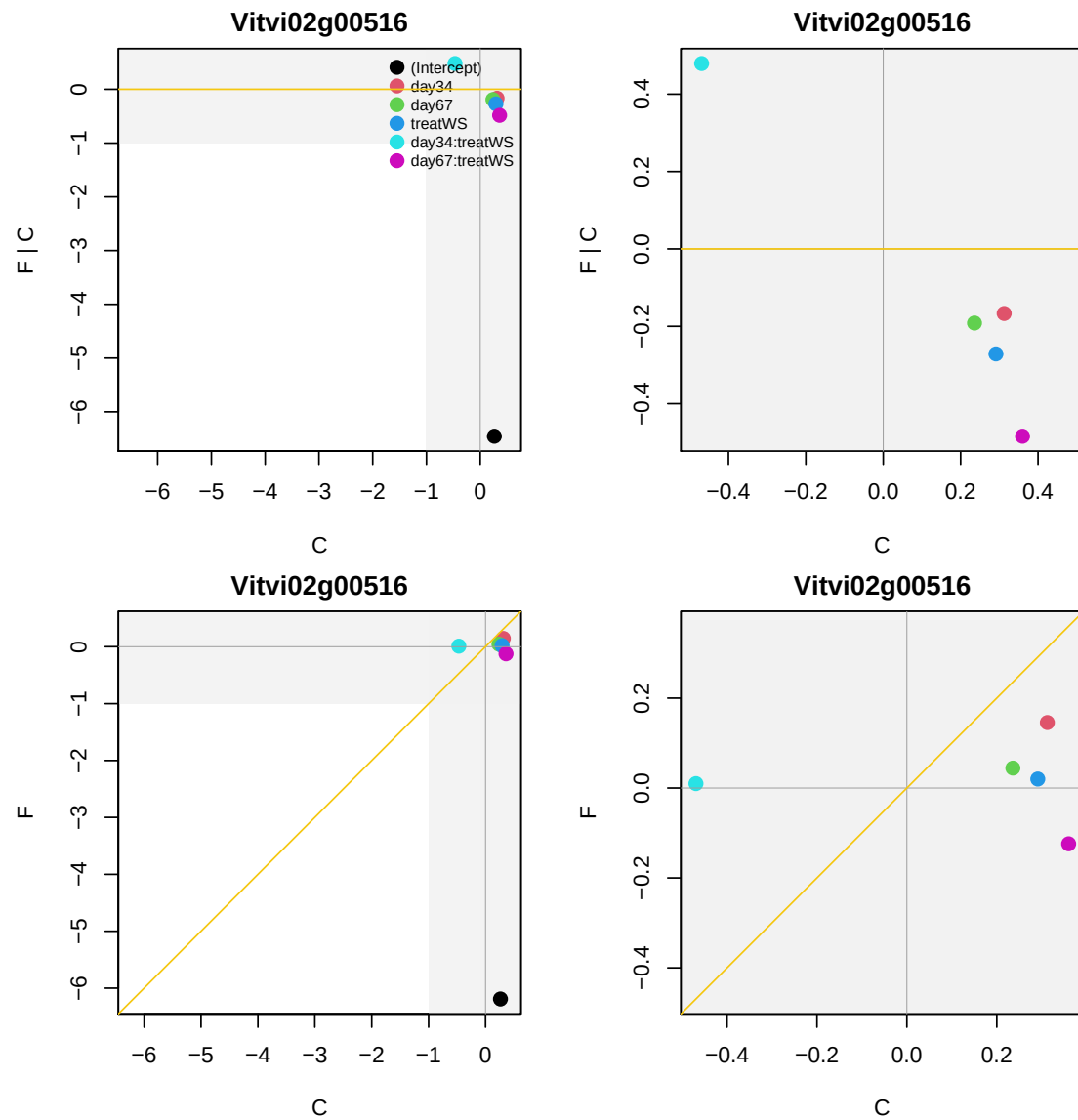


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



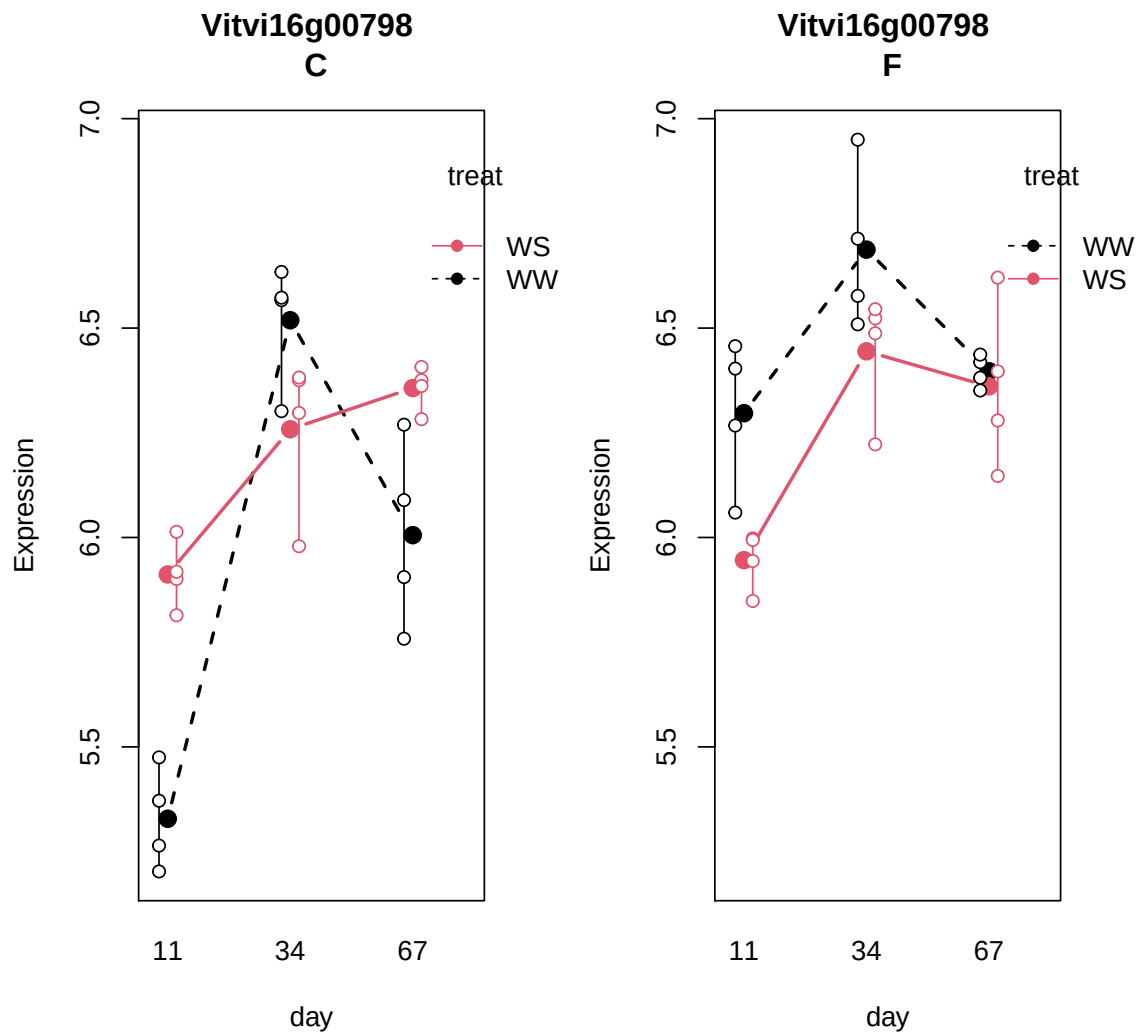
6.2 day34

6.2.1 Vitvi16g00798

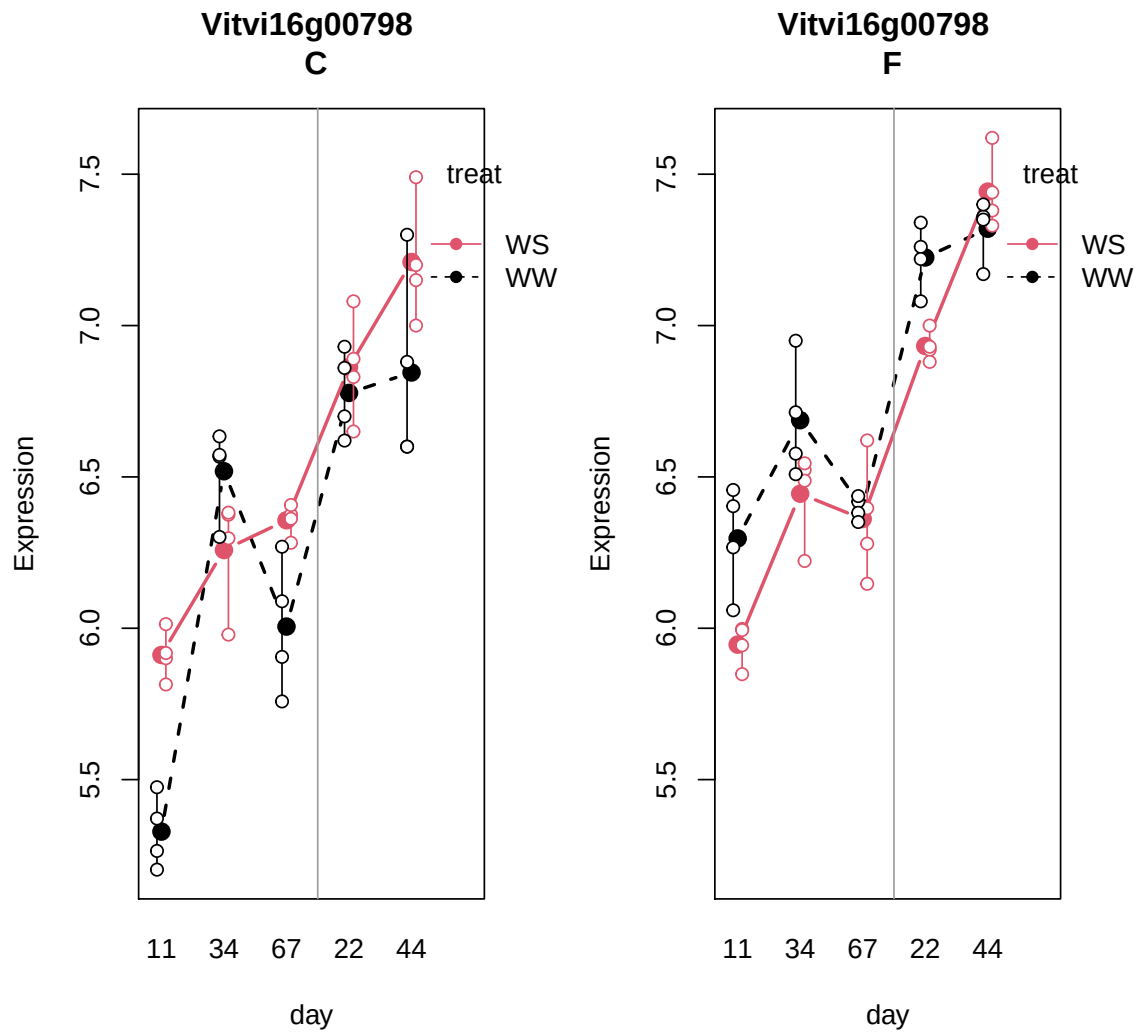
Coefficient day34 for Vitvi16g00798.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi16g00798 1.190445 6.209294 10.96652 1.927425e-13
      adj.P.Val      B
Vitvi16g00798 2.937781e-09 20.35693

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

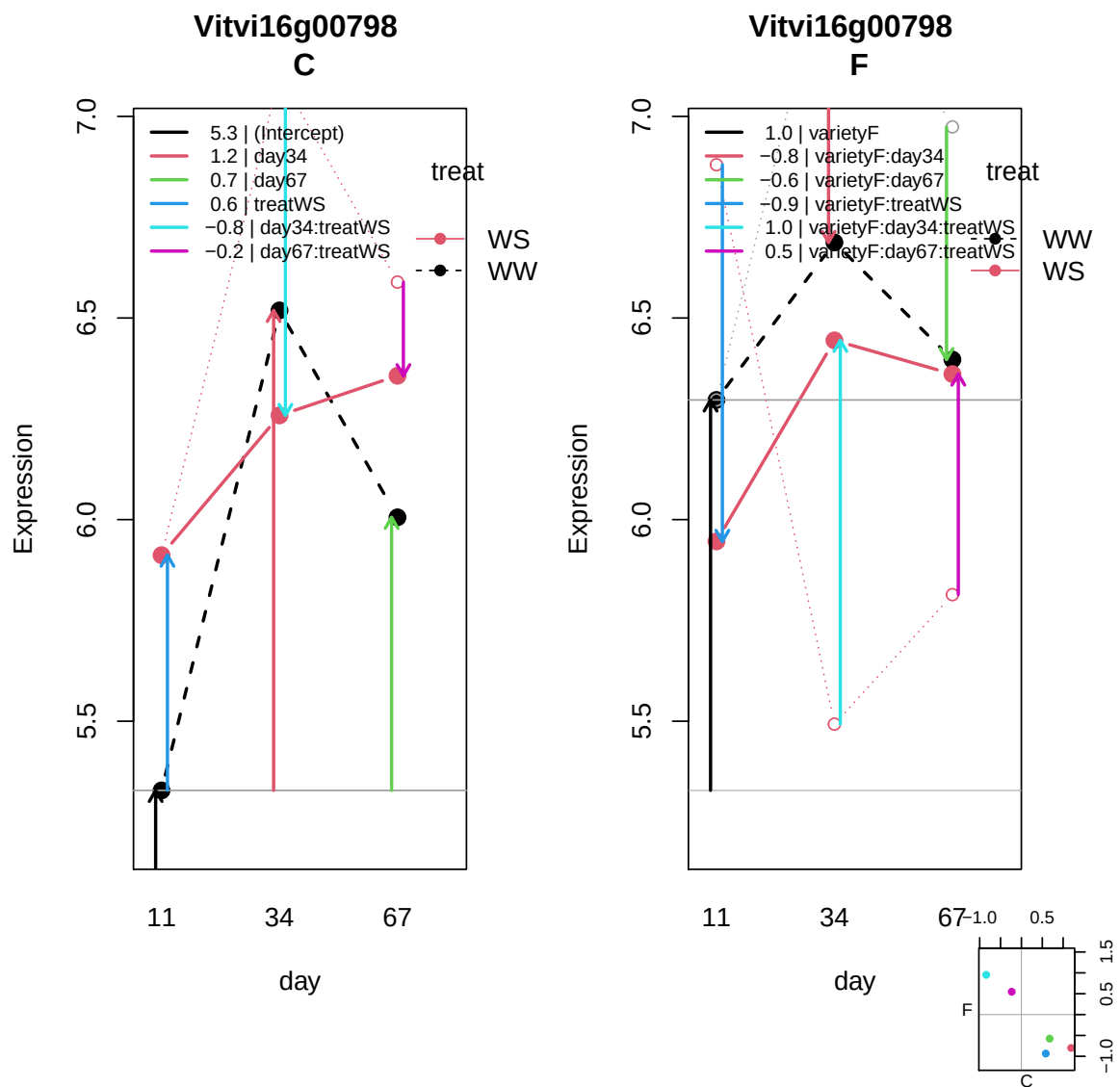
              (Intercept)  varietyF    day34    day67
Vitvi16g00798      5.328284 0.9684092 1.190445 0.6772426
              treatWS  varietyF:day34  varietyF:day67
Vitvi16g00798 0.5834342      -0.7998266      -0.5770564
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi16g00798      -0.934199      -0.8437712      -0.2322219
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi16g00798              0.9516926              0.546962

```

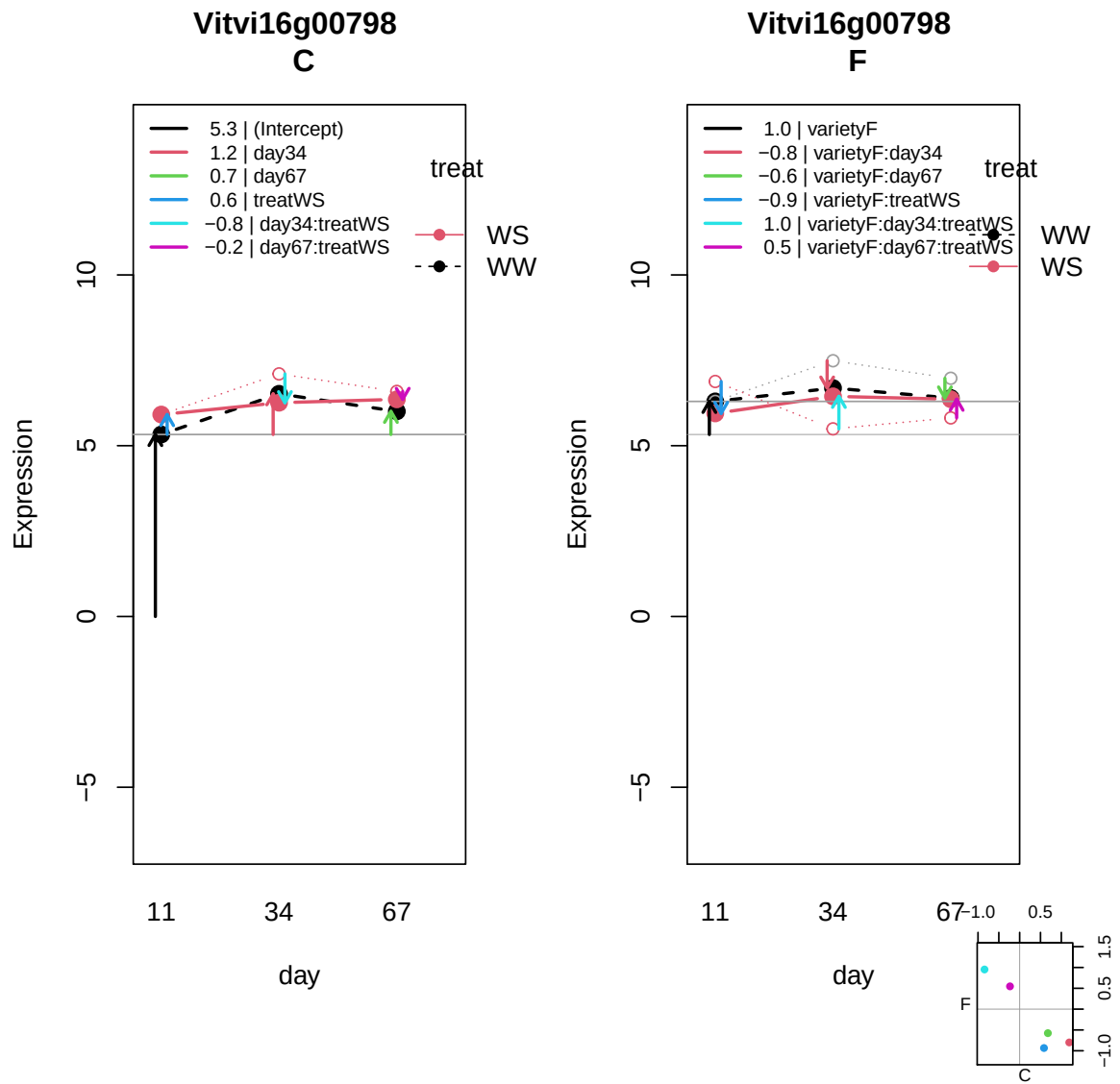
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

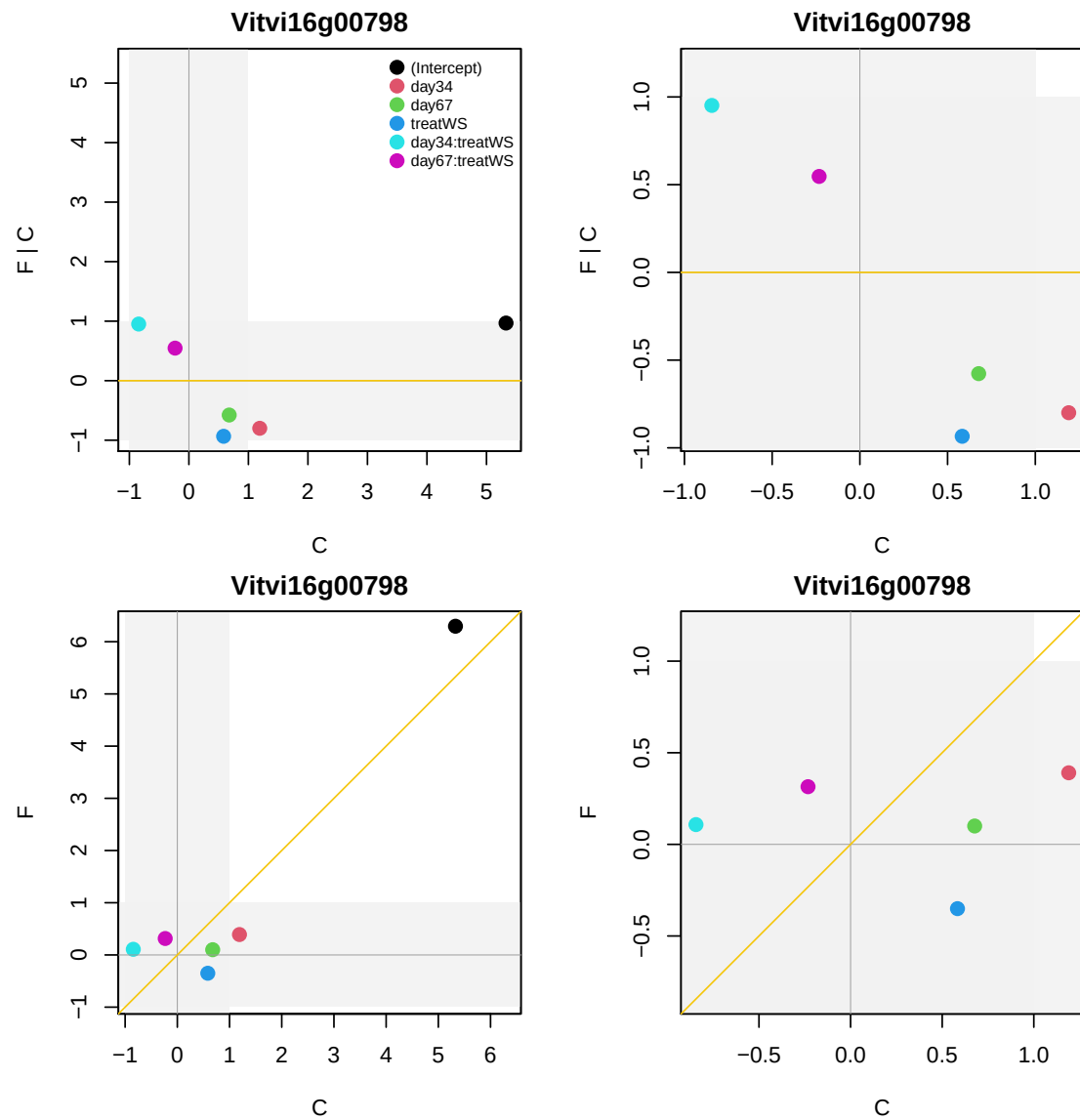


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

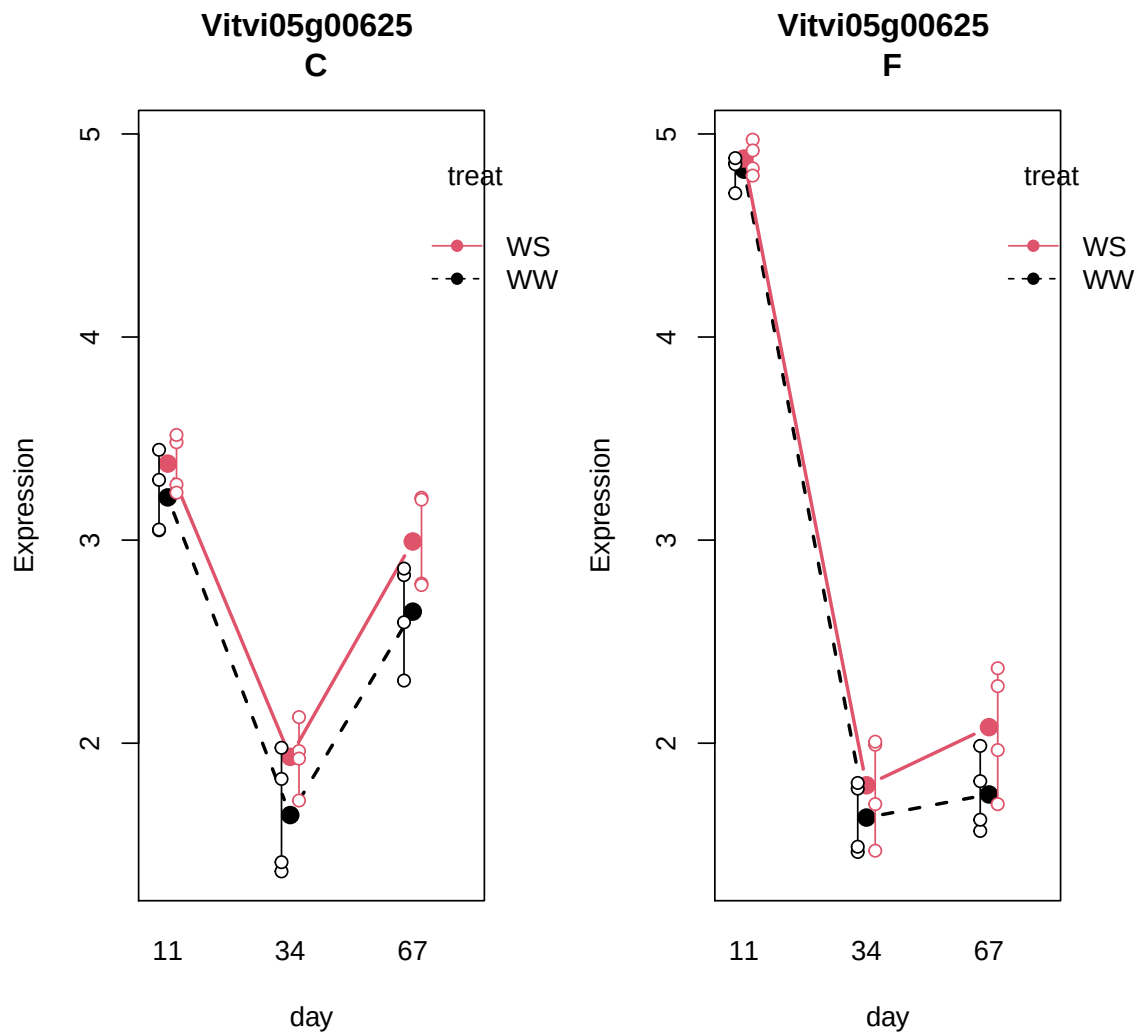


6.2.2 Vitvi05g00625

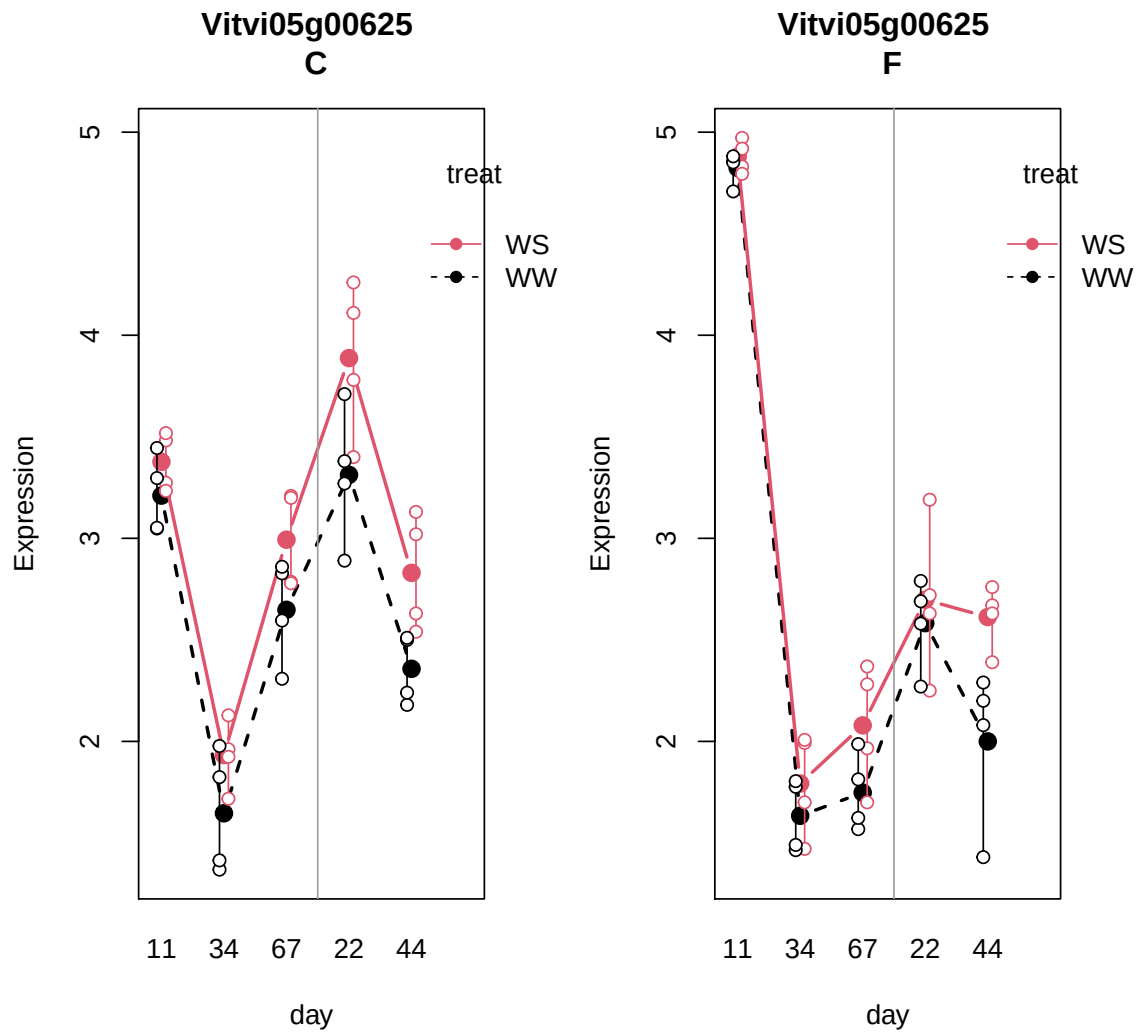
Coefficient day34 for Vitvi05g00625.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi05g00625 -1.564344 2.730309 -10.44862 7.908378e-13
      adj.P.Val      B
Vitvi05g00625 4.834288e-09 19.01996

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

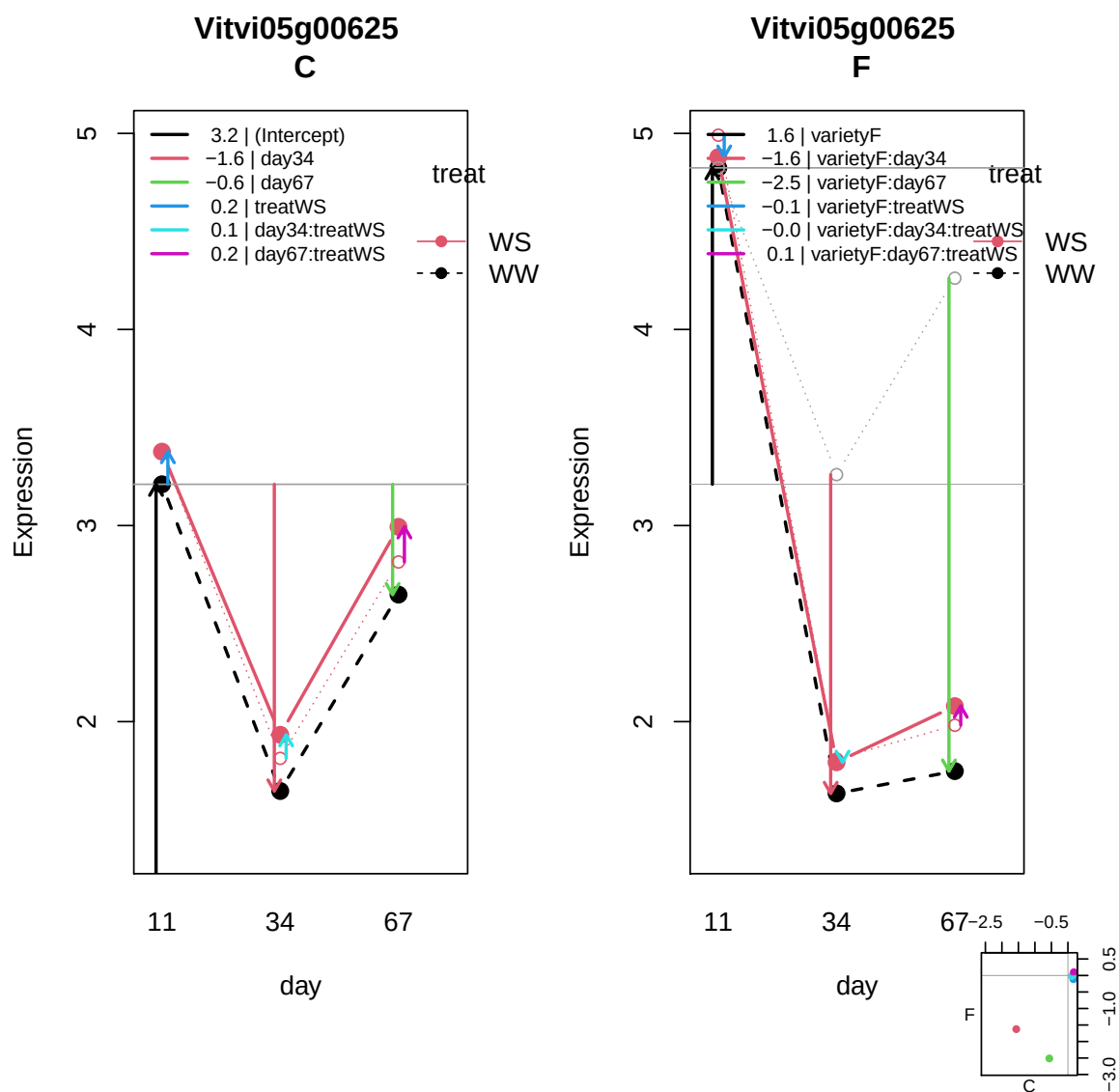
      (Intercept) varietyF      day34      day67
Vitvi05g00625    3.210428 1.613775 -1.564344 -0.5626437
      treatWS varietyF:day34 varietyF:day67
Vitvi05g00625  0.1663916    -1.626041    -2.513869
      varietyF:treatWS day34:treatWS day67:treatWS
Vitvi05g00625    -0.1115694    0.1204359    0.1790545
      varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi05g00625    -0.01640733    0.09748231

```

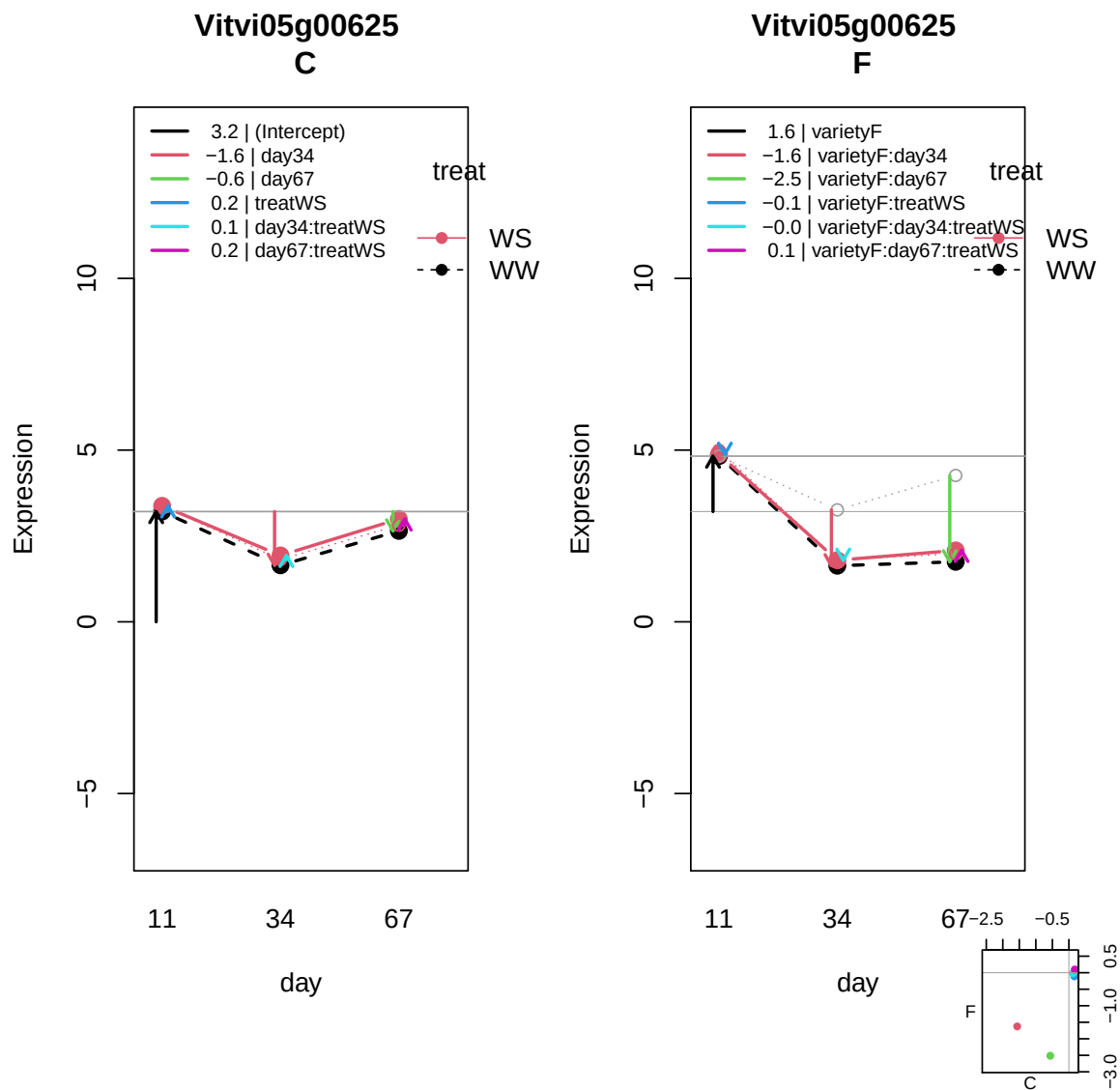
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

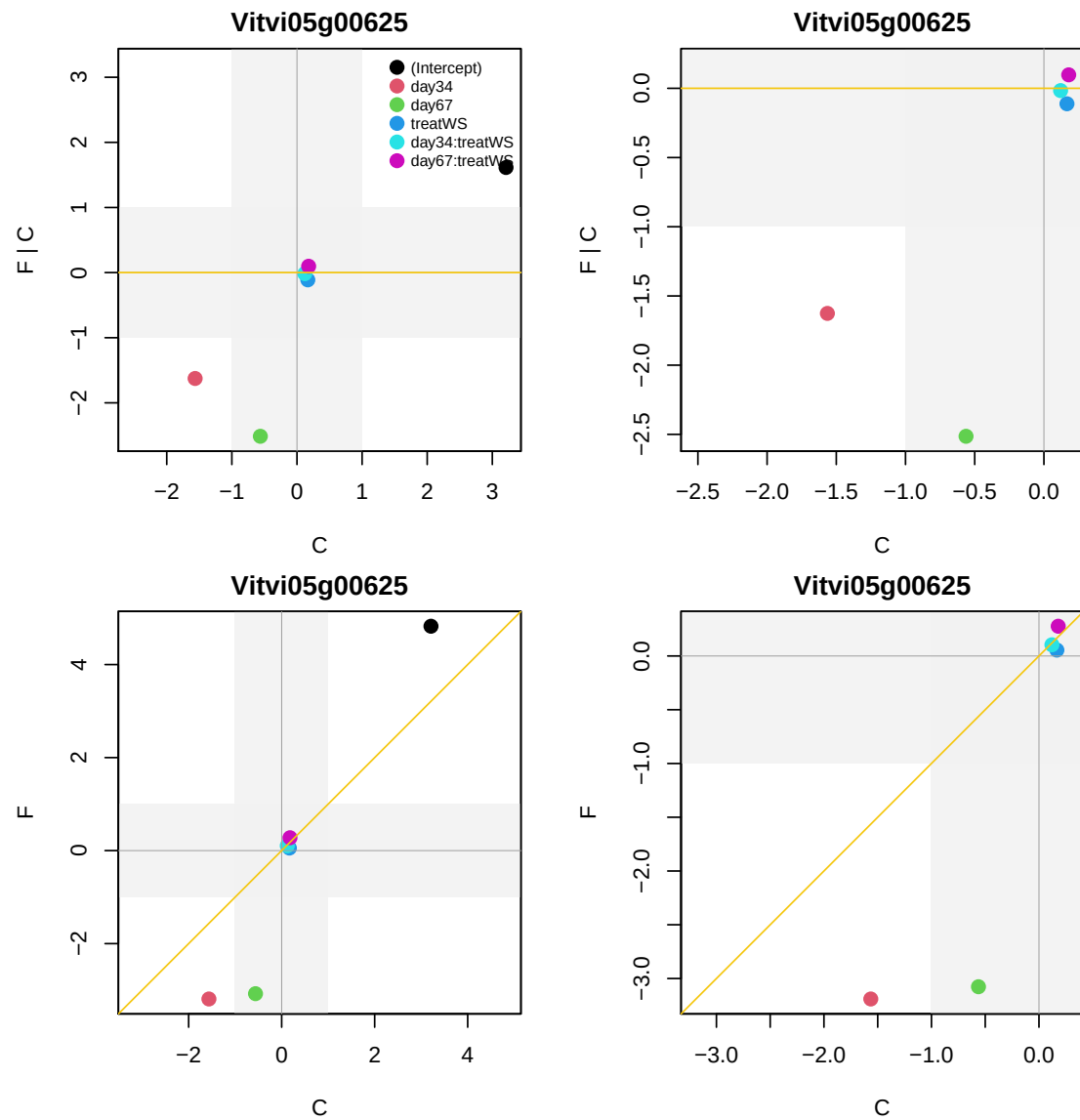


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

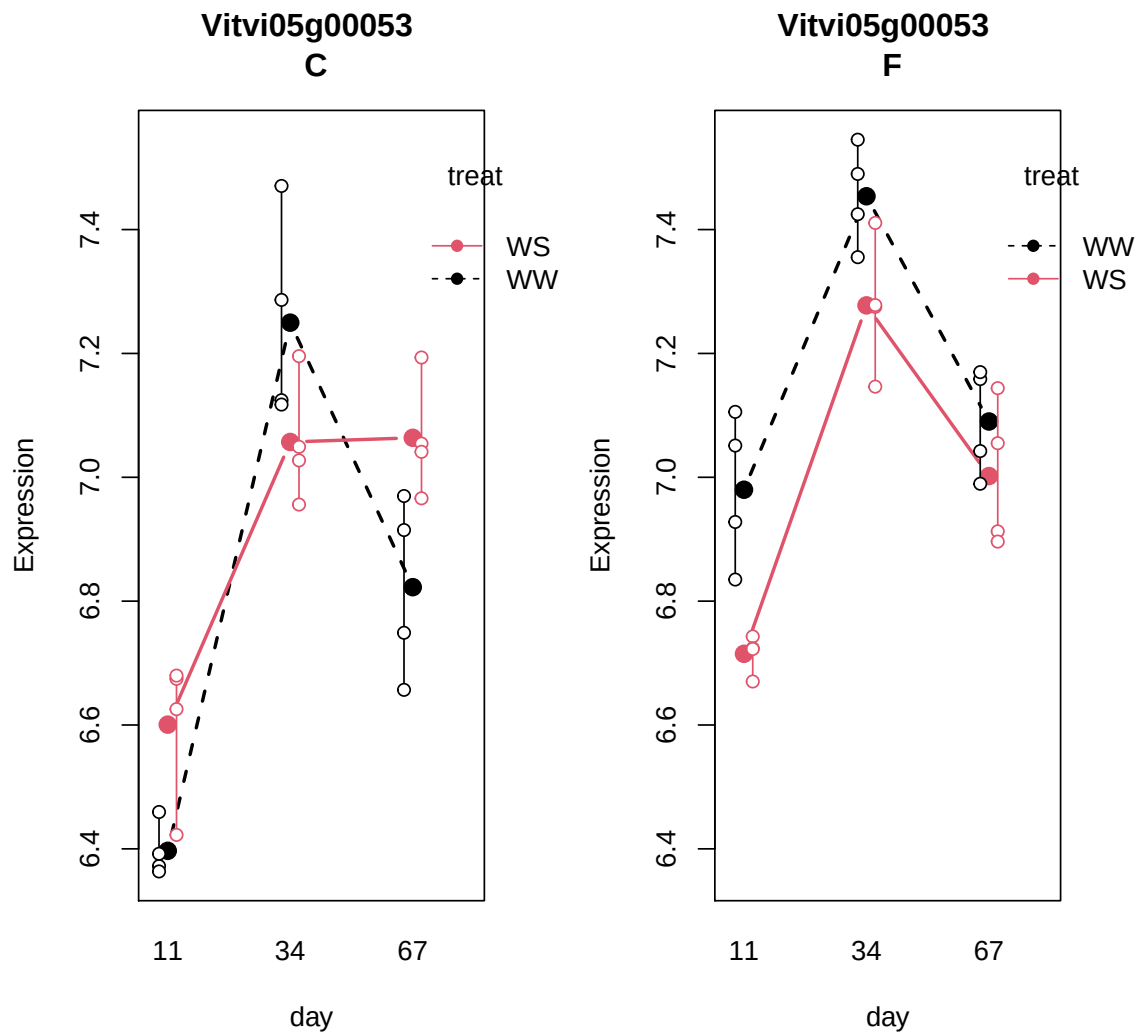
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



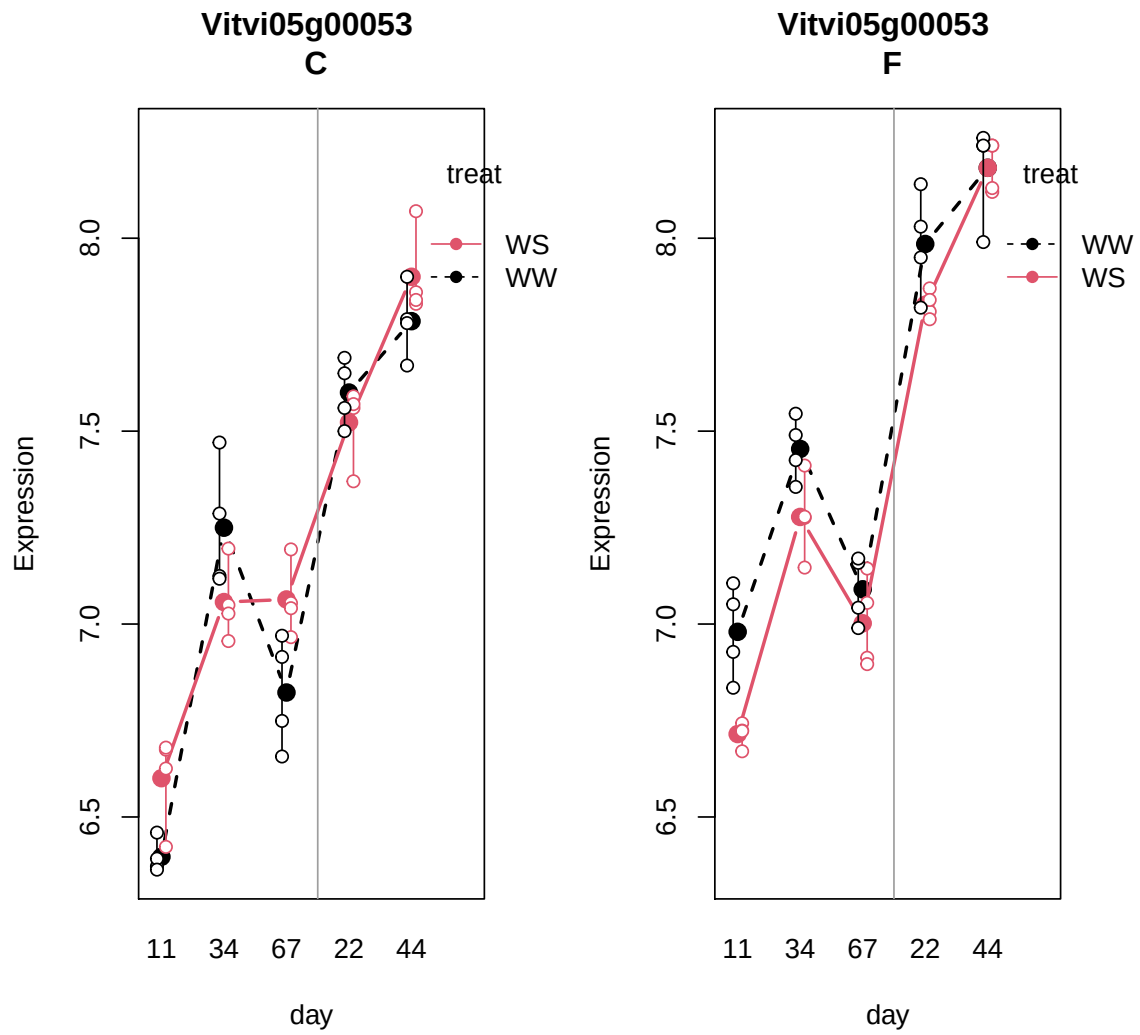
6.2.3 Vitvi05g00053

Coefficient day34 for Vitvi05g00053.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi05g00053 0.8529002 6.975734 10.35388 1.027743e-12
      adj.P.Val      B
Vitvi05g00053 4.834288e-09 18.7712
> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```




```
> fit1[varname,]$coefficients
```

```

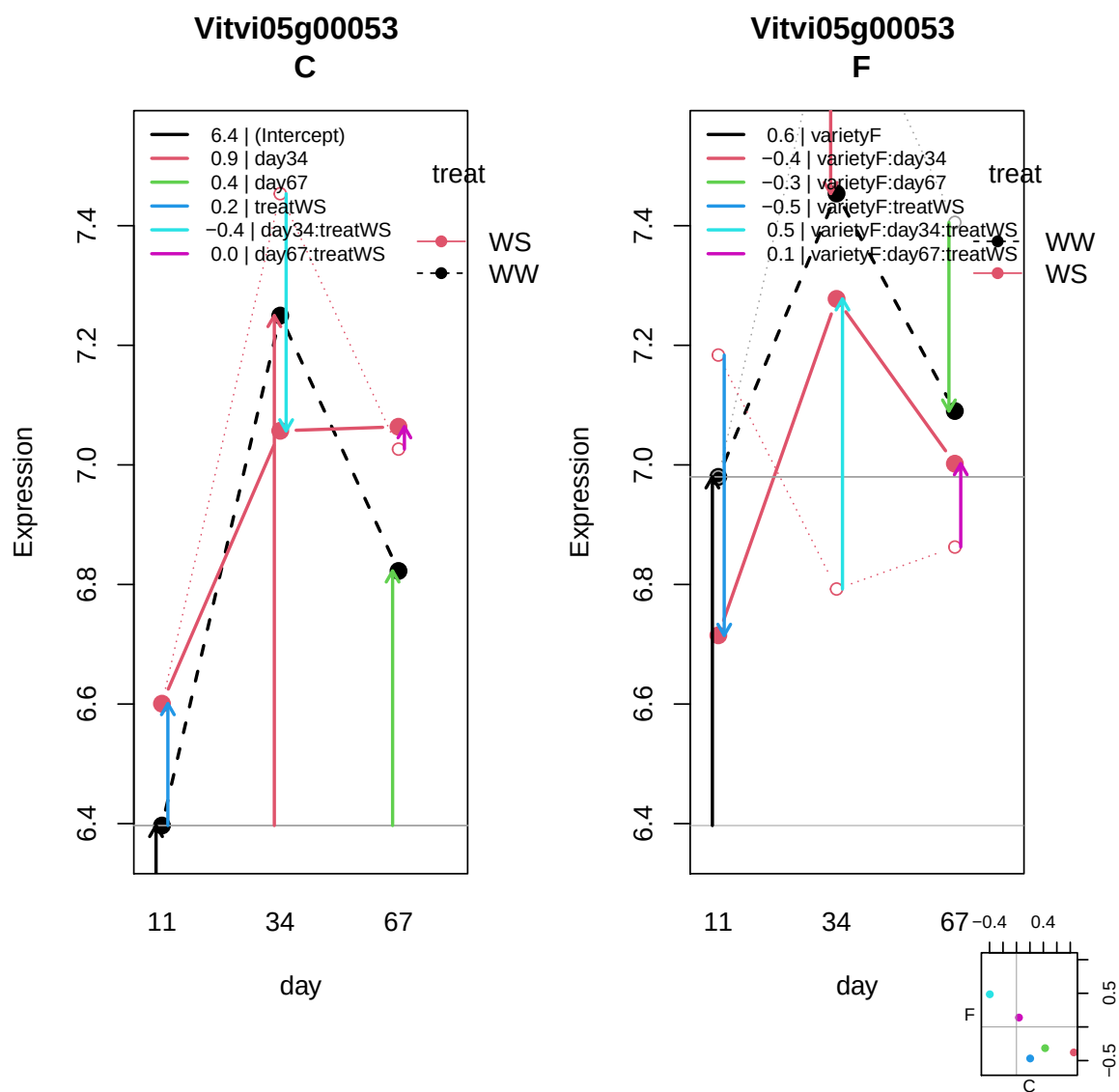
              (Intercept)  varietyF    day34    day67
Vitvi05g00053      6.396807 0.5830994 0.8529002 0.425754
              treatWS varietyF:day34 varietyF:day67
Vitvi05g00053 0.203799   -0.3789759   -0.3155766
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi05g00053   -0.4687441   -0.3965011    0.0373976
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi05g00053           0.4852314           0.1394394

```

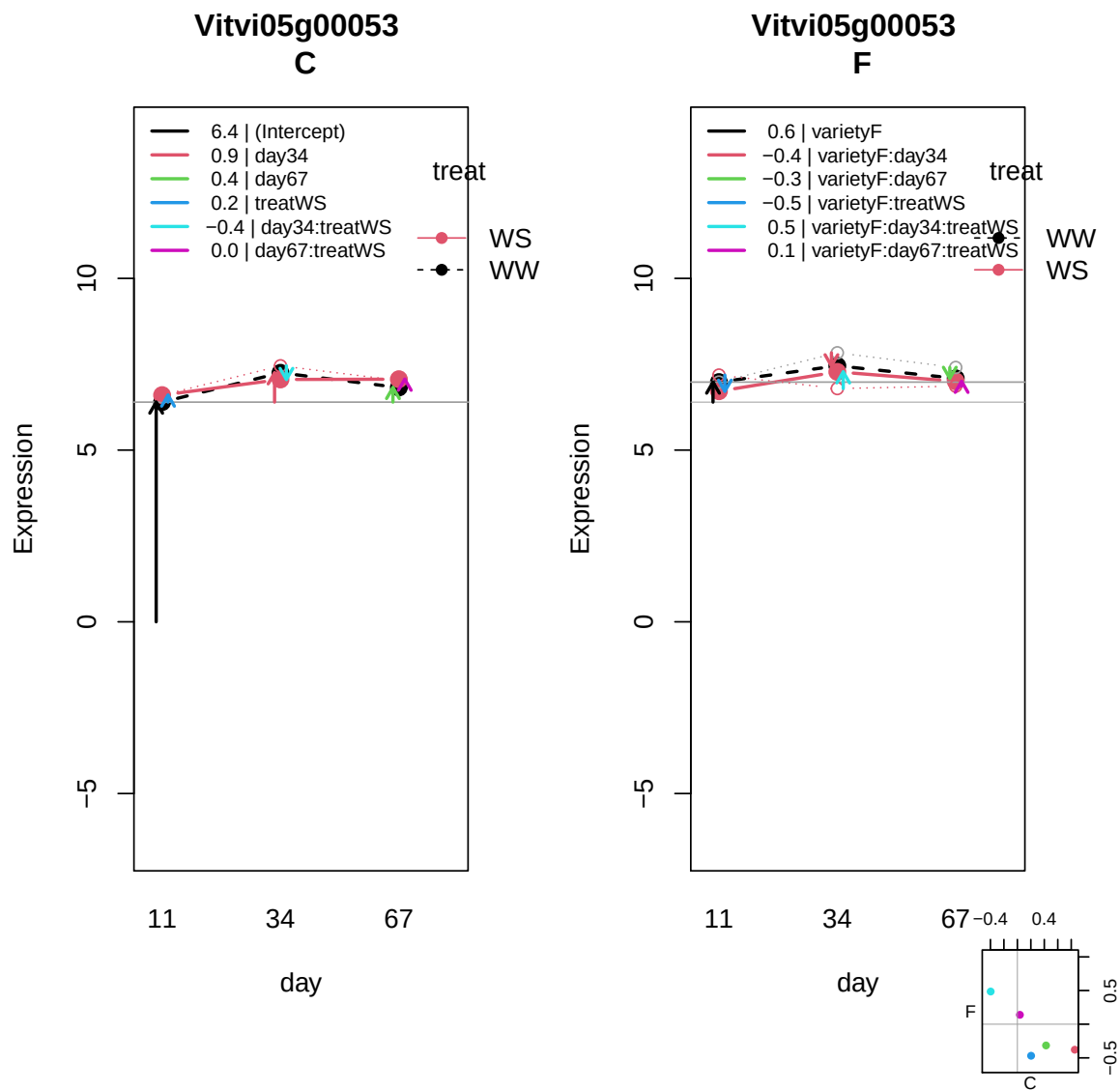
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

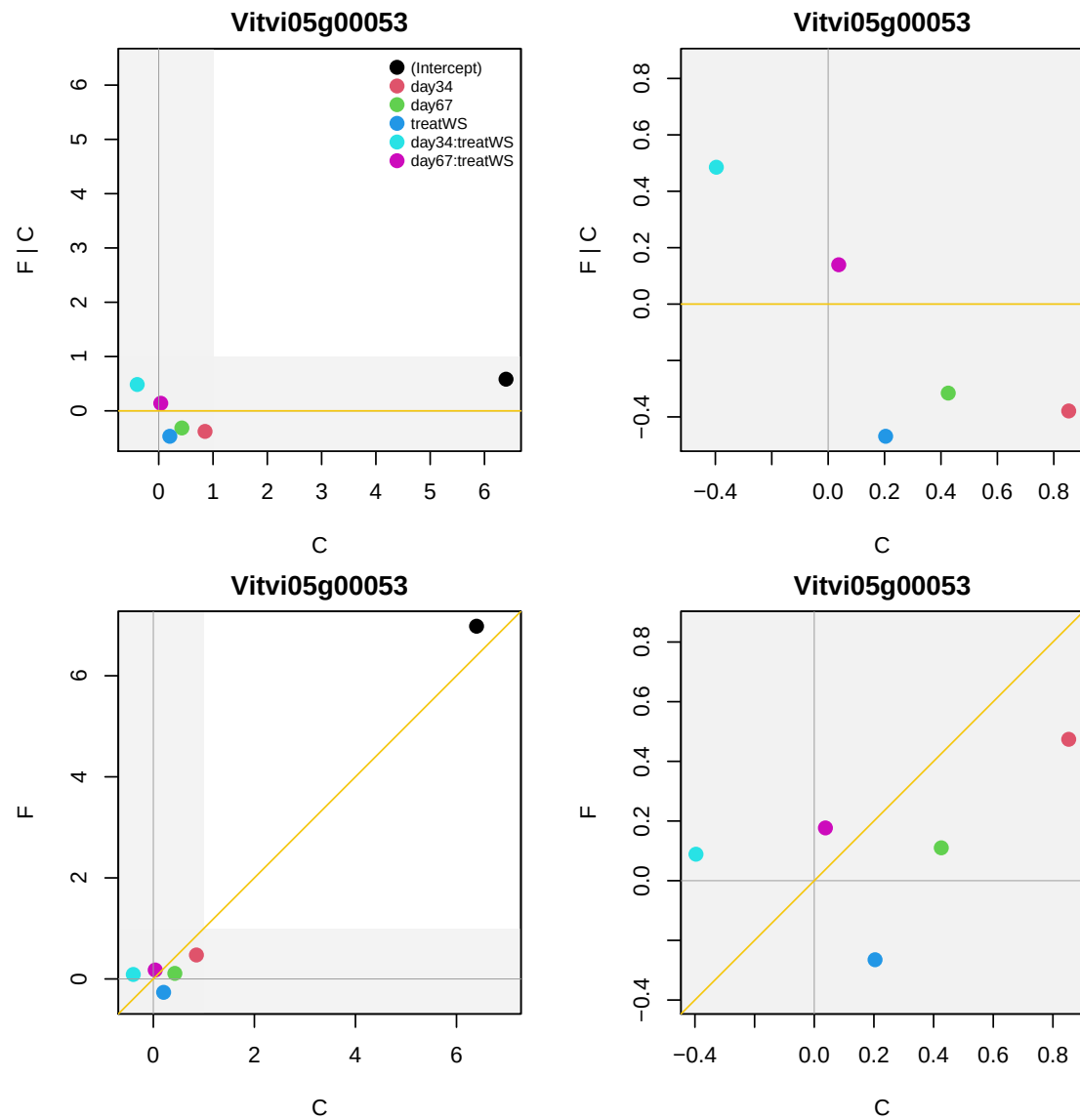


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

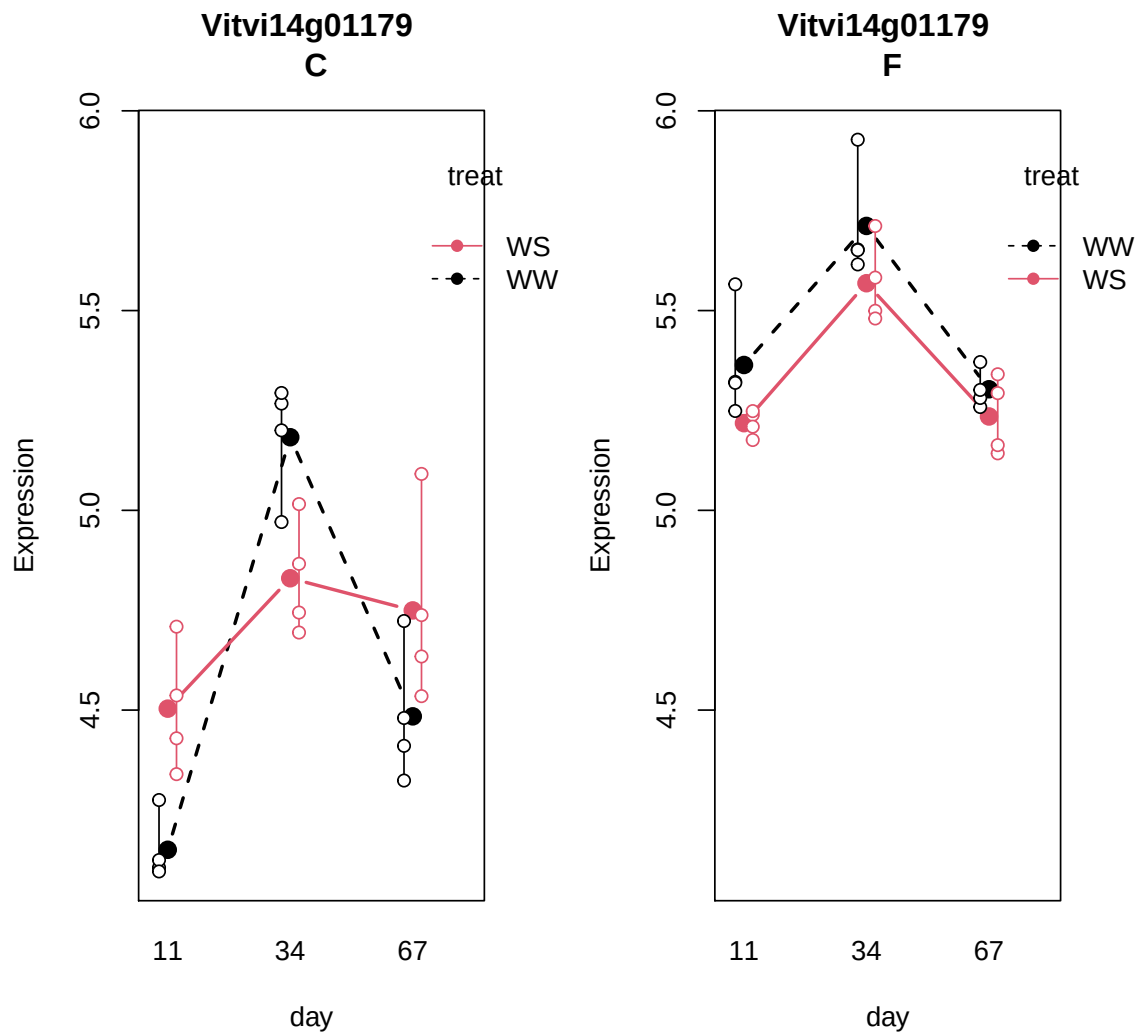


6.2.4 Vitvi14g01179

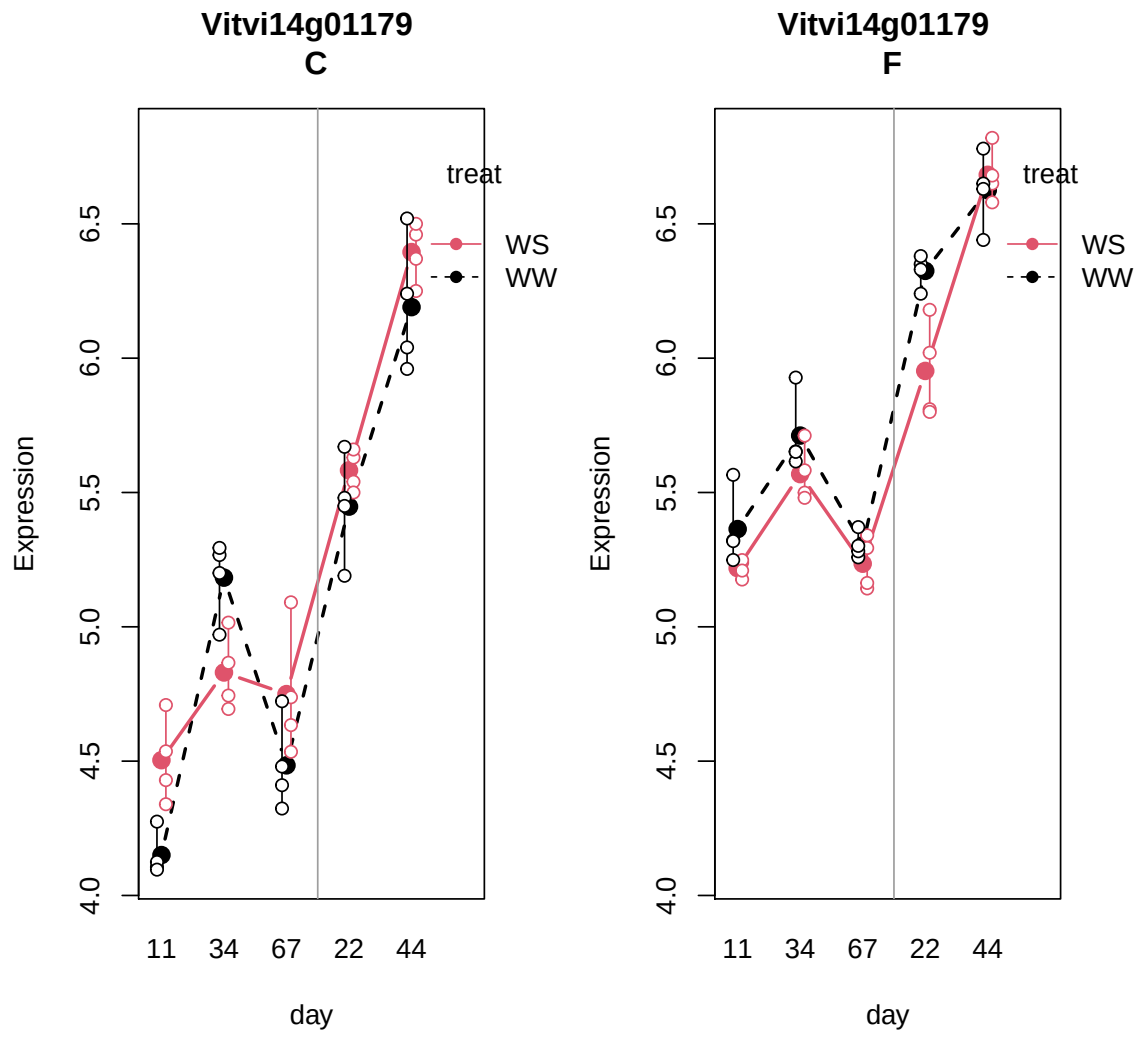
Coefficient day34 for Vitvi14g01179.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi14g01179 1.032678 5.025093 10.264 1.319214e-12
      adj.P.Val      B
Vitvi14g01179 4.834288e-09 18.53401

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

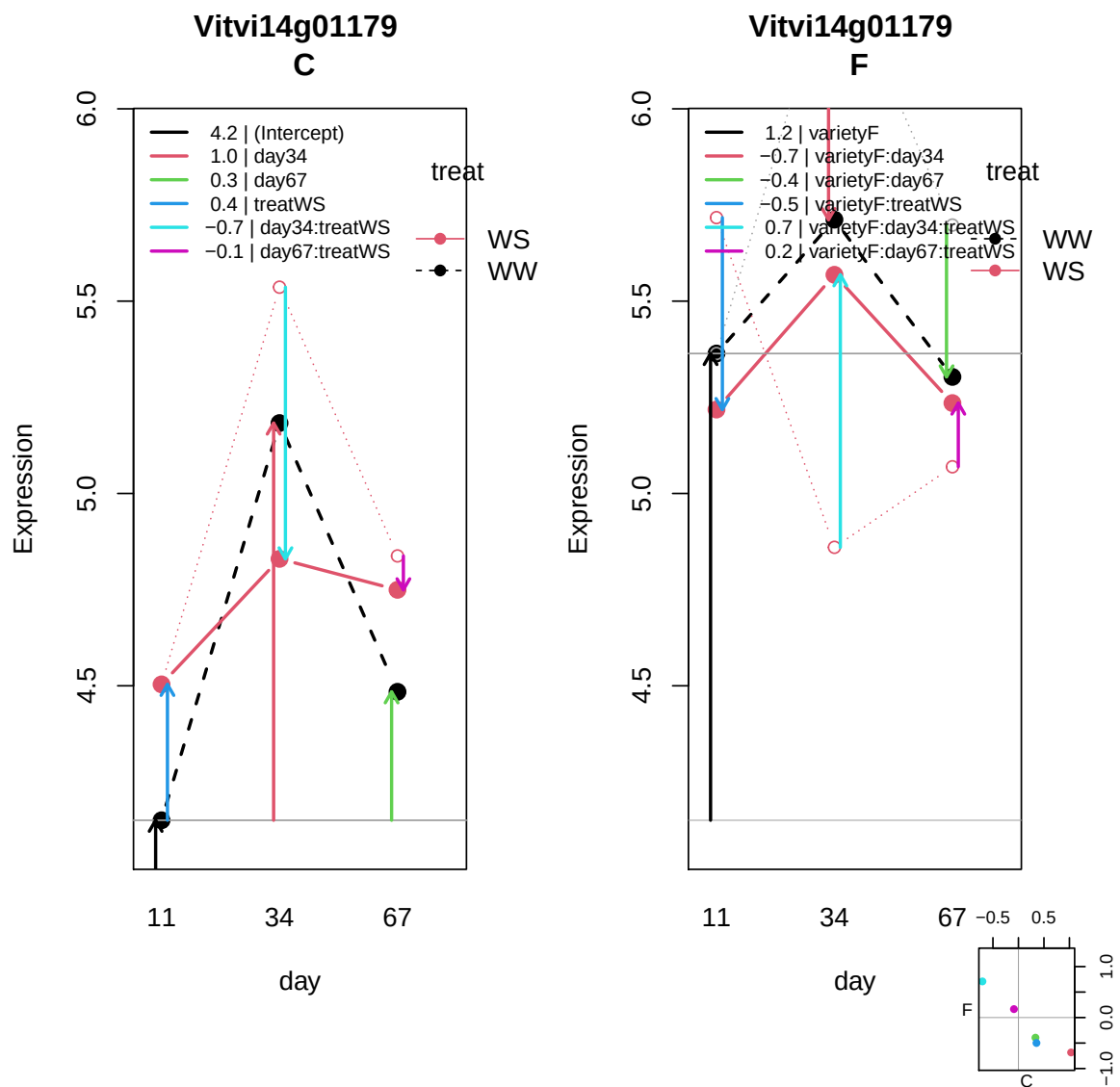
      (Intercept) varietyF    day34    day67
Vitvi14g01179    4.150315 1.213506 1.032678 0.3339794
      treatWS varietyF:day34 varietyF:day67
Vitvi14g01179  0.3532928   -0.6846035   -0.3947294
      varietyF:treatWS day34:treatWS day67:treatWS
Vitvi14g01179   -0.4989294   -0.7062866   -0.08807387
      varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi14g01179    0.7085102    0.1655754

```

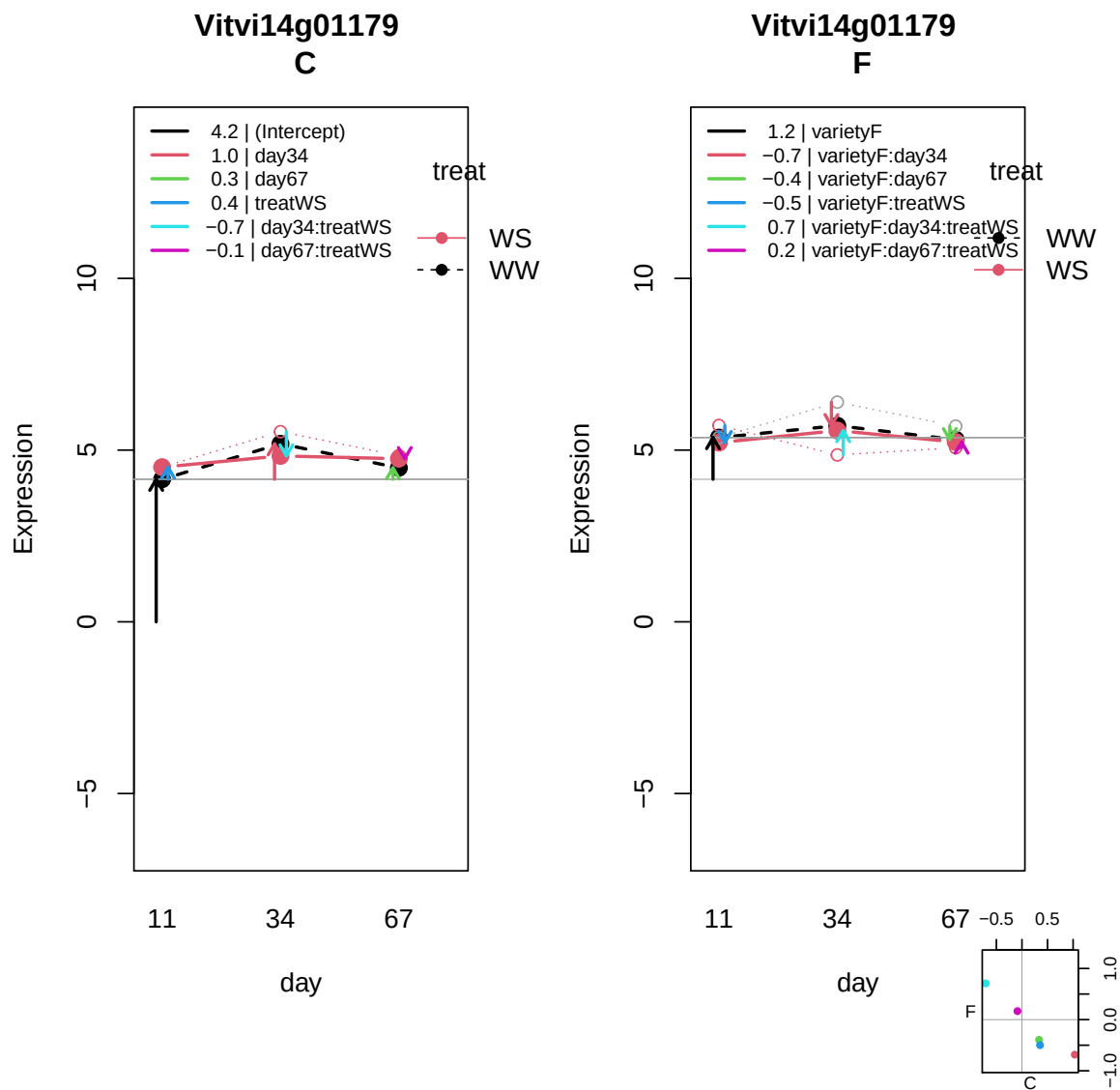
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

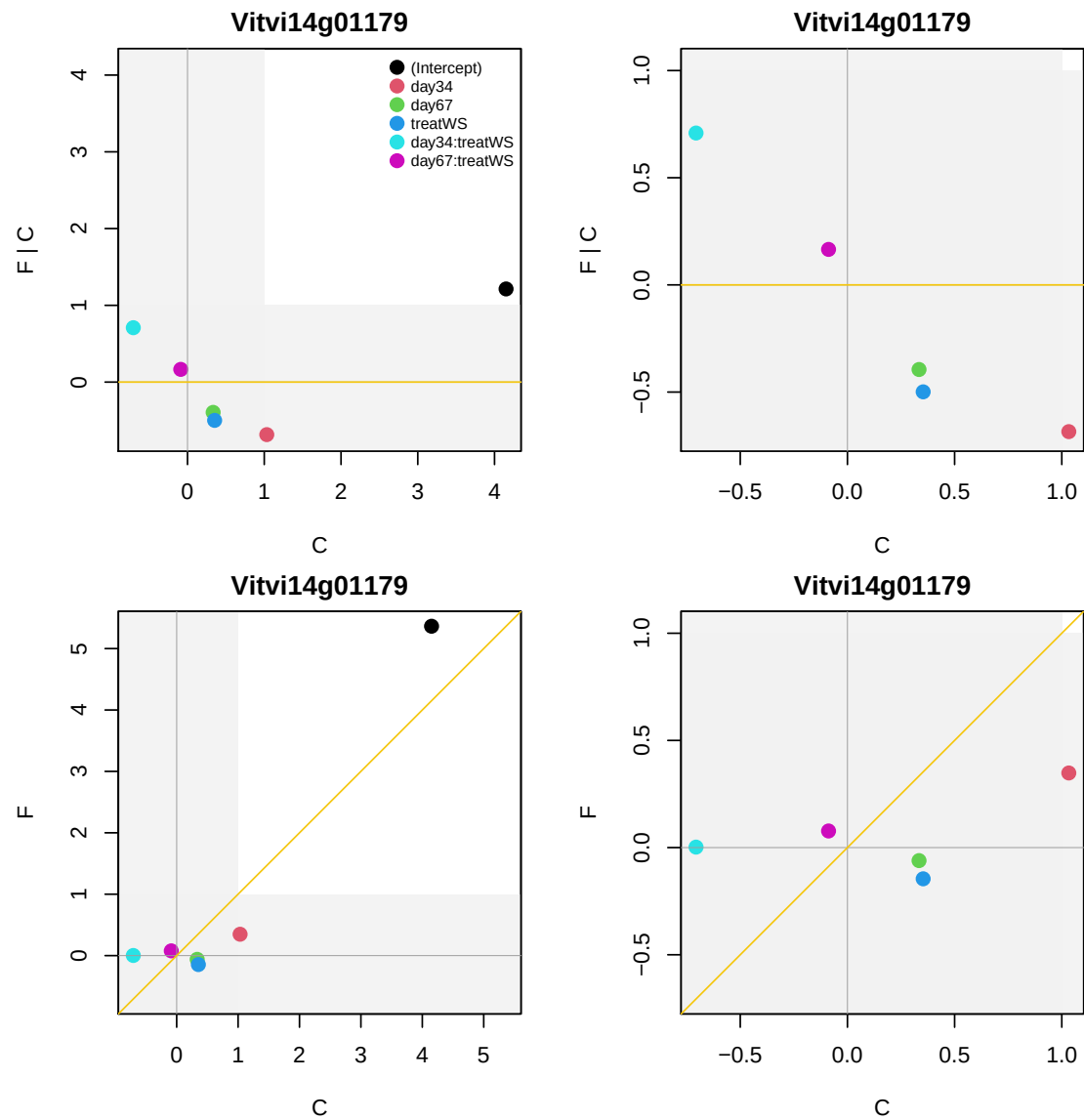


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

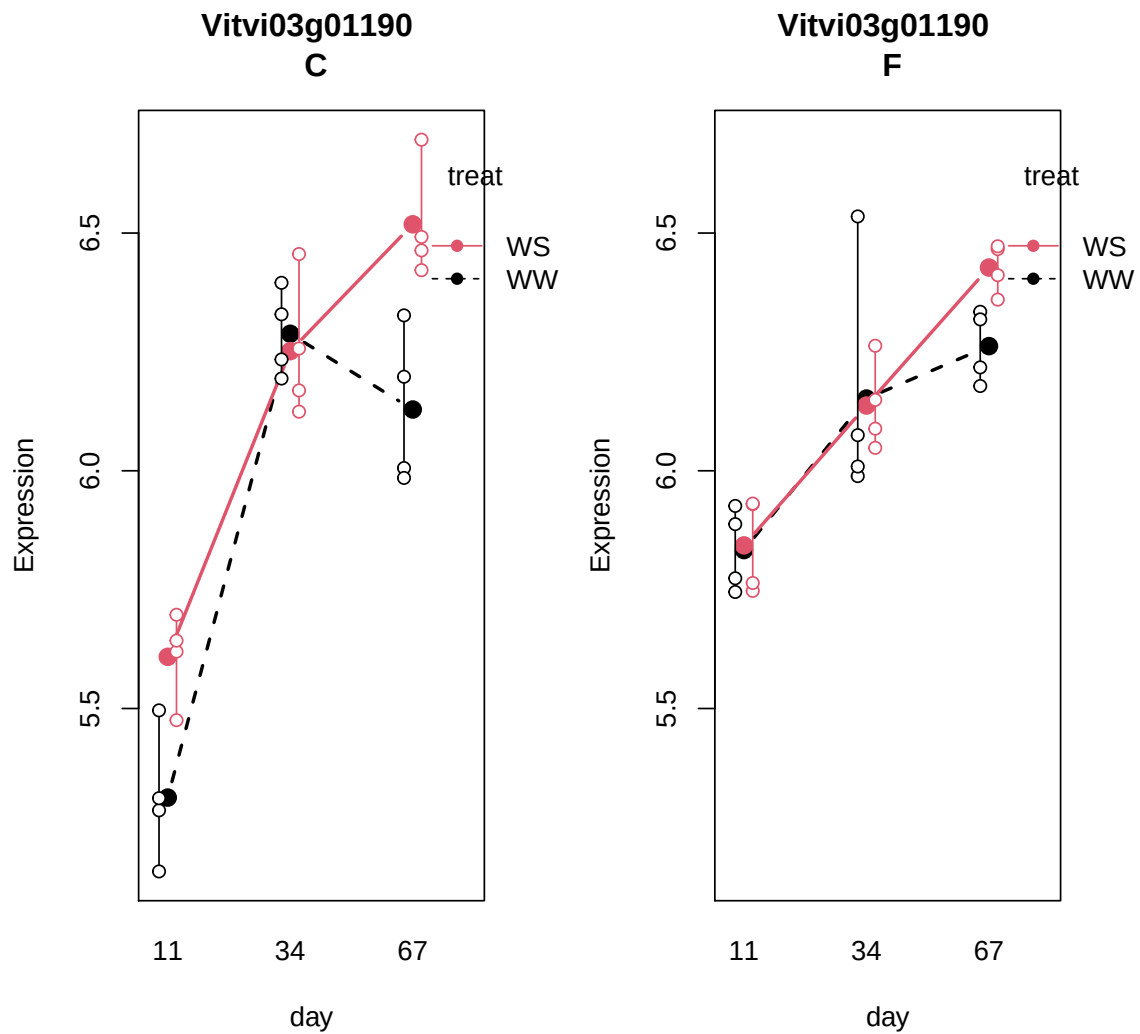


6.2.5 Vitvi03g01190

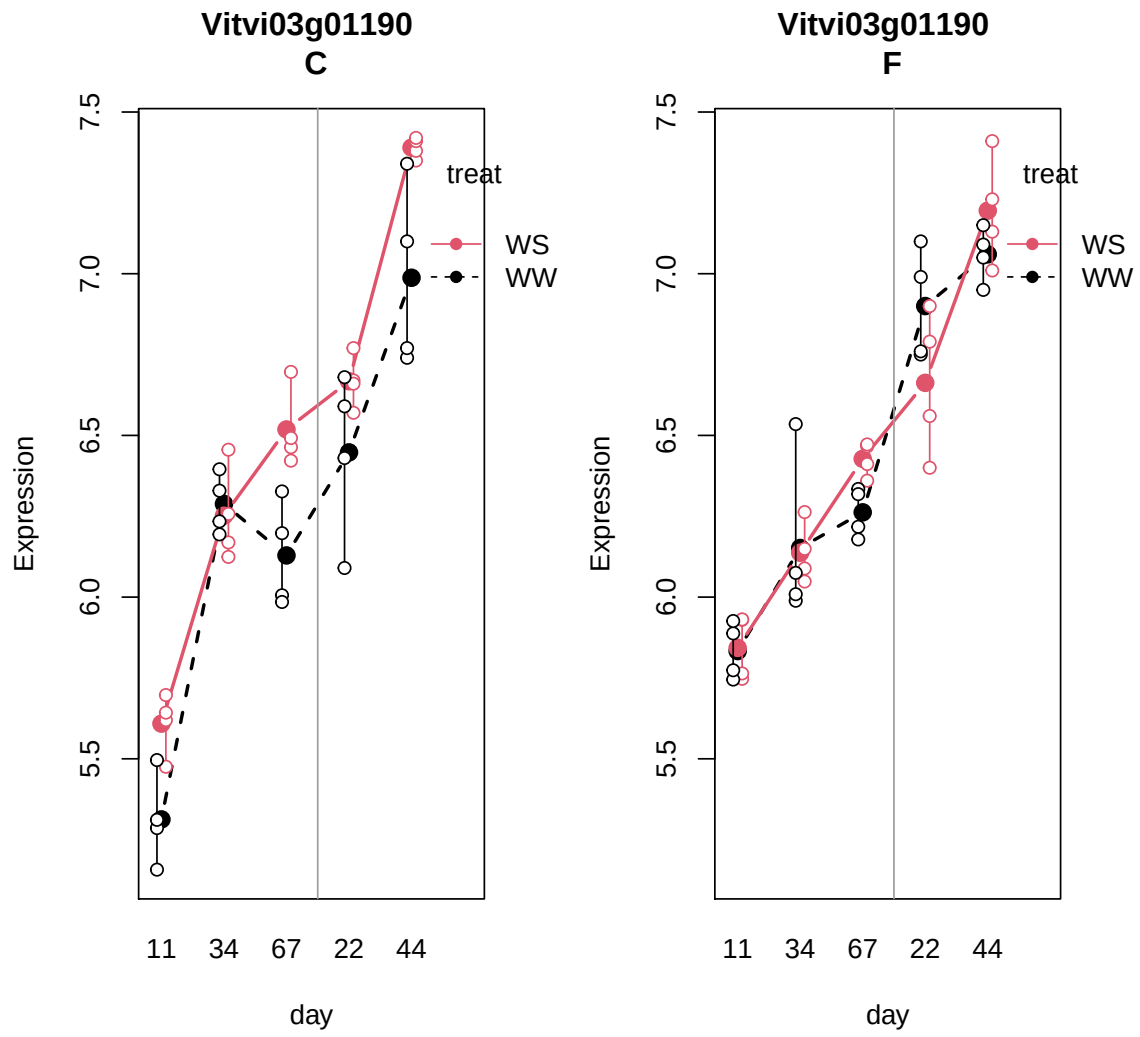
Coefficient day34 for Vitvi03g01190.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi03g01190 0.9755206 6.063602 10.19797 1.585844e-12
      adj.P.Val      B
Vitvi03g01190 4.834288e-09 18.35902

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

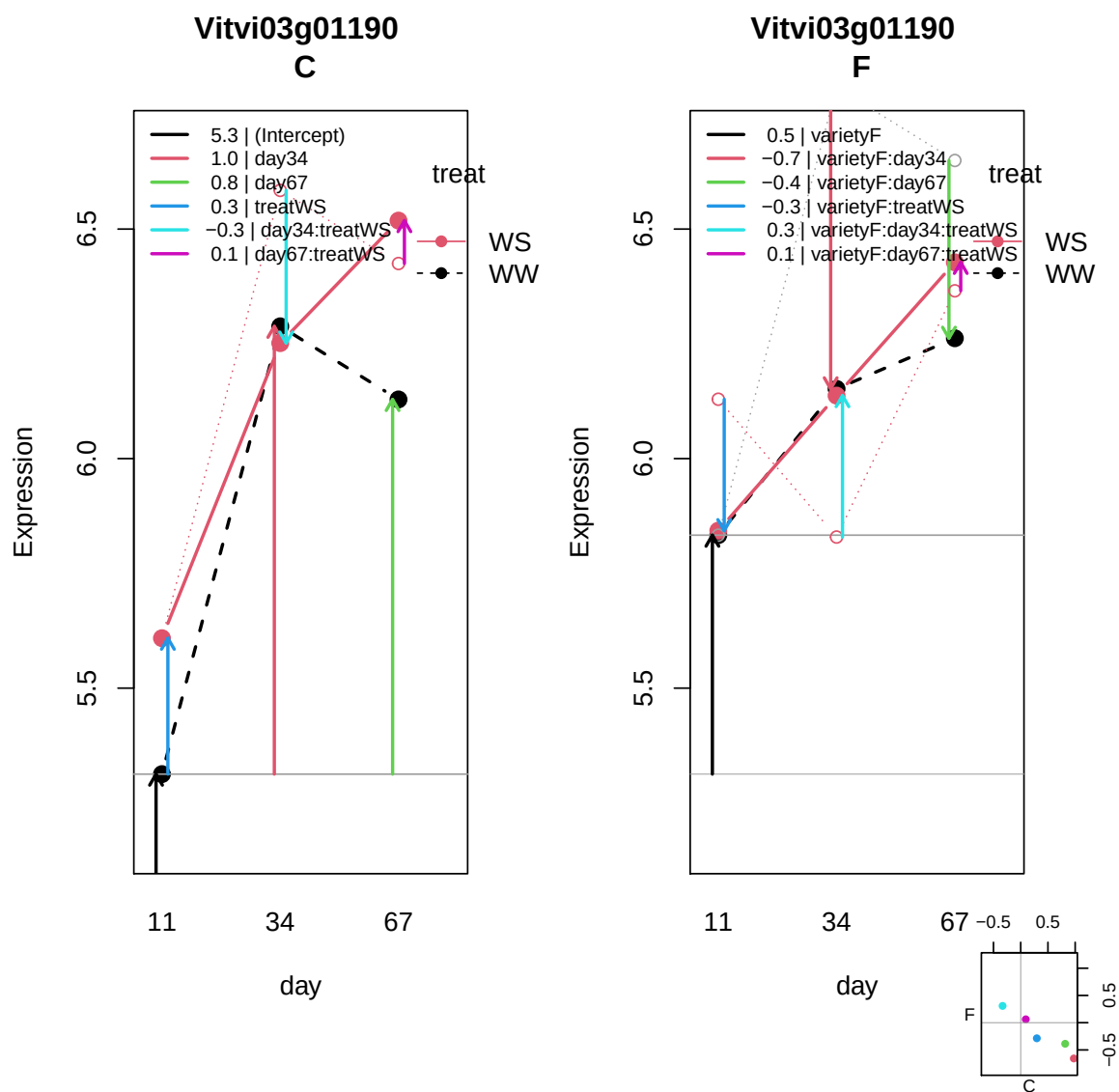
              (Intercept)  varietyF    day34    day67
Vitvi03g01190      5.312626 0.5205454 0.9755206 0.8161821
              treatWS varietyF:day34 varietyF:day67
Vitvi03g01190 0.296119    -0.6567876    -0.3872201
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi03g01190      -0.2862636    -0.332686    0.0934925
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi03g01190              0.3081245              0.06198418

```

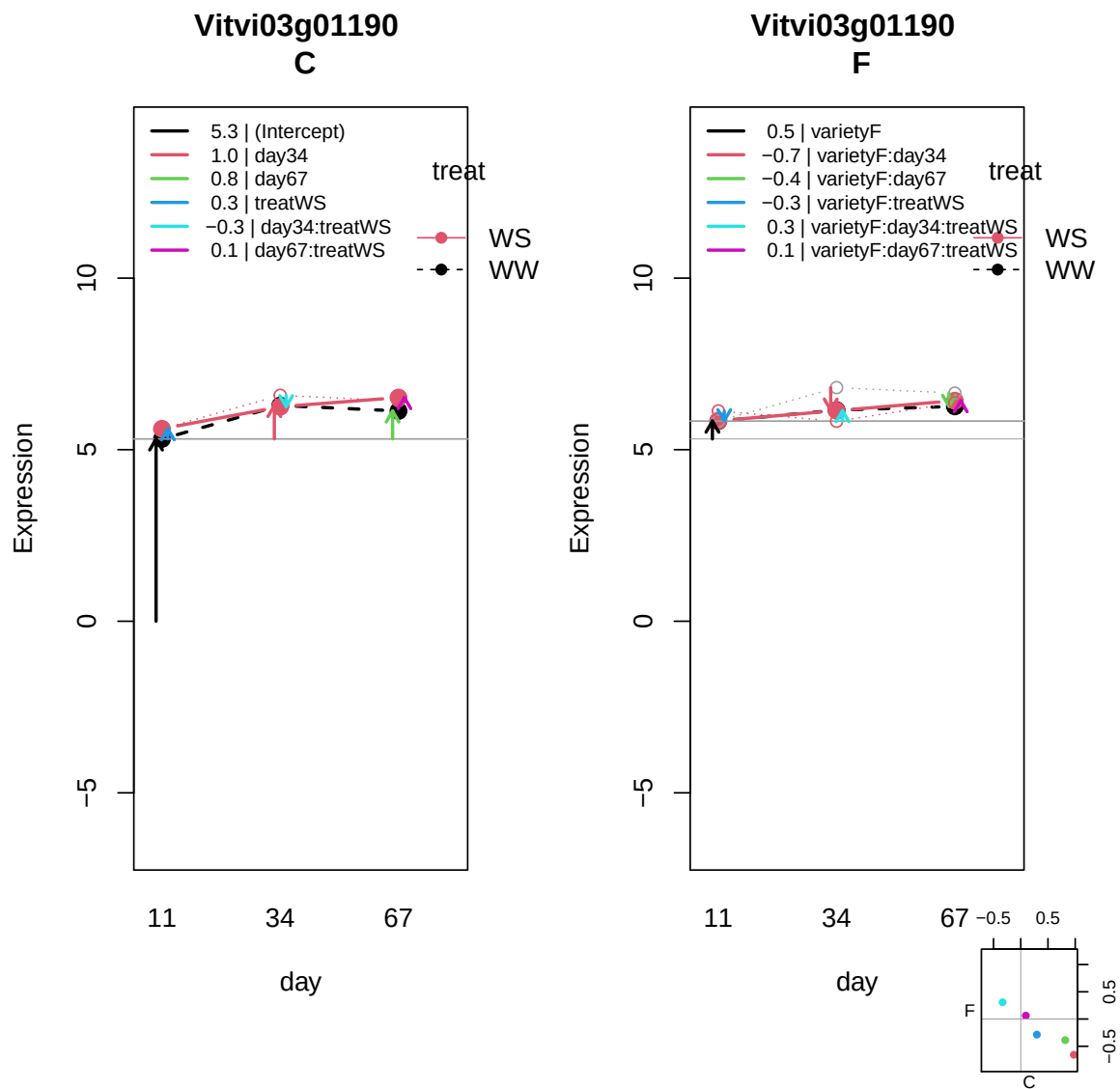
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

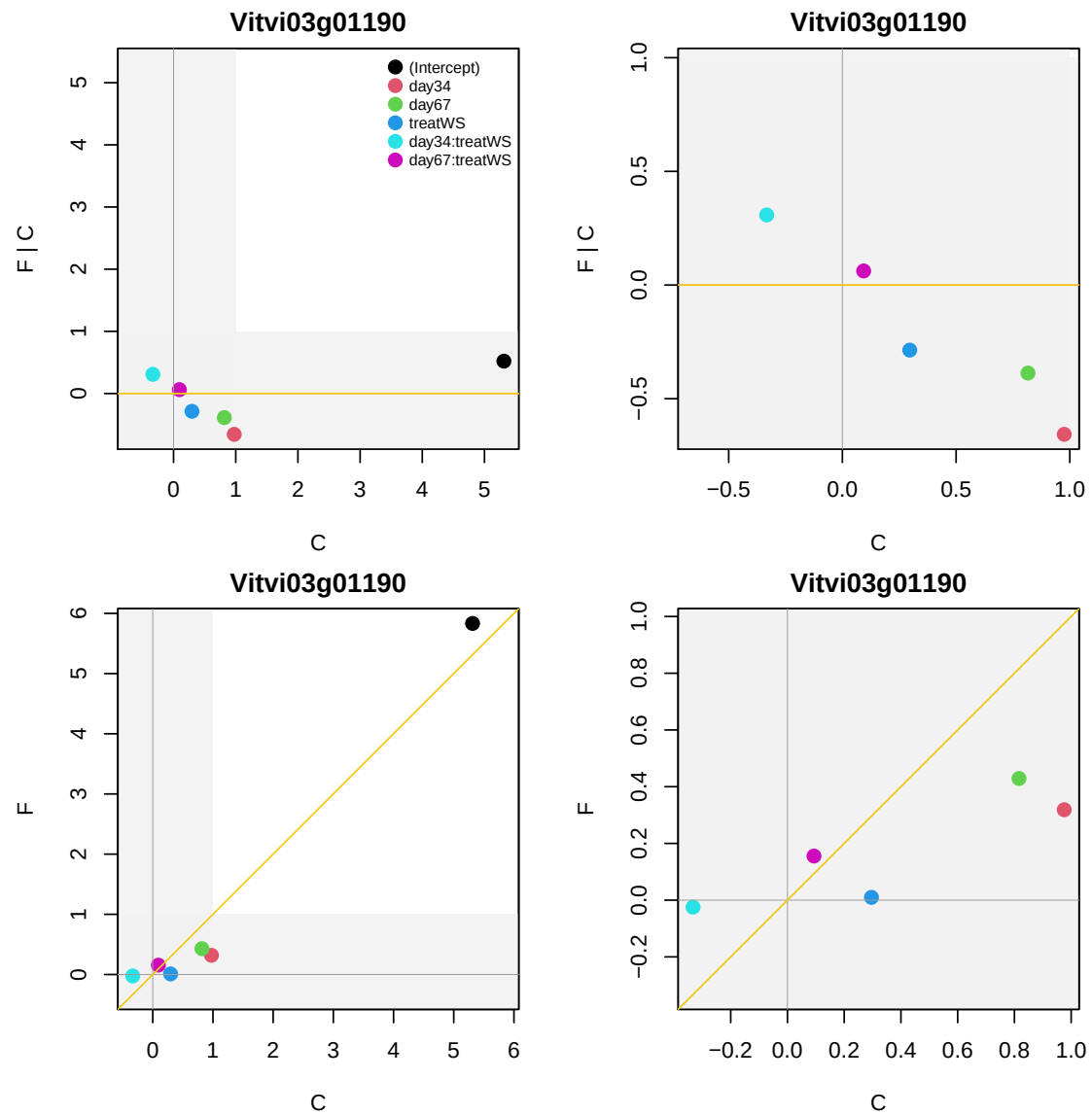


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

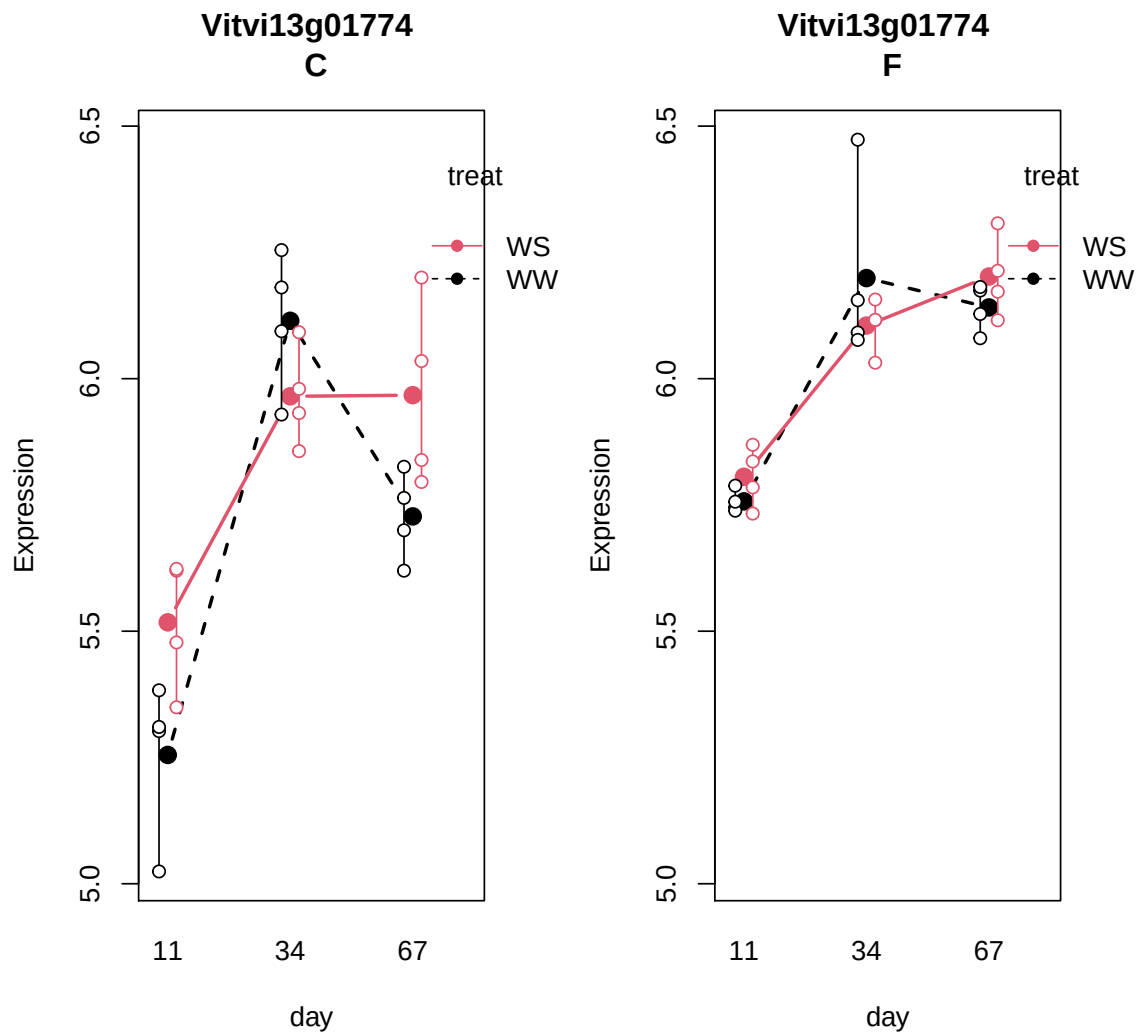


6.2.6 Vitvi13g01774

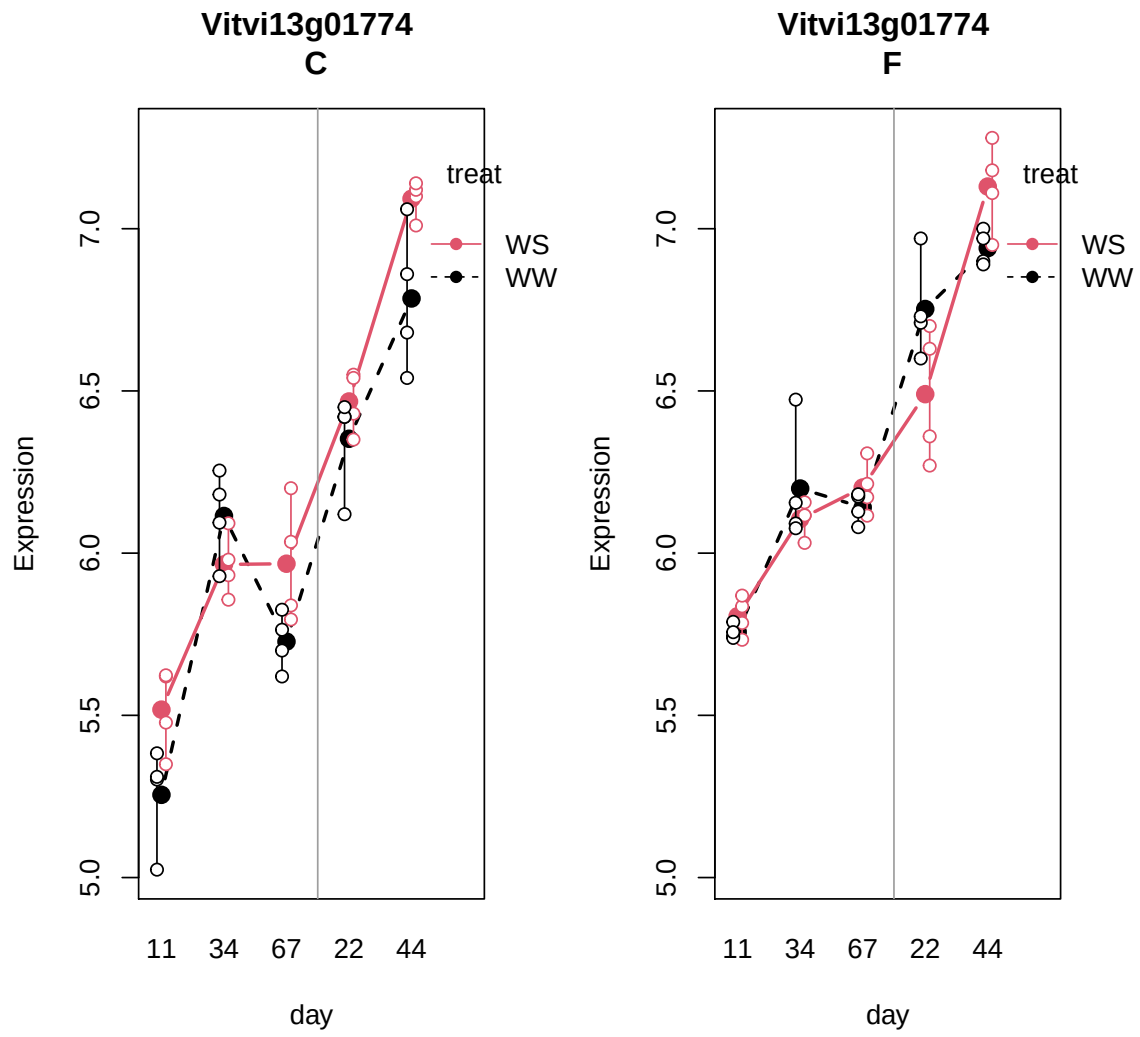
Coefficient day34 for Vitvi13g01774.

```
> tt[varname,]
              logFC AveExpr      t      P.Value
Vitvi13g01774 0.8595379 5.896415 9.792604 4.971153e-12
              adj.P.Val      B
Vitvi13g01774 1.170118e-08 17.27102

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



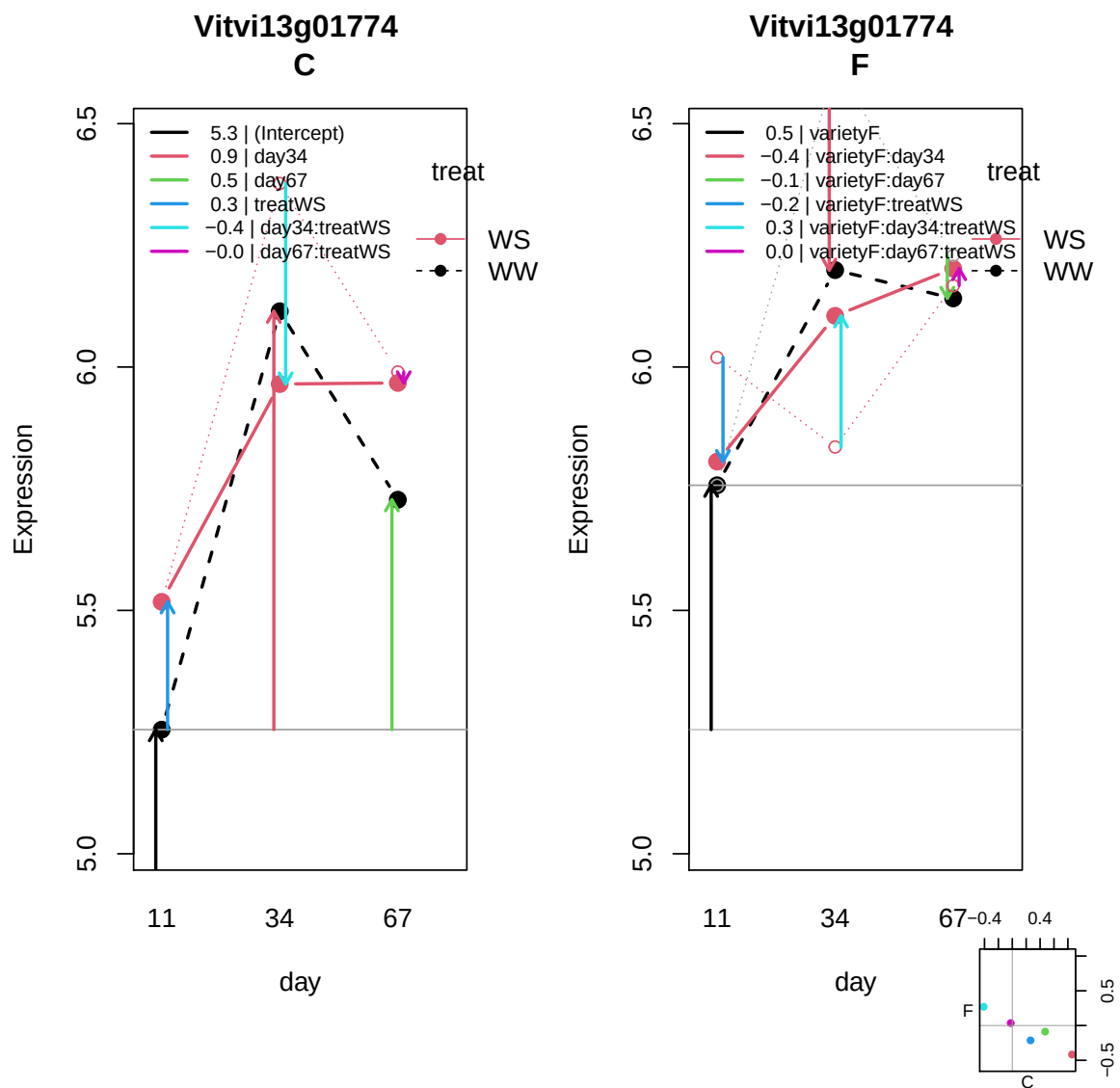
```

> fit1[varname,]$coefficients

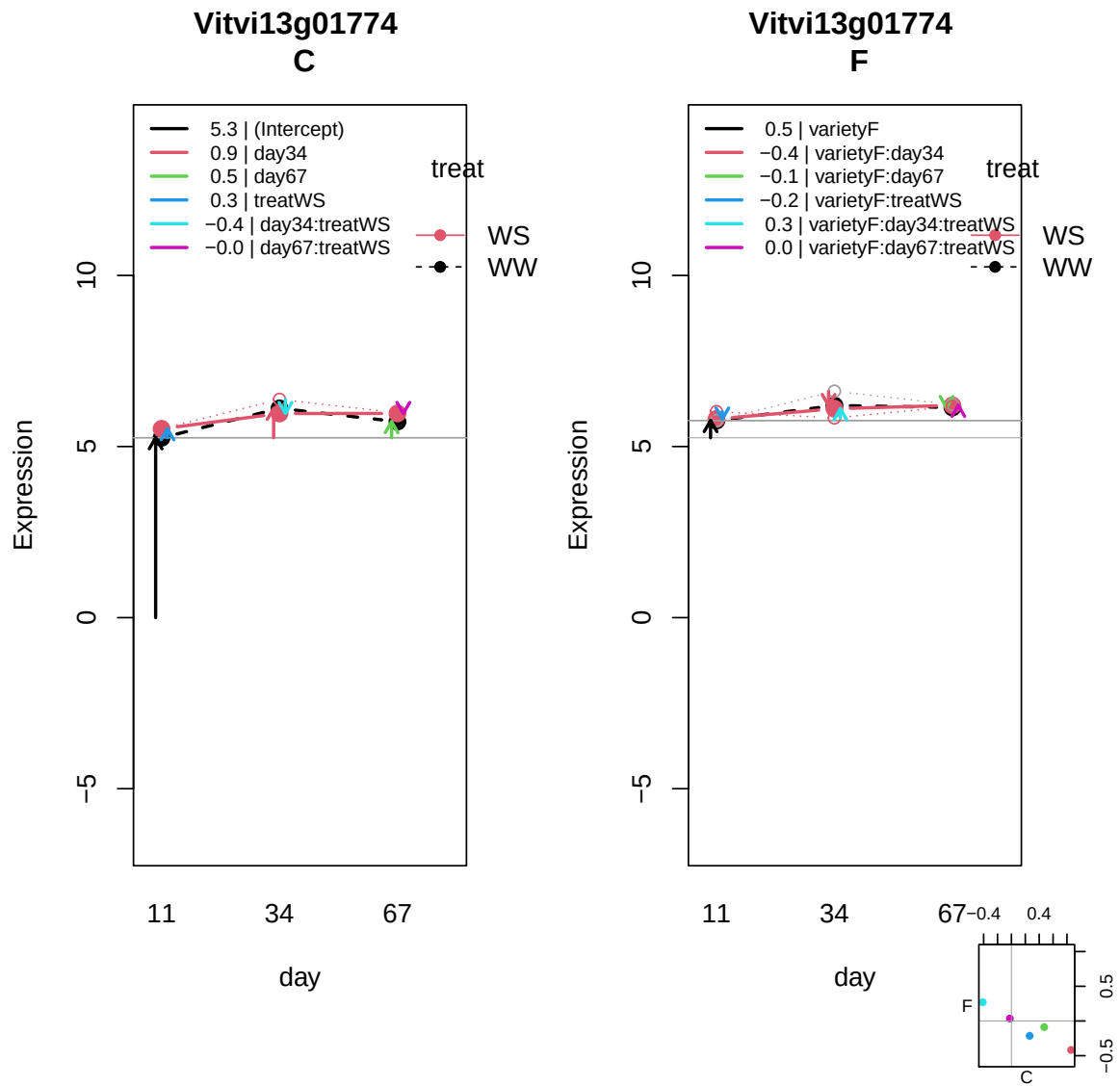
              (Intercept)  varietyF      day34      day67
Vitvi13g01774      5.254989  0.50205 0.8595379 0.4722865
              treatWS  varietyF:day34  varietyF:day67
Vitvi13g01774 0.2625701      -0.4174586      -0.0883149
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi13g01774      -0.2139055      -0.4120733      -0.02249532
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi13g01774              0.2694431              0.03505175

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

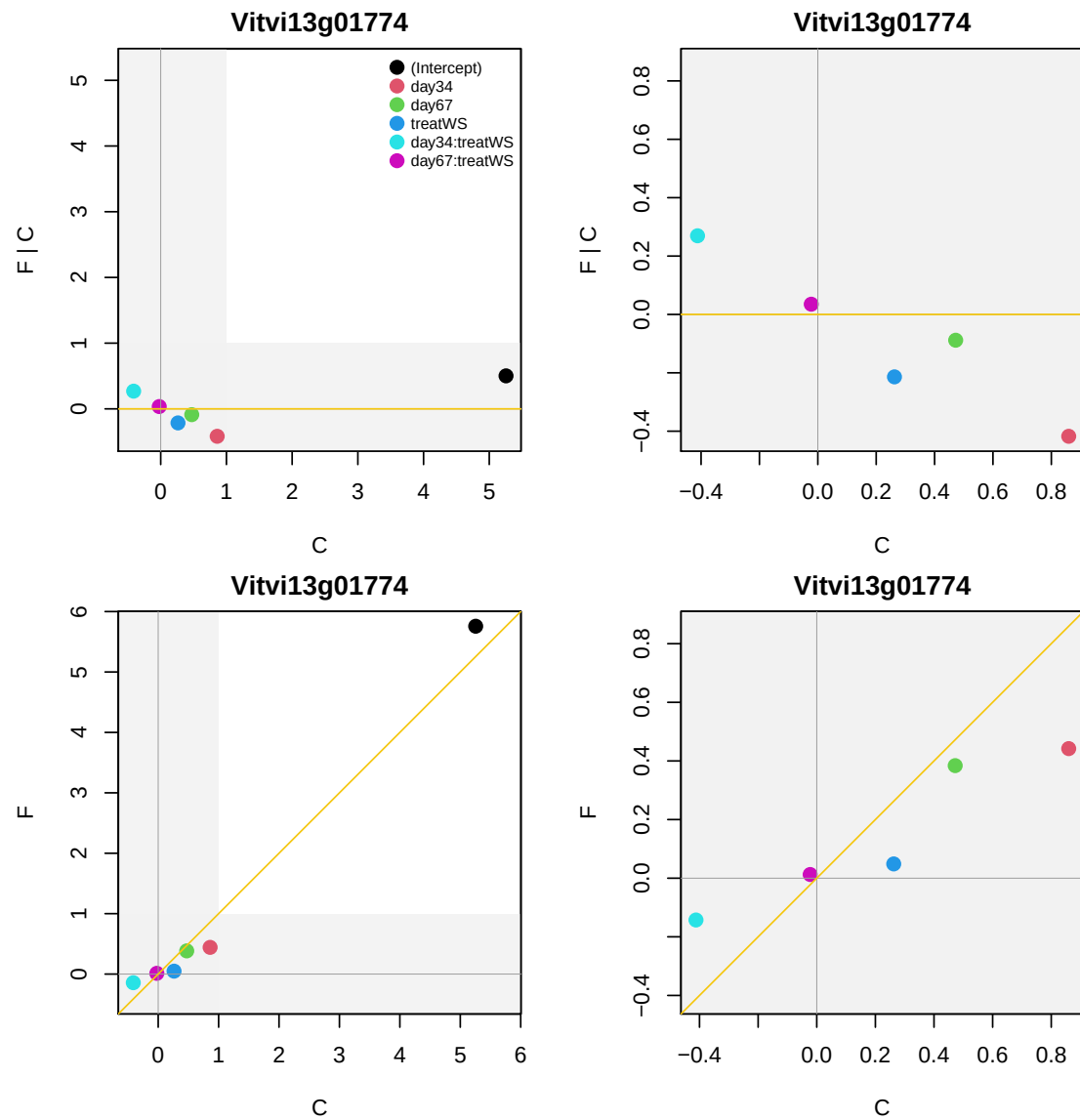



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

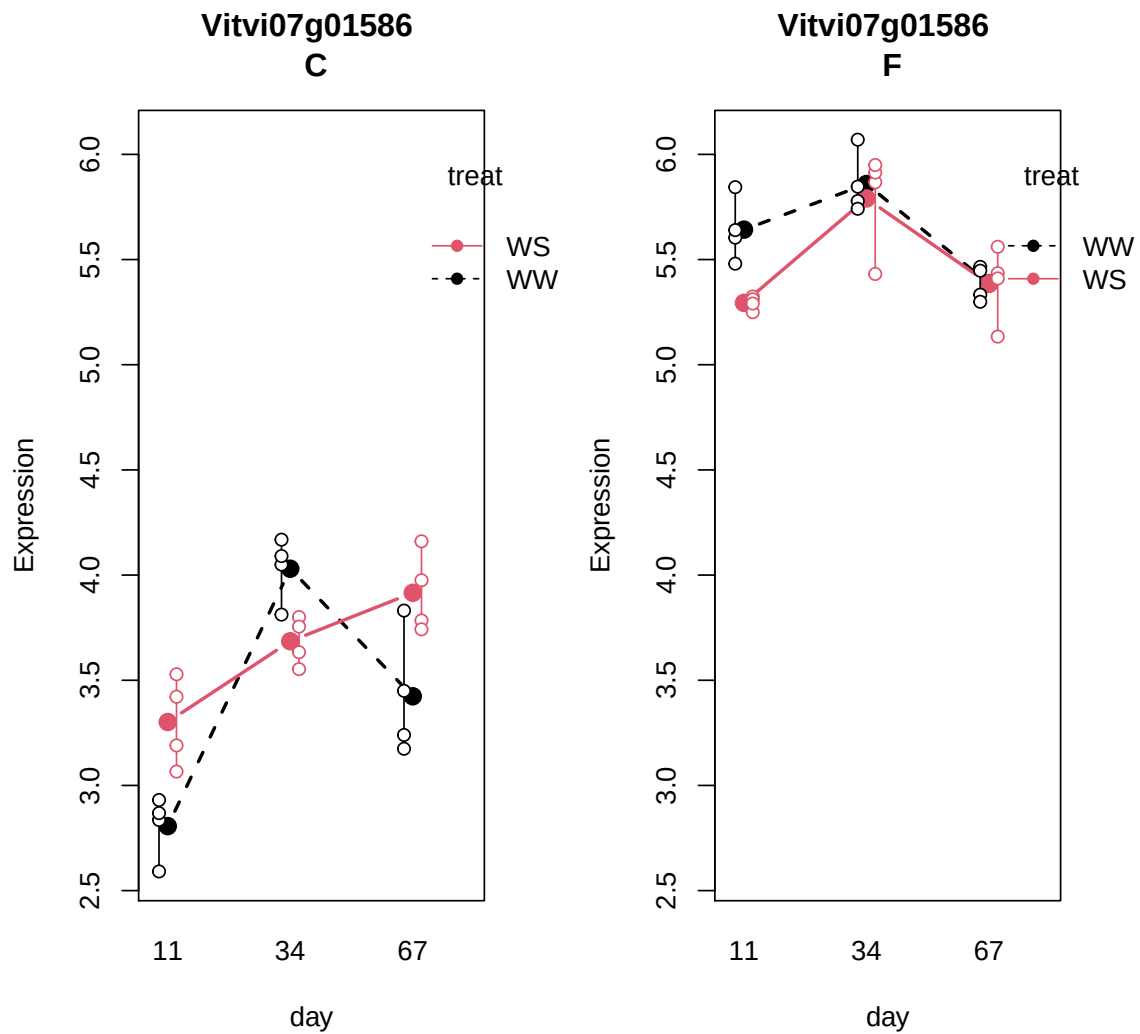


6.2.7 Vitvi07g01586

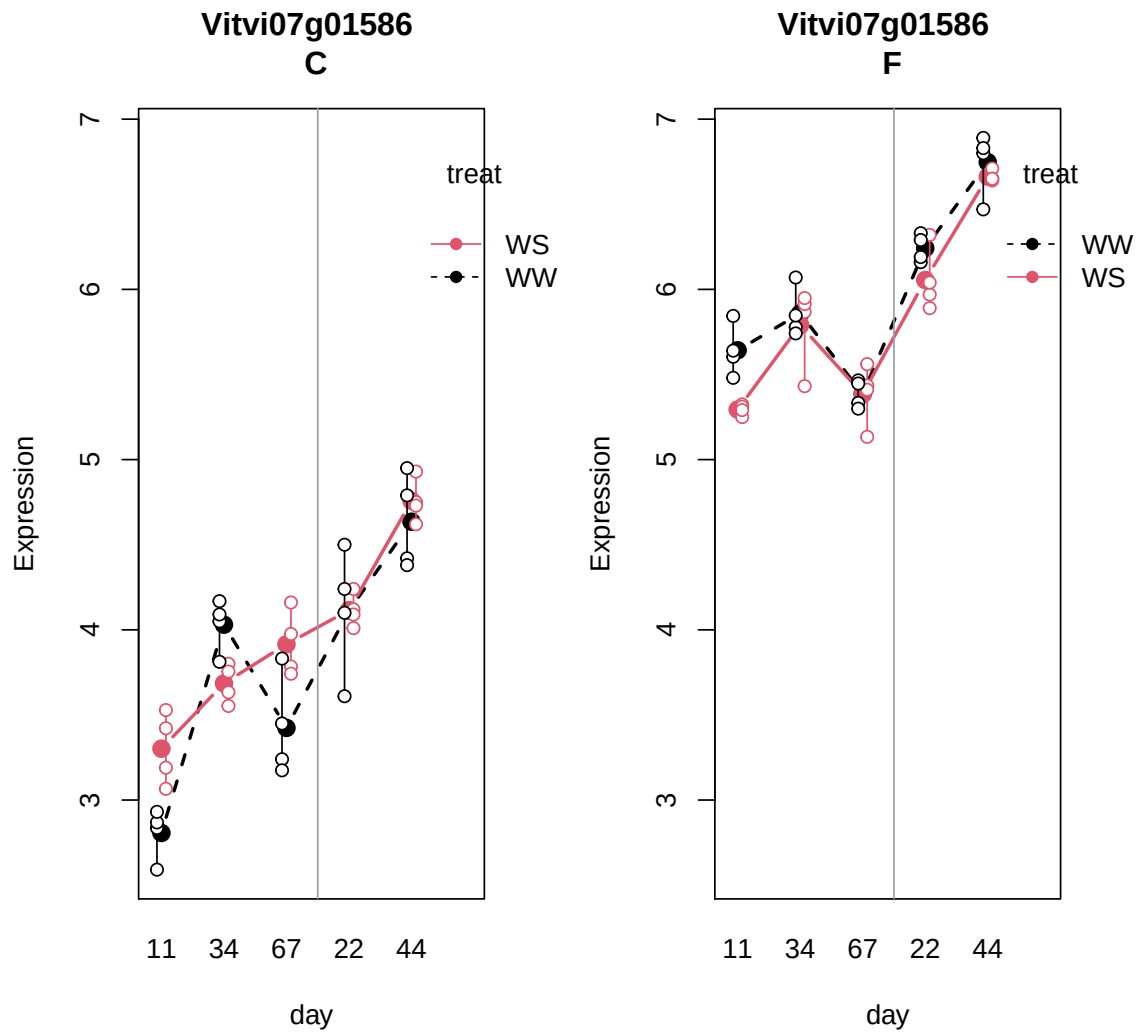
Coefficient day34 for Vitvi07g01586.

```
> tt[varname,]
              logFC  AveExpr      t      P.Value
Vitvi07g01586 1.223598 4.543338 9.76524 5.37385e-12
              adj.P.Val      B
Vitvi07g01586 1.170118e-08 17.19673

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



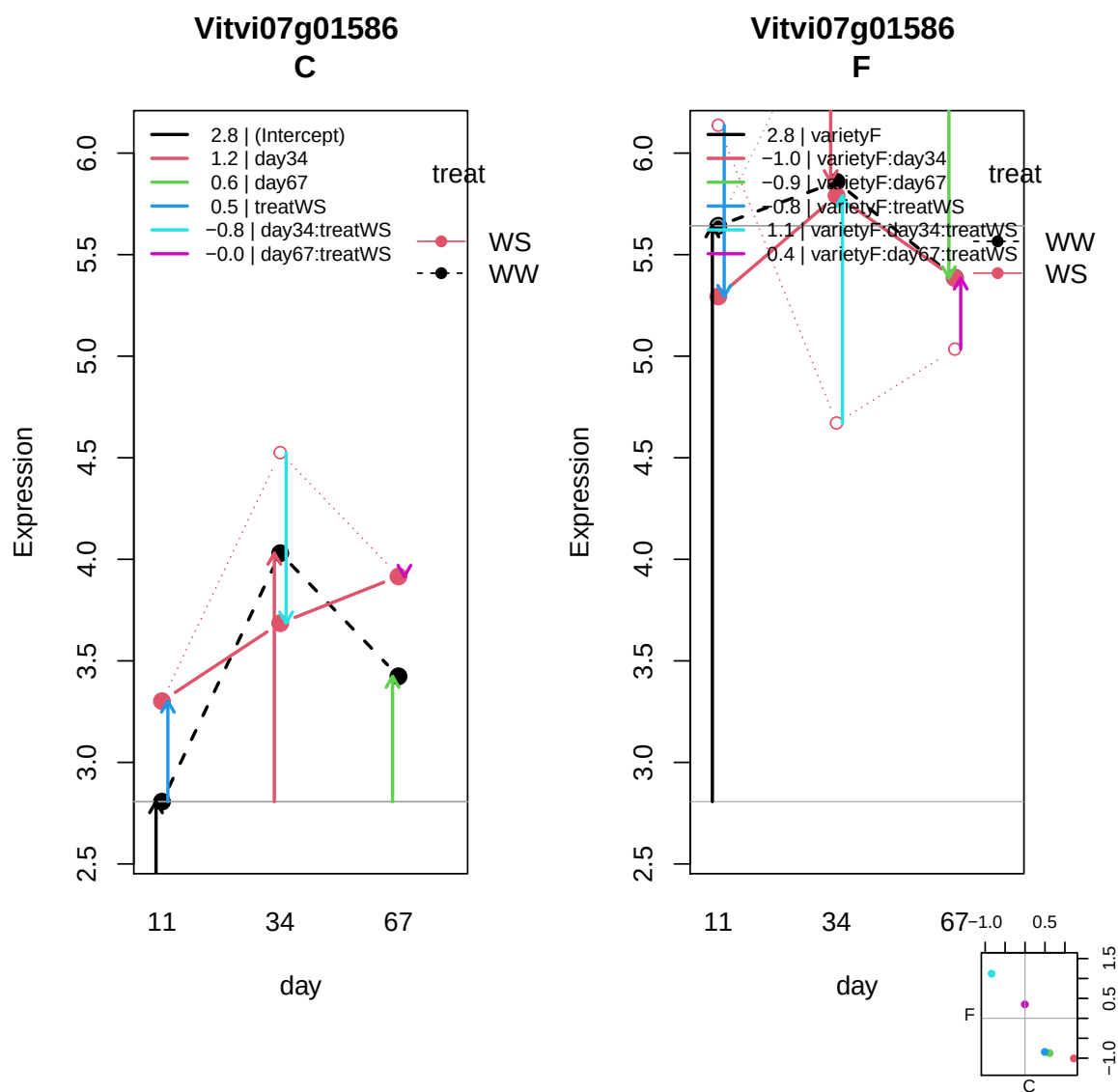
```

> fit1[varname,]$coefficients

      (Intercept) varietyF    day34    day67
Vitvi07g01586    2.806563 2.835605 1.223598 0.6172236
      treatWS varietyF:day34 varietyF:day67
Vitvi07g01586 0.4950294    -1.006741    -0.8731968
      varietyF:treatWS day34:treatWS day67:treatWS
Vitvi07g01586    -0.8431653    -0.8398327    -0.003172334
      varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi07g01586          1.119435          0.3501502

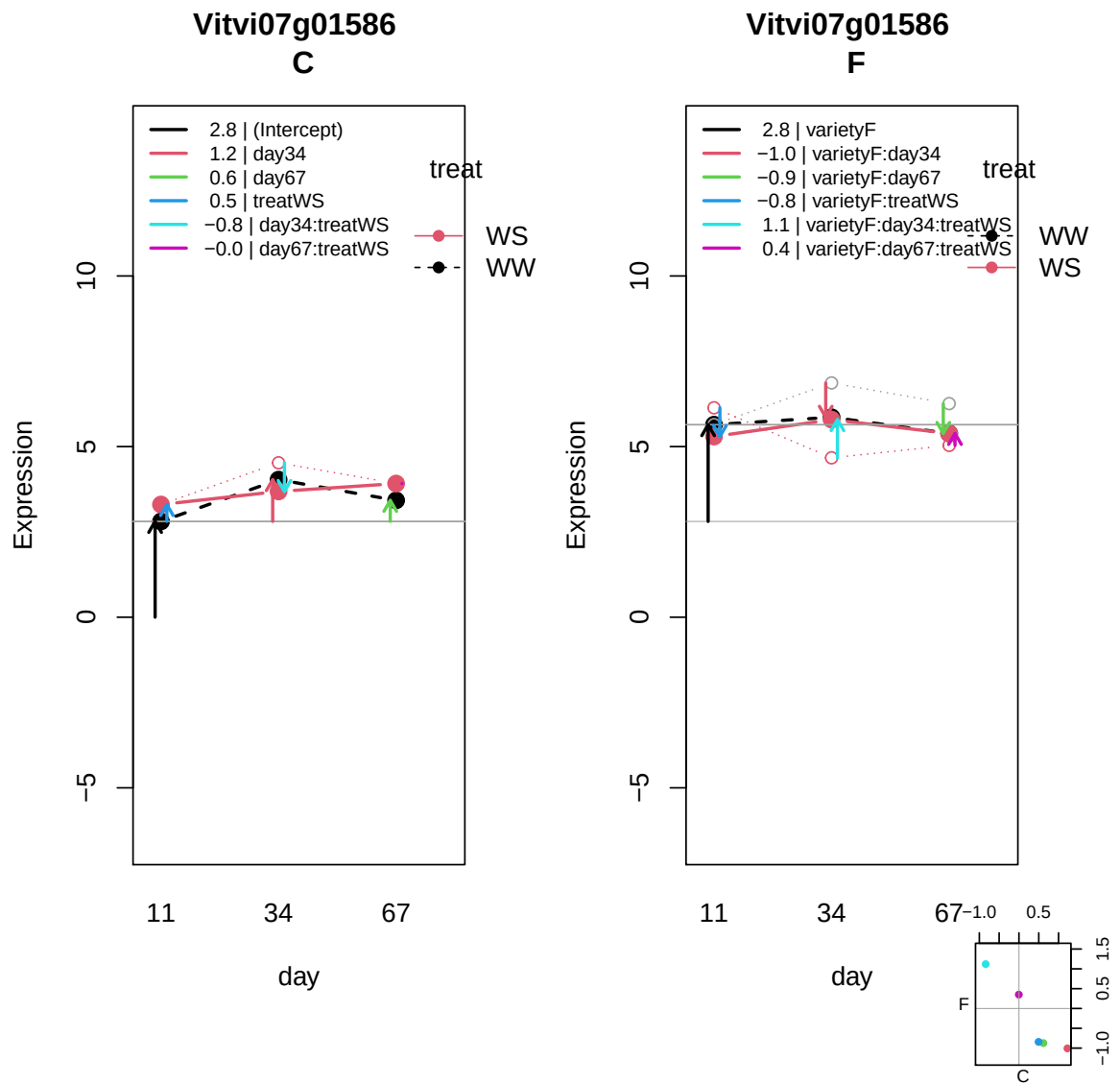
> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



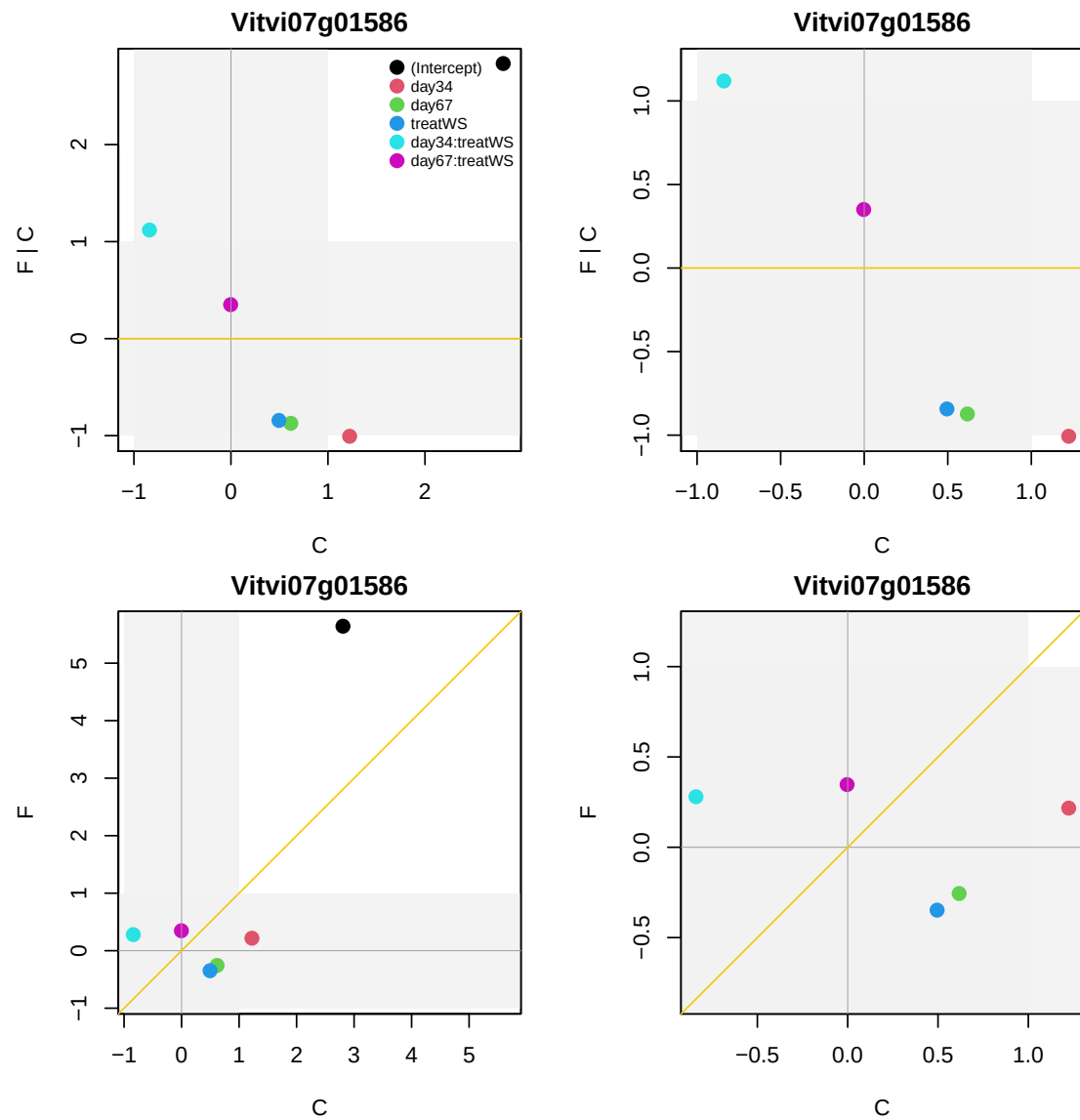
```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```

Warning in arrows(1:ndays + d, es, 1:ndays + d, esF, col = cl + 1:ndays, : zero



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

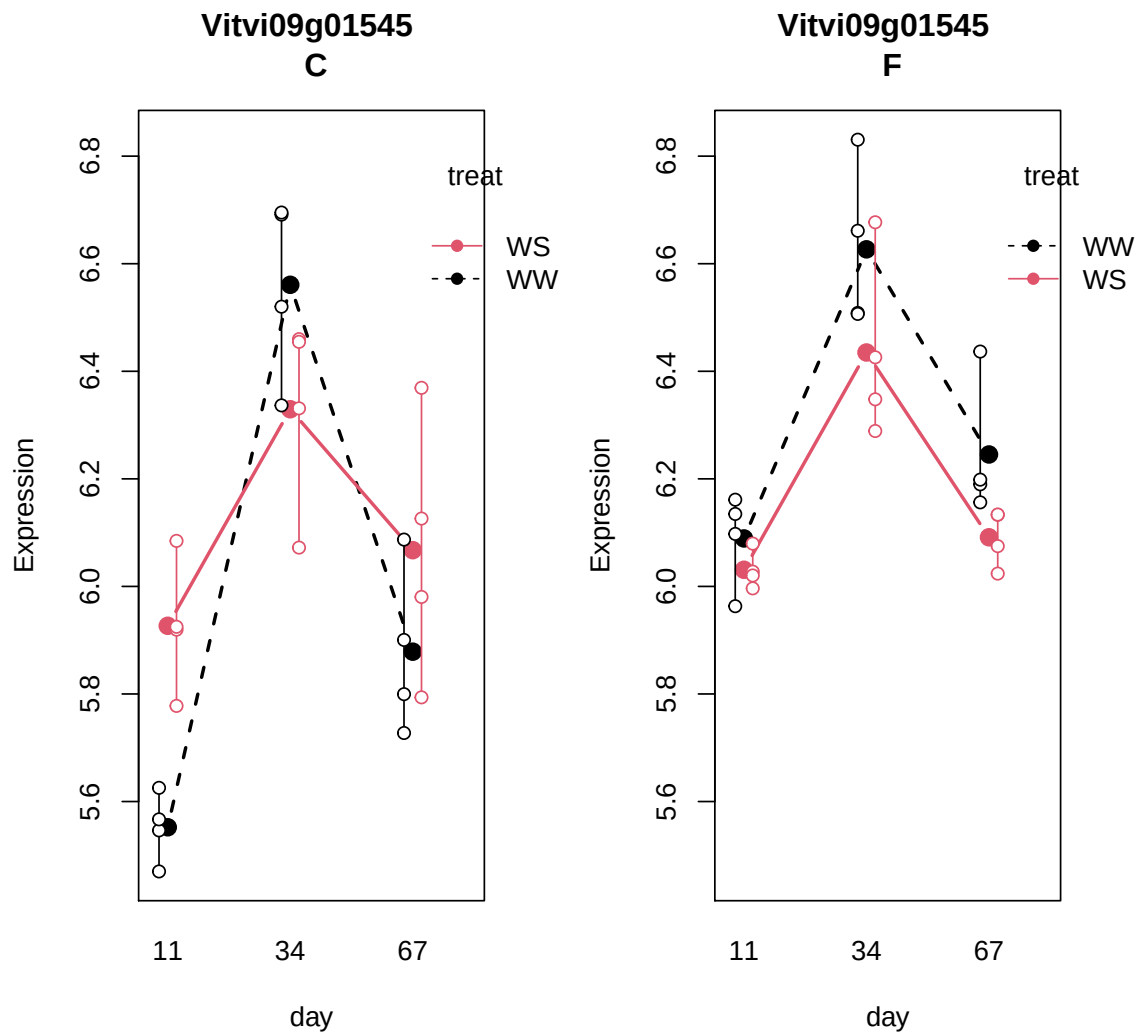


6.2.8 Vitvi09g01545

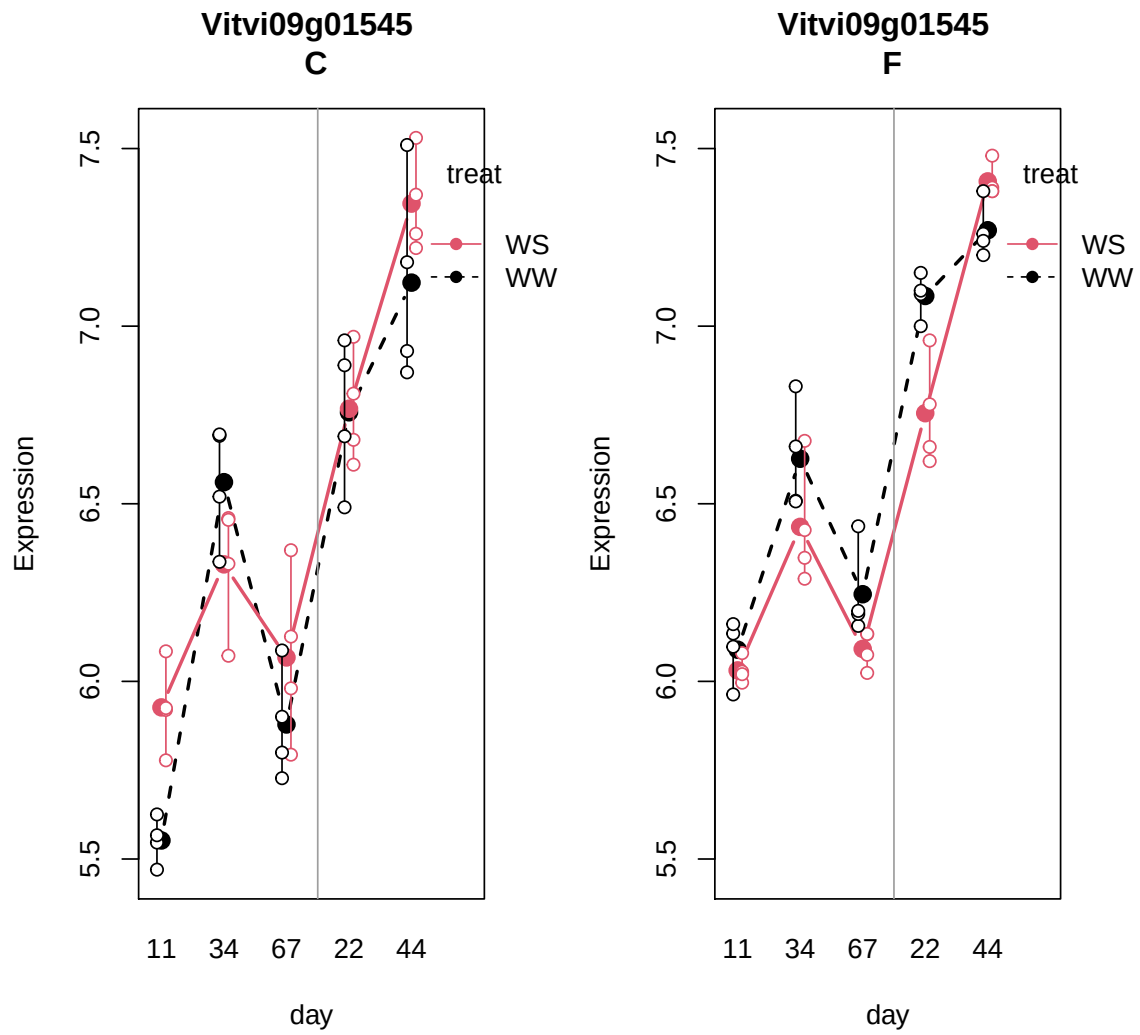
Coefficient day34 for Vitvi09g01545.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi09g01545 1.008632 6.152811 9.667081 7.111718e-12
      adj.P.Val      B
Vitvi09g01545 1.27705e-08 16.92938

> plot.interactions(varname,phdata=pd,data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

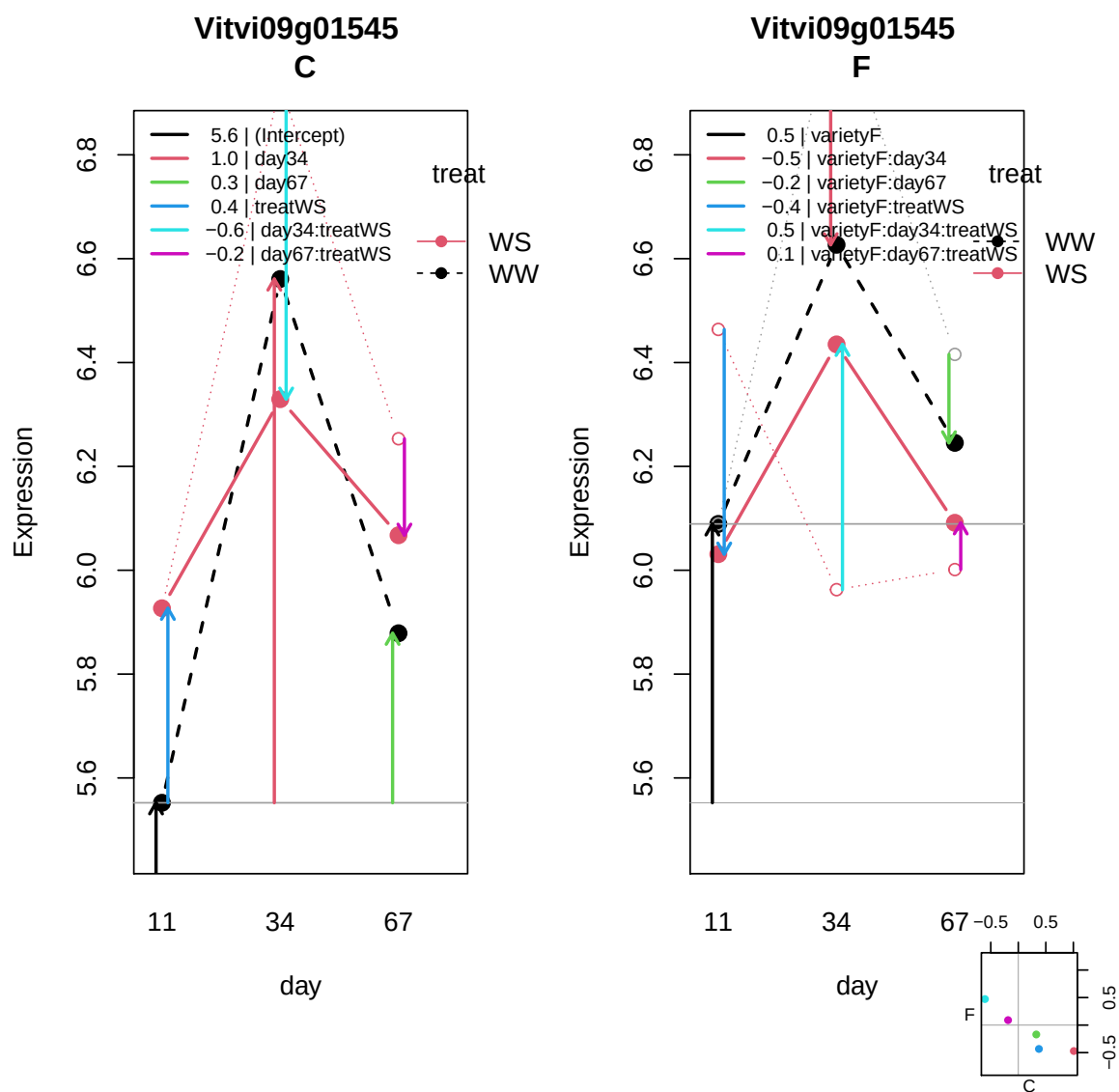
              (Intercept)  varietyF    day34    day67
Vitvi09g01545      5.552176 0.5370189 1.008632 0.3264718
              treatWS  varietyF:day34  varietyF:day67
Vitvi09g01545 0.3745699      -0.4710659      -0.1703431
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi09g01545      -0.4328311      -0.6059419      -0.1858244
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi09g01545              0.4723996              0.09011746

```

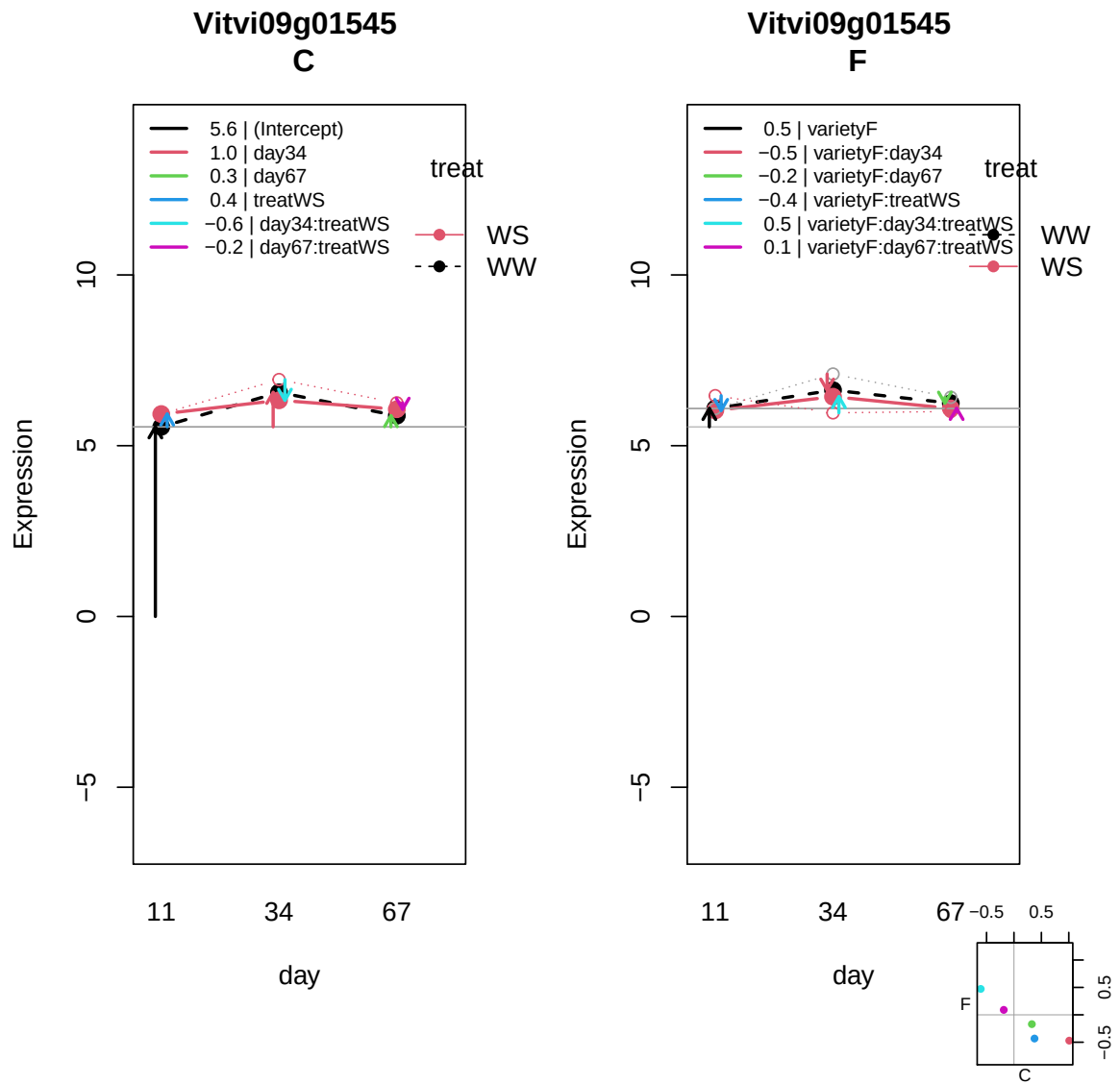
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

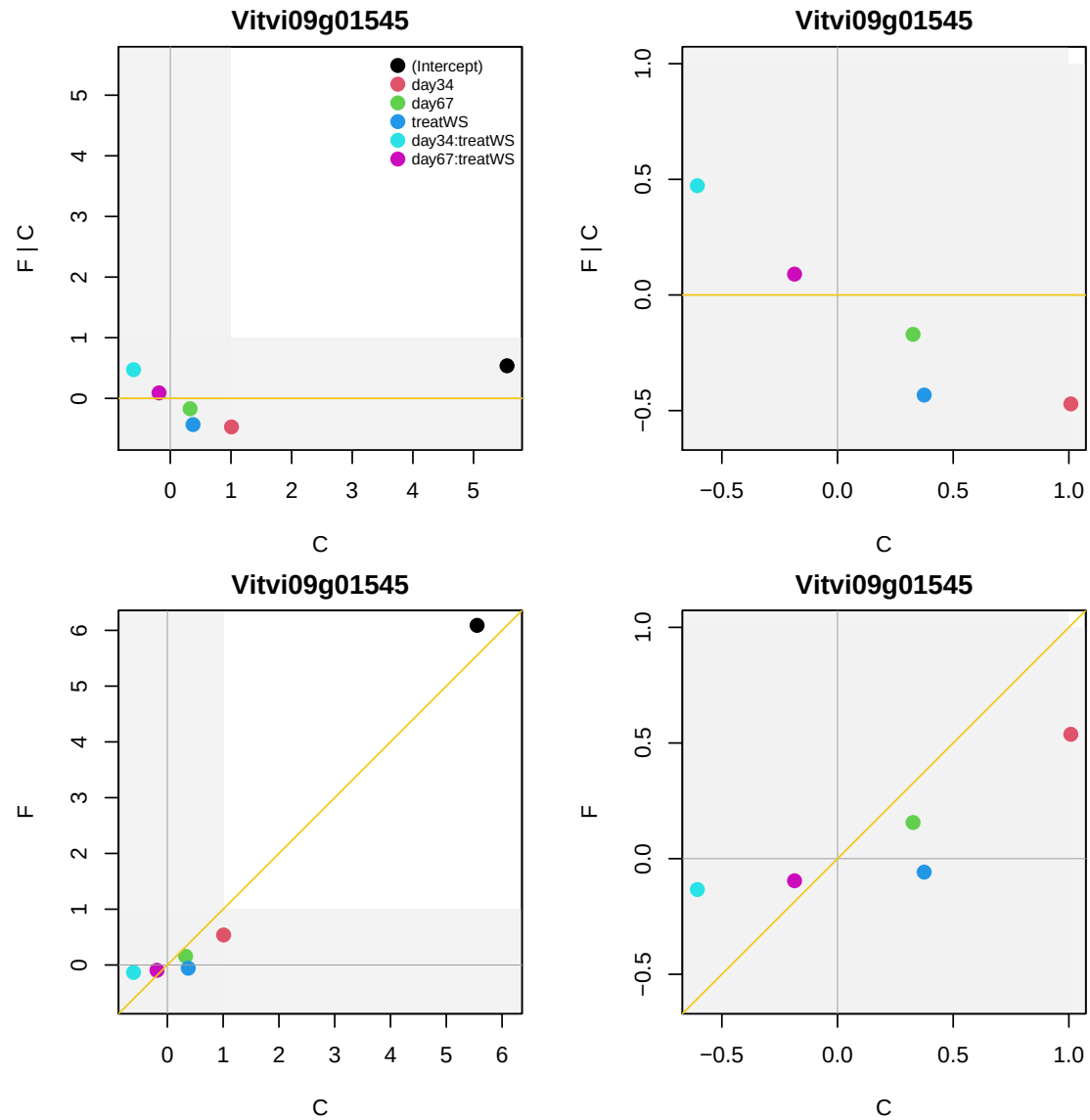


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

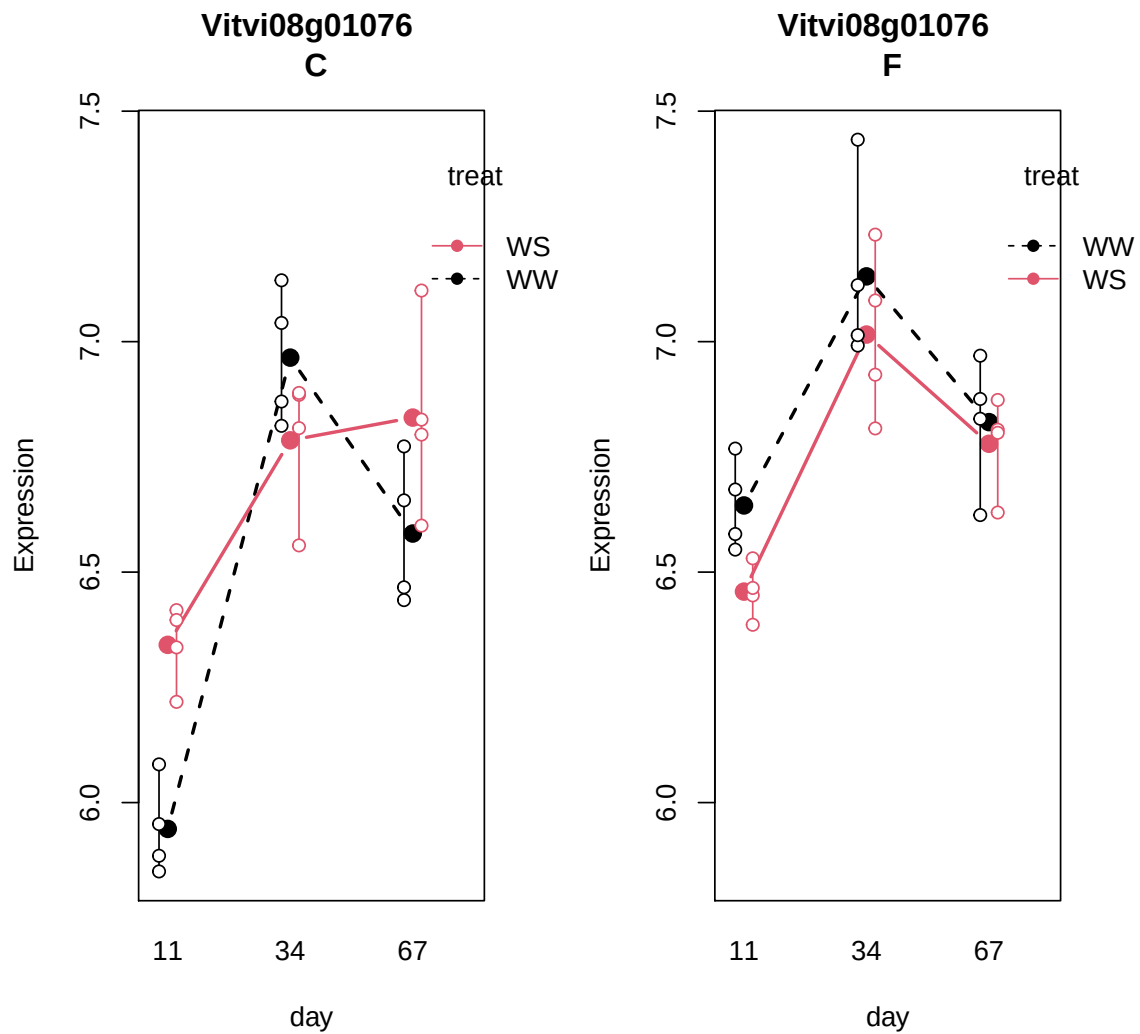


6.2.9 Vitvi08g01076

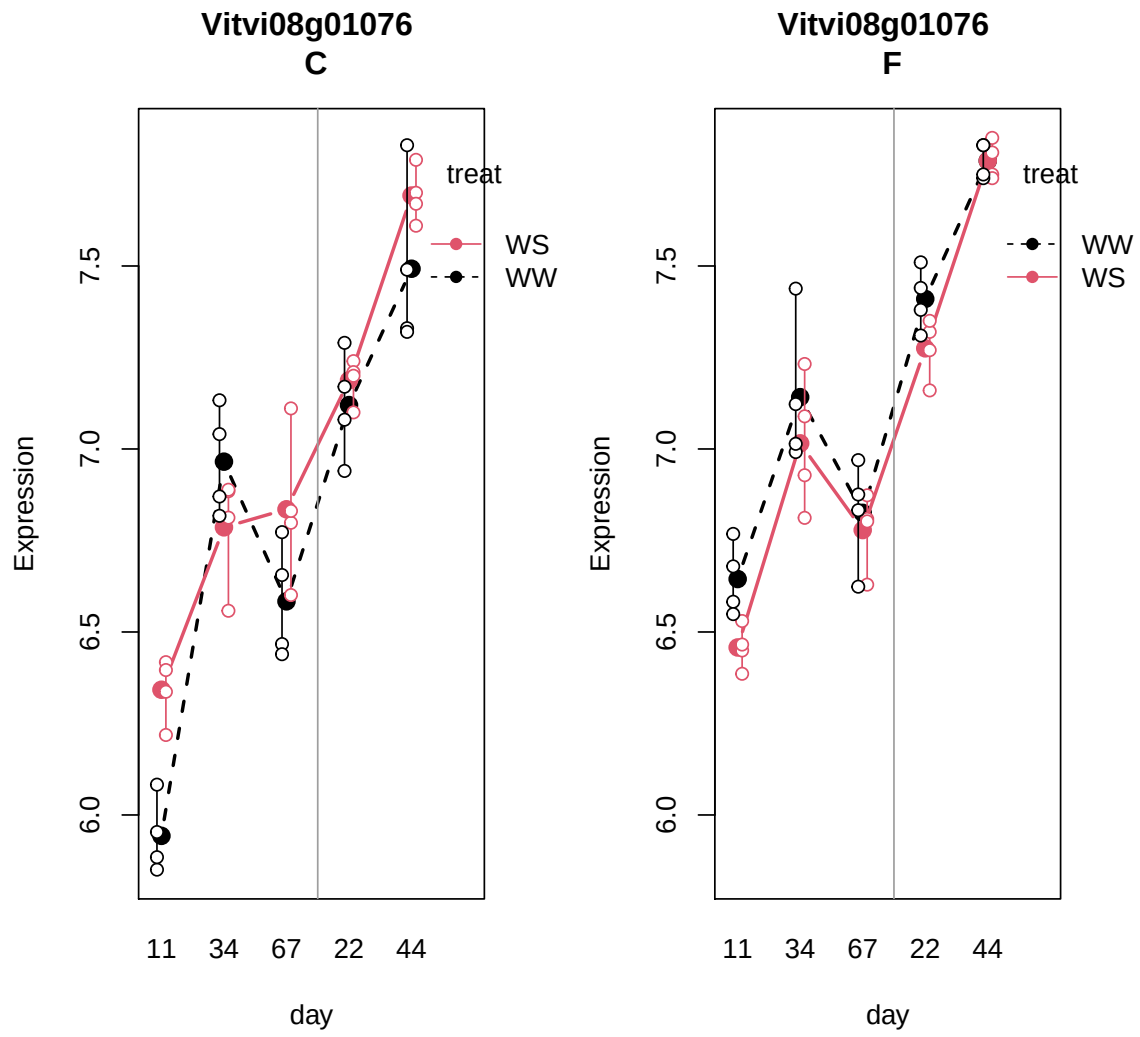
Coefficient day34 for Vitvi08g01076.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi08g01076 1.022432 6.693198 9.646619 7.540644e-12
      adj.P.Val      B
Vitvi08g01076 1.27705e-08 16.87348

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

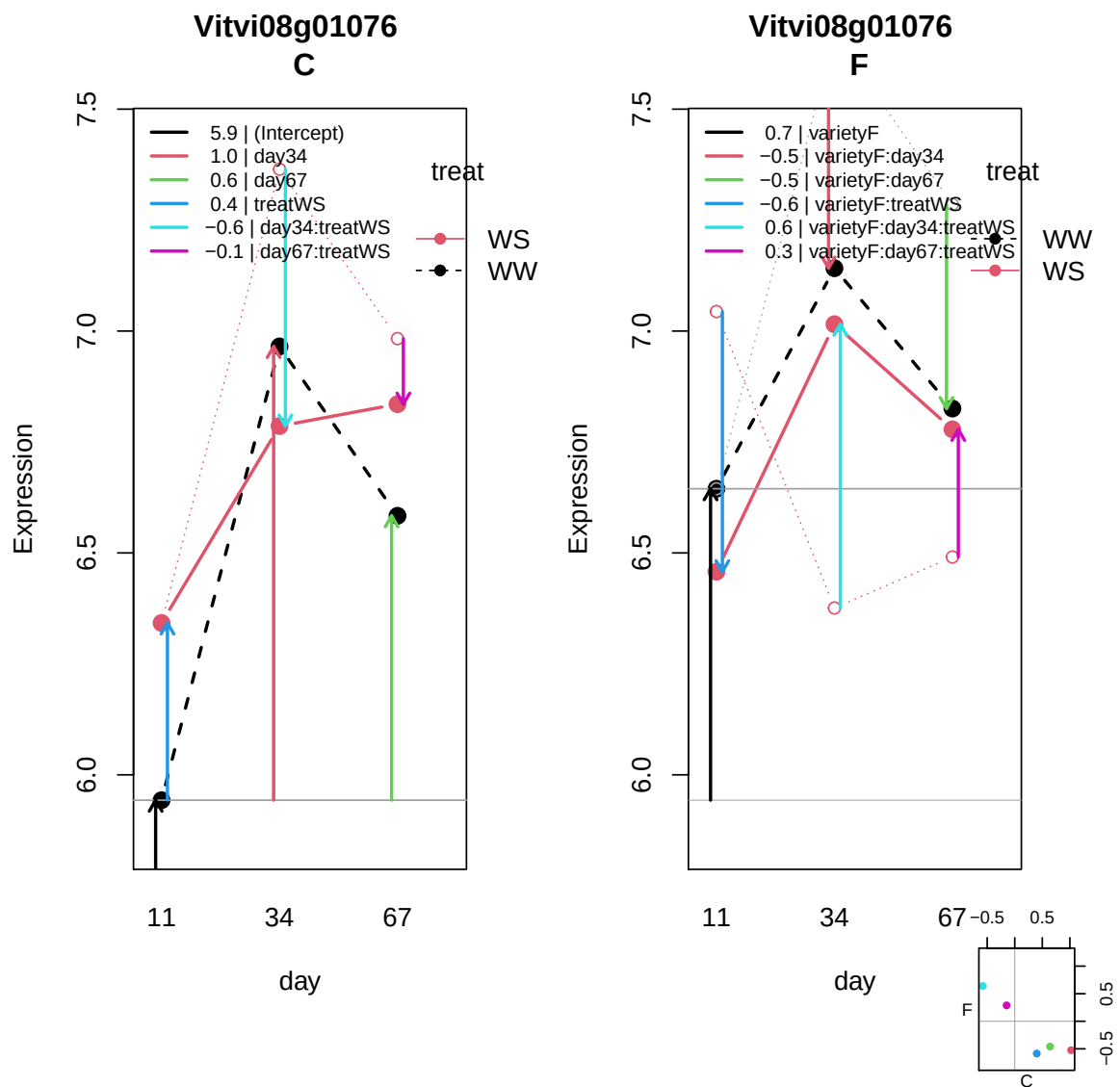
              (Intercept)  varietyF    day34    day67
Vitvi08g01076    5.942885  0.7017705  1.022432  0.6407555
              treatWS  varietyF:day34  varietyF:day67
Vitvi08g01076  0.3993021    -0.5254989    -0.4599974
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi08g01076    -0.5862559    -0.5787137    -0.1477094
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi08g01076          0.6394613          0.2877034

```

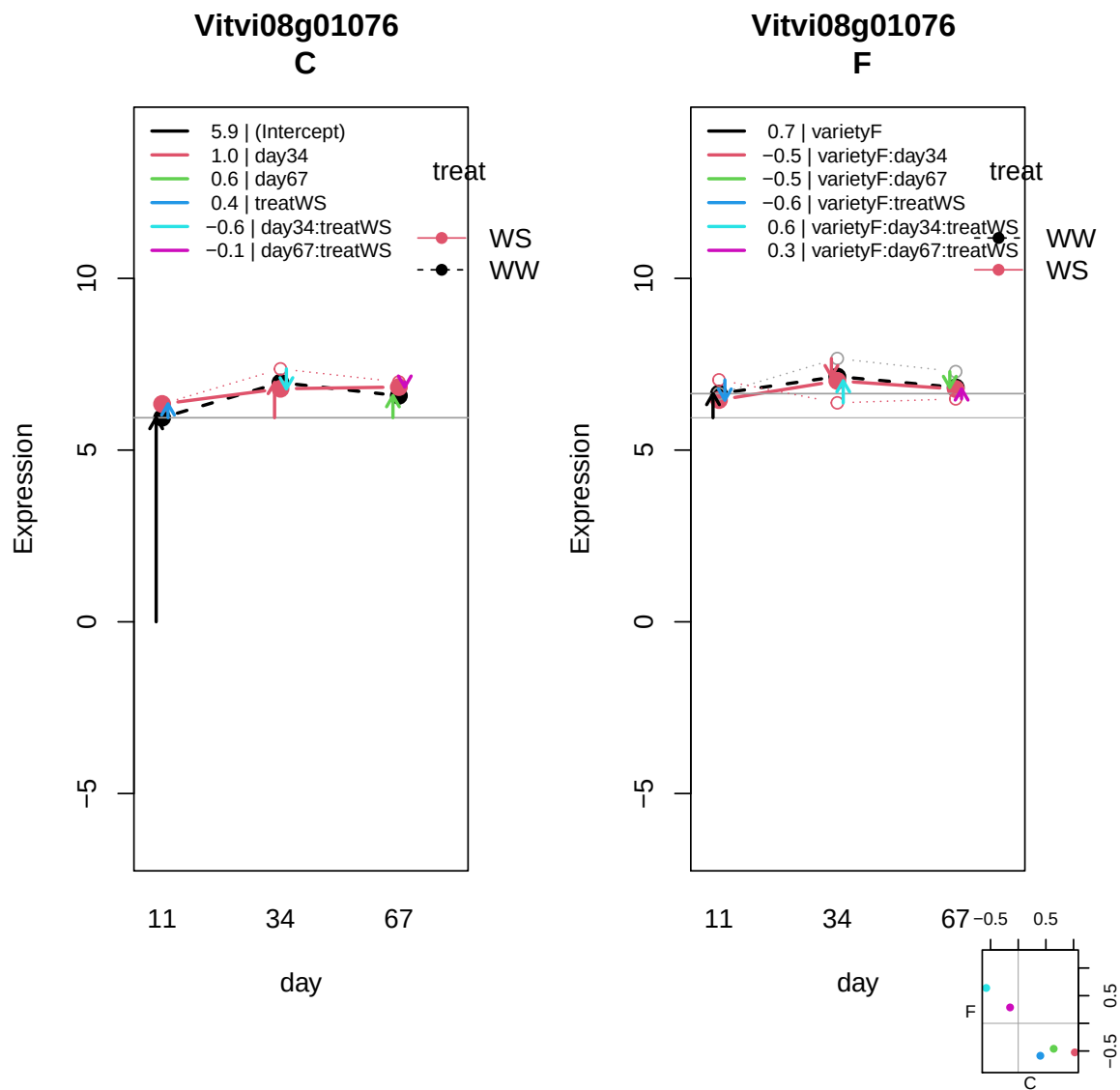
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

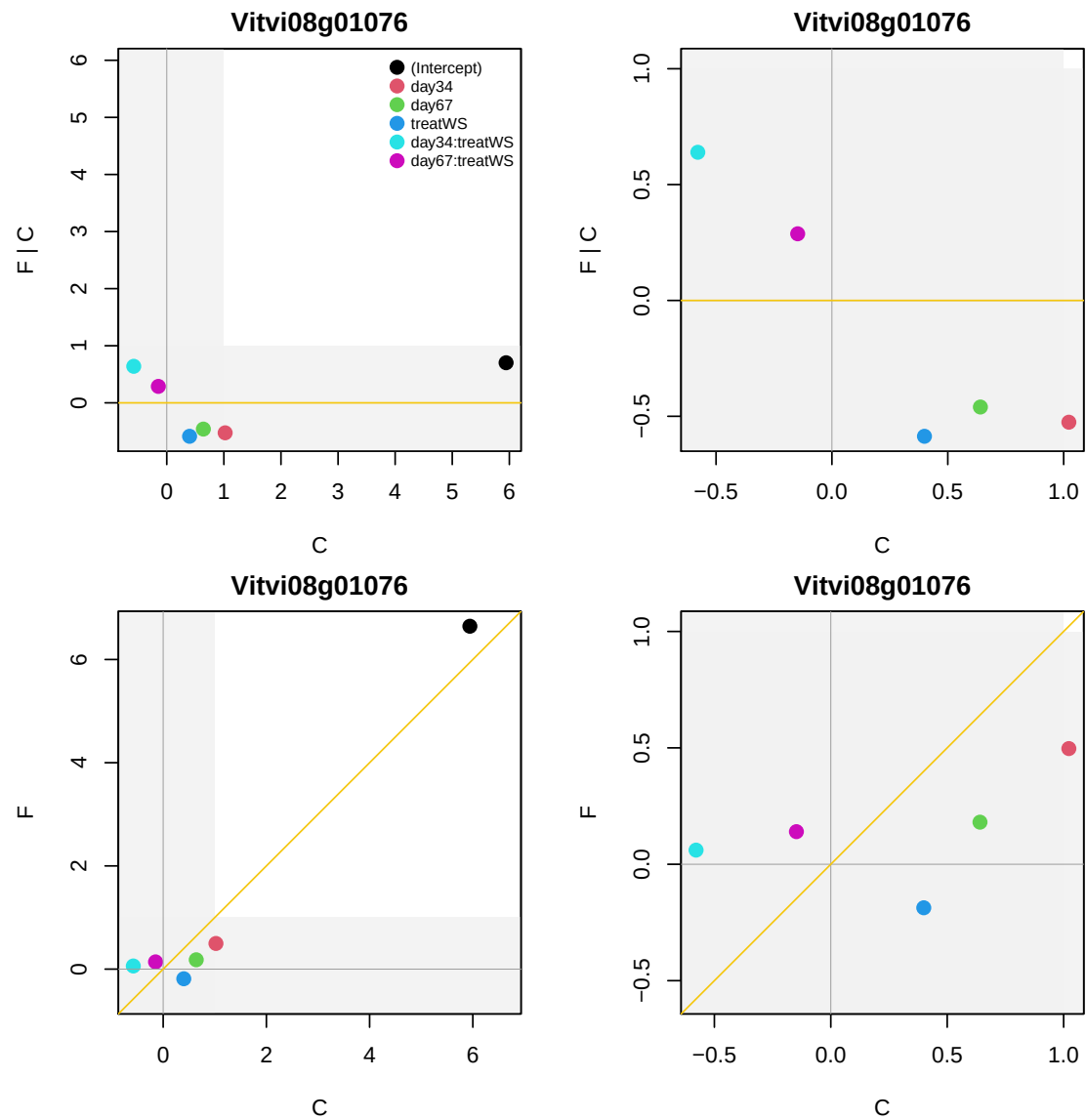


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

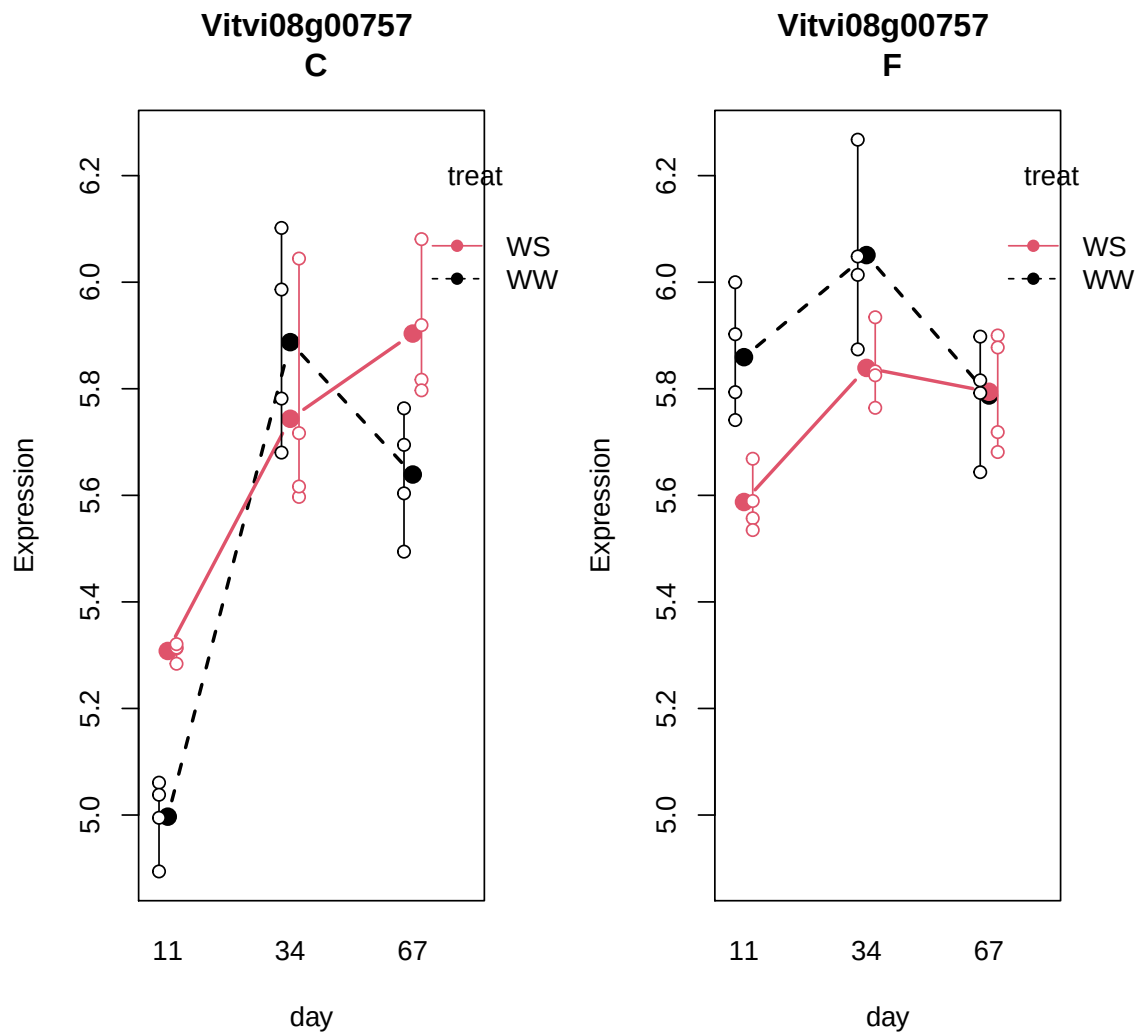


6.2.10 Vitvi08g00757

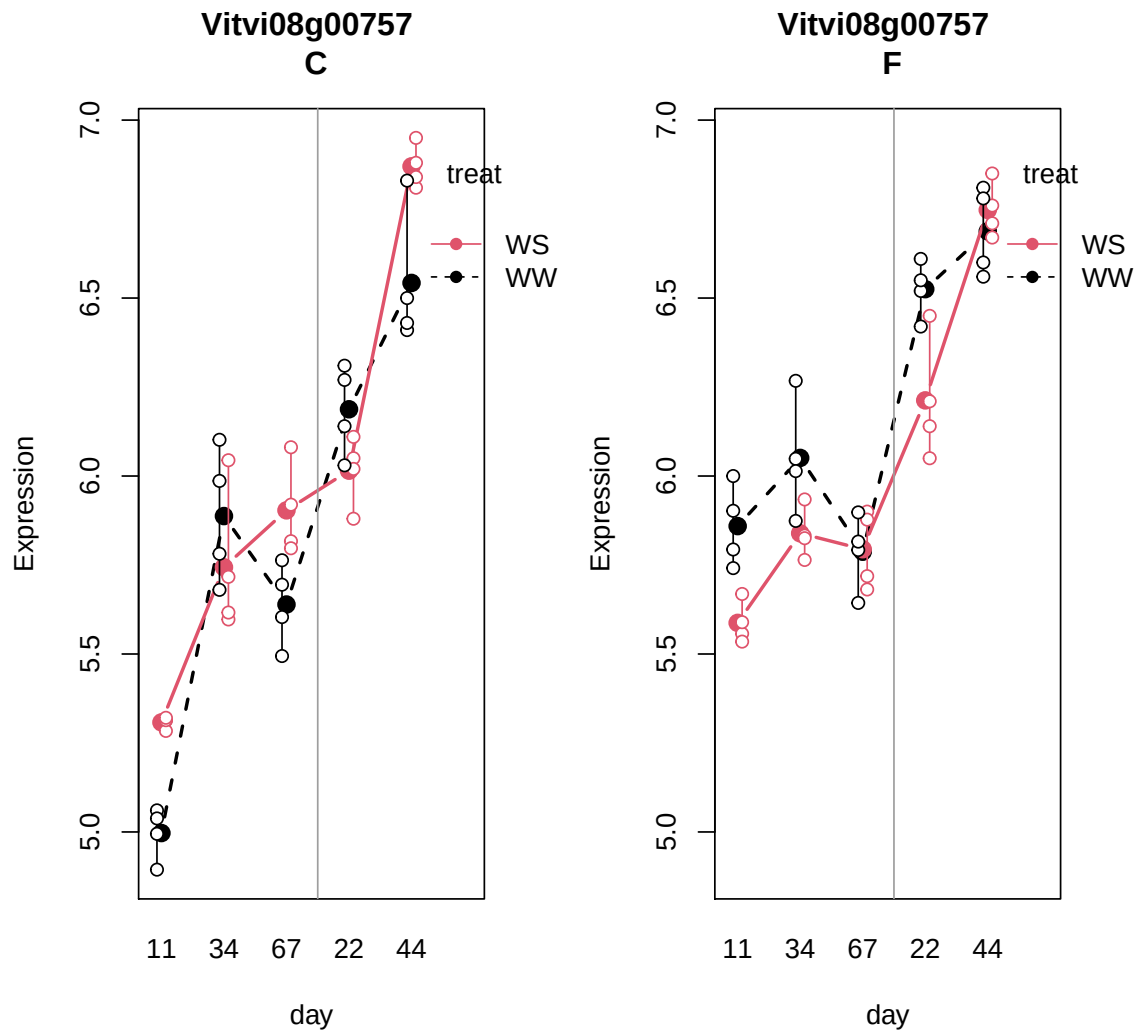
Coefficient day34 for Vitvi08g00757.

```
> tt[varname,]
               logFC  AveExpr      t      P.Value
Vitvi08g00757  0.8905523  5.699747  9.603767  8.526088e-12
               adj.P.Val      B
Vitvi08g00757  1.299546e-08  16.75621

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

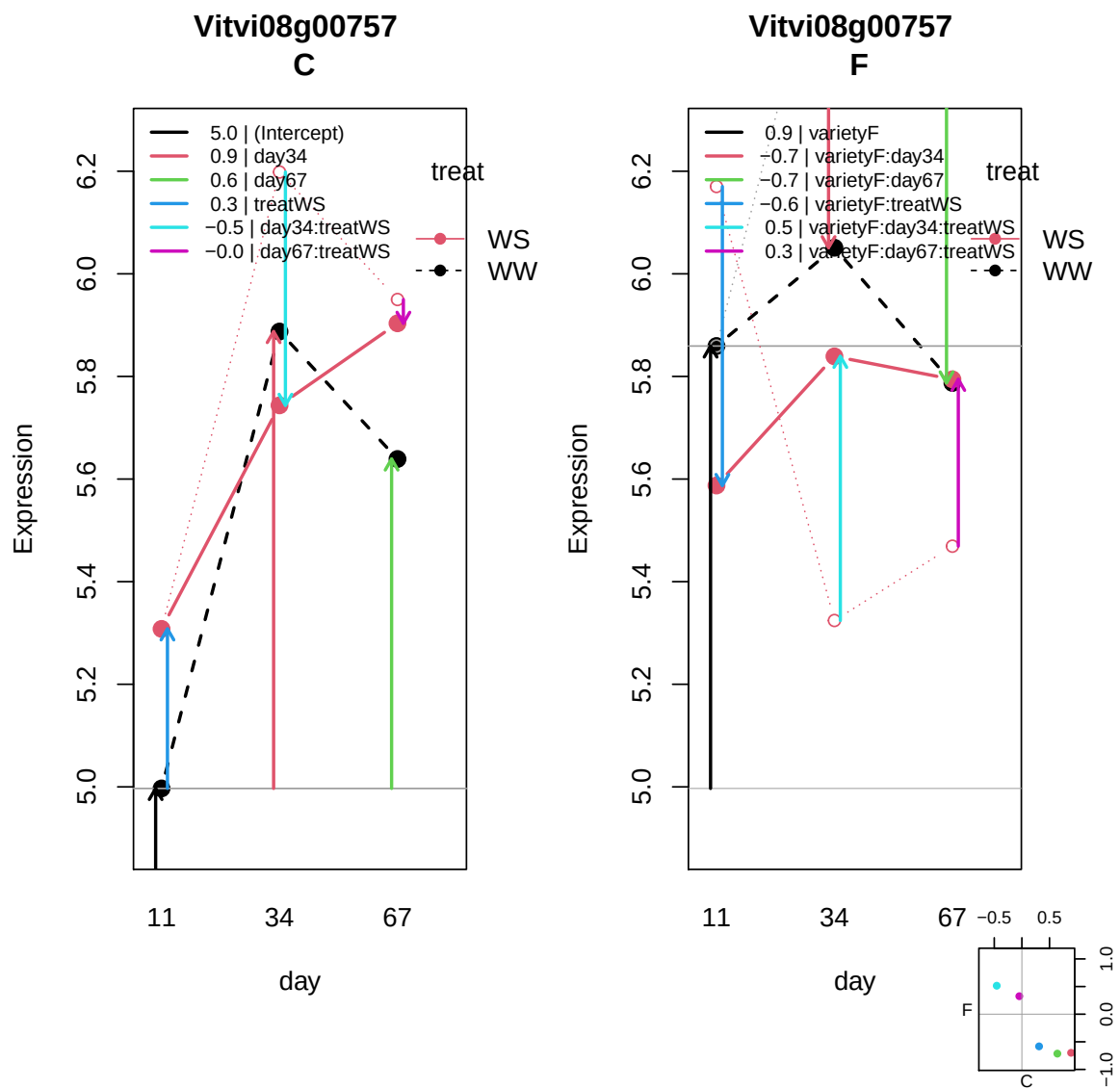
              (Intercept)  varietyF    day34    day67
Vitvi08g00757      4.996929 0.8623556 0.8905523 0.642086
              treatWS  varietyF:day34  varietyF:day67
Vitvi08g00757 0.3109508      -0.6989615      -0.7140334
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi08g00757      -0.5827972      -0.454755      -0.04638046
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi08g00757              0.5148298              0.3252469

```

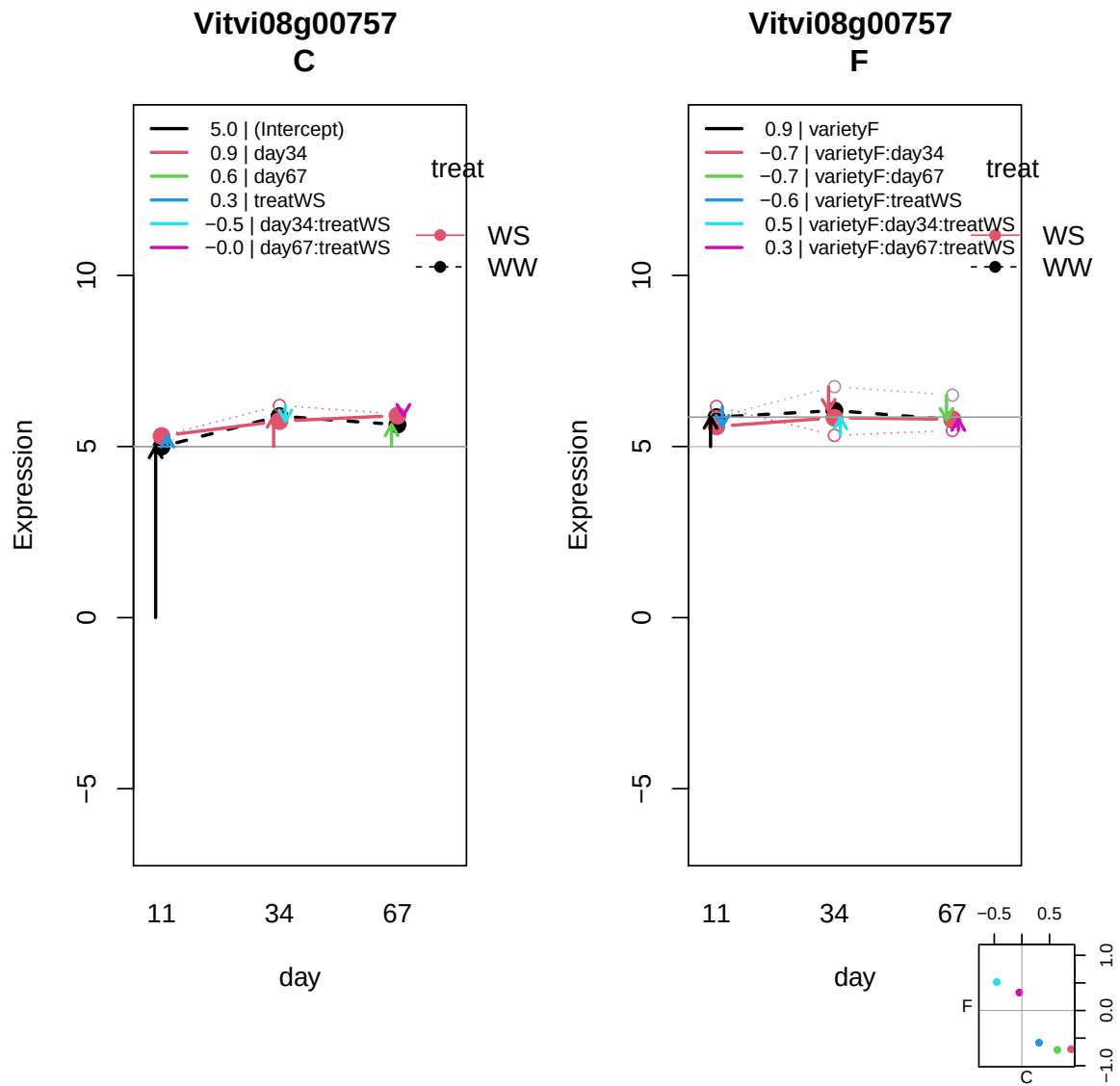
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

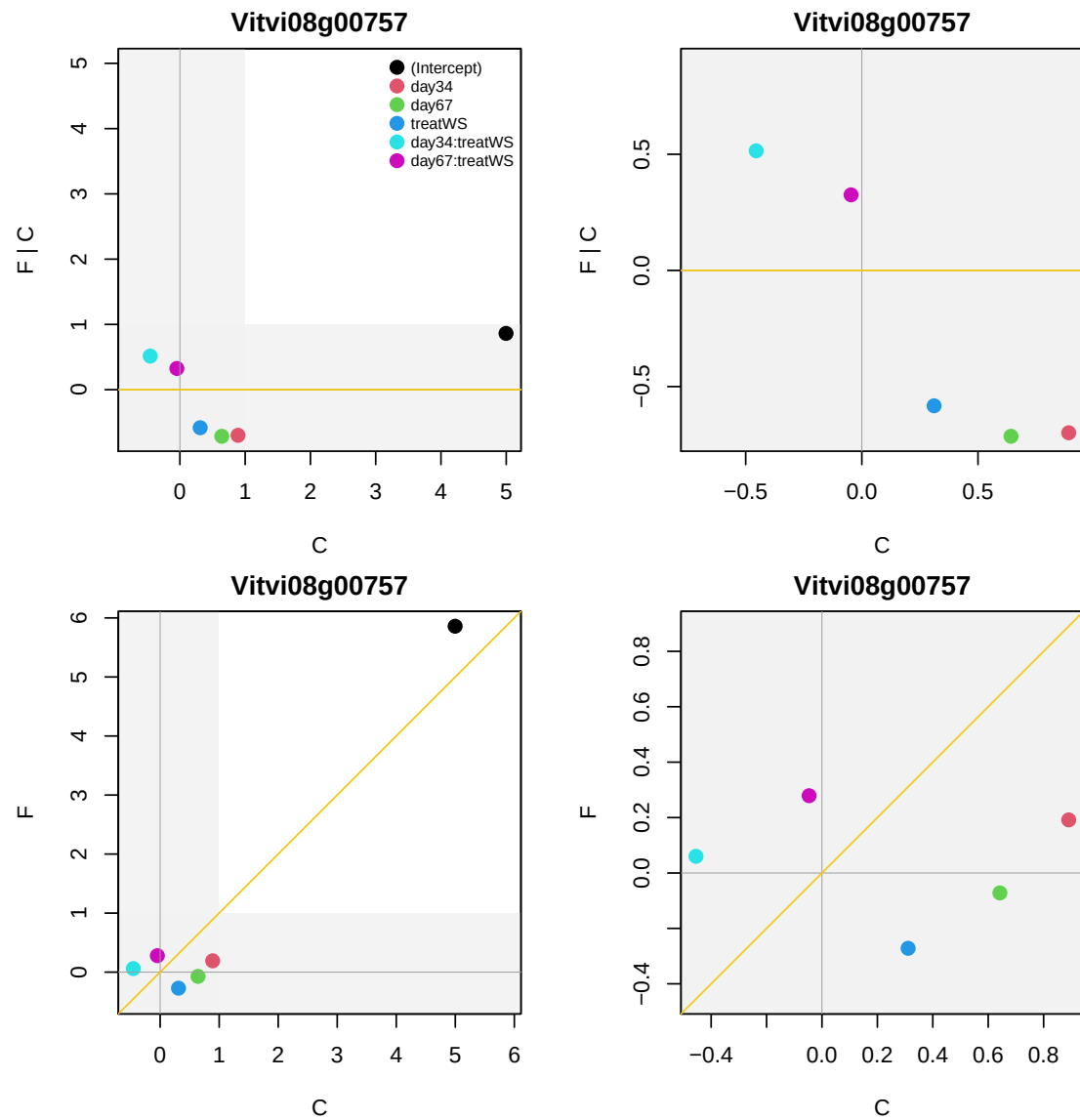


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

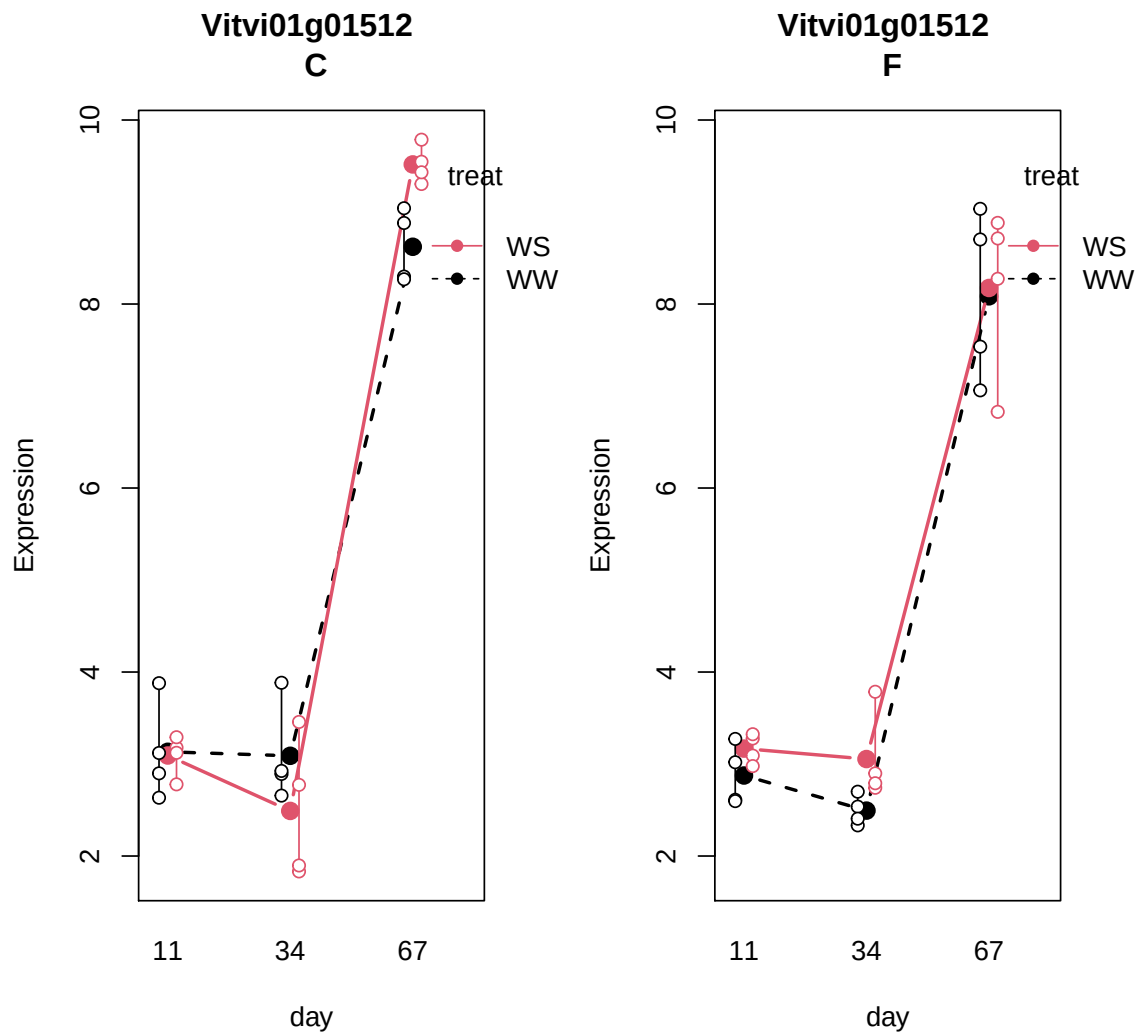


6.3 day67

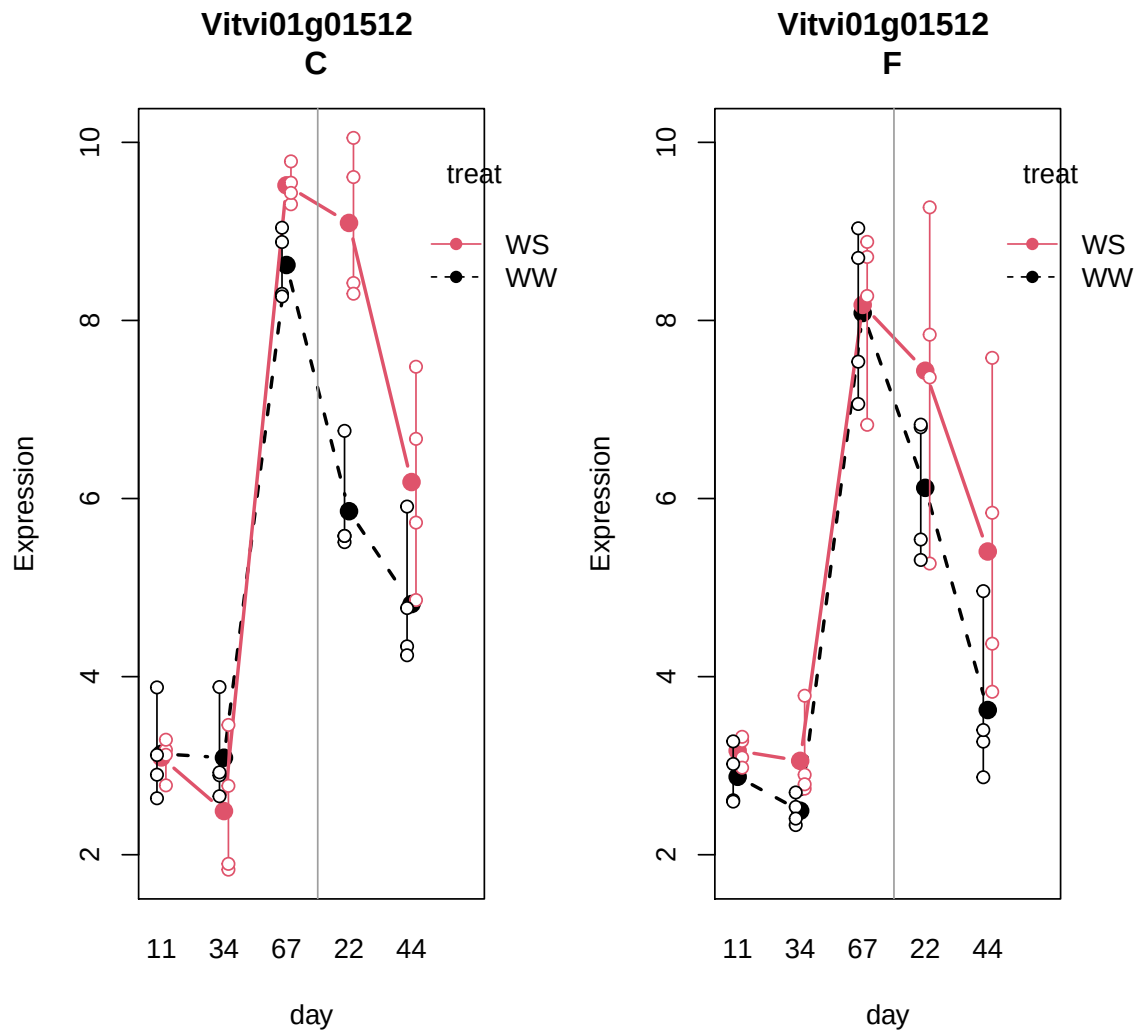
6.3.1 Vitvi01g01512

Coefficient day67 for Vitvi01g01512.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi01g01512 5.489446 4.816159 14.67234 2.096926e-17
      adj.P.Val      B
Vitvi01g01512 1.298882e-13 29.3837
> plot.interactions(varname, phdata=pd, data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

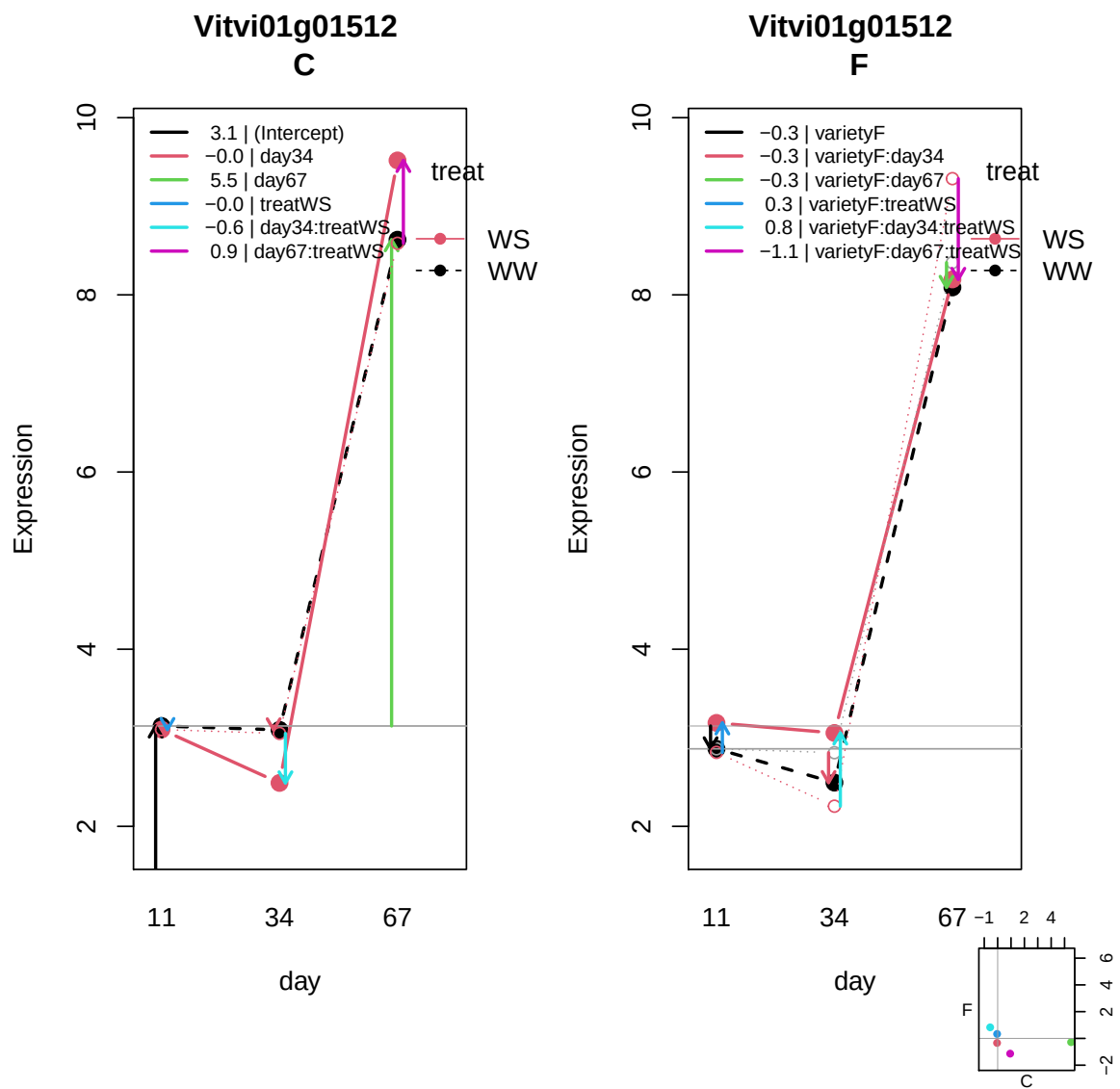
              (Intercept)    varietyF      day34      day67
Vitvi01g01512      3.132911 -0.2577885 -0.04352659  5.489446
              treatWS  varietyF:day34  varietyF:day67
Vitvi01g01512 -0.04023751    -0.3378027    -0.2807618
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi01g01512      0.3329277    -0.5589194      0.9351506
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi01g01512      0.8266066                      -1.137274

```

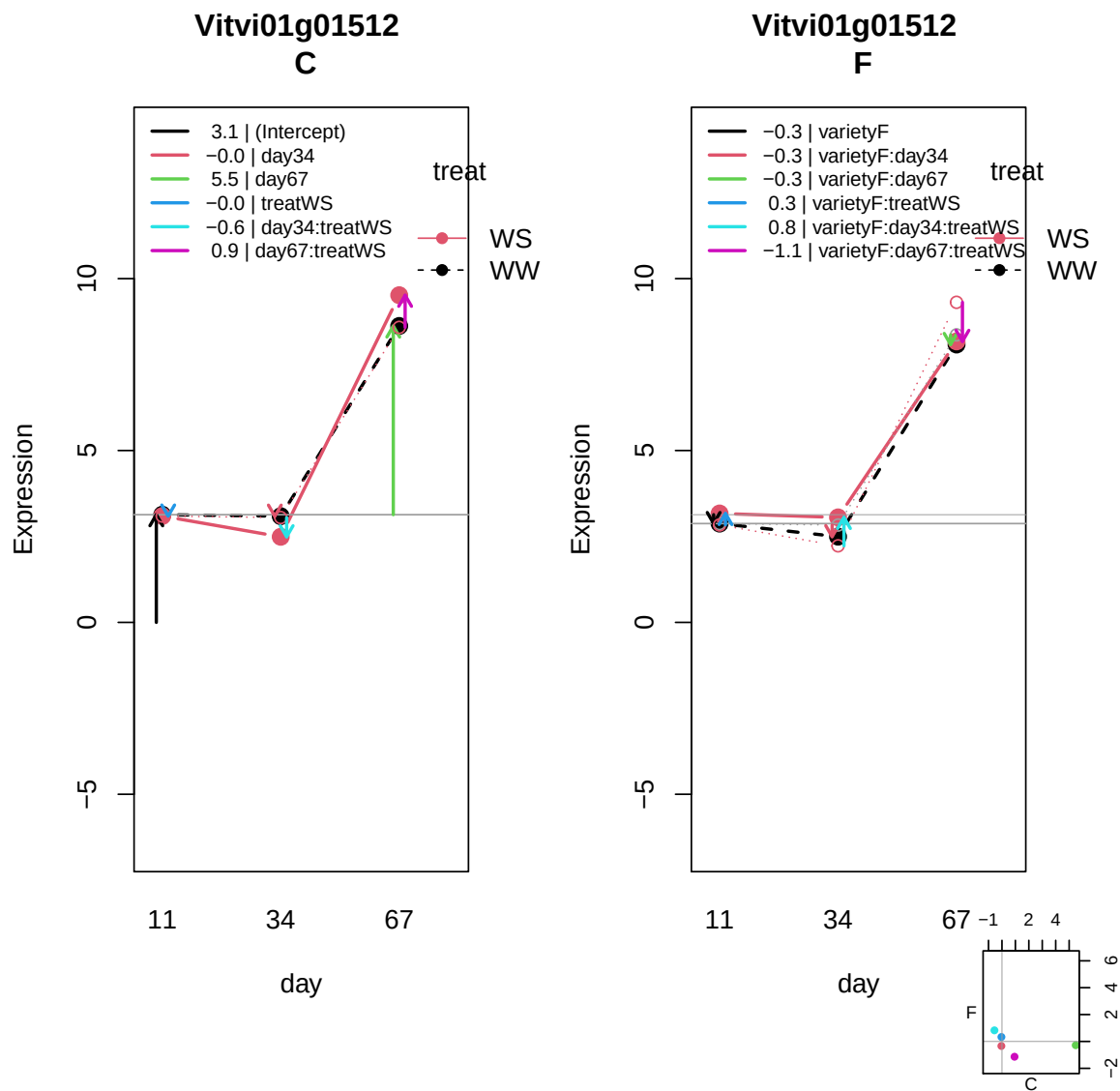
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

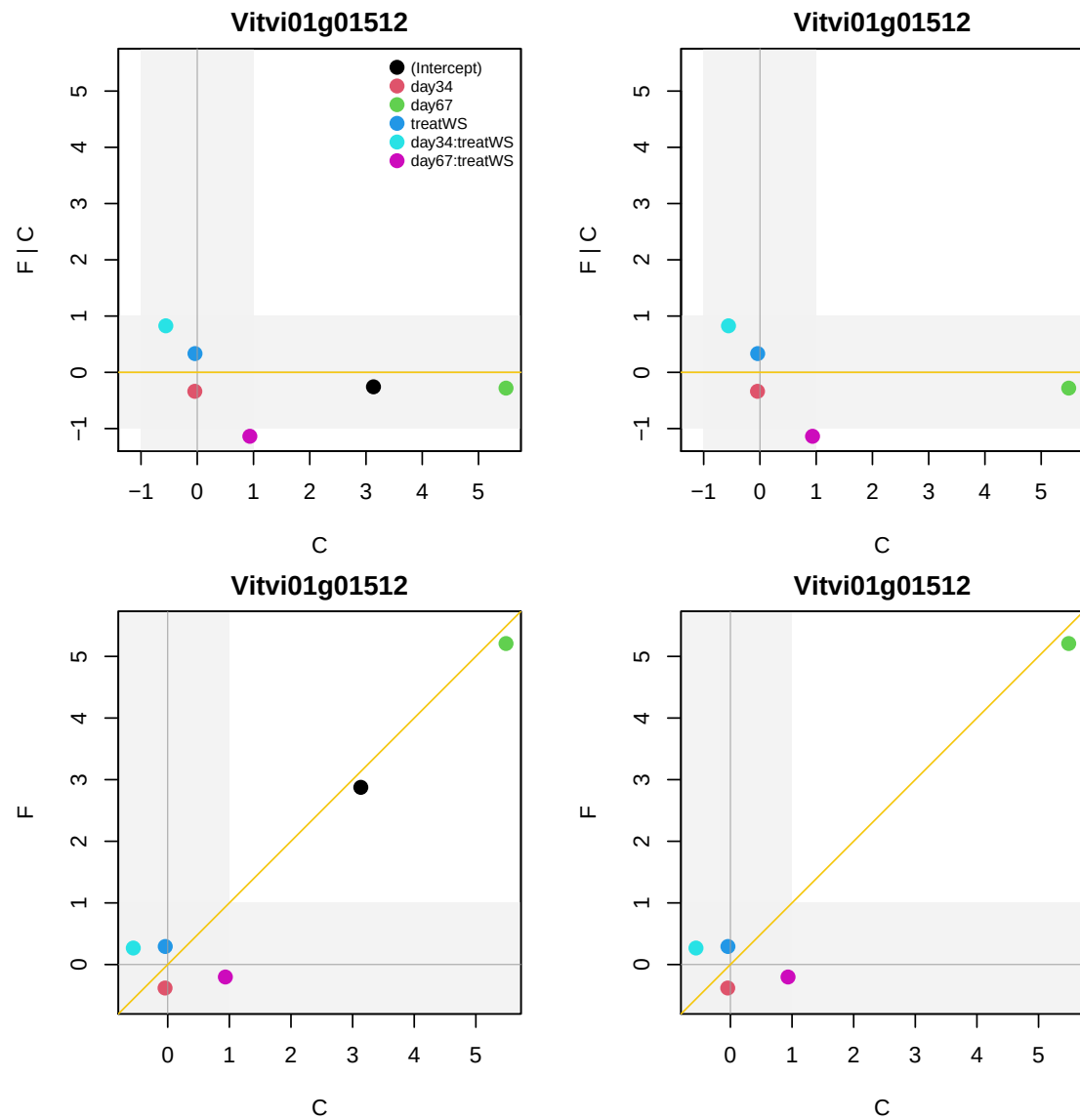


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

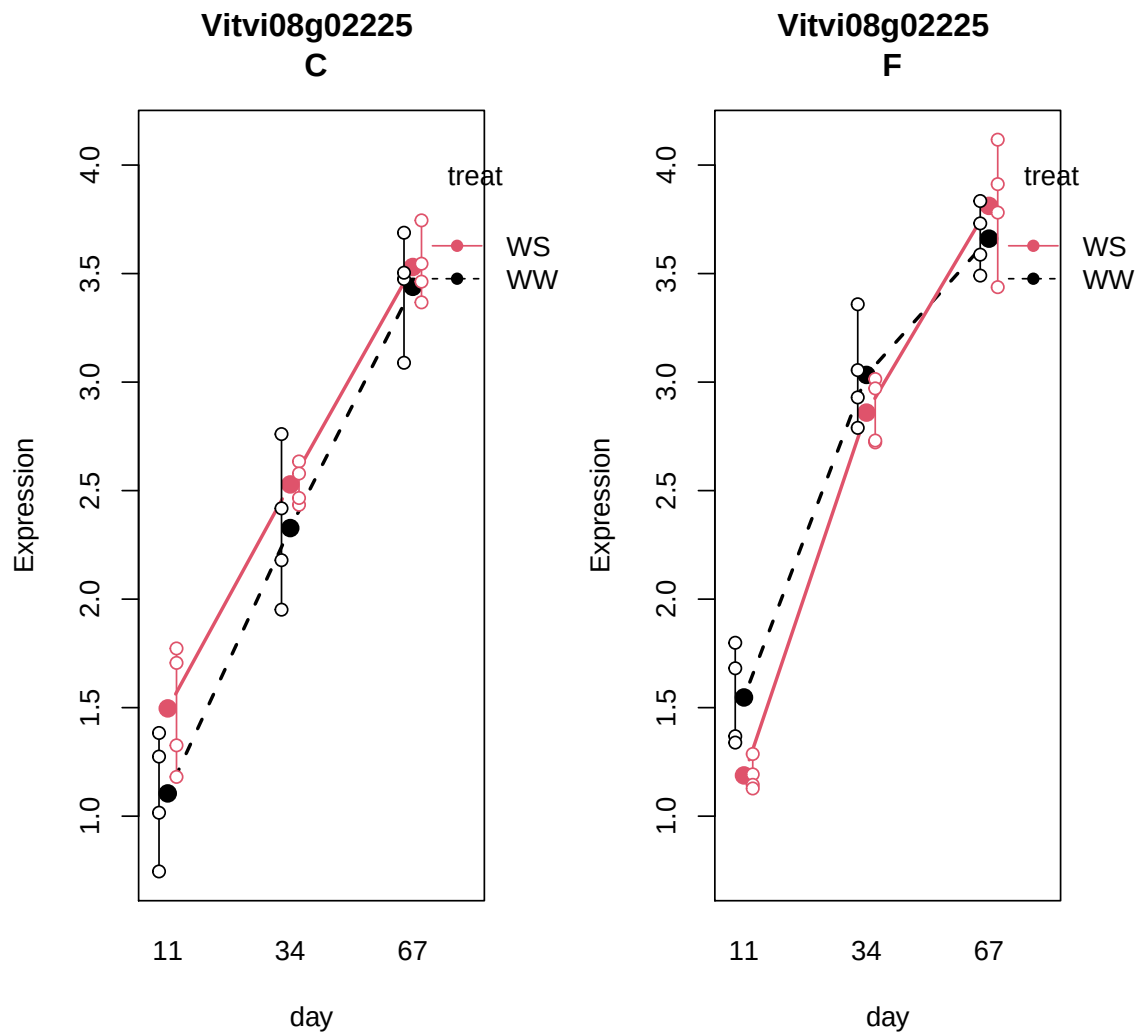


6.3.2 Vitvi08g02225

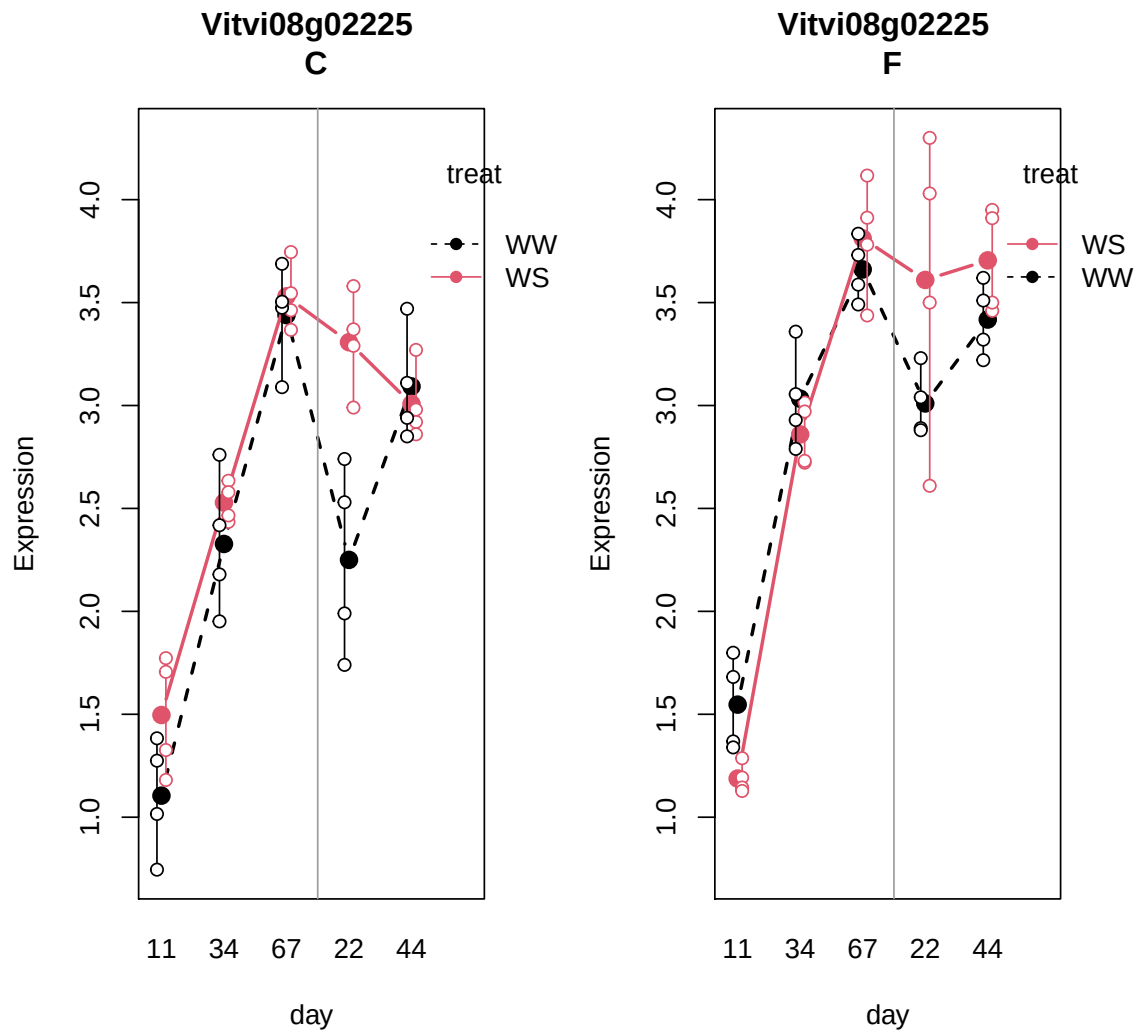
Coefficient day67 for Vitvi08g02225.

```
> tt[varname,]
              logFC AveExpr      t      P.Value
Vitvi08g02225 2.334283 2.543867 14.587 2.541168e-17
              adj.P.Val      B
Vitvi08g02225 1.298882e-13 29.1997

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

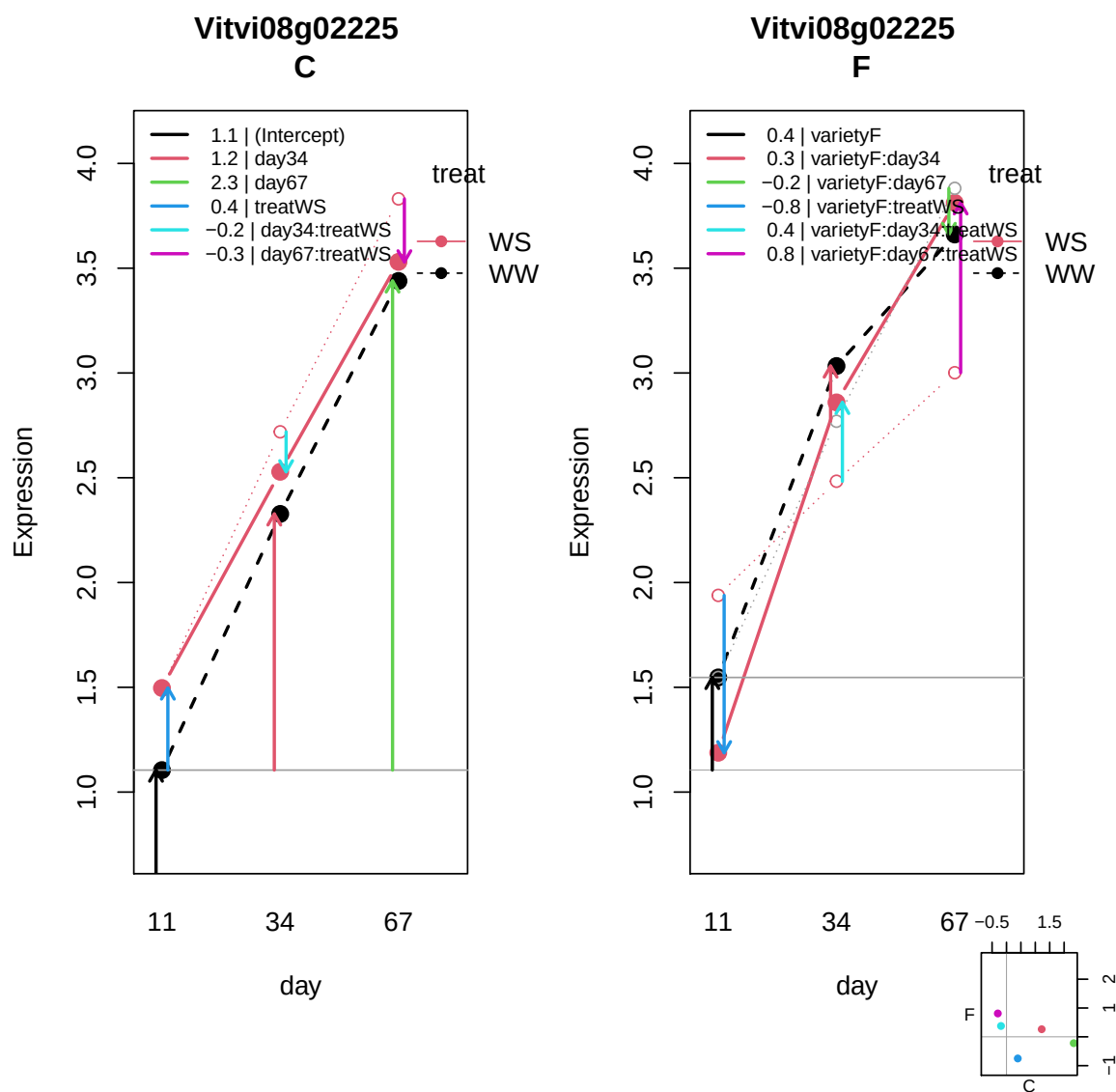
              (Intercept)  varietyF    day34    day67
Vitvi08g02225      1.104757 0.4421493 1.222615 2.334283
              treatWS  varietyF:day34  varietyF:day67
Vitvi08g02225 0.3917499      0.2635495      -0.220287
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi08g02225      -0.7509161      -0.190648      -0.3005512
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi08g02225              0.3762017              0.8107518

```

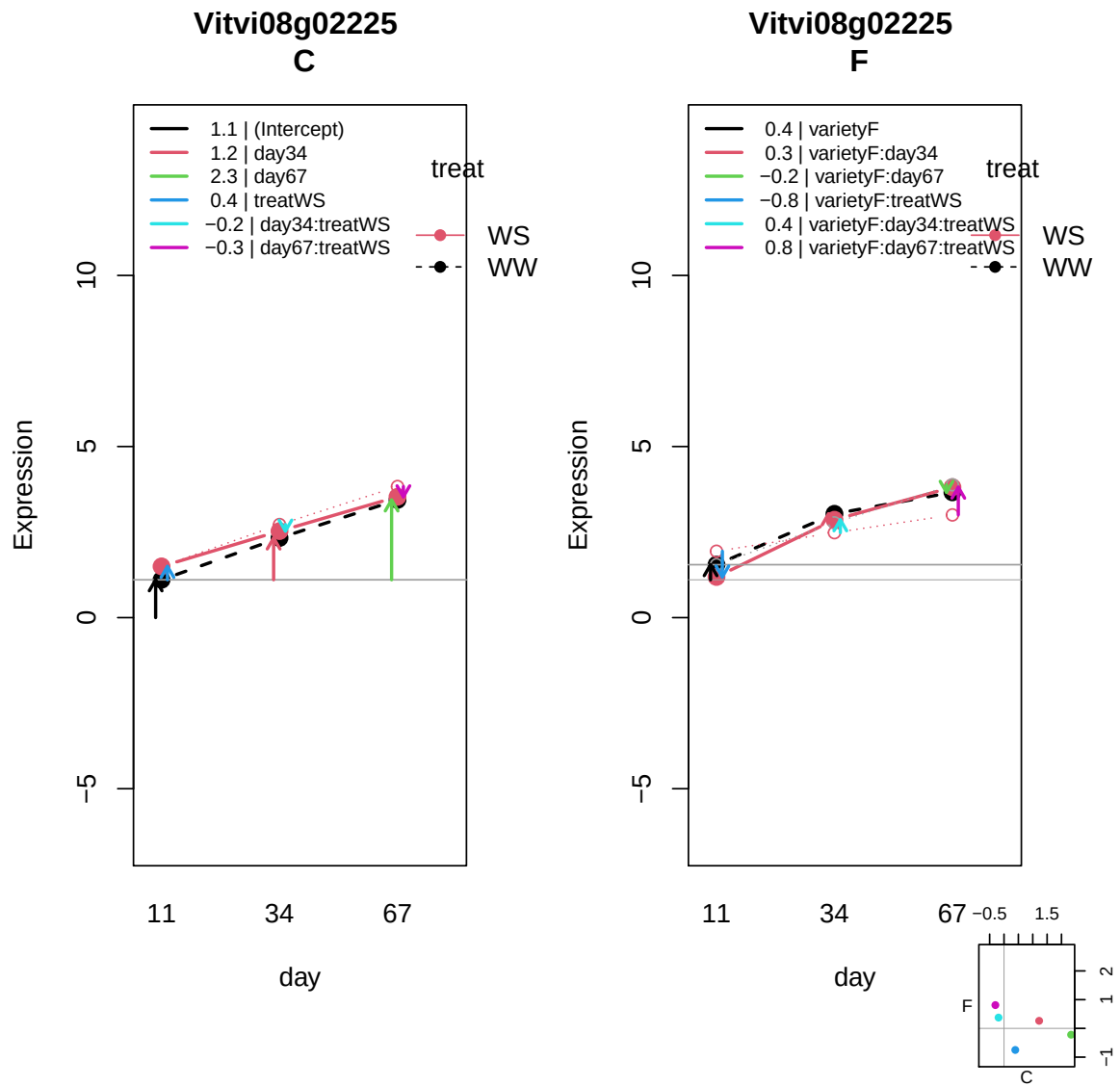
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

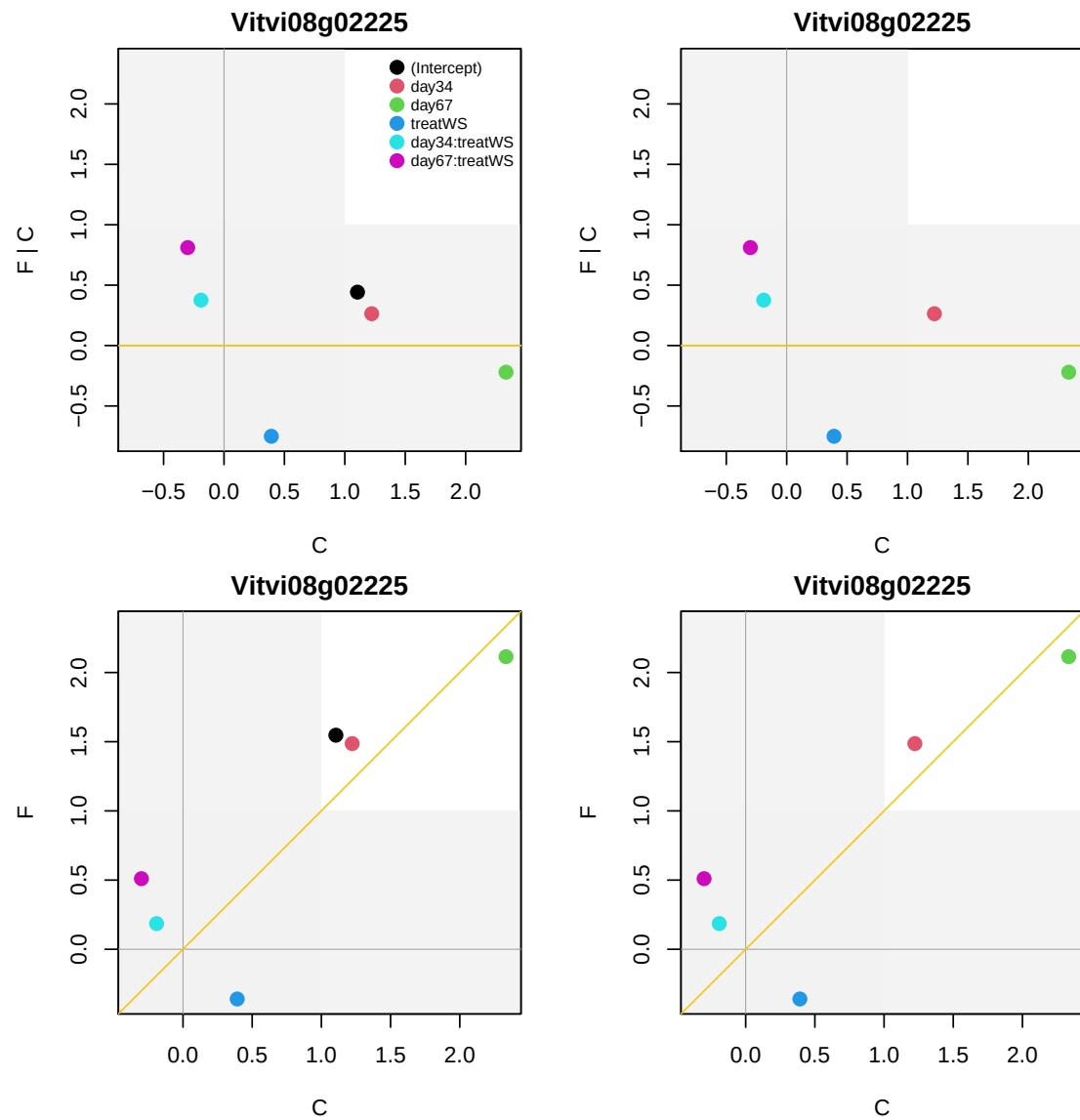


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

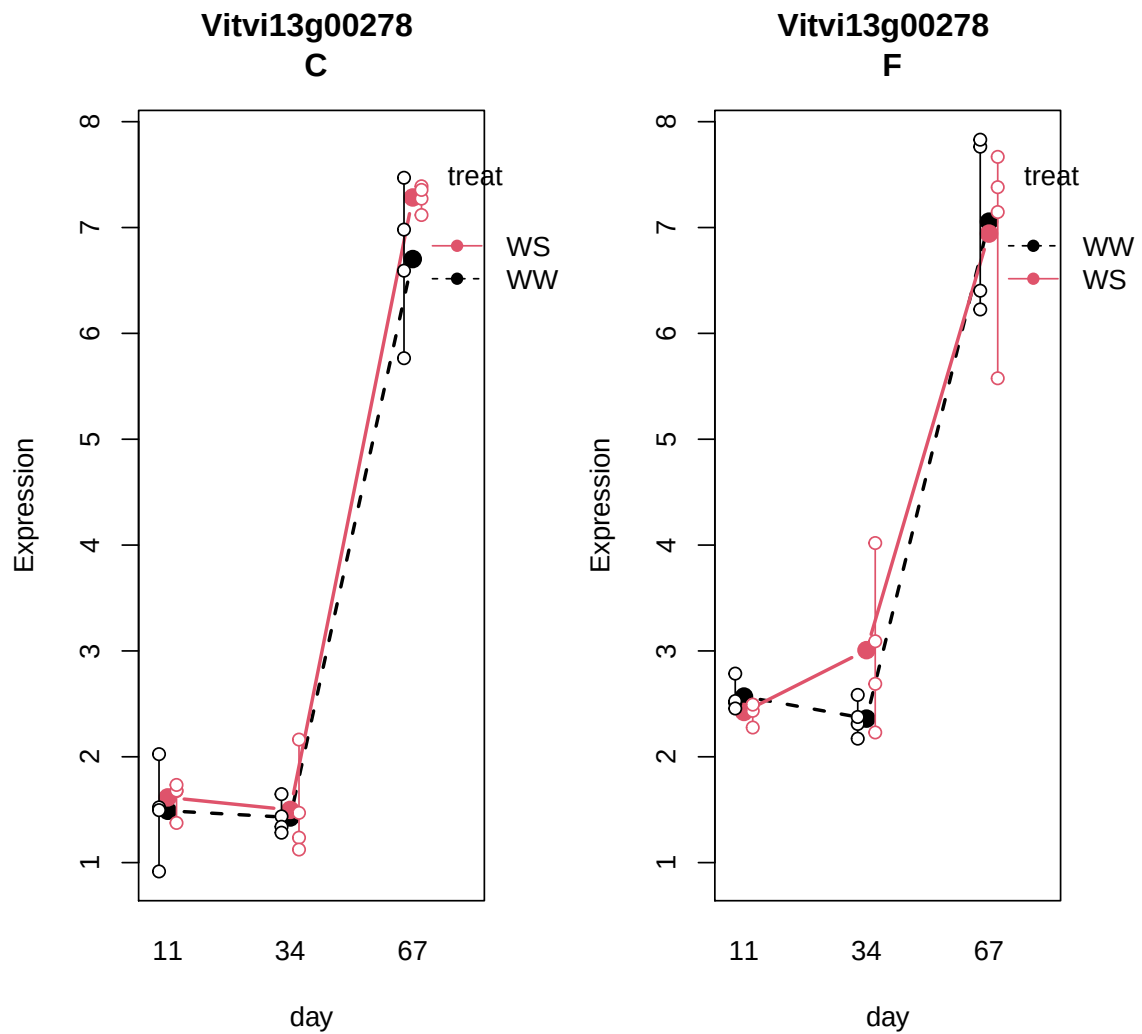


6.3.3 Vitvi13g00278

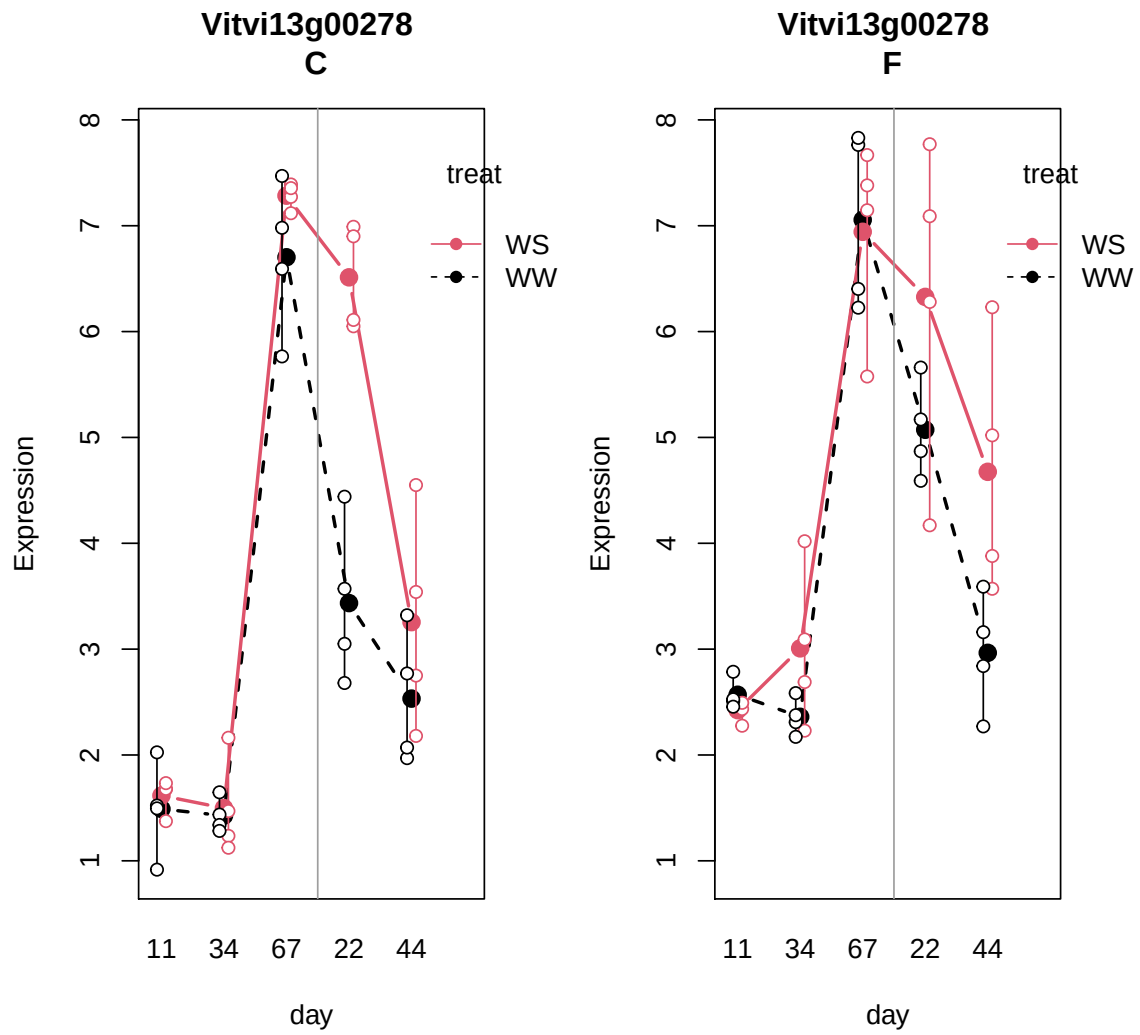
Coefficient day67 for Vitvi13g00278.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi13g00278 5.212264 3.69793 14.58433 2.556518e-17
      adj.P.Val      B
Vitvi13g00278 1.298882e-13 29.19394

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



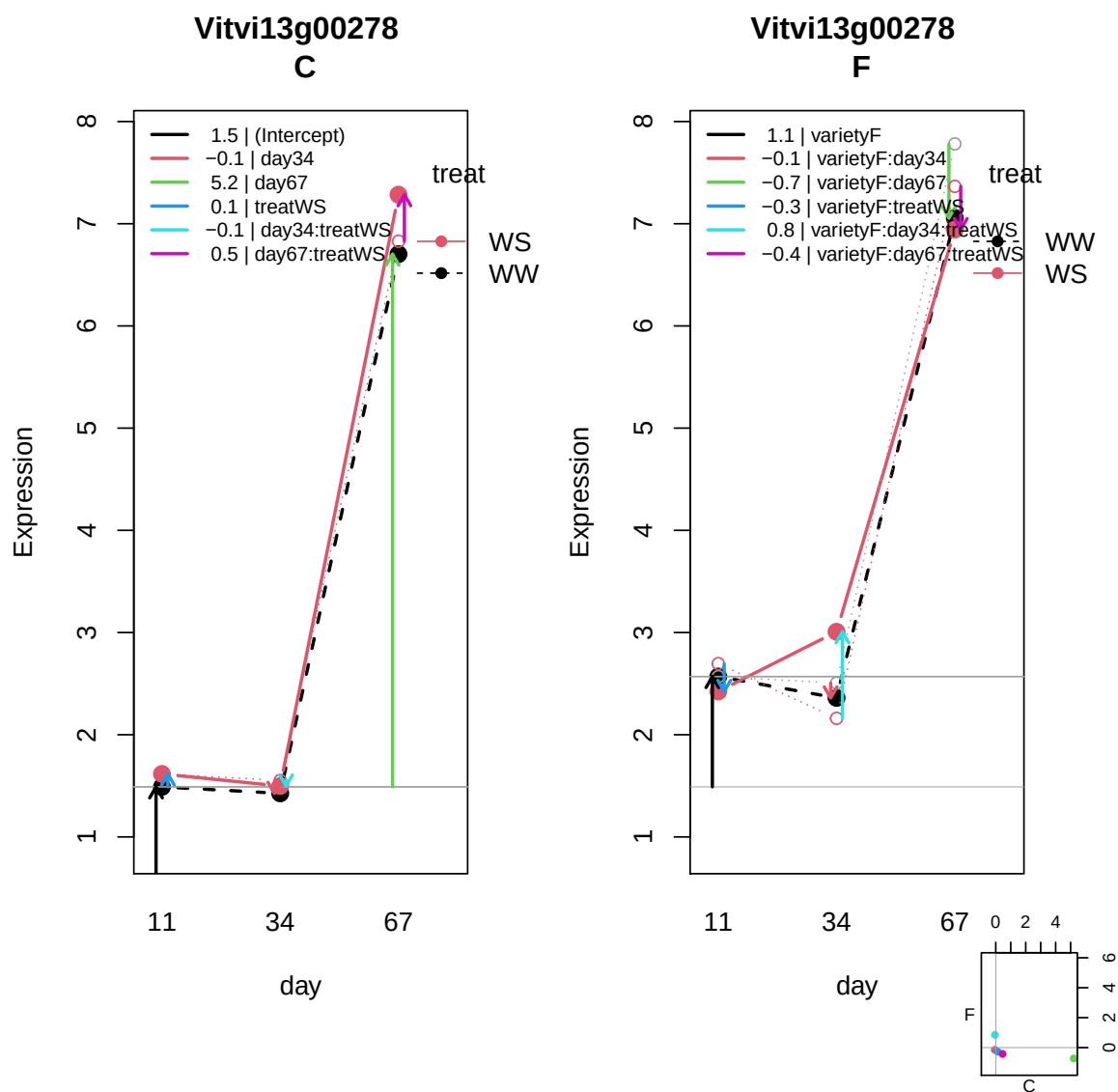
```

> fit1[varname,]$coefficients

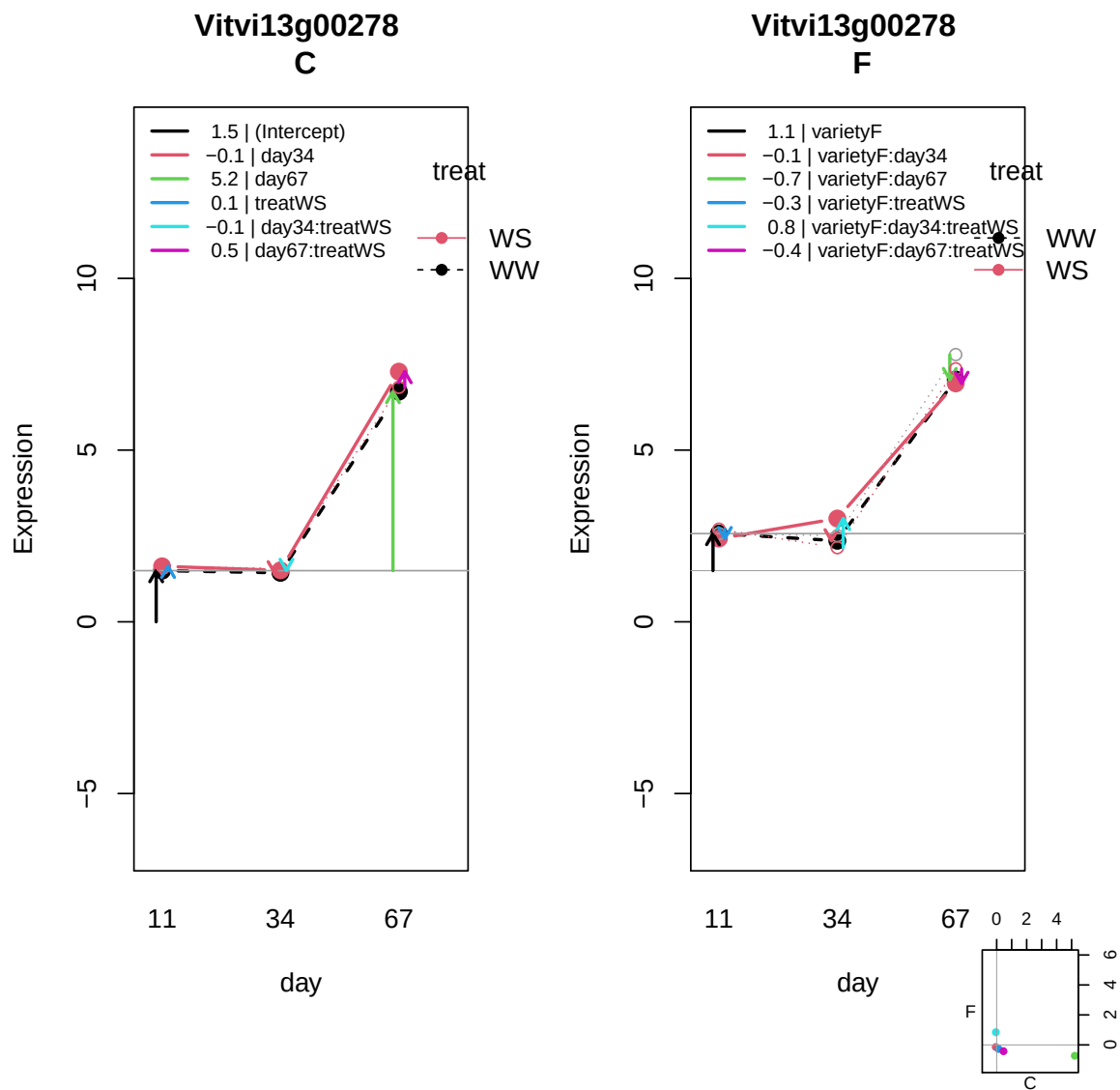
              (Intercept)  varietyF      day34      day67
Vitvi13g00278      1.489798  1.079071 -0.06342194  5.212264
              treatWS  varietyF:day34  varietyF:day67
Vitvi13g00278  0.1264335      -0.1450531      -0.72543
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi13g00278      -0.2716998      -0.05476667      0.4555156
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi13g00278              0.8469857              -0.4232278

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

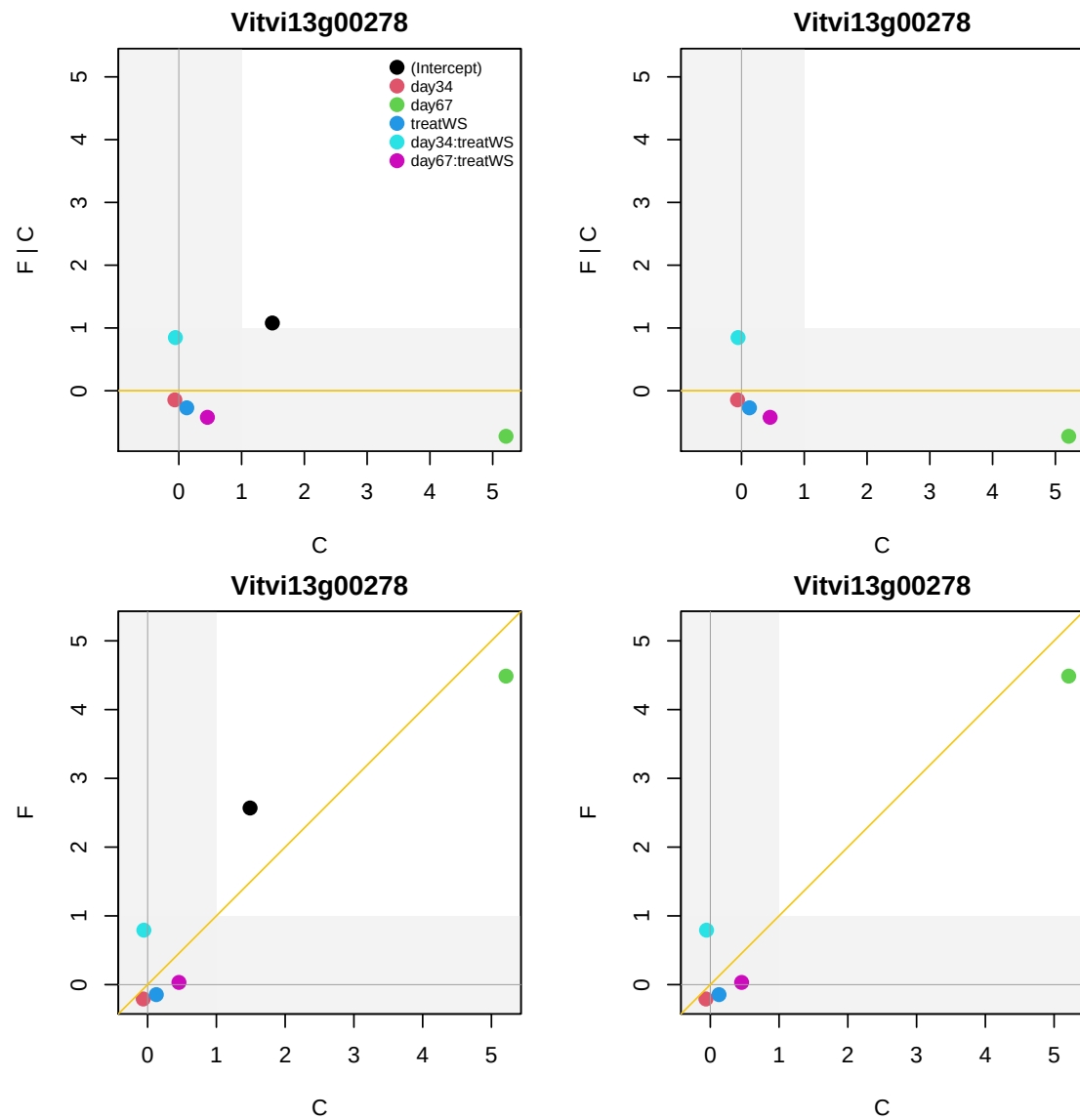


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

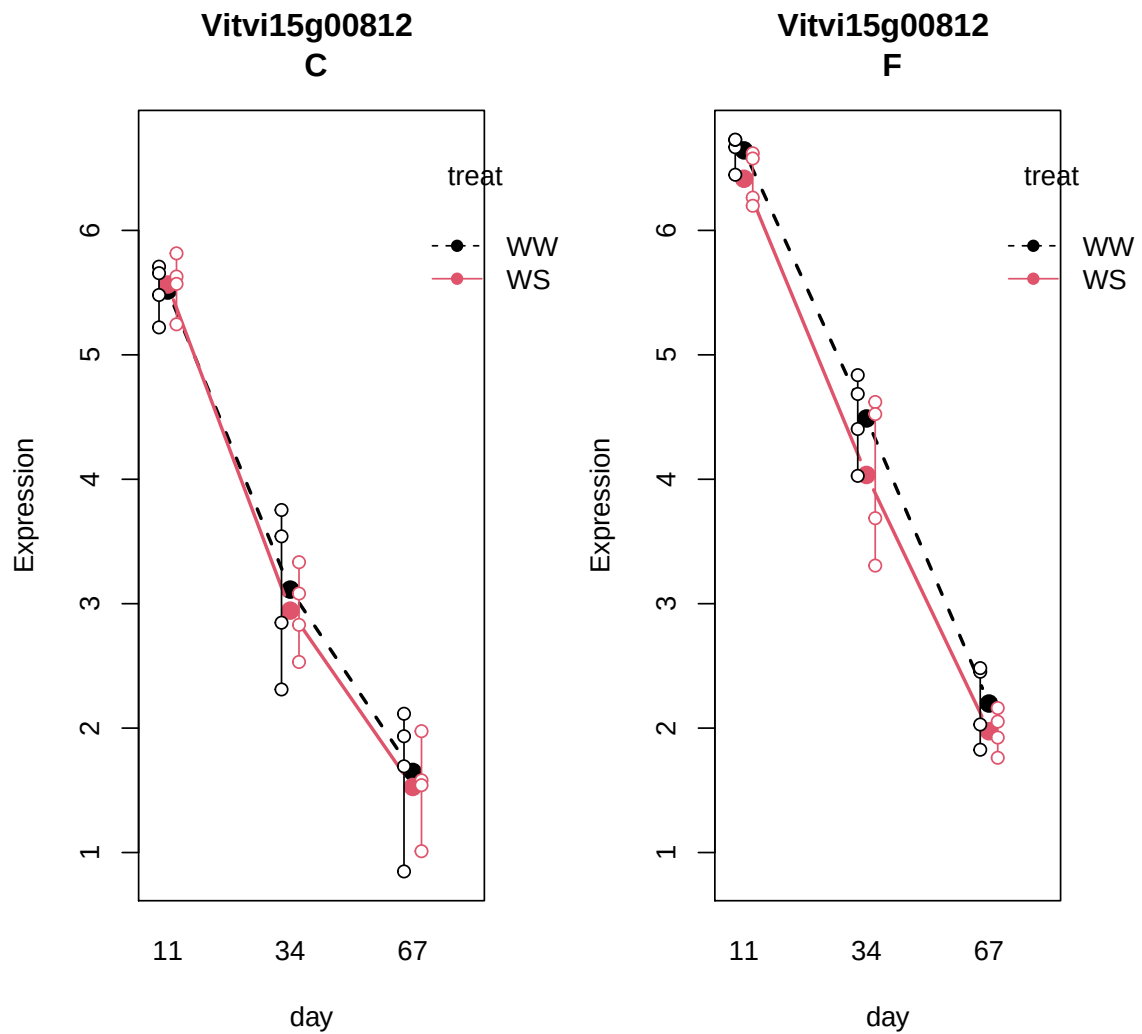


6.3.4 Vitvi15g00812

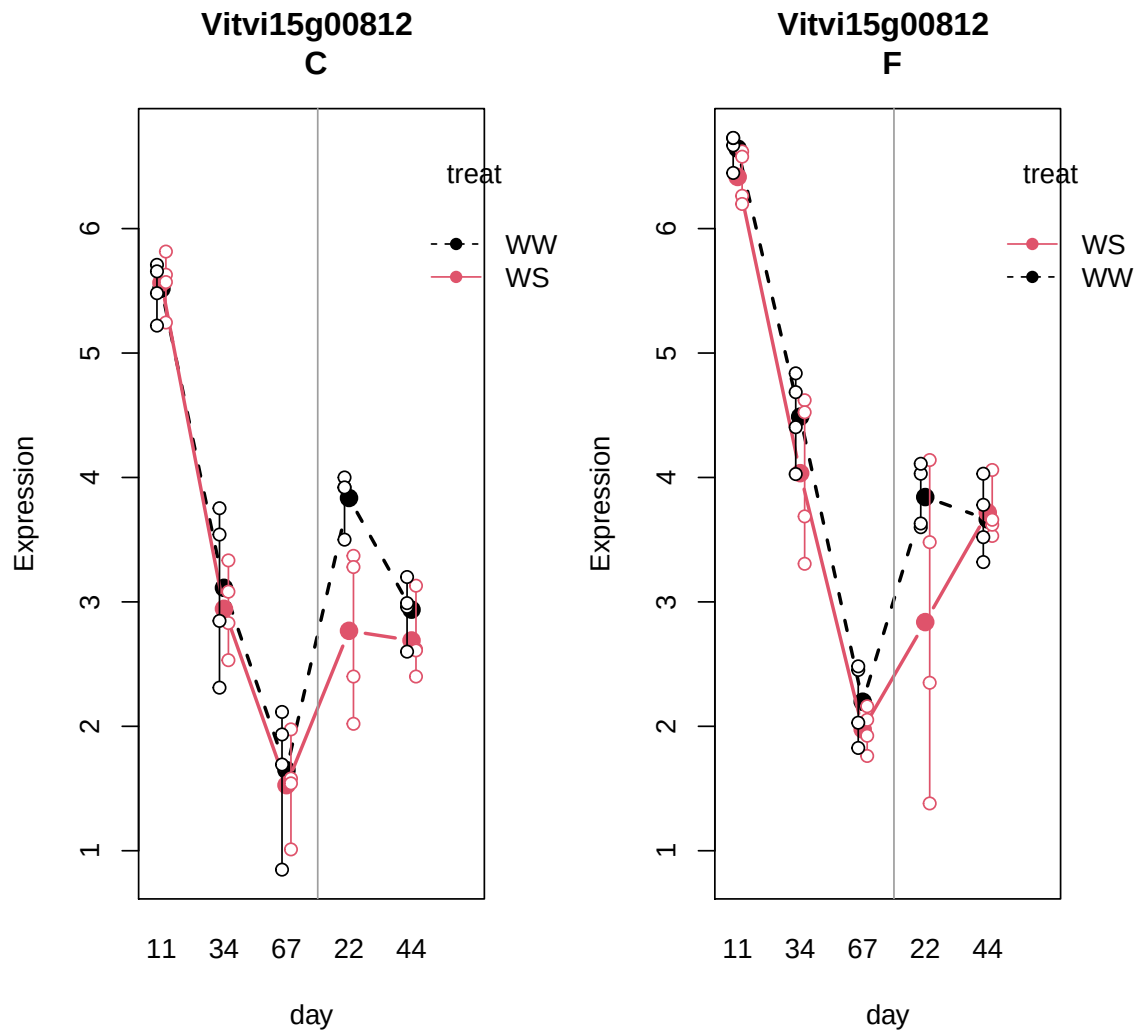
Coefficient day67 for Vitvi15g00812.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi15g00812 -3.868948 3.838898 -14.26181 5.323357e-17
      adj.P.Val      B
Vitvi15g00812 2.028465e-13 28.49066

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```




```
> fit1[varname,]$coefficients
```

```

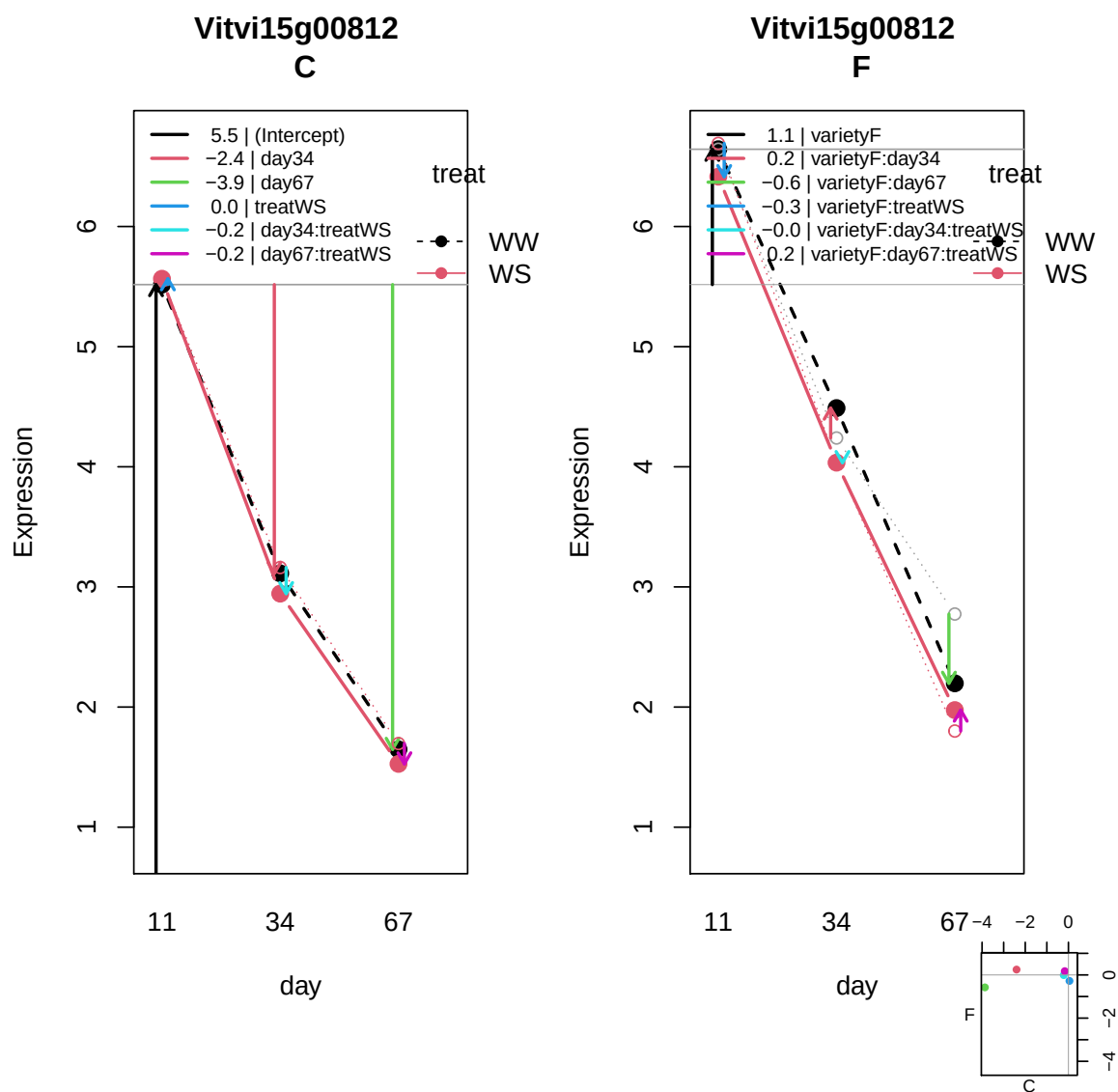
      (Intercept) varietyF      day34      day67
Vitvi15g00812    5.516615  1.12657 -2.403641 -3.868948
      treatWS varietyF:day34 varietyF:day67
Vitvi15g00812  0.04846943    0.2488548   -0.5766973
      varietyF:treatWS day34:treatWS day67:treatWS
Vitvi15g00812   -0.2766561   -0.2173099   -0.1691396
      varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi15g00812   -0.00843176              0.1744948

```

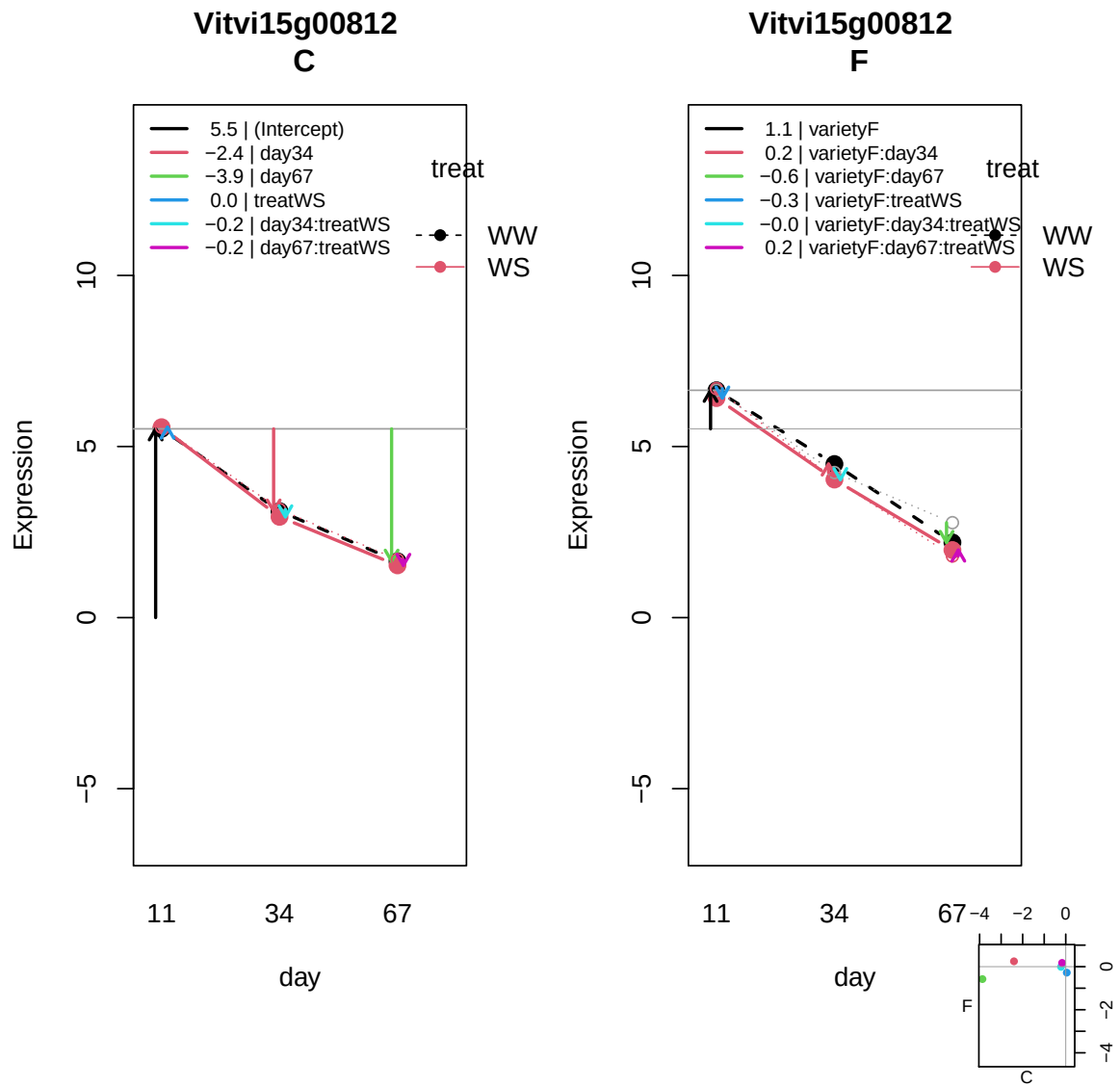
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

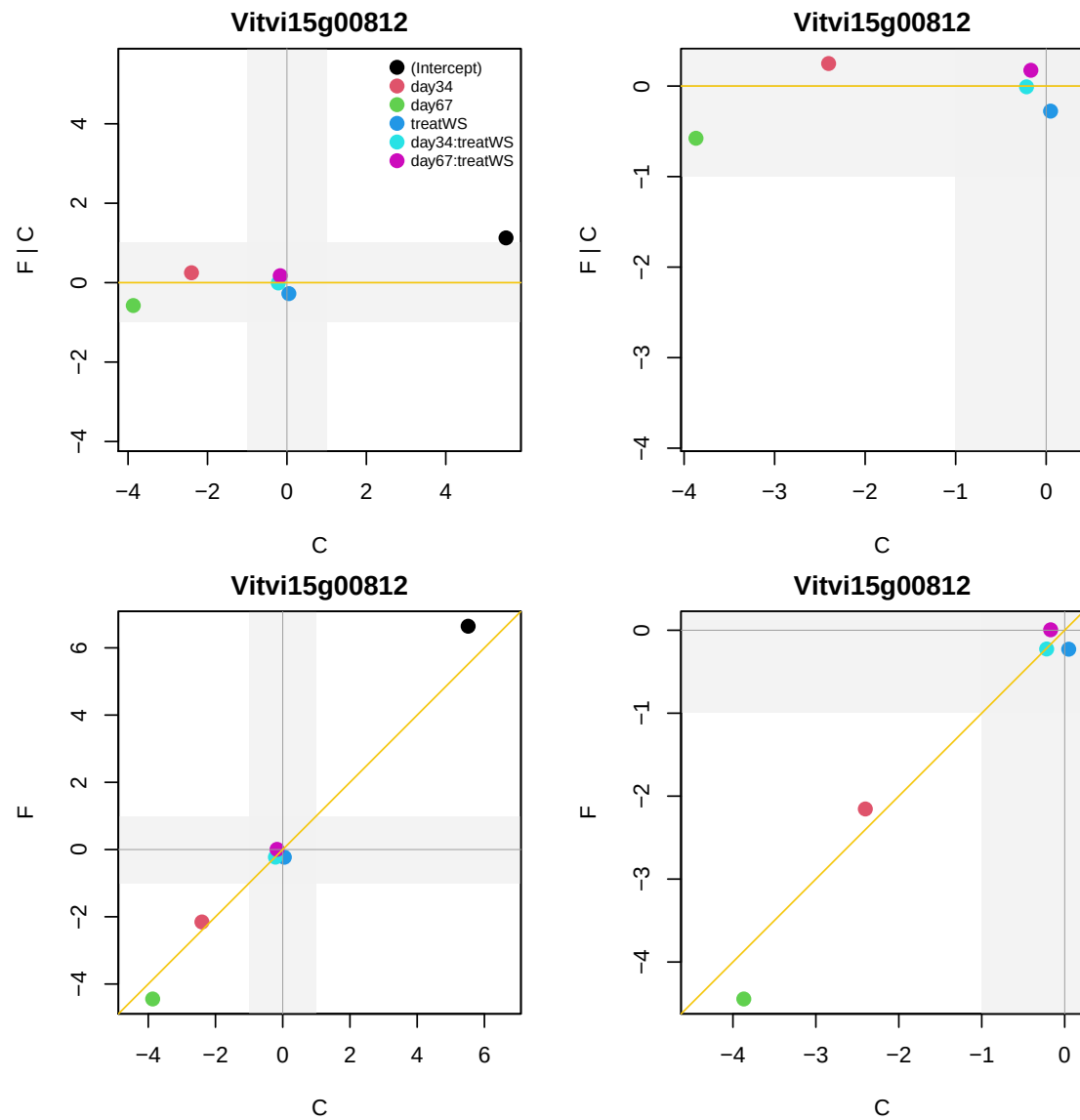


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

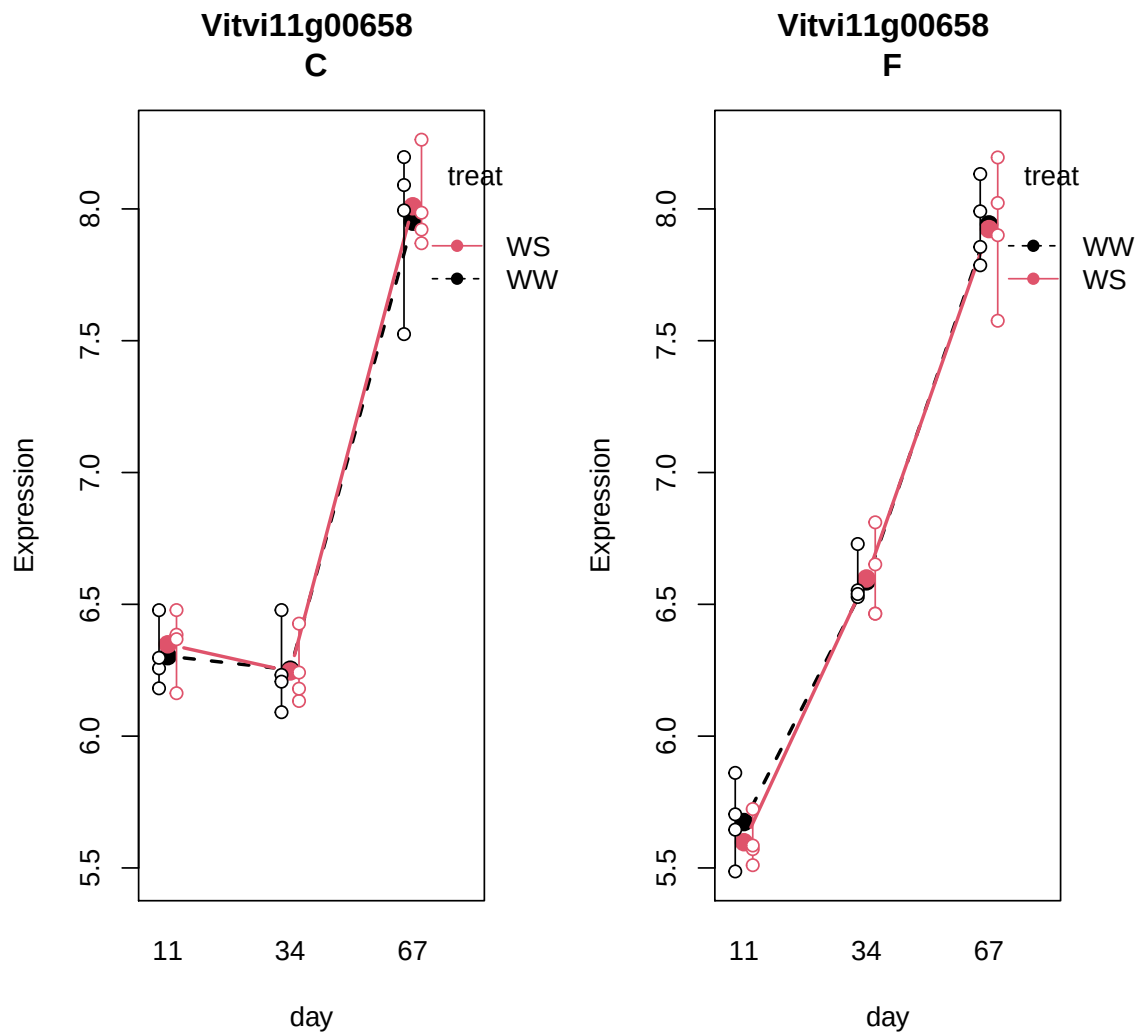


6.3.5 Vitvi11g00658

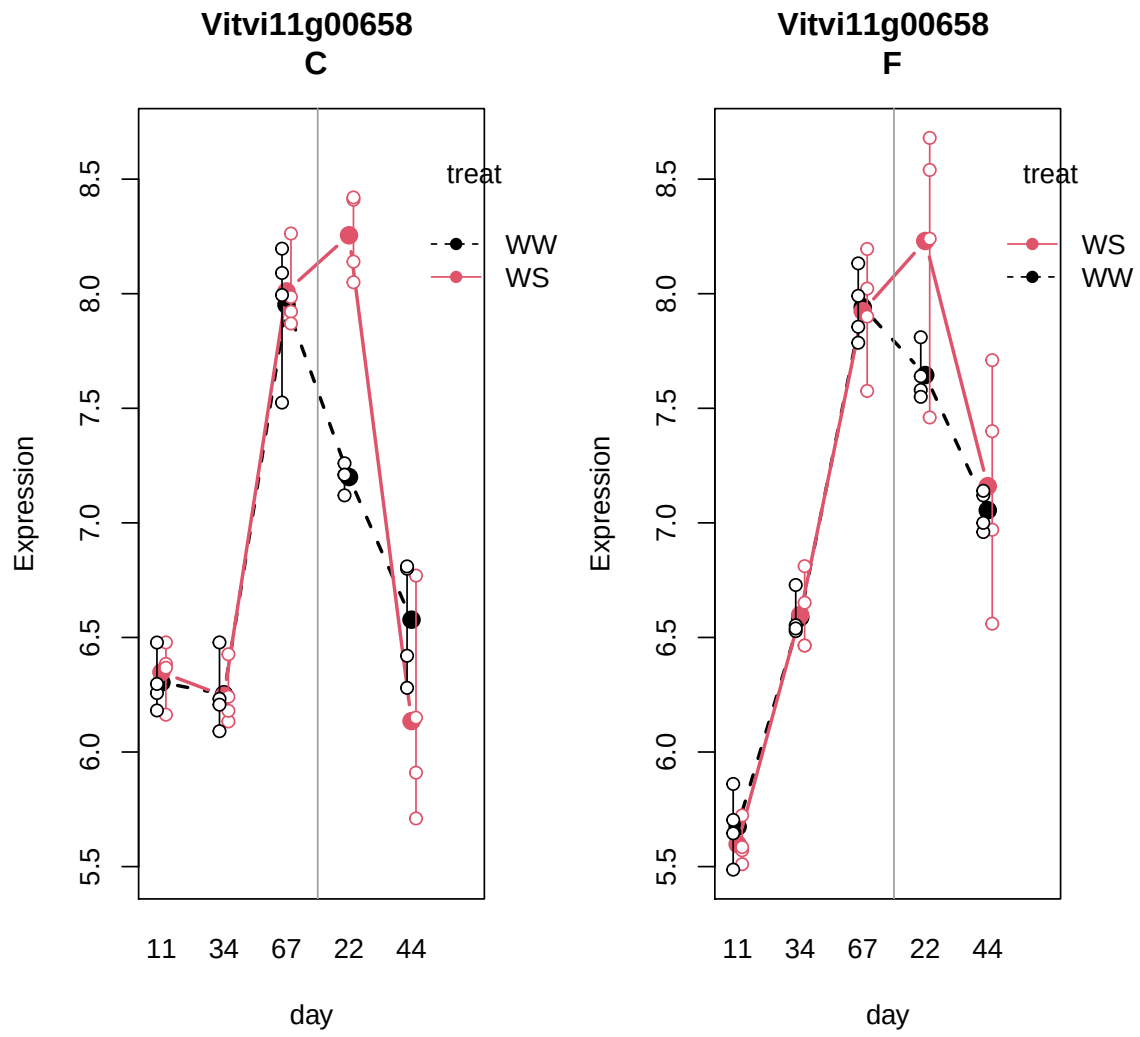
Coefficient day67 for Vitvi11g00658.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi11g00658 1.648232 6.786001 13.4054 3.949934e-16
      adj.P.Val      B
Vitvi11g00658 1.204098e-12 26.56176

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

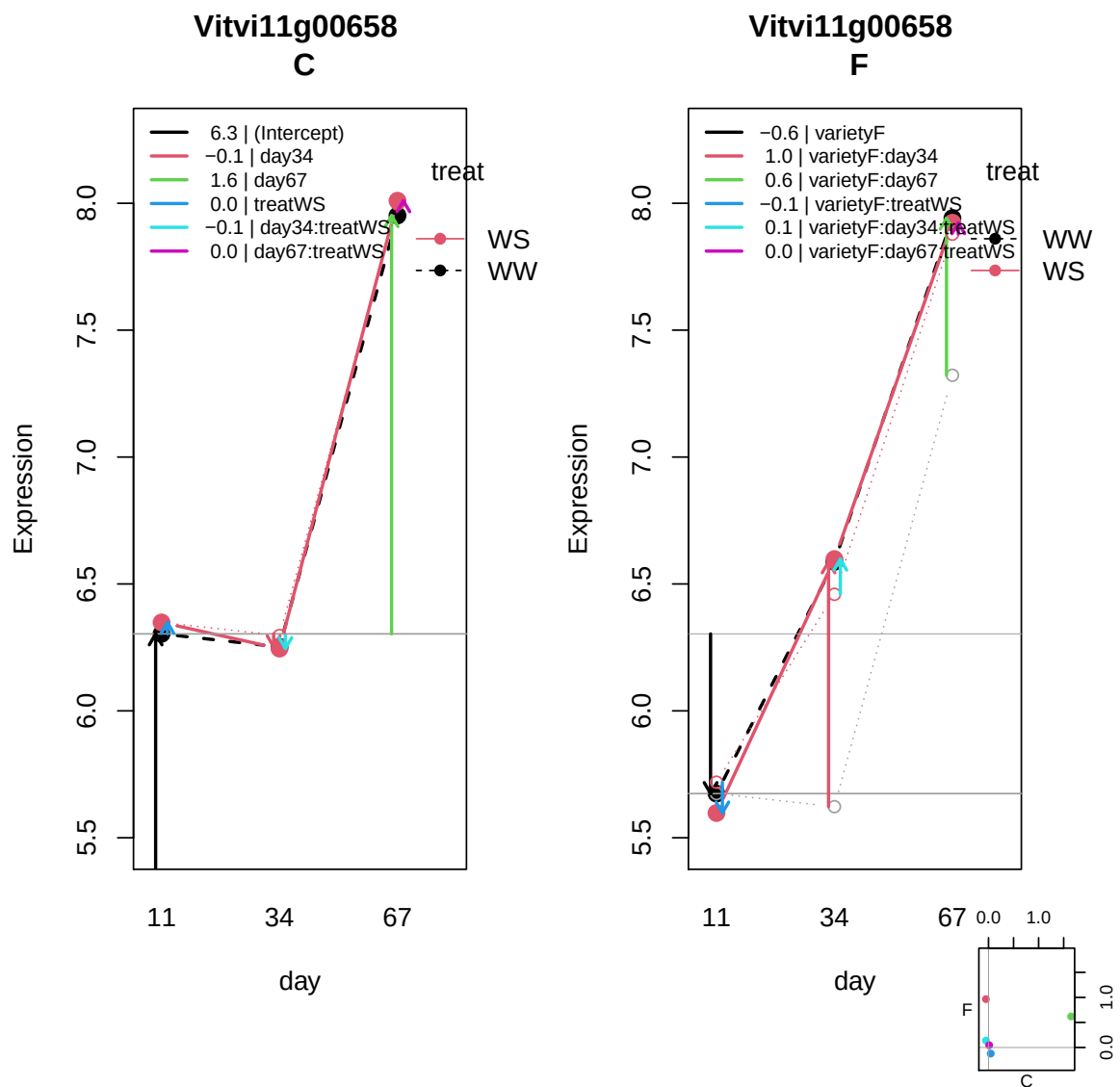
              (Intercept)    varietyF      day34      day67
Vitvi11g00658      6.303384 -0.6294305 -0.05141551 1.648232
              treatWS    varietyF:day34    varietyF:day67
Vitvi11g00658  0.04497136      0.9646803      0.6191009
              varietyF:treatWS    day34:treatWS    day67:treatWS
Vitvi11g00658      -0.1213844      -0.05162395      0.01333419
              varietyF:day34:treatWS    varietyF:day67:treatWS
Vitvi11g00658              0.1388105              0.04525846

```

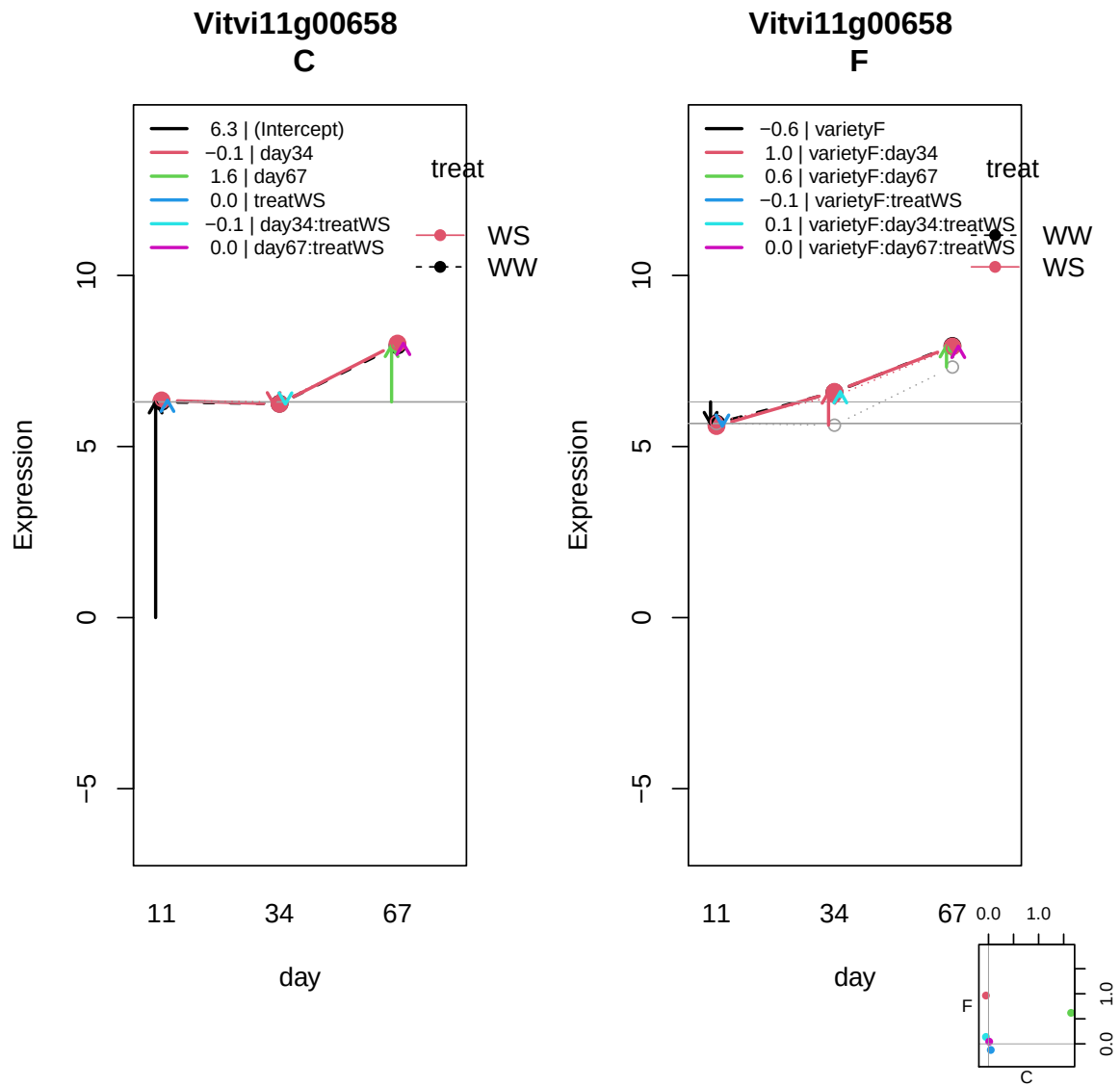
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

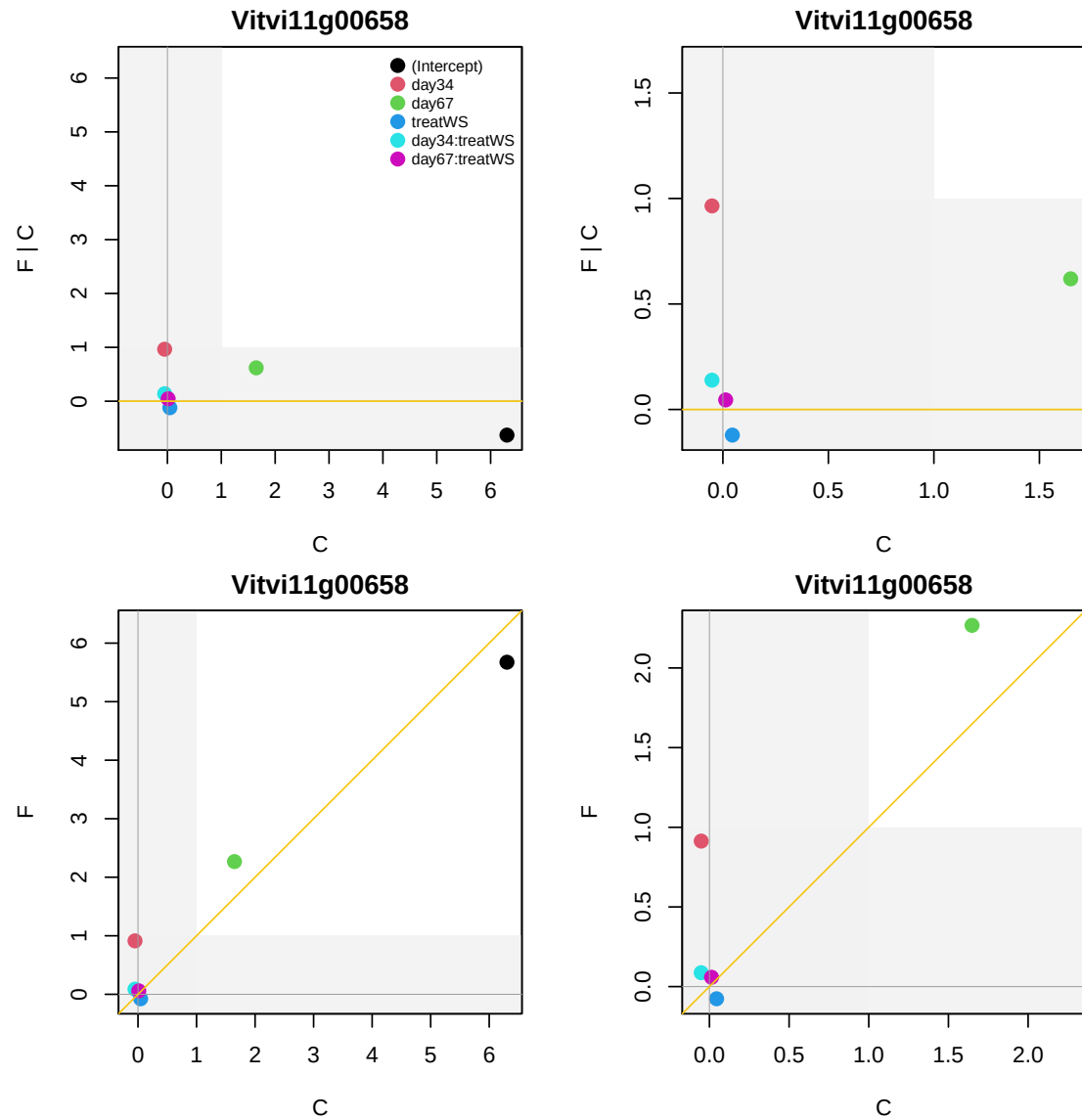


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

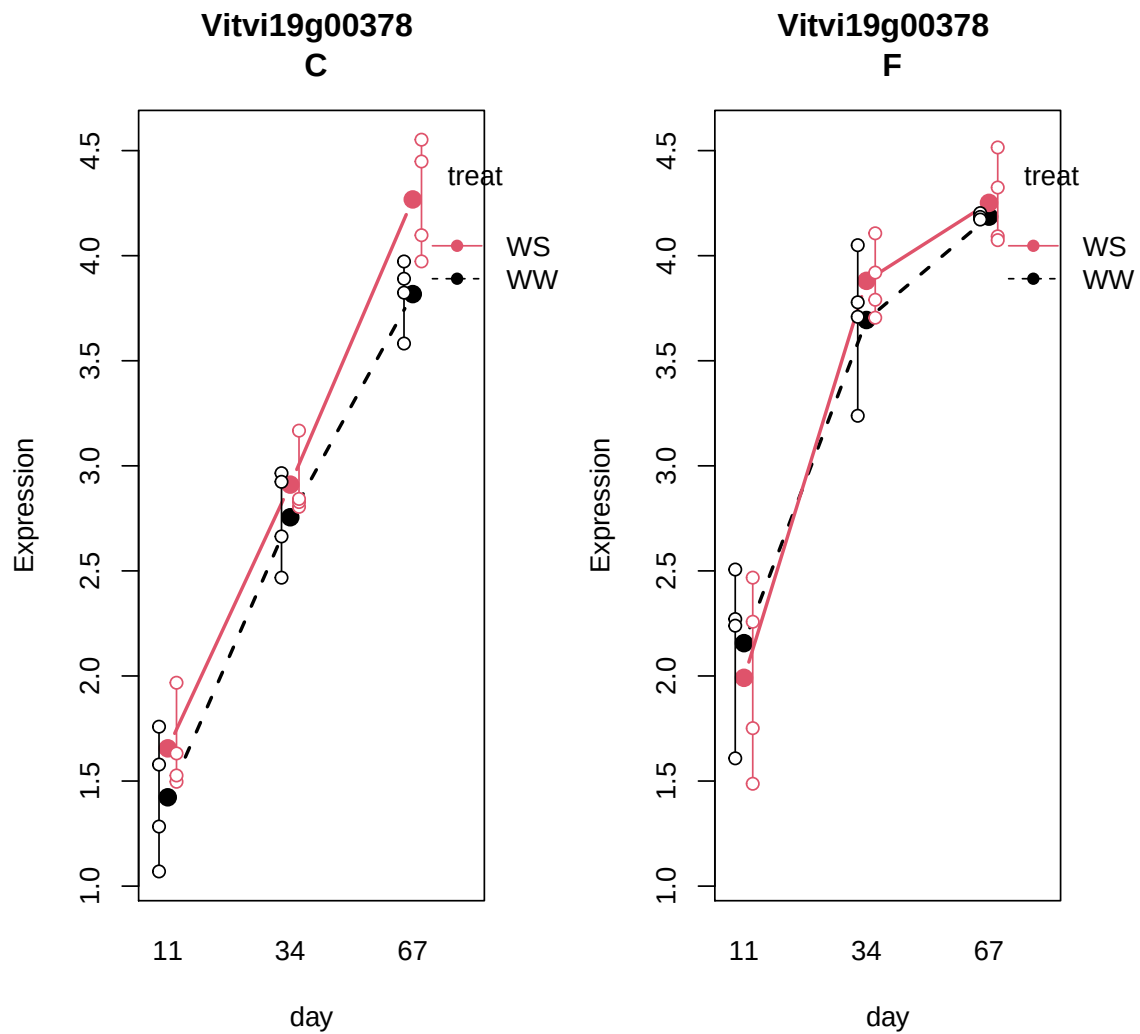


6.3.6 Vitvi19g00378

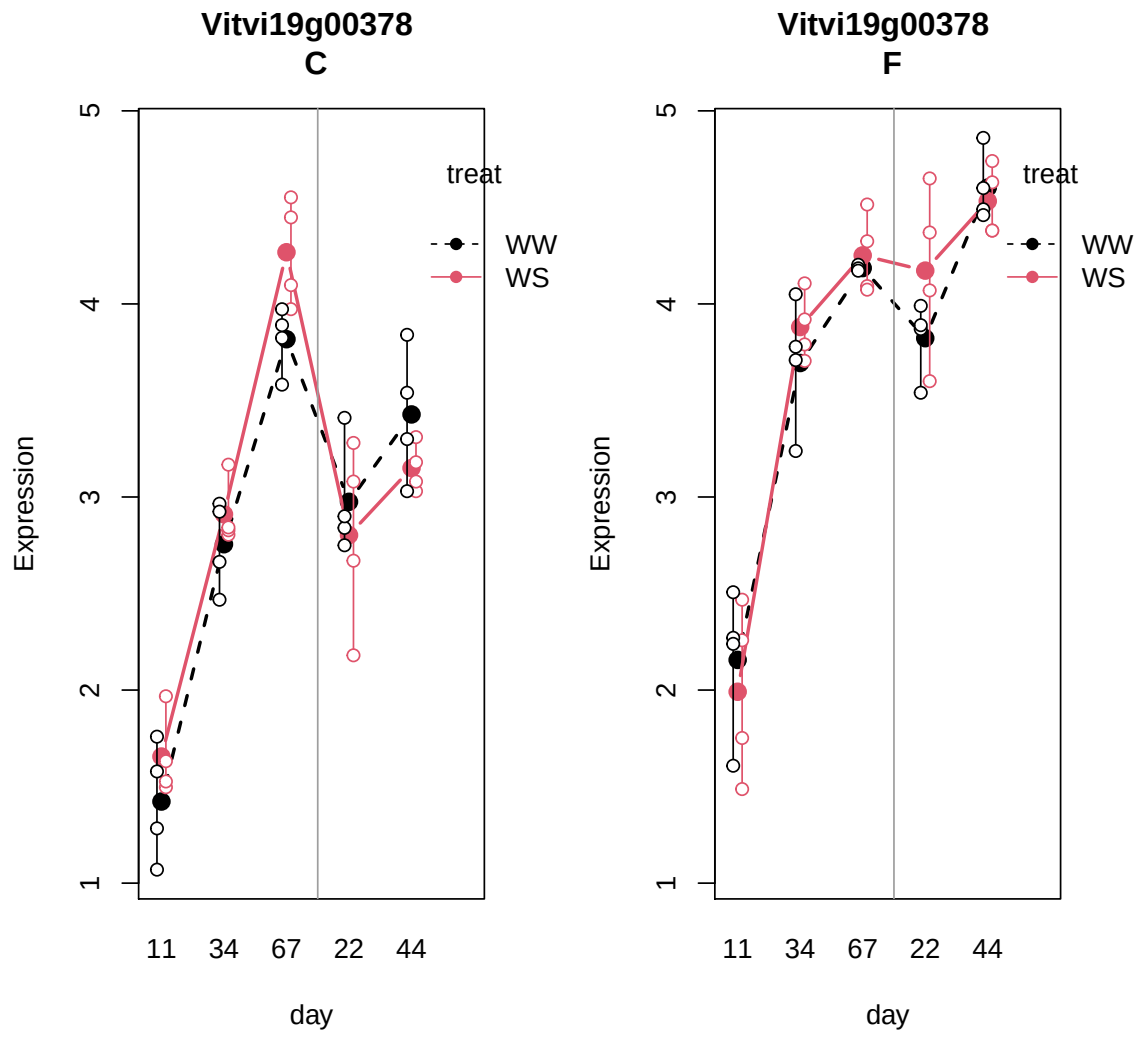
Coefficient day67 for Vitvi19g00378.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi19g00378 2.394597 3.082295 12.80149 1.708546e-15
      adj.P.Val      B
Vitvi19g00378 4.340277e-12 25.14611

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



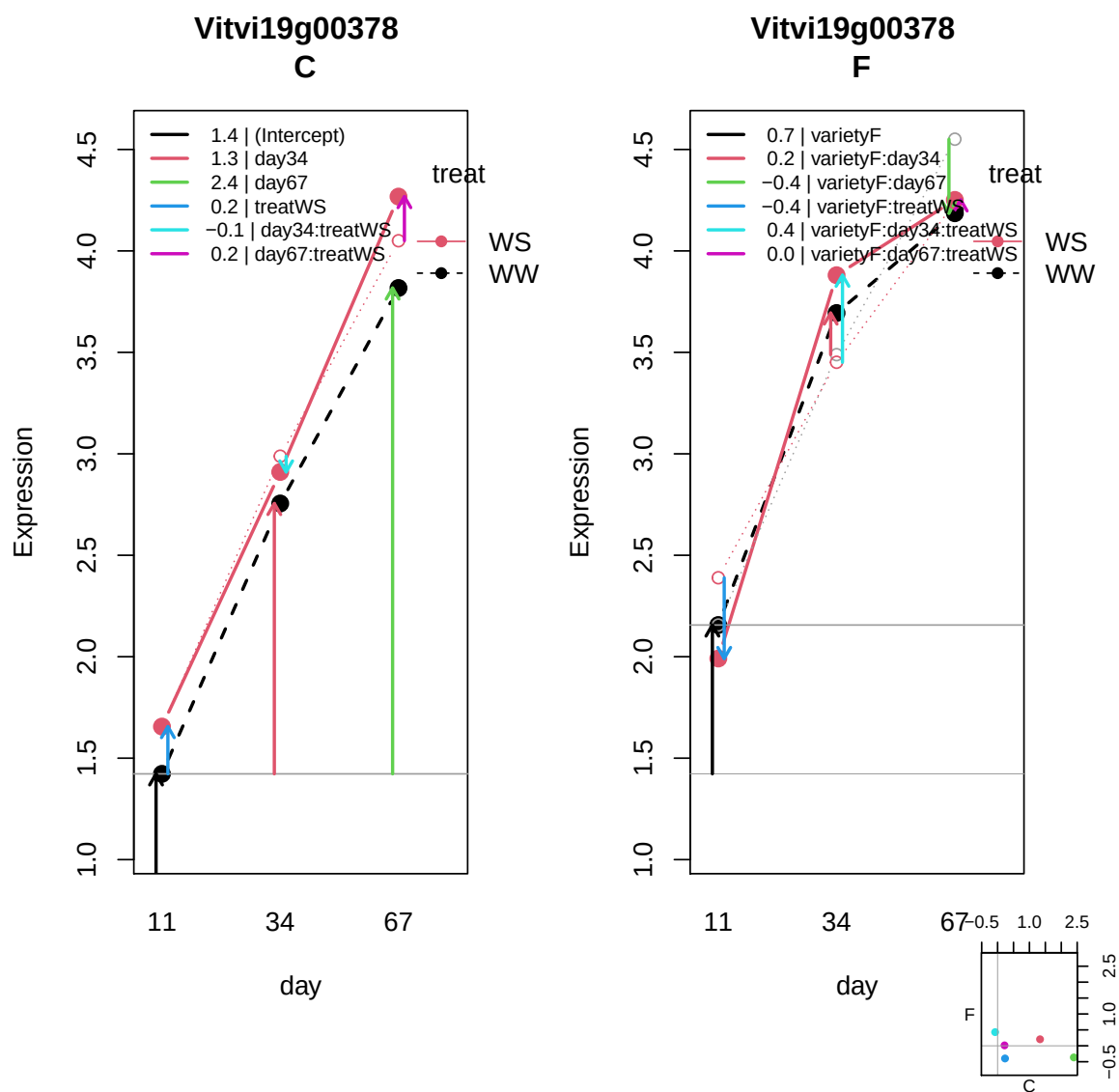
```

> fit1[varname,]$coefficients

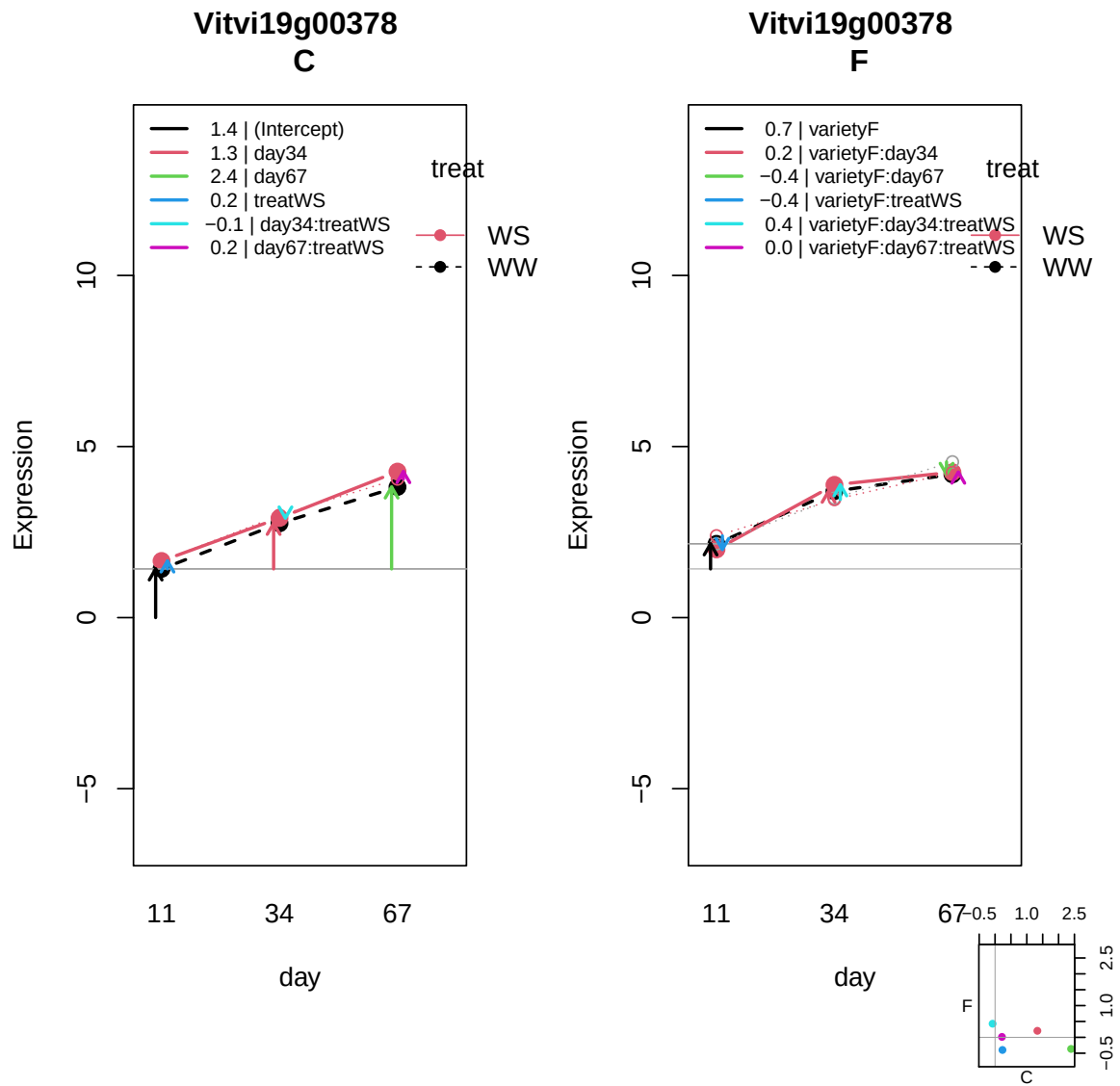
              (Intercept)  varietyF    day34    day67
Vitvi19g00378      1.422604 0.7335577 1.332632 2.394597
              treatWS  varietyF:day34  varietyF:day67
Vitvi19g00378 0.2329904      0.2050962      -0.3650381
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi19g00378      -0.3979853      -0.07764311      0.2174665
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi19g00378              0.42905              0.01322533

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

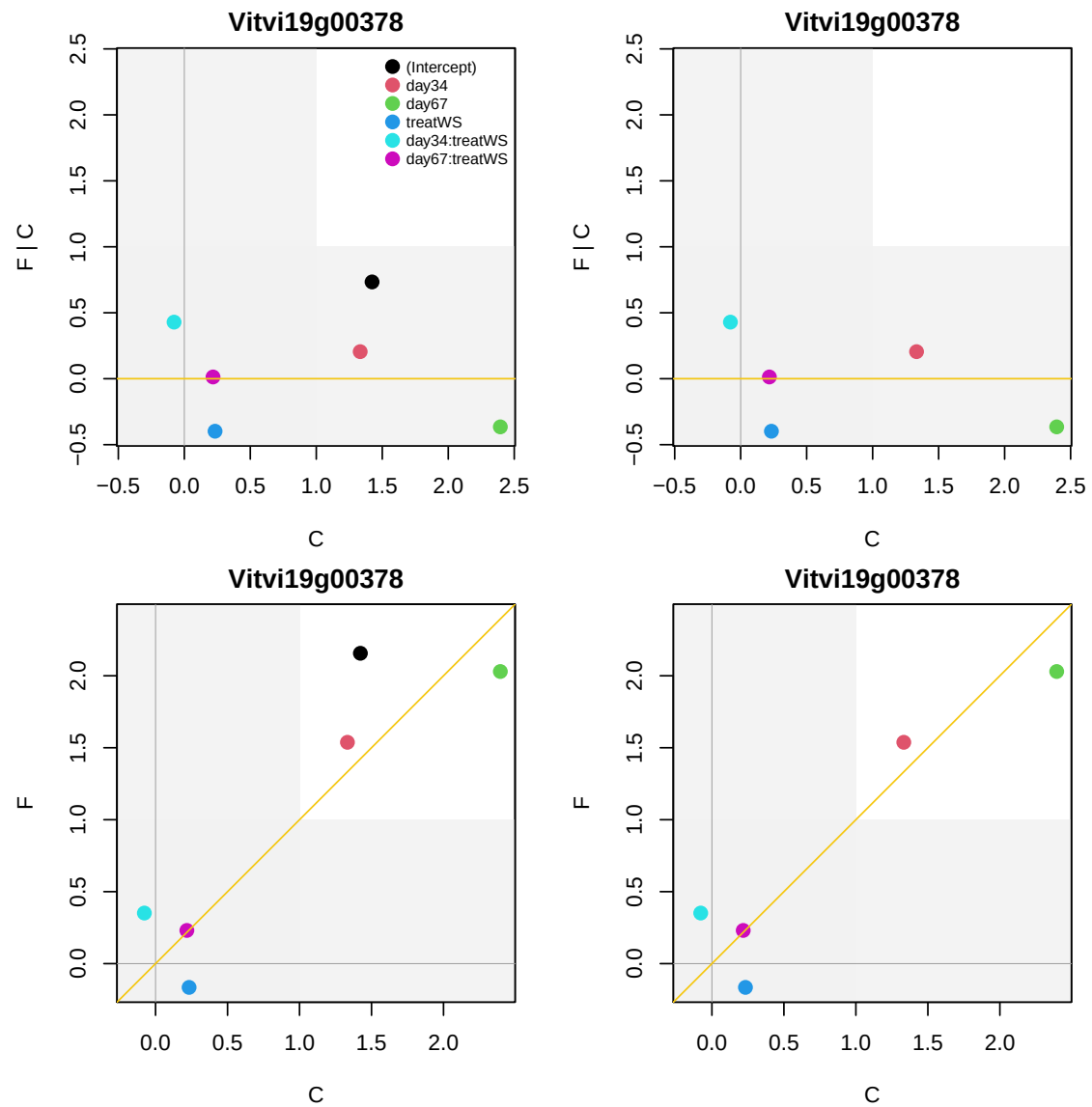


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

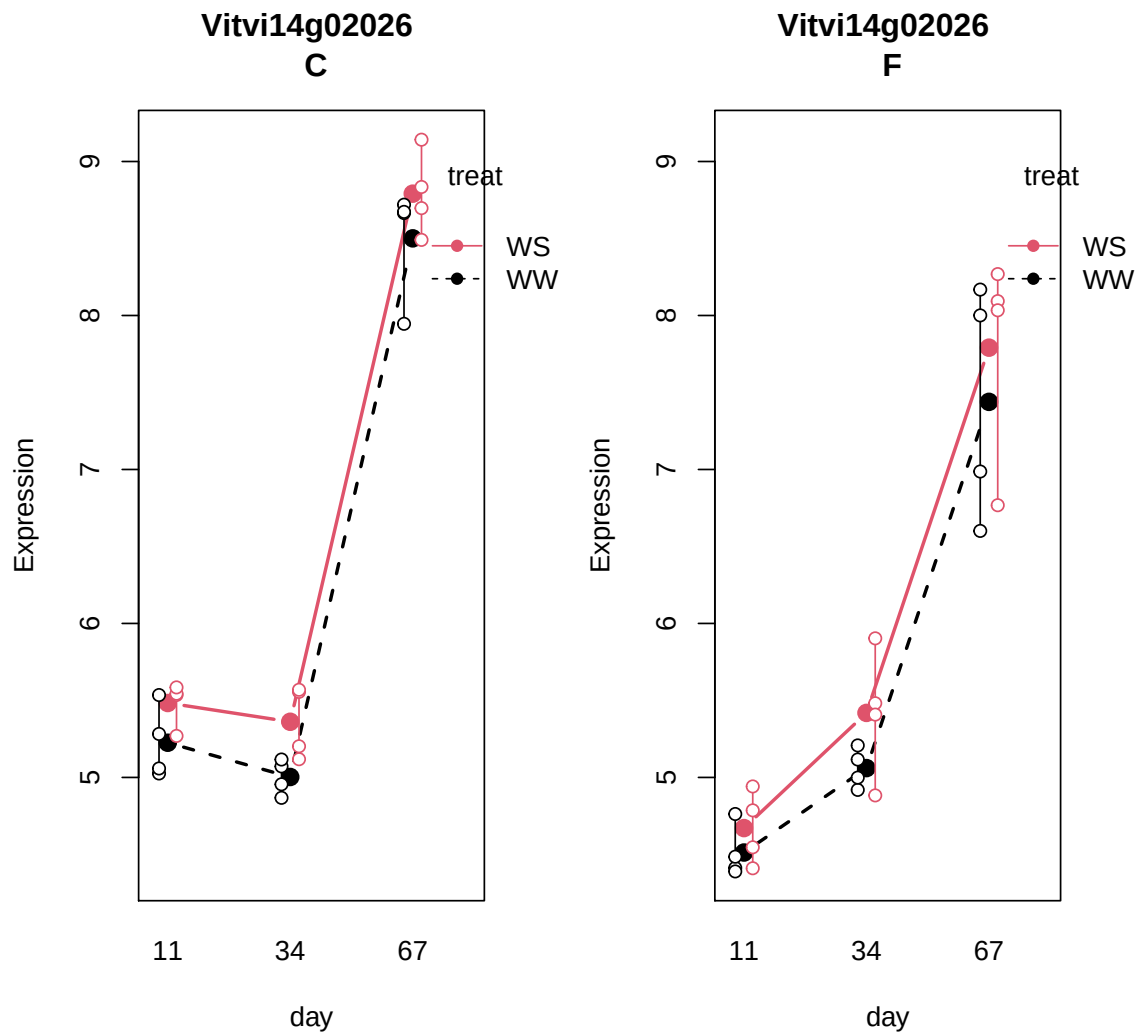


6.3.7 Vitvi14g02026

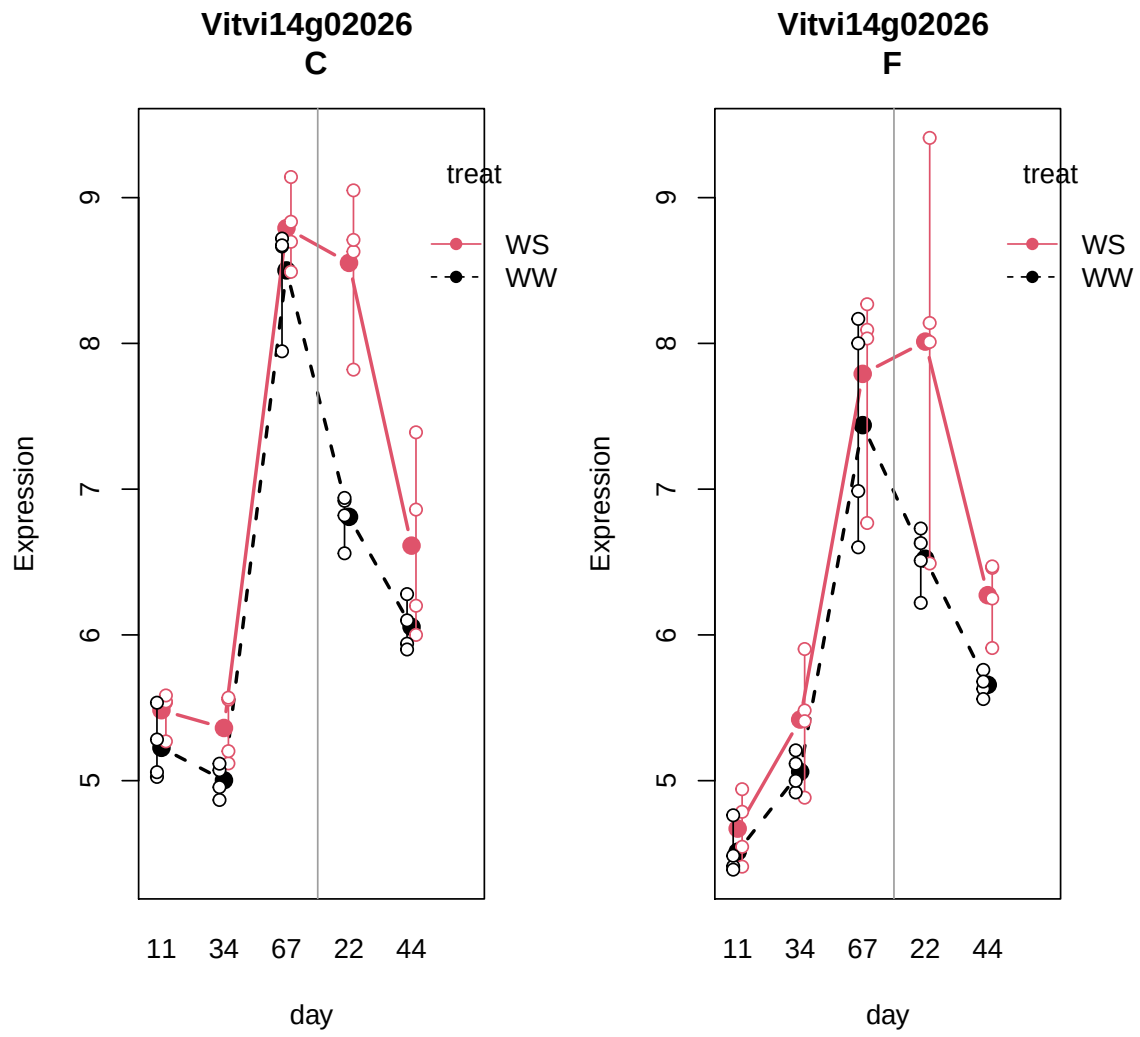
Coefficient day67 for Vitvi14g02026.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi14g02026 3.275455 6.104848 12.66007 2.422798e-15
      adj.P.Val      B
Vitvi14g02026 4.724183e-12 24.80778

> plot.interactions(varname, phdata=pd, data=exprs)
```



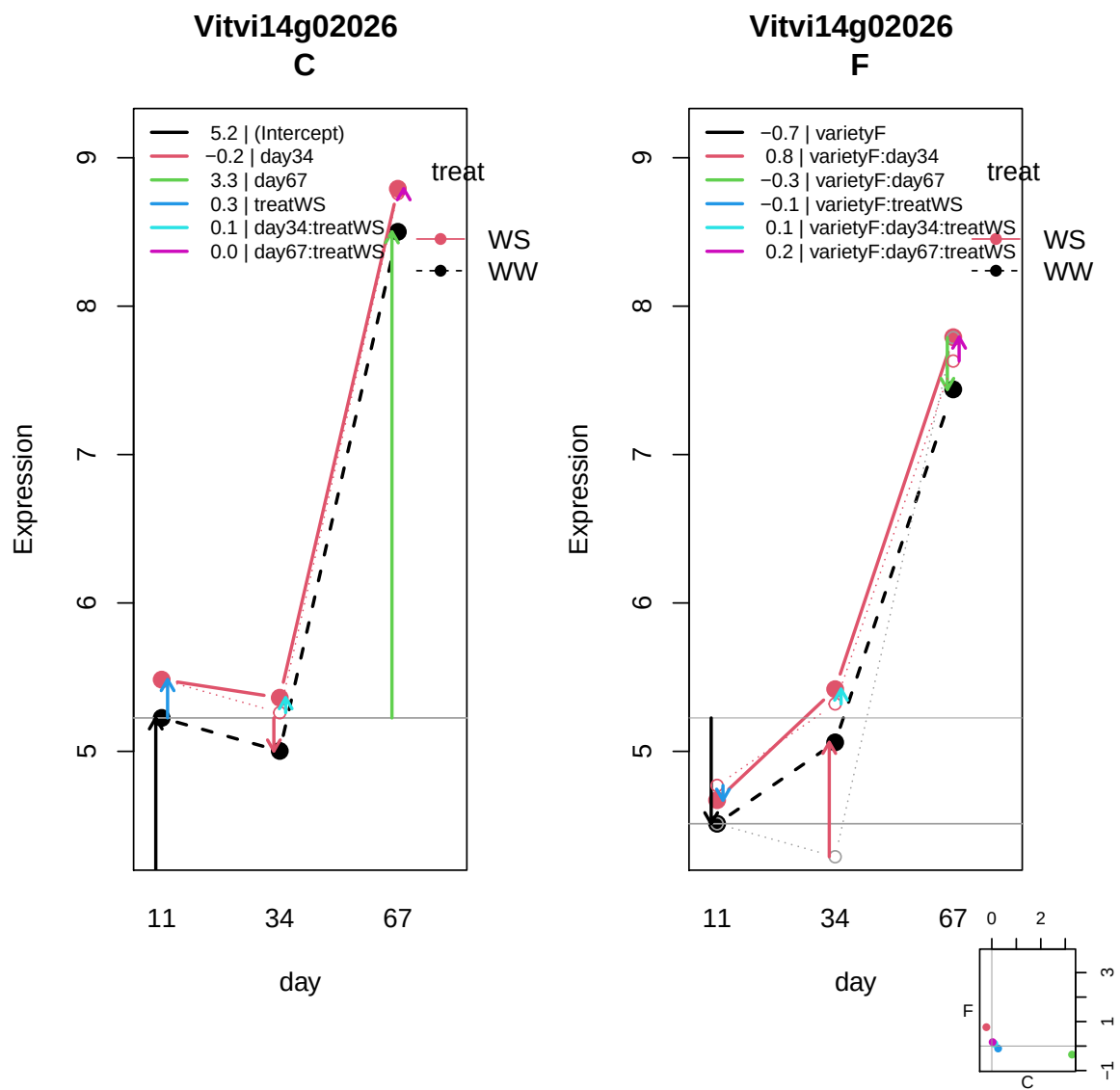
```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



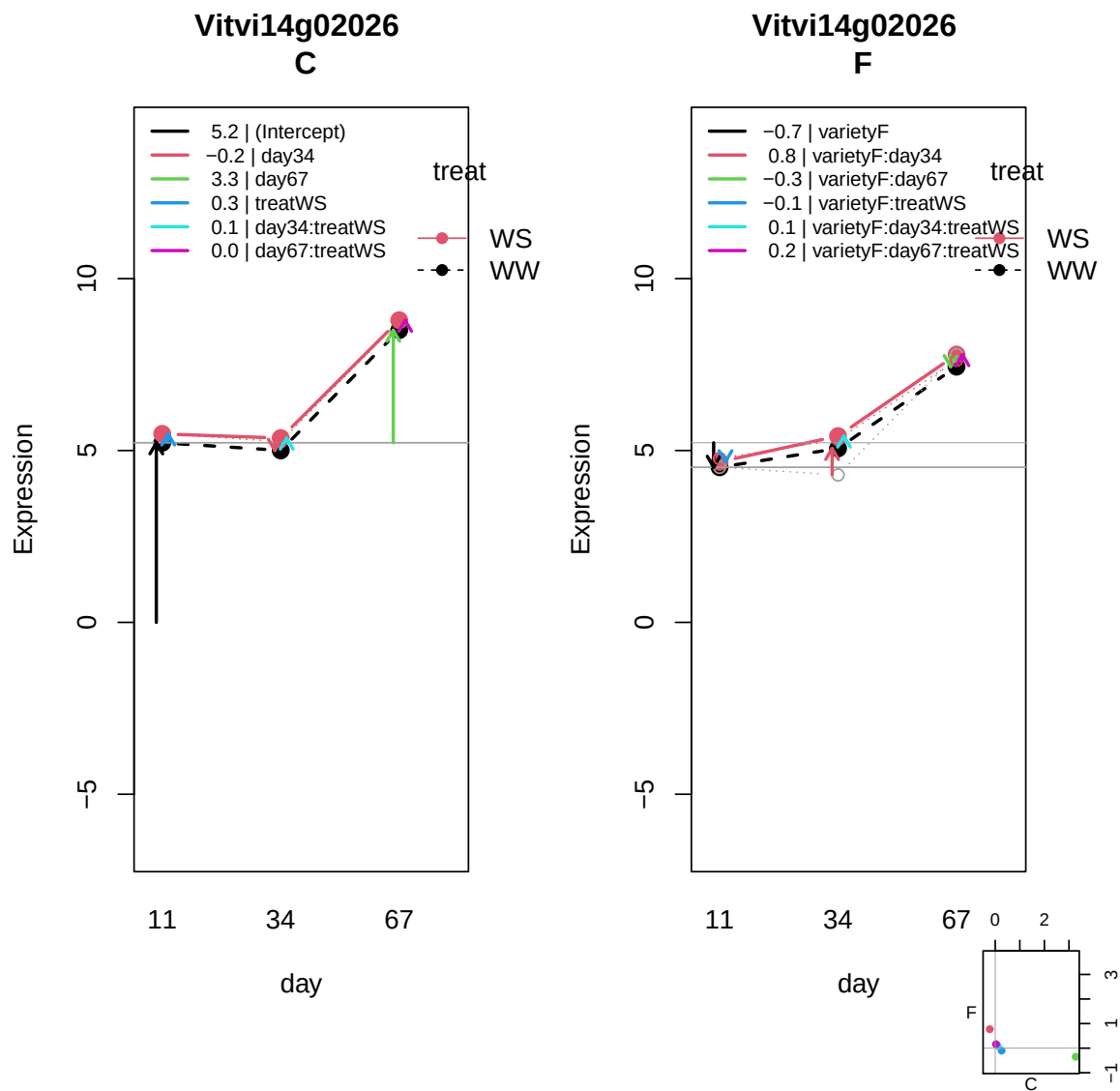
```

> fit1[varname,]$coefficients
              (Intercept)  varietyF      day34      day67
Vitvi14g02026      5.22537 -0.7129808 -0.2225624 3.275455
              treatWS varietyF:day34 varietyF:day67
Vitvi14g02026 0.2580128      0.7707792      -0.3487451
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi14g02026      -0.099325      0.1006722      0.03219897
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi14g02026      0.09917876      0.1609496
> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

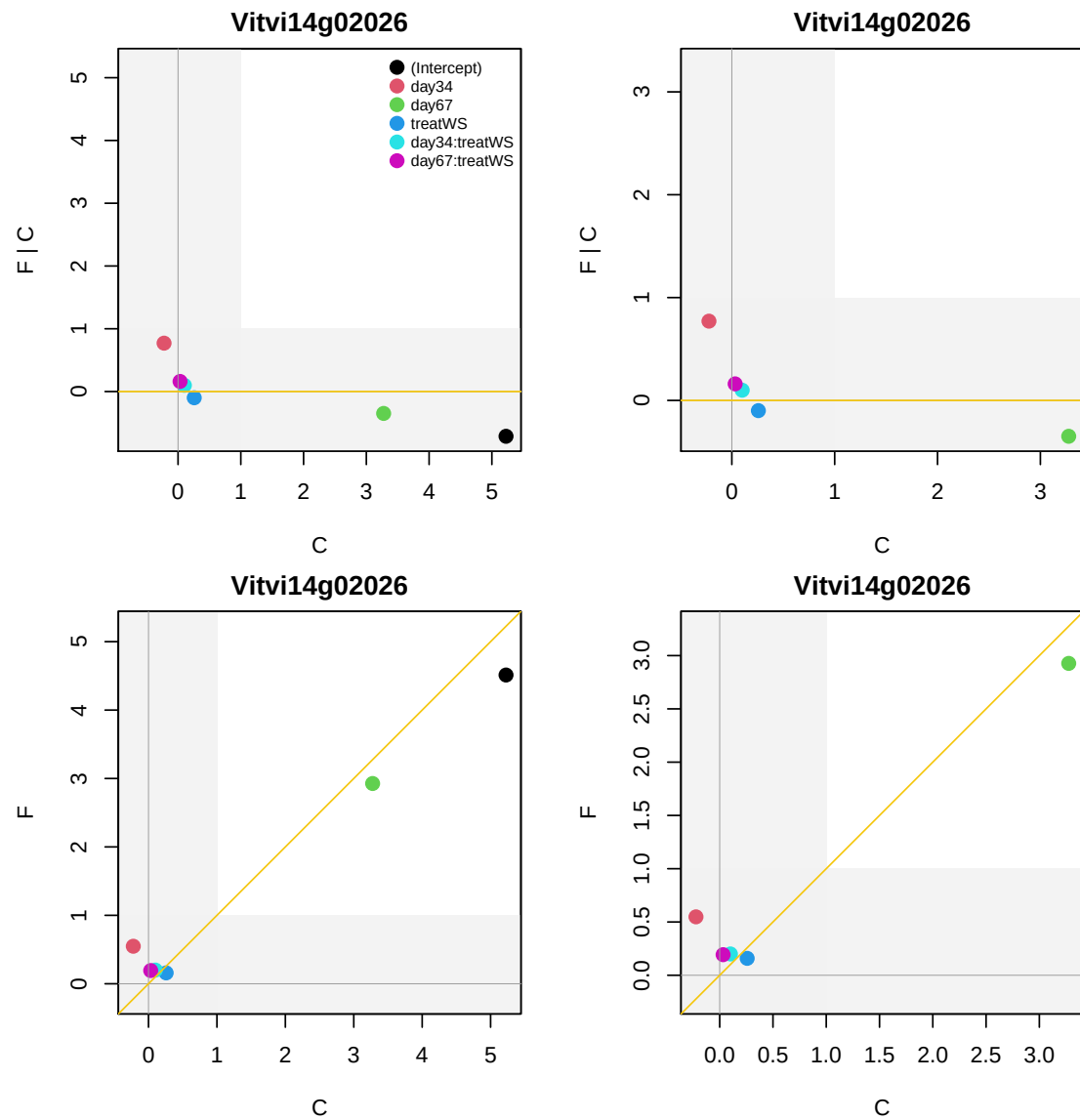



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

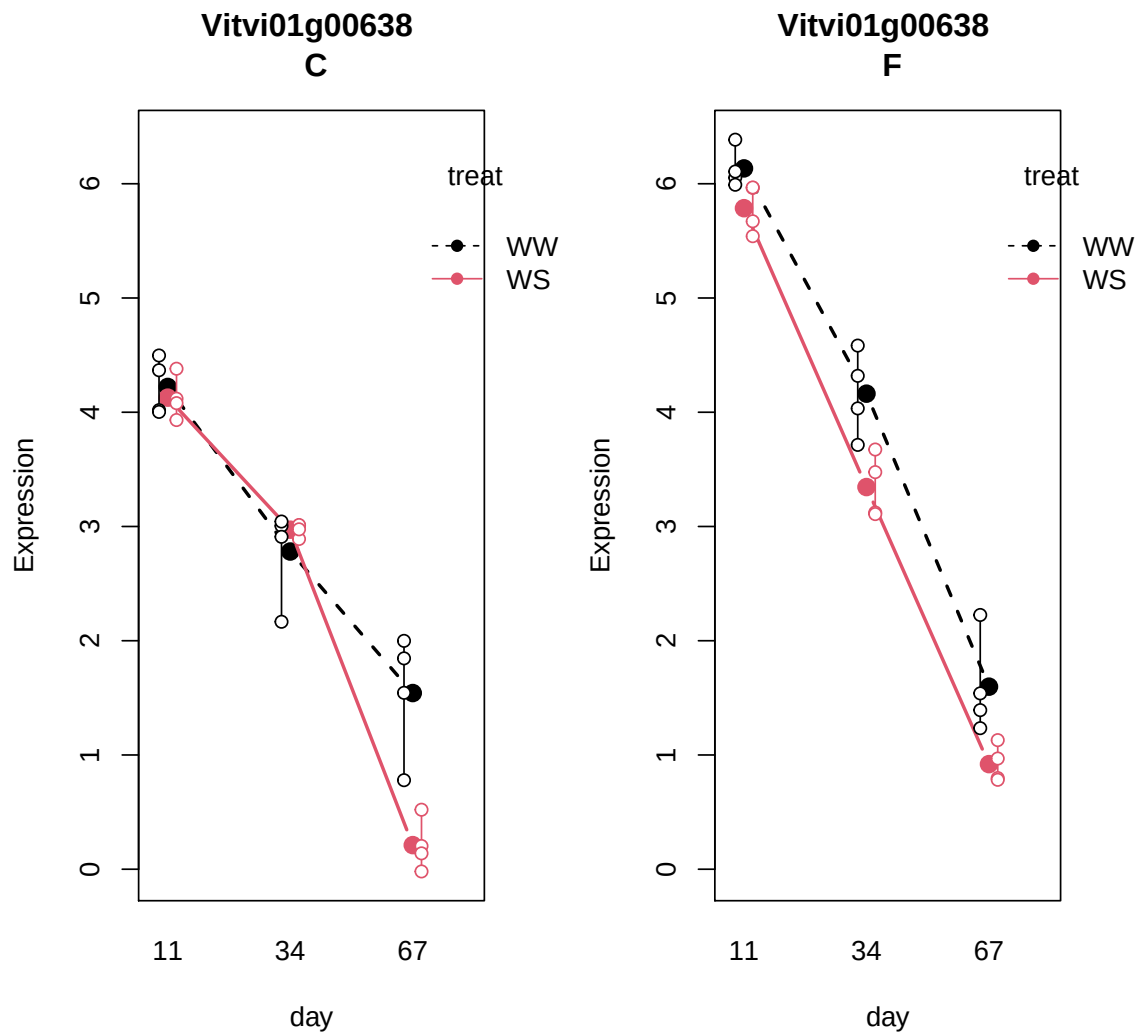


6.3.8 Vitvi01g00638

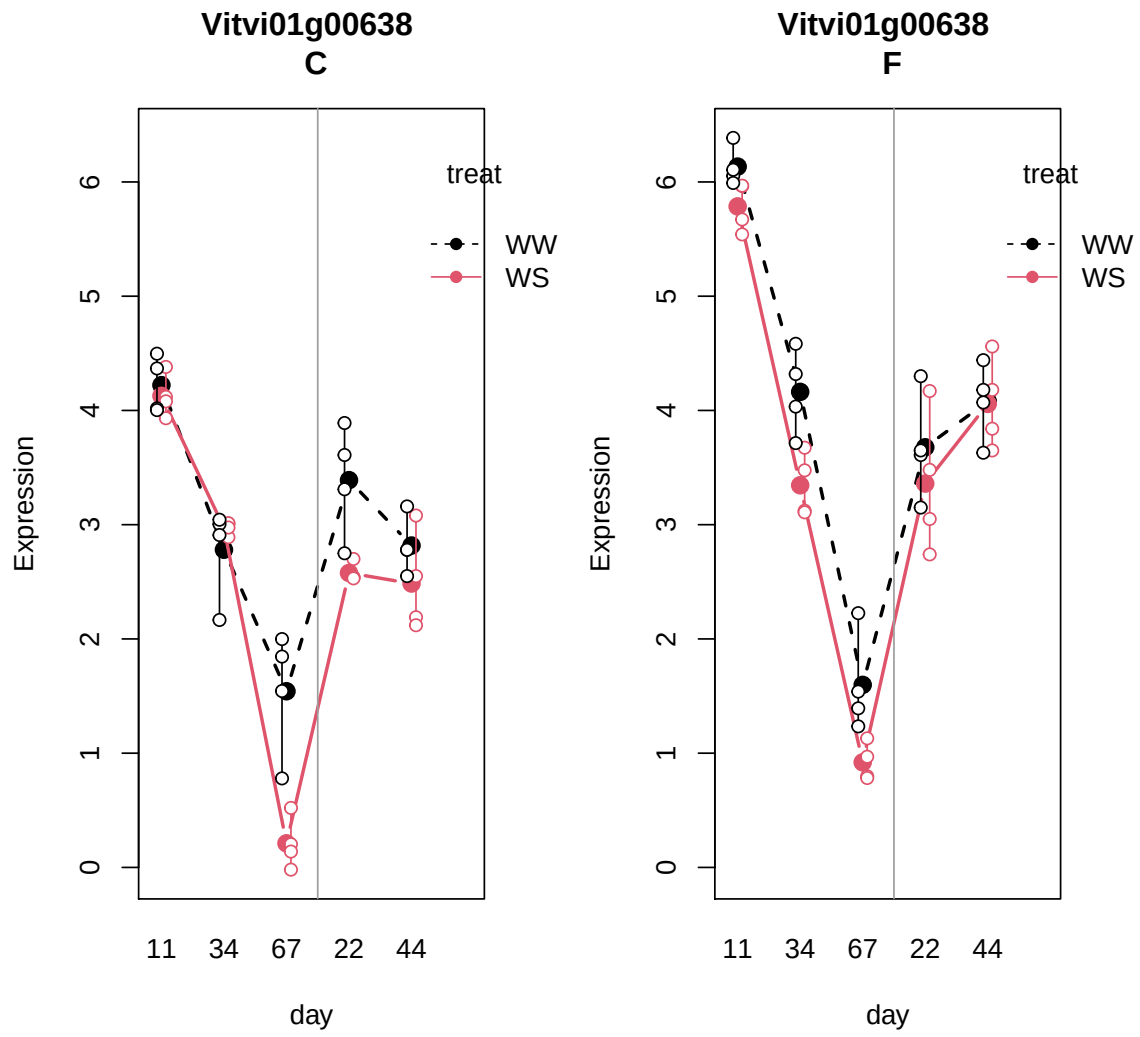
Coefficient day67 for Vitvi01g00638.

```
> tt[varname,]
               logFC  AveExpr          t      P.Value
Vitvi01g00638 -2.679497 3.150068 -12.63071 2.605798e-15
               adj.P.Val          B
Vitvi01g00638 4.724183e-12 24.73722

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

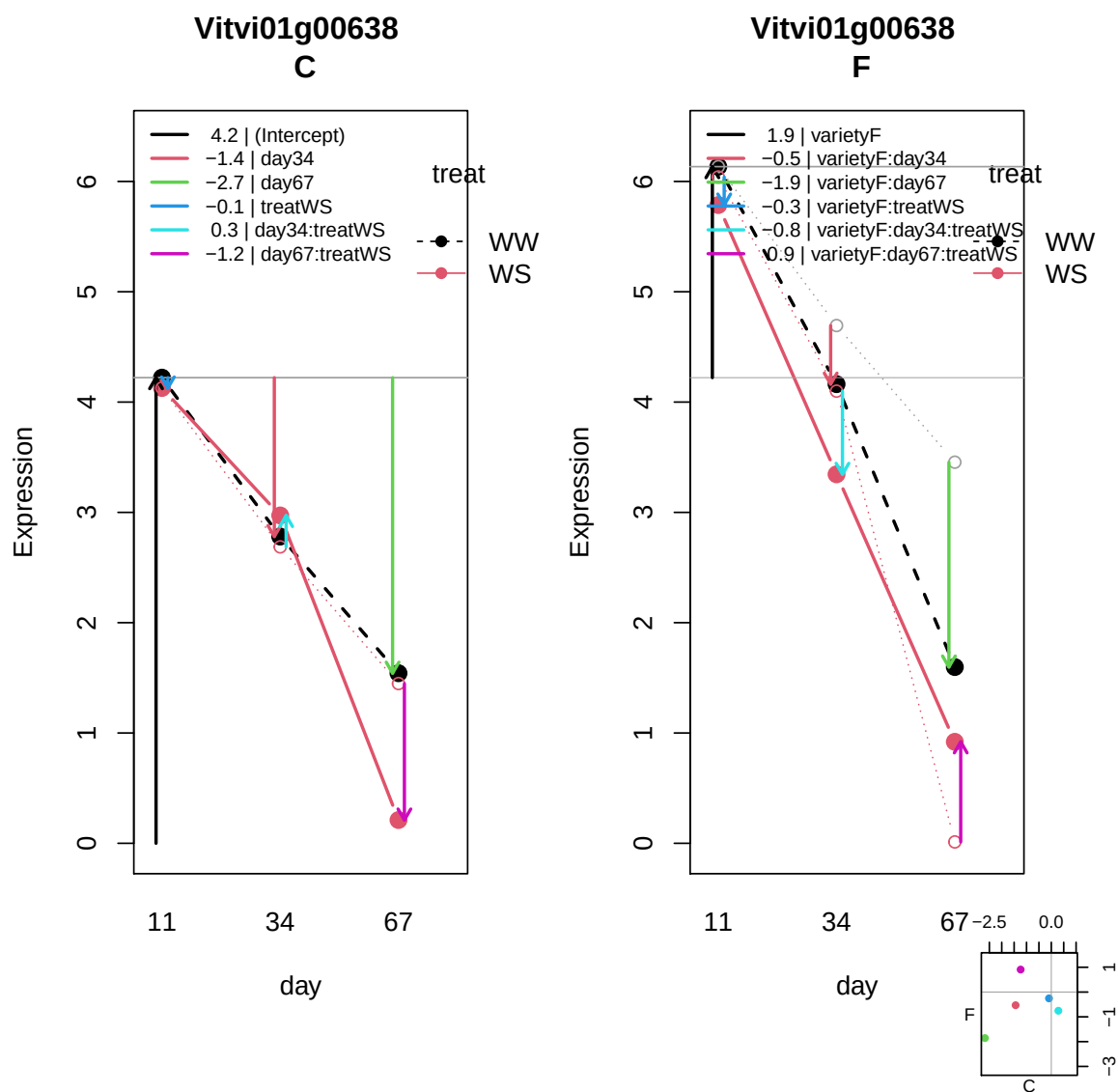
              (Intercept)  varietyF    day34    day67
Vitvi01g00638      4.221472  1.912933 -1.440526 -2.679497
              treatWS  varietyF:day34  varietyF:day67
Vitvi01g00638 -0.09376714    -0.5313502    -1.856975
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi01g00638      -0.2546268    0.2849177    -1.237339
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi01g00638      -0.7540133              0.9076456

```

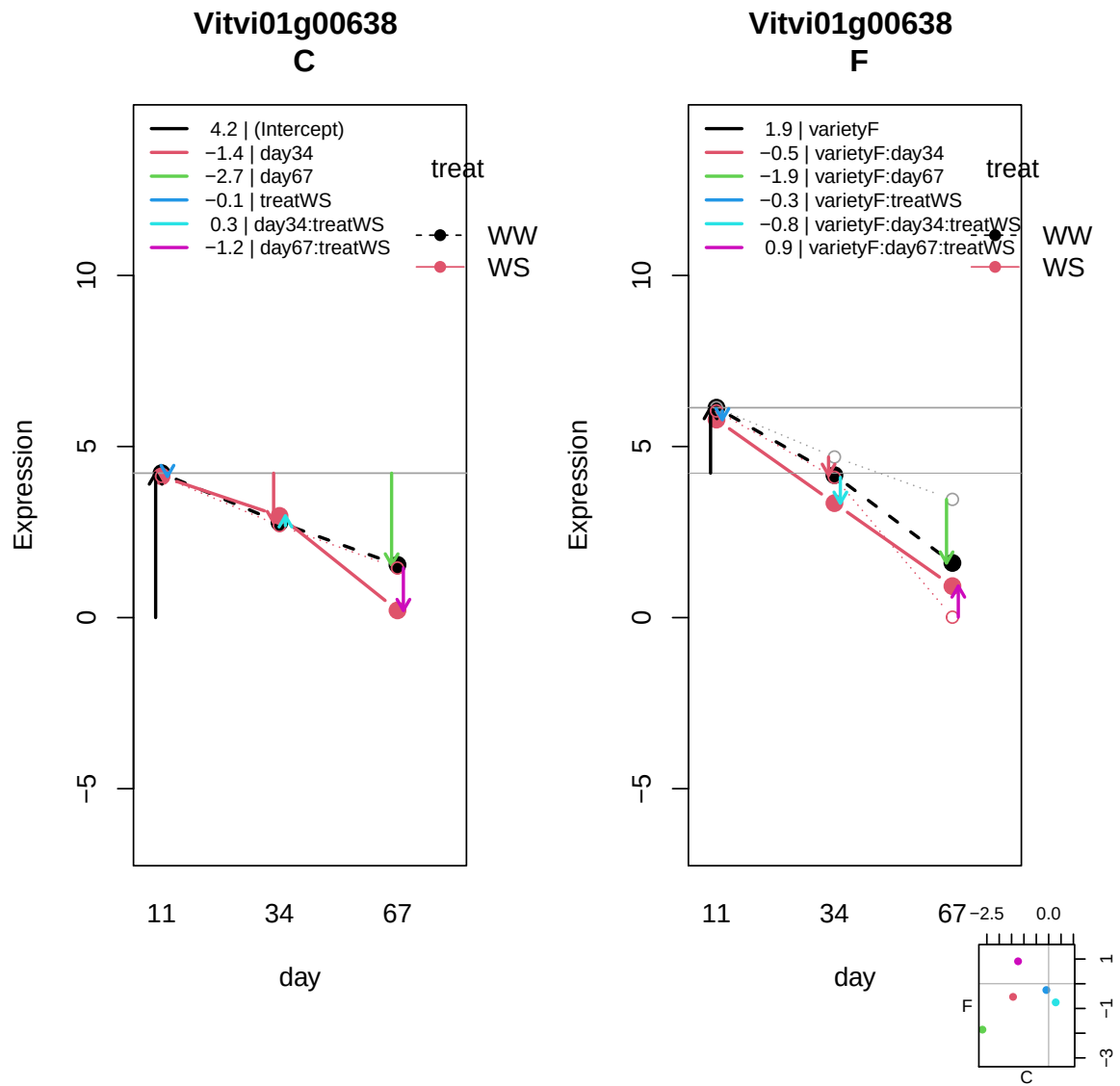
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

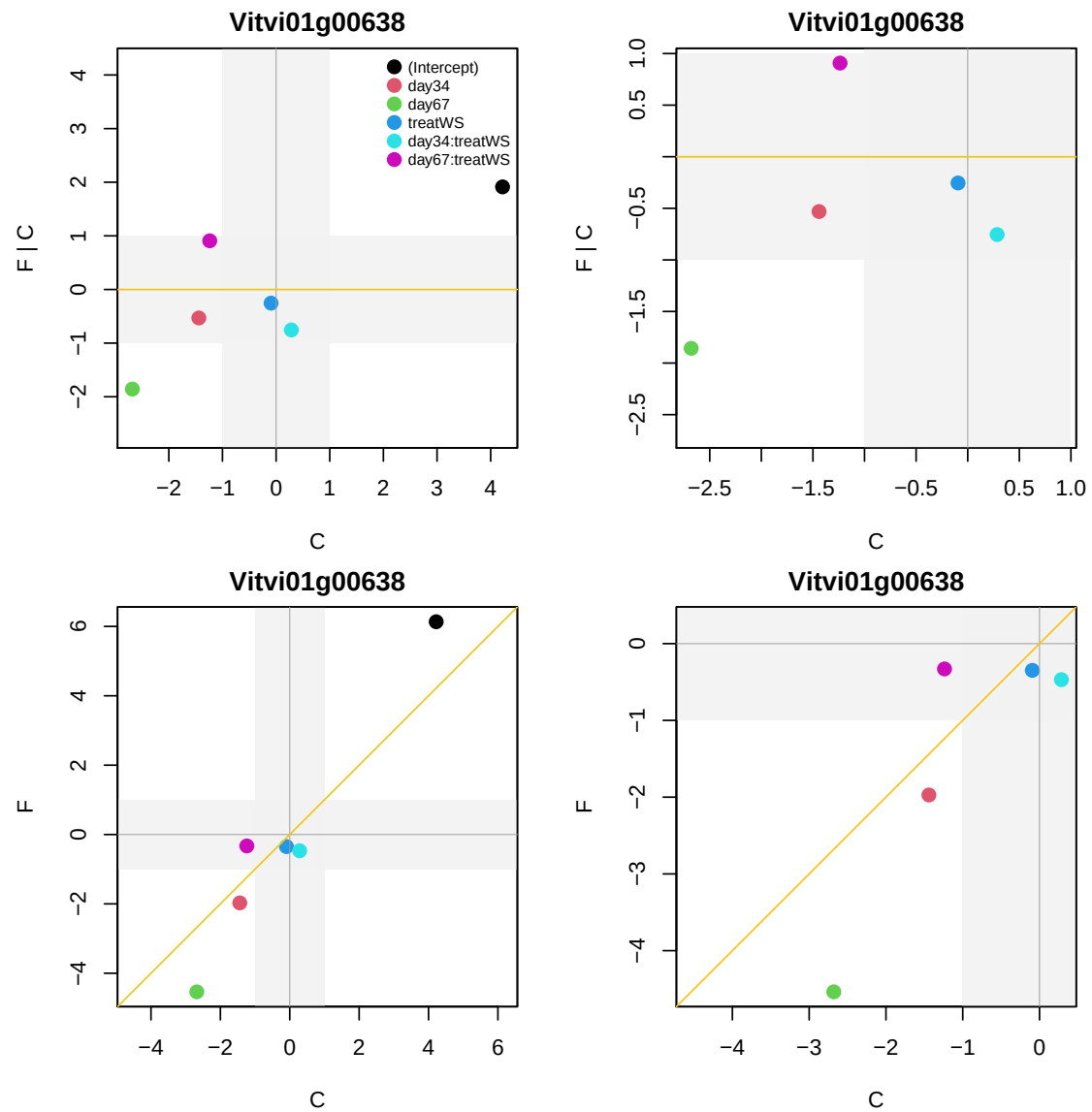


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

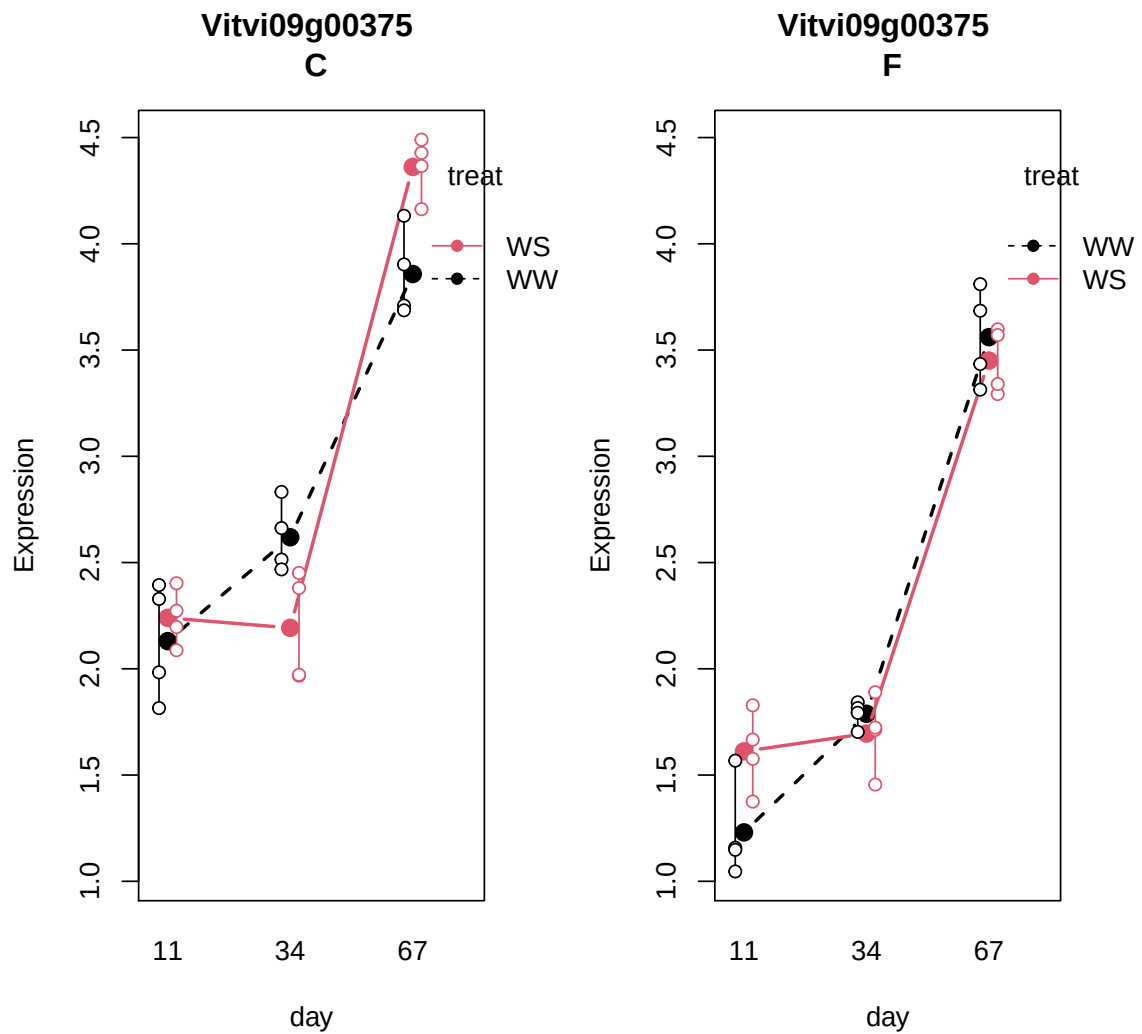


6.3.9 Vitvi09g00375

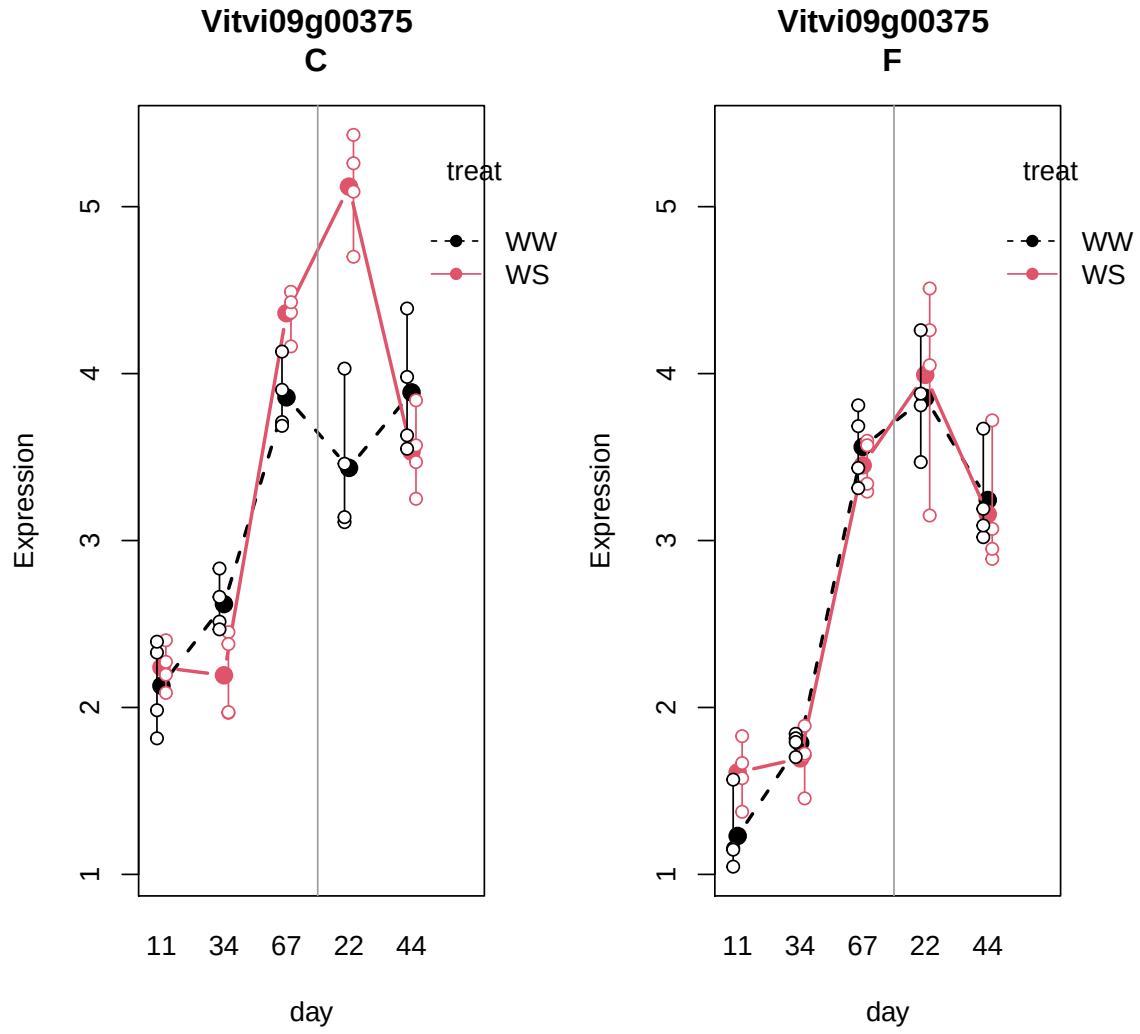
Coefficient day67 for Vitvi09g00375.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi09g00375 1.727592 2.561474 12.58619 2.910604e-15
      adj.P.Val      B
Vitvi09g00375 4.724183e-12 24.62999

> plot.interactions(varname, phdata=pd, data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

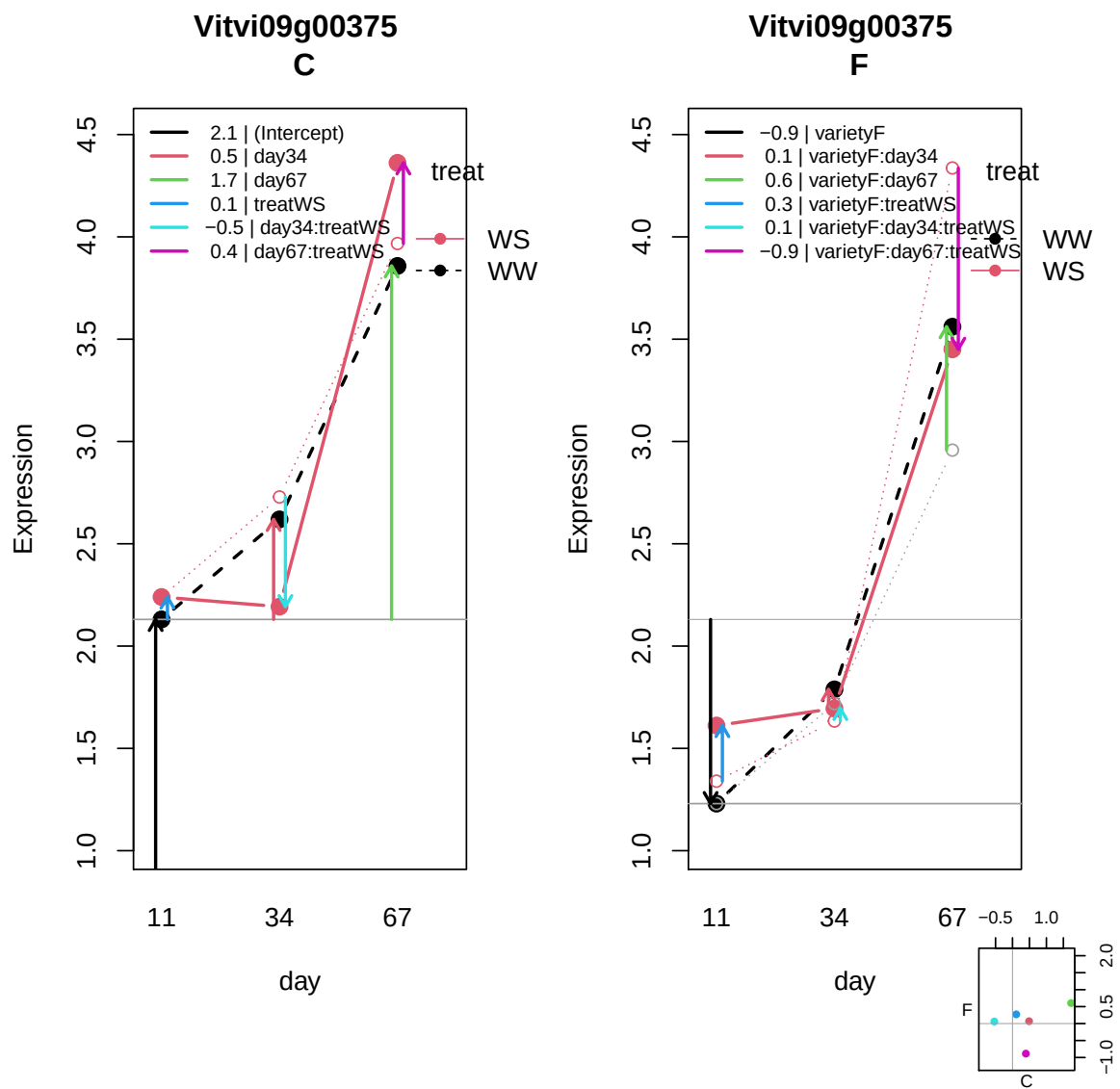
      (Intercept) varietyF      day34      day67
Vitvi09g00375    2.130241 -0.90019 0.4888542 1.727592
      treatWS varietyF:day34 varietyF:day67
Vitvi09g00375 0.1095824      0.06941871      0.6031974
      varietyF:treatWS day34:treatWS day67:treatWS
Vitvi09g00375      0.2719117      -0.536022      0.3943073
      varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi09g00375      0.0614299      -0.8863068

```

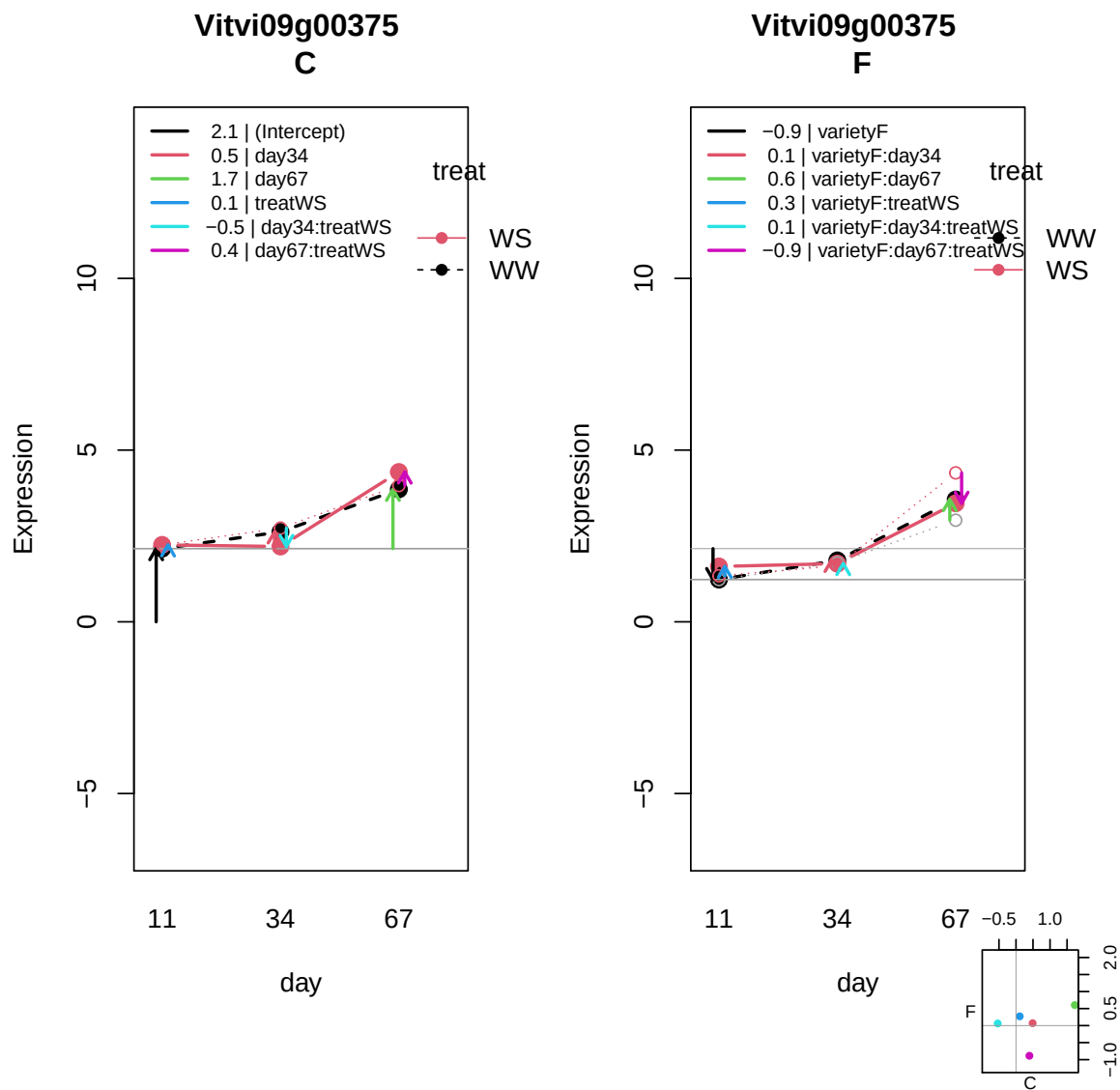
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

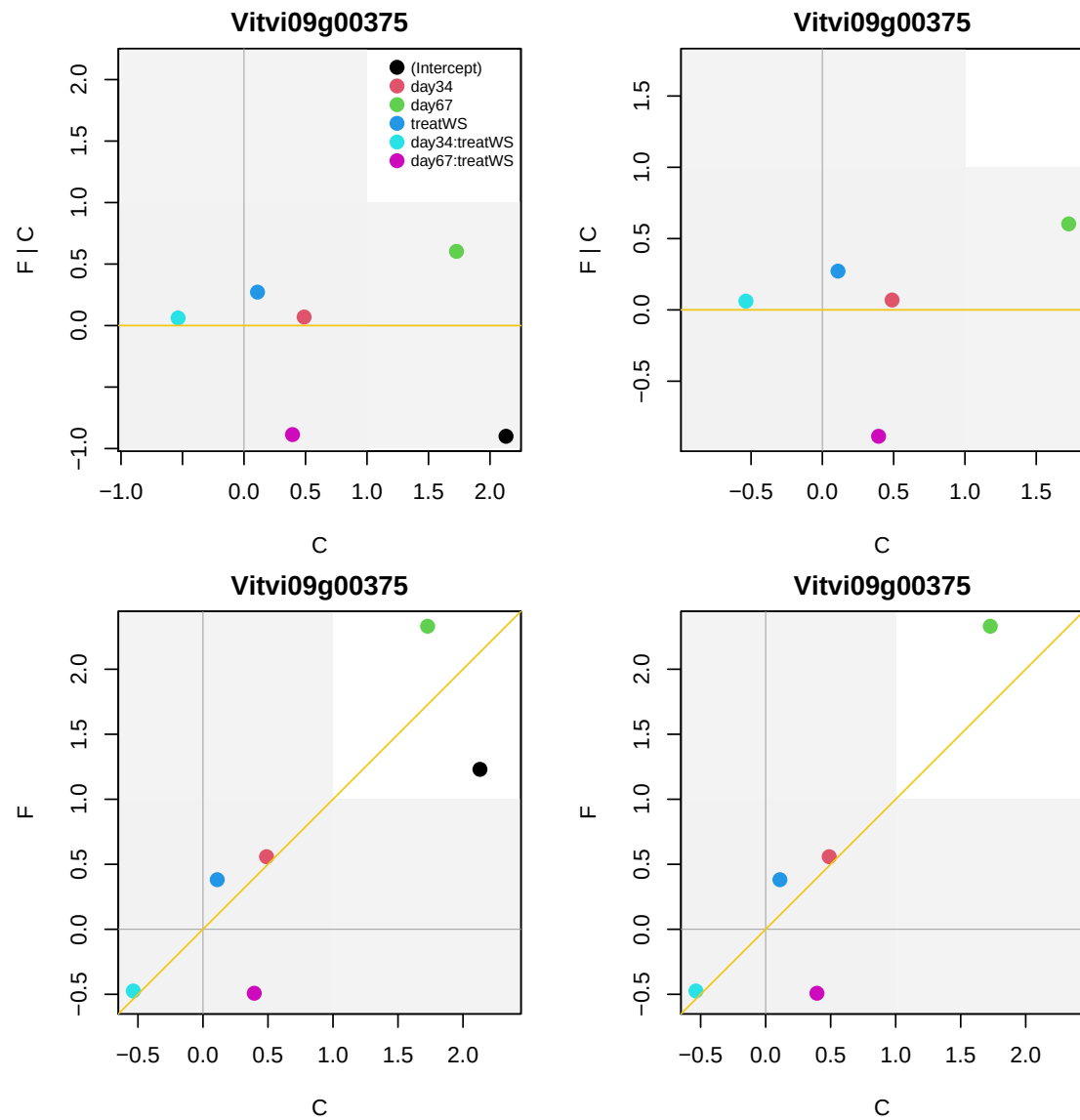


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

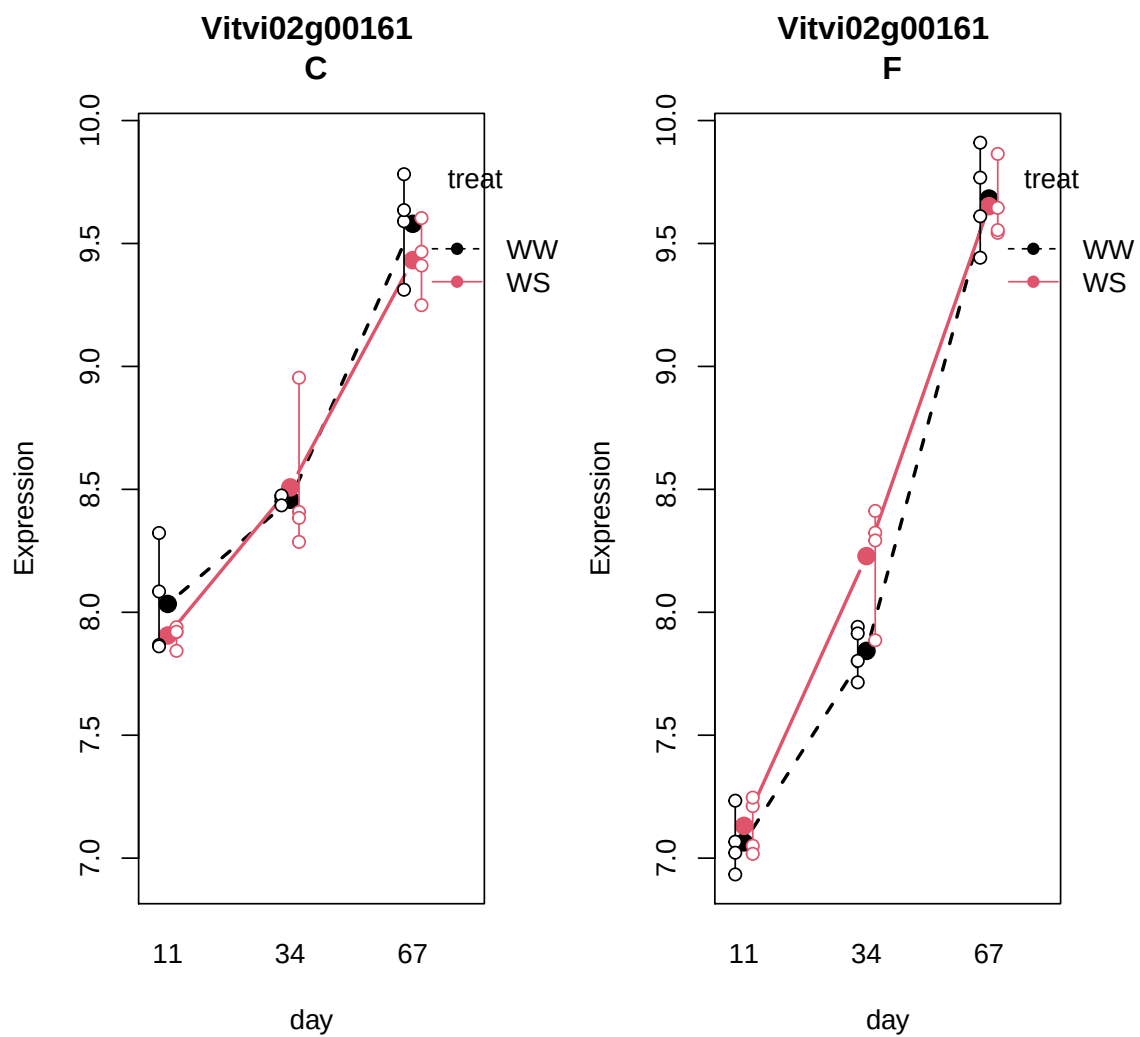
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



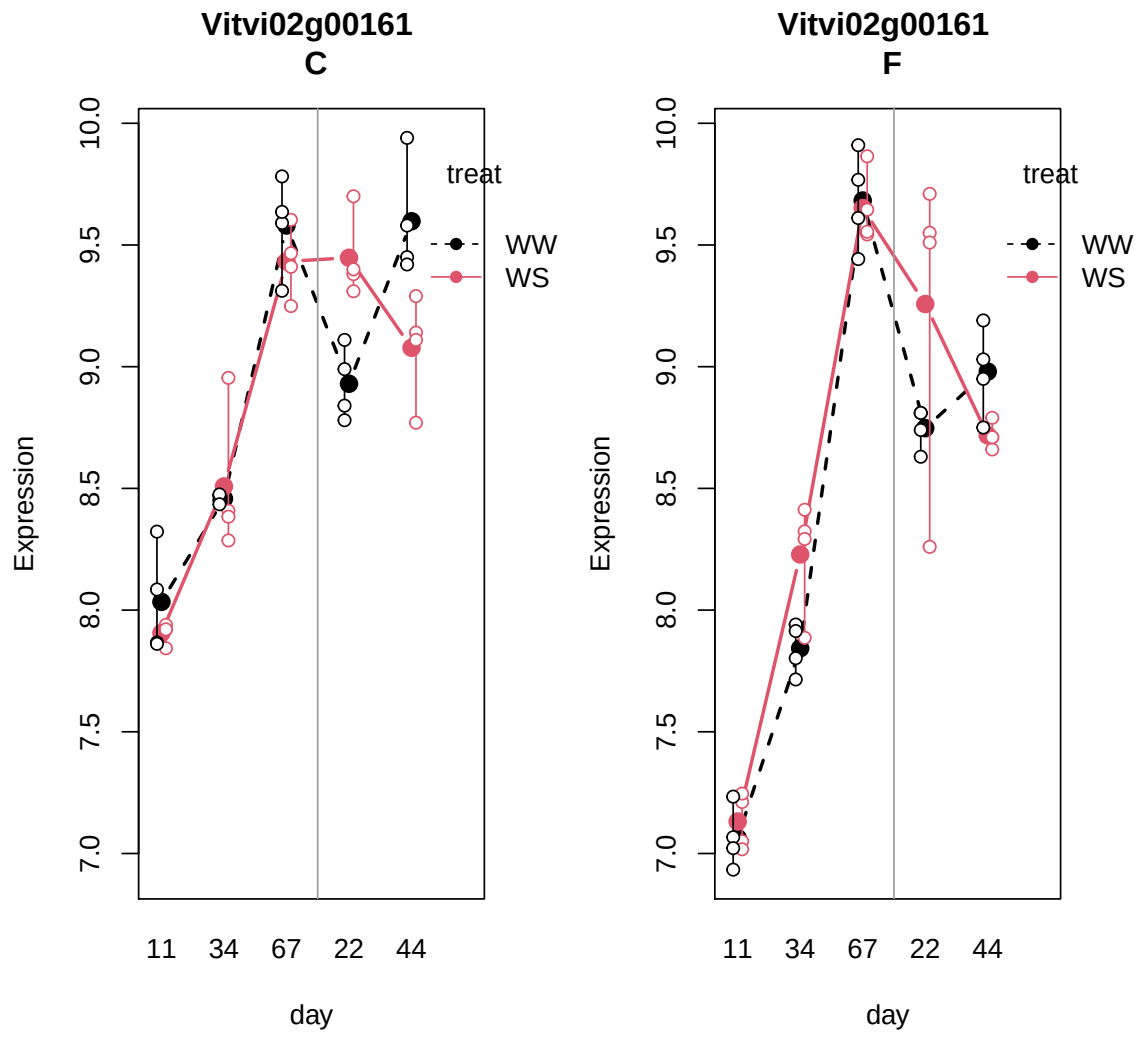
6.3.10 Vitvi02g00161

Coefficient day67 for Vitvi02g00161.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi02g00161 1.546092 8.459917 12.52868 3.358915e-15
      adj.P.Val      B
Vitvi02g00161 4.724183e-12 24.4911
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

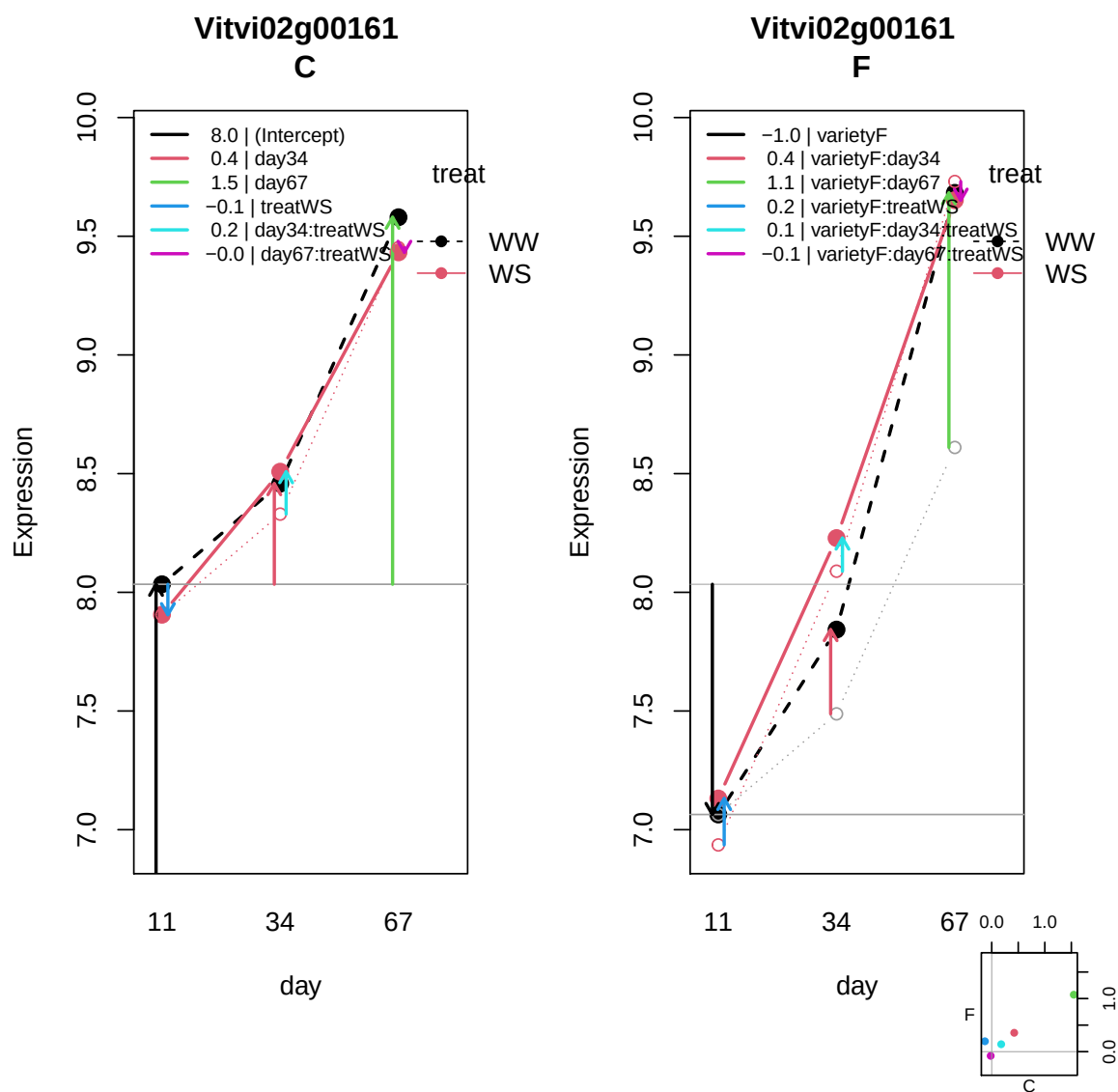
              (Intercept)    varietyF    day34    day67
Vitvi02g00161      8.033875 -0.9697892  0.4238433  1.546092
              treatWS  varietyF:day34  varietyF:day67
Vitvi02g00161  -0.128231      0.3550849      1.072519
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi02g00161      0.1955857      0.1785447     -0.01949251
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi02g00161      0.1395843      -0.07876839

```

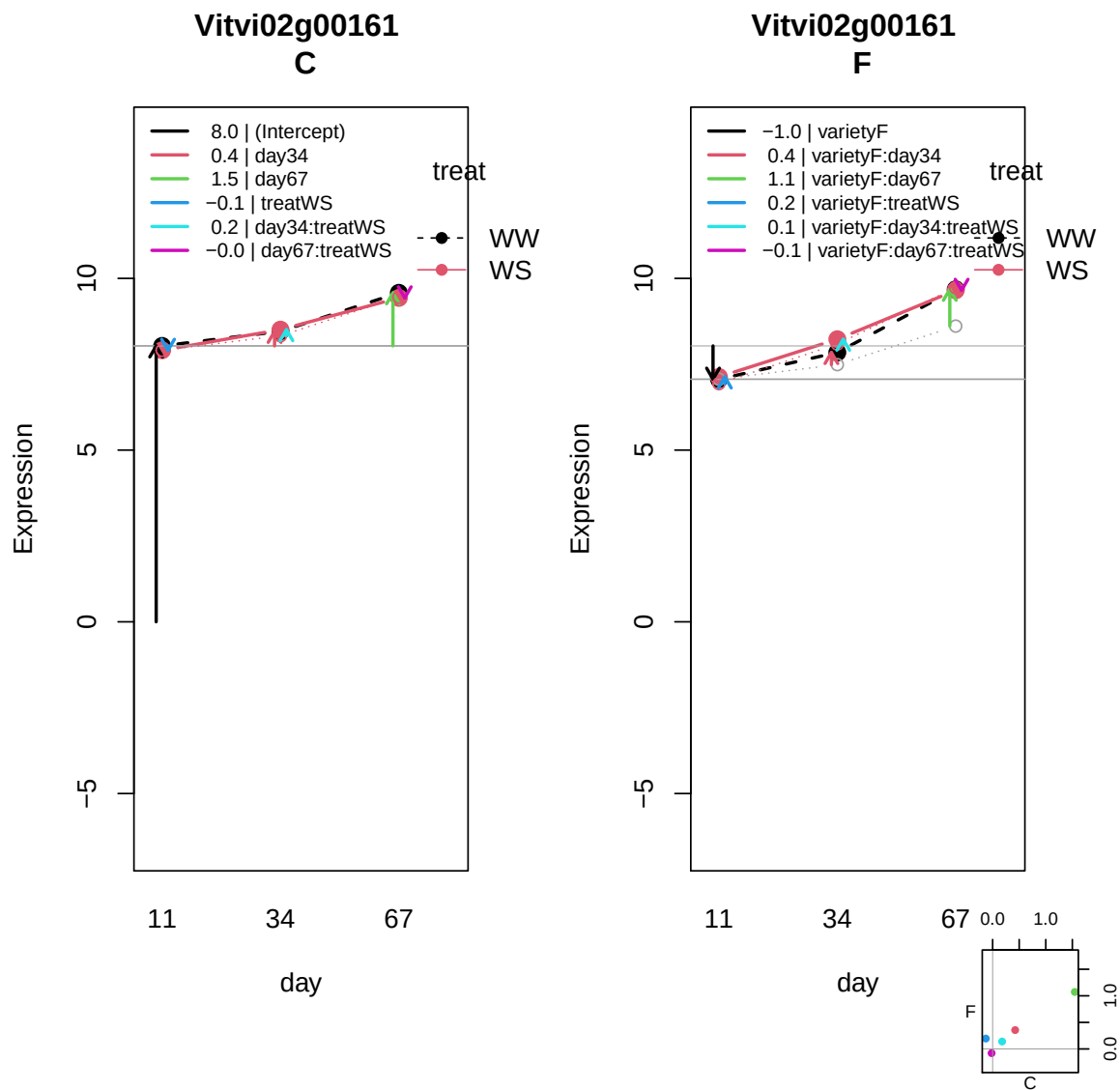
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

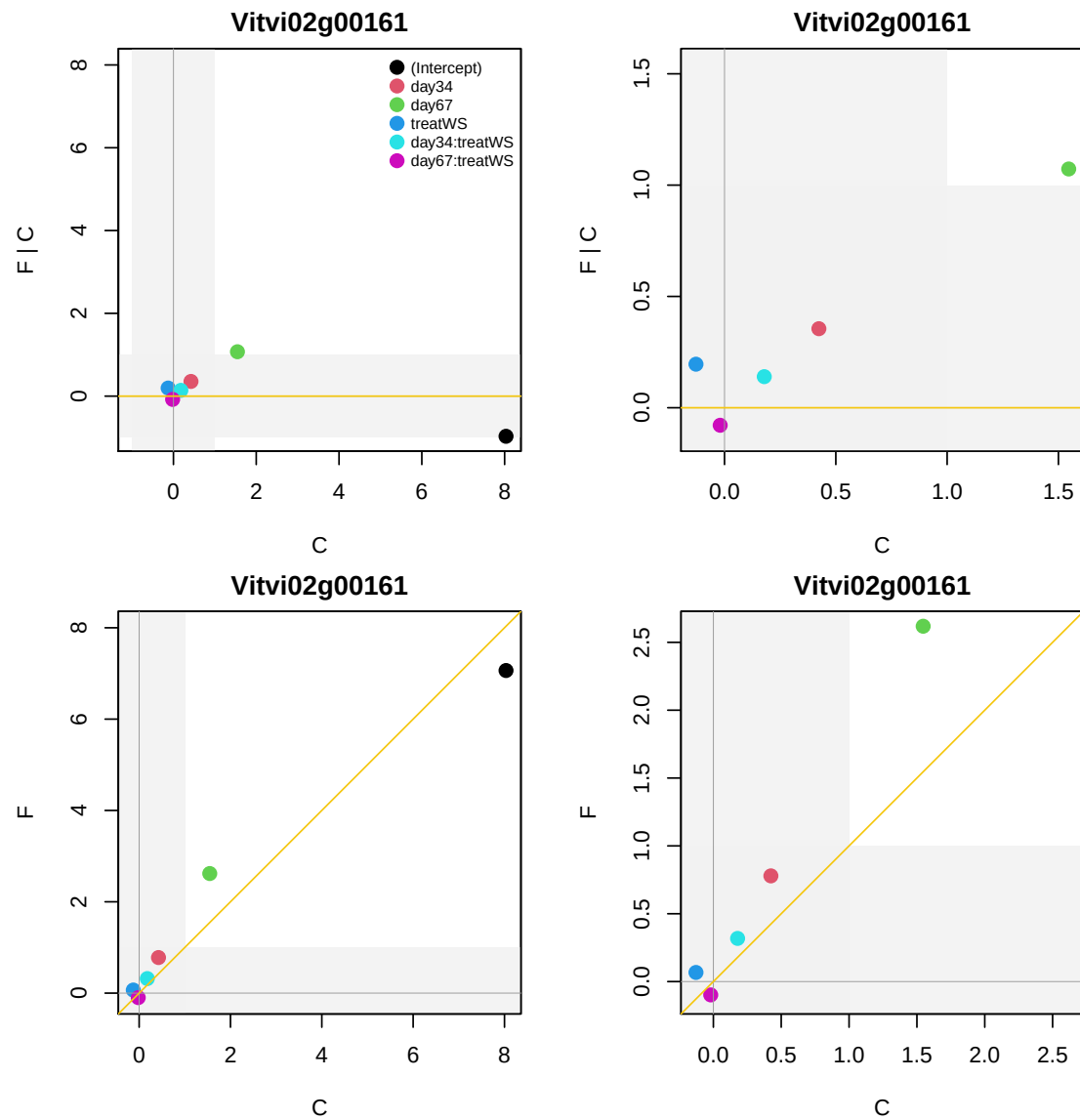


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



6.4 treatWS

6.4.1 NA

Coefficient treatWS for NA.

```
> tt[varname,]  
      logFC AveExpr  t P.Value adj.P.Val  B  
NA      NA      NA NA      NA      NA NA  
  
> plot.interactions(varname, phdata=pd, data=exprs)  
Warning in min(x): no non-missing arguments to min; returning Inf  
Warning in max(x): no non-missing arguments to max; returning -Inf  
Error in plot.window(...): need finite 'ylim' values
```

```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
Warning in min(x): no non-missing arguments to min; returning Inf
Warning in max(x): no non-missing arguments to max; returning -Inf
Error in plot.window(...): need finite 'ylim' values
```

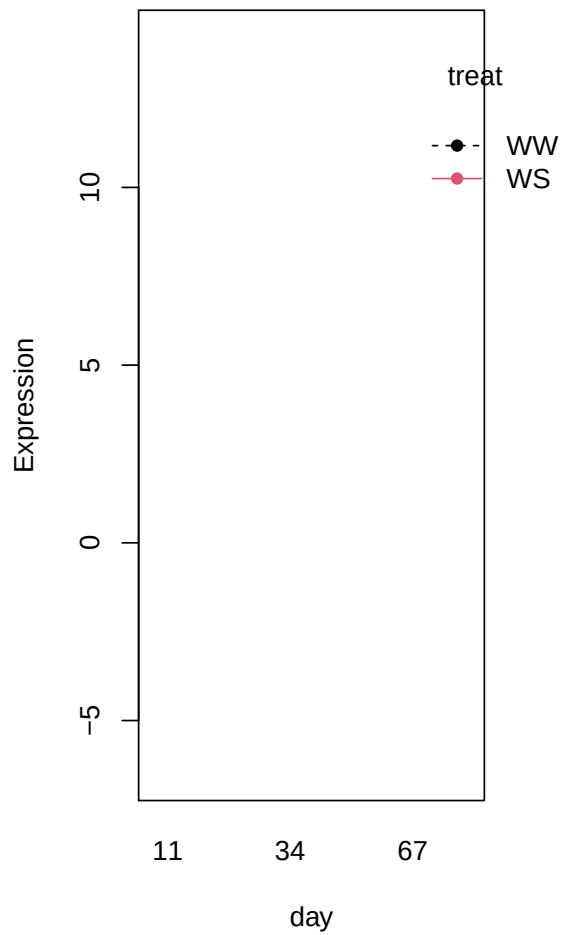
```

> fit1[varname,]$coefficients
Error in subsetListOfArrays(object, i, j, IJ = IJ, IX = IX, I = I, JX = JX): S
> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)
Warning in min(x): no non-missing arguments to min; returning Inf
Warning in max(x): no non-missing arguments to max; returning -Inf
Error in plot.window(...): need finite 'ylim' values

```

```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```

```
Error in subsetListOfArrays(object, i, j, IJ = IJ, IX = IX, I = I, JX = JX): S
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
Error in subsetListOfArrays(object, i, j, IJ = IJ, IX = IX, I = I, JX = JX): S
> plot.coefficients(2:6)
Error in subsetListOfArrays(object, i, j, IJ = IJ, IX = IX, I = I, JX = JX): S
> plot.coefficients(1:6, add=TRUE)
Error in subsetListOfArrays(object, i, j, IJ = IJ, IX = IX, I = I, JX = JX): S
> plot.coefficients(2:6, add=TRUE)
Error in subsetListOfArrays(object, i, j, IJ = IJ, IX = IX, I = I, JX = JX): S
```

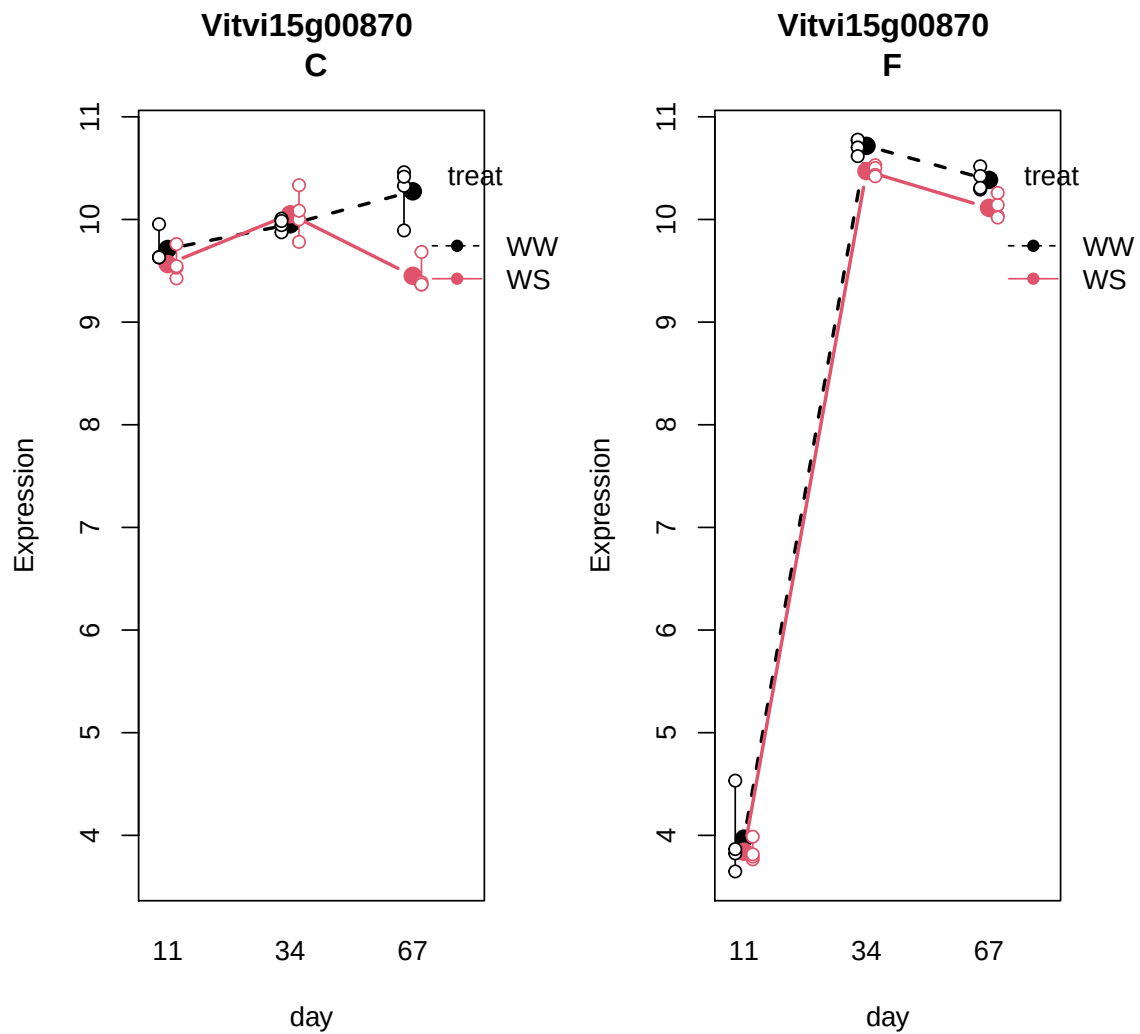
6.5 varietyF:day34

6.5.1 Vitvi15g00870

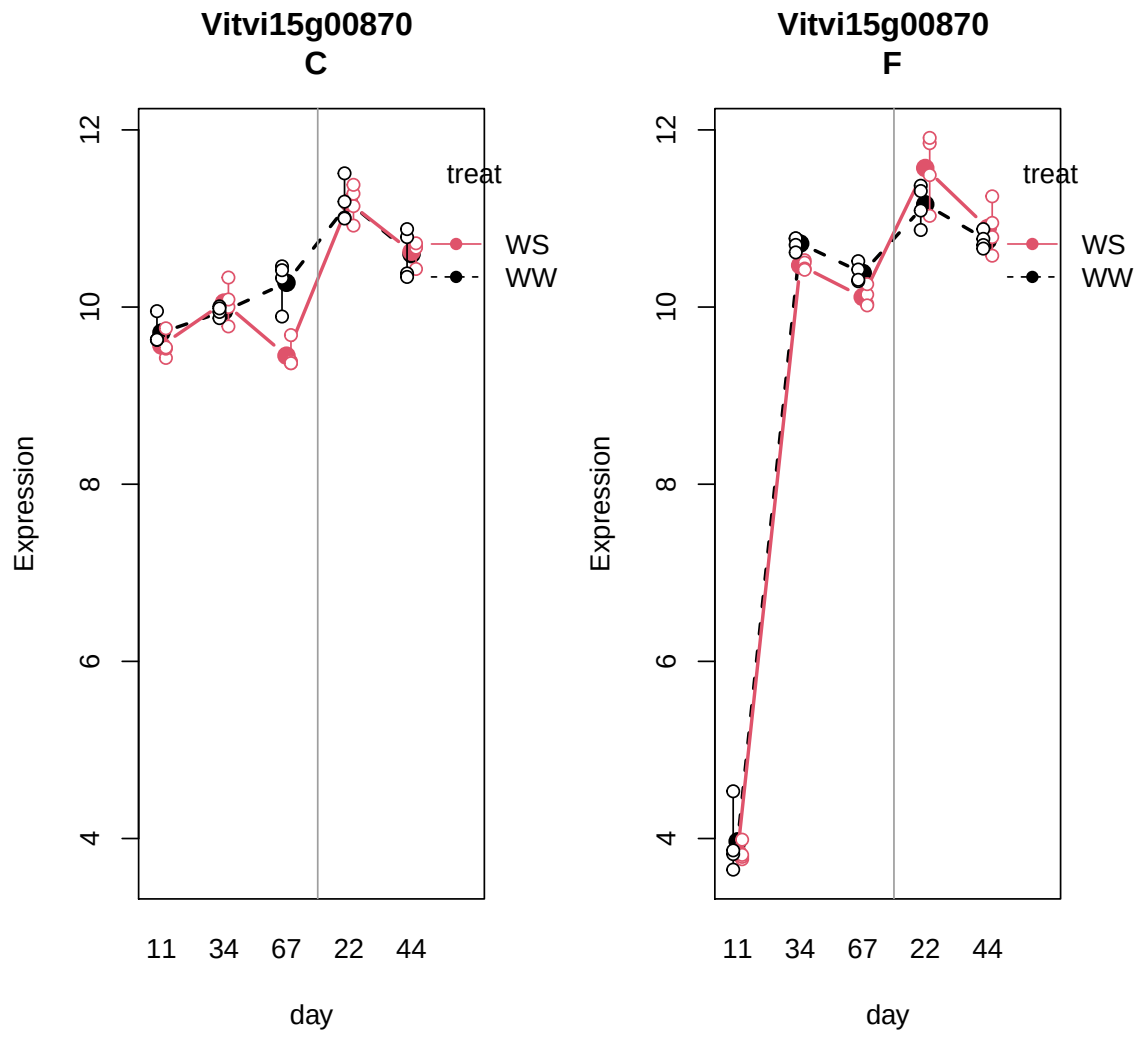
Coefficient varietyF:day34 for Vitvi15g00870.

```
> tt[varname,]
      logFC  AveExpr      t    P.Value
Vitvi15g00870 6.50791 9.041797 36.06882 2.035548e-31
      adj.P.Val      B
Vitvi15g00870 3.102582e-27 60.16984

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

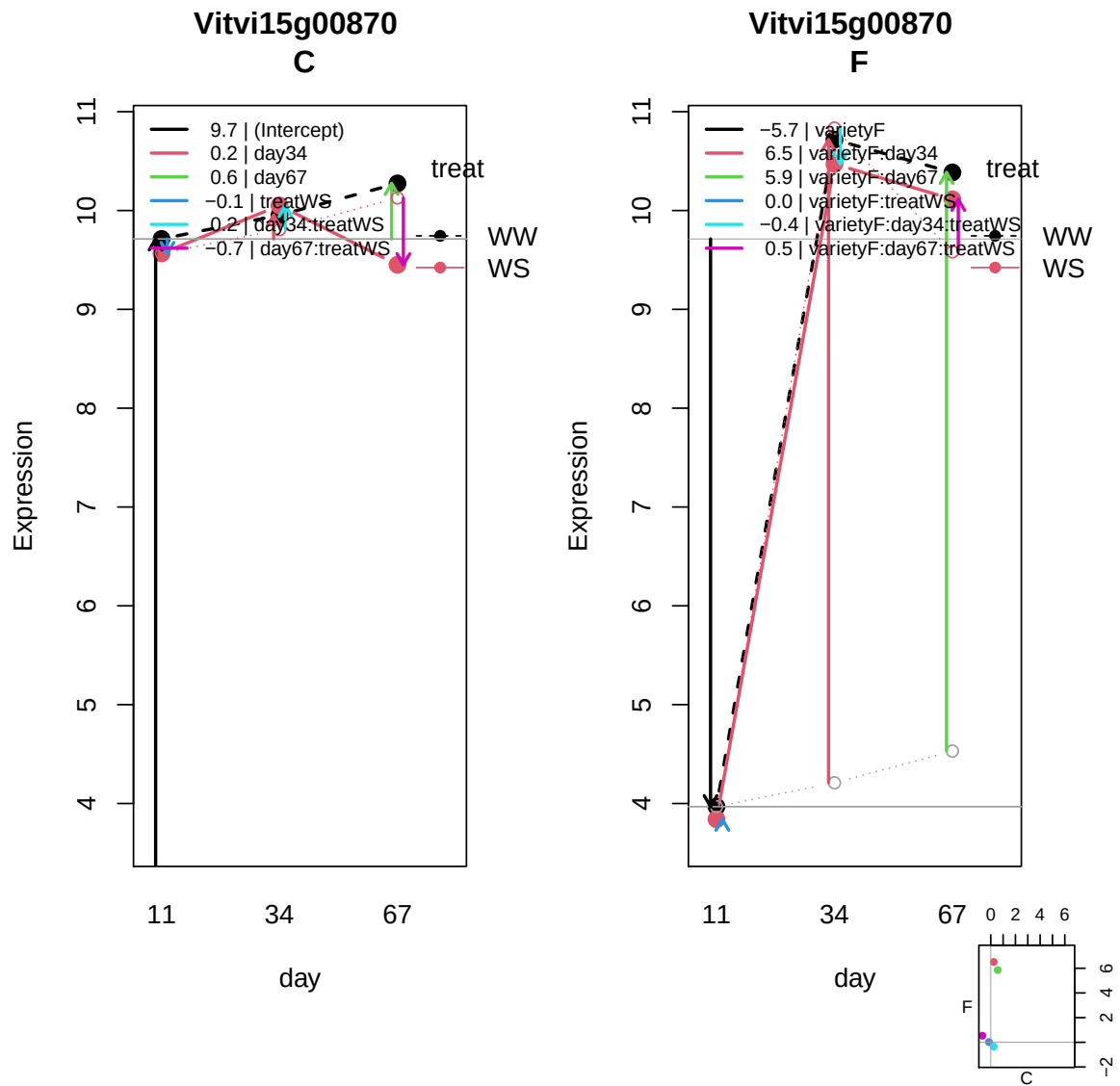
              (Intercept)  varietyF    day34    day67
Vitvi15g00870    9.712176 -5.744264 0.2411027 0.5620365
              treatWS varietyF:day34 varietyF:day67
Vitvi15g00870 -0.1468785    6.50791    5.855476
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi15g00870    0.01930059    0.2438981   -0.6761894
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi15g00870          -0.3619446          0.5316046

```

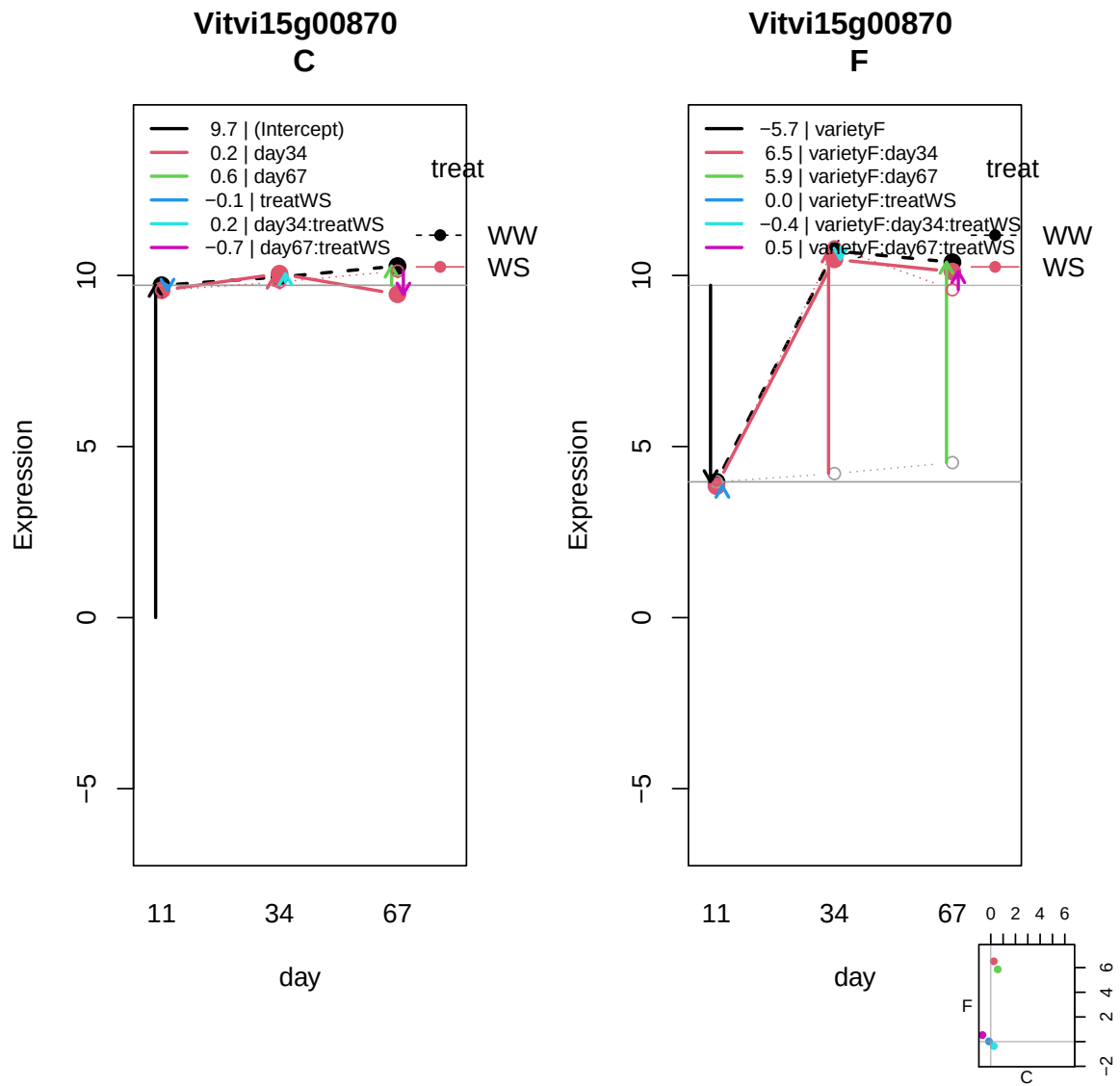
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

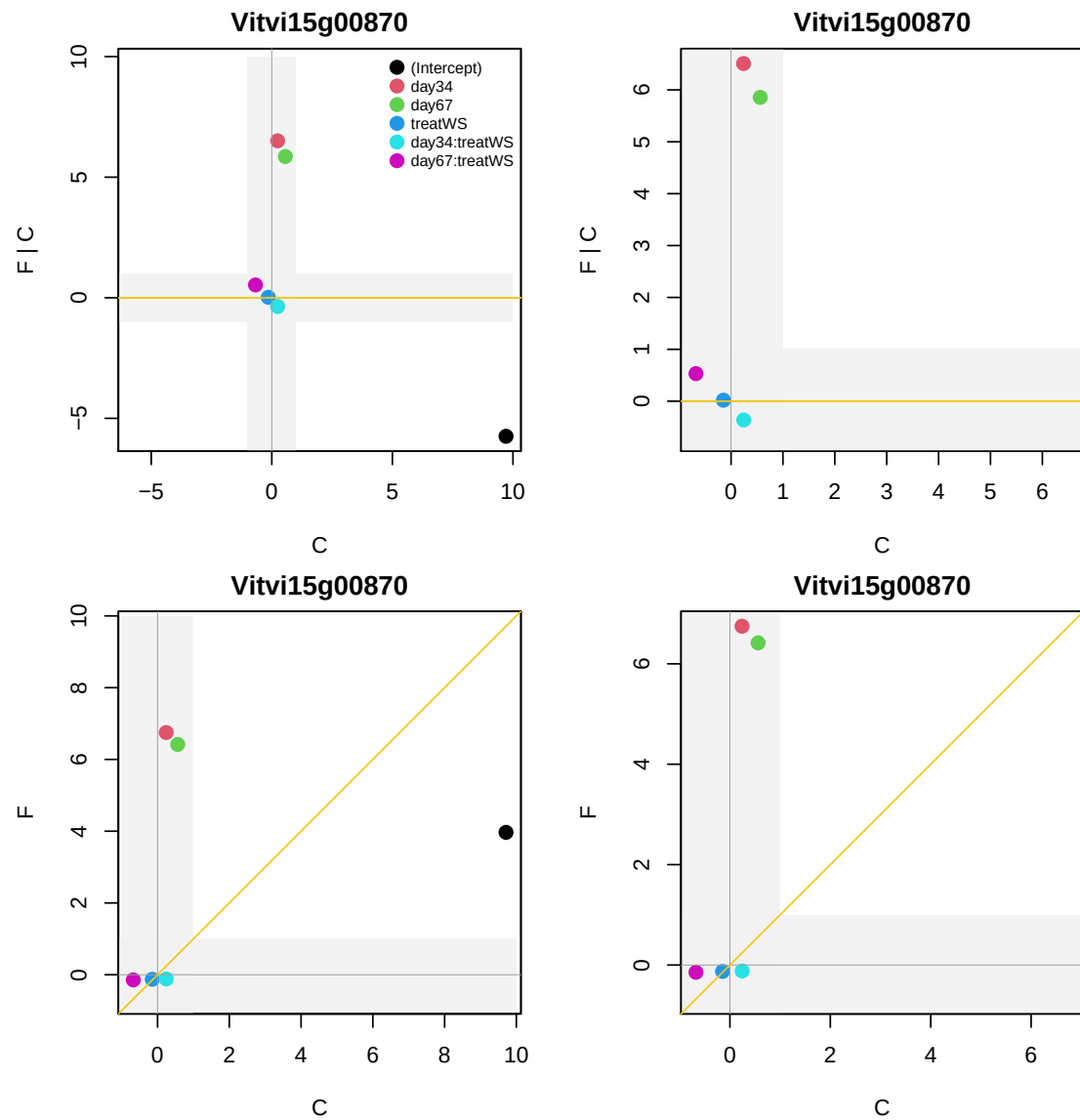


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

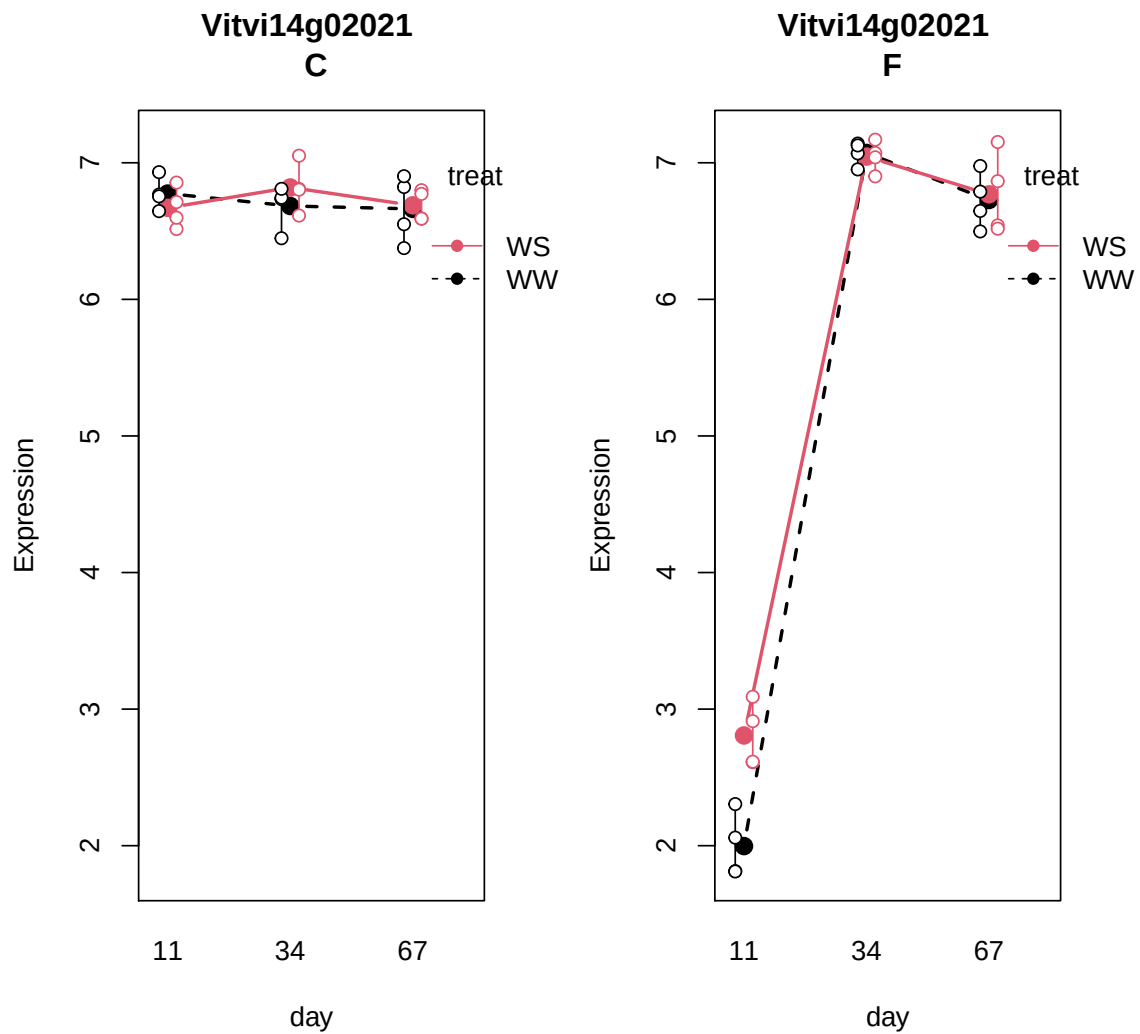


6.5.2 Vitvi14g02021

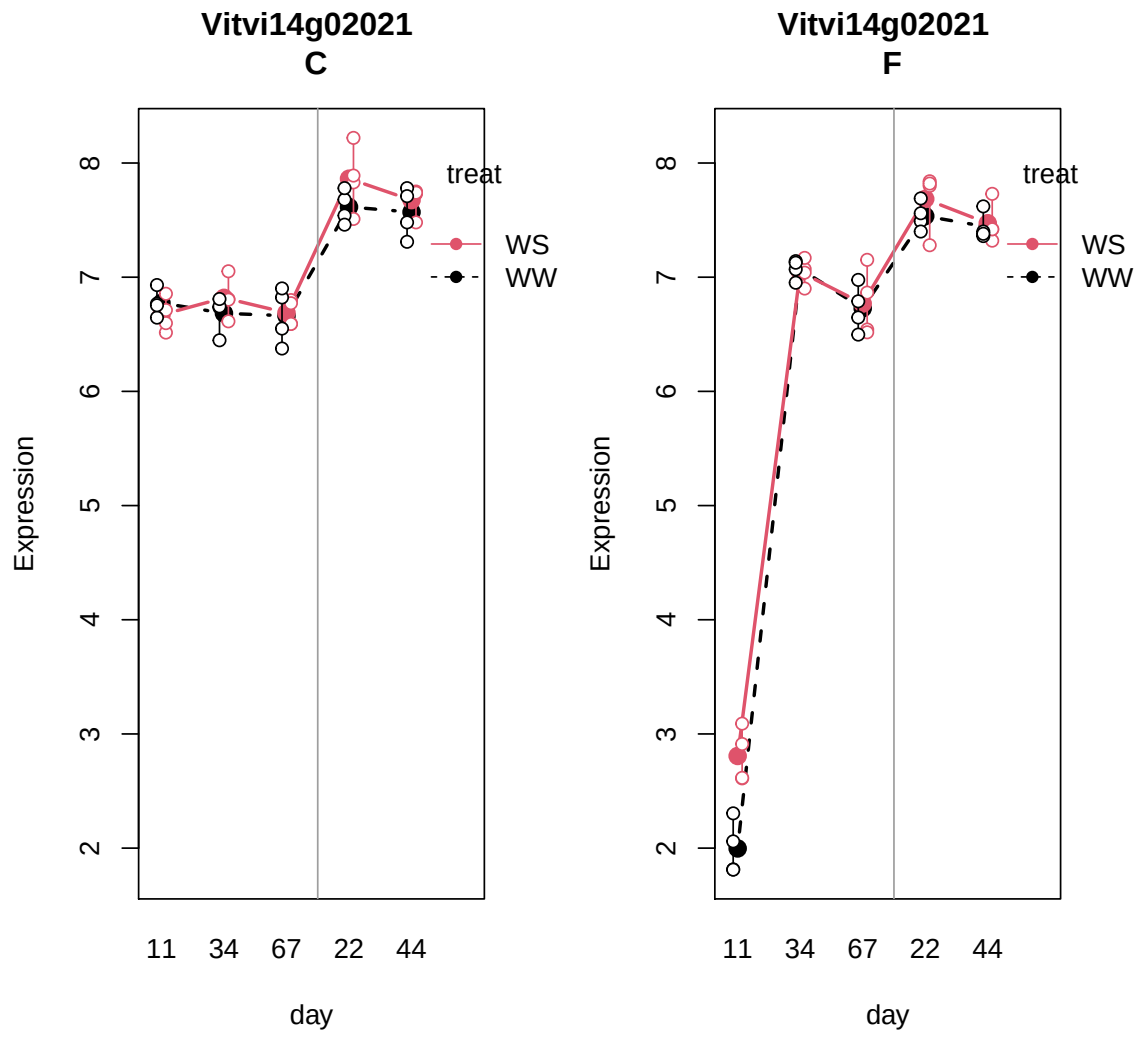
Coefficient varietyF:day34 for Vitvi14g02021.

```
> tt[varname,]
              logFC  AveExpr      t      P.Value
Vitvi14g02021  5.165862  6.059683 27.26962 6.867688e-27
              adj.P.Val      B
Vitvi14g02021  5.233865e-23 50.69833

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

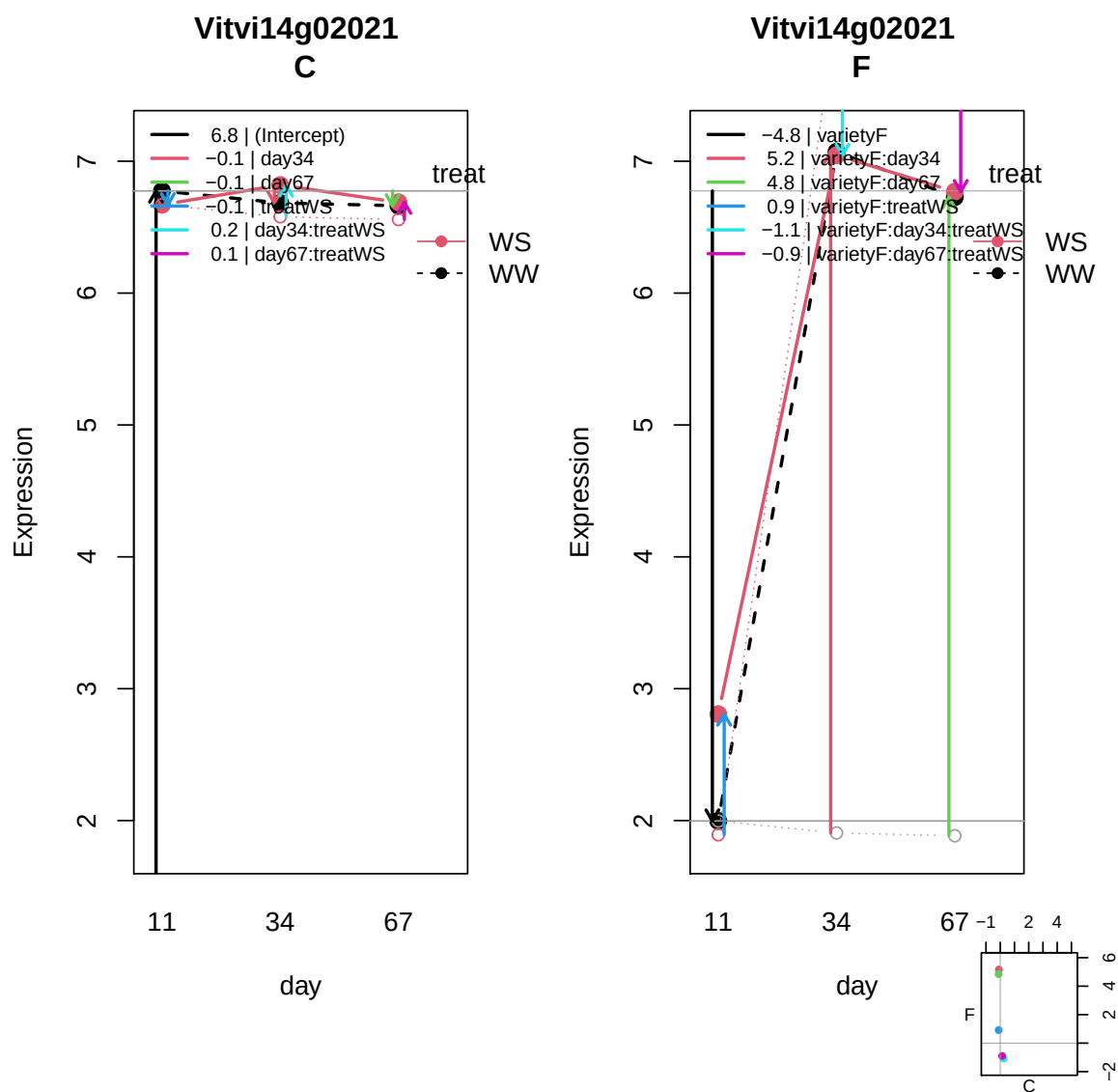
              (Intercept)  varietyF      day34      day67
Vitvi14g02021    6.774623 -4.777409 -0.0911036 -0.1122672
              treatWS varietyF:day34 varietyF:day67
Vitvi14g02021  -0.1046253    5.165862    4.842459
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi14g02021      0.9145095    0.2403122    0.1307239
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi14g02021      -1.07683      -0.8989803

```

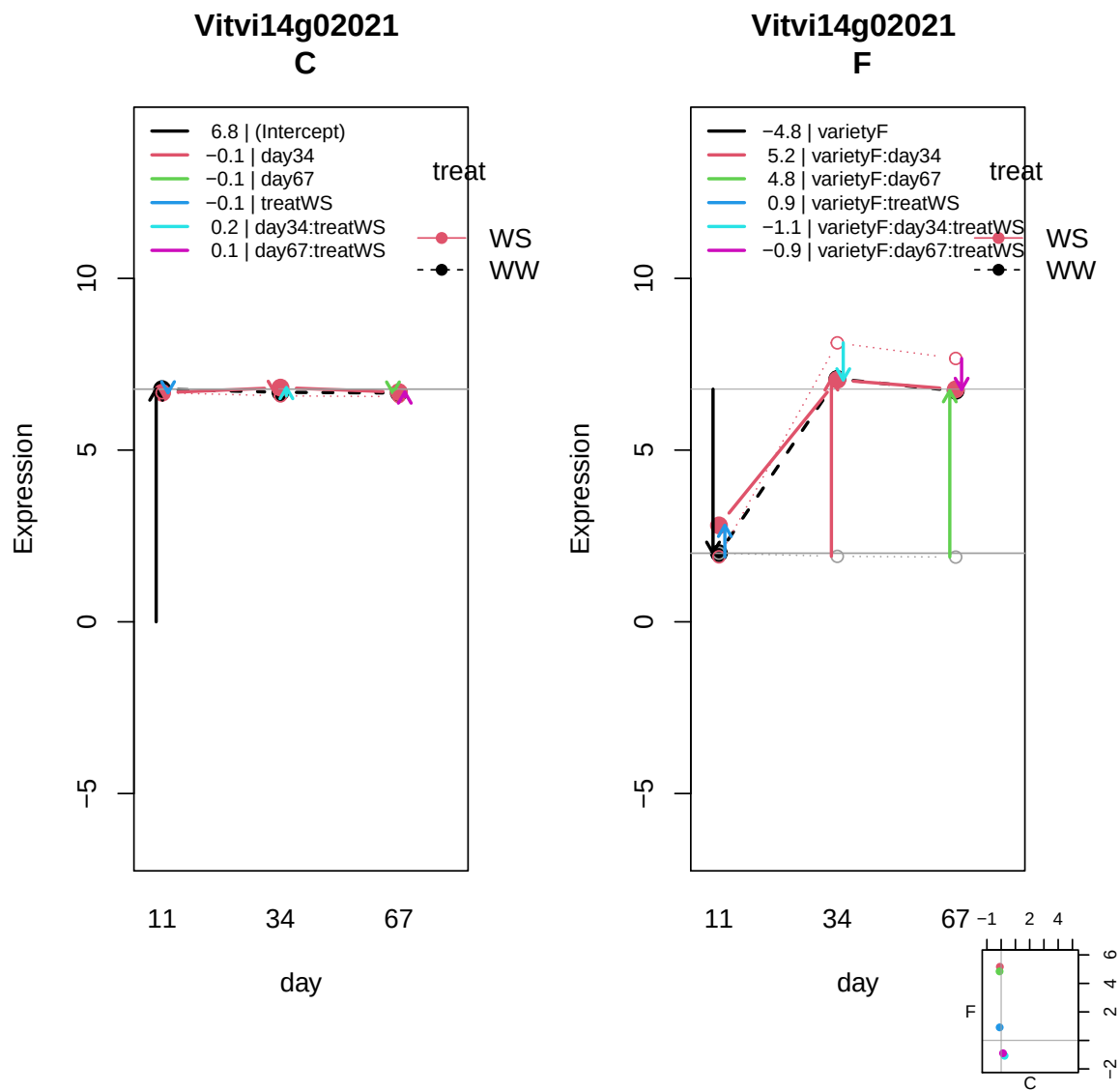
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

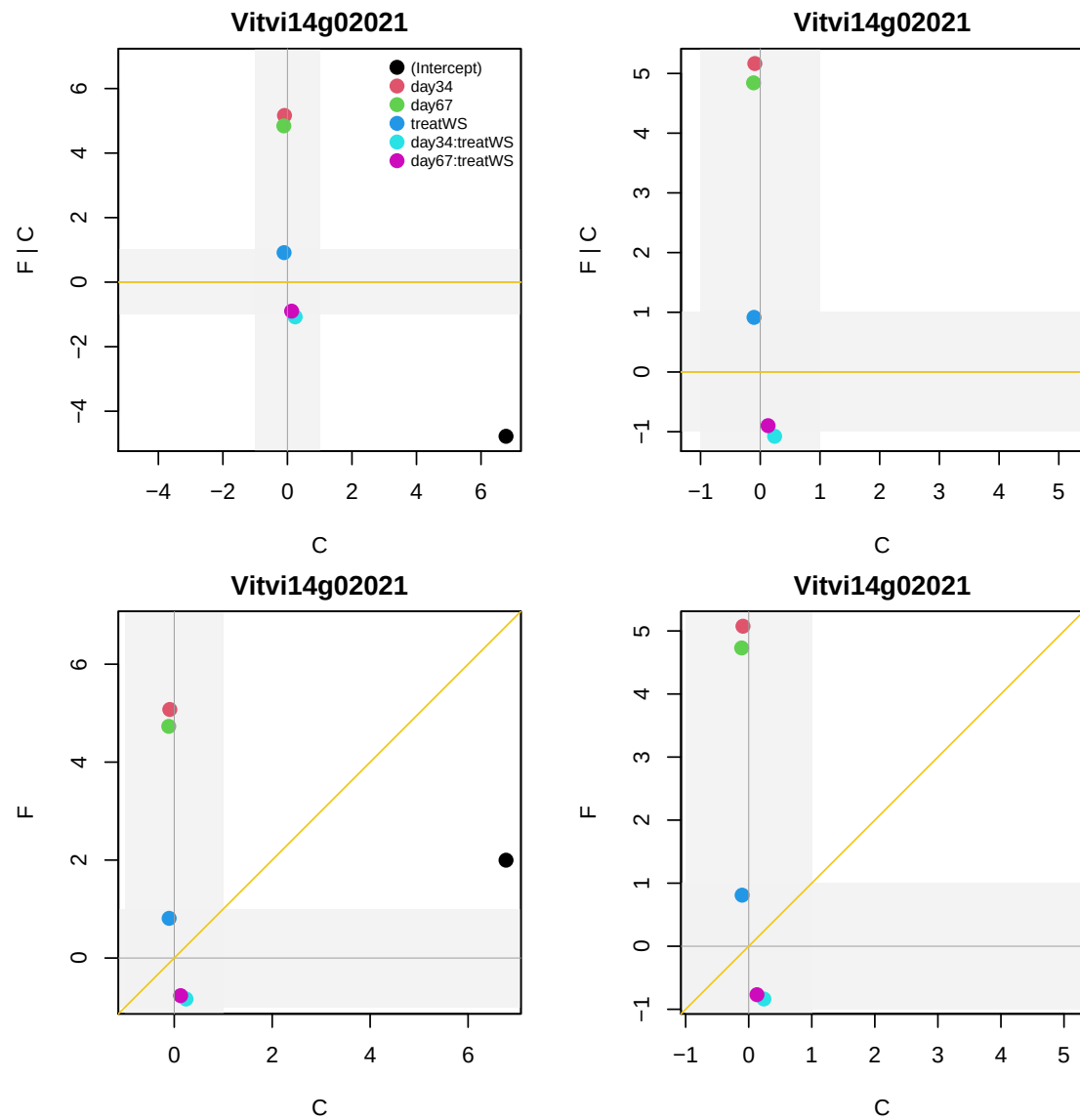



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

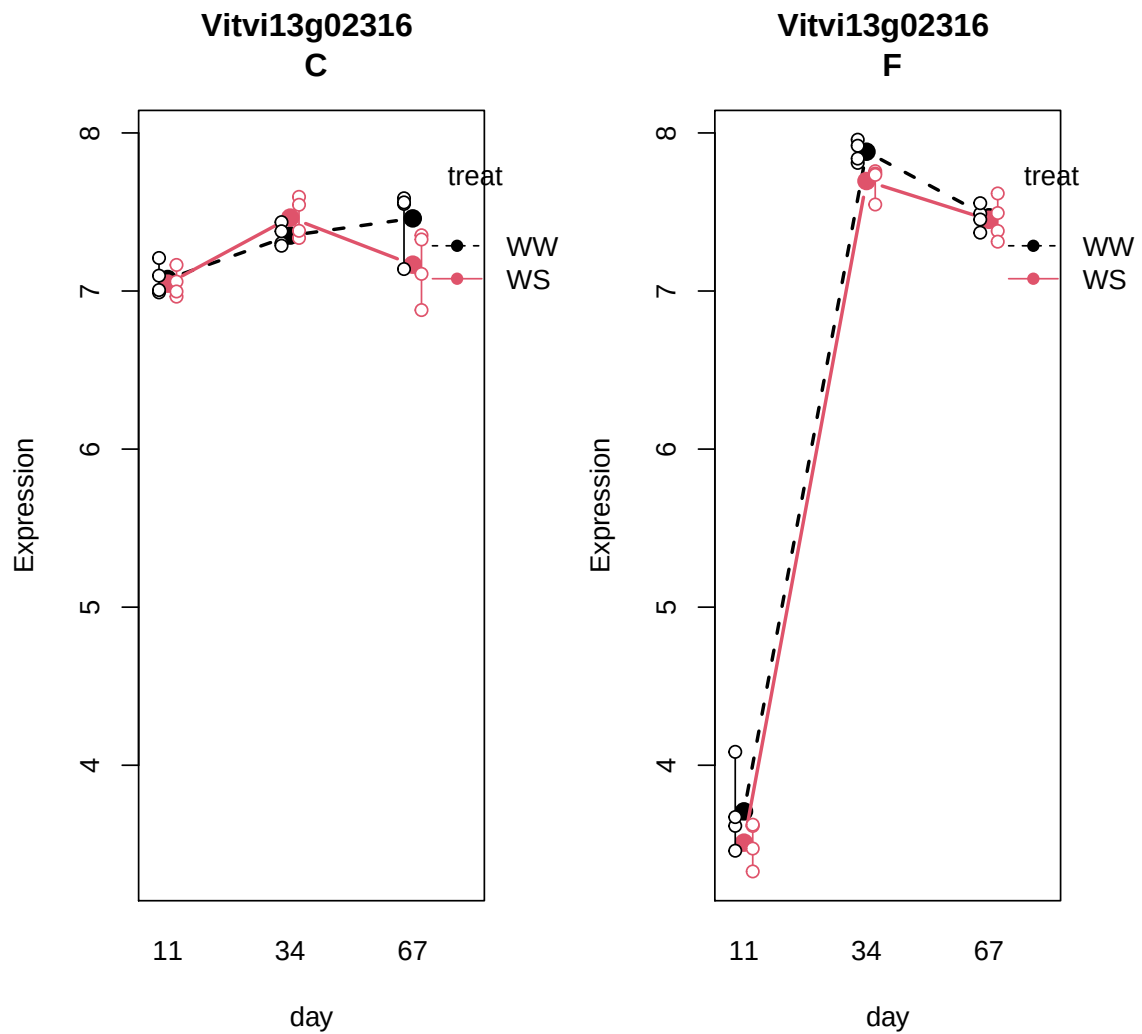


6.5.3 Vitvi13g02316

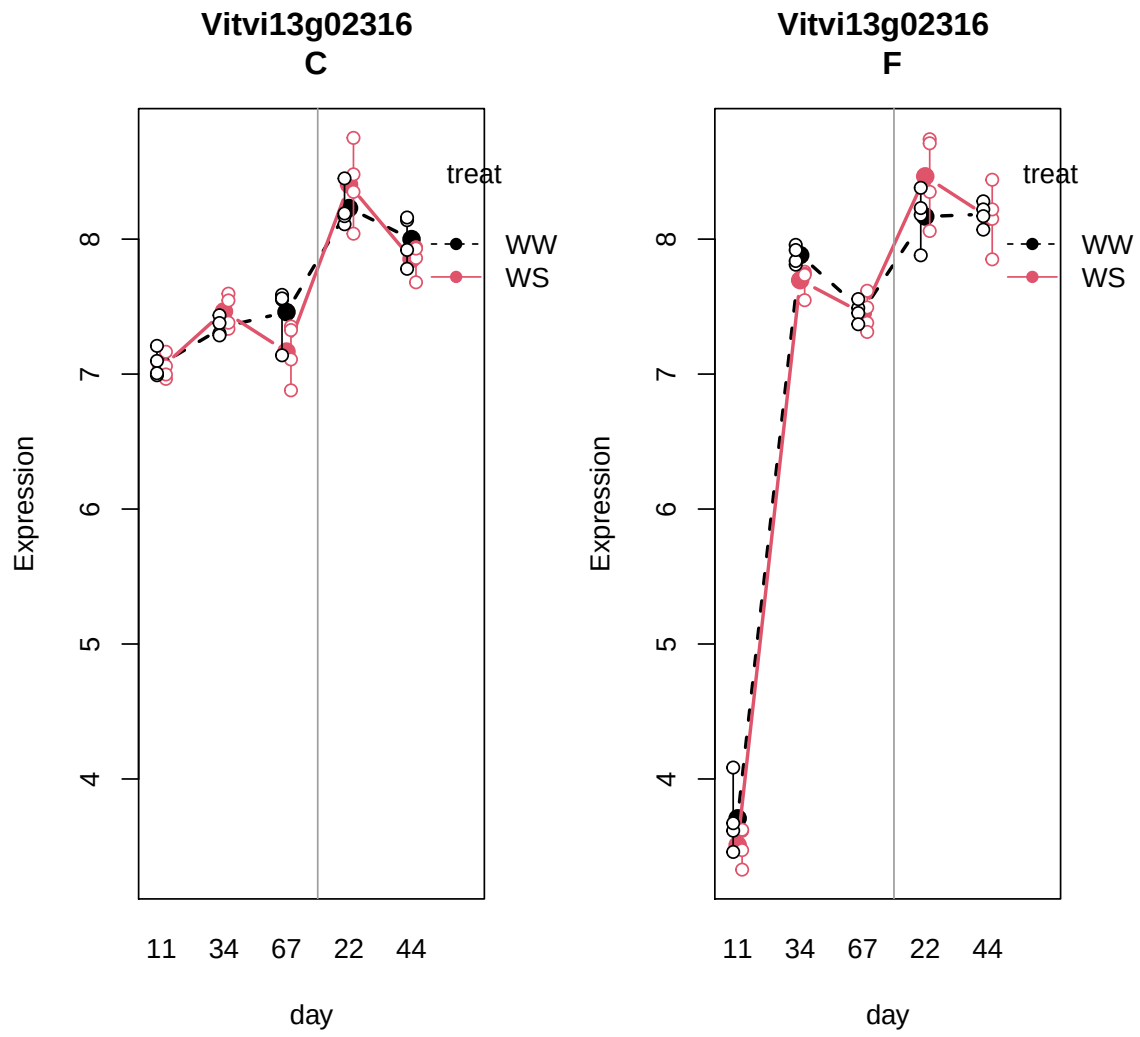
Coefficient varietyF:day34 for Vitvi13g02316.

```
> tt[varname,]
      logFC  AveExpr      t      P.Value
Vitvi13g02316 3.898189 6.773039 25.70719 6.005609e-26
      adj.P.Val      B
Vitvi13g02316 3.05125e-22 48.66364

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

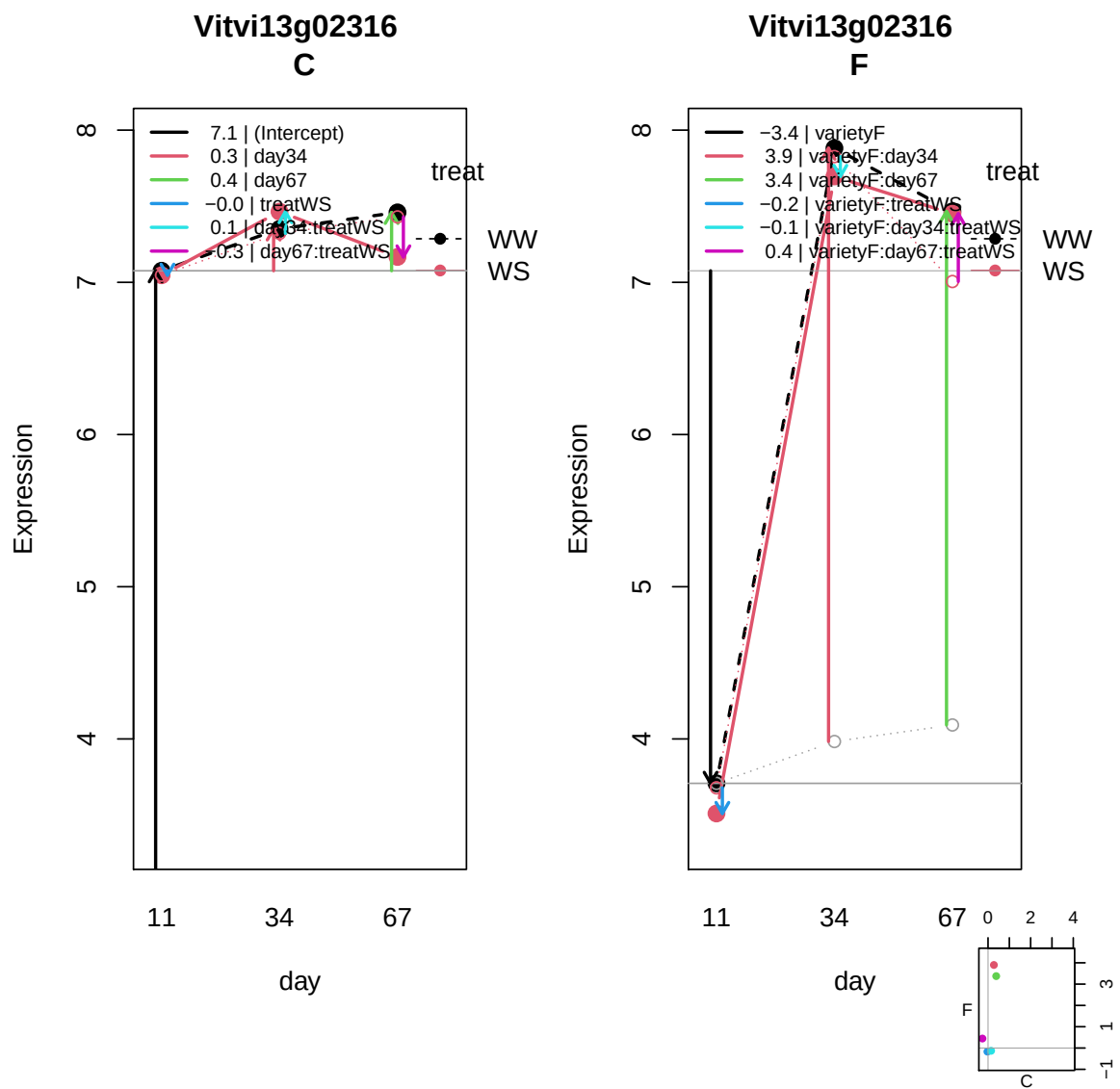
      (Intercept)  varietyF    day34    day67
Vitvi13g02316    7.075935 -3.367749 0.2748625 0.3834497
      treatWS varietyF:day34 varietyF:day67
Vitvi13g02316 -0.02940304   3.898189   3.374933
      varietyF:treatWS day34:treatWS day67:treatWS
Vitvi13g02316   -0.1685125   0.1430608   -0.2632921
      varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi13g02316   -0.1305528             0.4452277

```

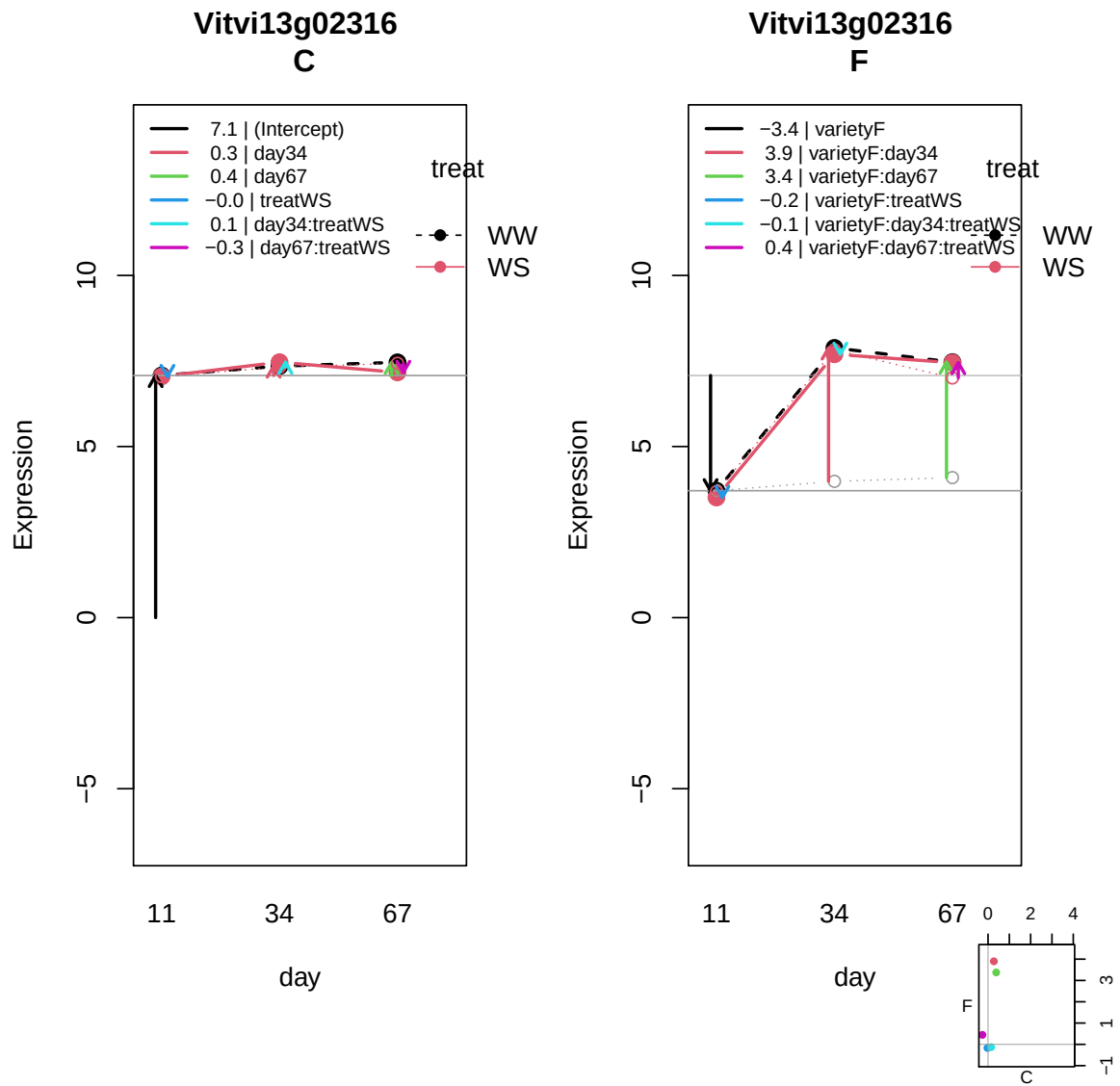
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

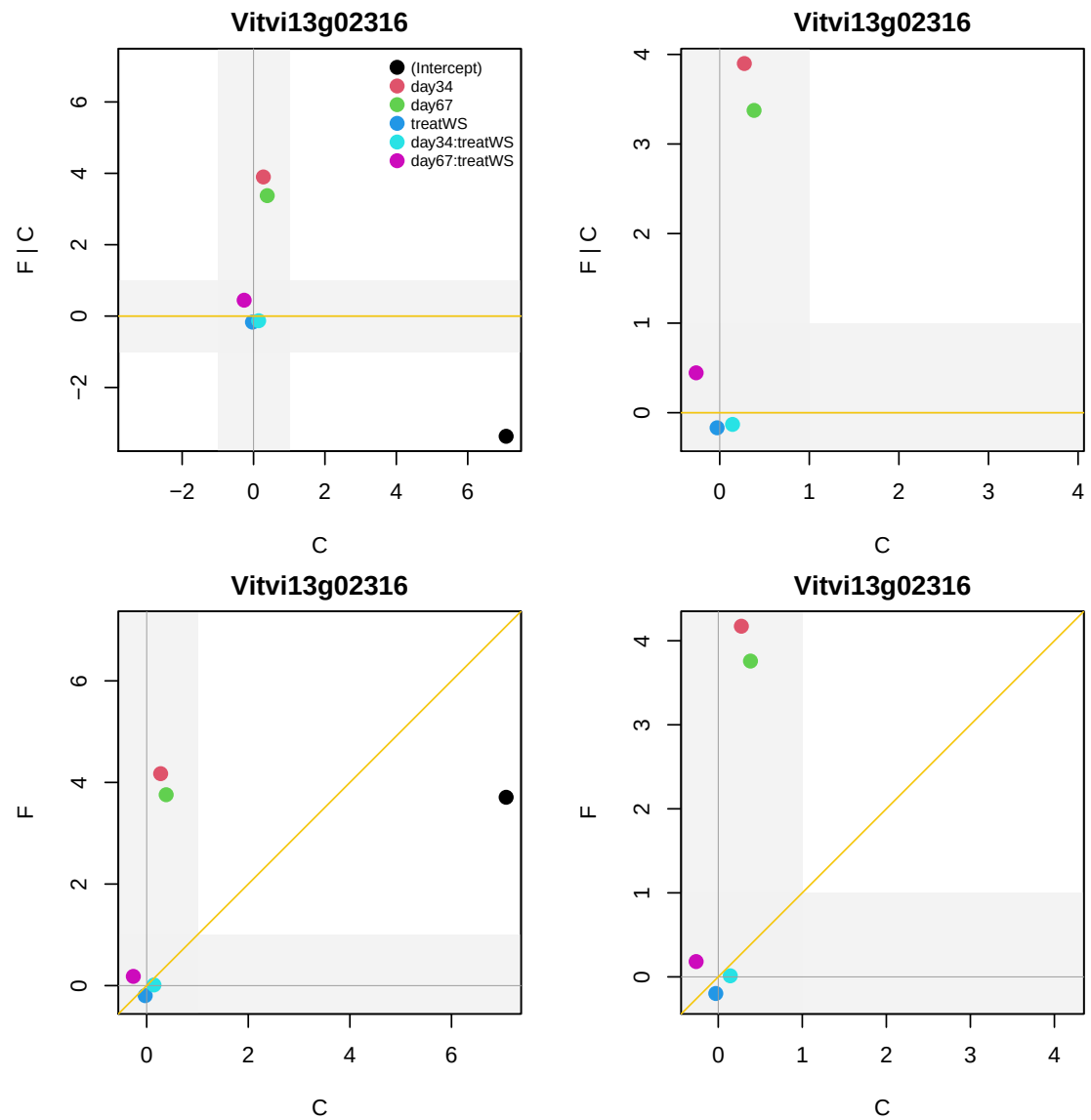


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

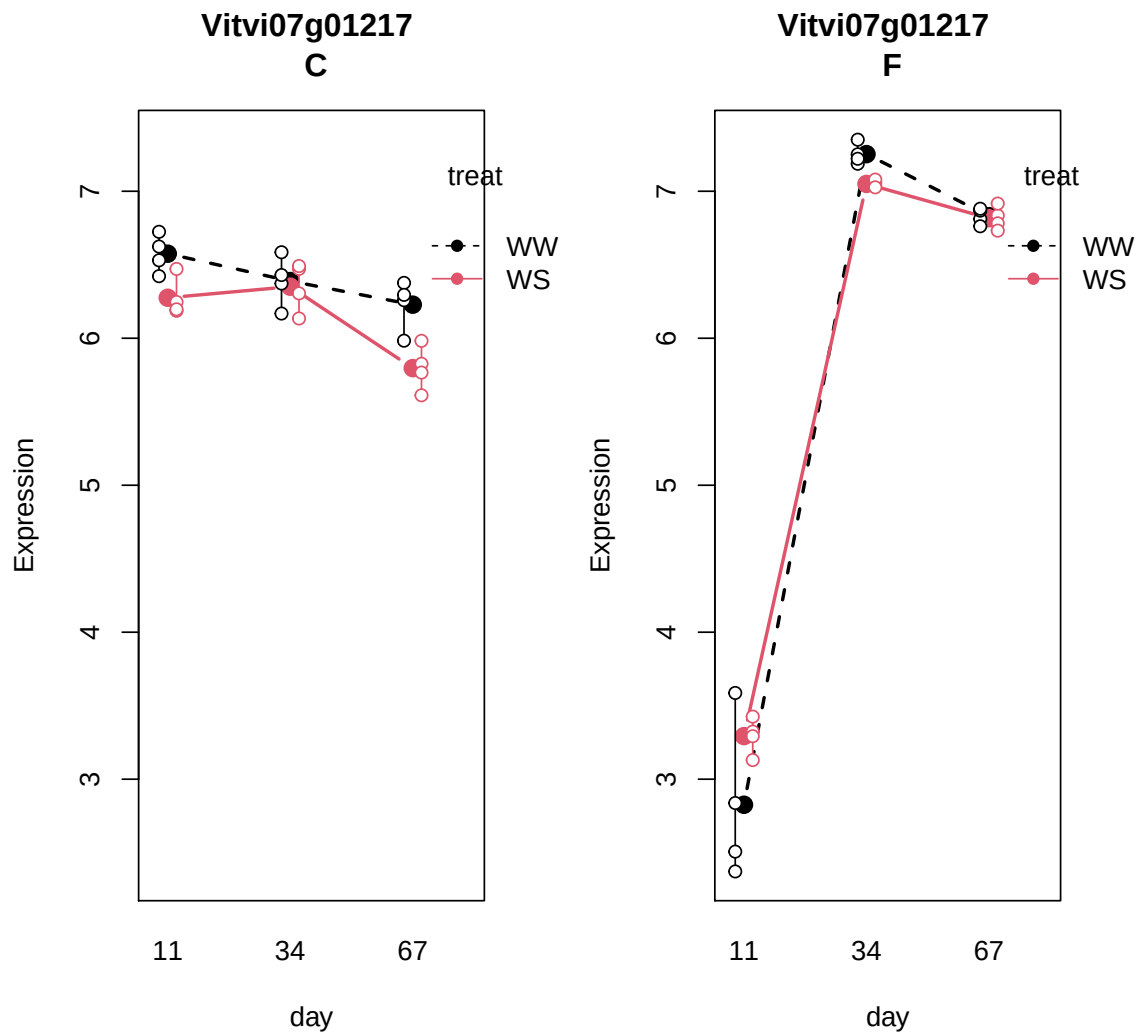


6.5.4 Vitvi07g01217

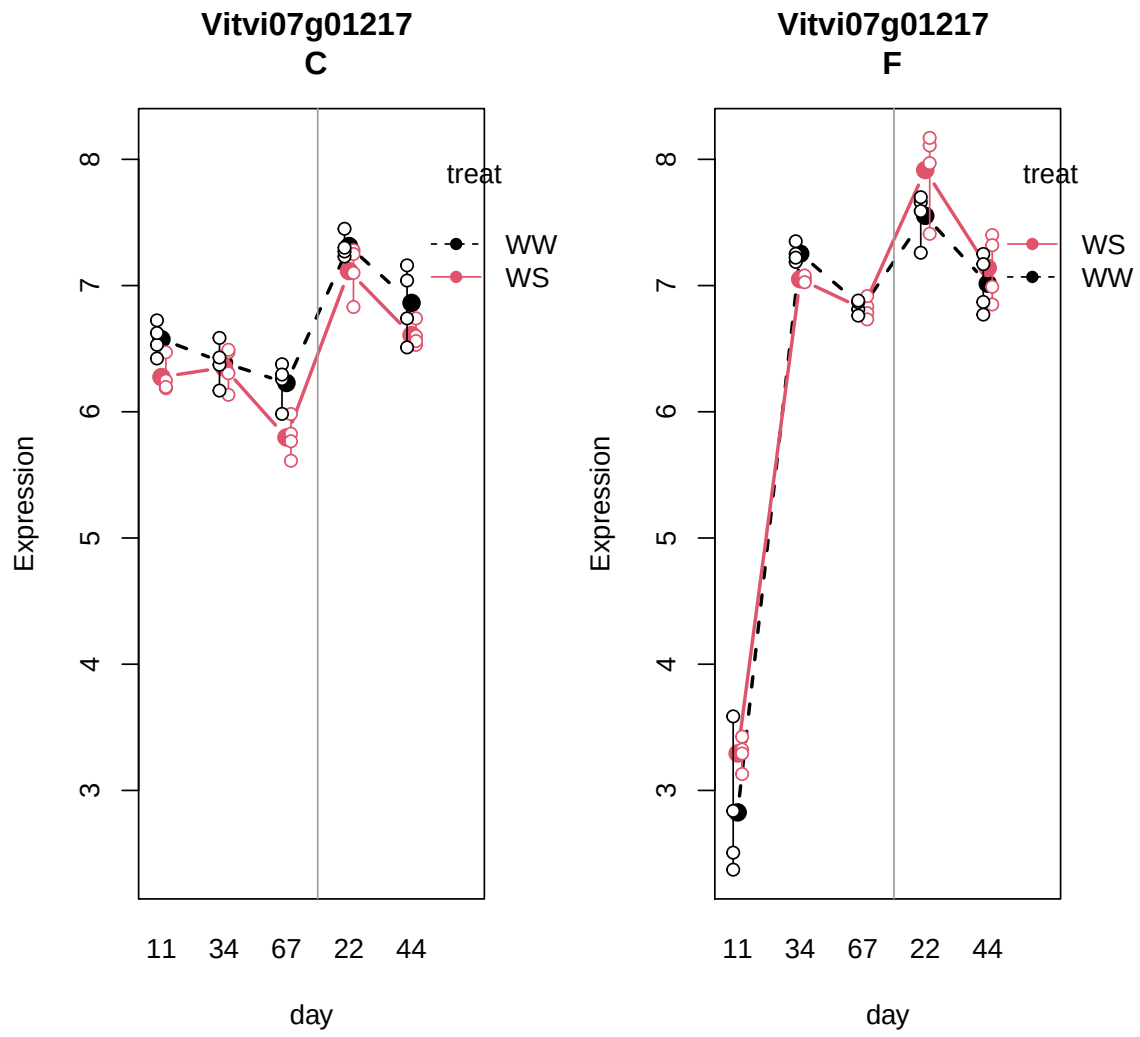
Coefficient varietyF:day34 for Vitvi07g01217.

```
> tt[varname,]
      logFC AveExpr      t    P.Value
Vitvi07g01217 4.612853 5.973643 23.33799 2.03508e-24
      adj.P.Val      B
Vitvi07g01217 7.754672e-21 45.32053

> plot.interactions(varname, phdata=pd, data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

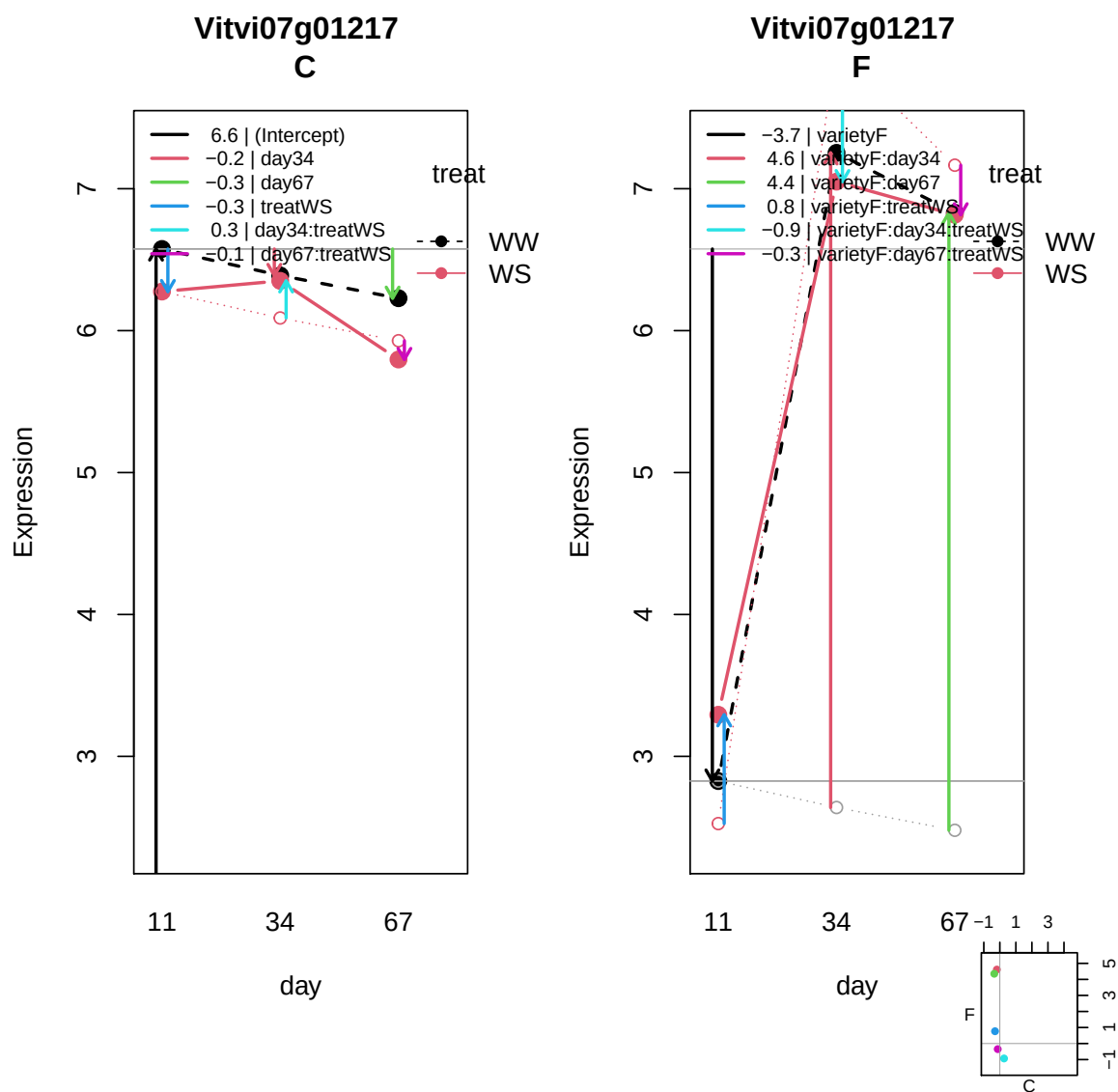
              (Intercept)  varietyF      day34      day67
Vitvi07g01217      6.575194 -3.749188 -0.186283 -0.3468225
              treatWS varietyF:day34 varietyF:day67
Vitvi07g01217    -0.2997572      4.612853      4.351425
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi07g01217      0.7667736      0.2615639     -0.1319302
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi07g01217      -0.9312521      -0.3494162

```

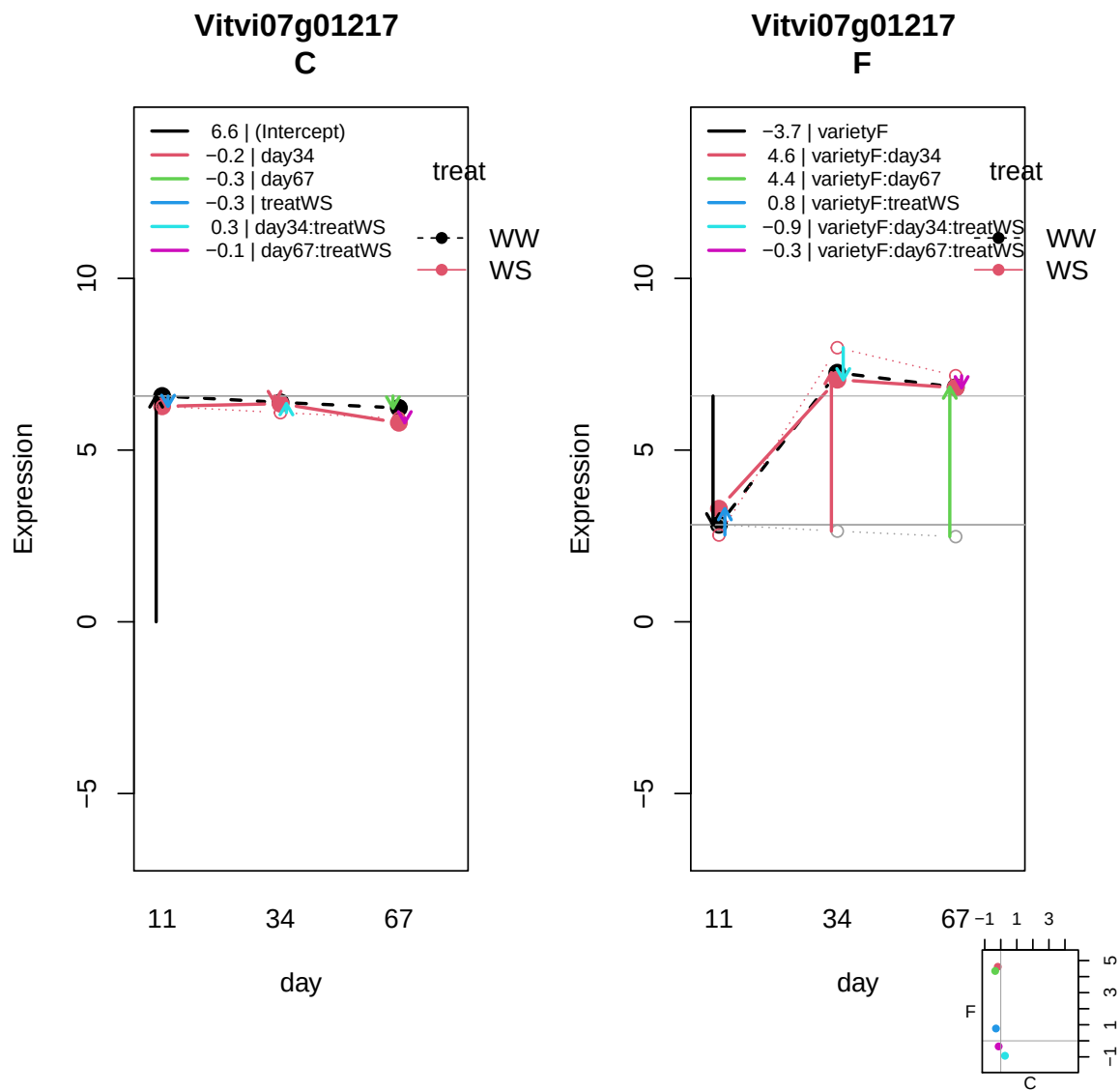
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

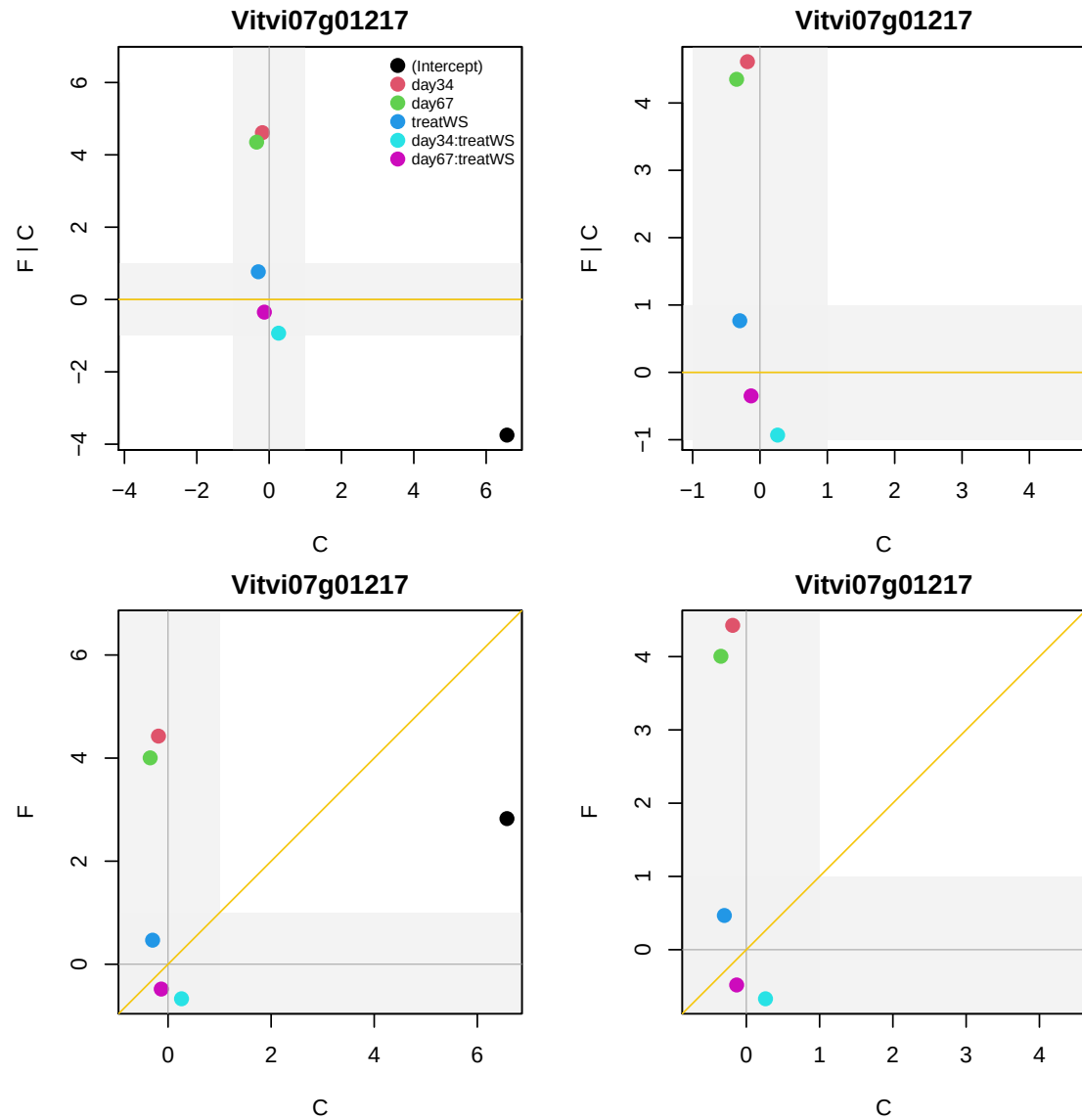


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

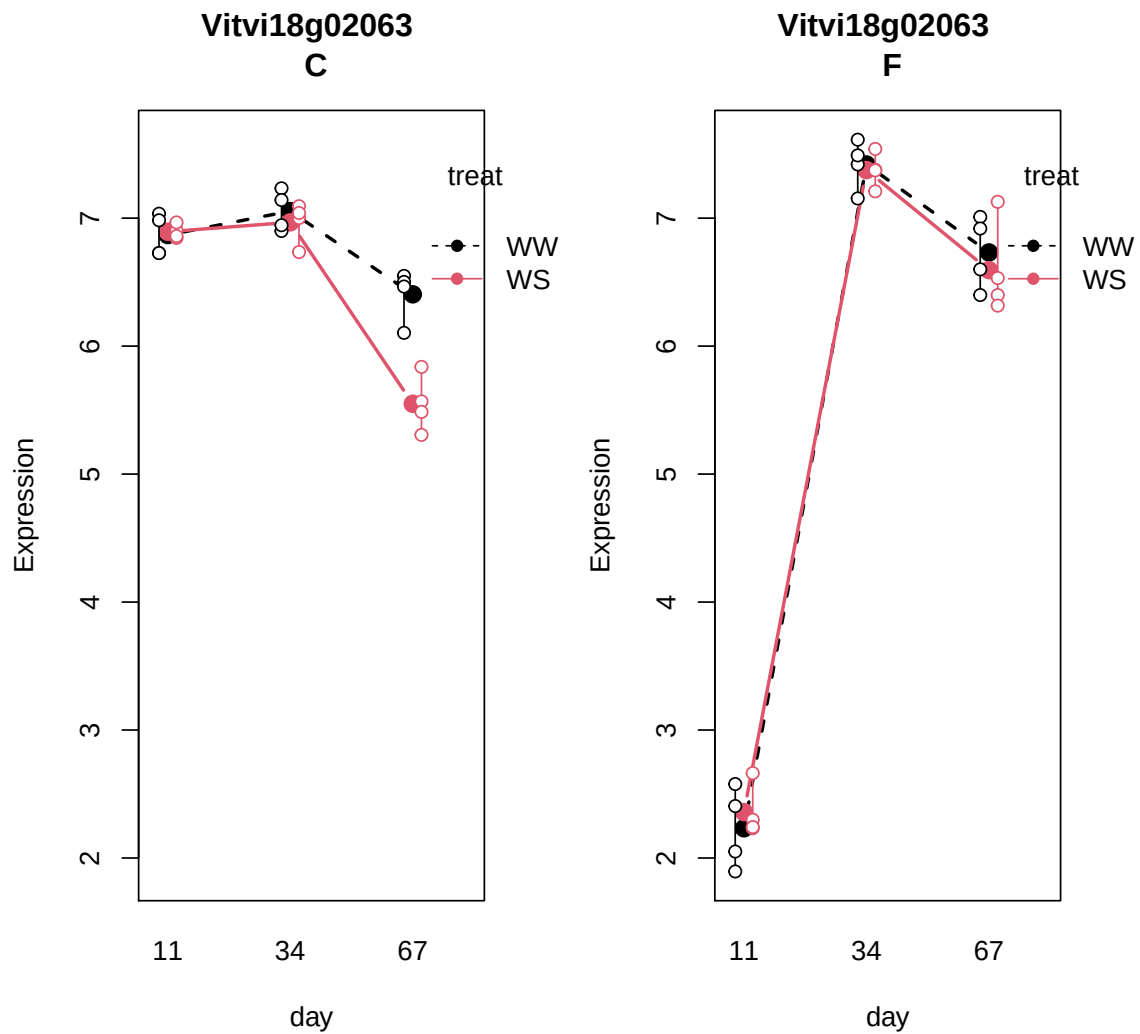


6.5.5 Vitvi18g02063

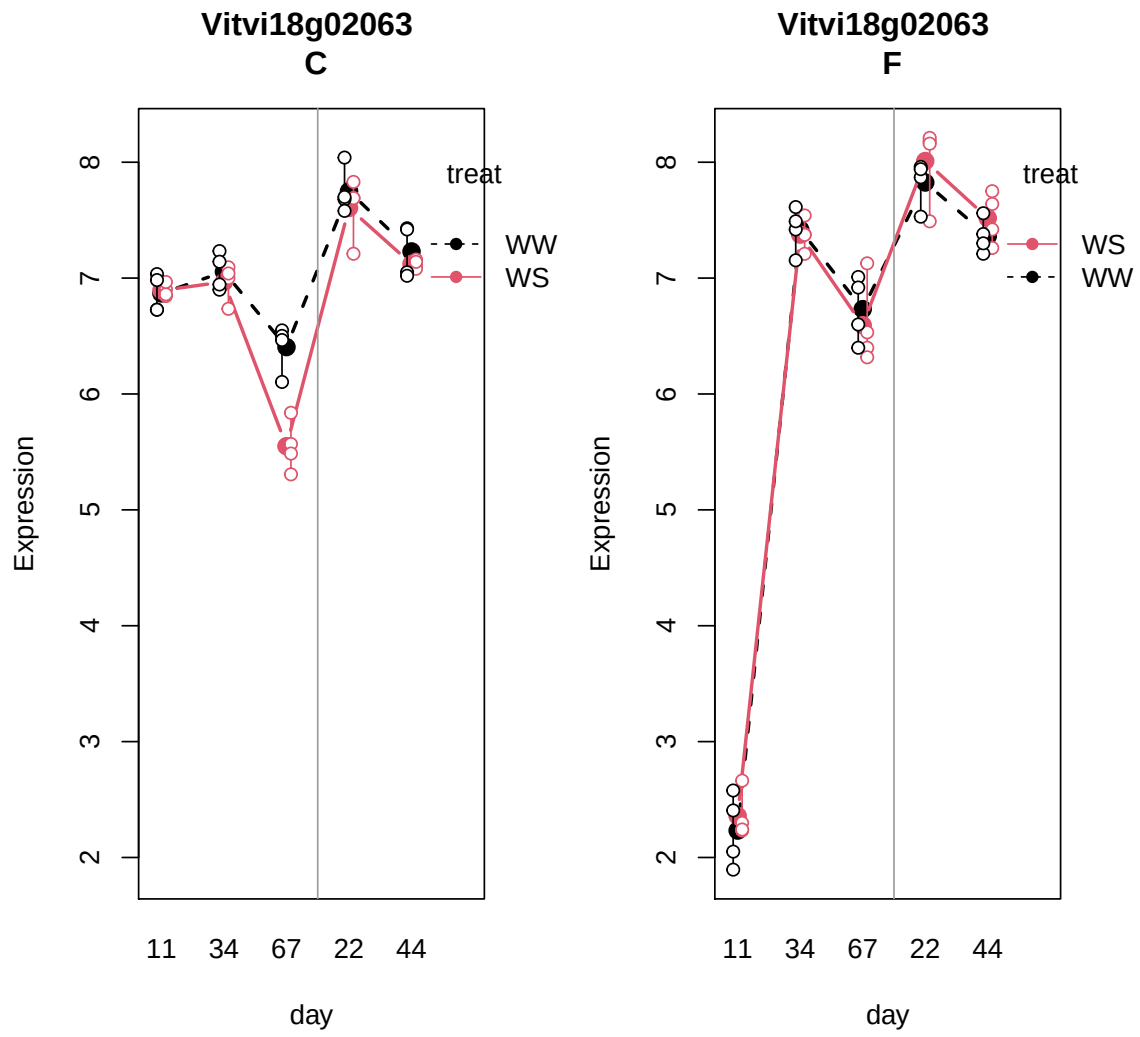
Coefficient varietyF:day34 for Vitvi18g02063.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi18g02063 5.000087 6.037444 22.87692 4.188697e-24
      adj.P.Val      B
Vitvi18g02063 1.276882e-20 44.63036

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

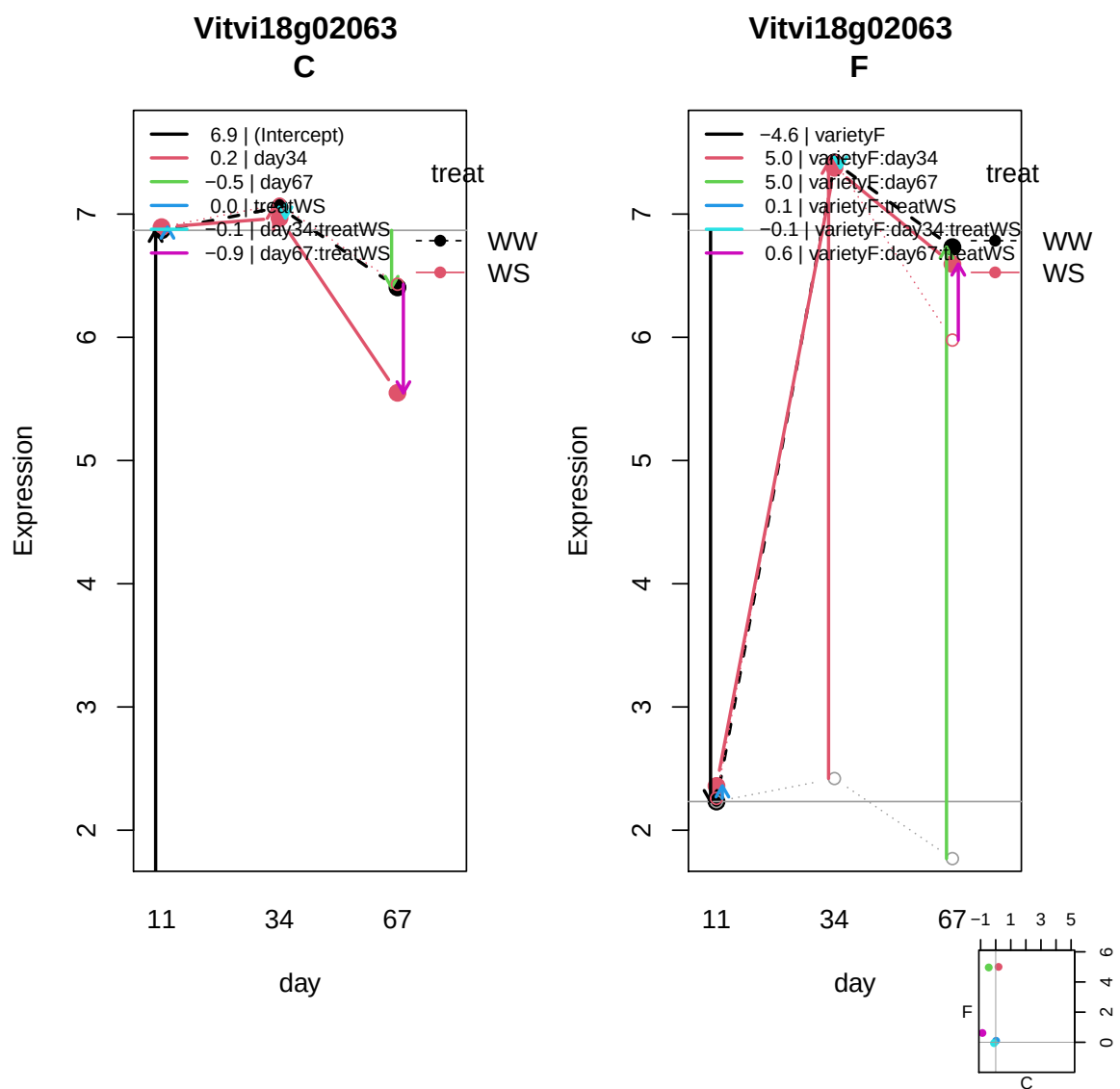
      (Intercept)  varietyF    day34    day67
Vitvi18g02063    6.868052 -4.635641 0.1866877 -0.4632554
      treatWS varietyF:day34 varietyF:day67
Vitvi18g02063    0.02572067    5.000087    4.962626
      varietyF:treatWS day34:treatWS day67:treatWS
Vitvi18g02063    0.1008641    -0.1132095    -0.8810801
      varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi18g02063    -0.05731196    0.6163656

```

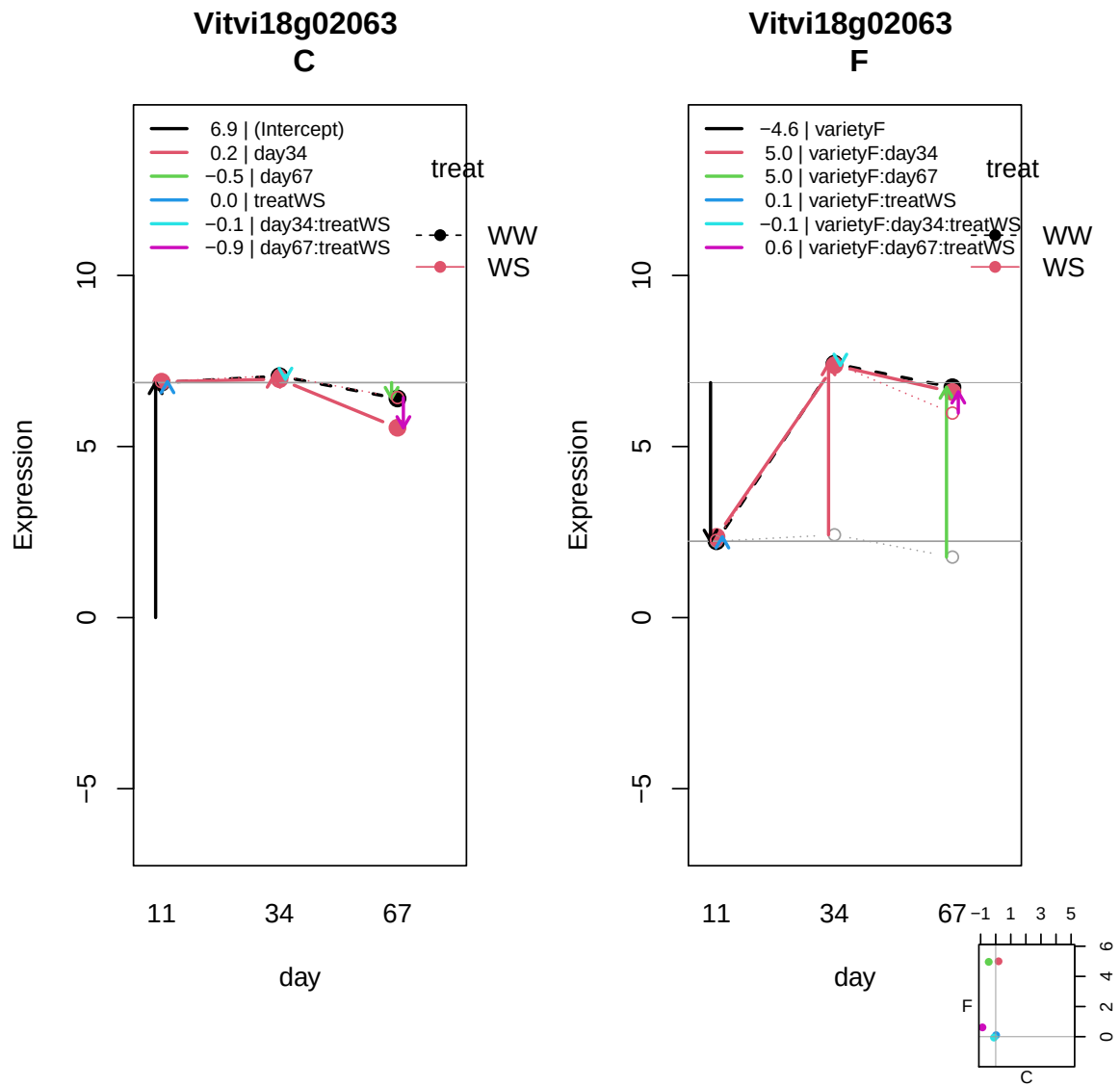
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

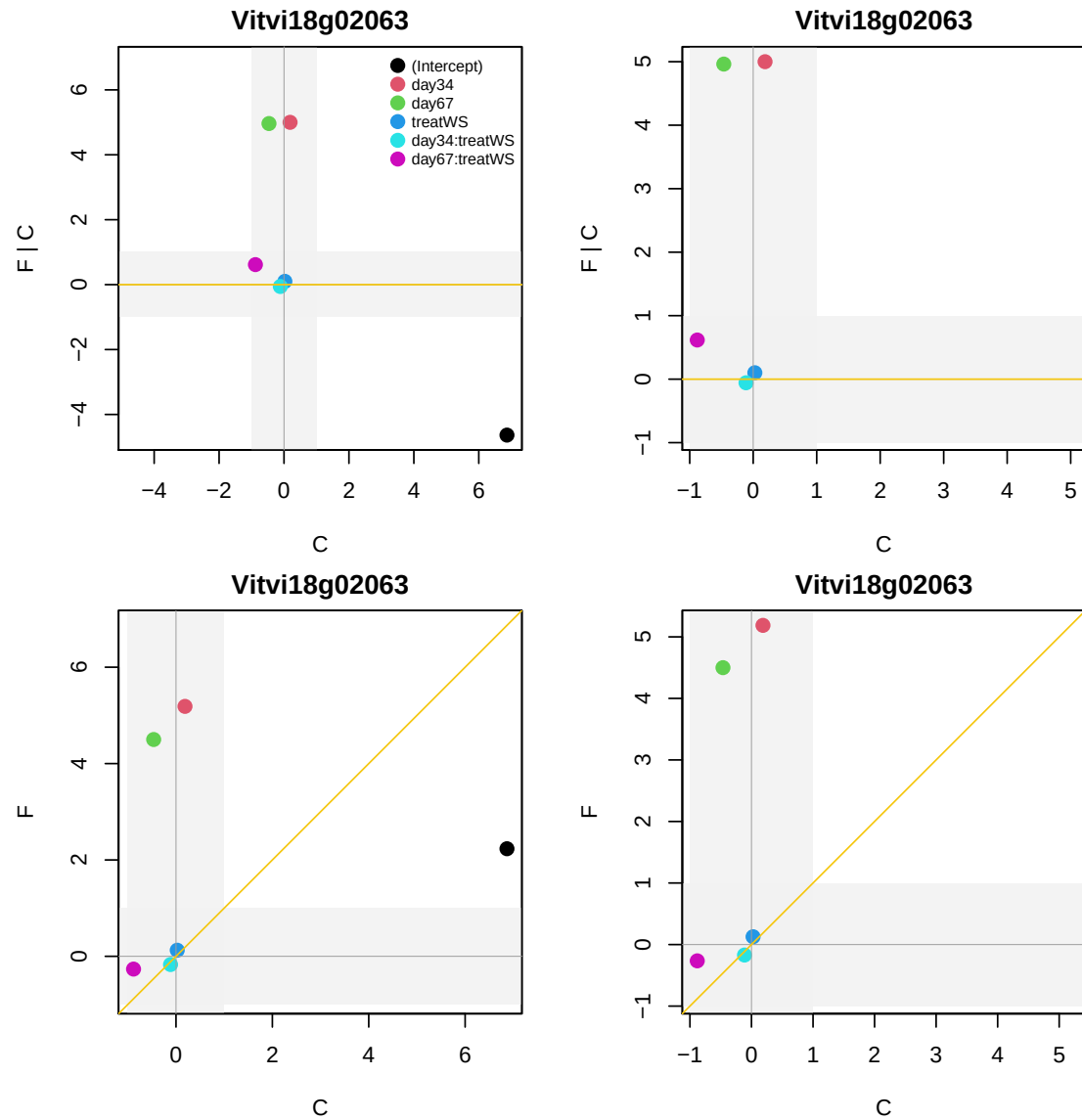


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

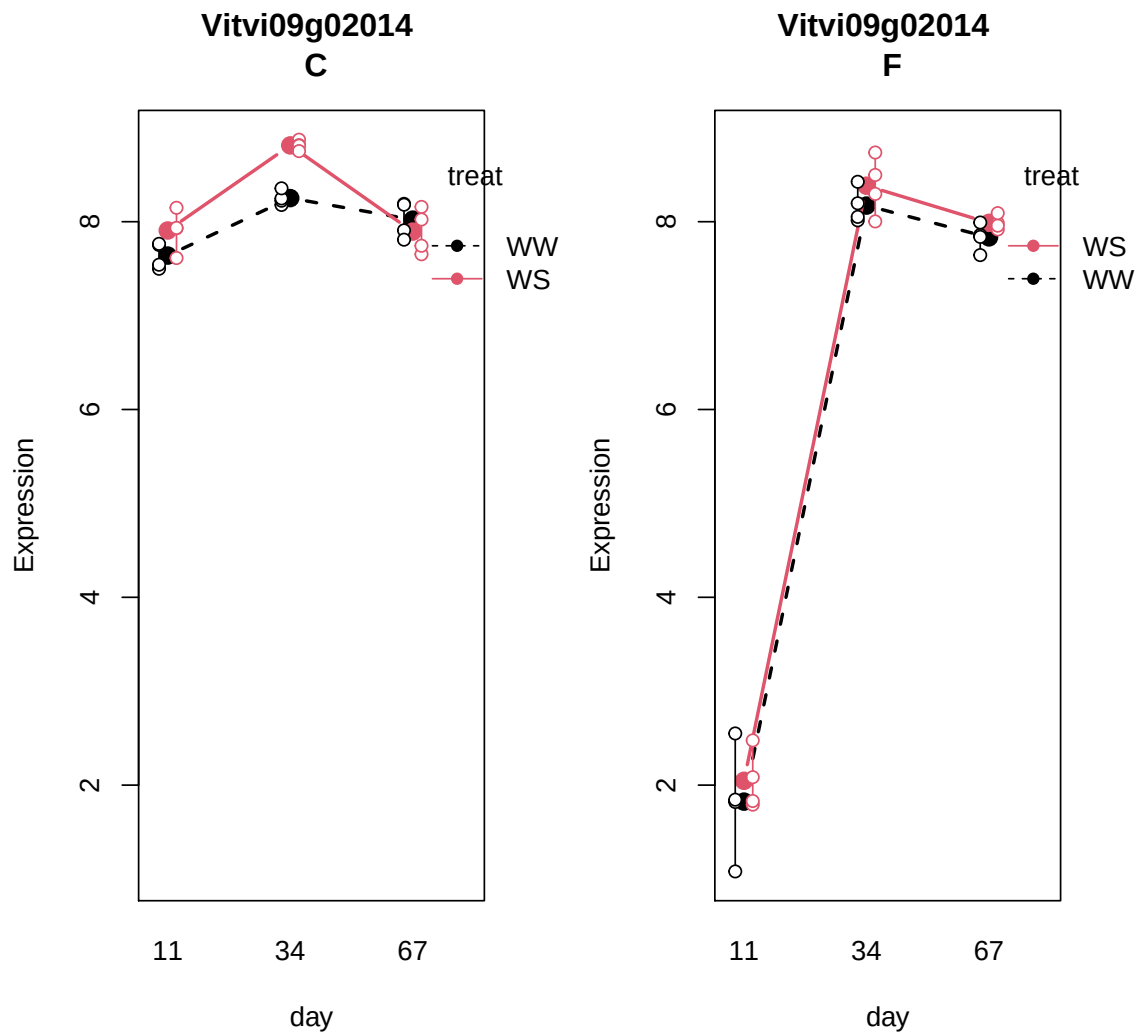


6.5.6 Vitvi09g02014

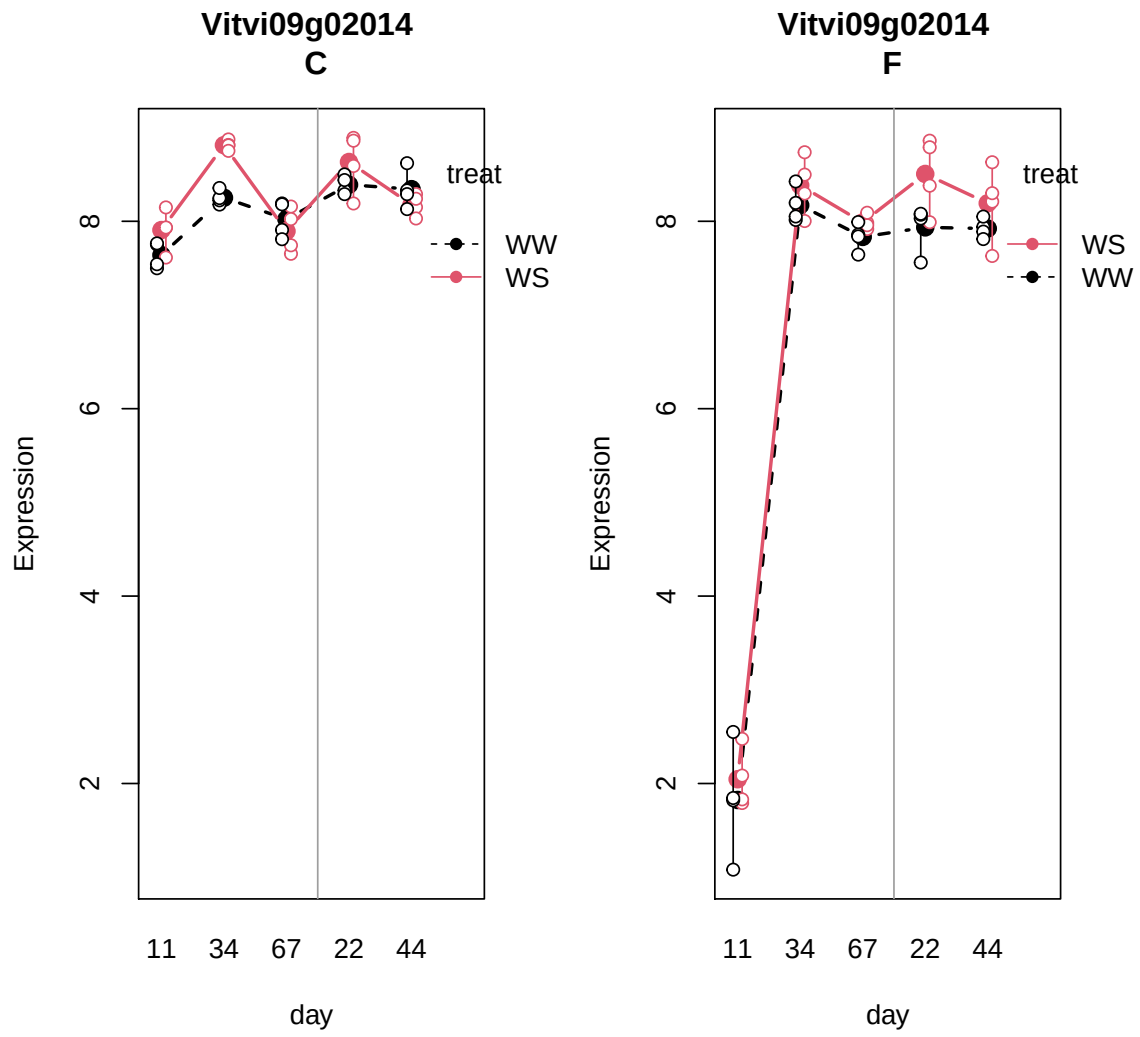
Coefficient varietyF:day34 for Vitvi09g02014.

```
> tt[varname,]
      logFC  AveExpr      t    P.Value
Vitvi09g02014 5.735648 7.064295 22.75637 5.06929e-24
      adj.P.Val      B
Vitvi09g02014 1.287769e-20 44.44765

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

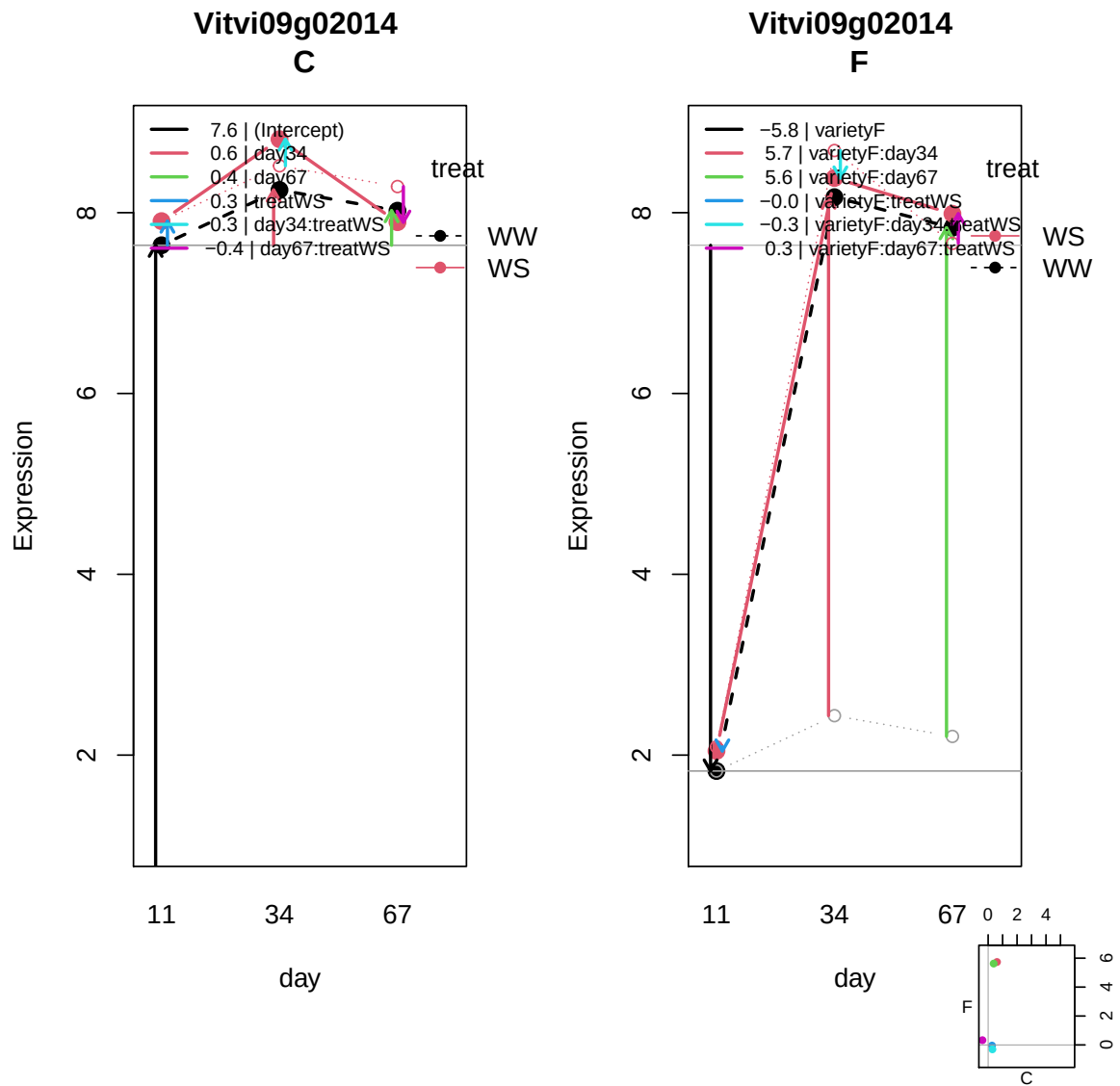
      (Intercept)  varietyF    day34    day67
Vitvi09g02014    7.639291 -5.815234 0.6119899 0.3826438
      treatWS varietyF:day34 varietyF:day67
Vitvi09g02014  0.2670763    5.735648    5.6265
      varietyF:treatWS day34:treatWS day67:treatWS
Vitvi09g02014   -0.04548081  0.2941177   -0.394429
      varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi09g02014   -0.3040742    0.3272909

```

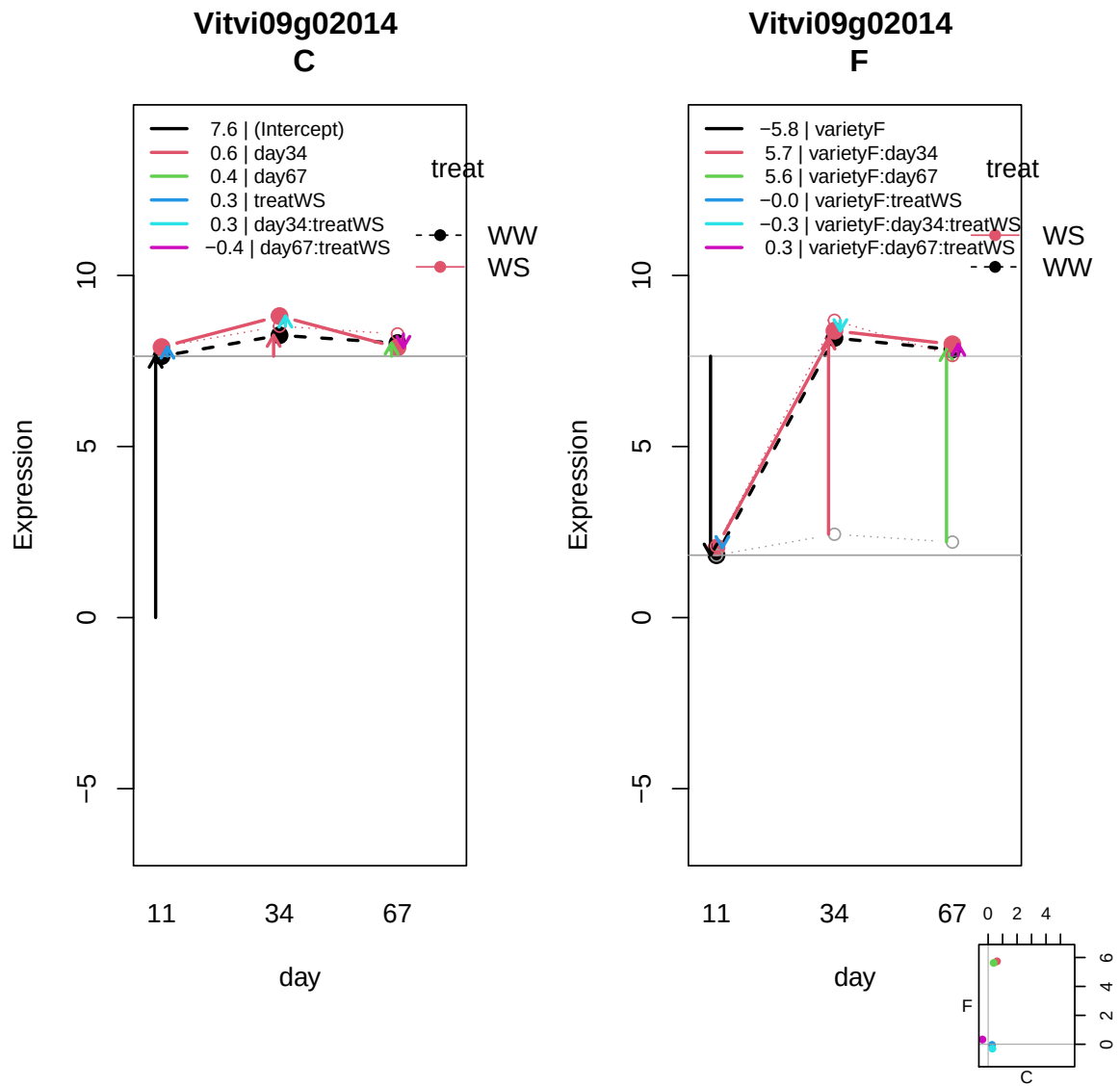
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

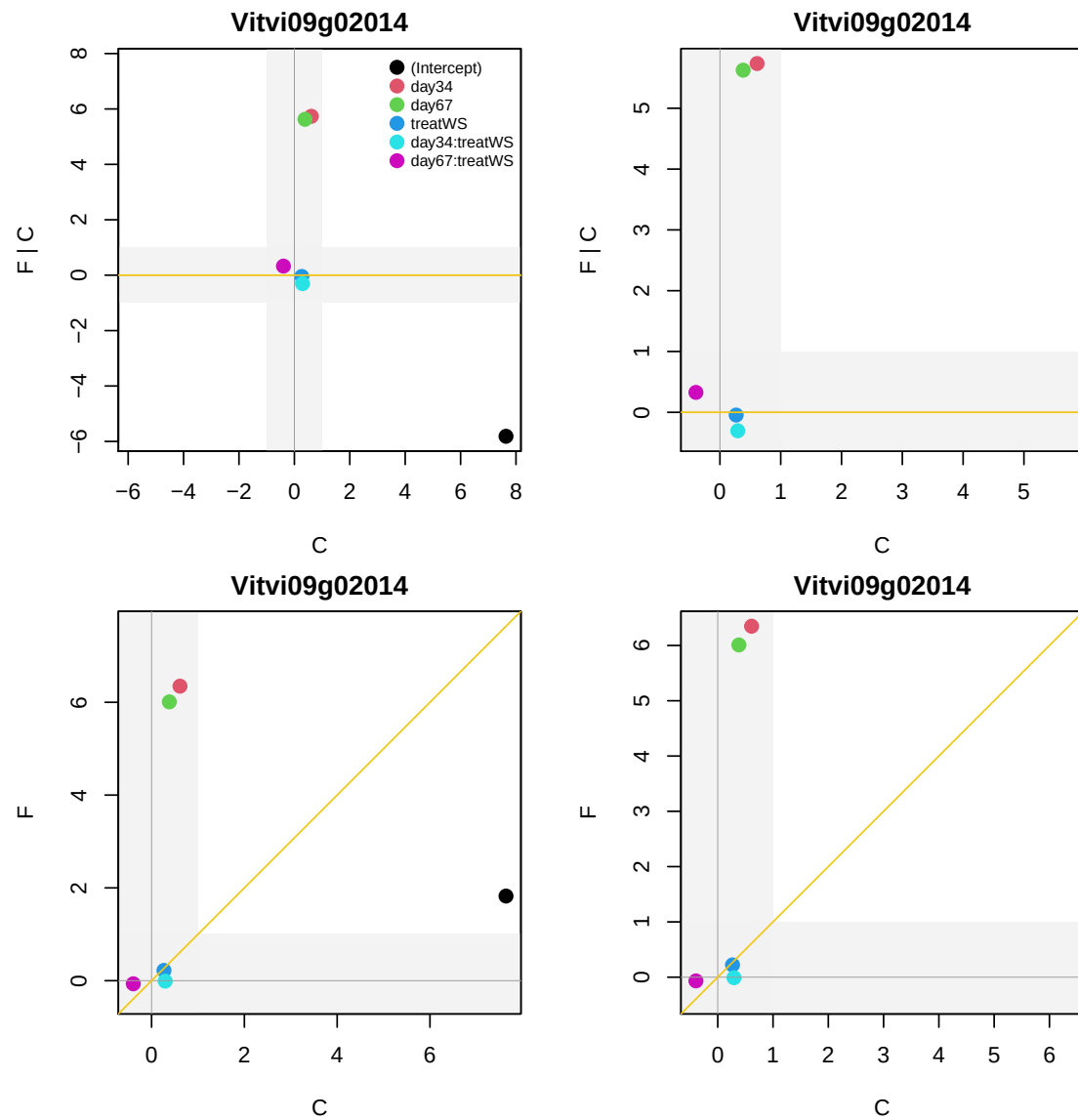


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

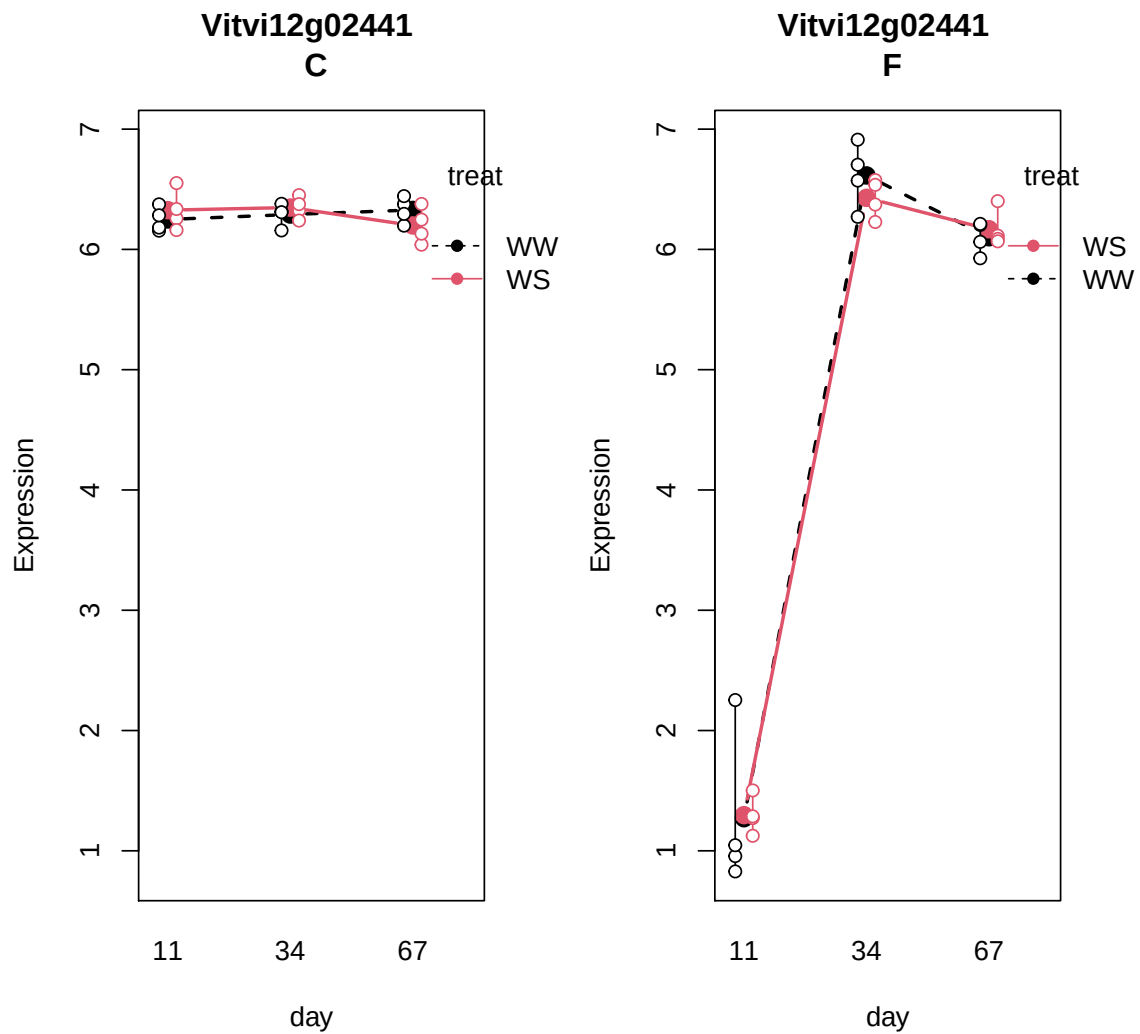


6.5.7 Vitvi12g02441

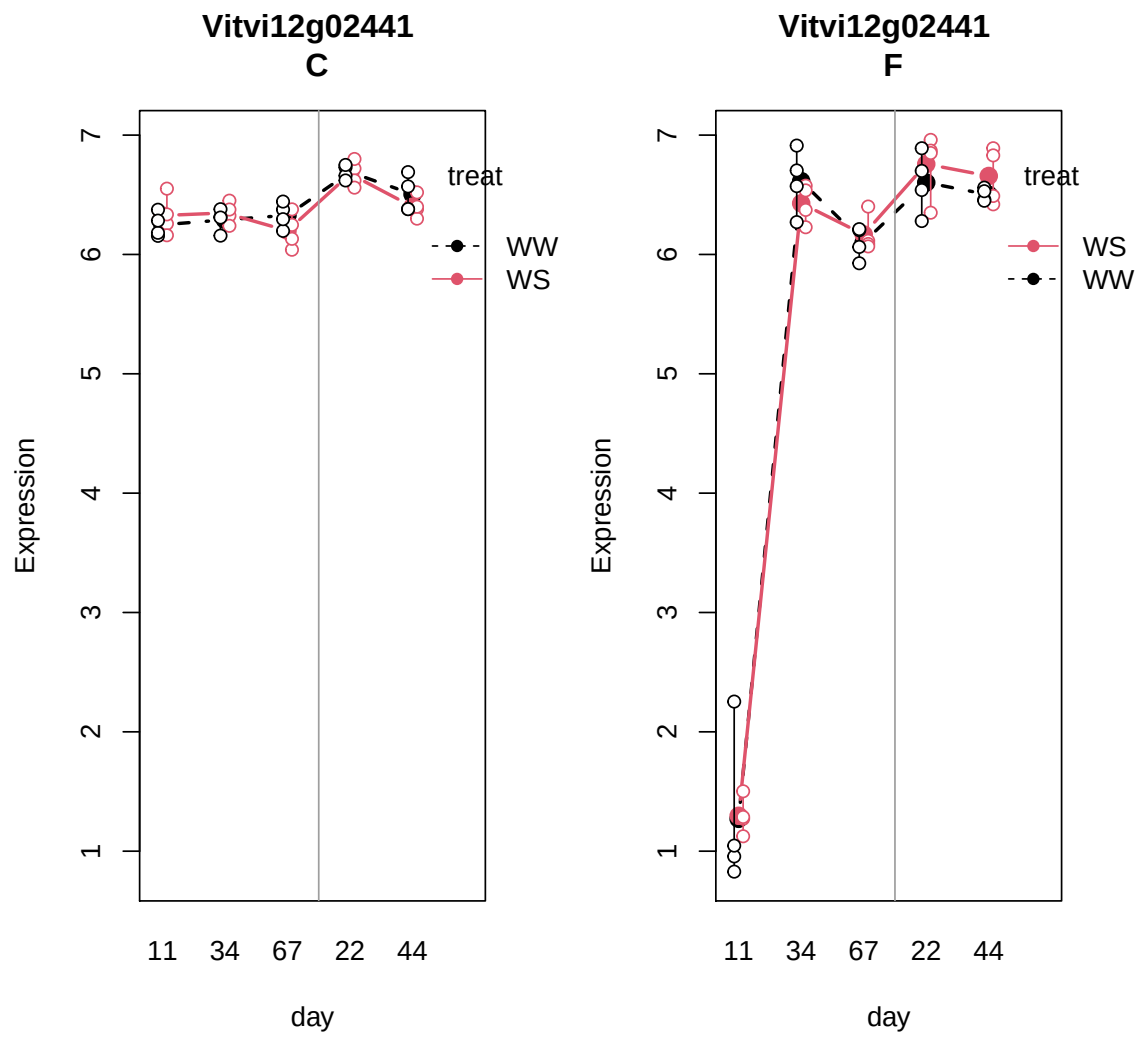
Coefficient varietyF:day34 for Vitvi12g02441.

```
> tt[varname,]
              logFC  AveExpr      t      P.Value
Vitvi12g02441  5.302641  5.468359 22.39995 8.957592e-24
              adj.P.Val      B
Vitvi12g02441 1.950452e-20 43.90185

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```




```
> fit1[varname,]$coefficients
```

```

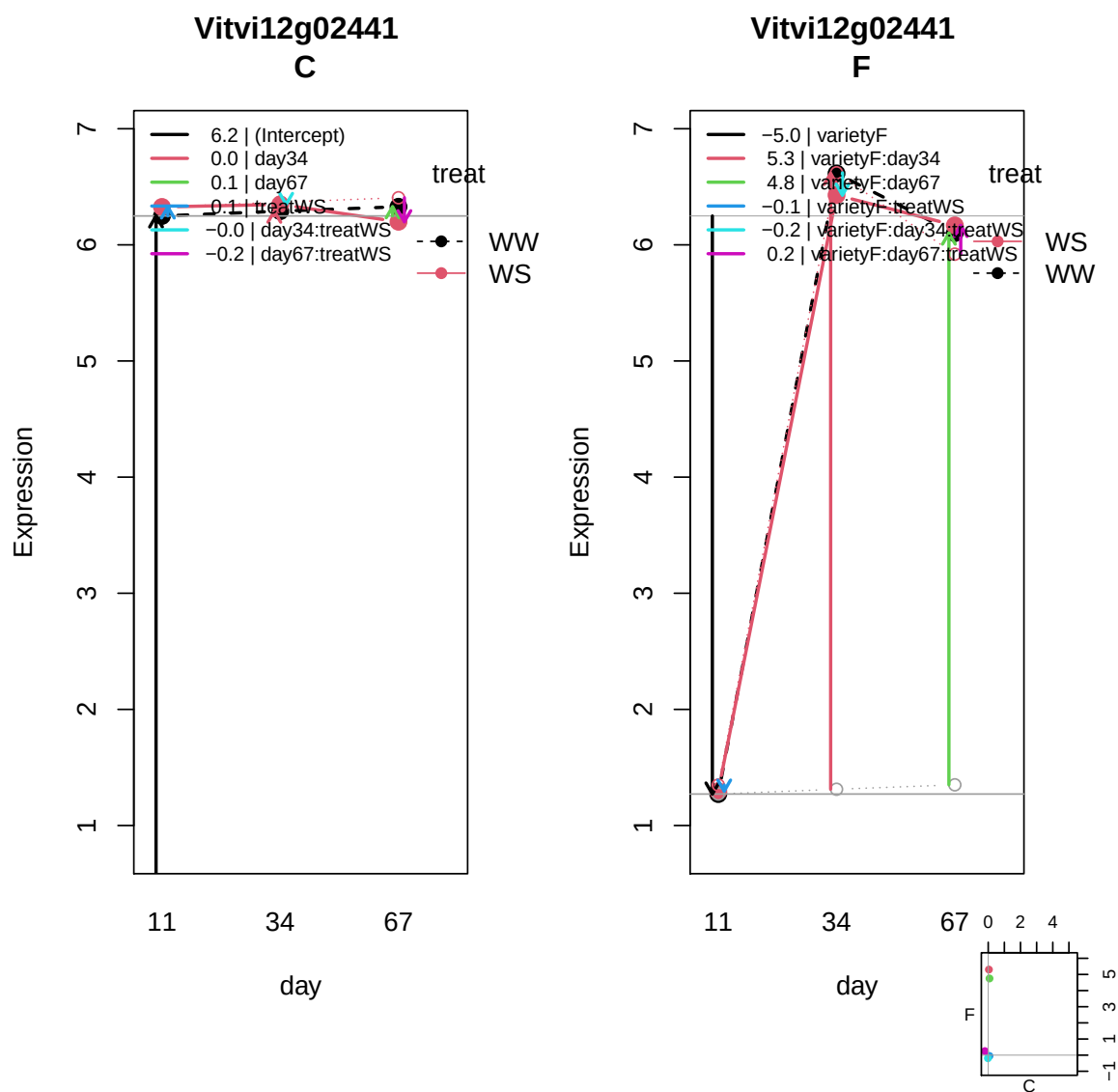
              (Intercept)  varietyF      day34      day67
Vitvi12g02441    6.248893 -4.977818  0.04124243  0.07917215
              treatWS  varietyF:day34  varietyF:day67
Vitvi12g02441  0.07751006      5.302641      4.750986
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi12g02441    -0.05232967    -0.0196895    -0.2065324
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi12g02441    -0.191883              0.2478422

```

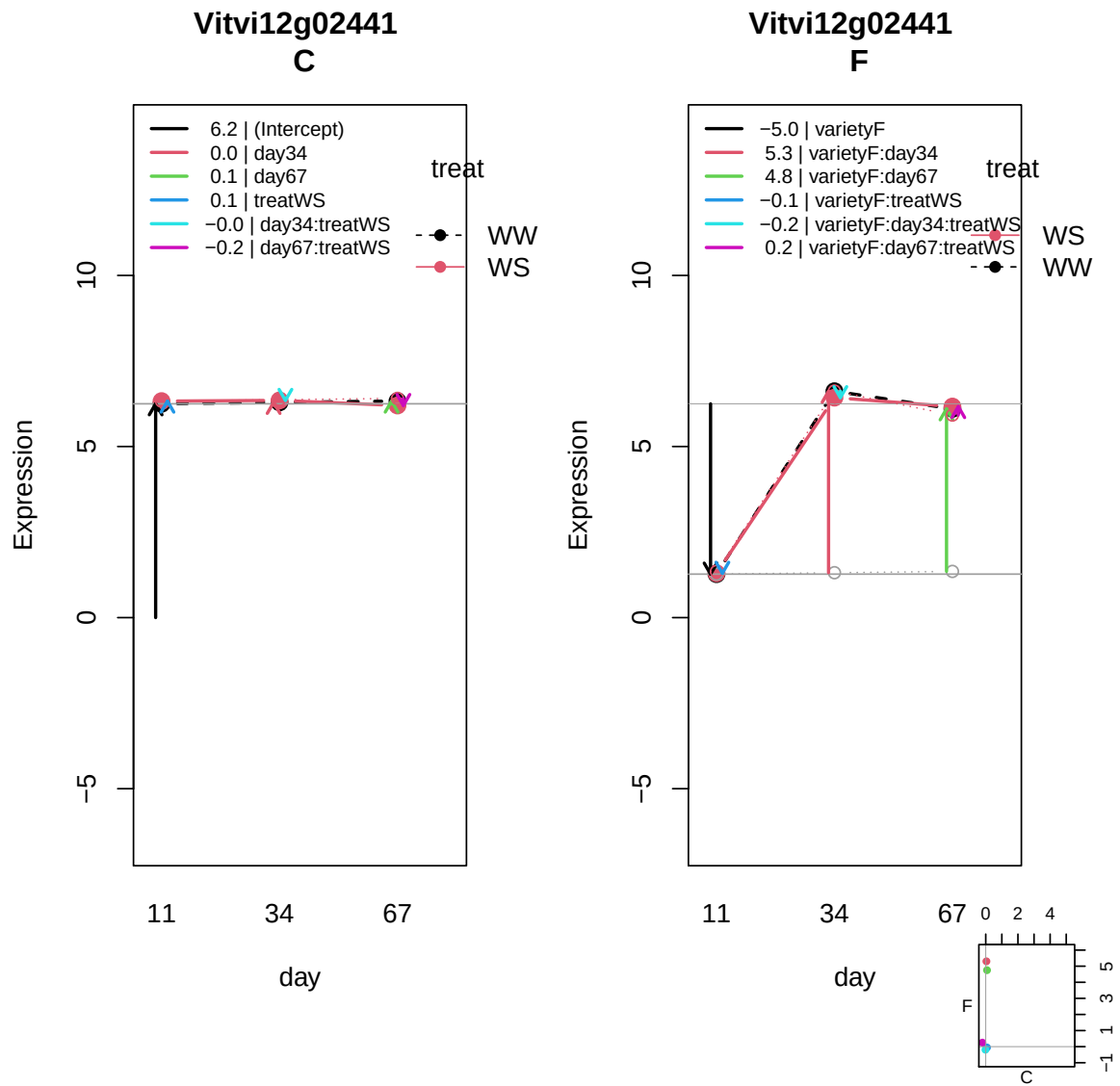
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

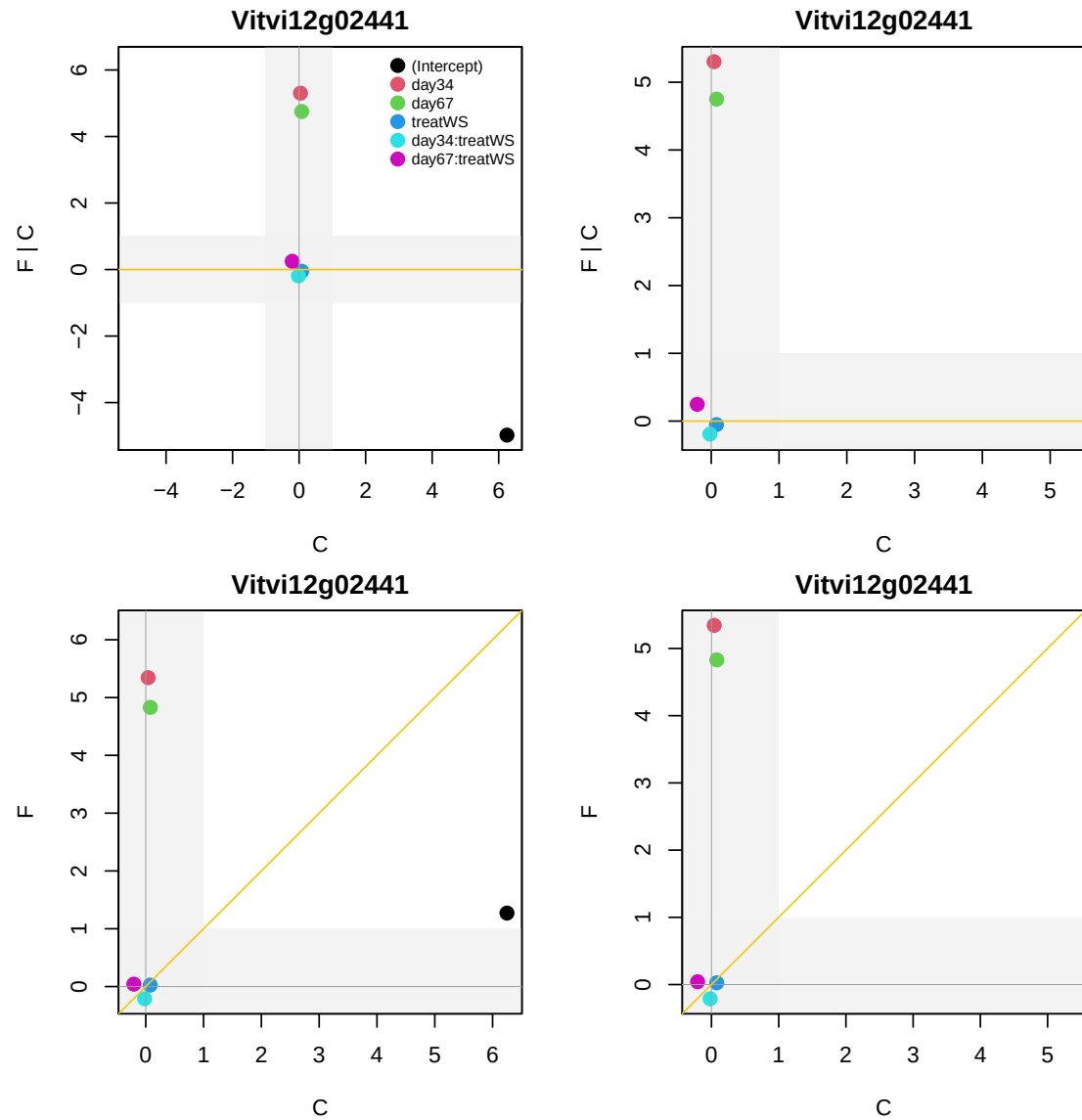


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

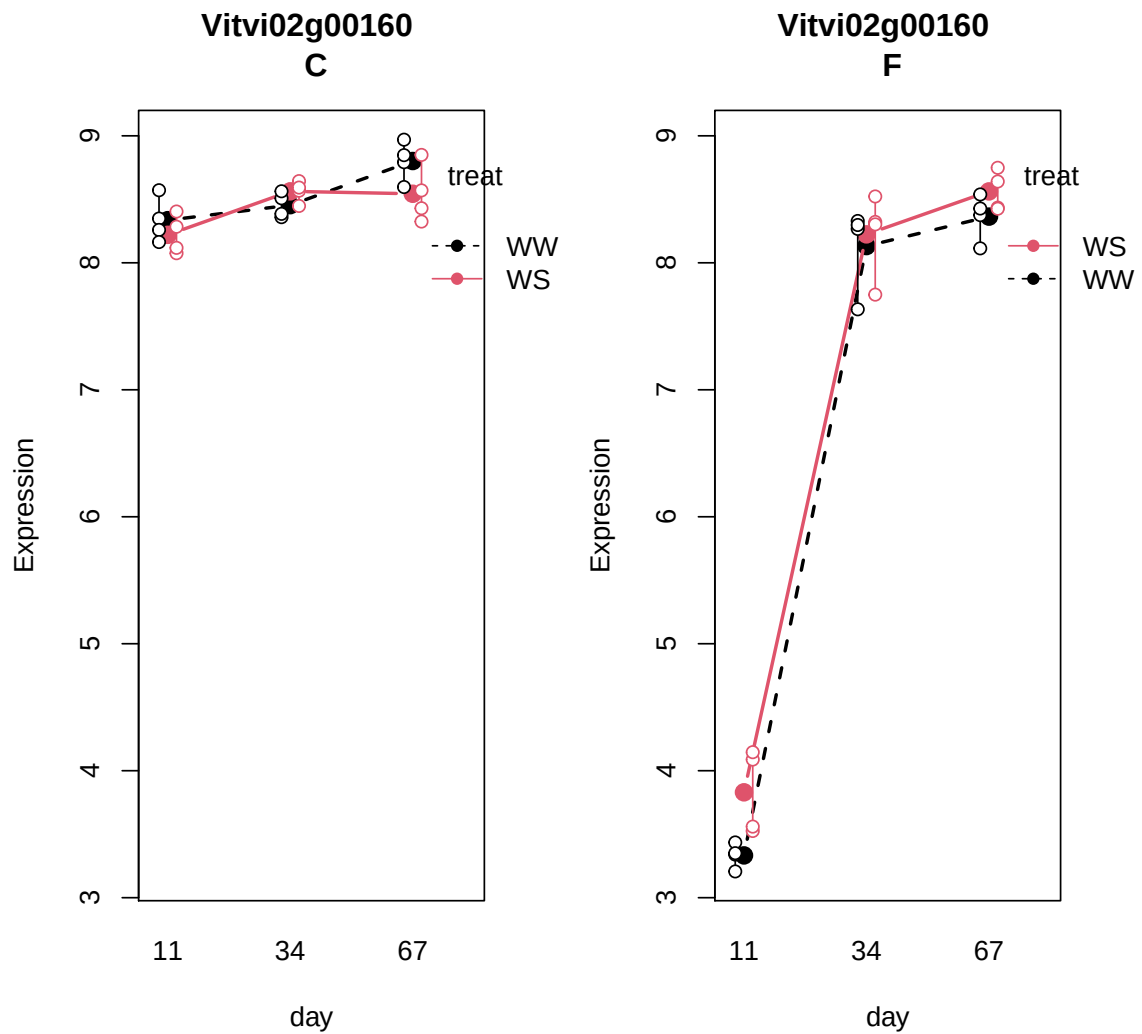


6.5.8 Vitvi02g00160

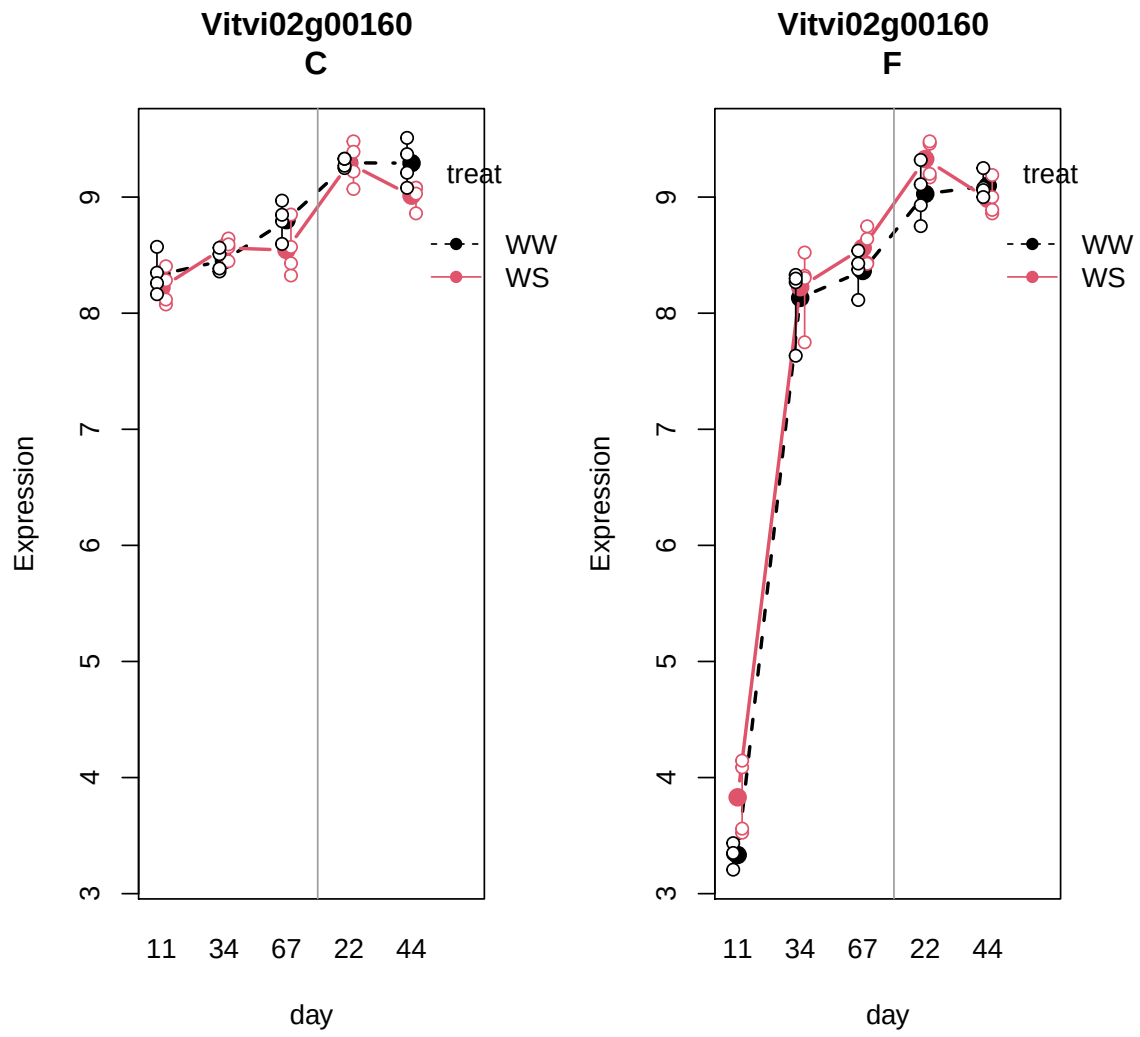
Coefficient varietyF:day34 for Vitvi02g00160.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi02g00160 4.680503 7.613536 22.10867 1.434752e-23
      adj.P.Val      B
Vitvi02g00160 2.733561e-20 43.44949

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

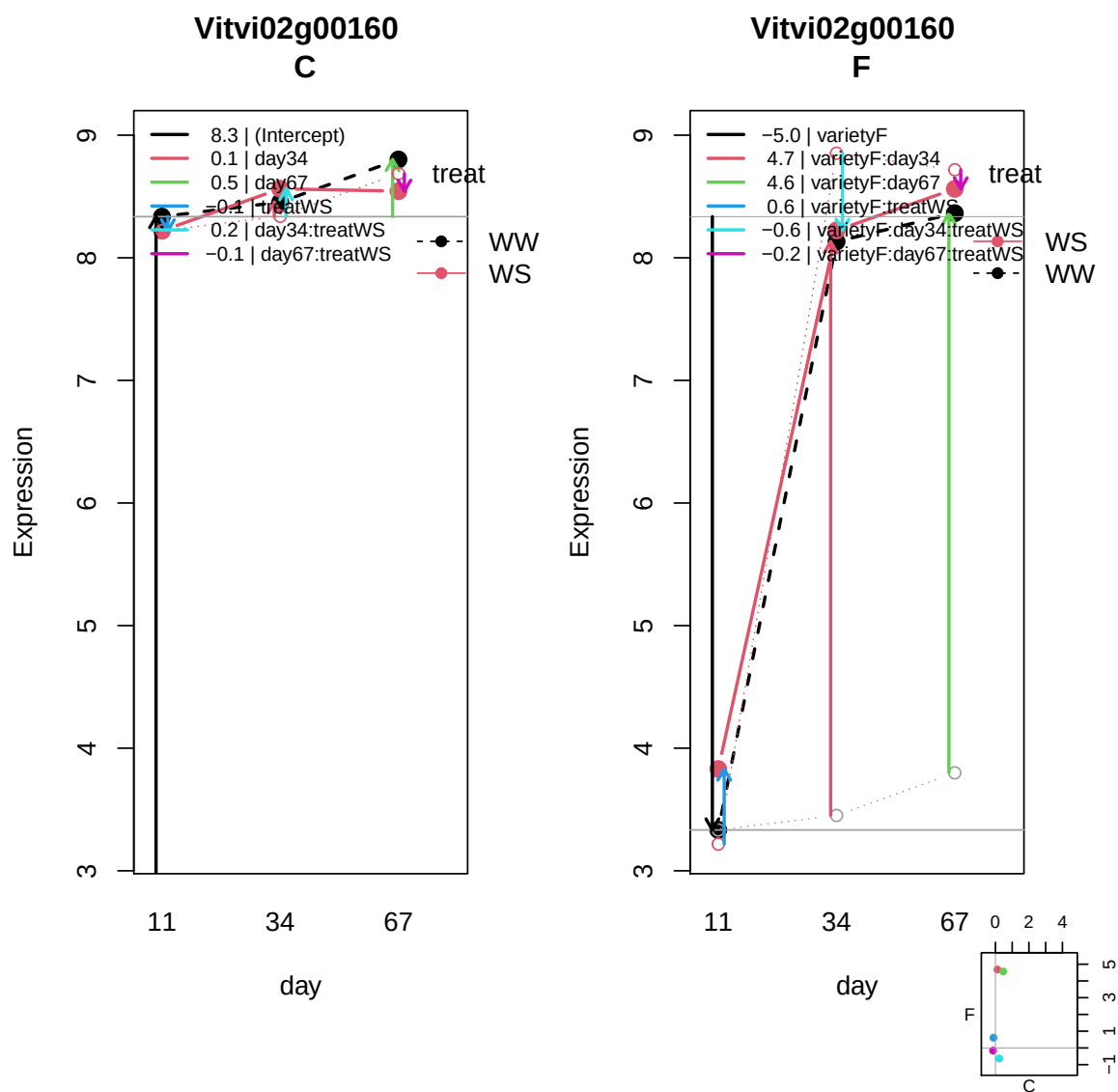
              (Intercept)  varietyF    day34    day67
Vitvi02g00160      8.335593 -5.002587 0.1183836 0.4659597
              treatWS varietyF:day34 varietyF:day67
Vitvi02g00160    -0.1152949      4.680503      4.564768
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi02g00160          0.6120862      0.2241478     -0.1426649
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi02g00160          -0.6288474          -0.1556883

```

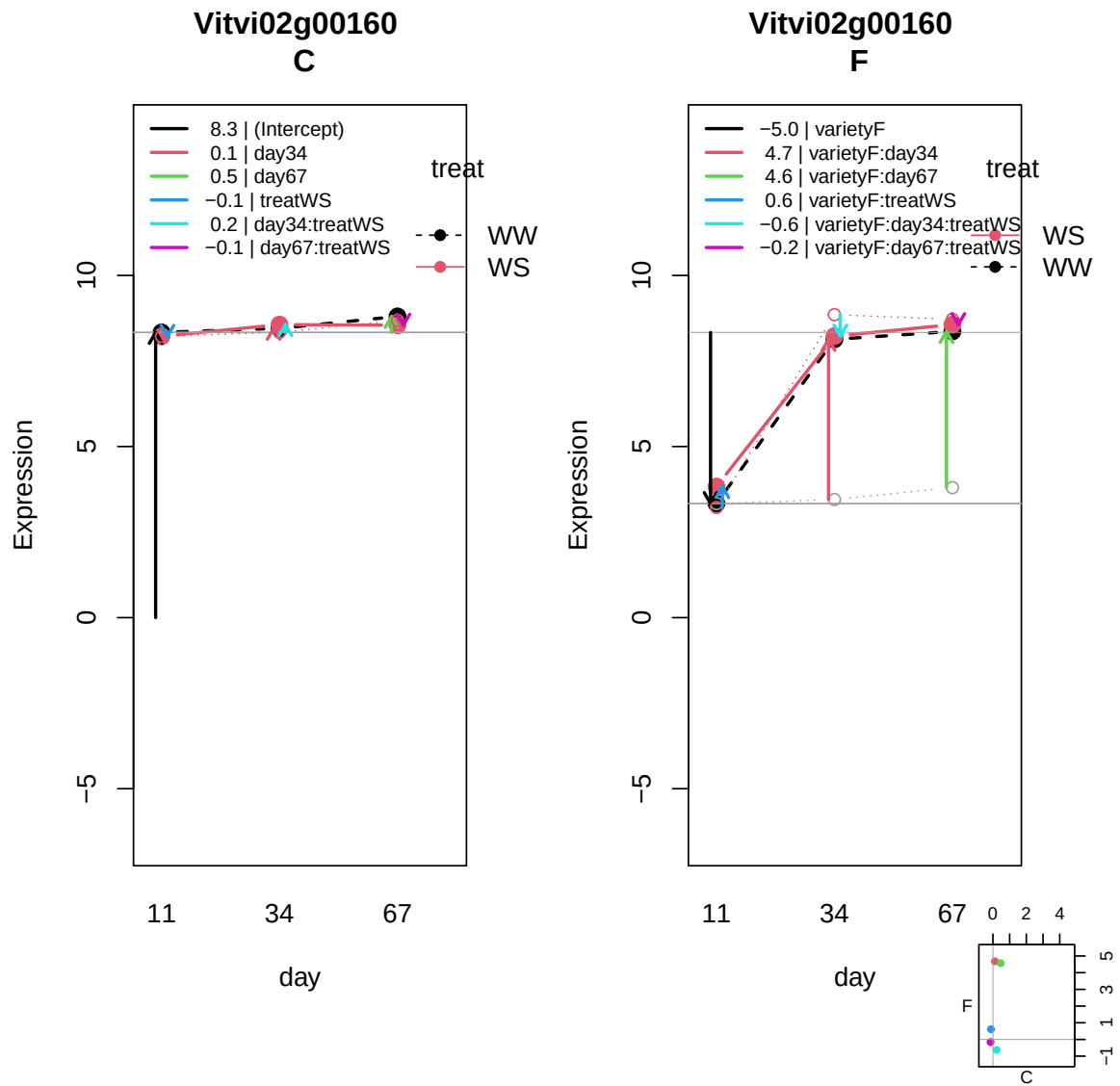
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

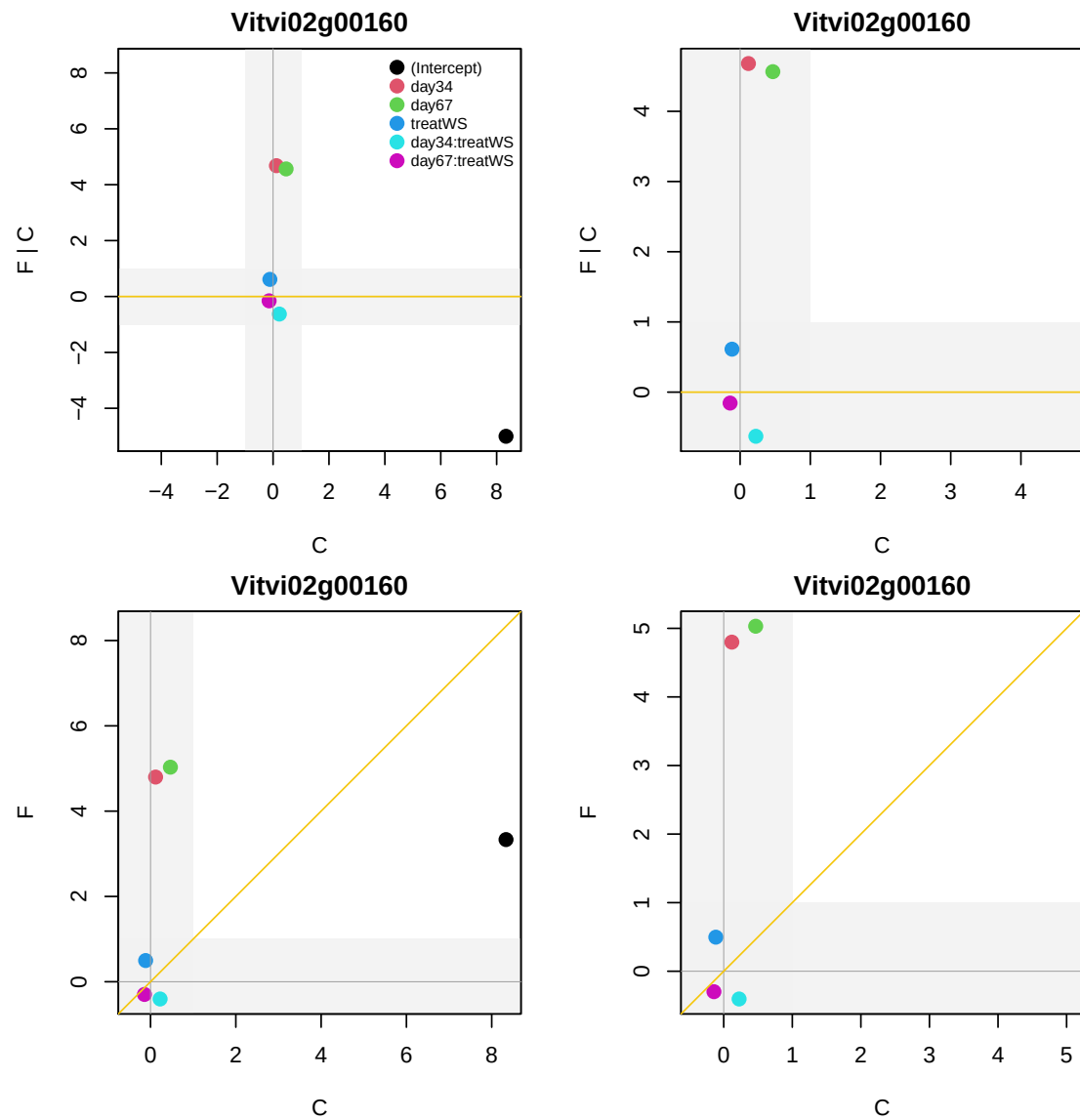


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

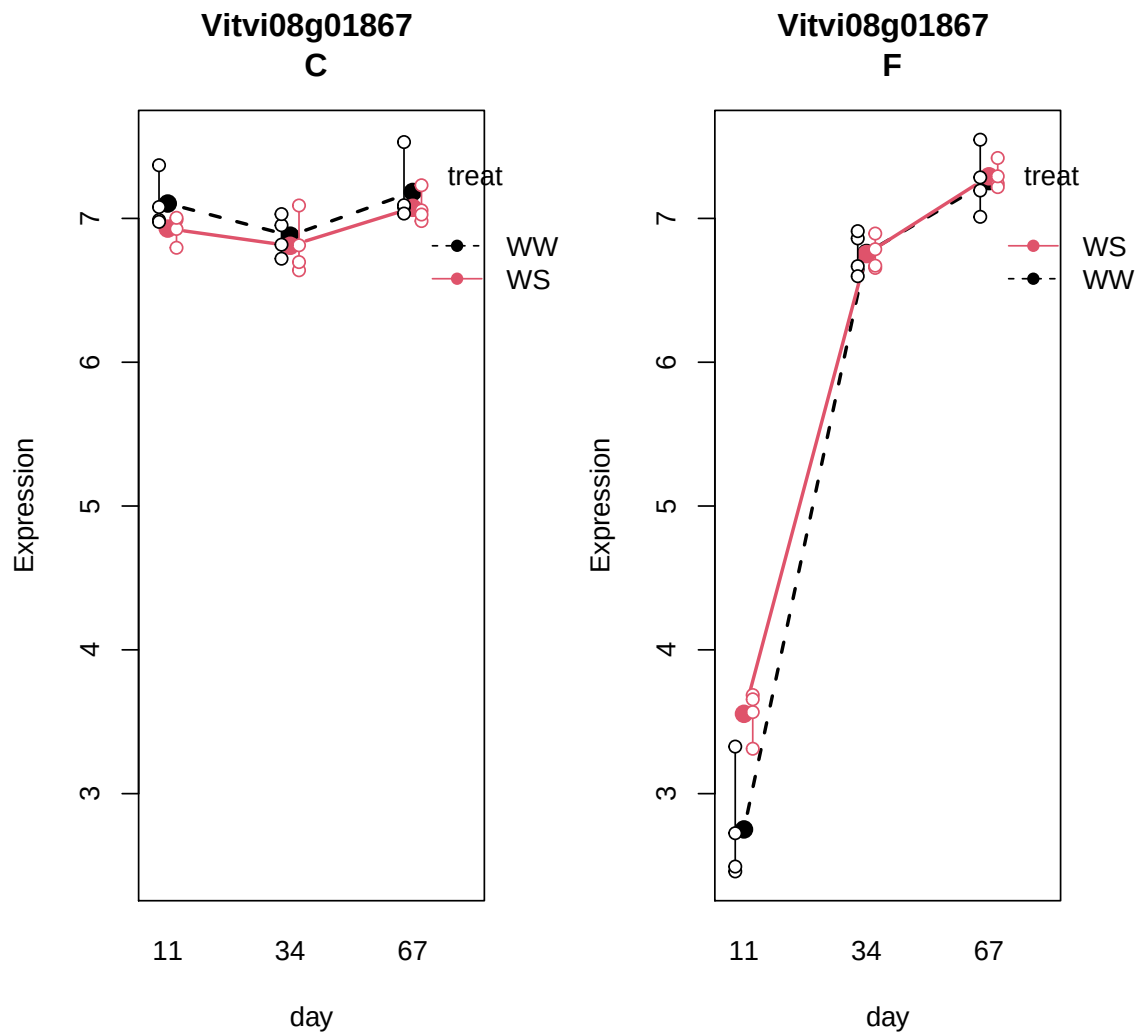


6.5.9 Vitvi08g01867

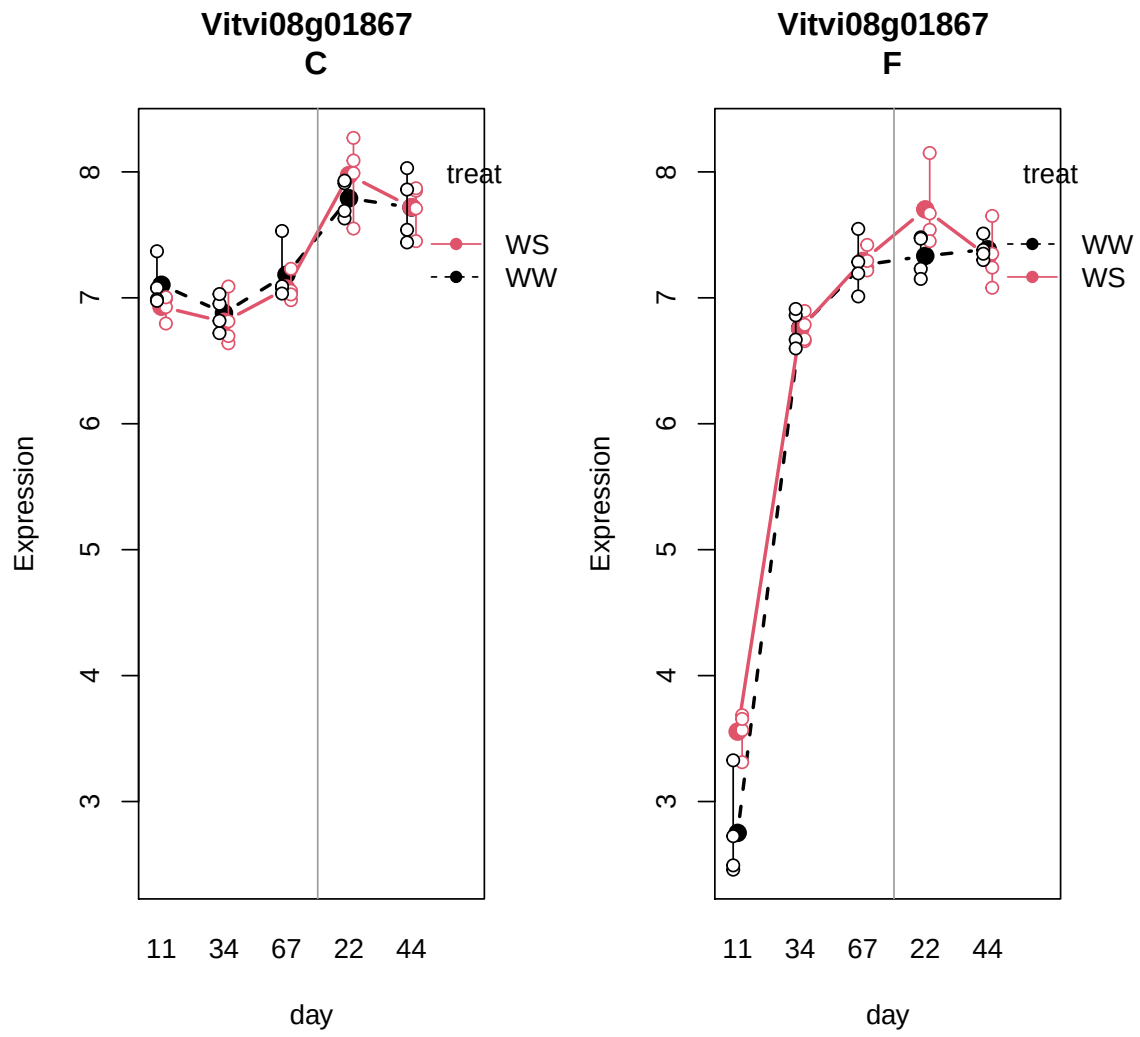
Coefficient varietyF:day34 for Vitvi08g01867.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi08g01867 4.231957 6.362479 21.81524 2.318544e-23
      adj.P.Val      B
Vitvi08g01867 3.926583e-20 42.98794

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

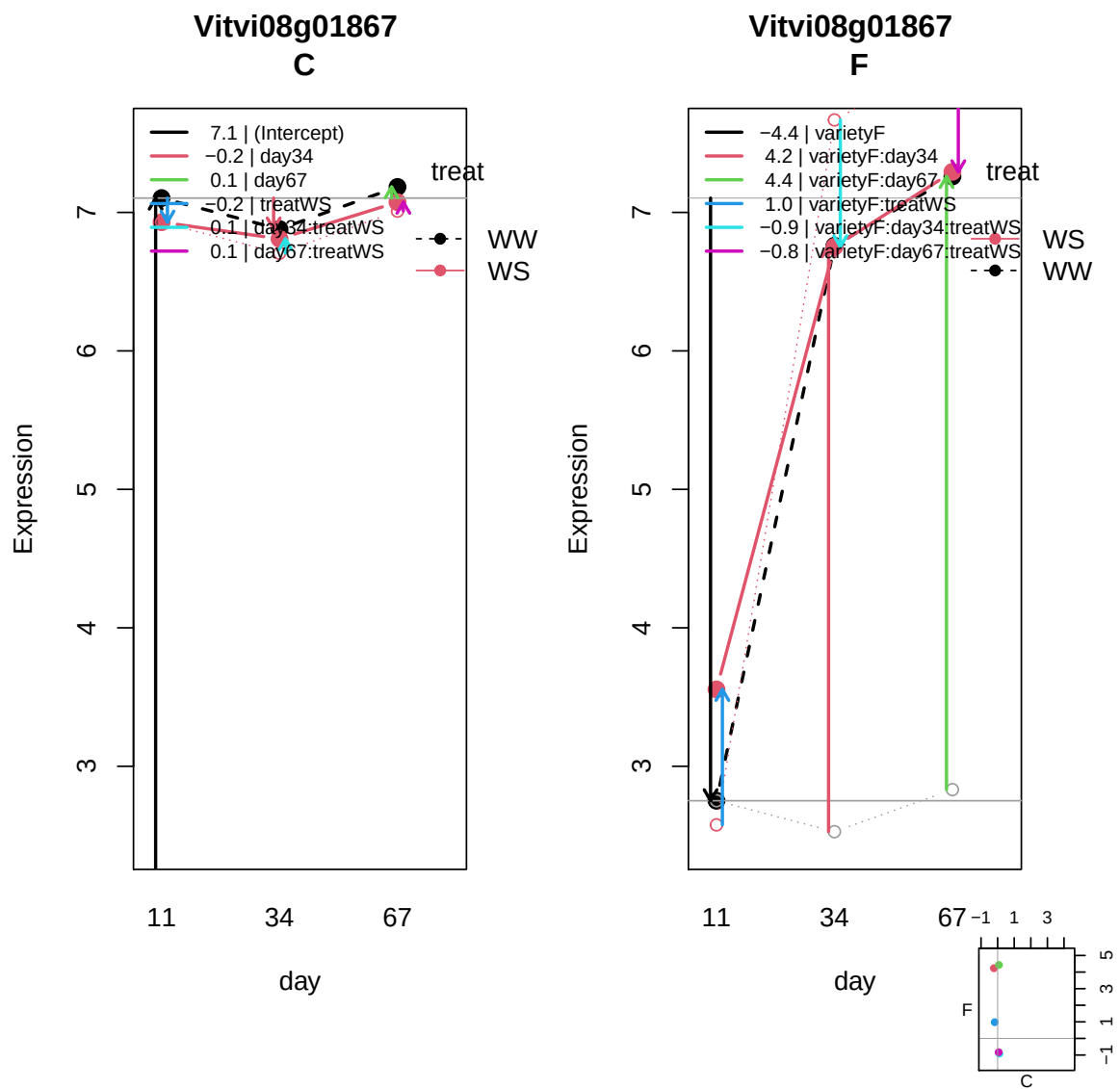
              (Intercept)  varietyF      day34      day67
Vitvi08g01867      7.103405 -4.352239 -0.2235626 0.0804419
              treatWS varietyF:day34 varietyF:day67
Vitvi08g01867    -0.1742414      4.231957      4.427784
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi08g01867           0.9783226      0.1040374      0.06415647
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi08g01867           -0.9157741           -0.8348168

```

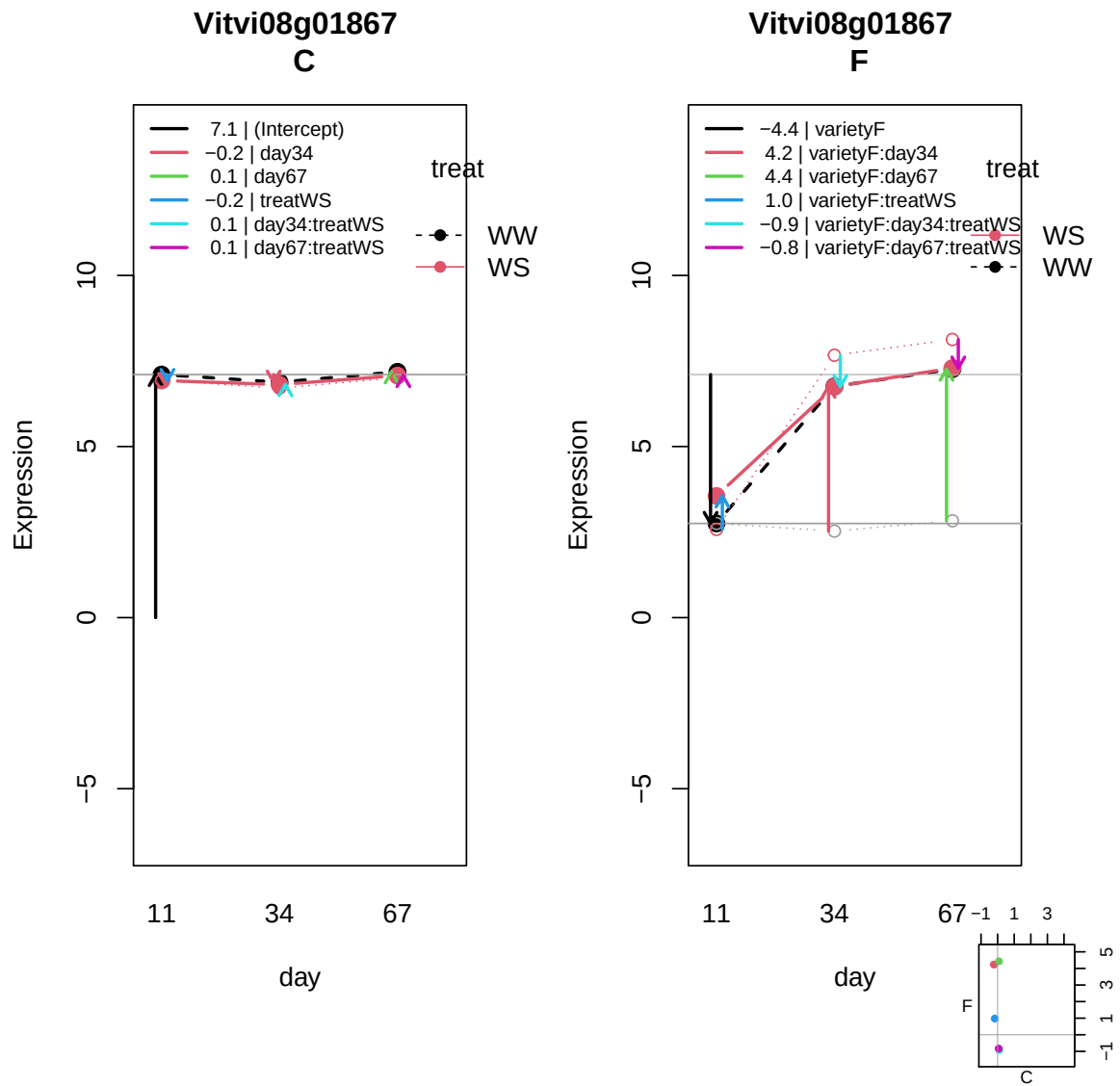
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

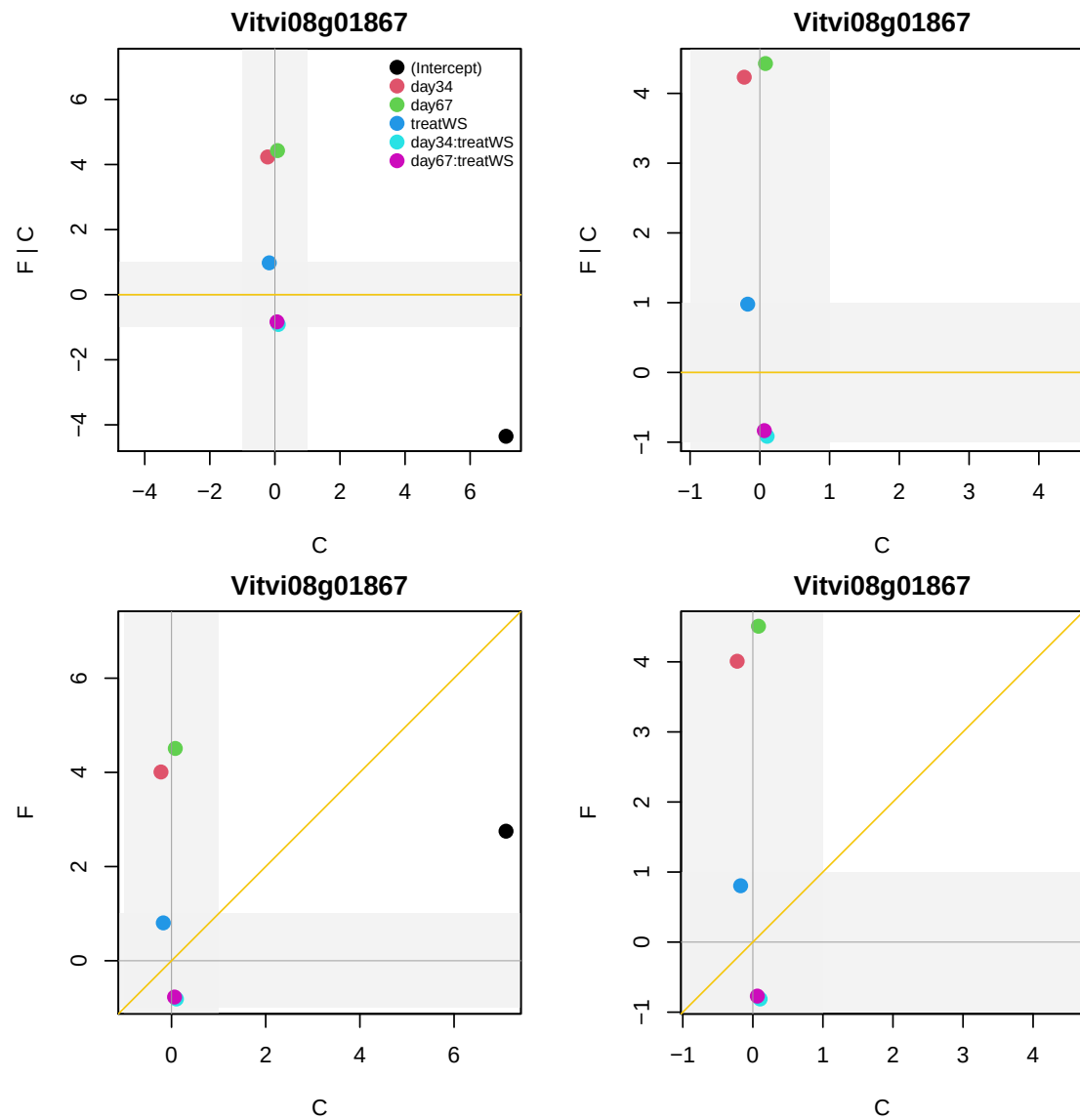


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

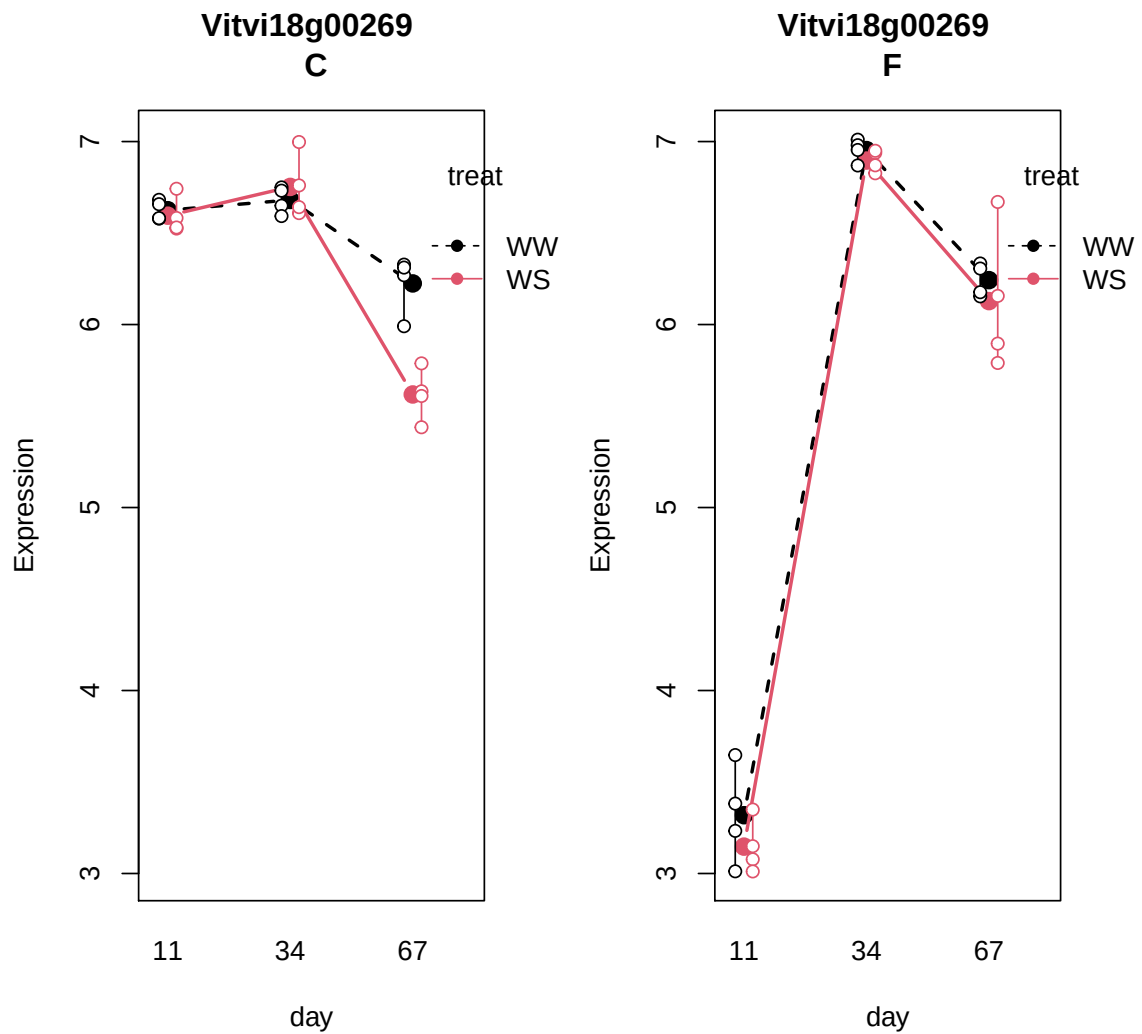


6.5.10 Vitvi18g00269

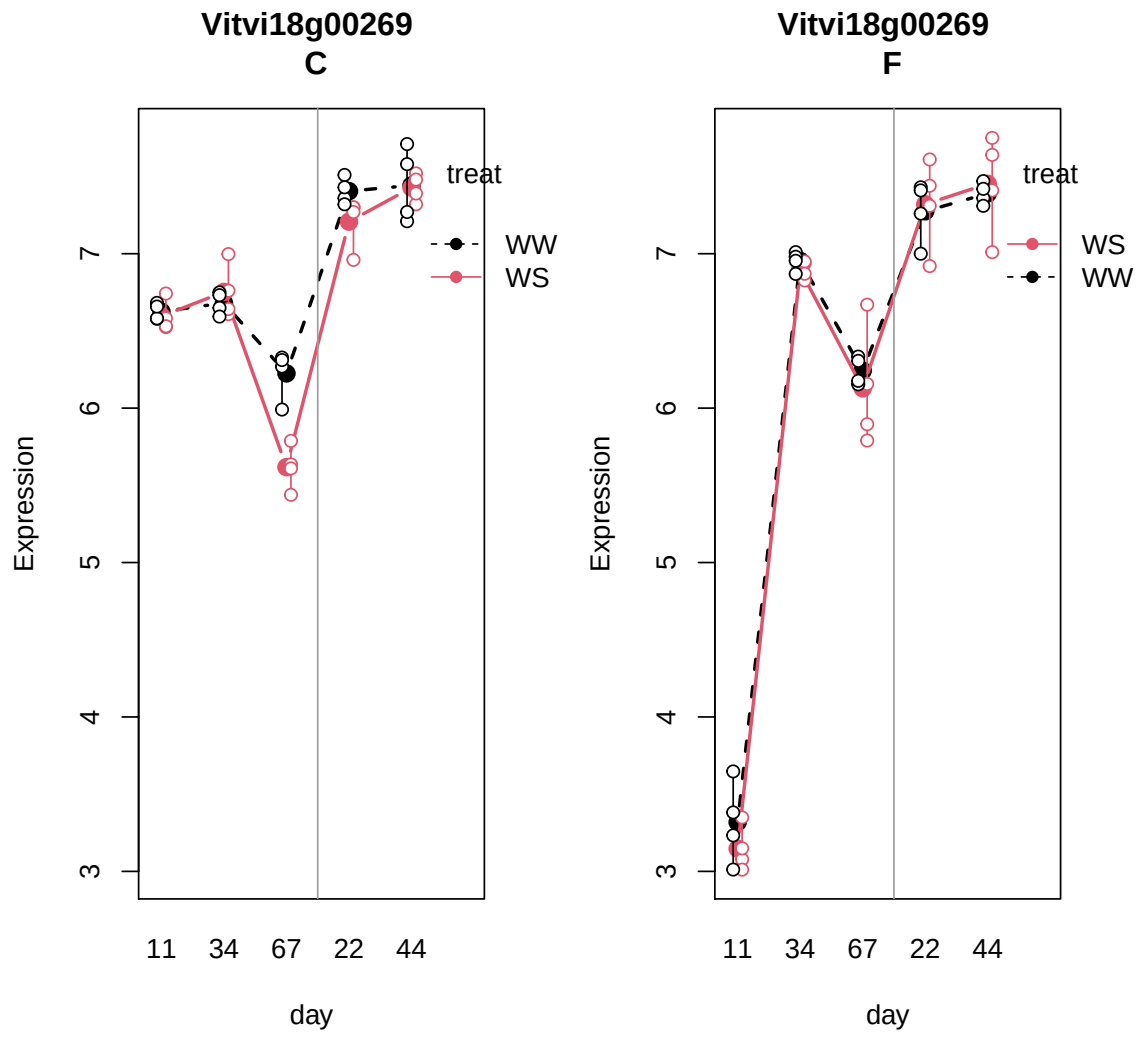
Coefficient varietyF:day34 for Vitvi18g00269.

```
> tt[varname,]
      logFC AveExpr      t    P.Value
Vitvi18g00269 3.578937 5.931697 20.55317 1.94908e-22
      adj.P.Val      B
Vitvi18g00269 2.719665e-19 40.93278

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

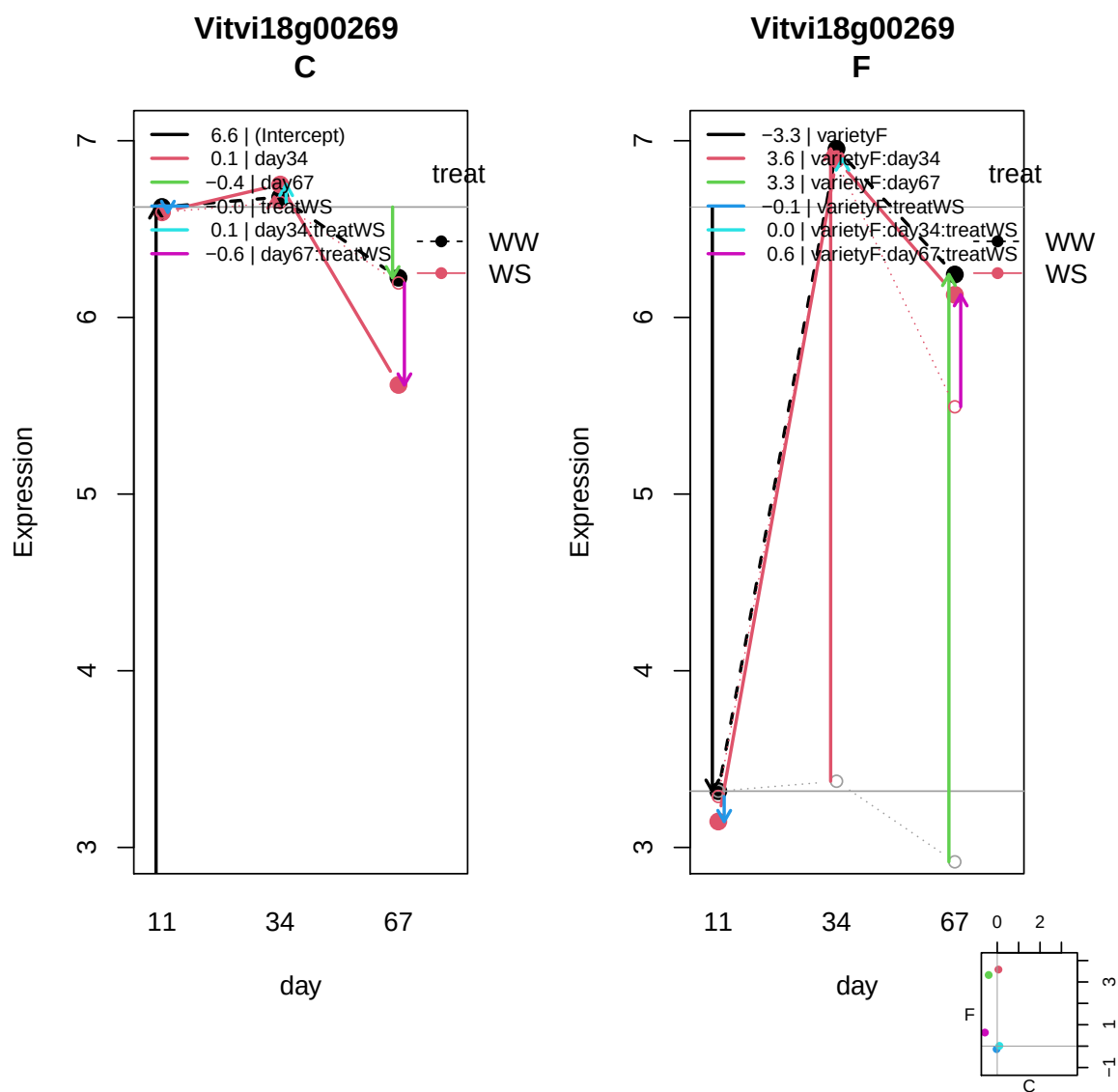
              (Intercept)  varietyF      day34      day67
Vitvi18g00269      6.624853 -3.306365  0.05596698 -0.4001566
              treatWS  varietyF:day34  varietyF:day67
Vitvi18g00269    -0.03004778    3.578937    3.324252
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi18g00269      -0.141646    0.1012889   -0.5768947
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi18g00269              0.01309042              0.6340429

```

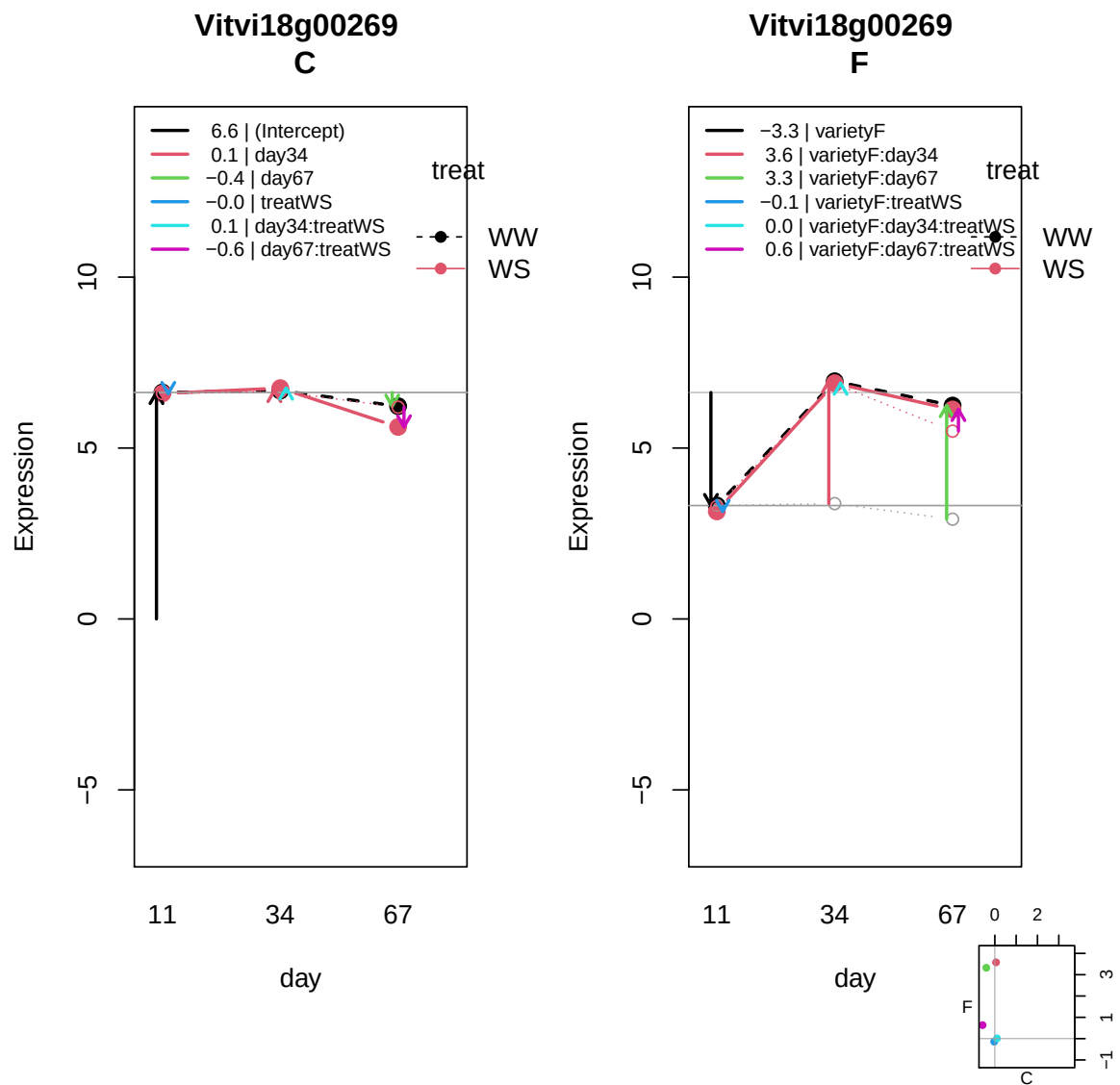
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

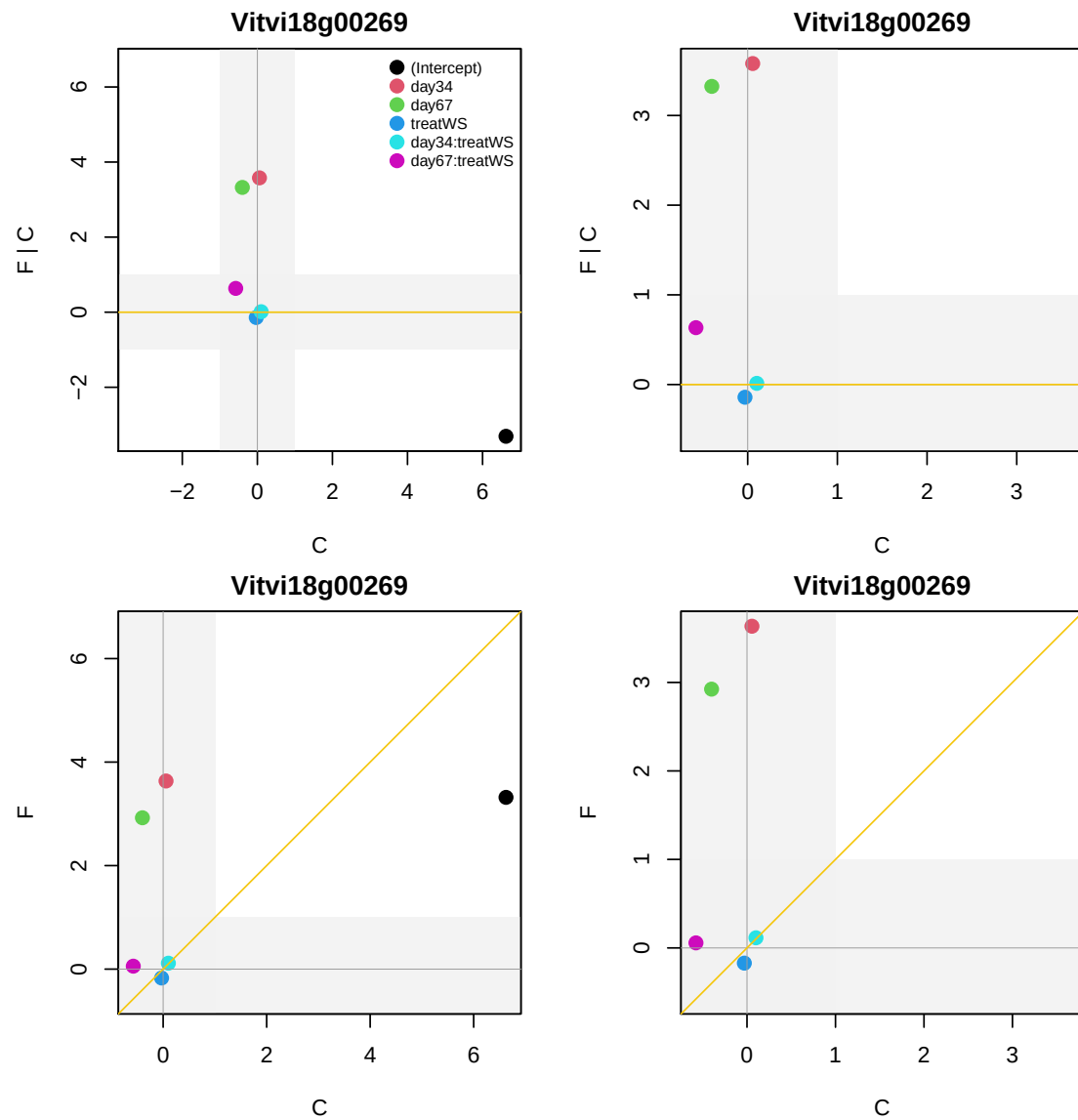



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



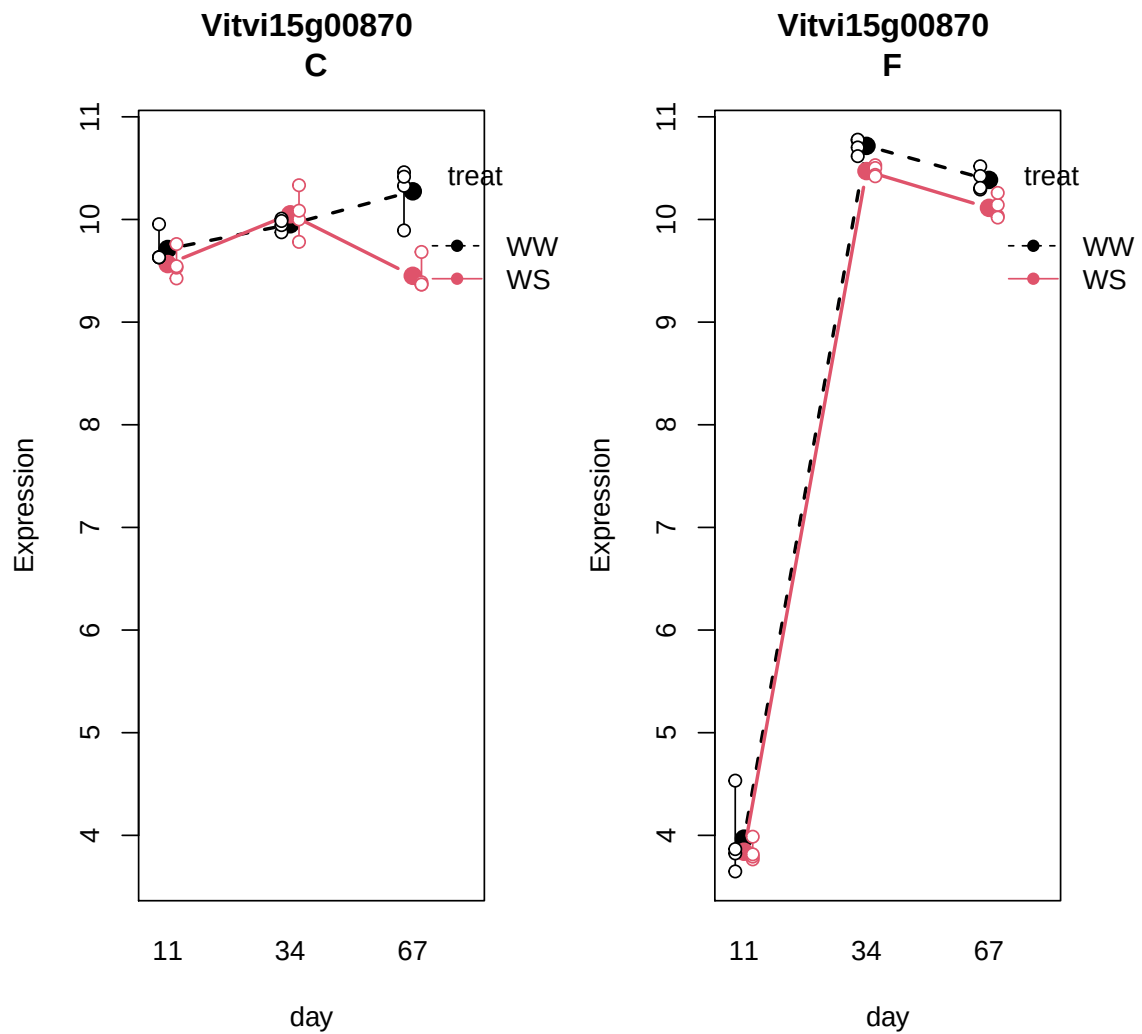
6.6 varietyF:day67

6.6.1 Vitvi15g00870

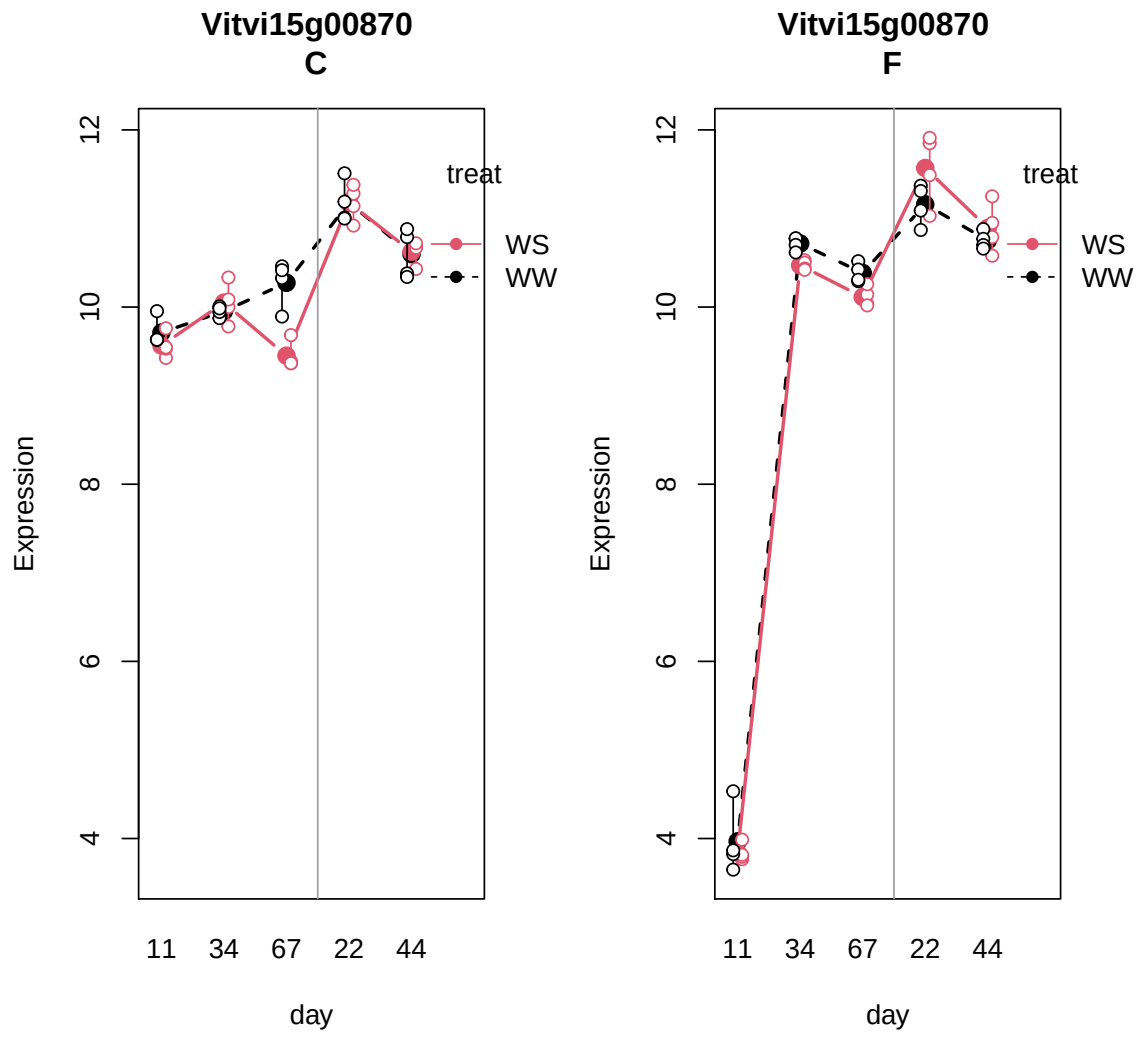
Coefficient varietyF:day67 for Vitvi15g00870.

```
> tt[varname,]
      logFC  AveExpr      t      P.Value
Vitvi15g00870 5.855476 9.041797 32.45283 1.071577e-29
      adj.P.Val      B
Vitvi15g00870 1.633298e-25 56.49043

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

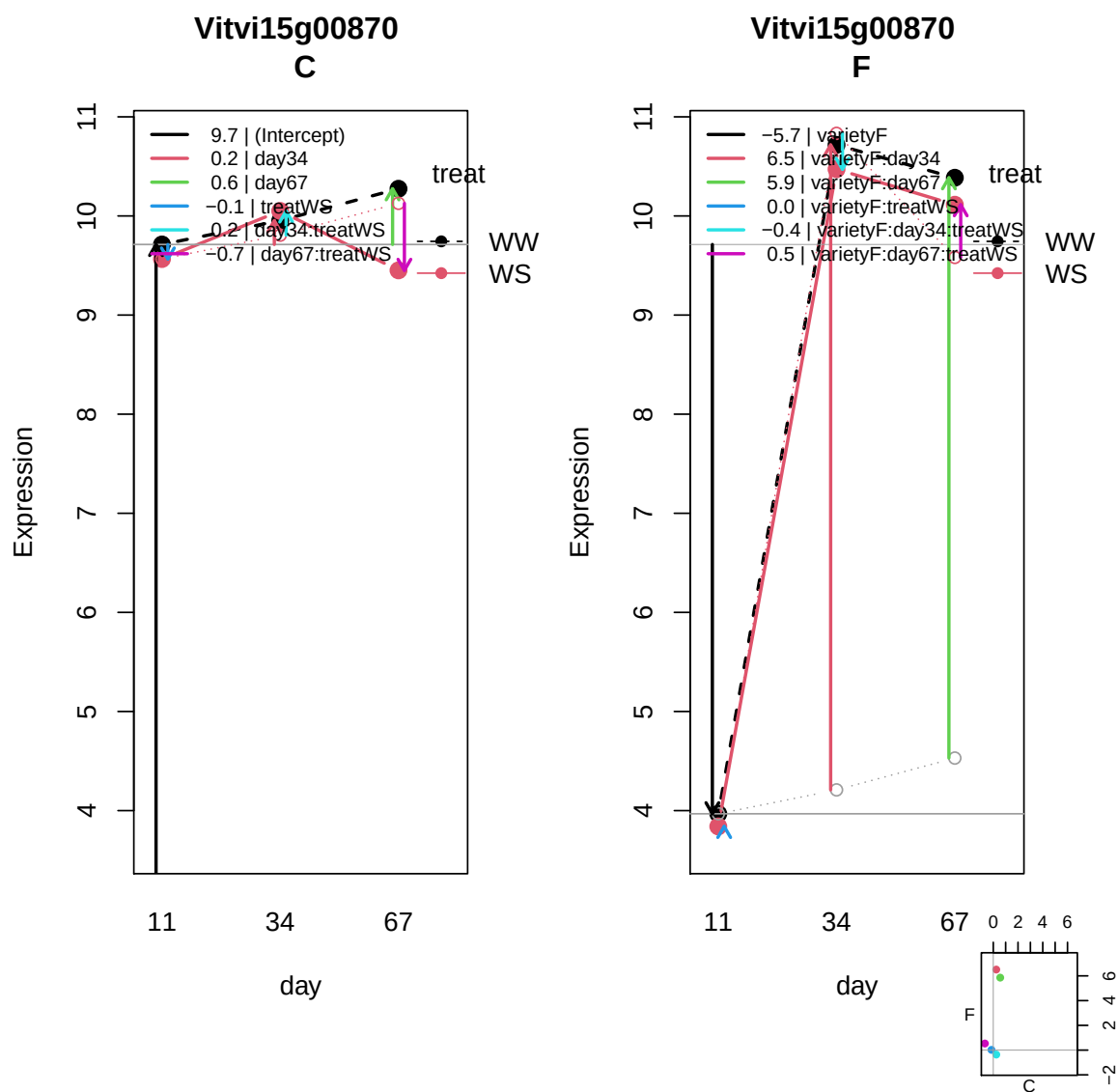
              (Intercept)  varietyF      day34      day67
Vitvi15g00870      9.712176 -5.744264  0.2411027  0.5620365
              treatWS  varietyF:day34  varietyF:day67
Vitvi15g00870     -0.1468785      6.50791      5.855476
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi15g00870      0.01930059  0.2438981     -0.6761894
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi15g00870      -0.3619446                      0.5316046

```

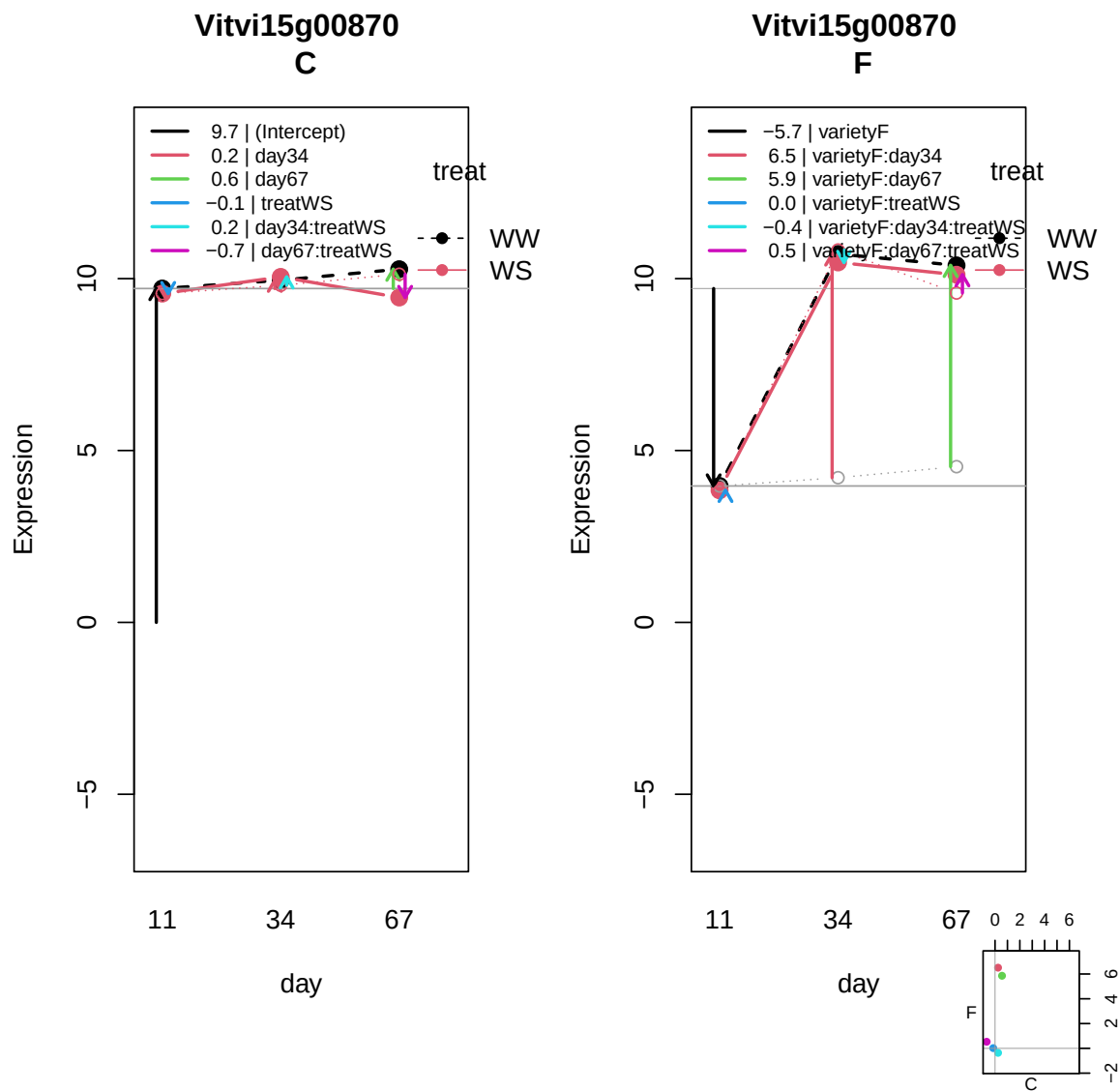
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

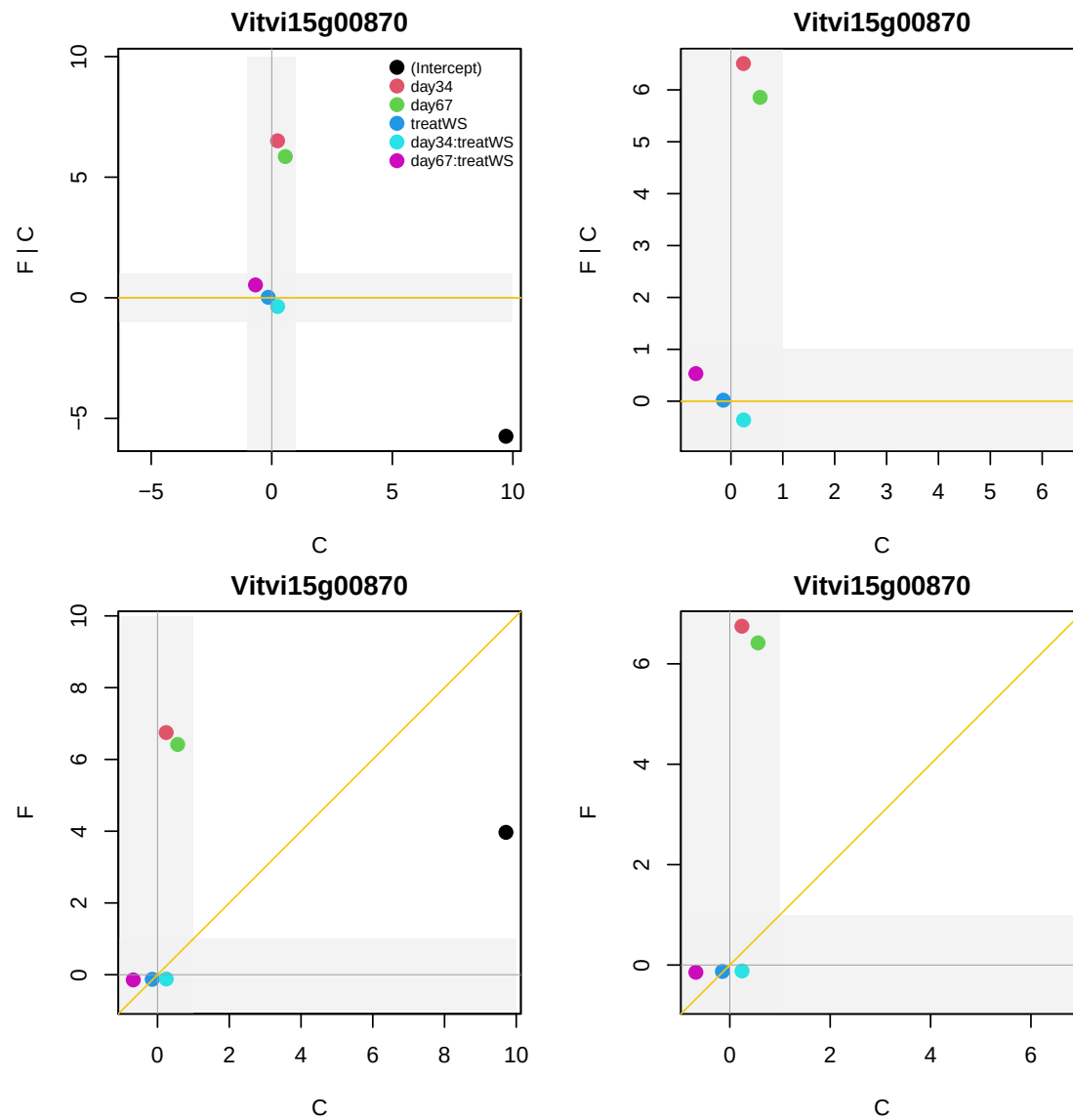


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

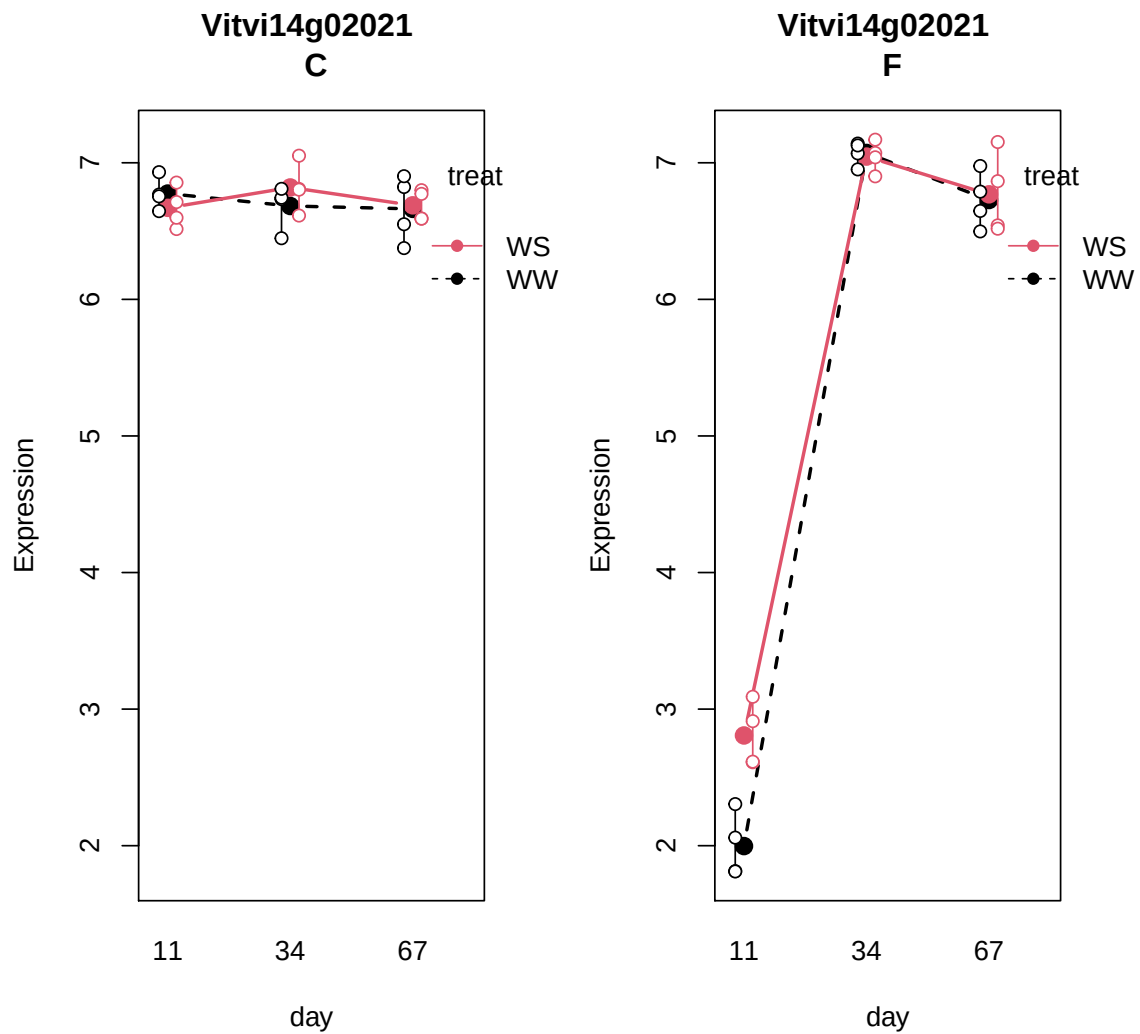


6.6.2 Vitvi14g02021

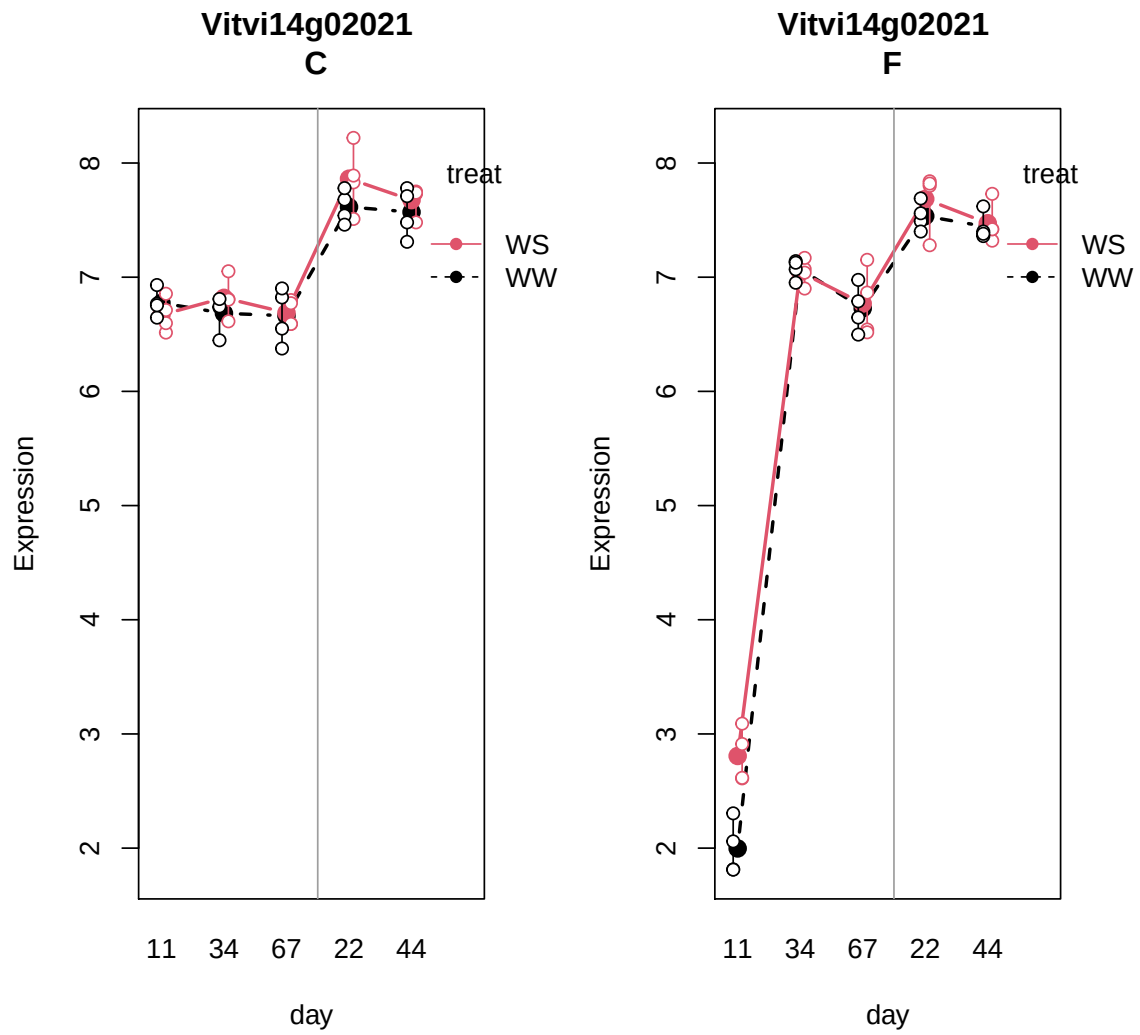
Coefficient varietyF:day67 for Vitvi14g02021.

```
> tt[varname,]
              logFC  AveExpr      t      P.Value
Vitvi14g02021  4.842459  6.059683 25.56243 7.385601e-26
              adj.P.Val      B
Vitvi14g02021  5.628566e-22 48.38671

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

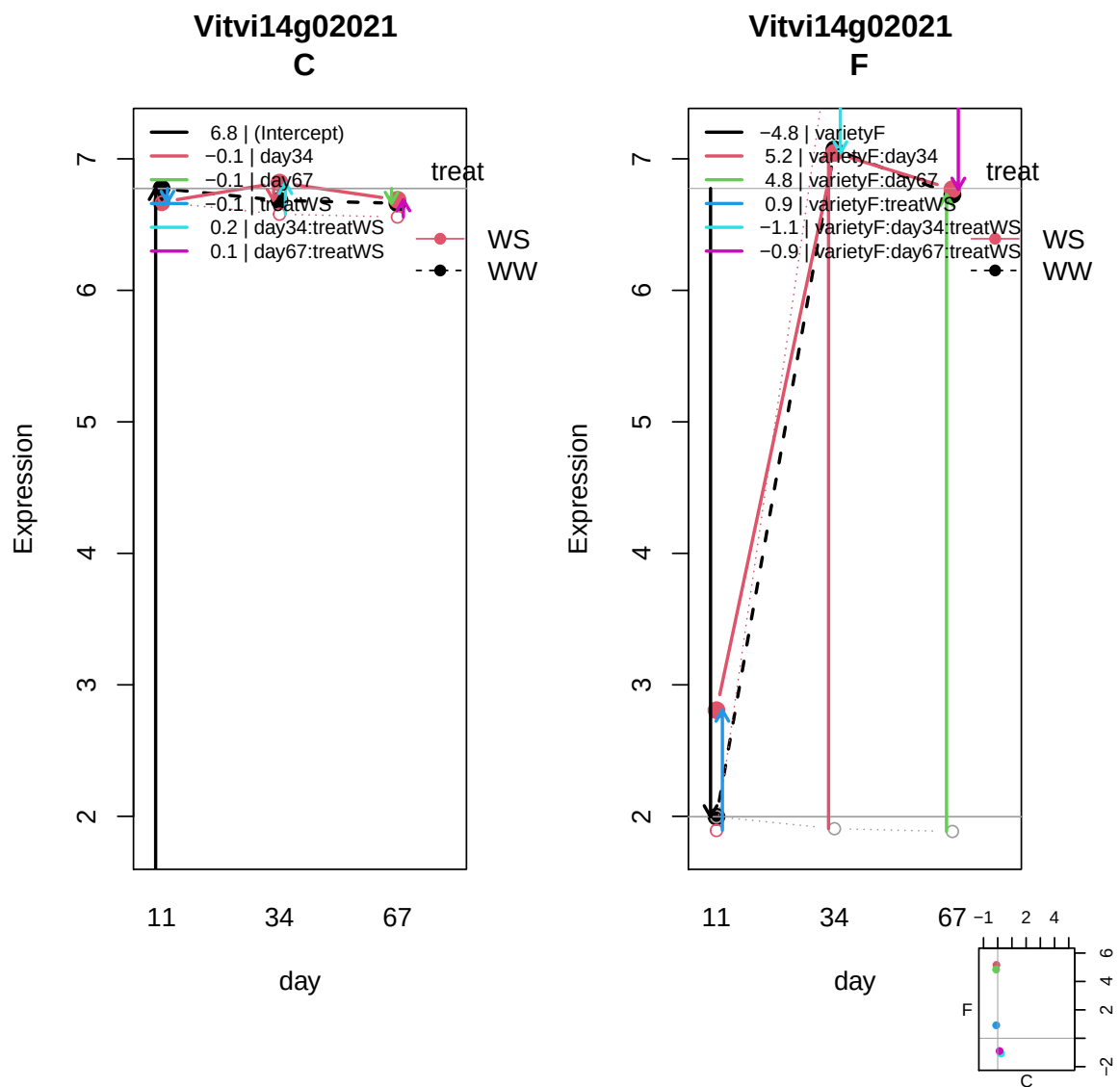
              (Intercept)  varietyF      day34      day67
Vitvi14g02021    6.774623 -4.777409 -0.09111036 -0.1122672
              treatWS varietyF:day34 varietyF:day67
Vitvi14g02021  -0.1046253    5.165862    4.842459
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi14g02021      0.9145095    0.2403122    0.1307239
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi14g02021      -1.07683      -0.8989803

```

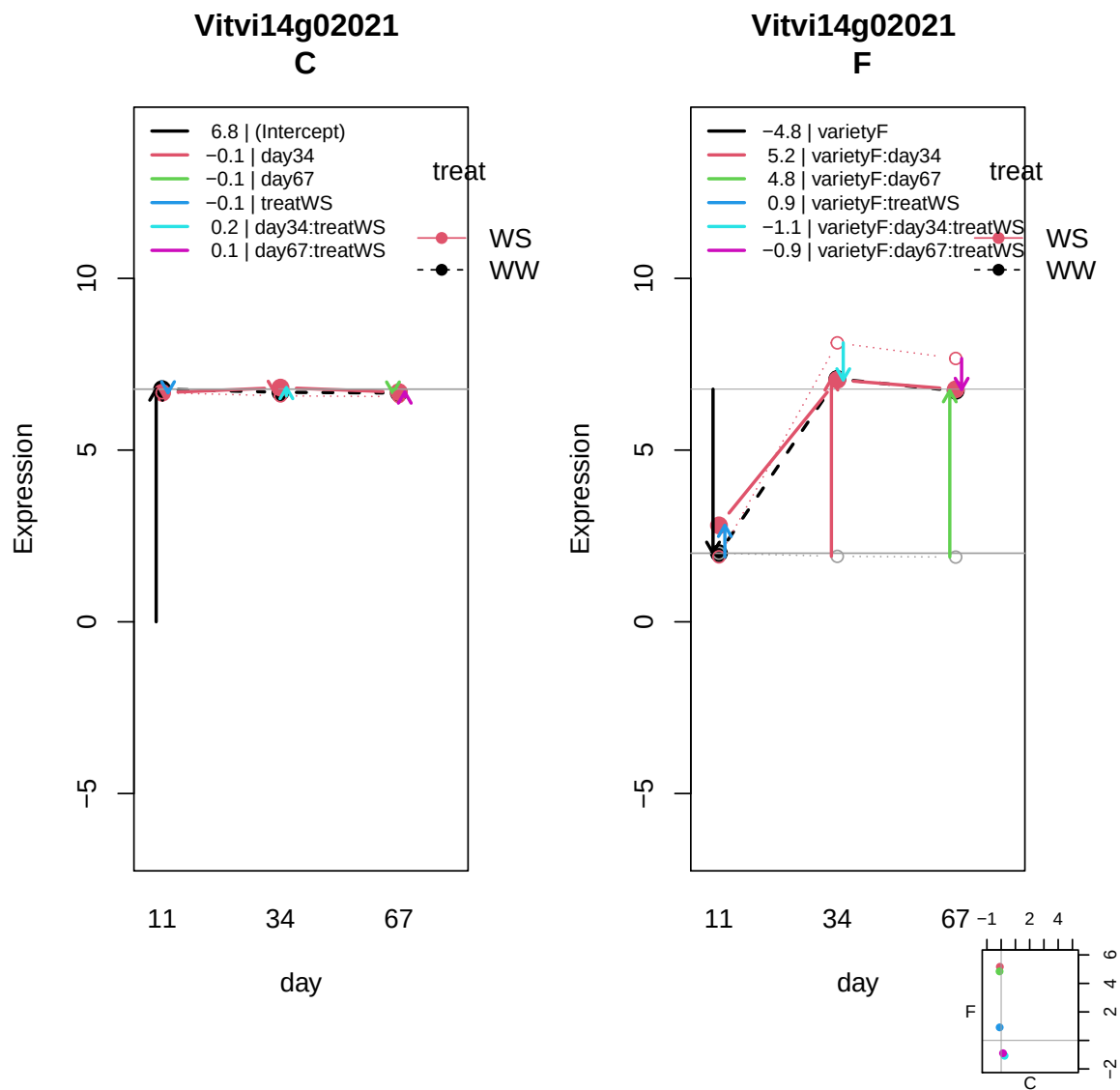
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

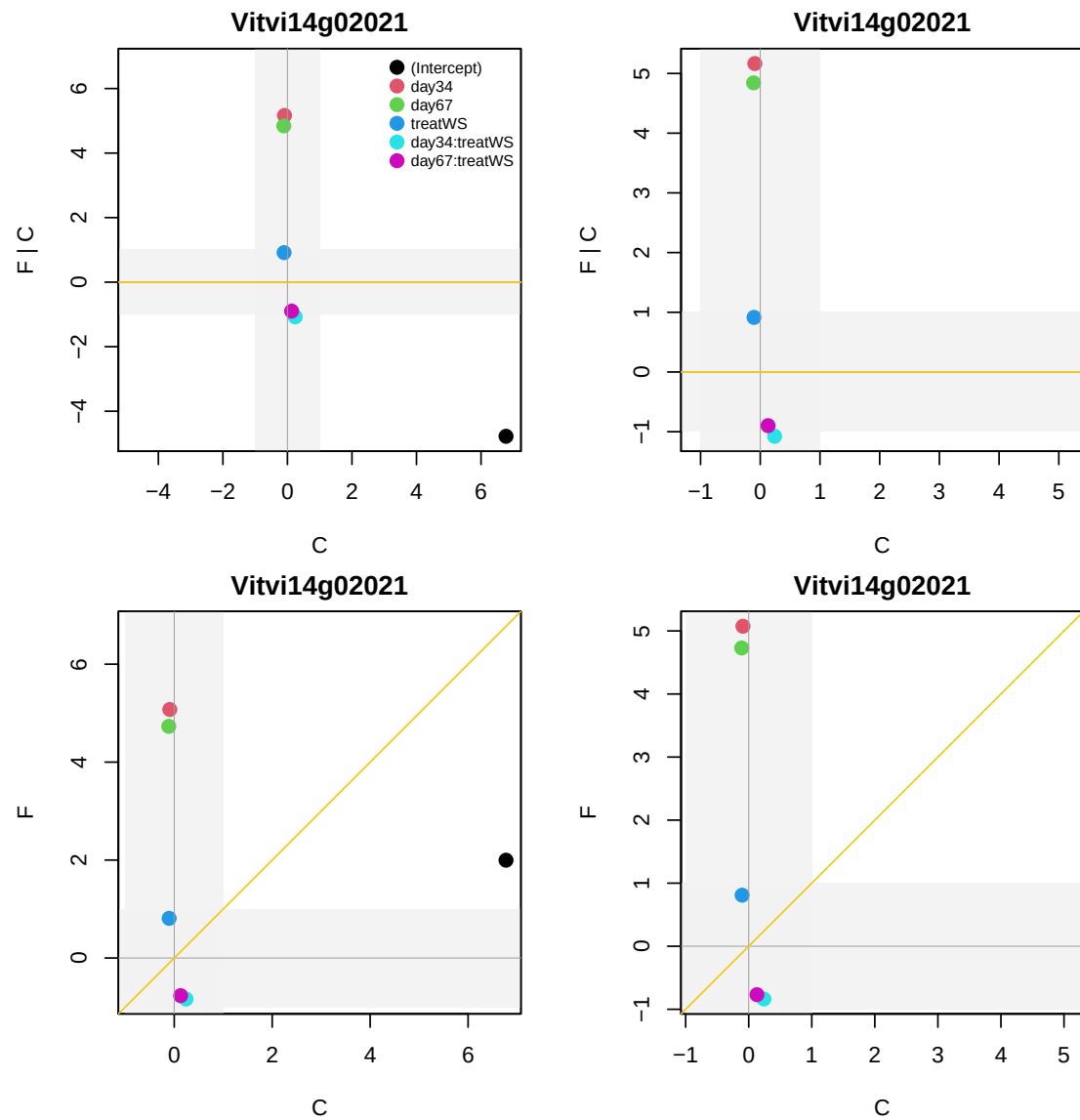


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

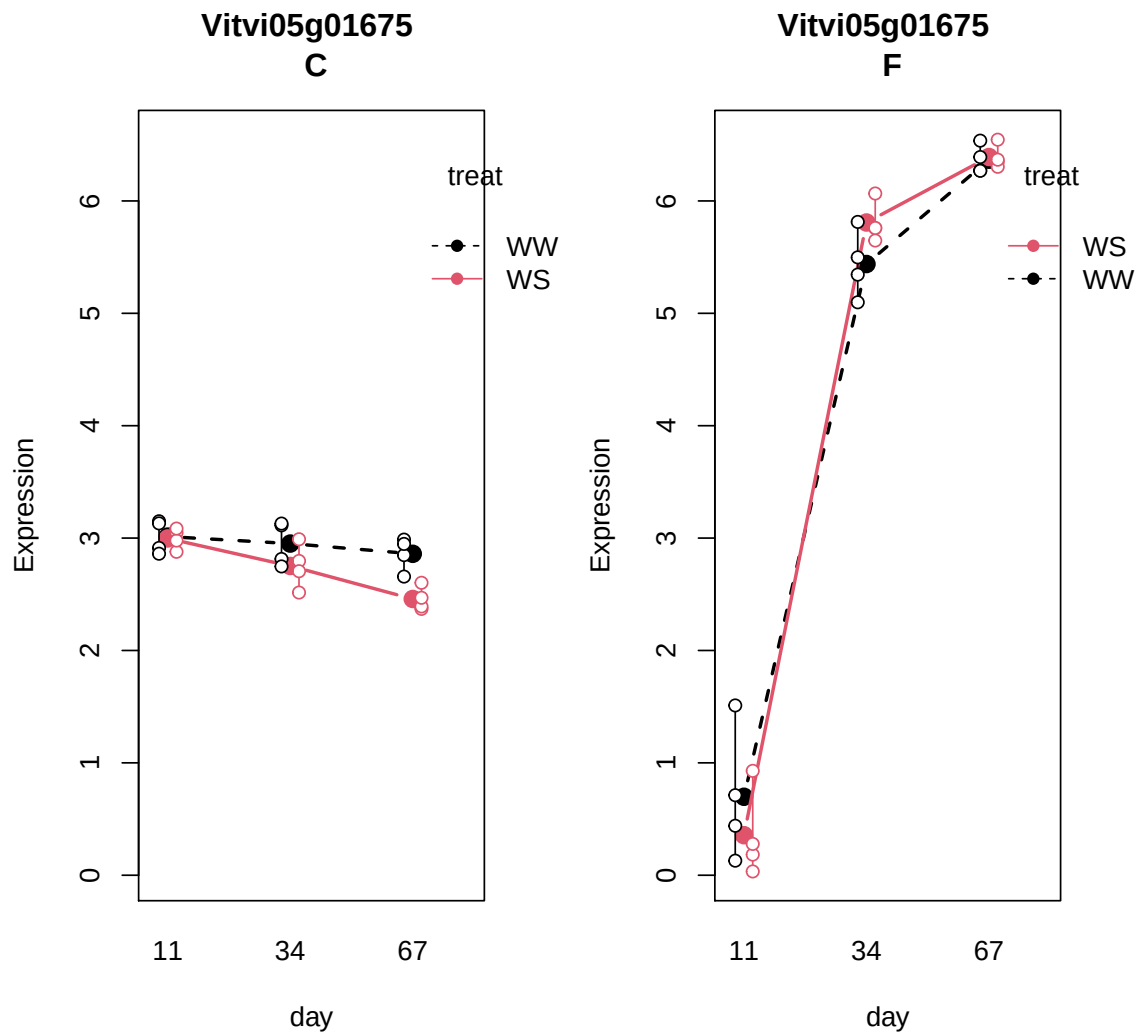


6.6.3 Vitvi05g01675

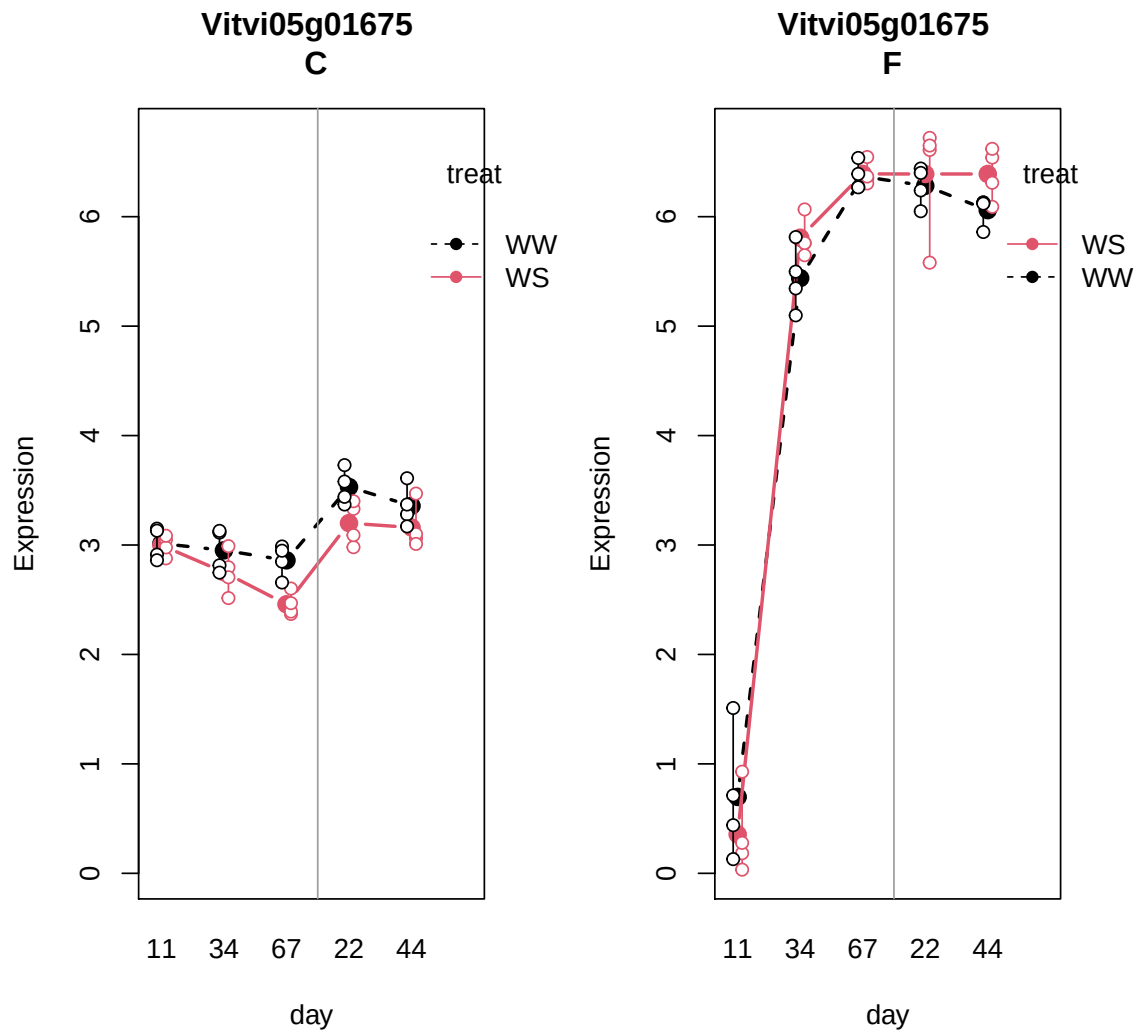
Coefficient varietyF:day67 for Vitvi05g01675.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi05g01675 5.822019 3.507502 22.94545 3.759581e-24
      adj.P.Val      B
Vitvi05g01675 1.675266e-20 44.674

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

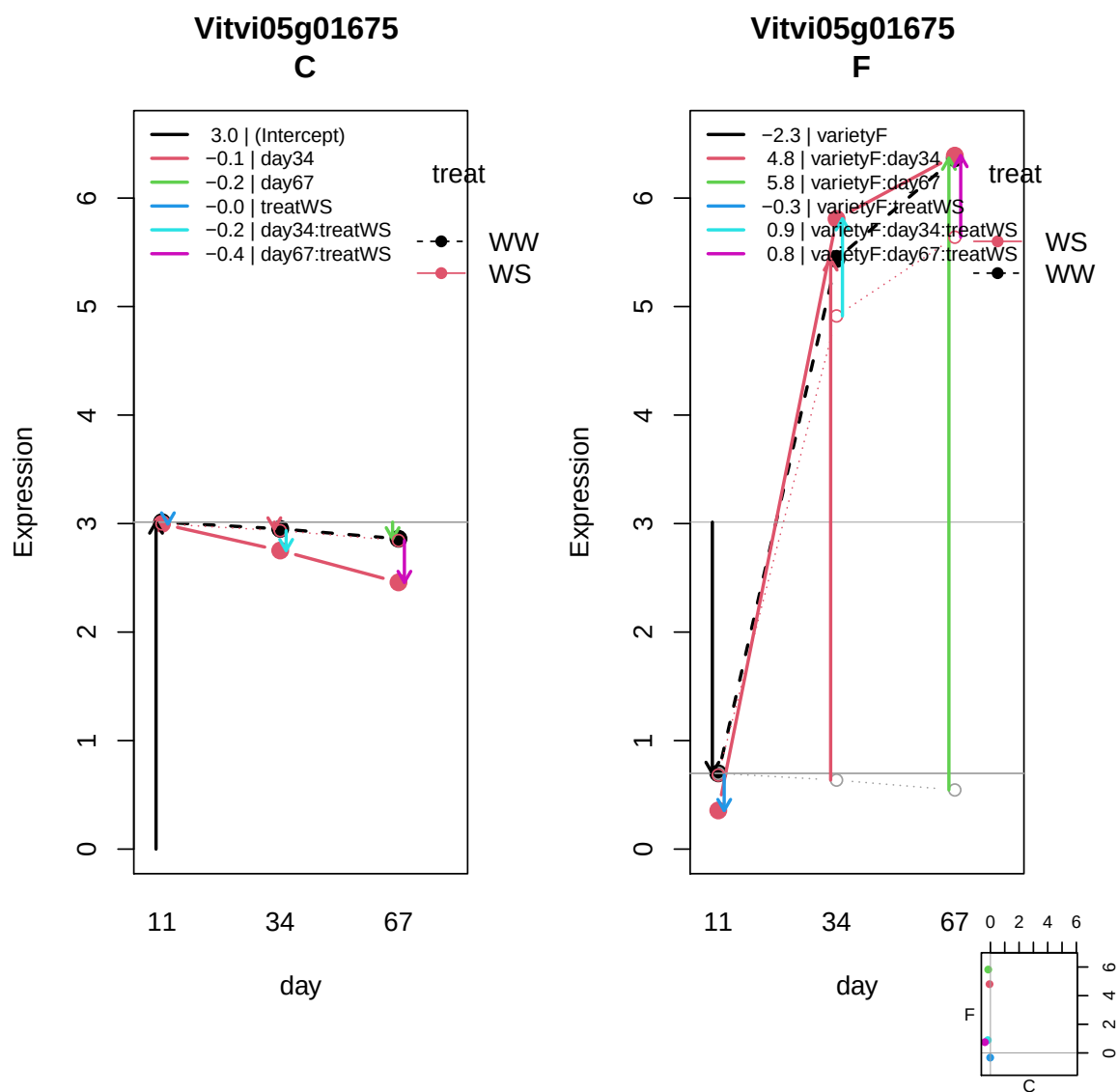
              (Intercept)  varietyF      day34      day67
Vitvi05g01675      3.013359 -2.315307 -0.06221154 -0.1532916
              treatWS  varietyF:day34  varietyF:day67
Vitvi05g01675 -0.01629731   4.802695   5.822019
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi05g01675      -0.3256435   -0.183107   -0.3856377
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi05g01675              0.8945553              0.7517899

```

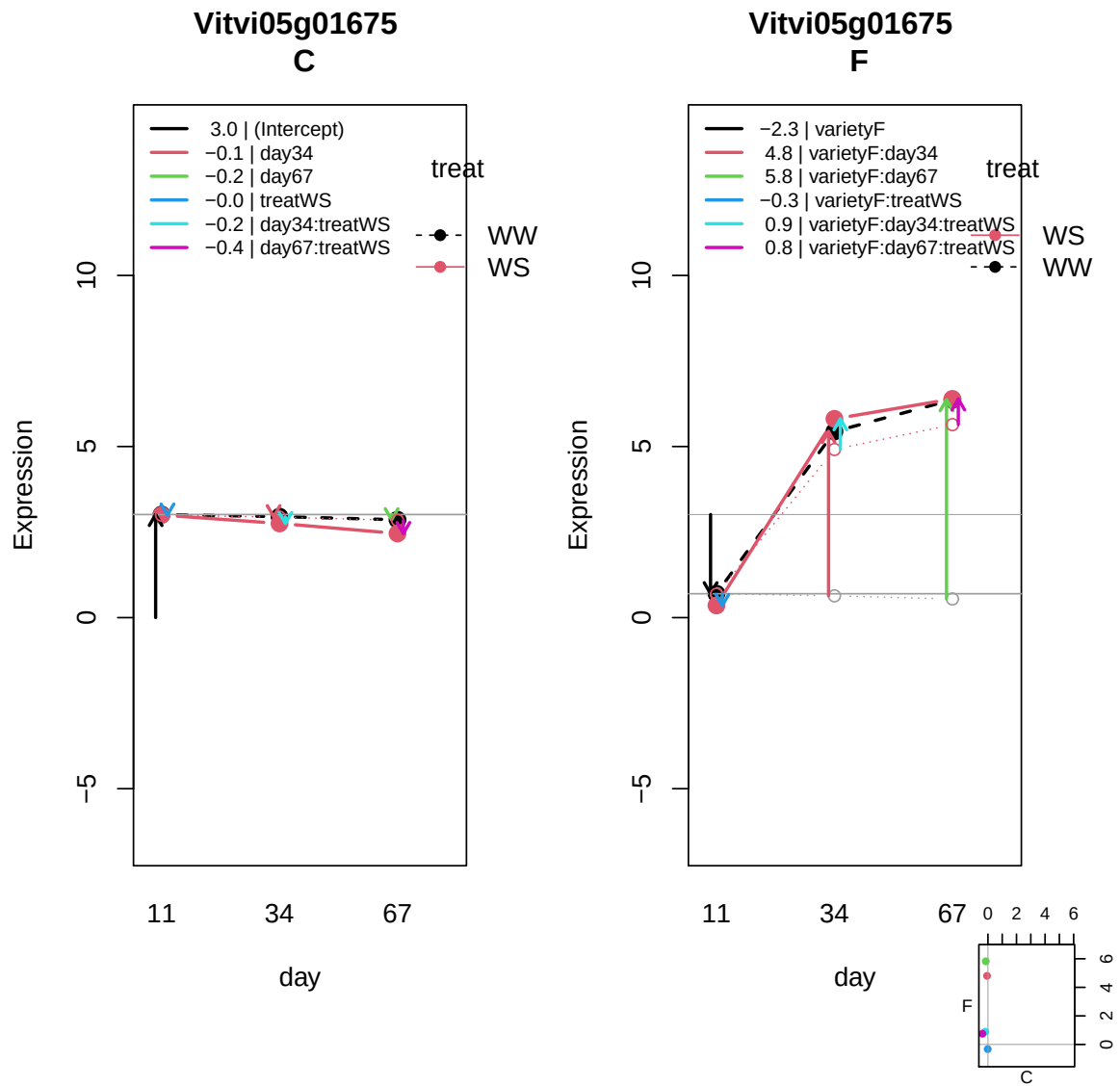
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

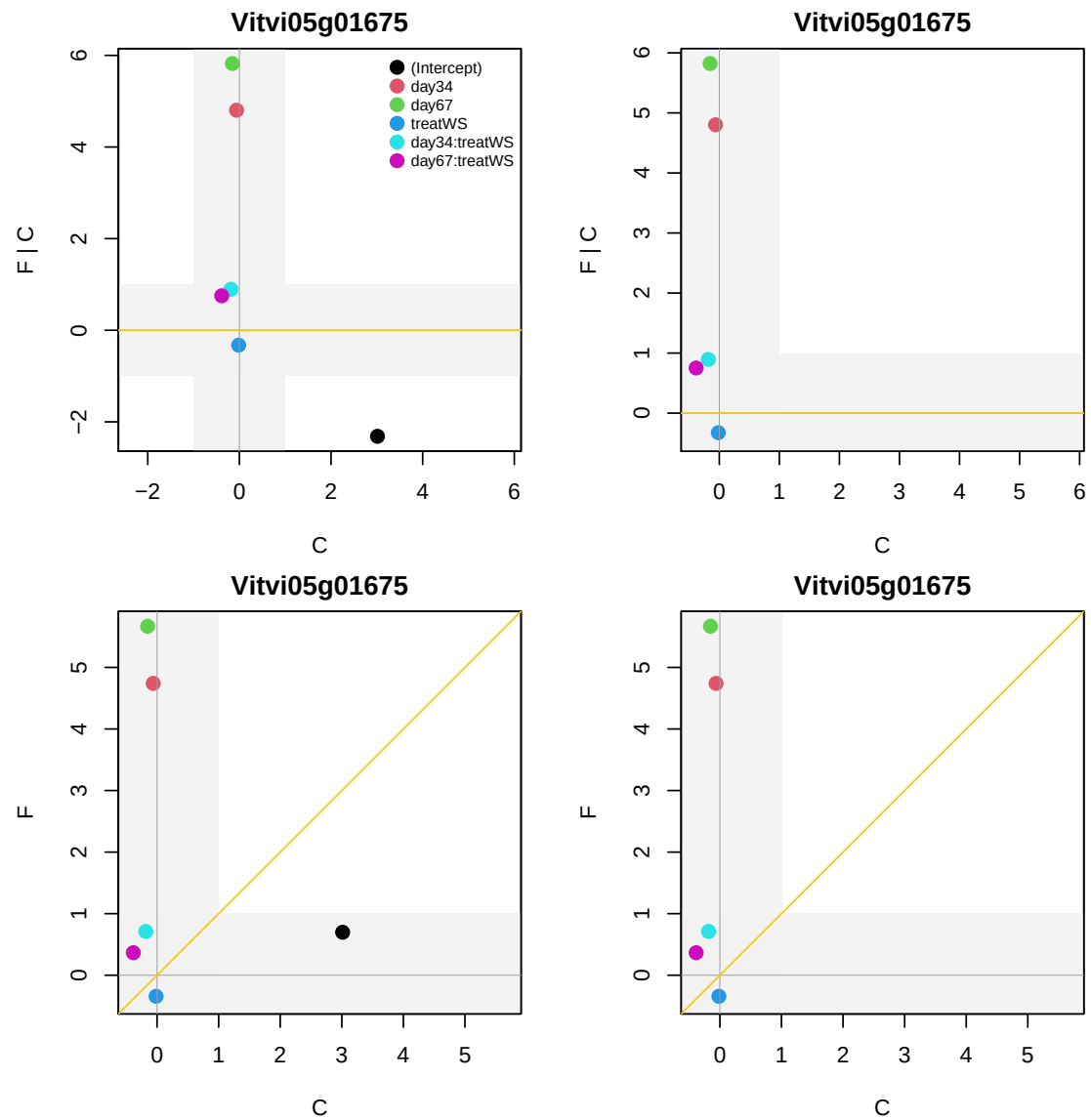



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

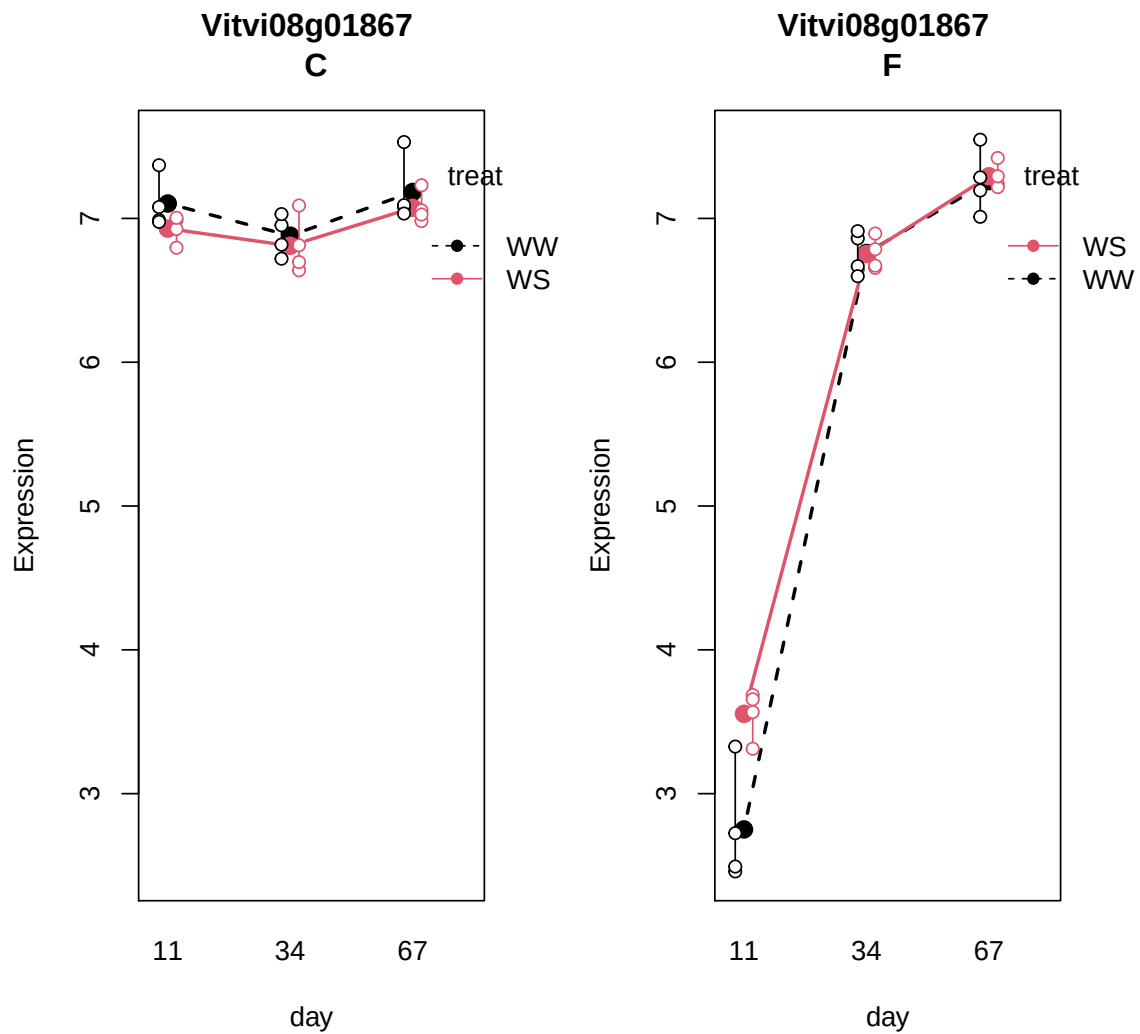


6.6.4 Vitvi08g01867

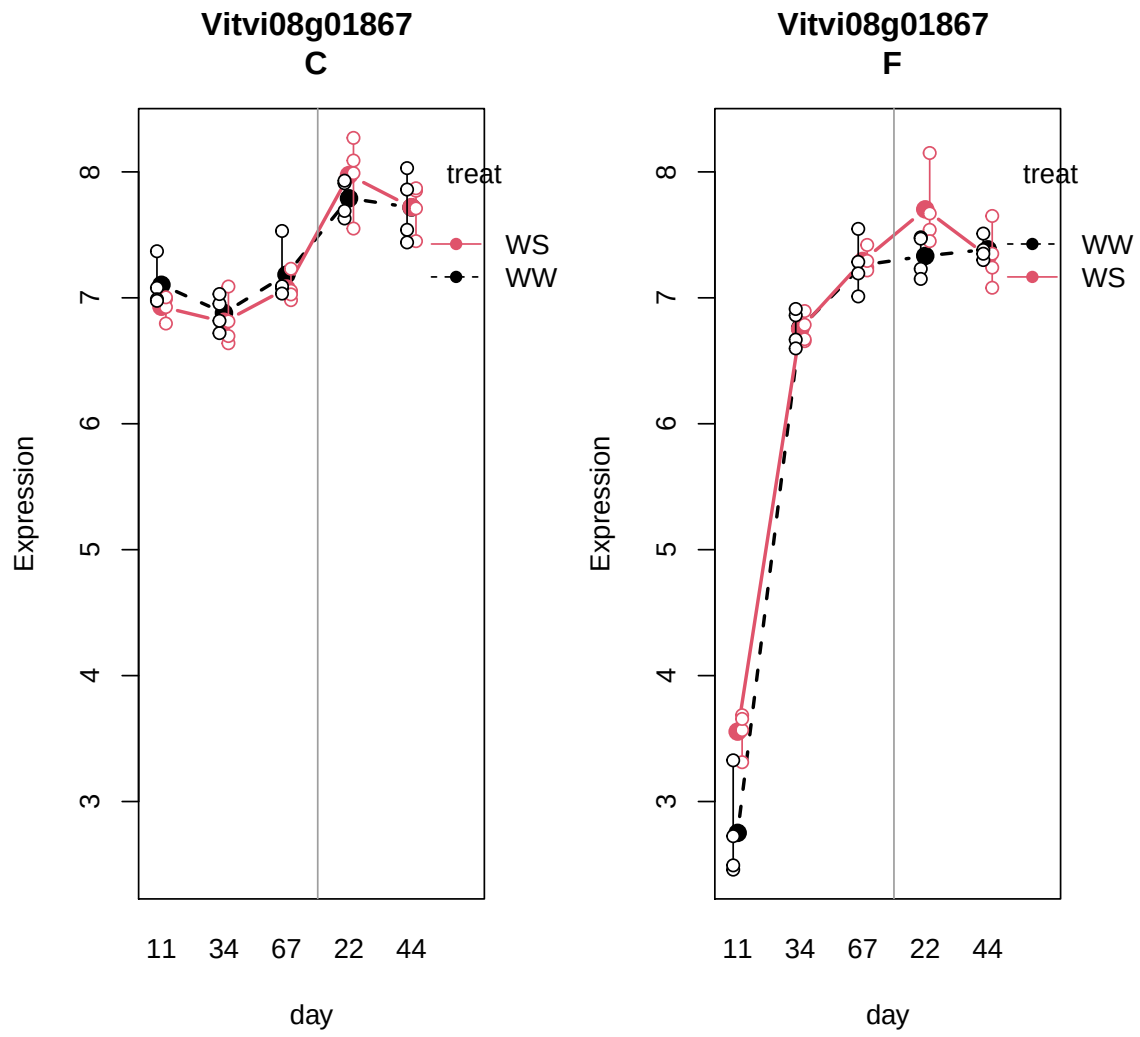
Coefficient varietyF:day67 for Vitvi08g01867.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi08g01867 4.427784 6.362479 22.82471 4.549076e-24
      adj.P.Val      B
Vitvi08g01867 1.675266e-20 44.49251

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



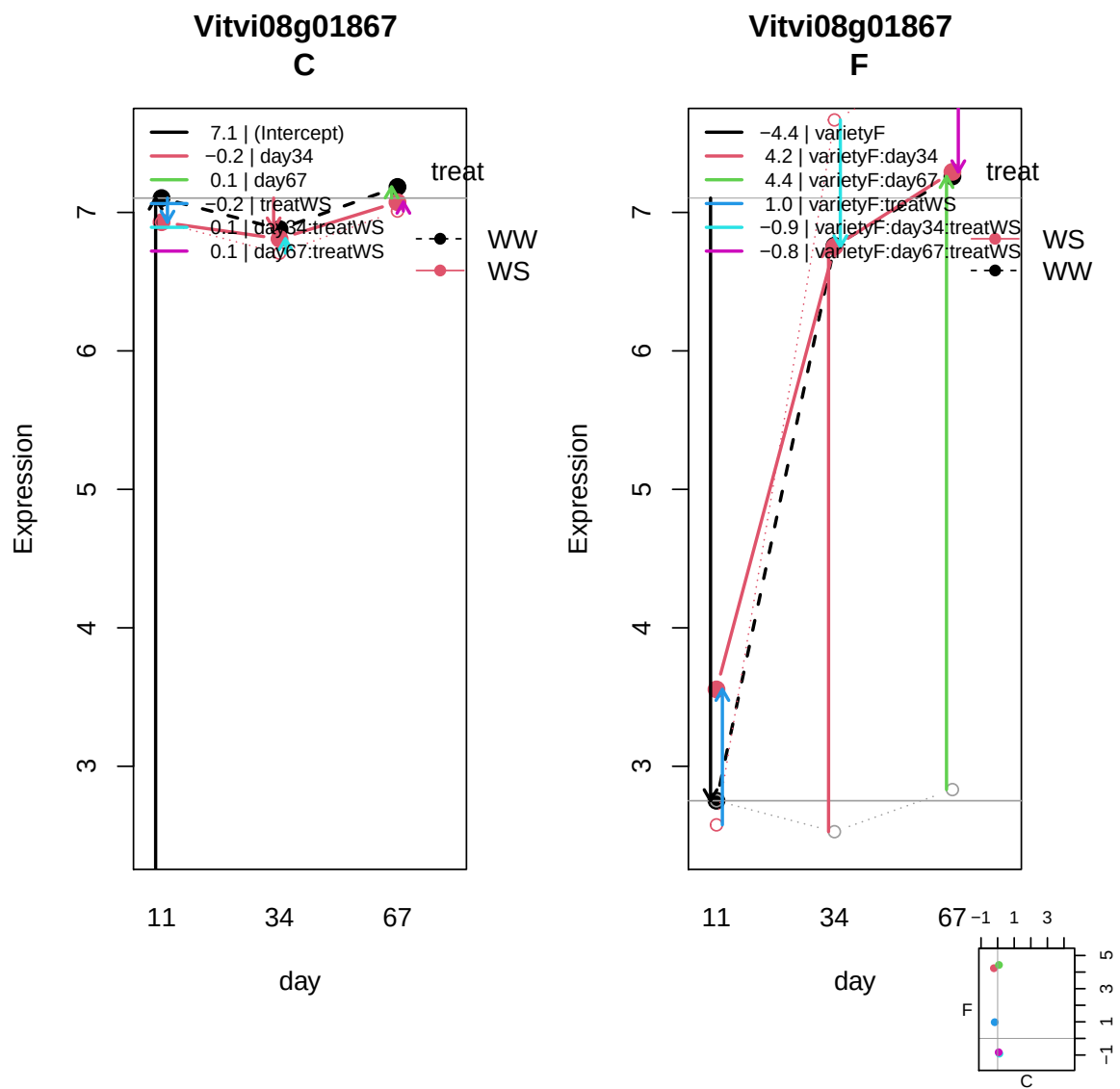
```

> fit1[varname,]$coefficients

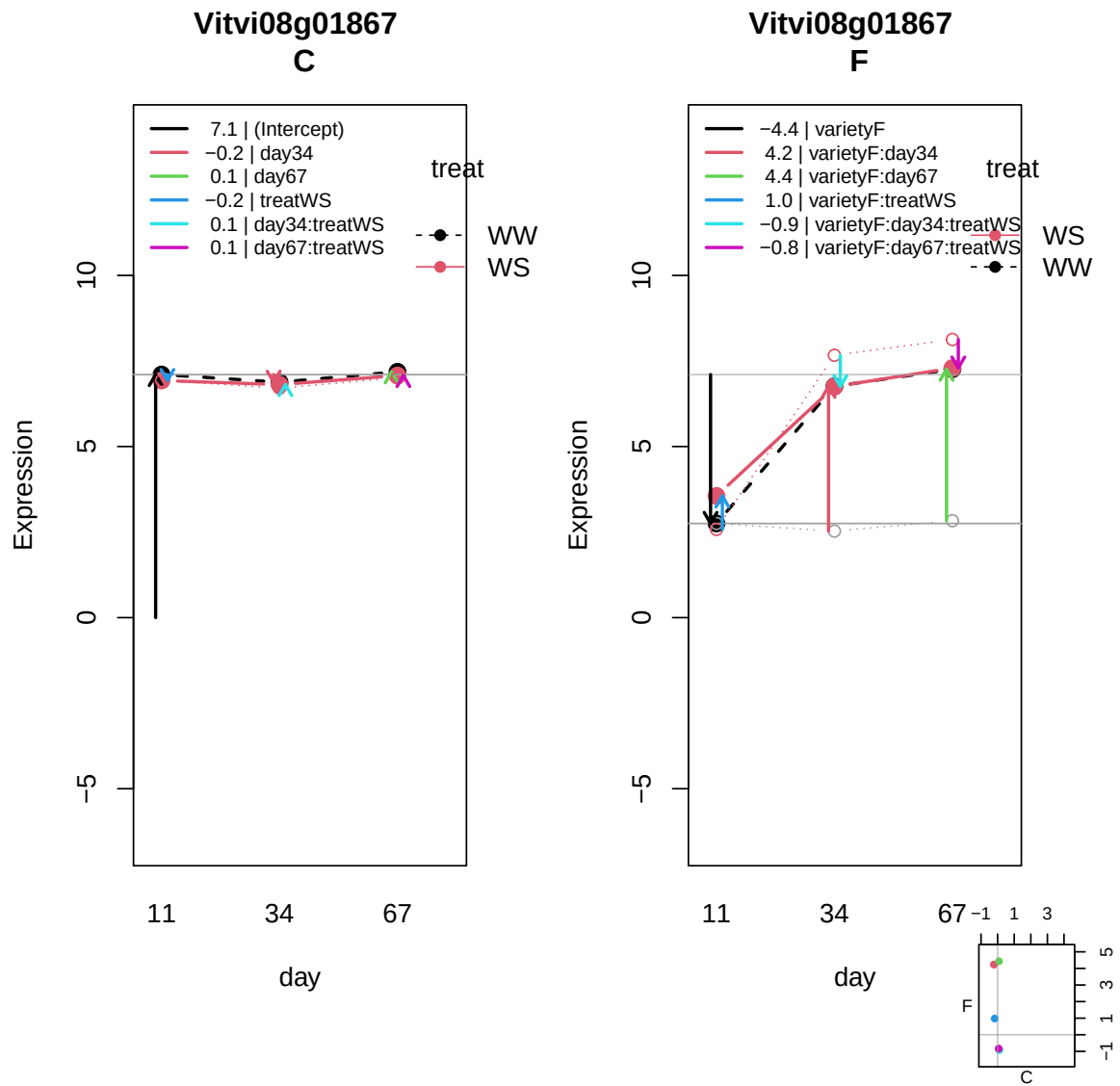
              (Intercept)  varietyF      day34      day67
Vitvi08g01867      7.103405 -4.352239 -0.2235626 0.0804419
              treatWS varietyF:day34 varietyF:day67
Vitvi08g01867 -0.1742414      4.231957      4.427784
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi08g01867      0.9783226      0.1040374      0.06415647
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi08g01867      -0.9157741      -0.8348168

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

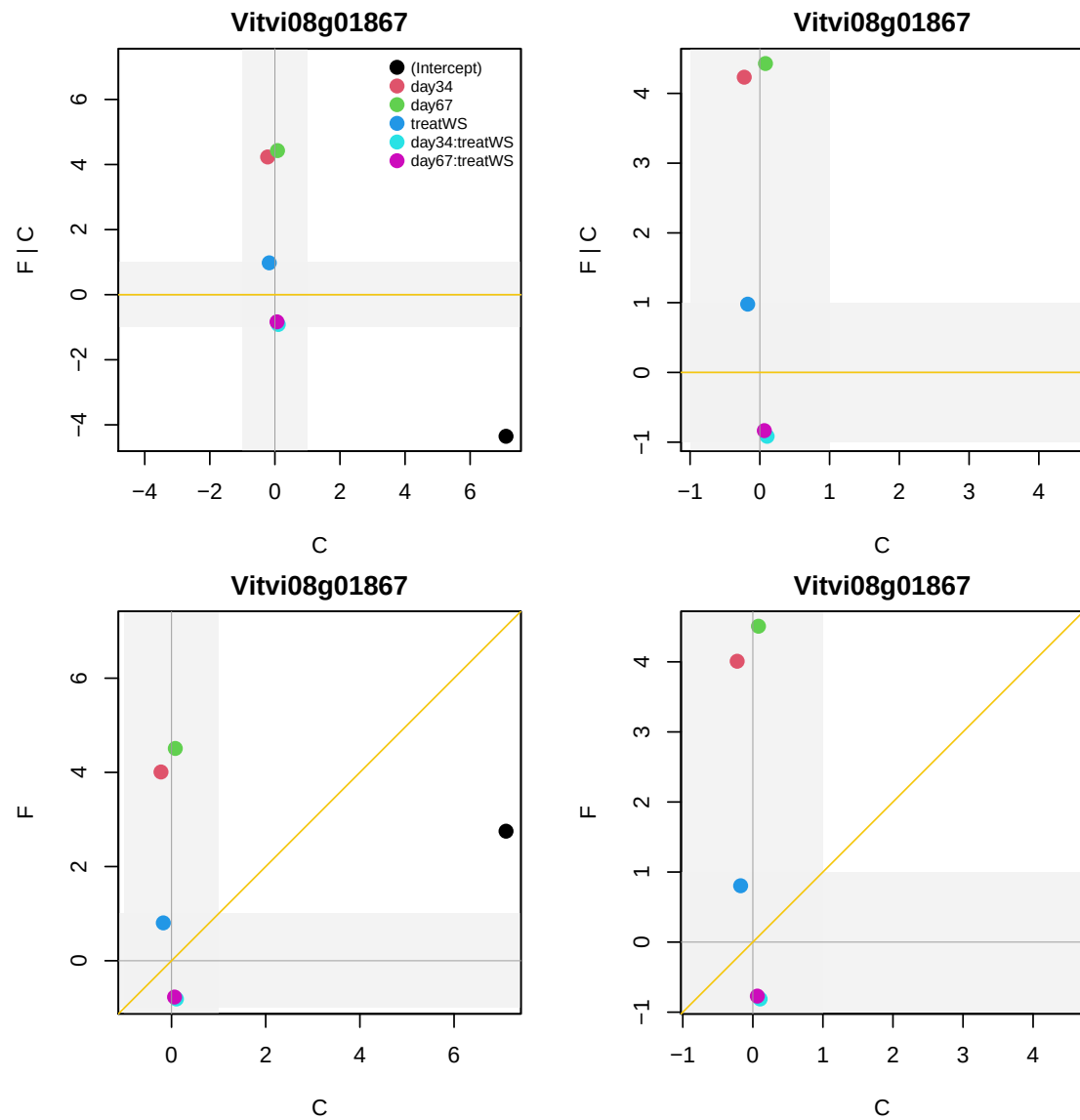


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

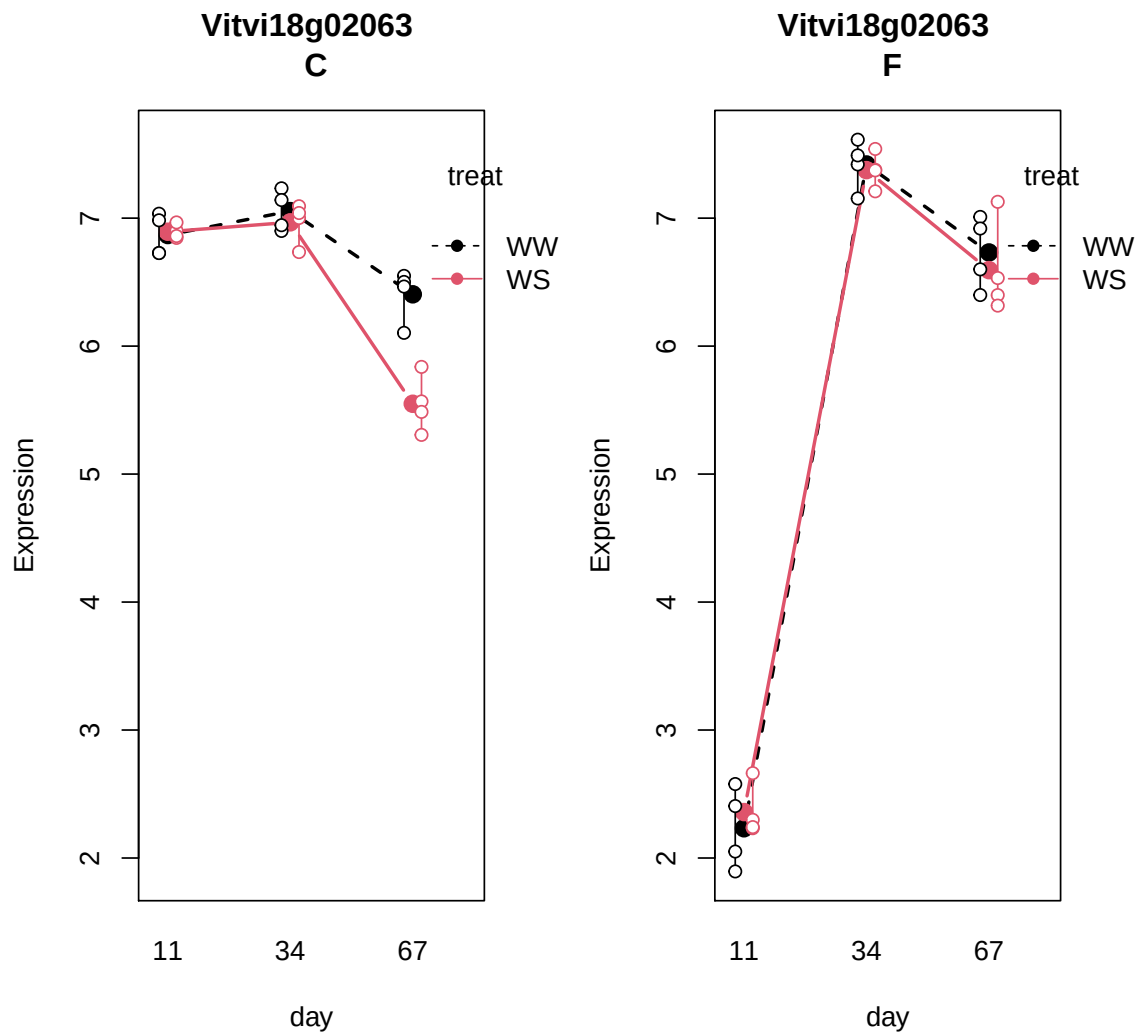


6.6.5 Vitvi18g02063

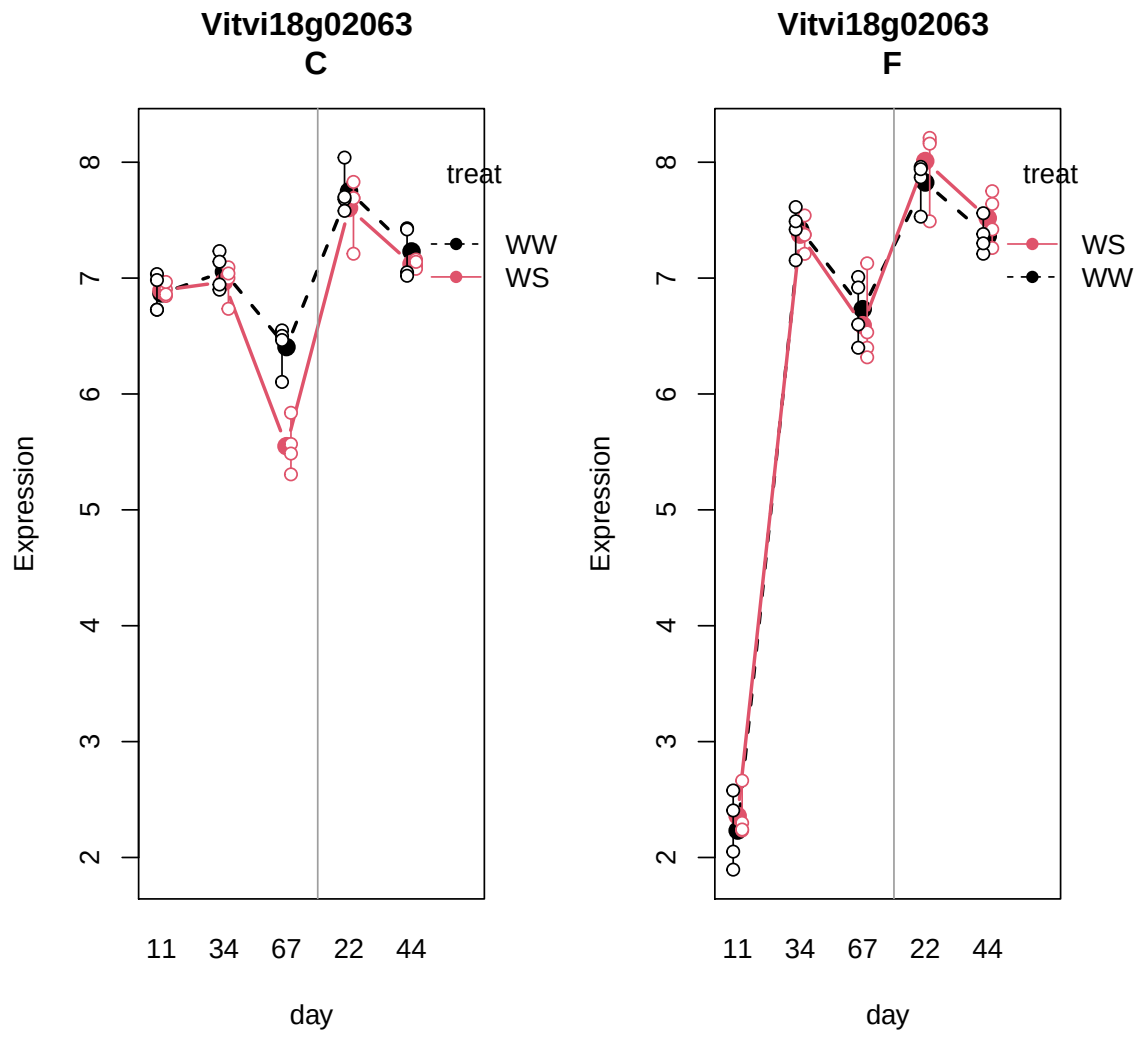
Coefficient varietyF:day67 for Vitvi18g02063.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi18g02063 4.962626 6.037444 22.70552 5.495558e-24
      adj.P.Val      B
Vitvi18g02063 1.675266e-20 44.31243

> plot.interactions(varname, phdata=pd, data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

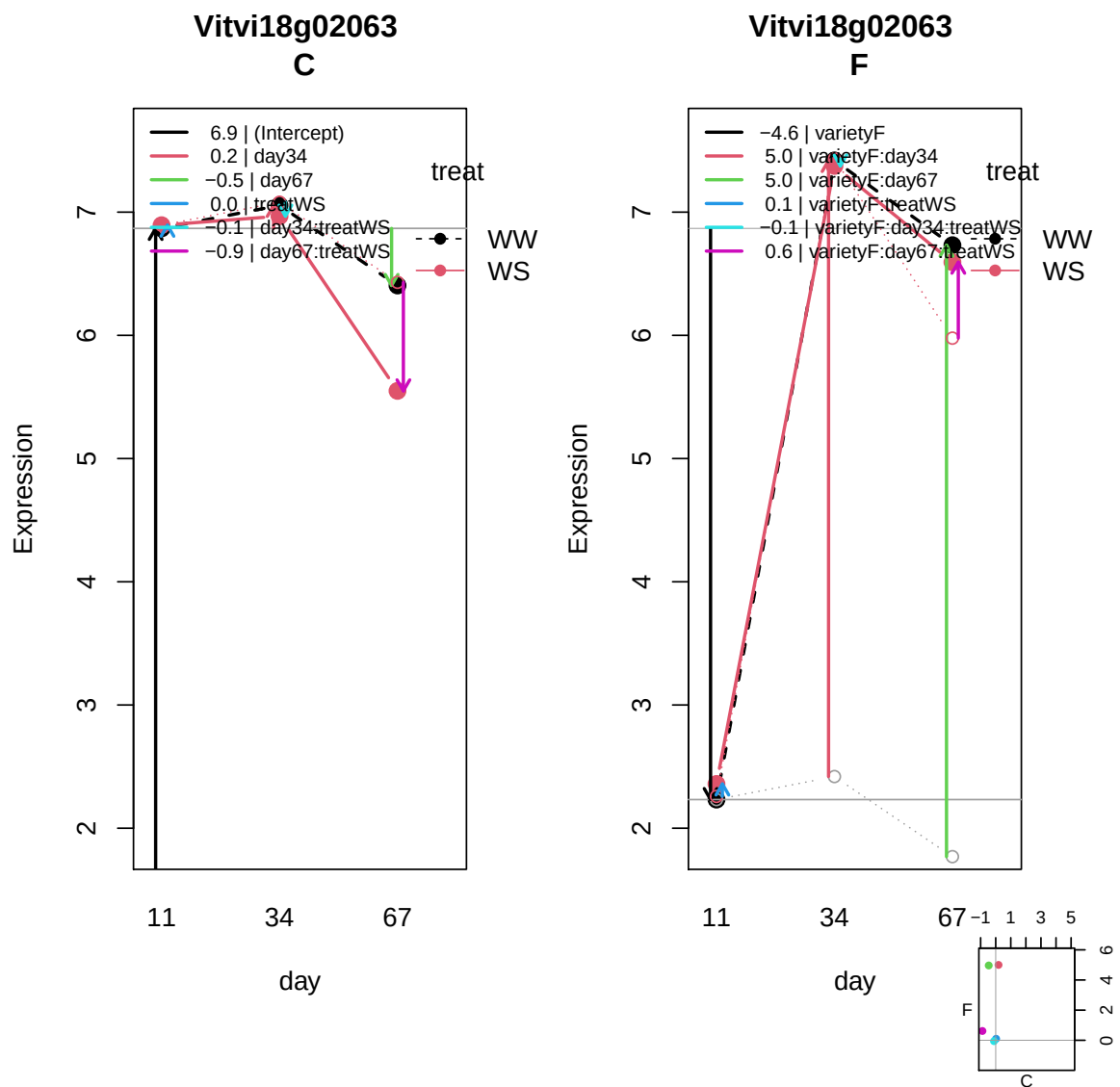
      (Intercept)  varietyF    day34    day67
Vitvi18g02063    6.868052 -4.635641 0.1866877 -0.4632554
      treatWS varietyF:day34 varietyF:day67
Vitvi18g02063    0.02572067    5.000087    4.962626
      varietyF:treatWS day34:treatWS day67:treatWS
Vitvi18g02063    0.1008641    -0.1132095    -0.8810801
      varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi18g02063    -0.05731196    0.6163656

```

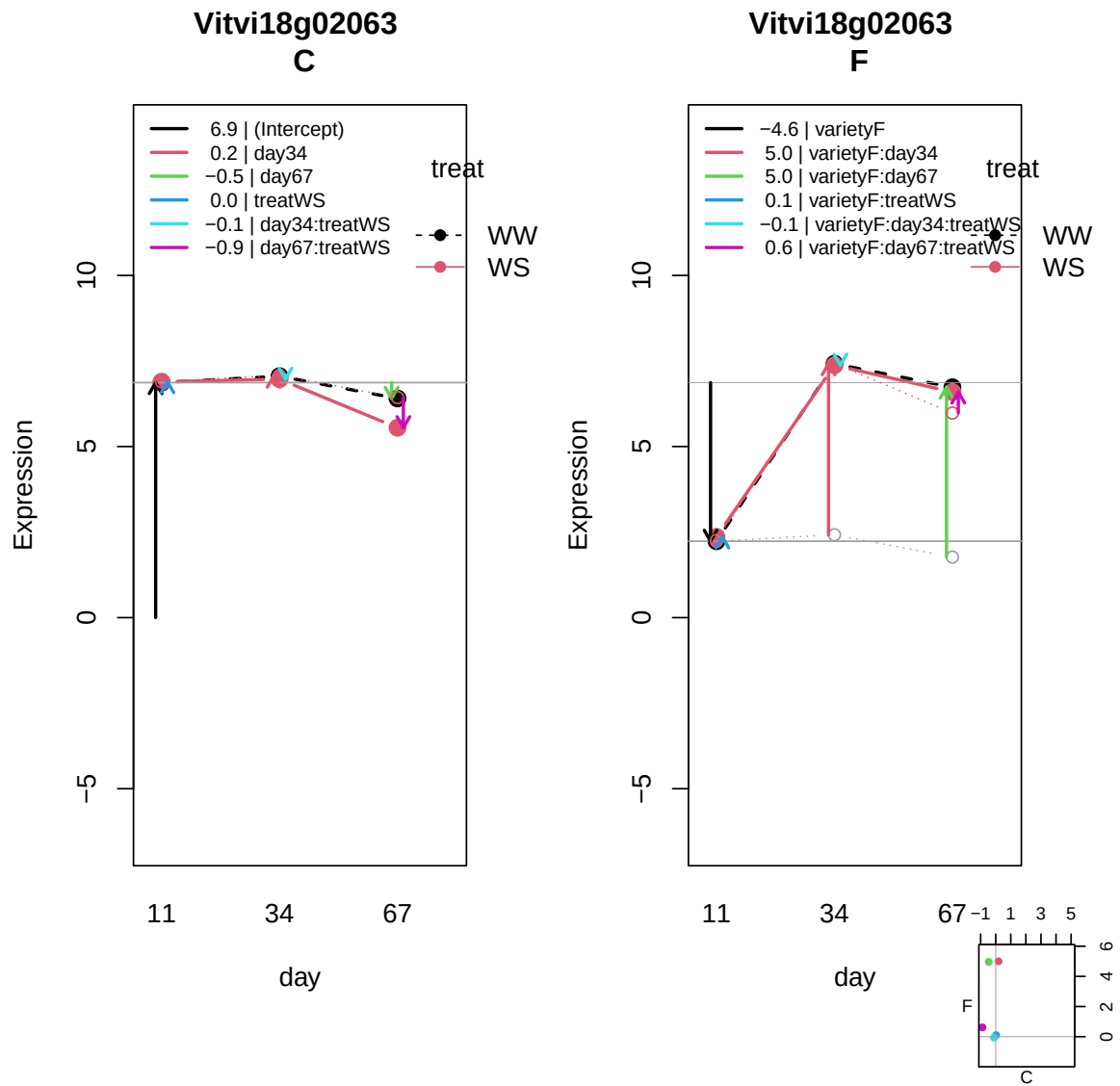
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

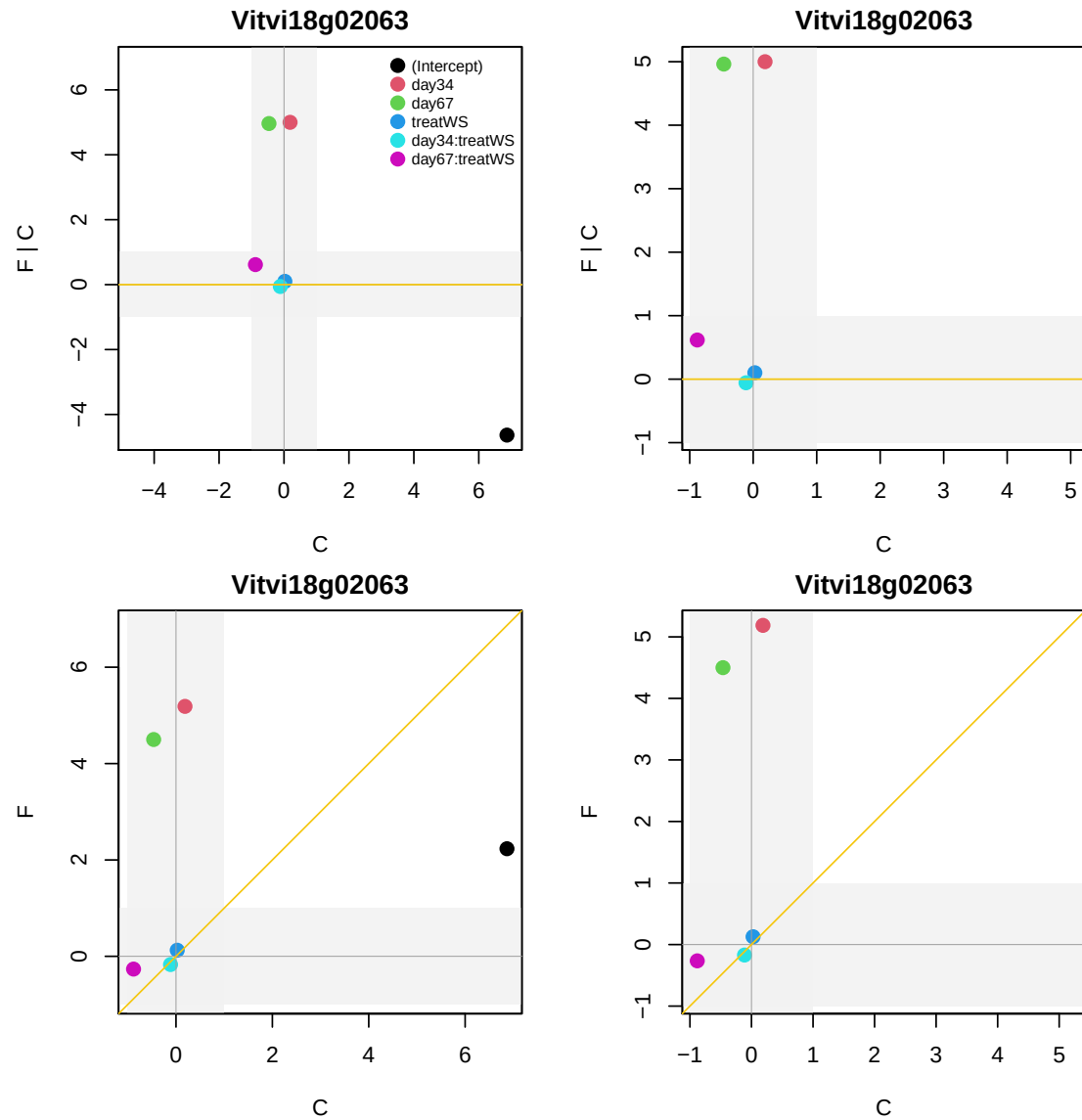


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

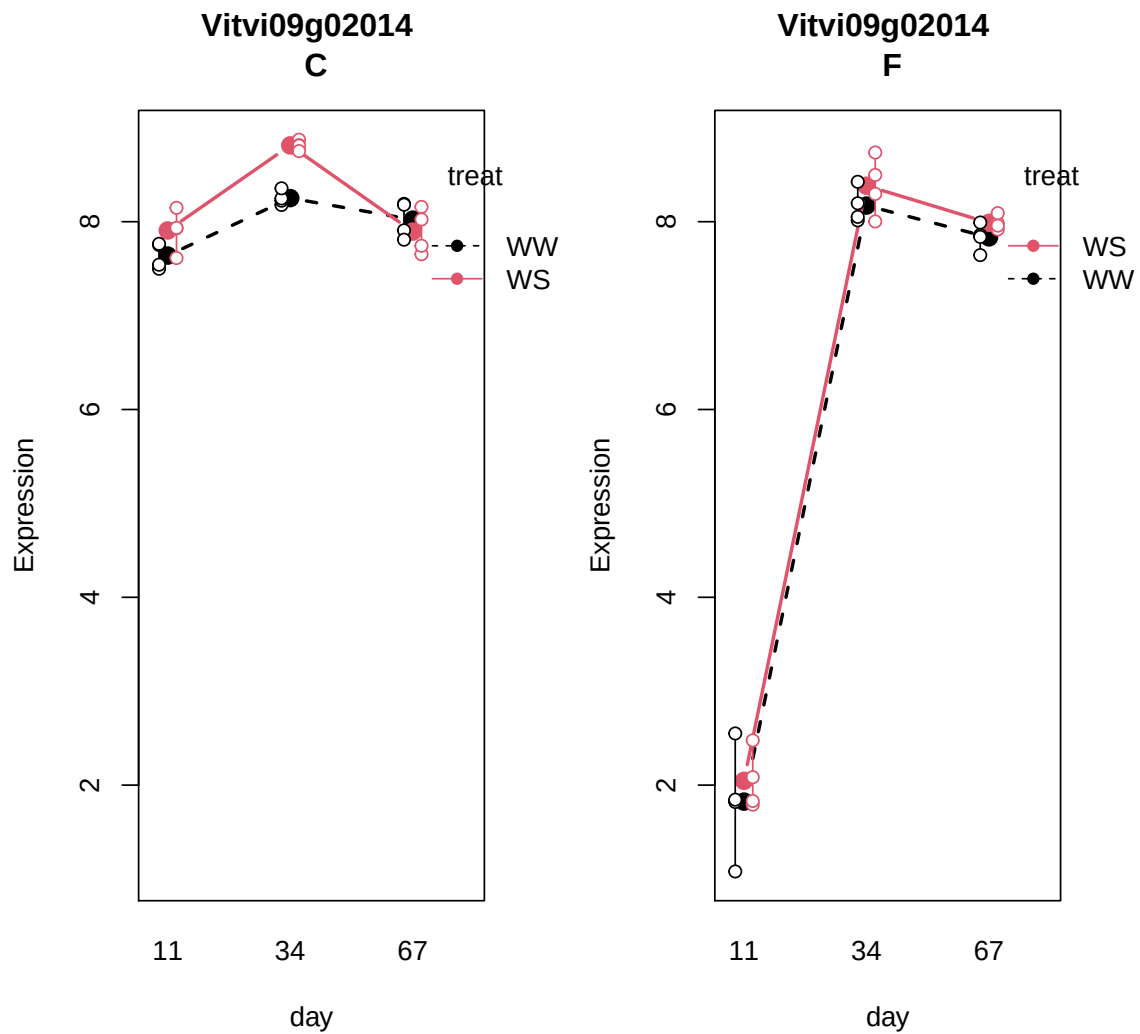


6.6.6 Vitvi09g02014

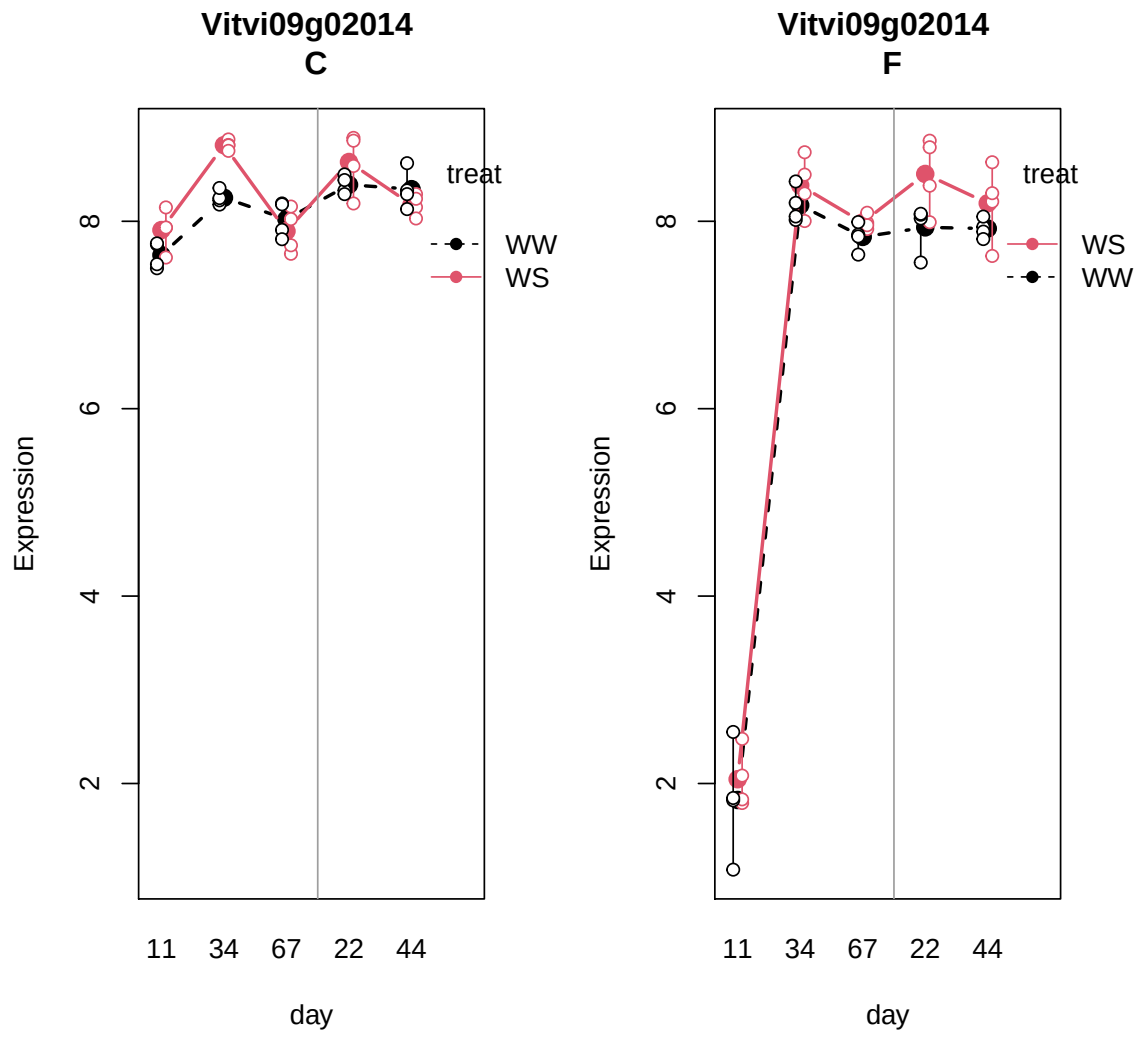
Coefficient varietyF:day67 for Vitvi09g02014.

```
> tt[varname,]
              logFC  AveExpr          t      P.Value
Vitvi09g02014  5.6265  7.064295  22.32332  1.013418e-23
              adj.P.Val          B
Vitvi09g02014  2.458092e-20  43.72859

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

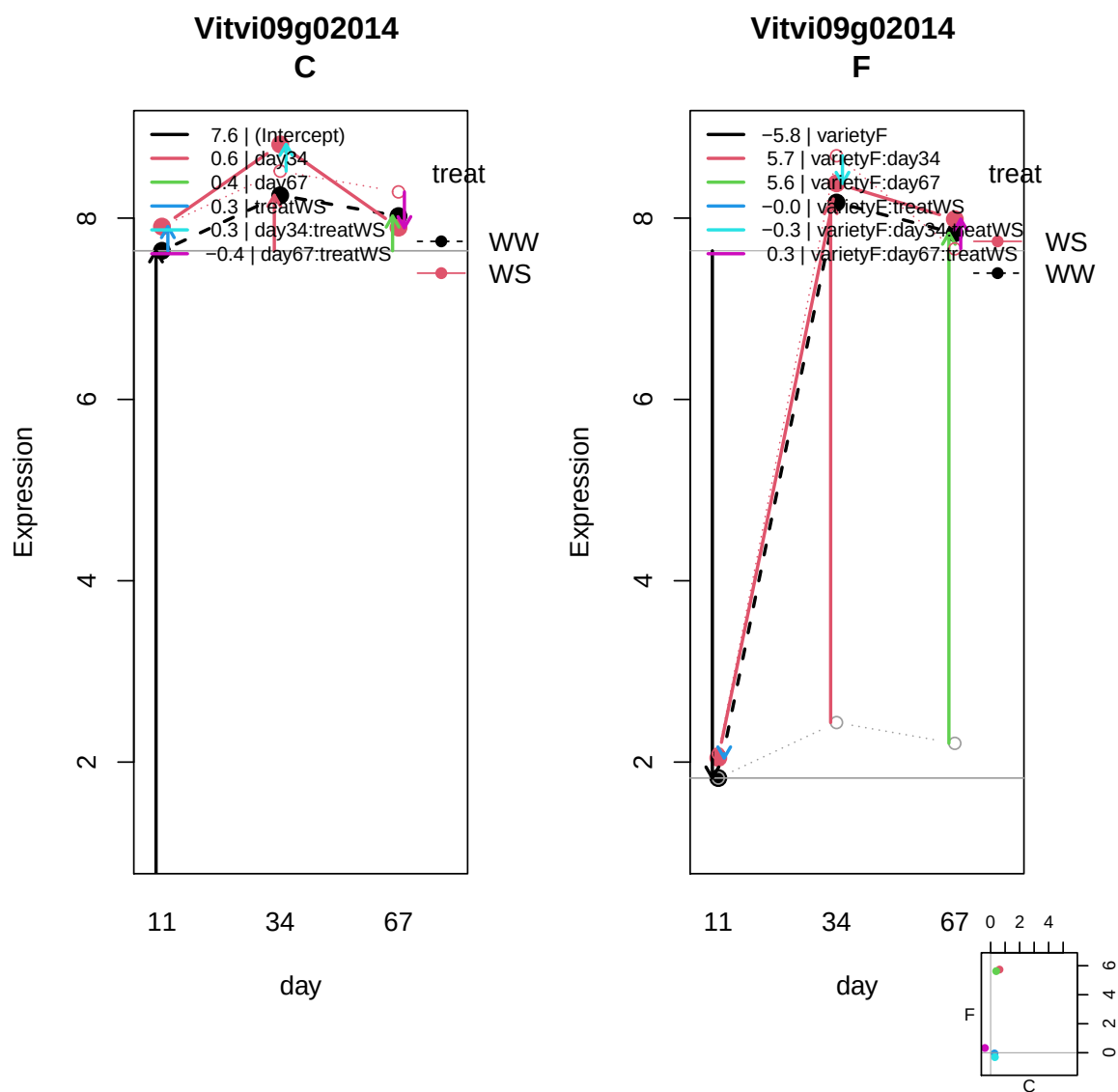
      (Intercept)  varietyF    day34    day67
Vitvi09g02014    7.639291 -5.815234 0.6119899 0.3826438
      treatWS varietyF:day34 varietyF:day67
Vitvi09g02014  0.2670763    5.735648    5.6265
      varietyF:treatWS day34:treatWS day67:treatWS
Vitvi09g02014   -0.04548081  0.2941177   -0.394429
      varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi09g02014   -0.3040742    0.3272909

```

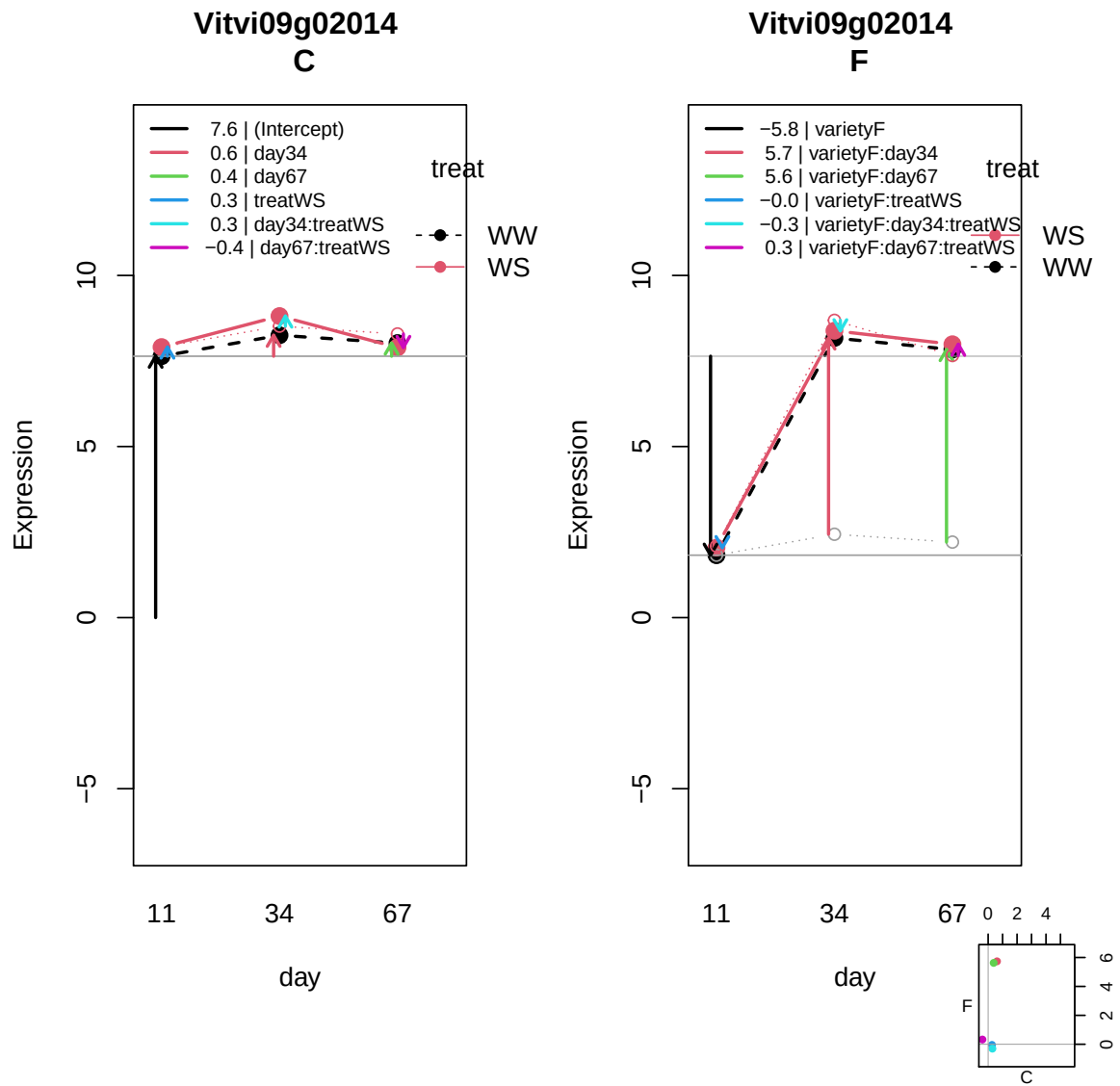
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

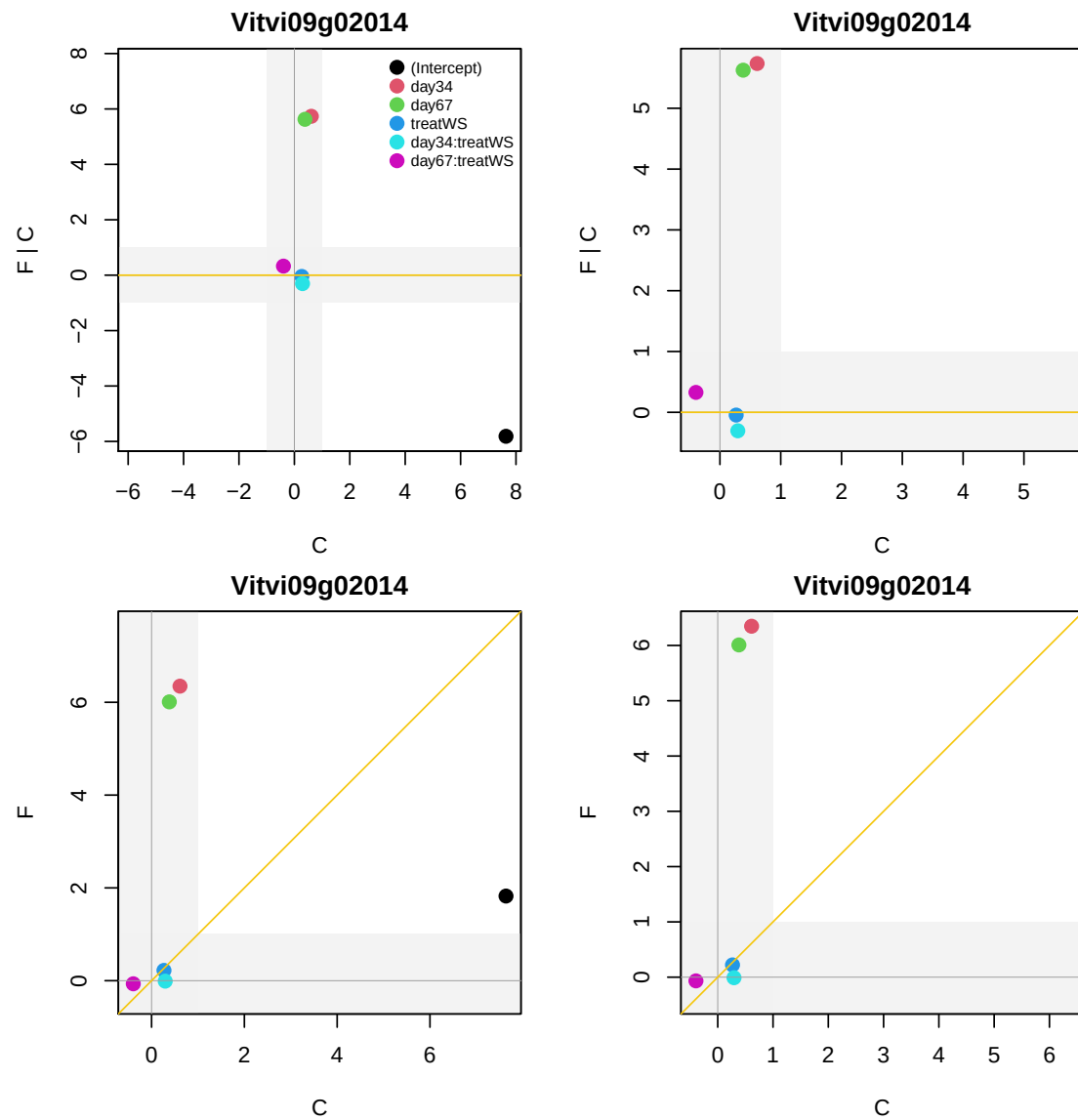


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

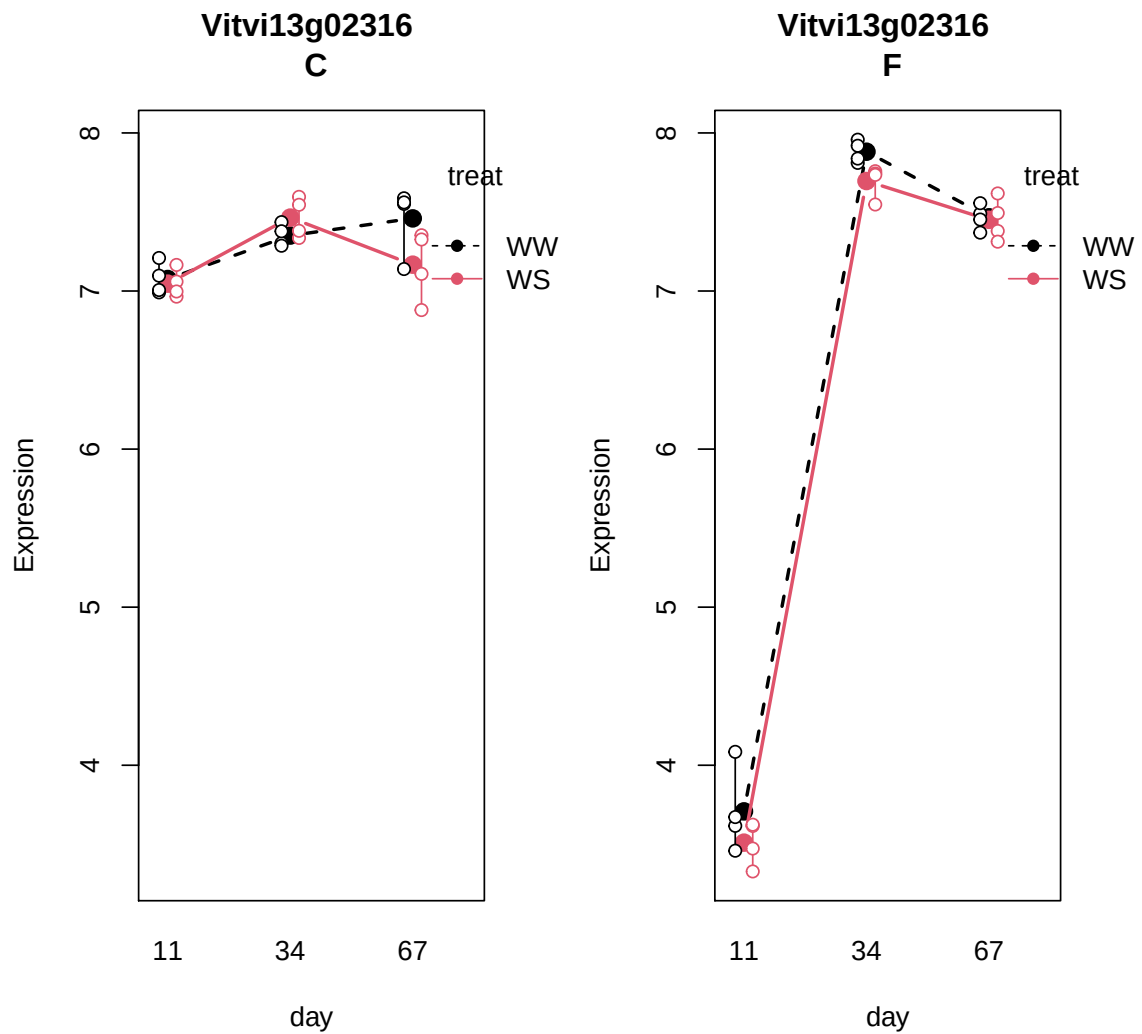


6.6.7 Vitvi13g02316

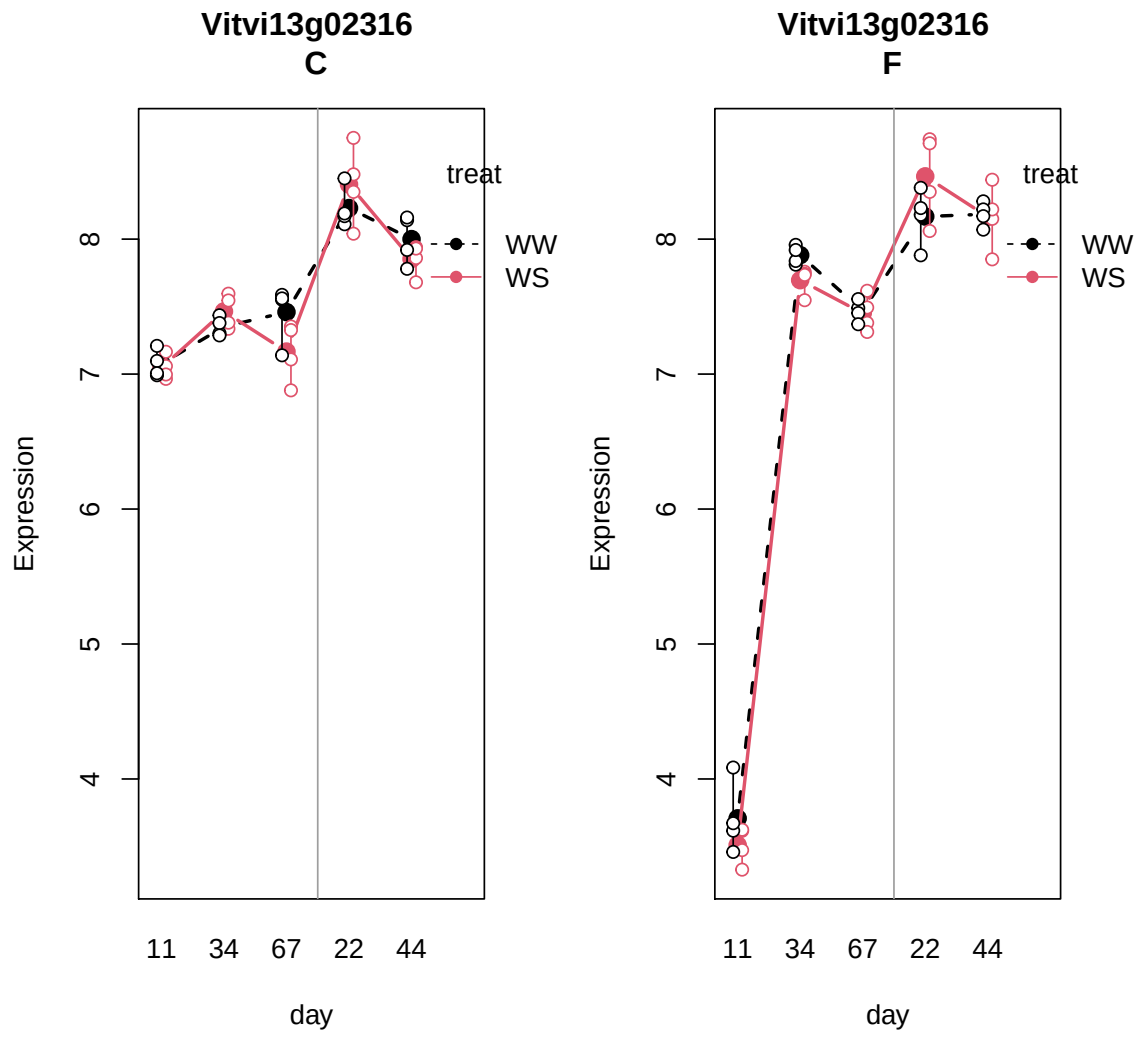
Coefficient varietyF:day67 for Vitvi13g02316.

```
> tt[varname,]
               logFC  AveExpr      t      P.Value
Vitvi13g02316 3.374933  6.773039 22.2565 1.128897e-23
               adj.P.Val      B
Vitvi13g02316 2.458092e-20 43.62552

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

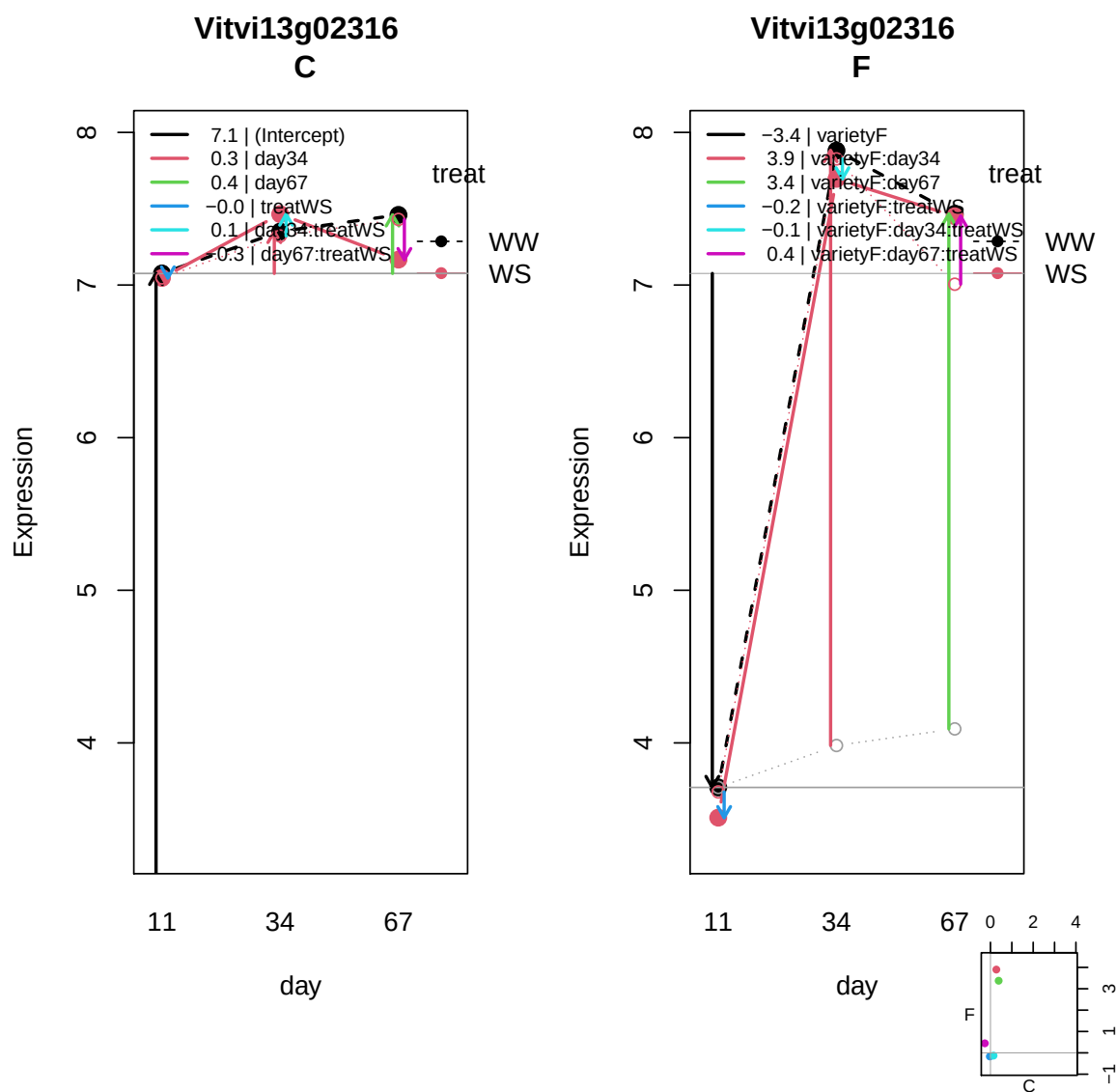
      (Intercept)  varietyF    day34    day67
Vitvi13g02316    7.075935 -3.367749 0.2748625 0.3834497
      treatWS varietyF:day34 varietyF:day67
Vitvi13g02316 -0.02940304   3.898189   3.374933
      varietyF:treatWS day34:treatWS day67:treatWS
Vitvi13g02316   -0.1685125   0.1430608   -0.2632921
      varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi13g02316   -0.1305528             0.4452277

```

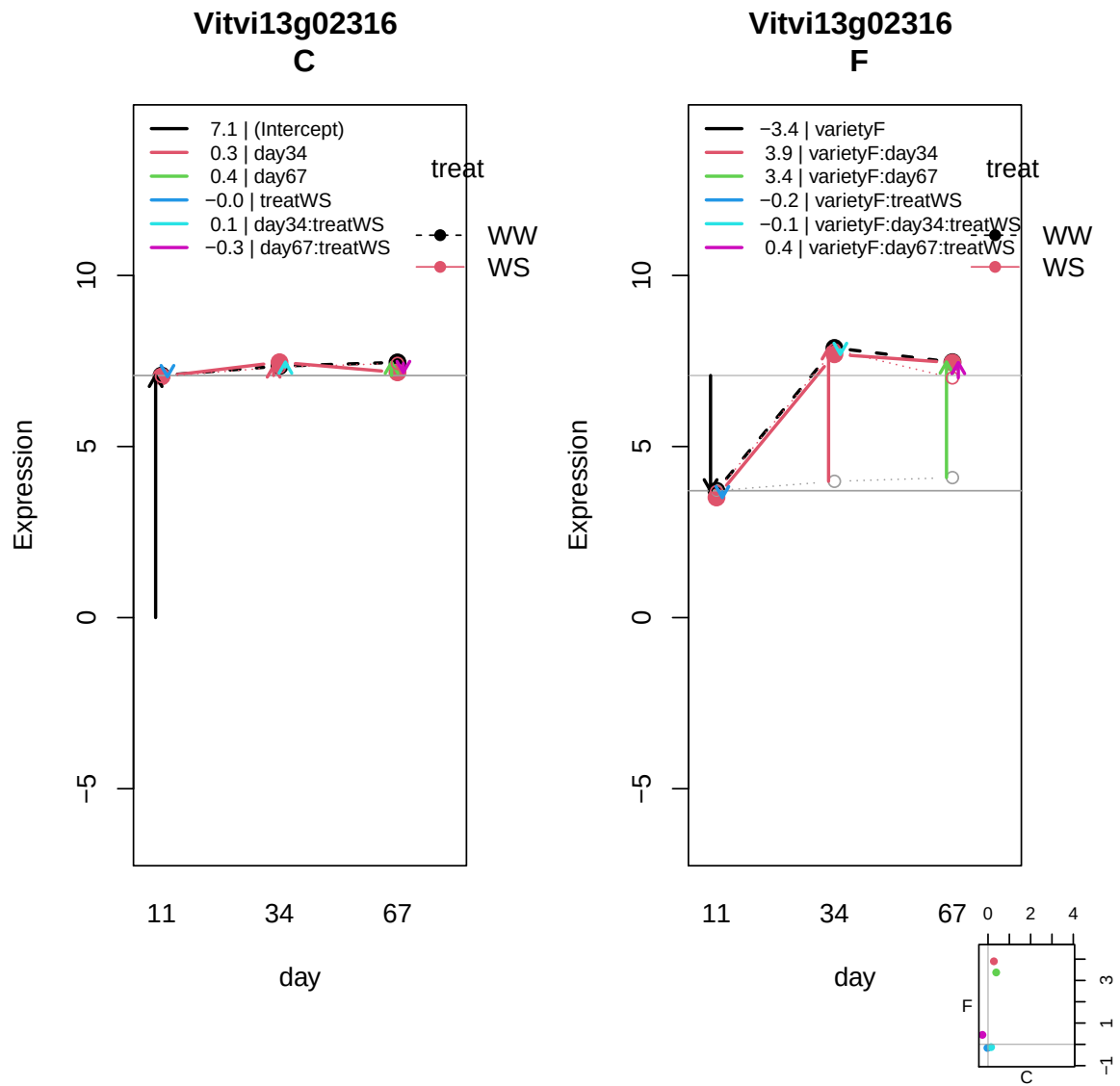
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

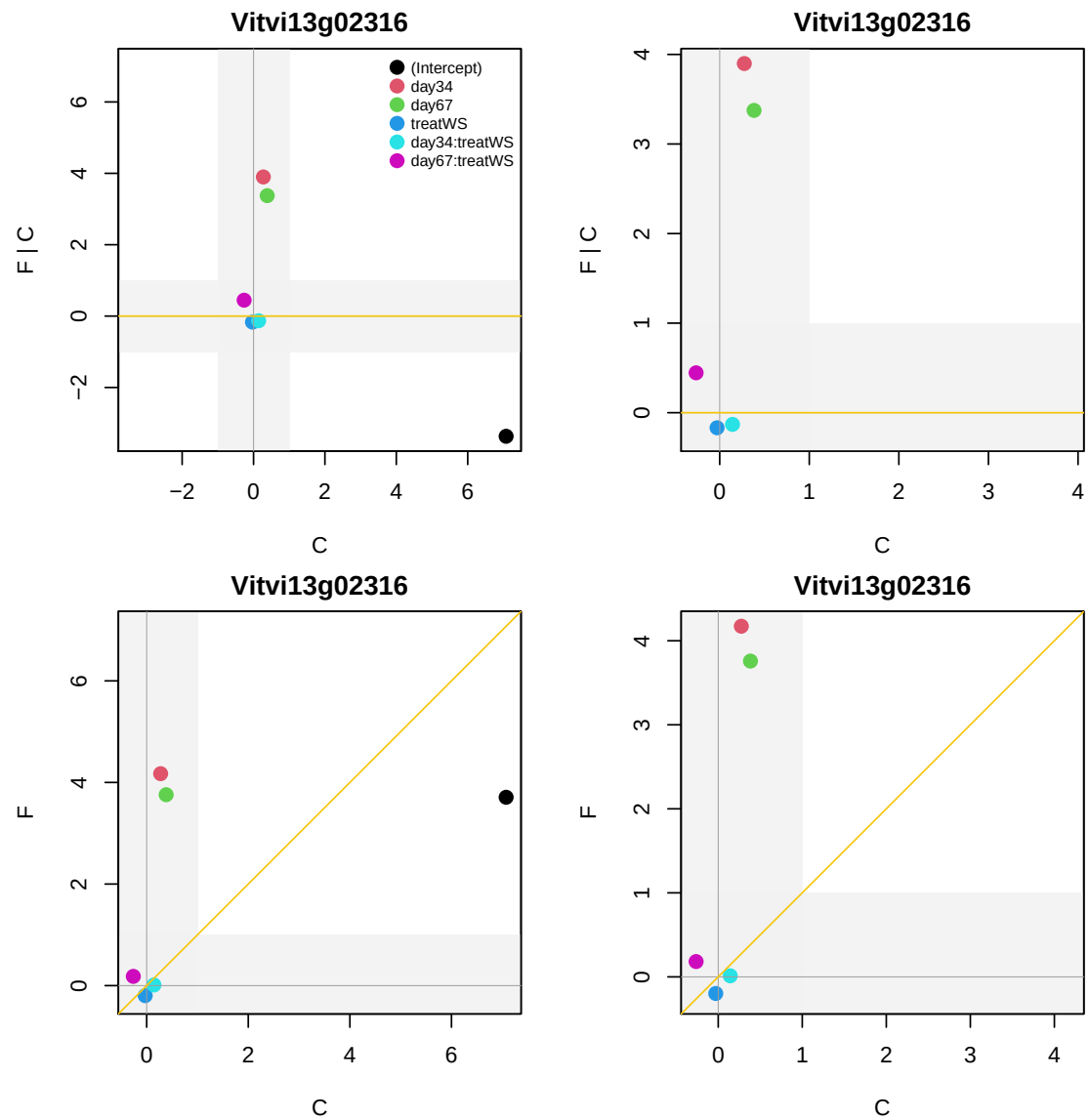


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

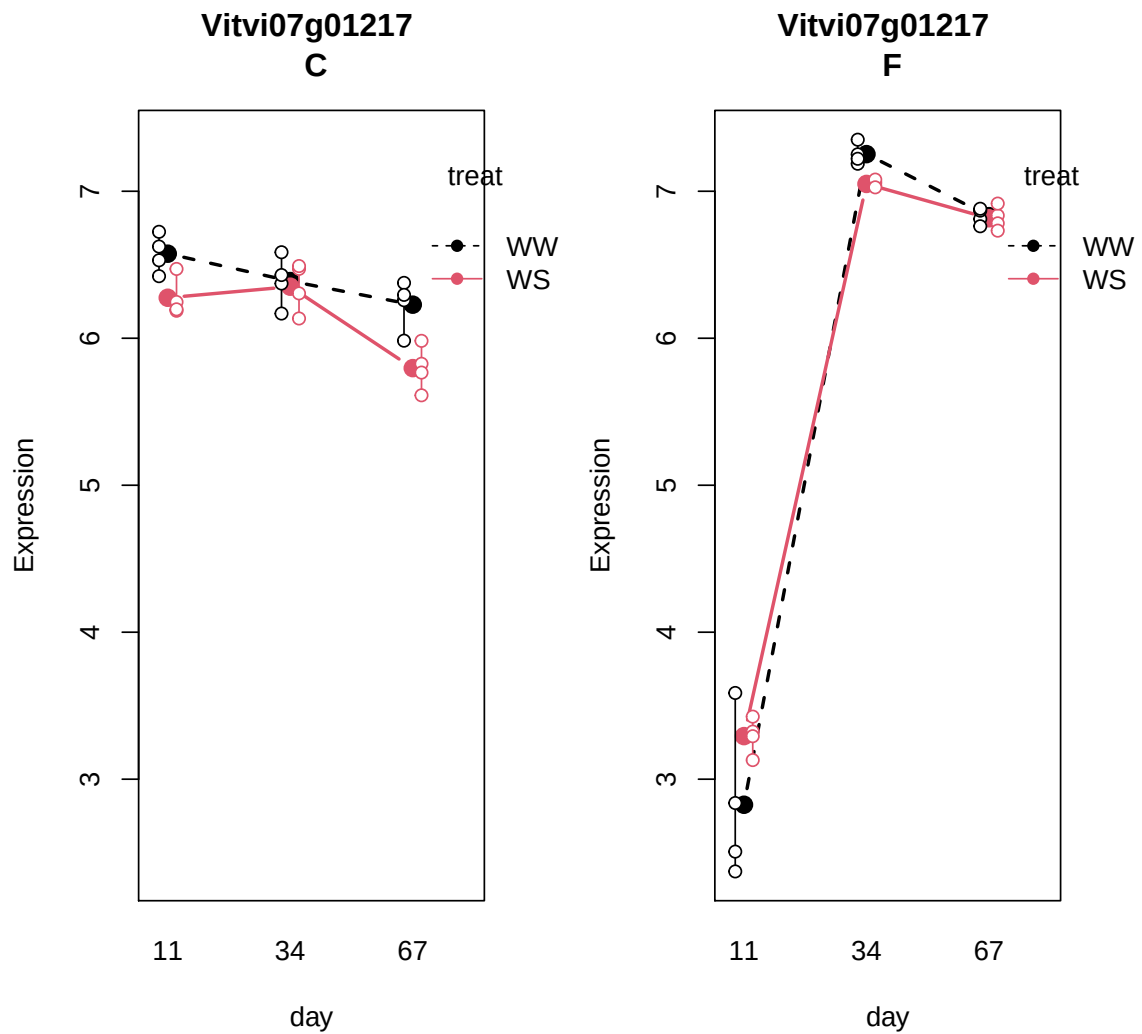


6.6.8 Vitvi07g01217

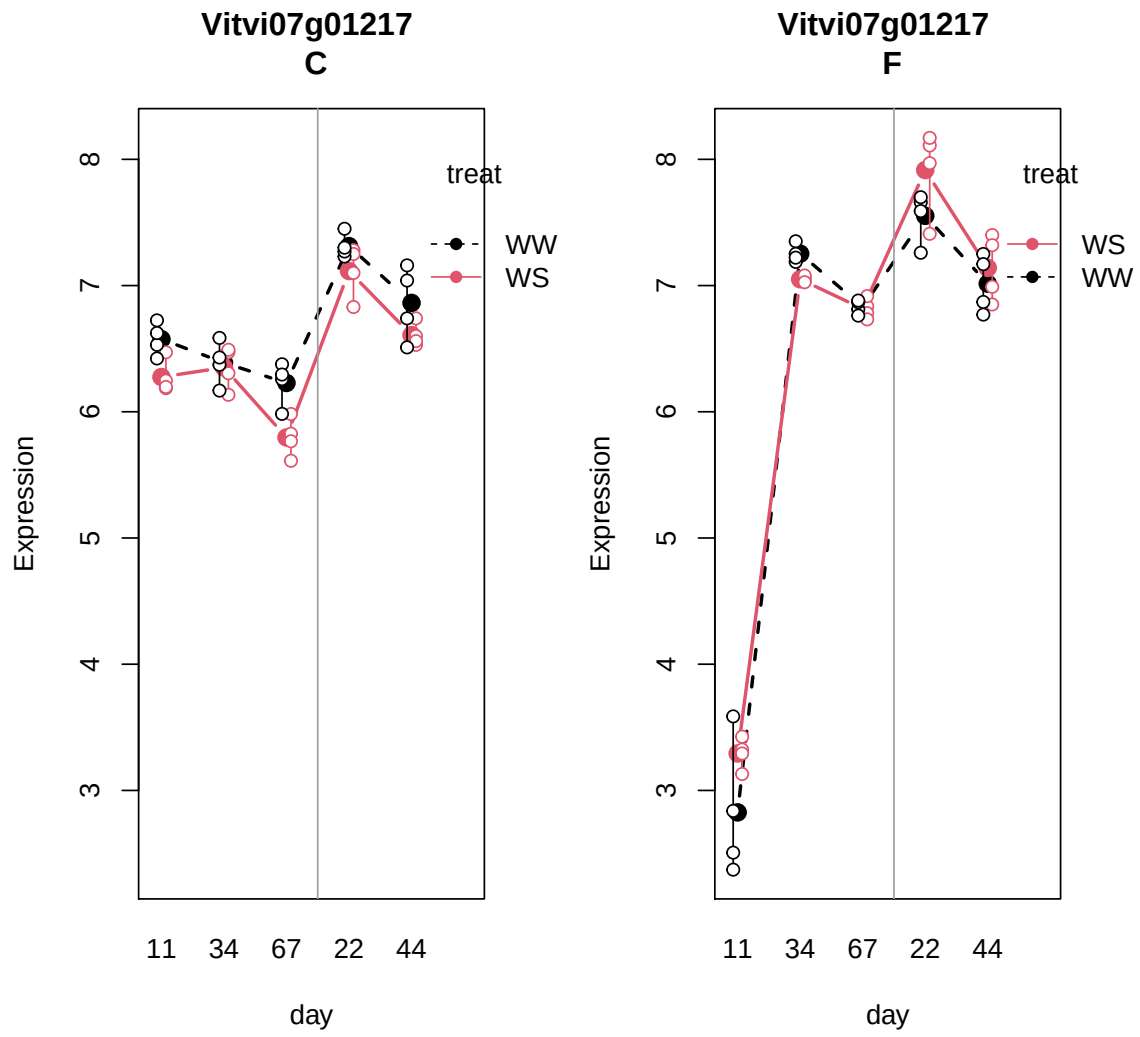
Coefficient varietyF:day67 for Vitvi07g01217.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi07g01217 4.351425 5.973643 22.01534 1.670371e-23
      adj.P.Val      B
Vitvi07g01217 3.182474e-20 43.25096

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```




```
> fit1[varname,]$coefficients
```

```

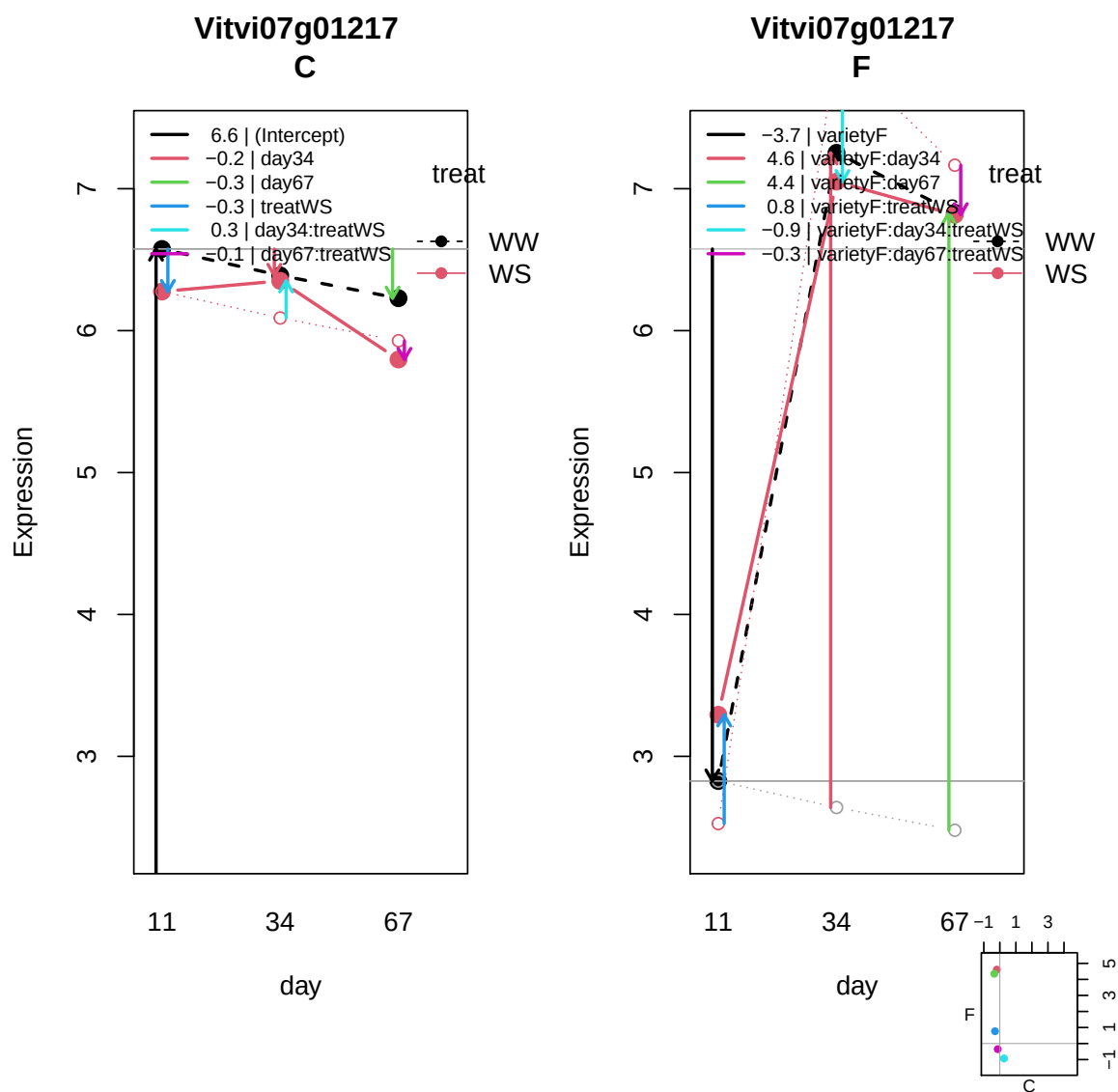
              (Intercept)  varietyF      day34      day67
Vitvi07g01217      6.575194 -3.749188 -0.186283 -0.3468225
              treatWS varietyF:day34 varietyF:day67
Vitvi07g01217    -0.2997572      4.612853      4.351425
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi07g01217      0.7667736      0.2615639     -0.1319302
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi07g01217      -0.9312521      -0.3494162

```

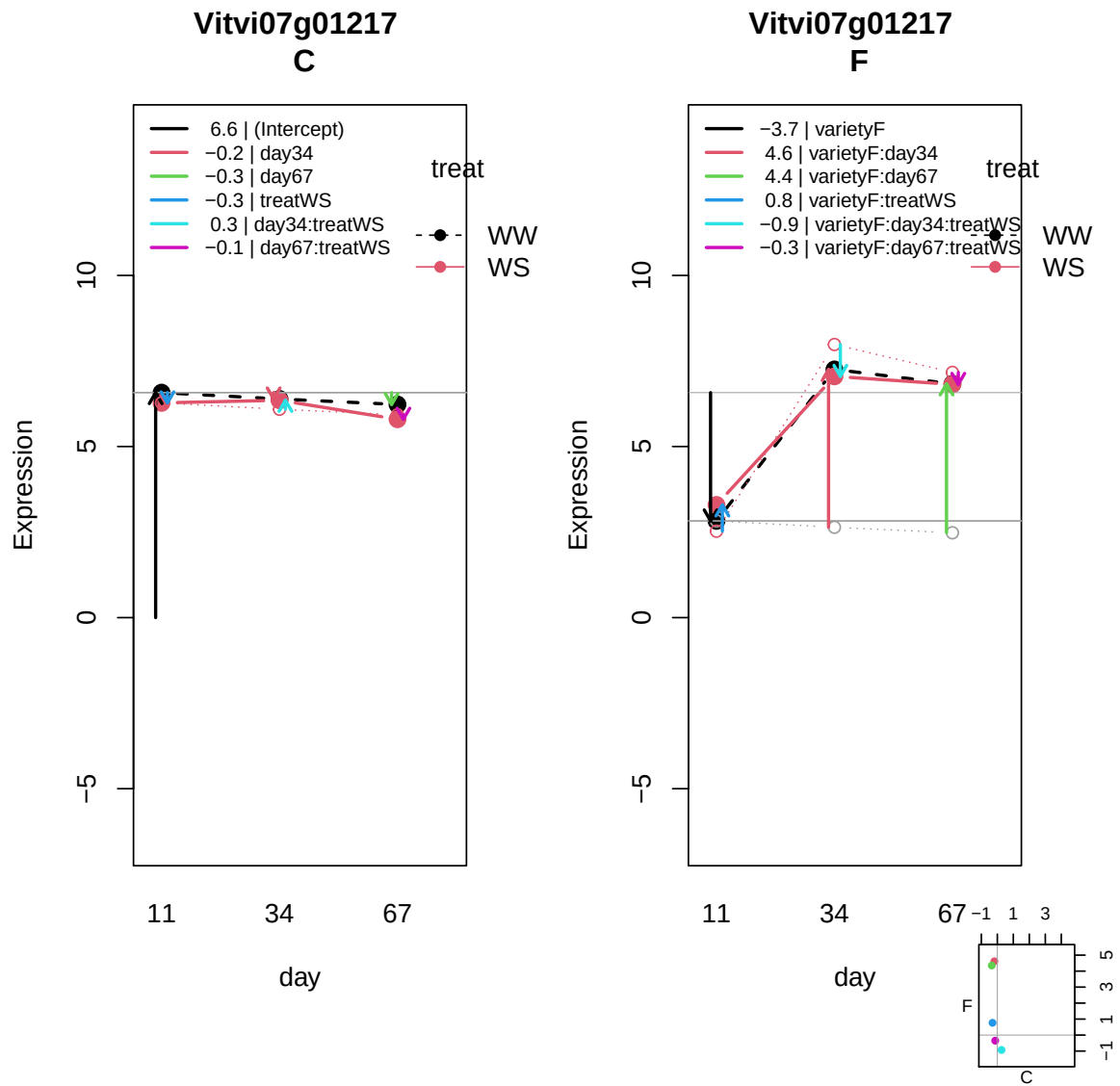
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

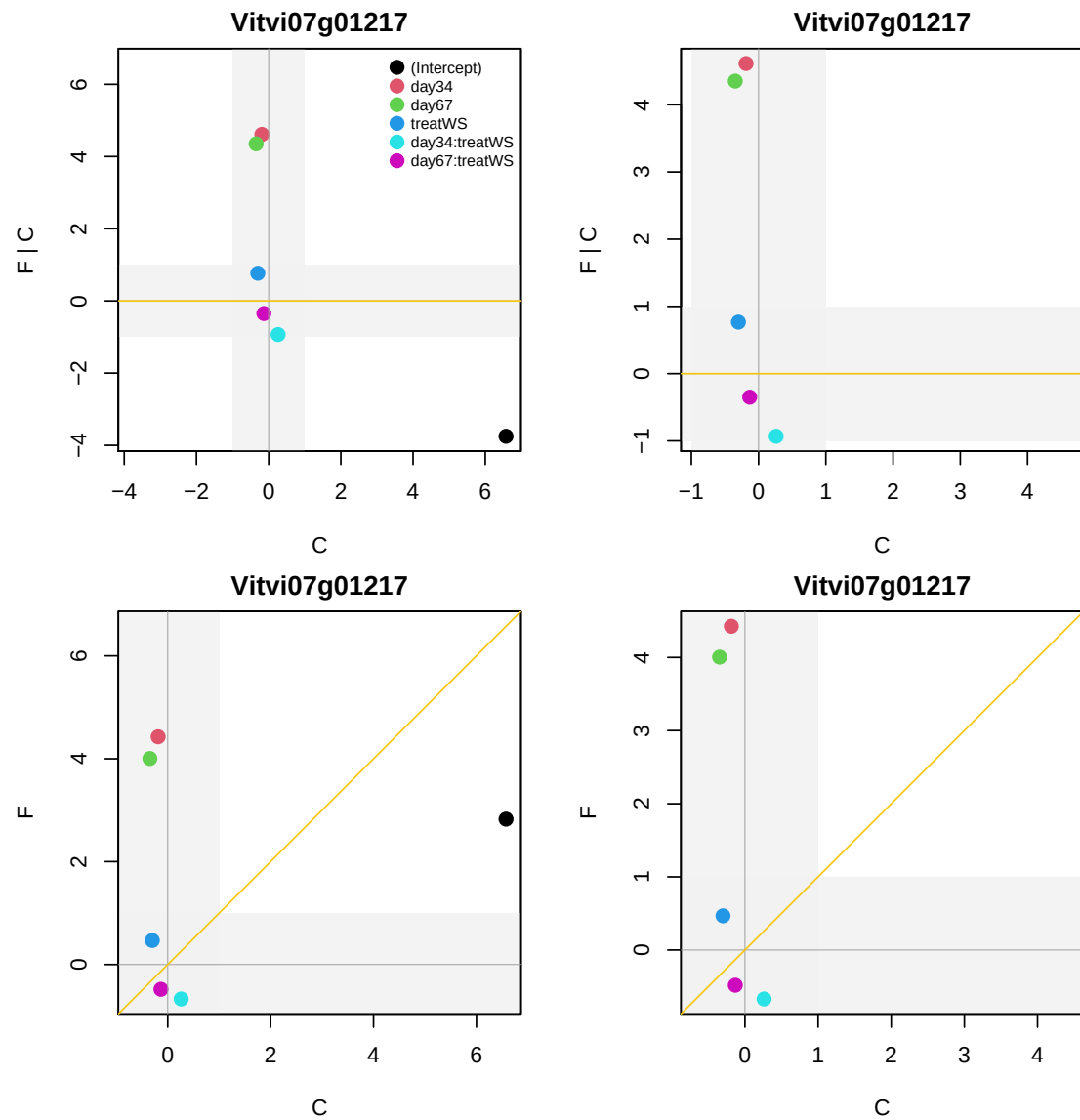


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

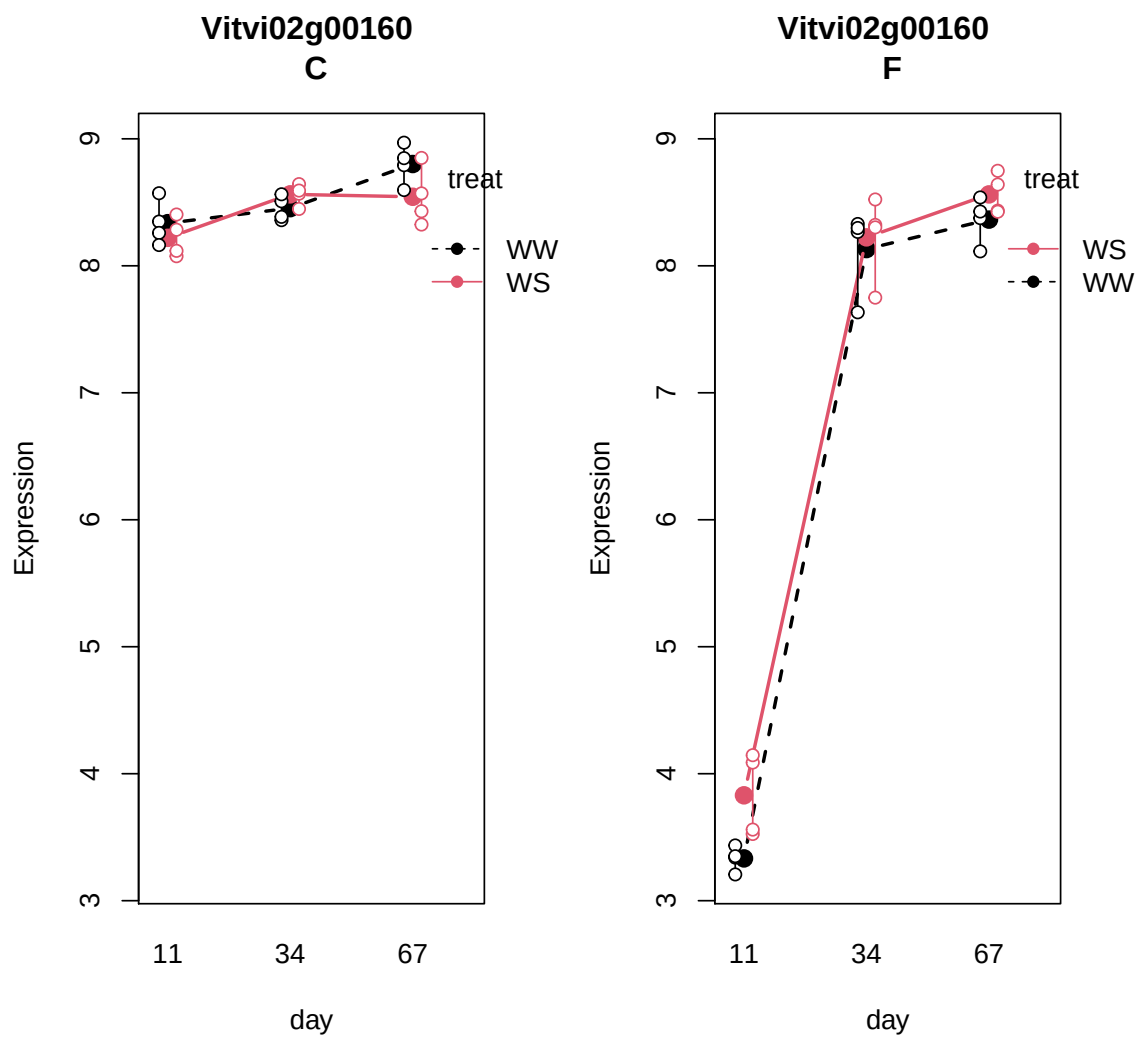


6.6.9 Vitvi02g00160

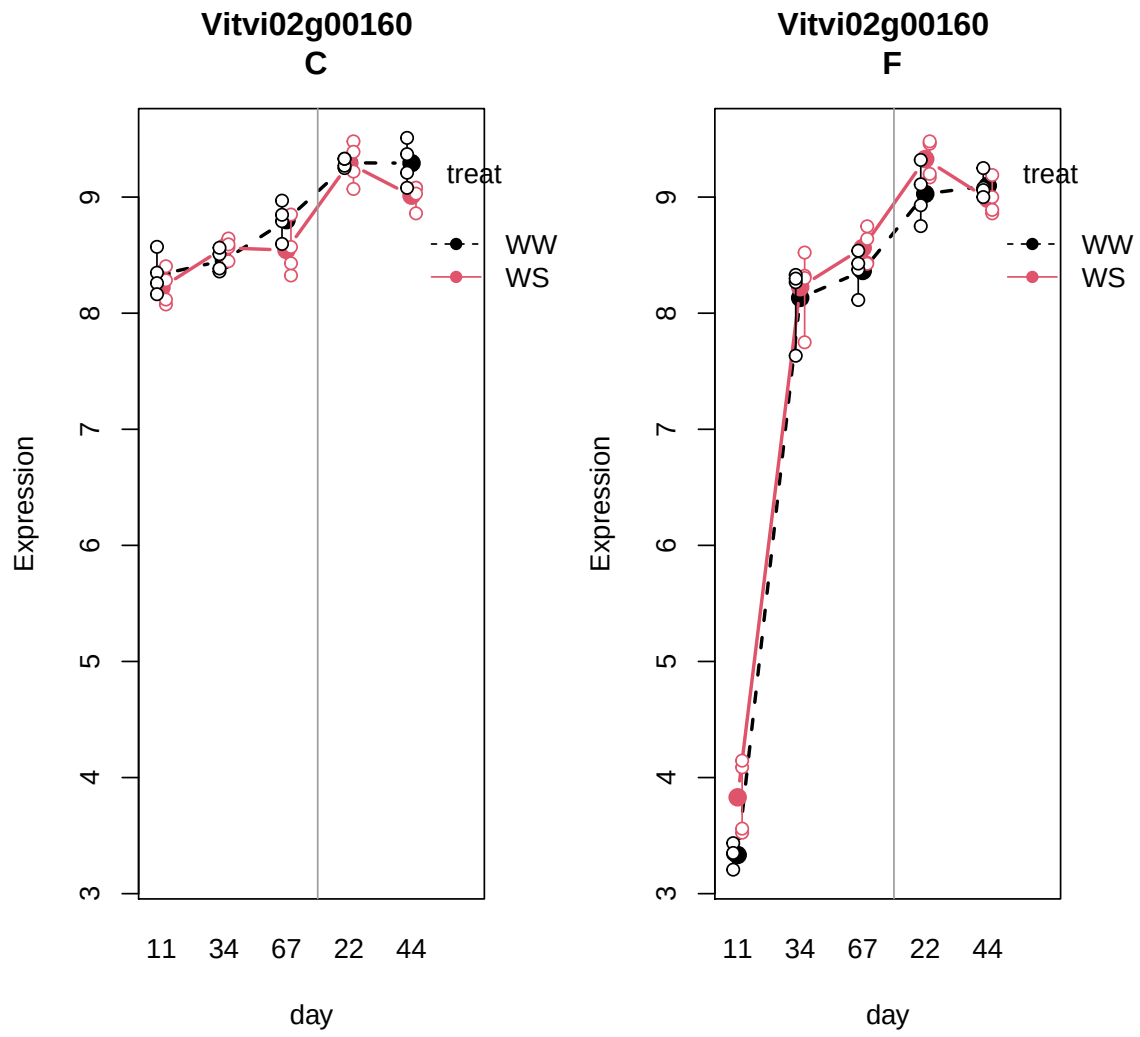
Coefficient varietyF:day67 for Vitvi02g00160.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi02g00160 4.564768 7.613536 21.56198 3.524161e-23
      adj.P.Val      B
Vitvi02g00160 5.968362e-20 42.53589

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

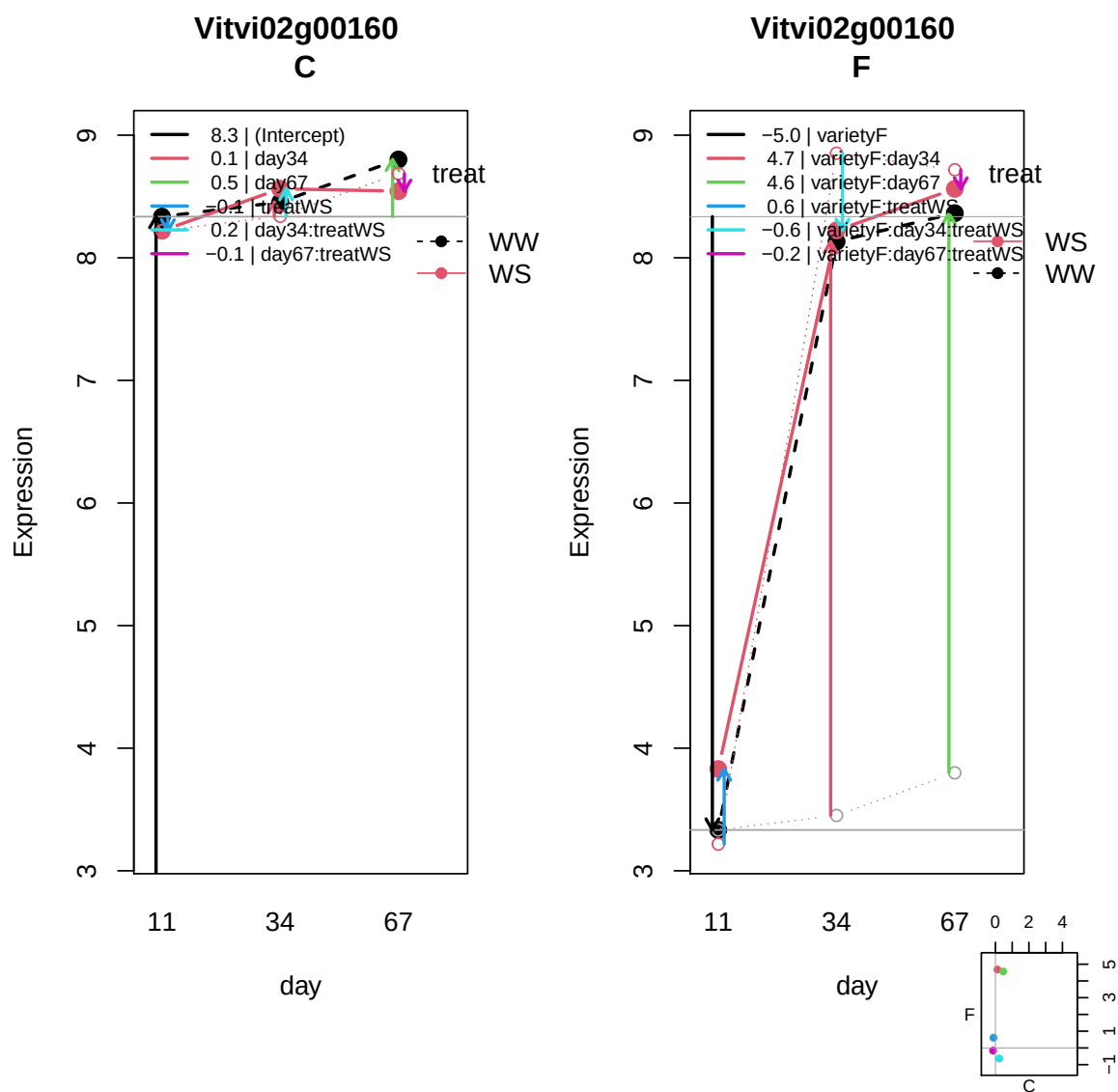
              (Intercept)  varietyF    day34    day67
Vitvi02g00160      8.335593 -5.002587 0.1183836 0.4659597
              treatWS  varietyF:day34  varietyF:day67
Vitvi02g00160 -0.1152949      4.680503      4.564768
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi02g00160      0.6120862      0.2241478     -0.1426649
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi02g00160      -0.6288474      -0.1556883

```

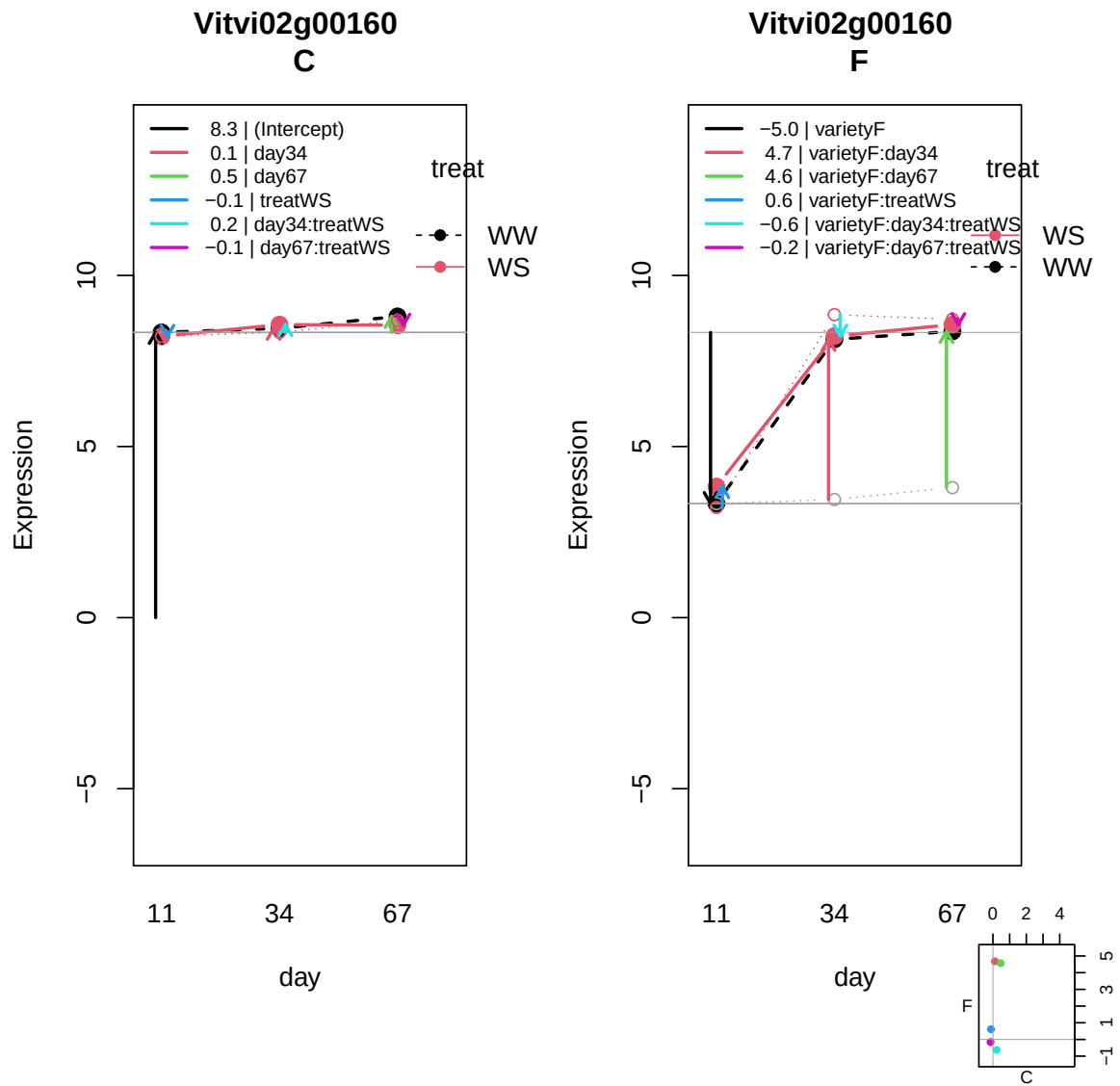
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

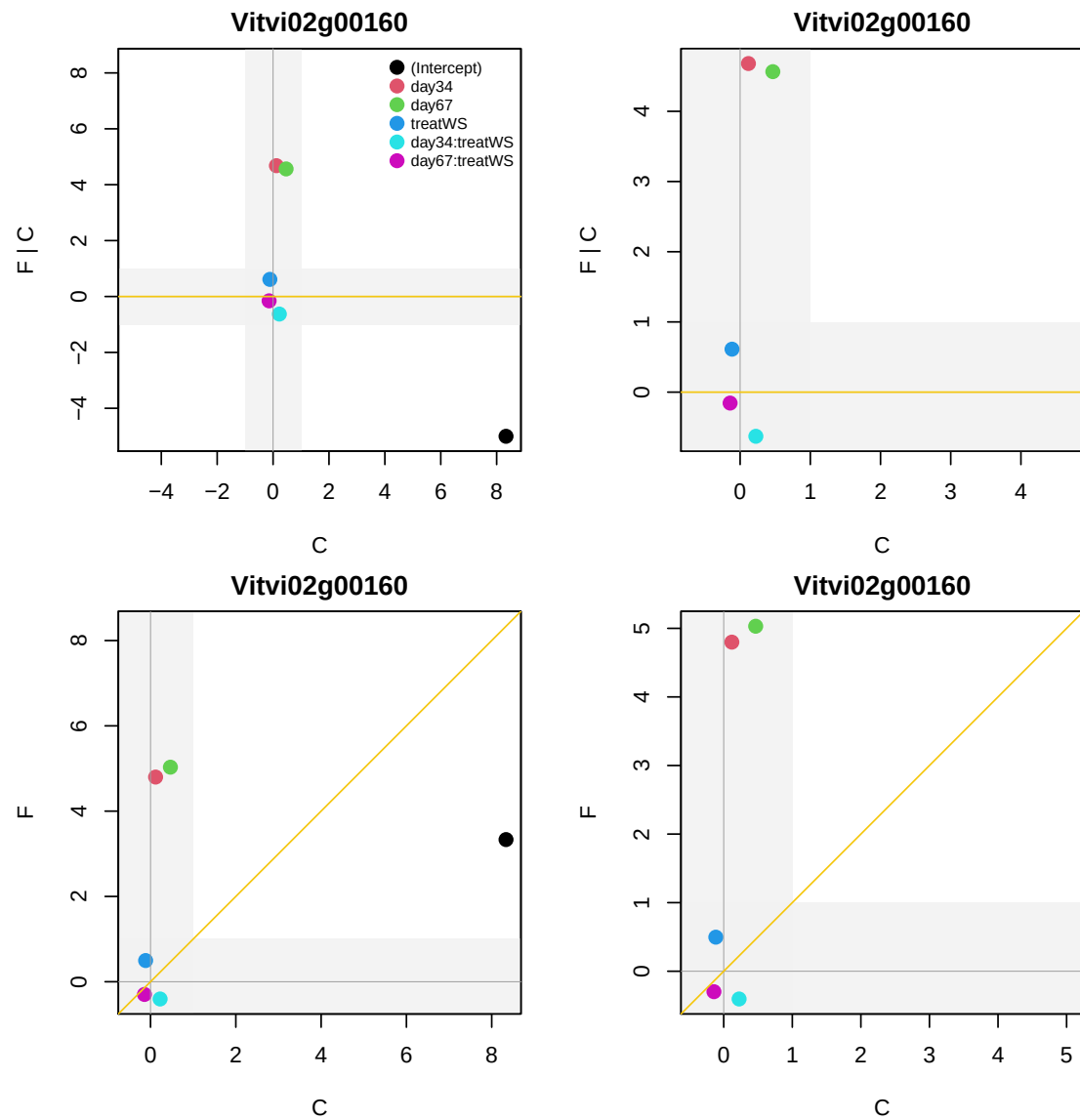


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

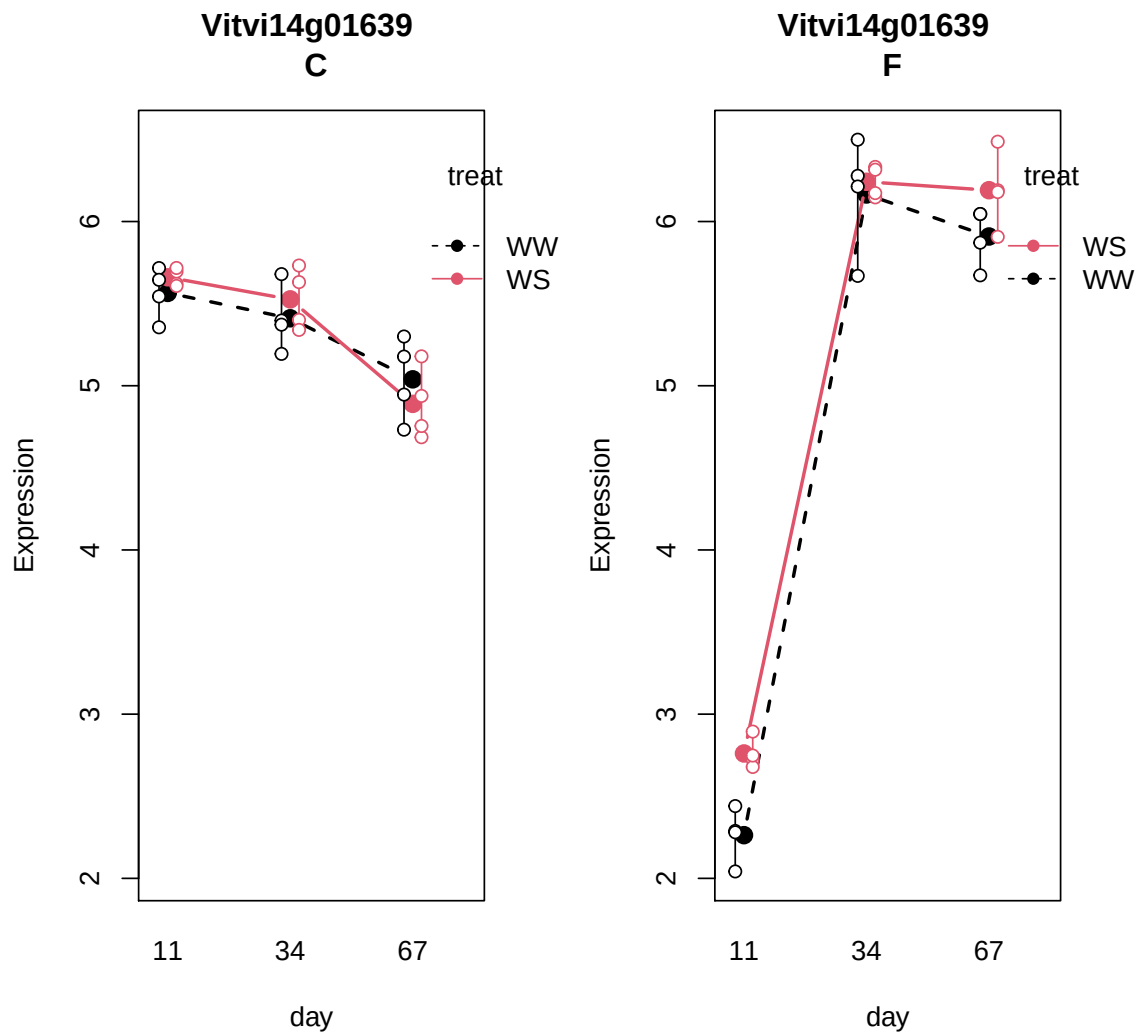


6.6.10 Vitvi14g01639

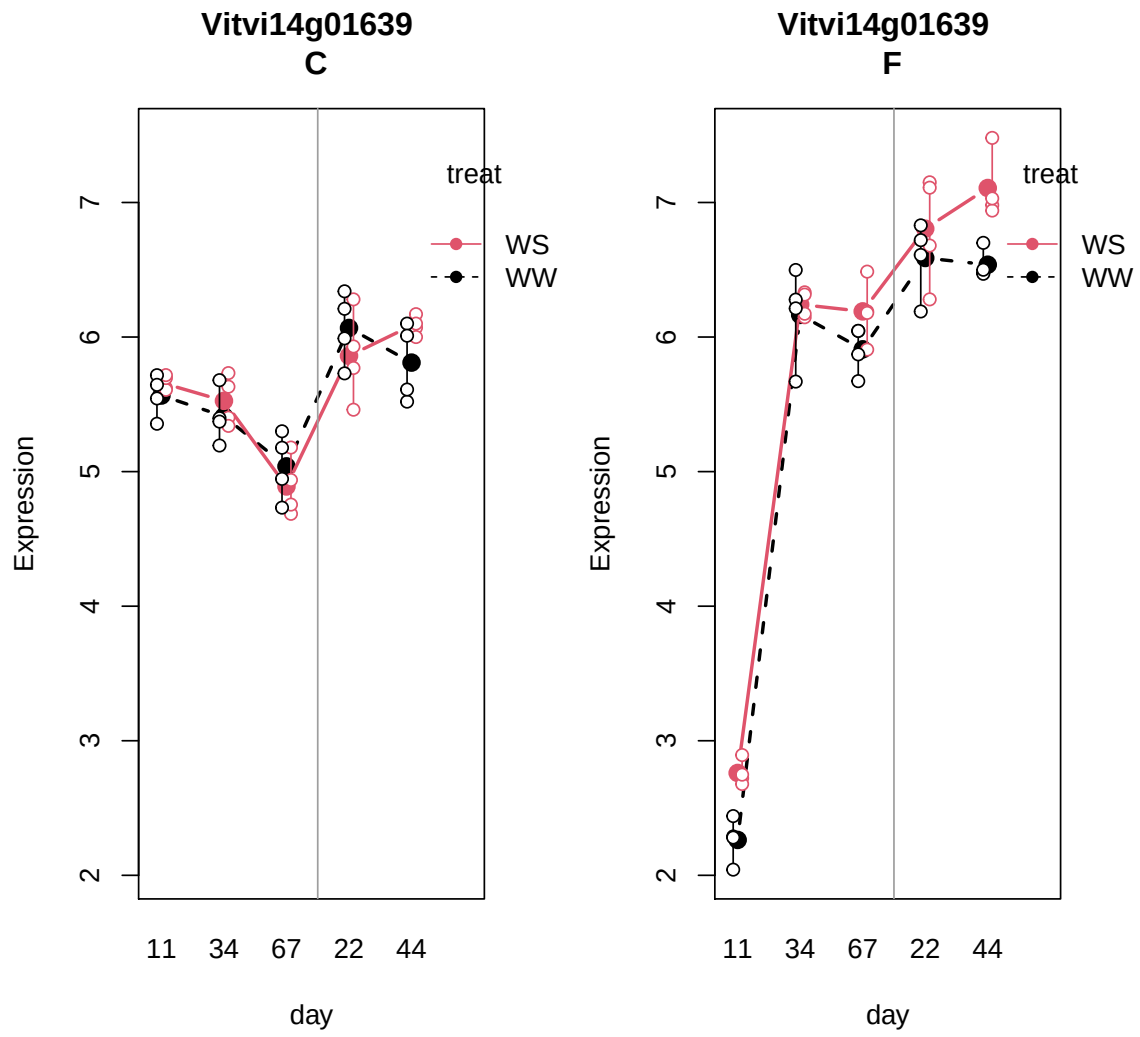
Coefficient varietyF:day67 for Vitvi14g01639.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi14g01639 4.172223 5.13502 21.08417 7.854541e-23
      adj.P.Val      B
Vitvi14g01639 1.197189e-19 41.76642

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



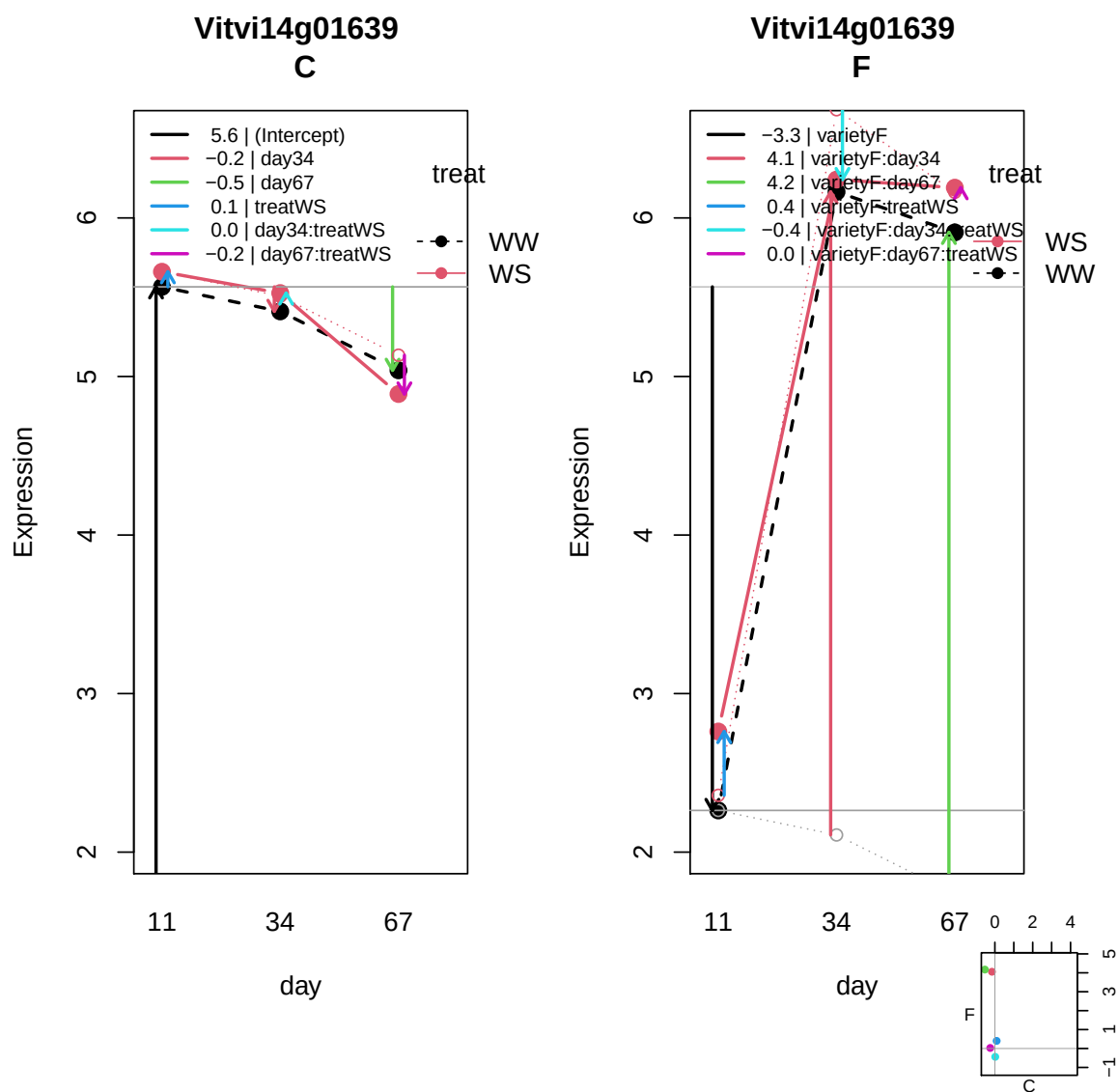
```

> fit1[varname,]$coefficients

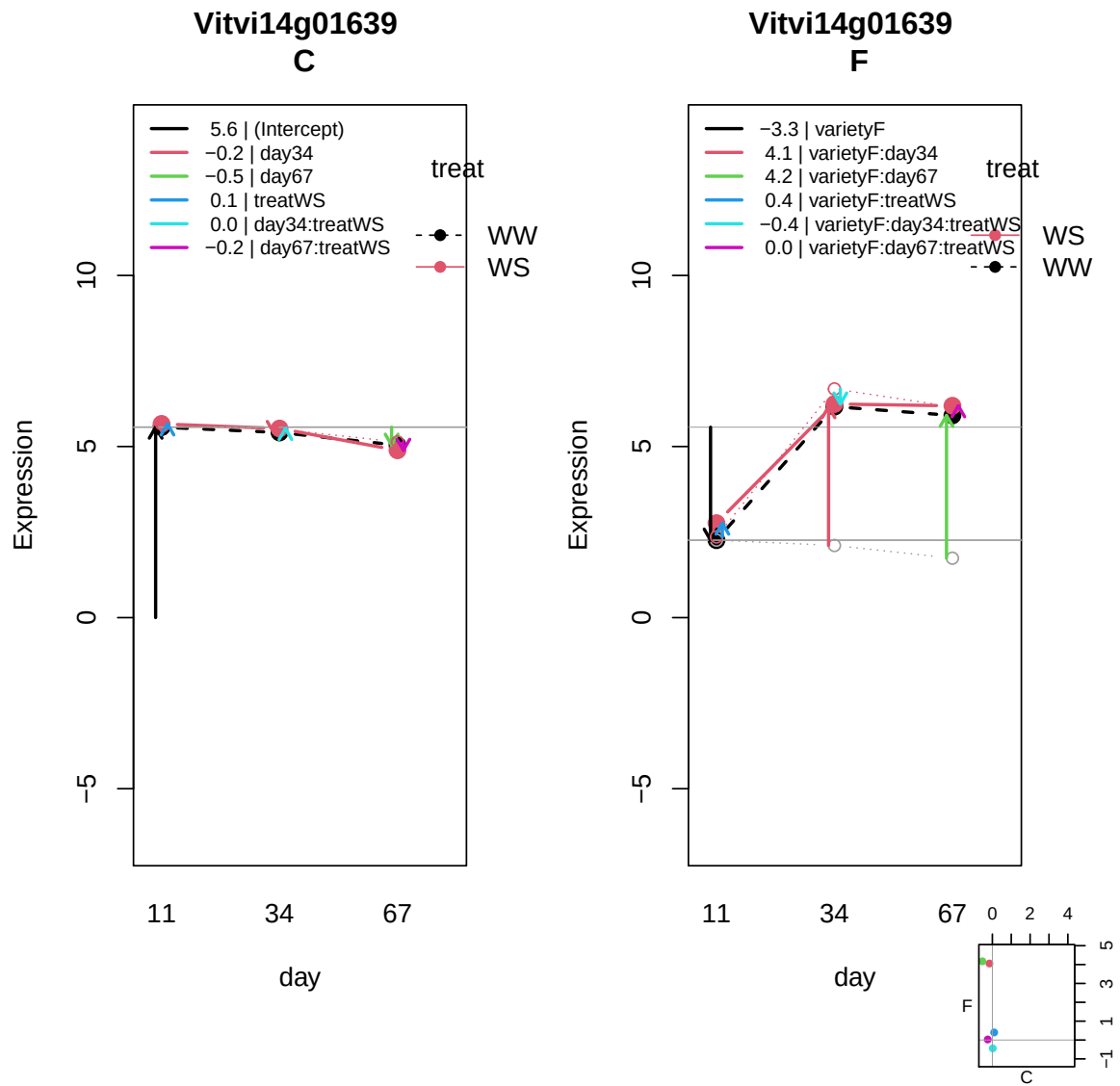
              (Intercept)  varietyF      day34    day67
Vitvi14g01639    5.565279 -3.302345 -0.1546864 -0.5264
              treatWS varietyF:day34 varietyF:day67
Vitvi14g01639  0.09522752    4.056406    4.172223
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi14g01639    0.402431    0.02011723    -0.2446191
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi14g01639    -0.4404636    0.02886853

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

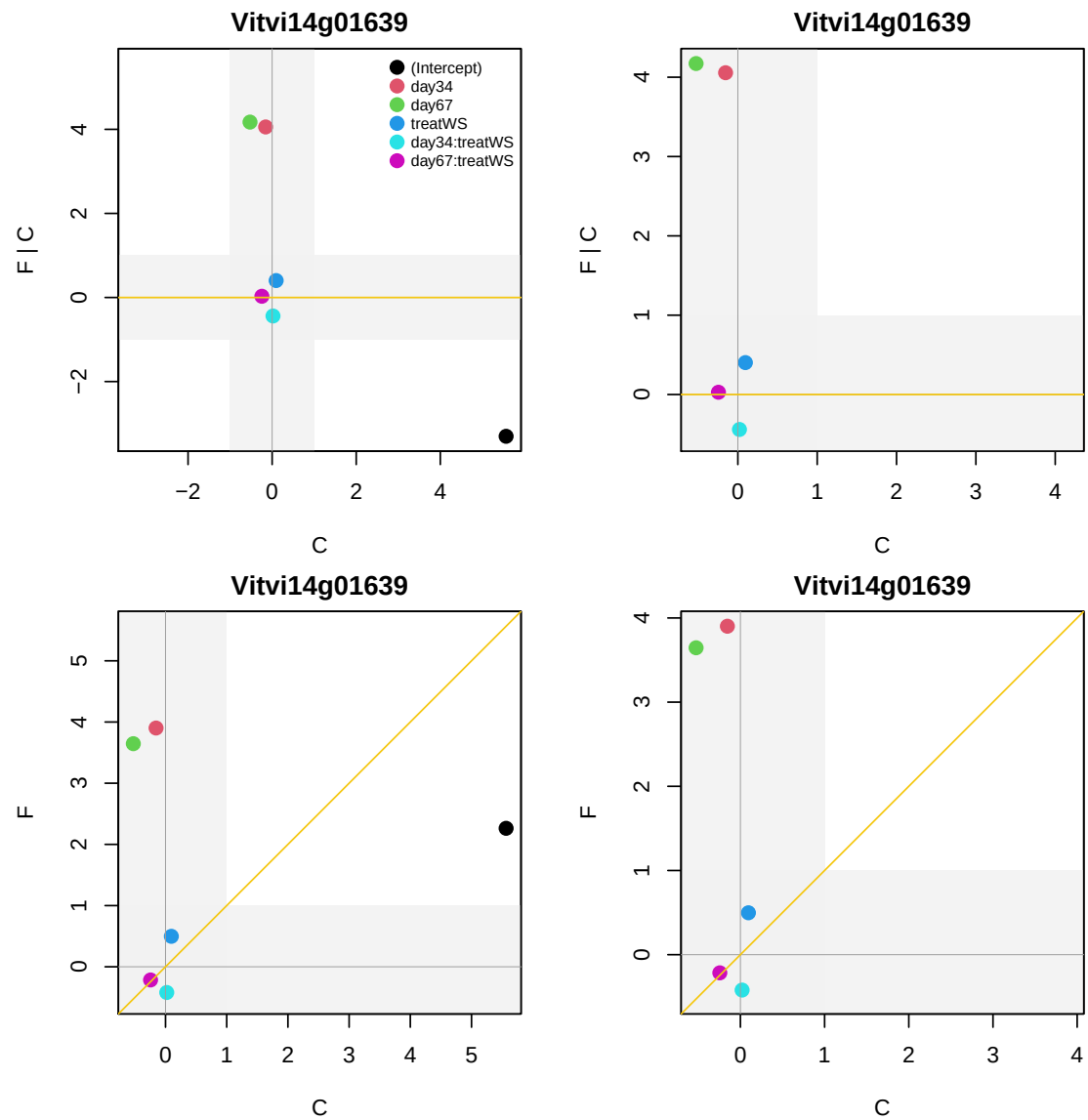


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

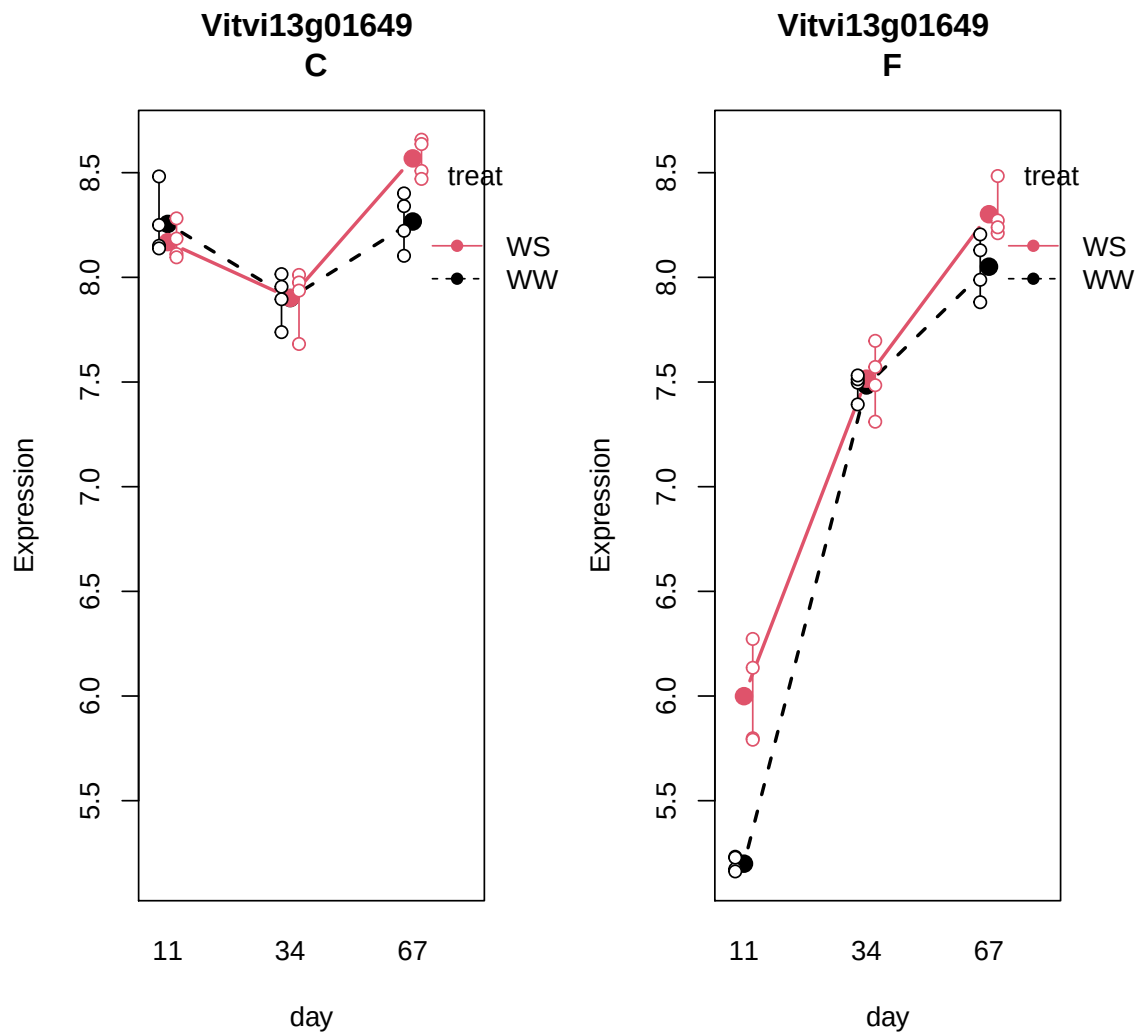


6.7 varietyF:treatWS

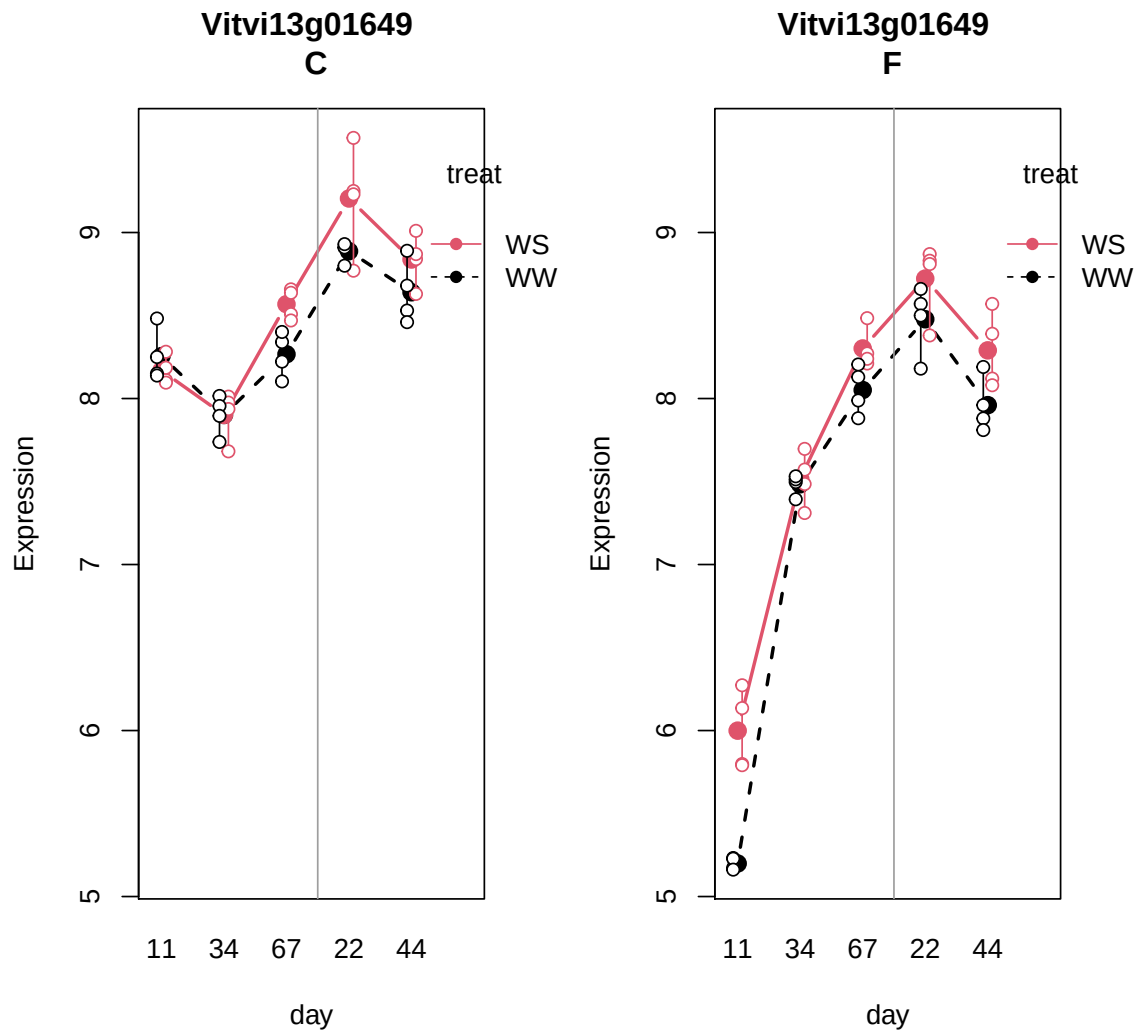
6.7.1 Vitvi13g01649

Coefficient varietyF:treatWS for Vitvi13g01649.

```
> tt[varname,]
              logFC AveExpr      t      P.Value
Vitvi13g01649 0.8870657 7.634288 6.292101 2.093873e-07
              adj.P.Val      B
Vitvi13g01649 0.001182715 6.934342
> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```




```
> fit1[varname,]$coefficients
```

```

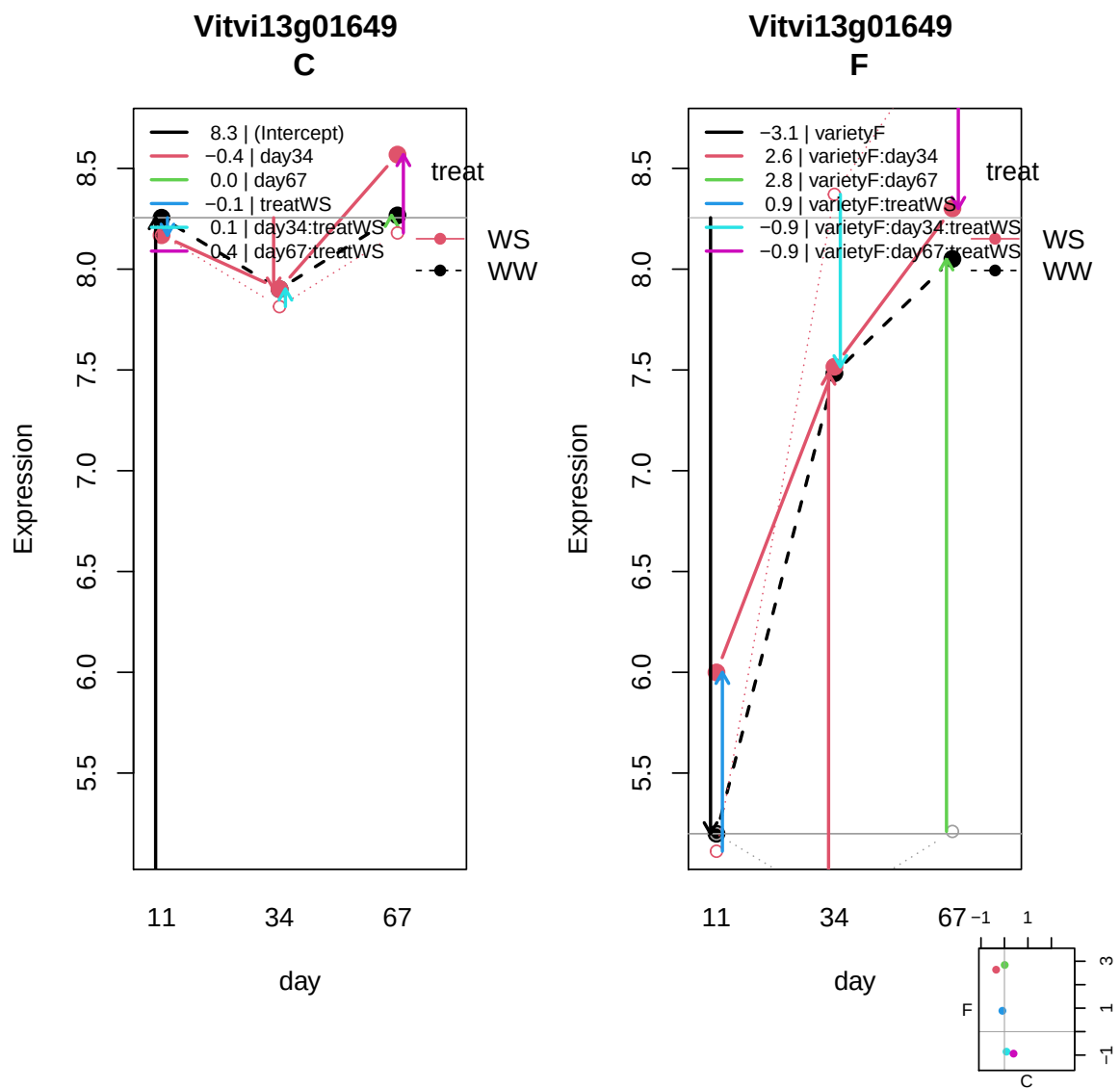
              (Intercept)  varietyF      day34      day67
Vitvi13g01649      8.255266 -3.056203 -0.3541708 0.01136536
              treatWS  varietyF:day34  varietyF:day67
Vitvi13g01649 -0.08684799   2.638707   2.840556
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi13g01649      0.8870657   0.08713344   0.3884909
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi13g01649      -0.8549865      -0.9381926

```

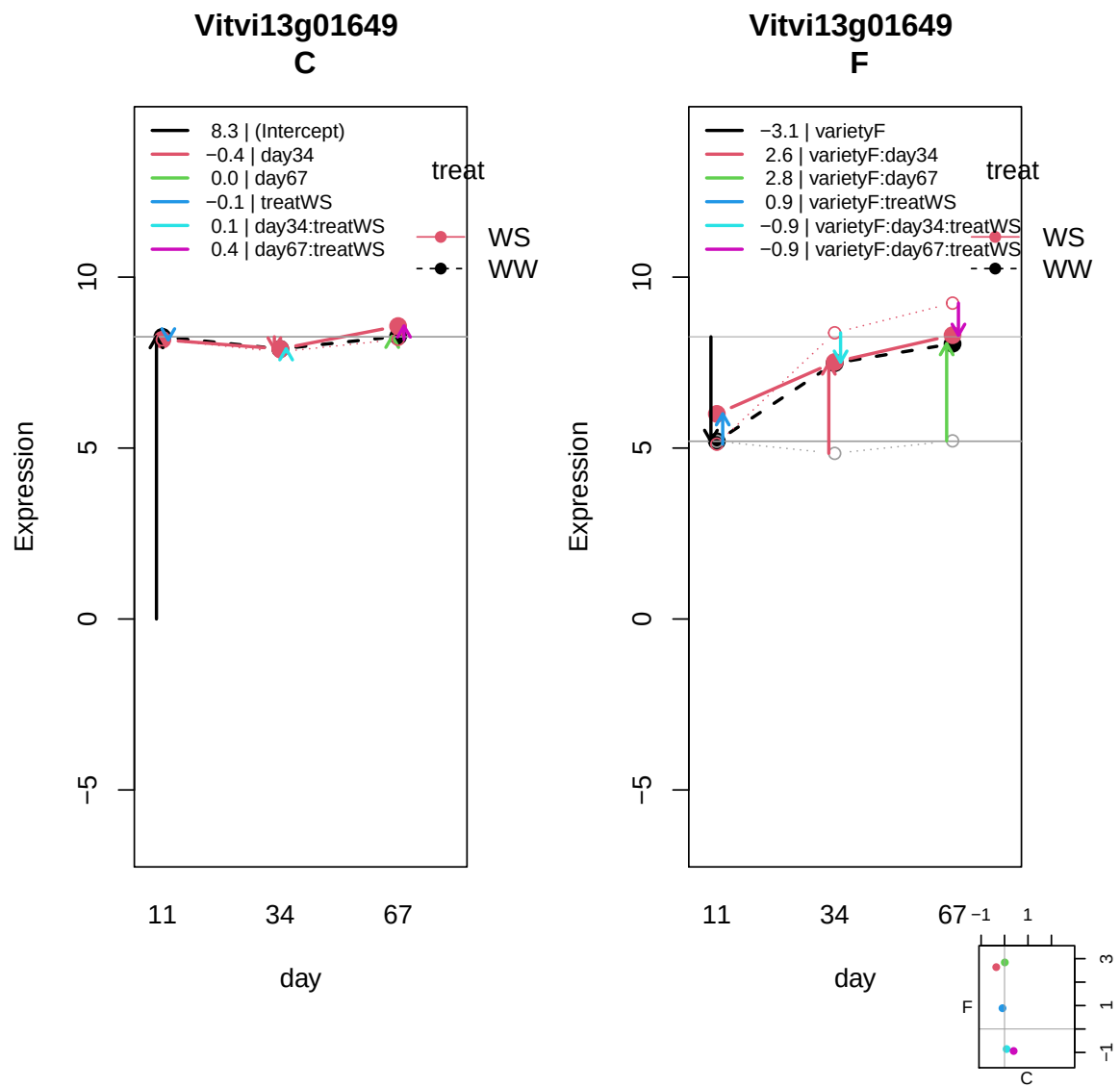
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

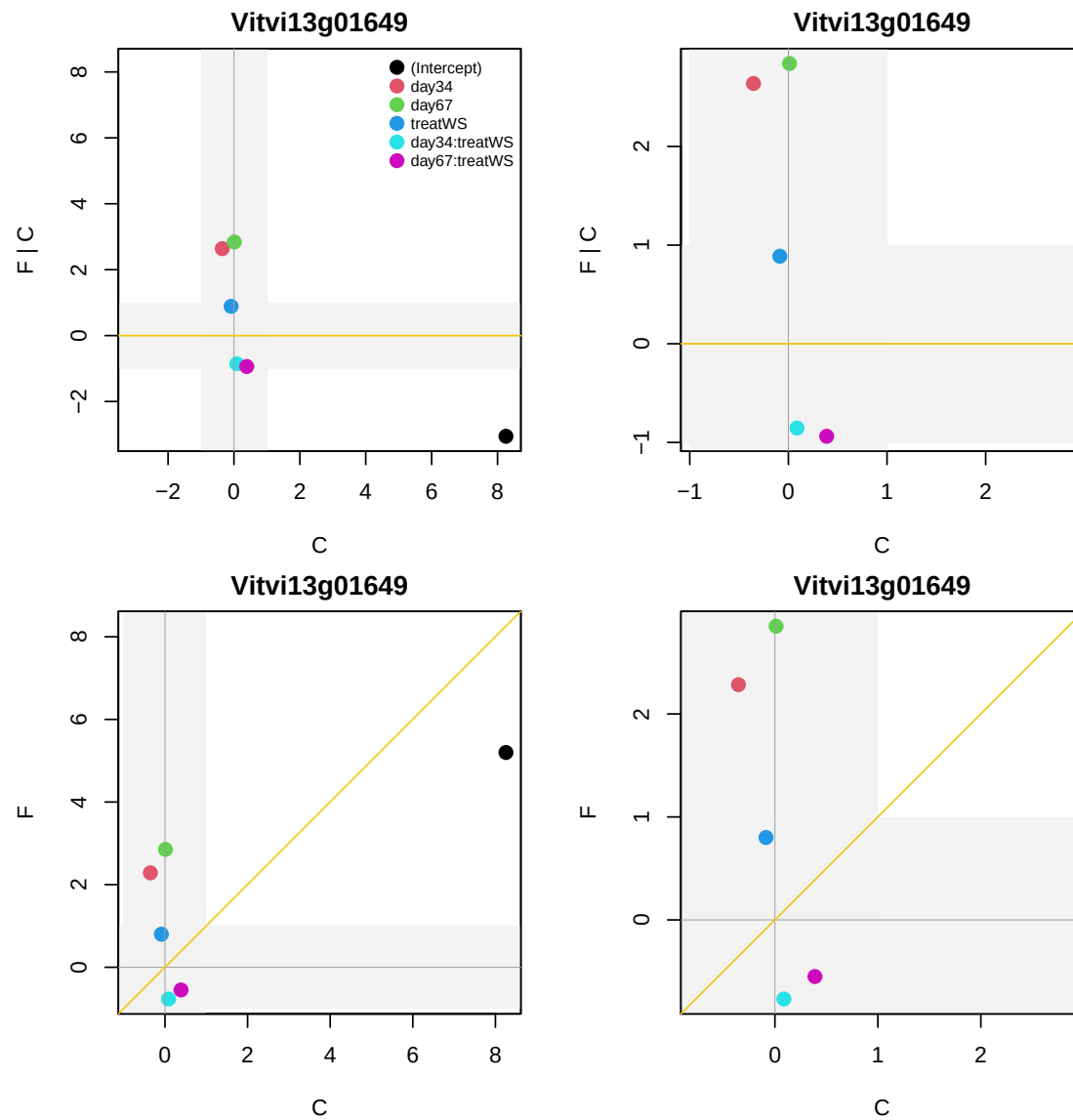


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

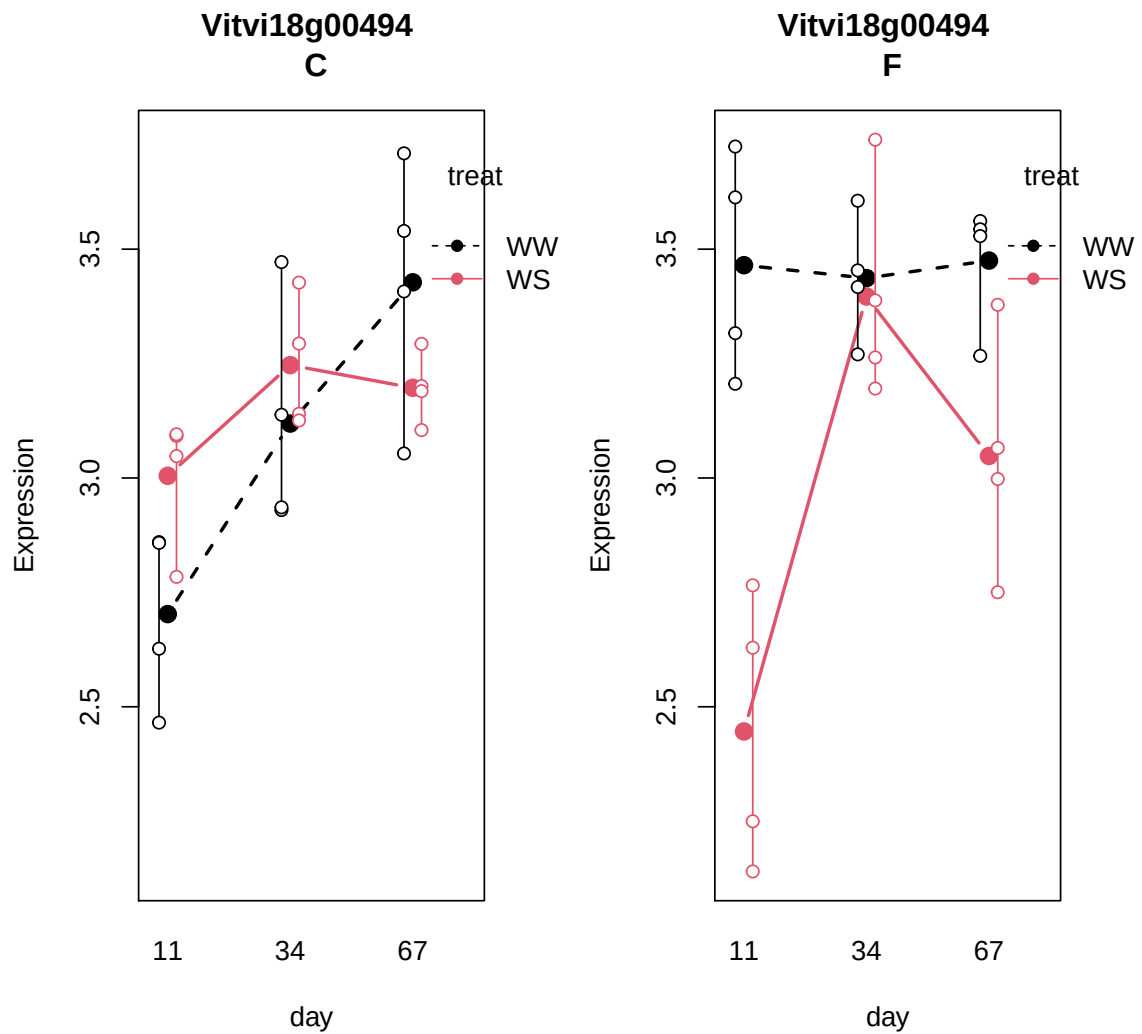
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



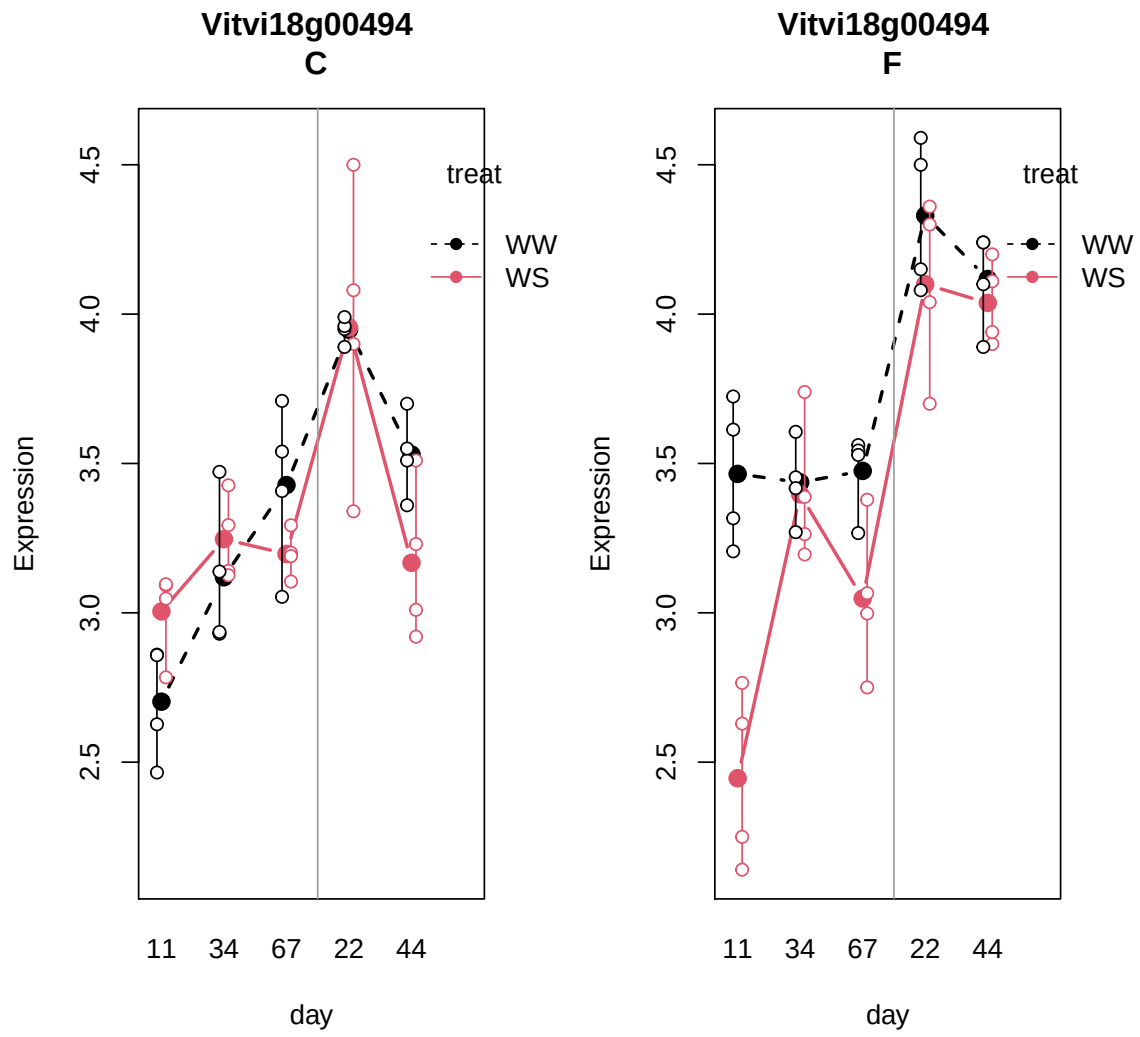
6.7.2 Vitvi18g00494

Coefficient varietyF:treatWS for Vitvi18g00494.

```
> tt[varname,]
      logFC AveExpr      t    P.Value
Vitvi18g00494 -1.321026 3.163748 -6.261142 2.31076e-07
      adj.P.Val      B
Vitvi18g00494 0.001182715 6.844434
> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

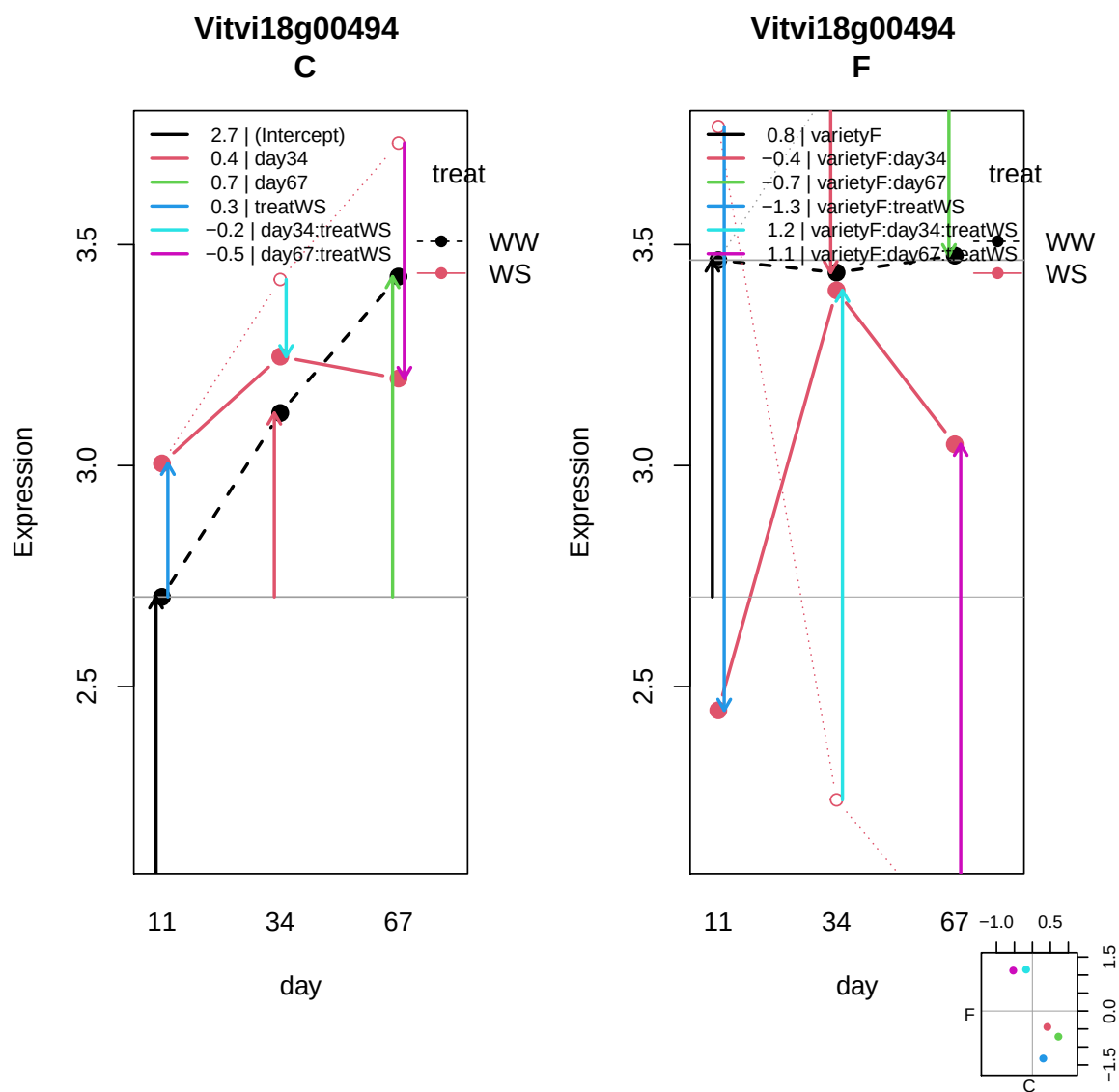
              (Intercept)  varietyF    day34    day67
Vitvi18g00494      2.702571 0.7623876 0.416355 0.7250324
              treatWS  varietyF:day34  varietyF:day67
Vitvi18g00494  0.3021615    -0.4445876    -0.714895
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi18g00494      -1.321026    -0.1744658    -0.5326873
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi18g00494              1.153137              1.124495

```

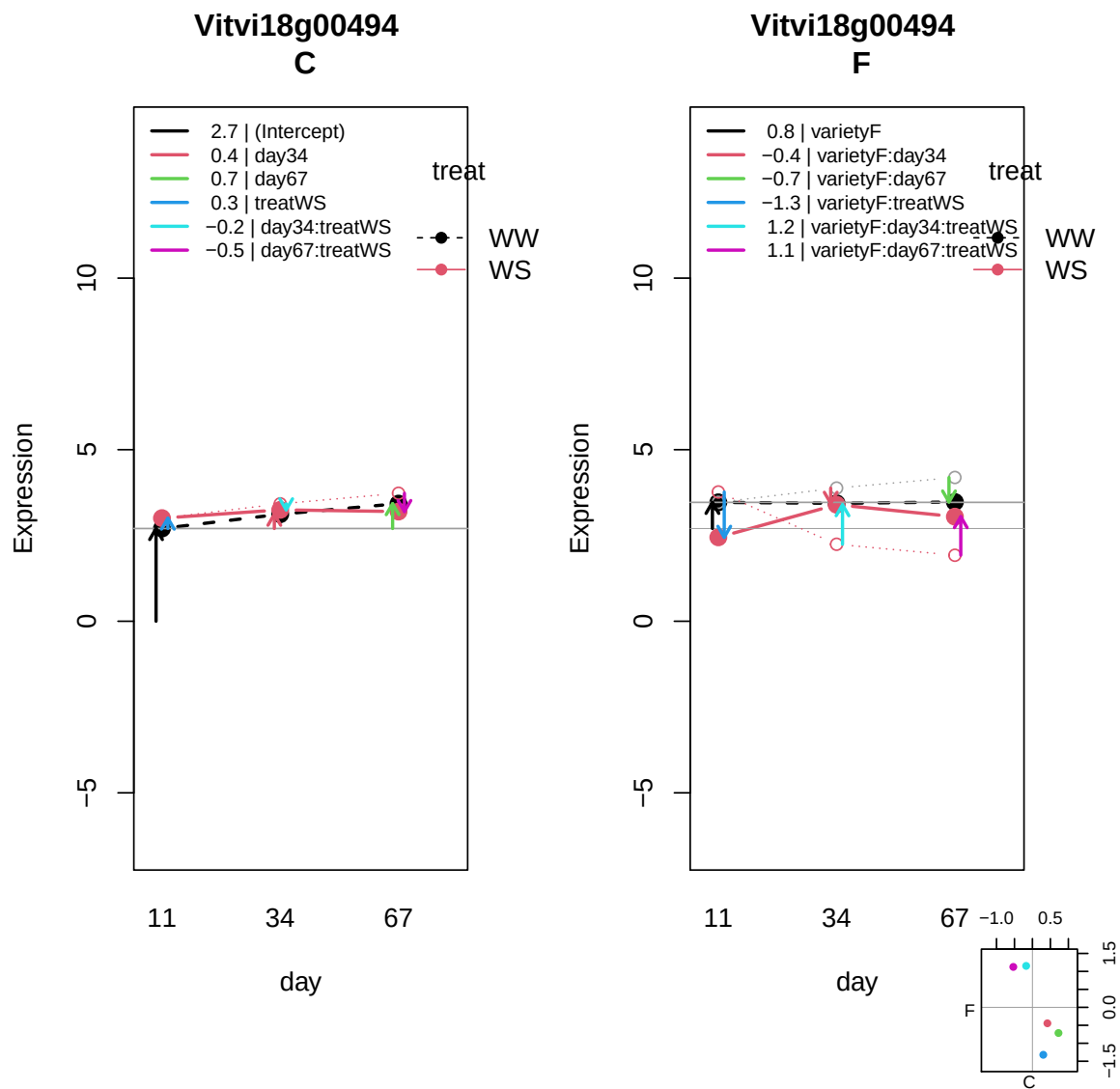
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

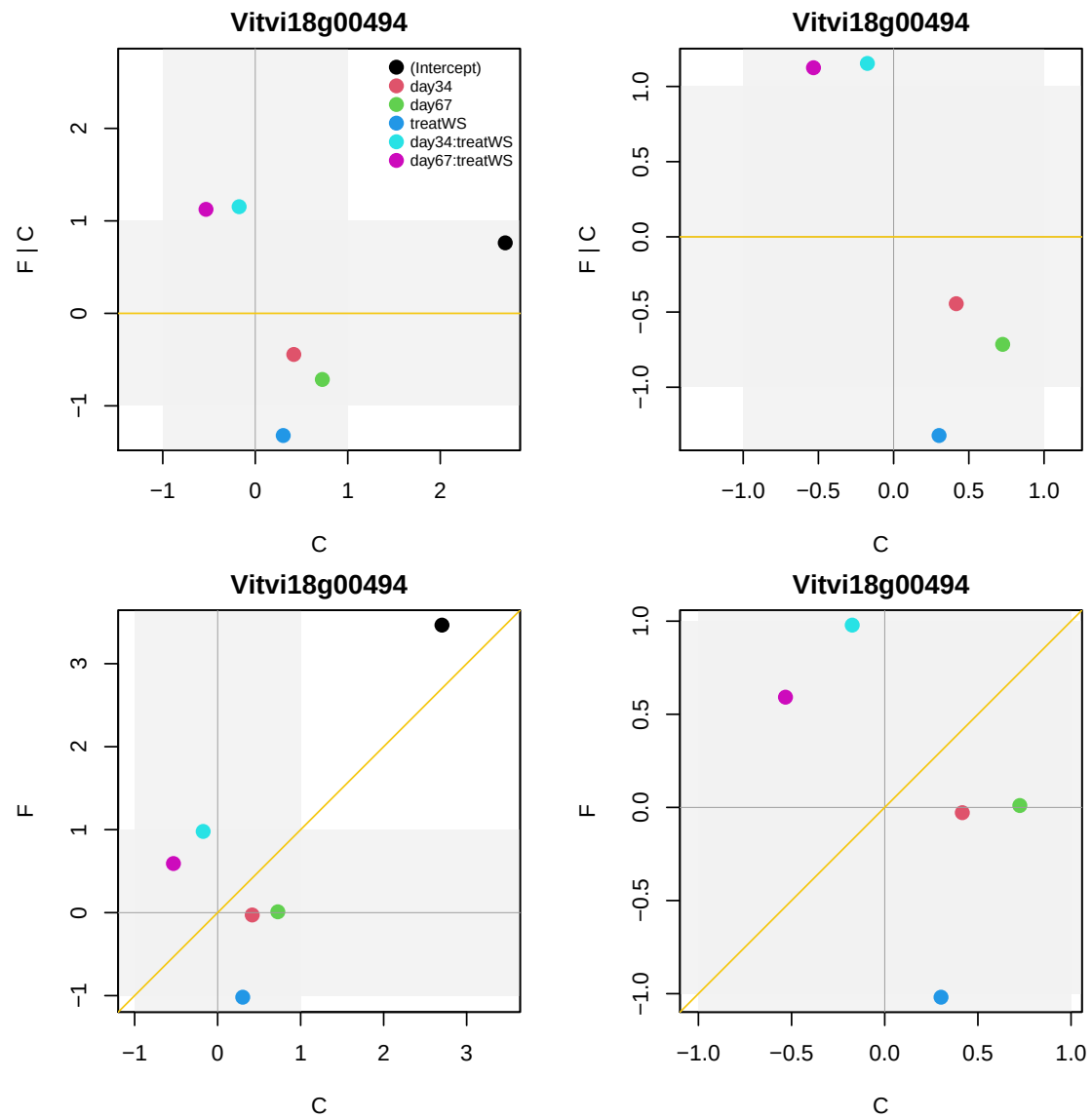


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

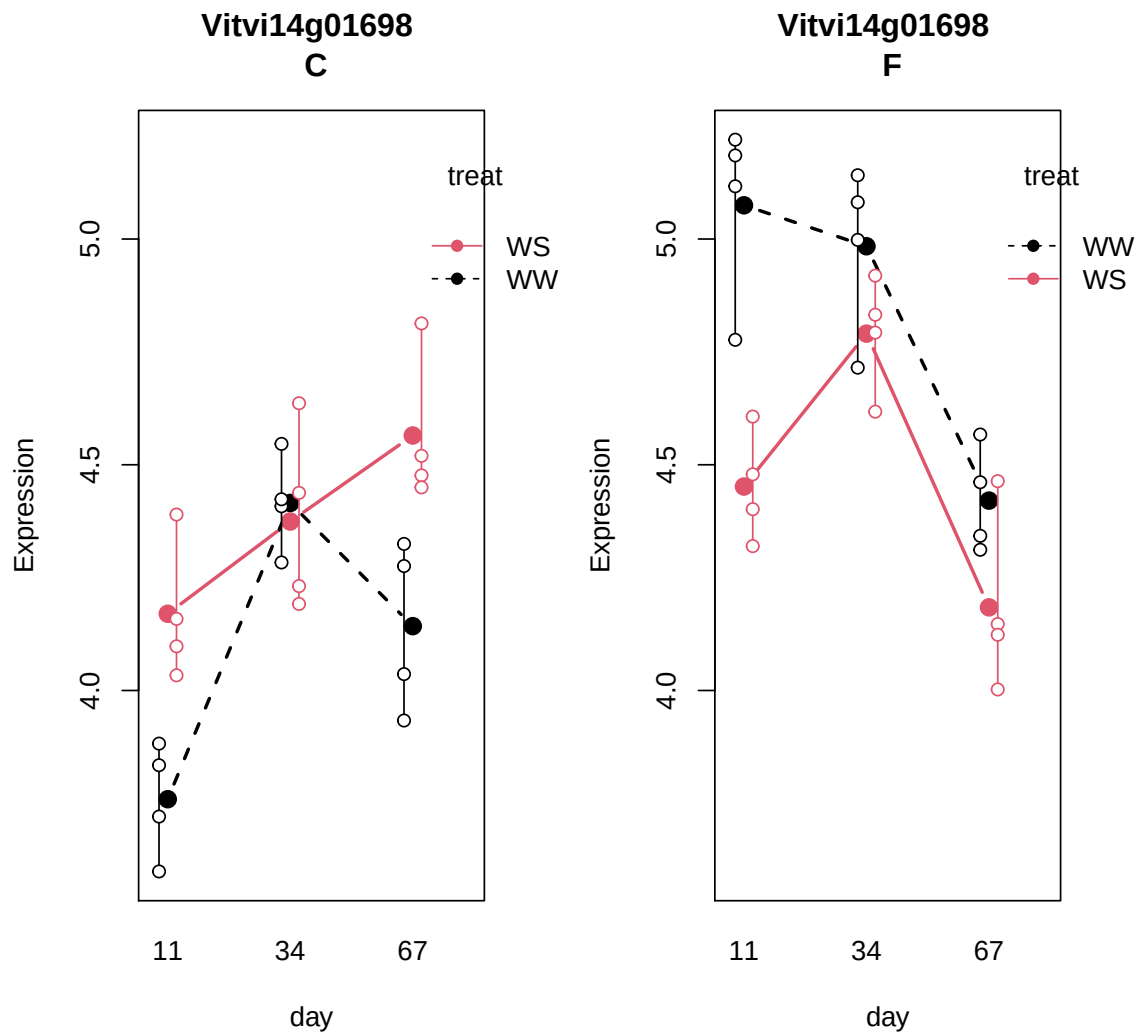
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



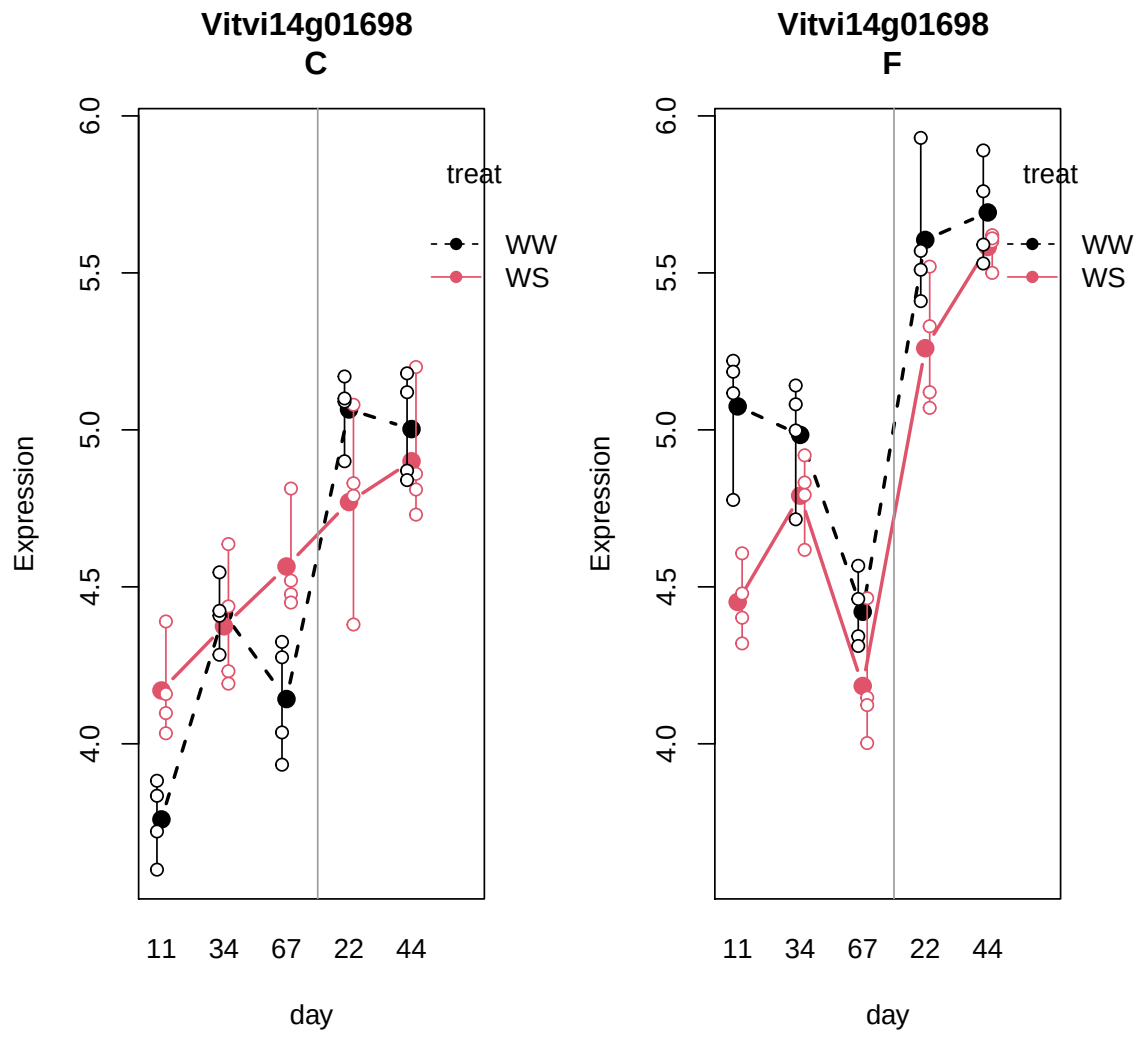
6.7.3 Vitvi14g01698

Coefficient varietyF:treatWS for Vitvi14g01698.

```
> tt[varname,]
      logFC AveExpr      t    P.Value
Vitvi14g01698 -1.033712 4.444313 -6.258825 2.327874e-07
      adj.P.Val      B
Vitvi14g01698 0.001182715 6.837703
> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

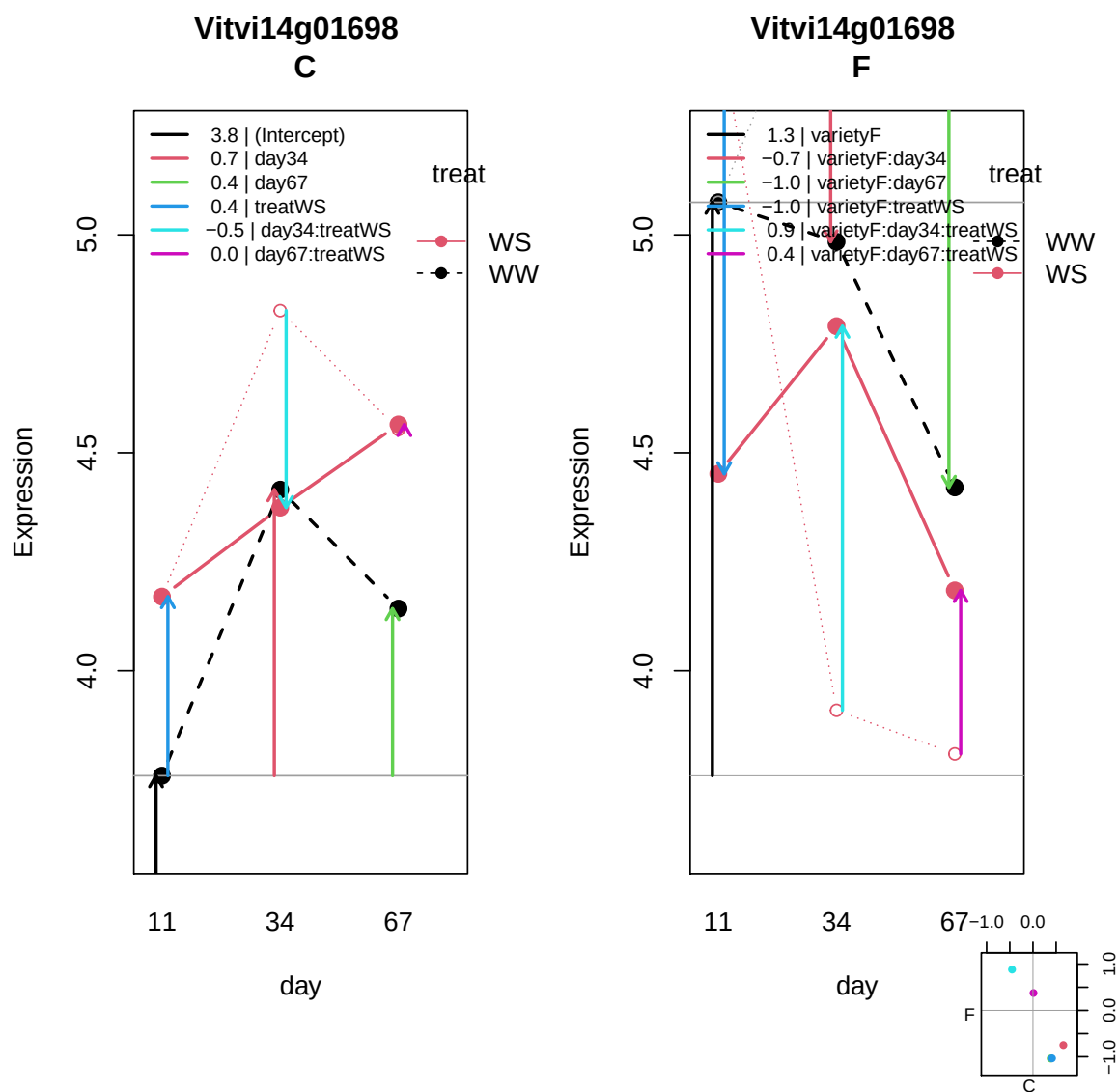
              (Intercept)  varietyF      day34      day67
Vitvi14g01698      3.759183  1.315519  0.6561698  0.3833518
              treatWS  varietyF:day34  varietyF:day67
Vitvi14g01698  0.4107661      -0.7468906      -1.037417
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi14g01698      -1.033712      -0.45187      0.01151877
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi14g01698      0.8812734      0.3749419

```

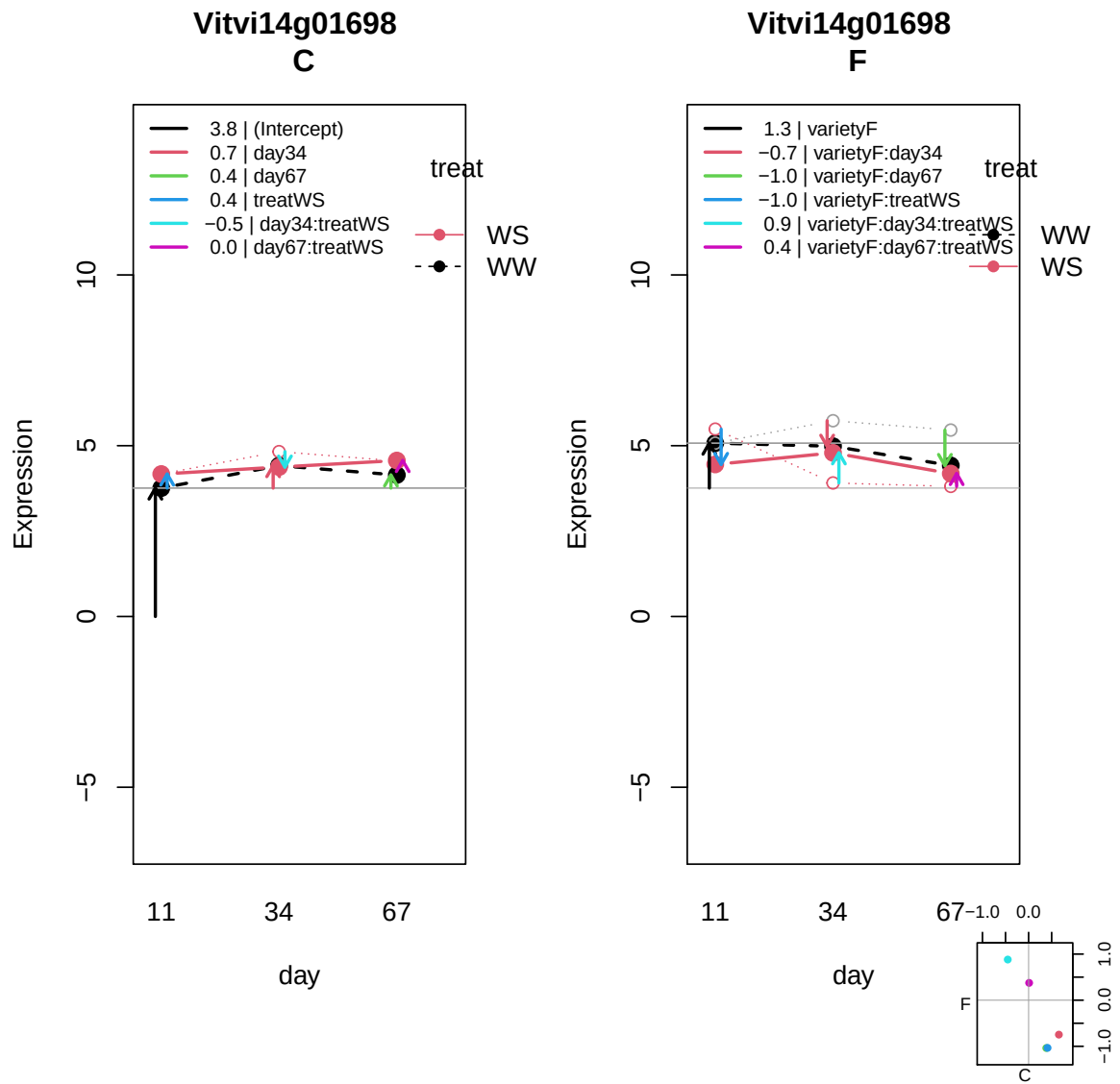
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

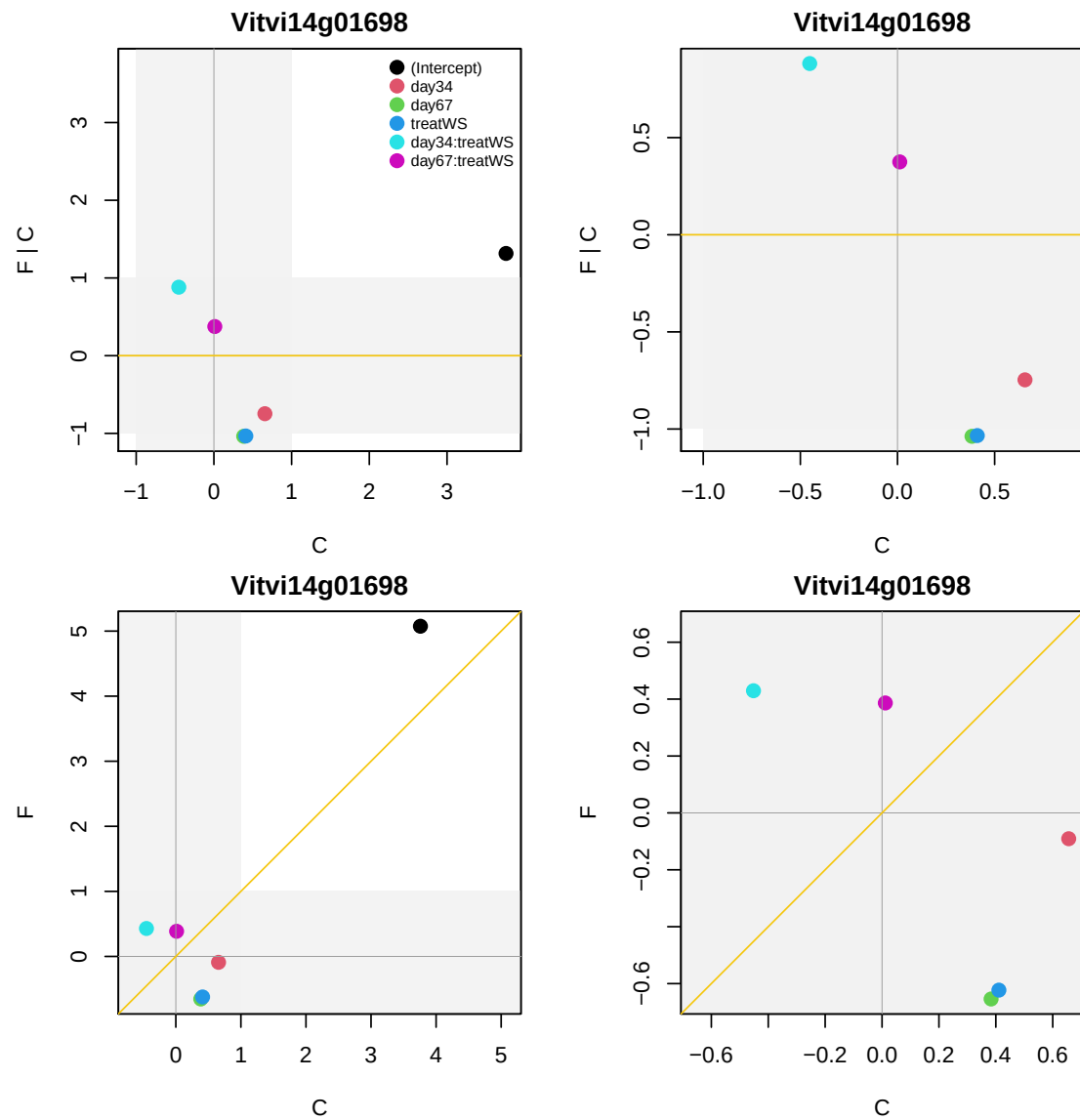


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

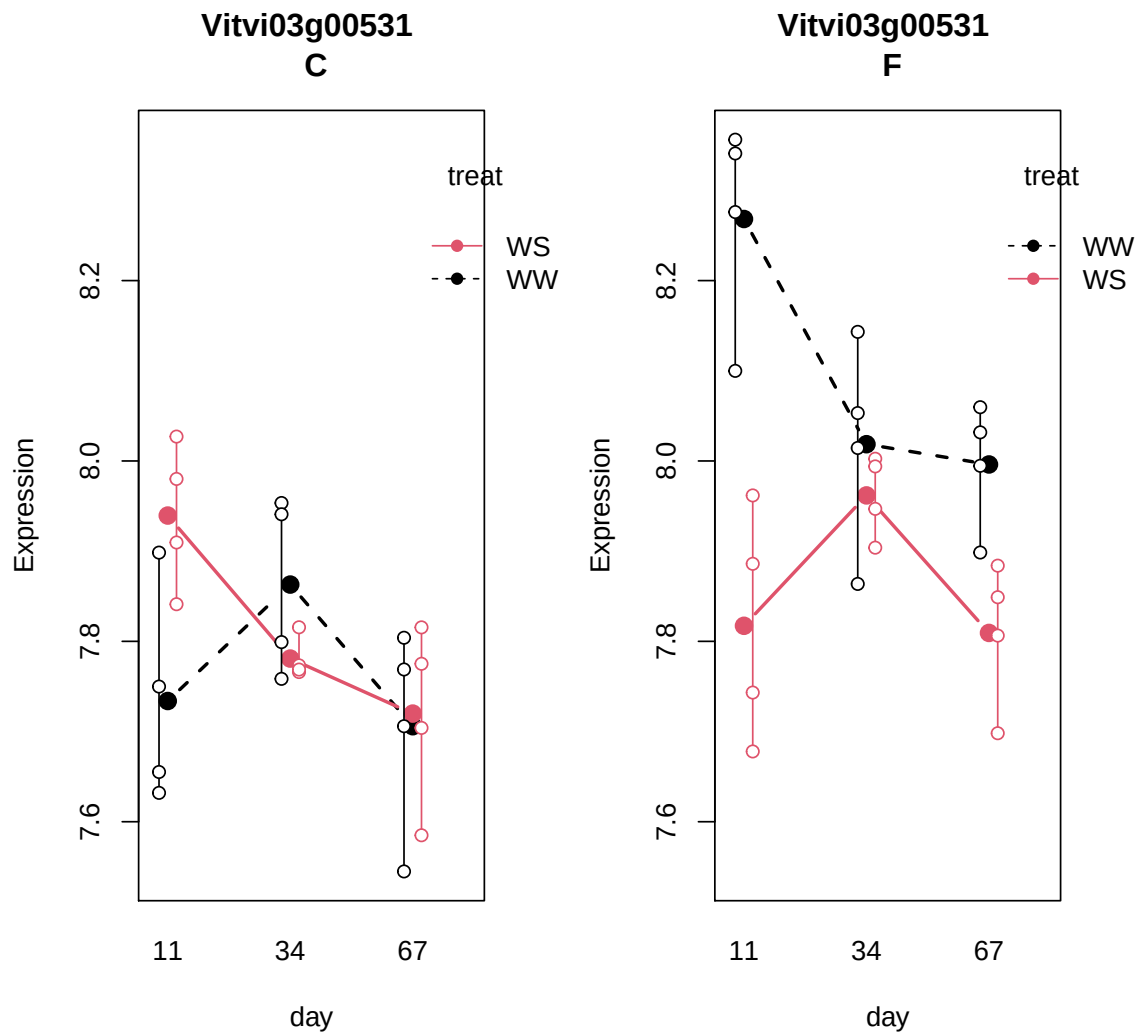


6.7.4 Vitvi03g00531

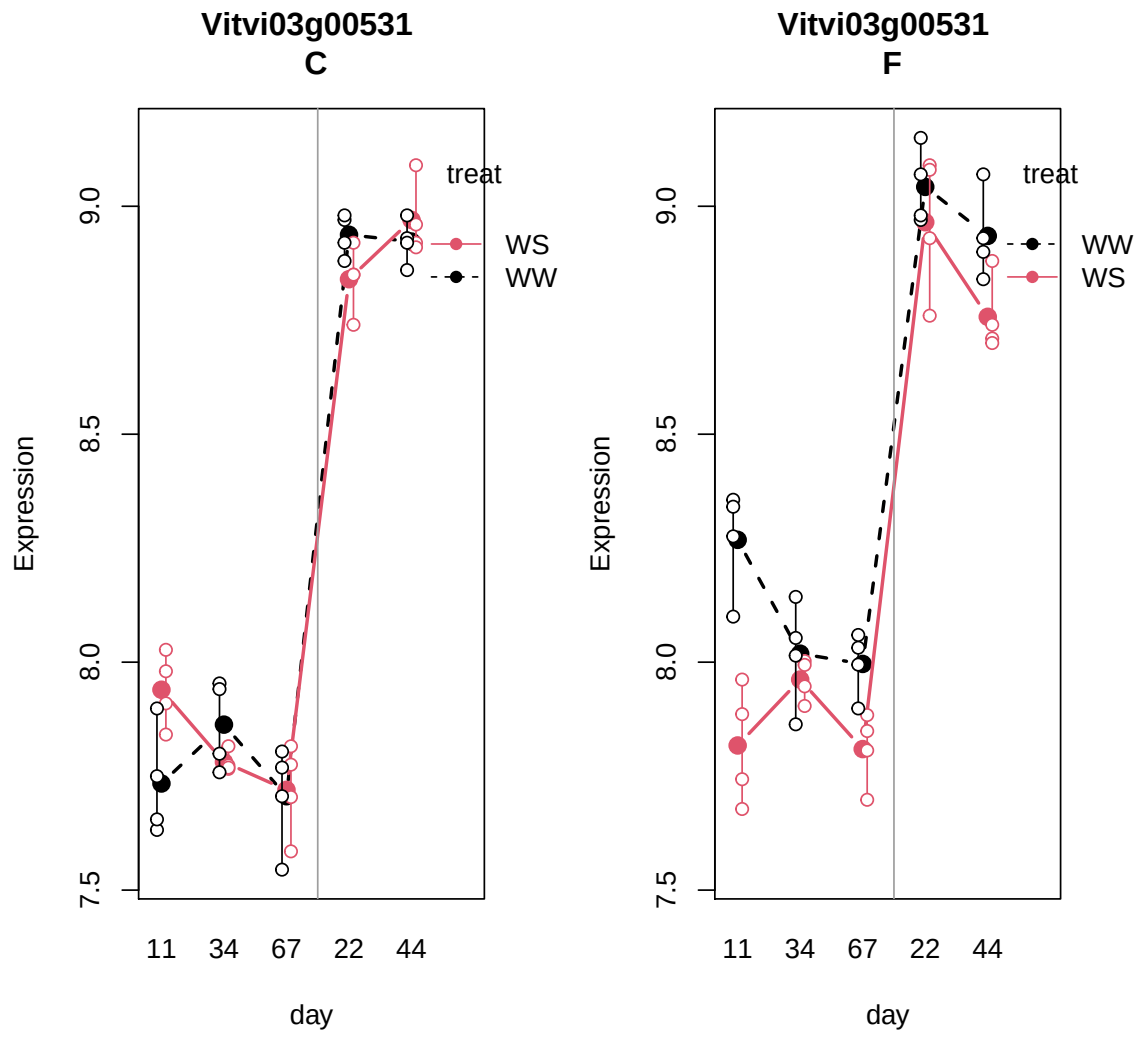
Coefficient varietyF:treatWS for Vitvi03g00531.

```
> tt[varname,]
          logFC AveExpr      t      P.Value
Vitvi03g00531 -0.656645  7.884524 -6.146456 3.329732e-07
          adj.P.Val      B
Vitvi03g00531 0.001229803 6.511014

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

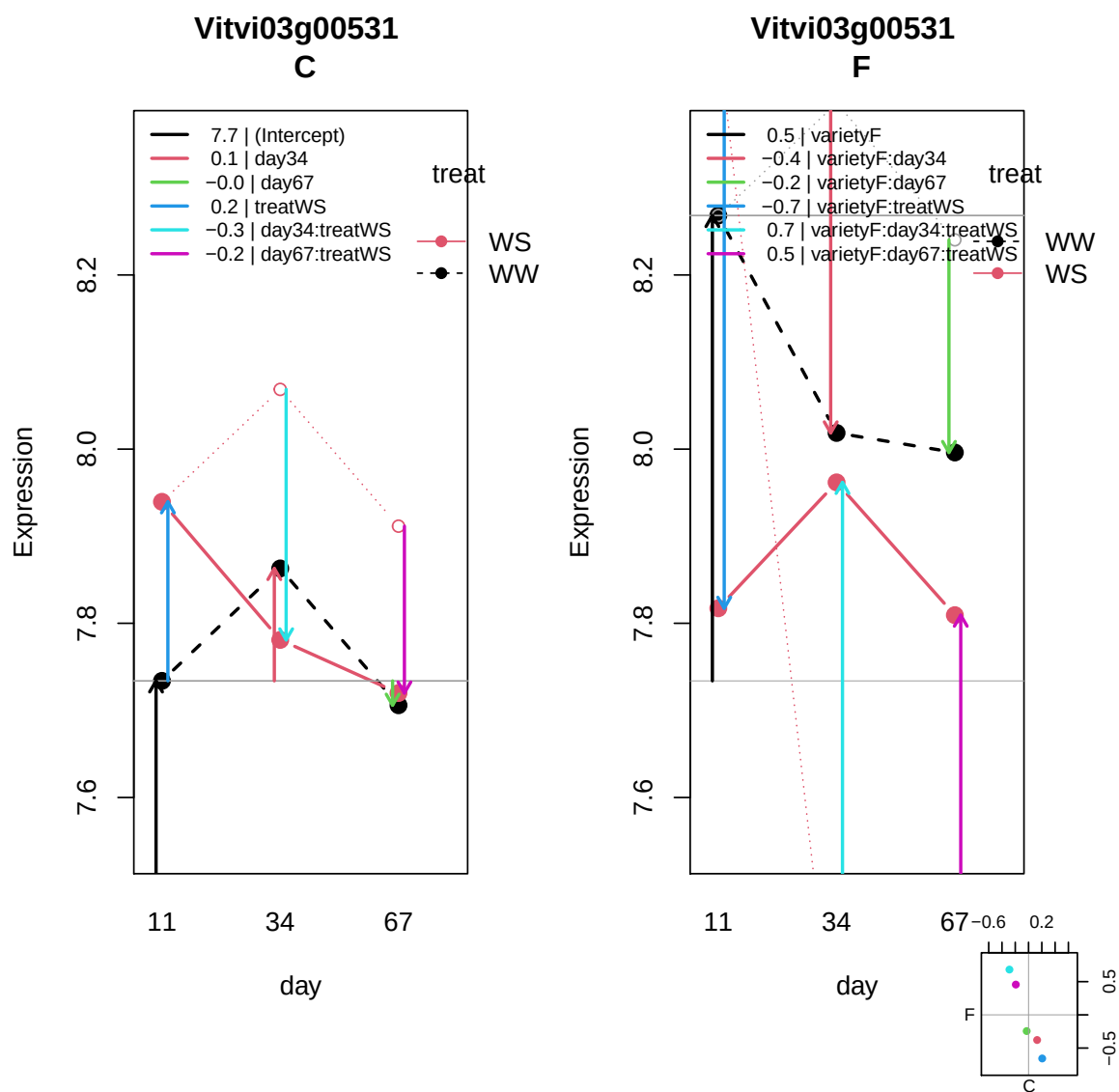
              (Intercept)  varietyF      day34      day67
Vitvi03g00531      7.733846 0.5344144 0.1291107 -0.02795651
              treatWS  varietyF:day34  varietyF:day67
Vitvi03g00531 0.2056293      -0.378794      -0.2441881
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi03g00531      -0.6566645      -0.2876782      -0.1916159
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi03g00531      0.6819357      0.4558711

```

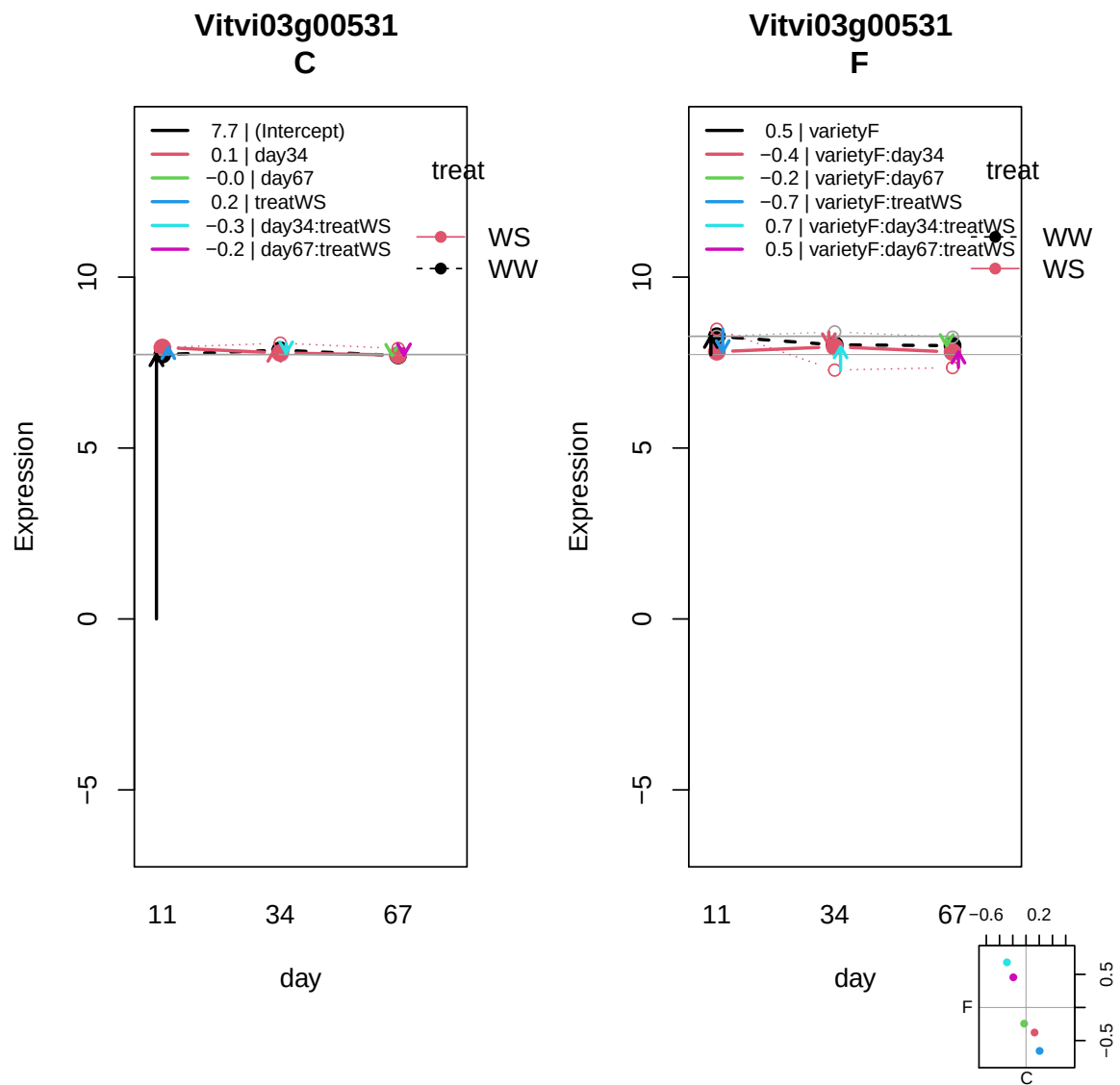
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

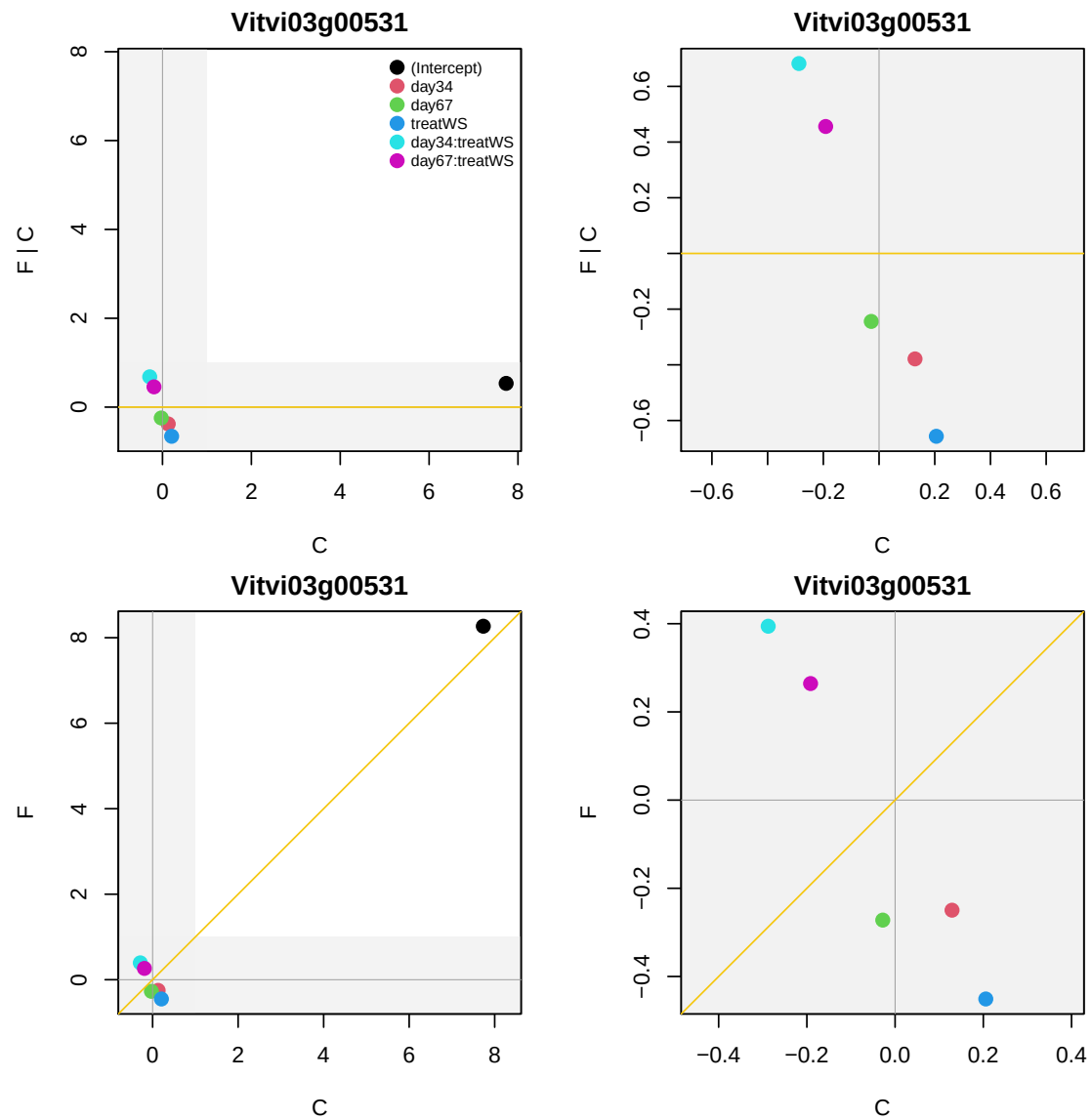



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

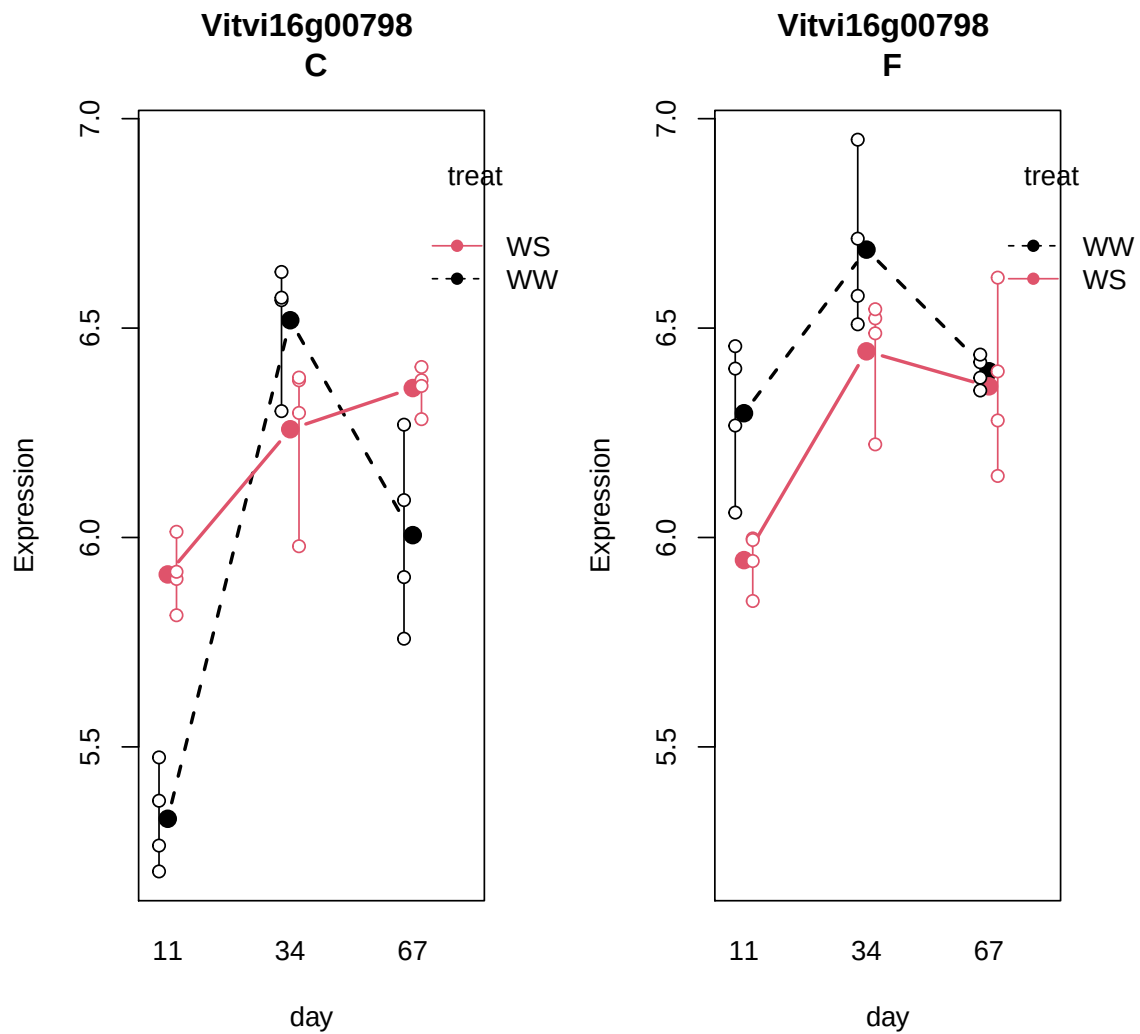
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



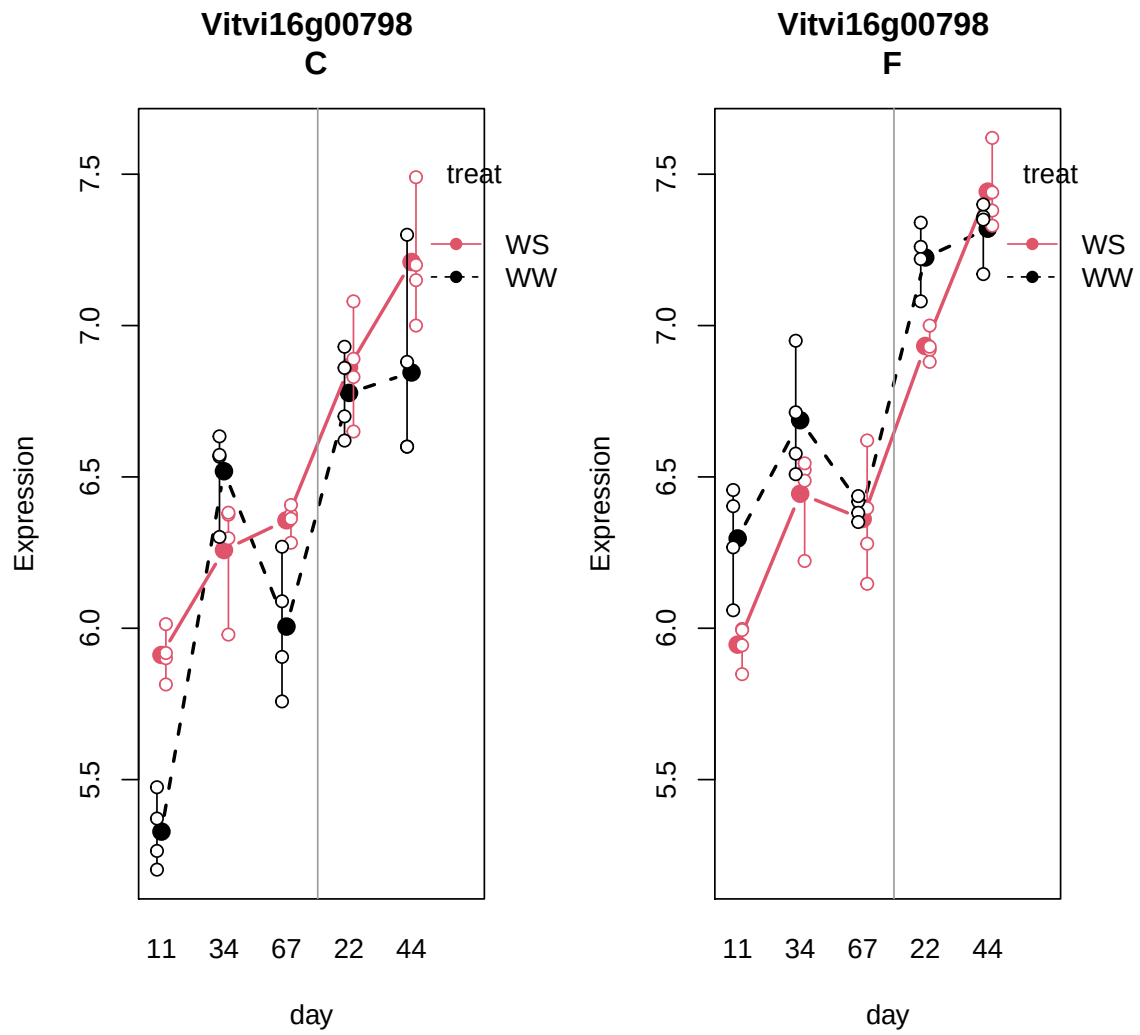
6.7.5 Vitvi16g00798

Coefficient varietyF:treatWS for Vitvi16g00798.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi16g00798 -0.934199 6.209294 -6.085327 4.045916e-07
      adj.P.Val      B
Vitvi16g00798 0.001229803 6.333098
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

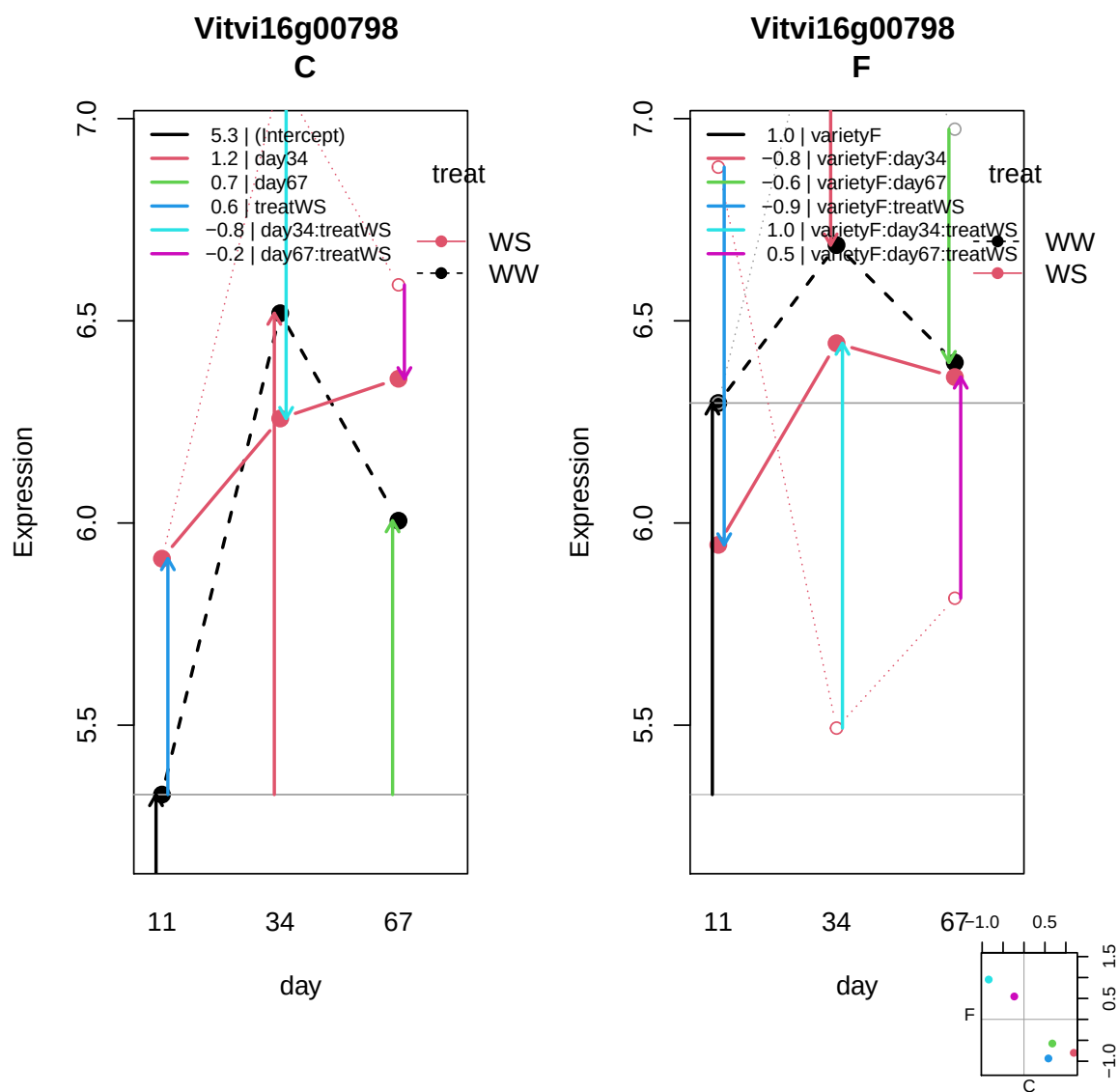
              (Intercept)  varietyF    day34    day67
Vitvi16g00798      5.328284 0.9684092 1.190445 0.6772426
              treatWS  varietyF:day34  varietyF:day67
Vitvi16g00798 0.5834342      -0.7998266      -0.5770564
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi16g00798      -0.934199      -0.8437712      -0.2322219
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi16g00798              0.9516926              0.546962

```

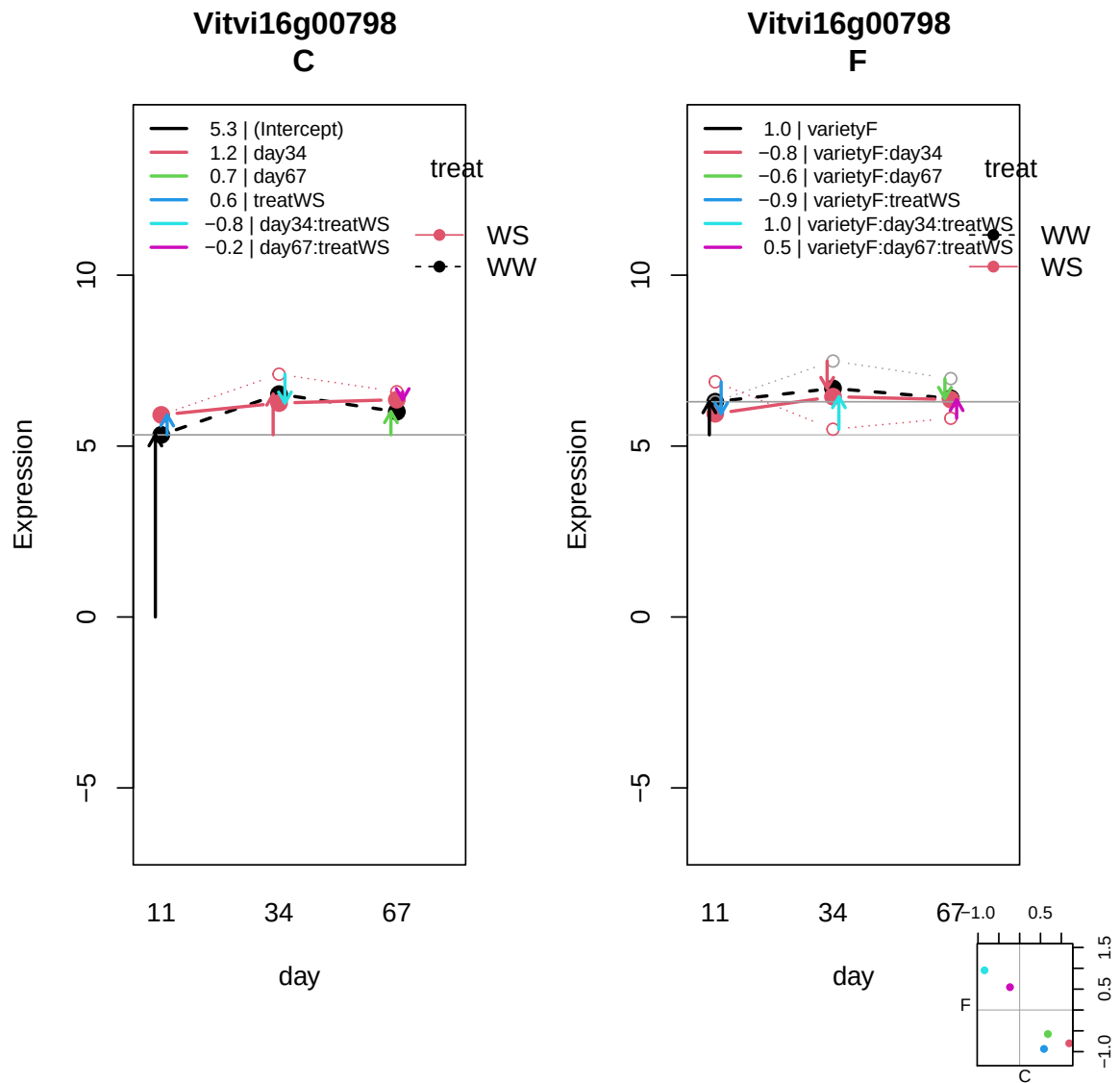
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

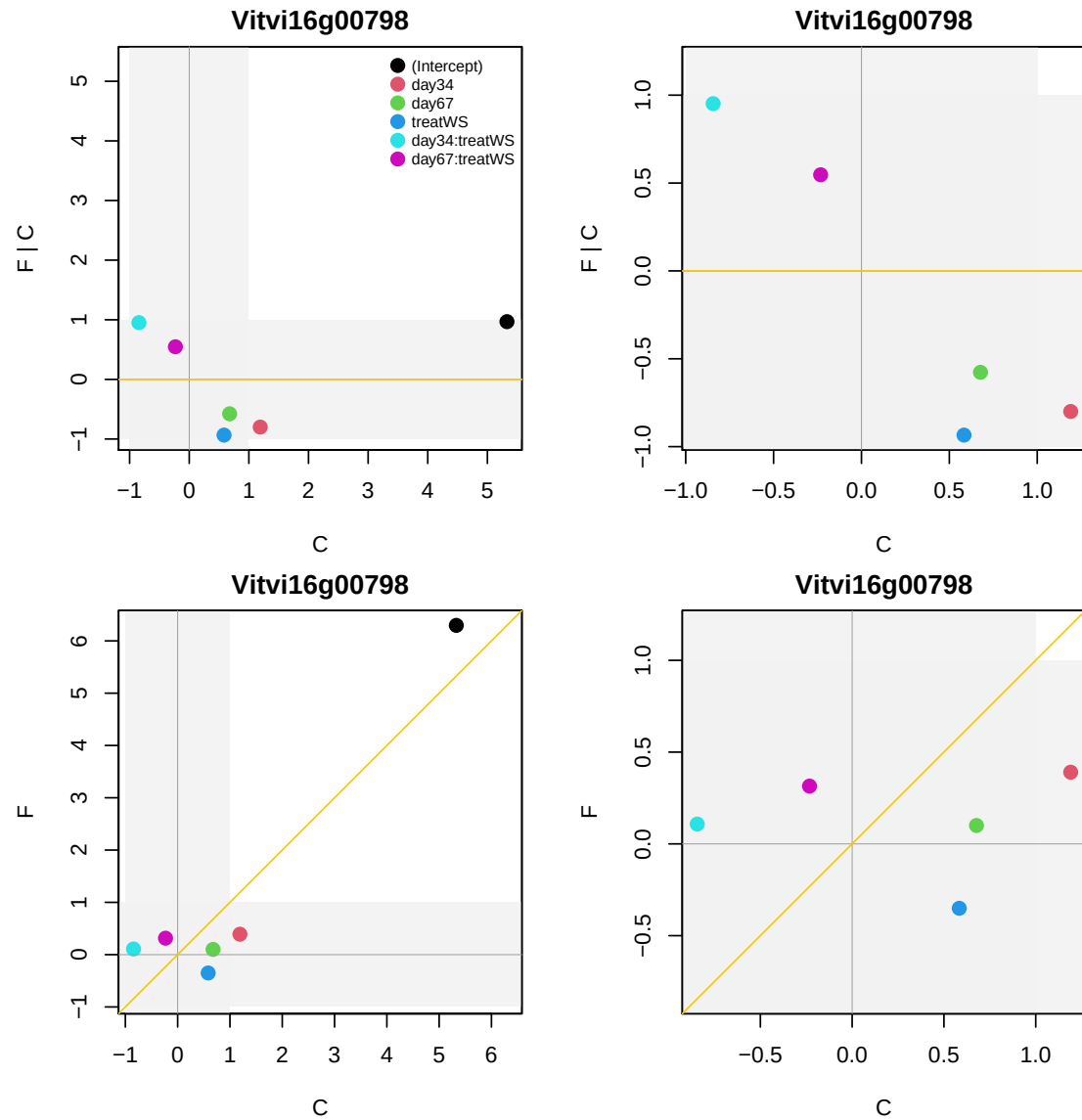


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

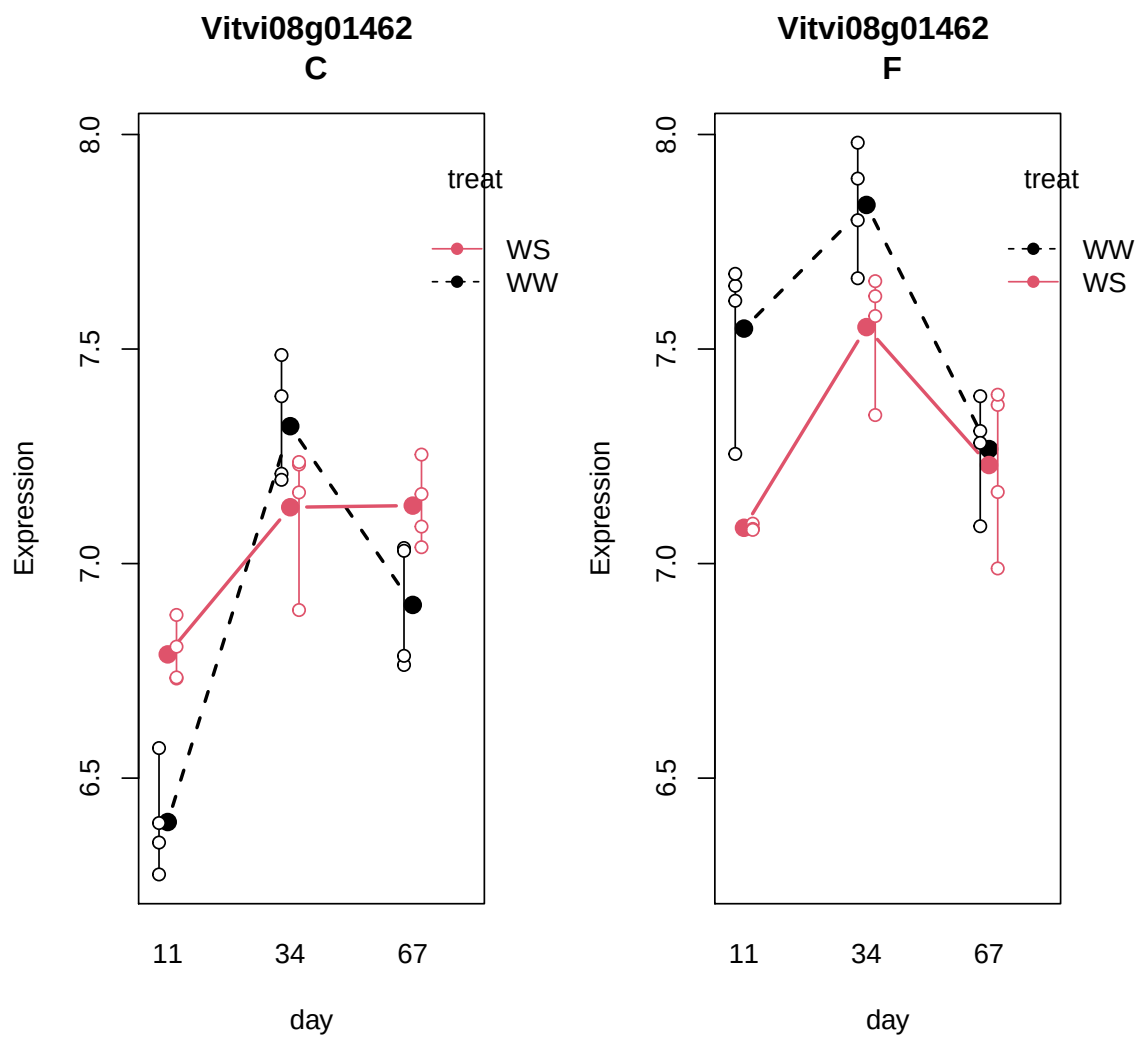


6.7.6 Vitvi08g01462

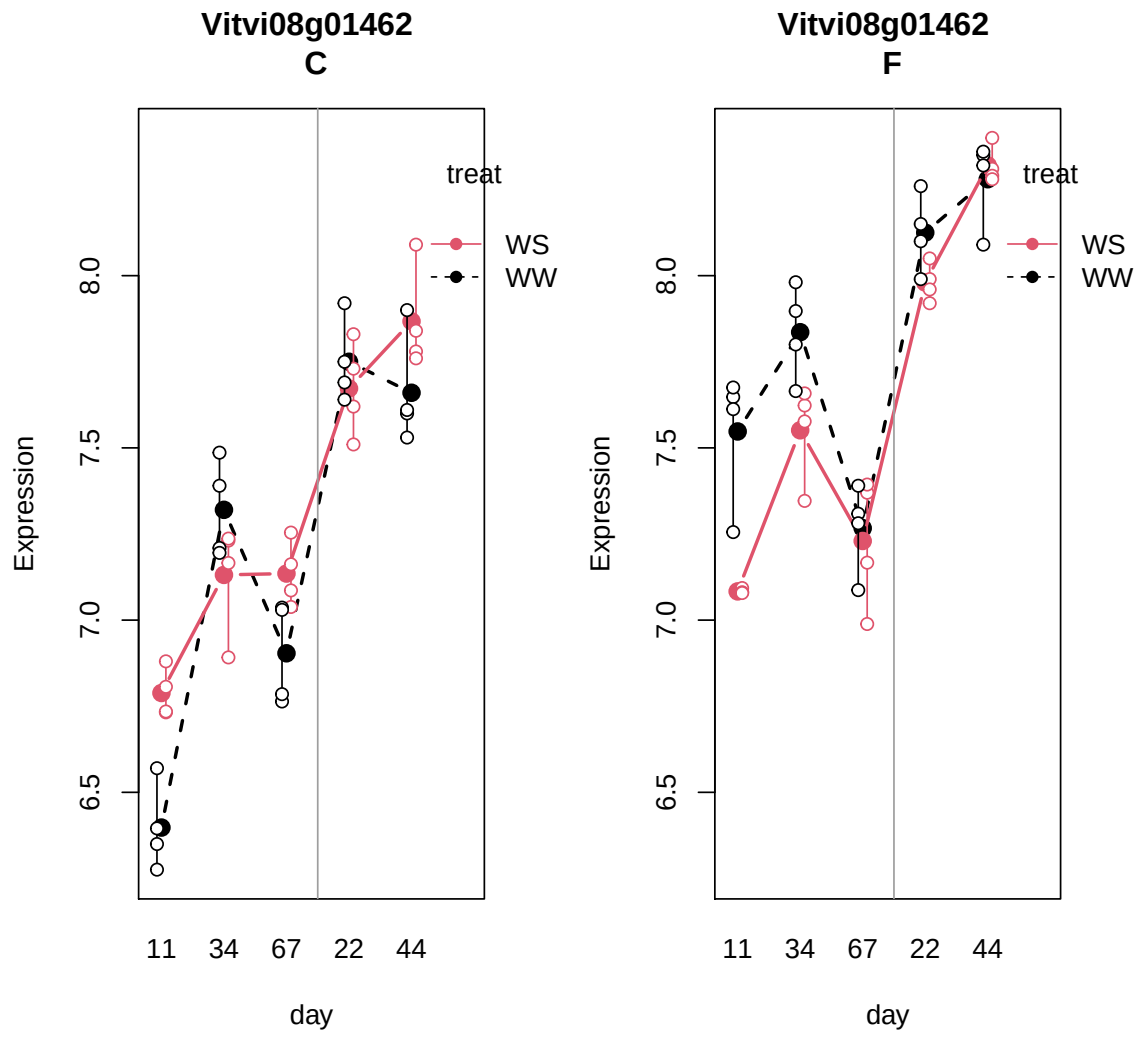
Coefficient varietyF:treatWS for Vitvi08g01462.

```
> tt[varname,]
              logFC  AveExpr          t      P.Value
Vitvi08g01462 -0.8550038  7.182573 -5.993913 5.414716e-07
              adj.P.Val          B
Vitvi08g01462 0.001229803  6.066834

> plot.interactions(varname, phdata=pd, data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



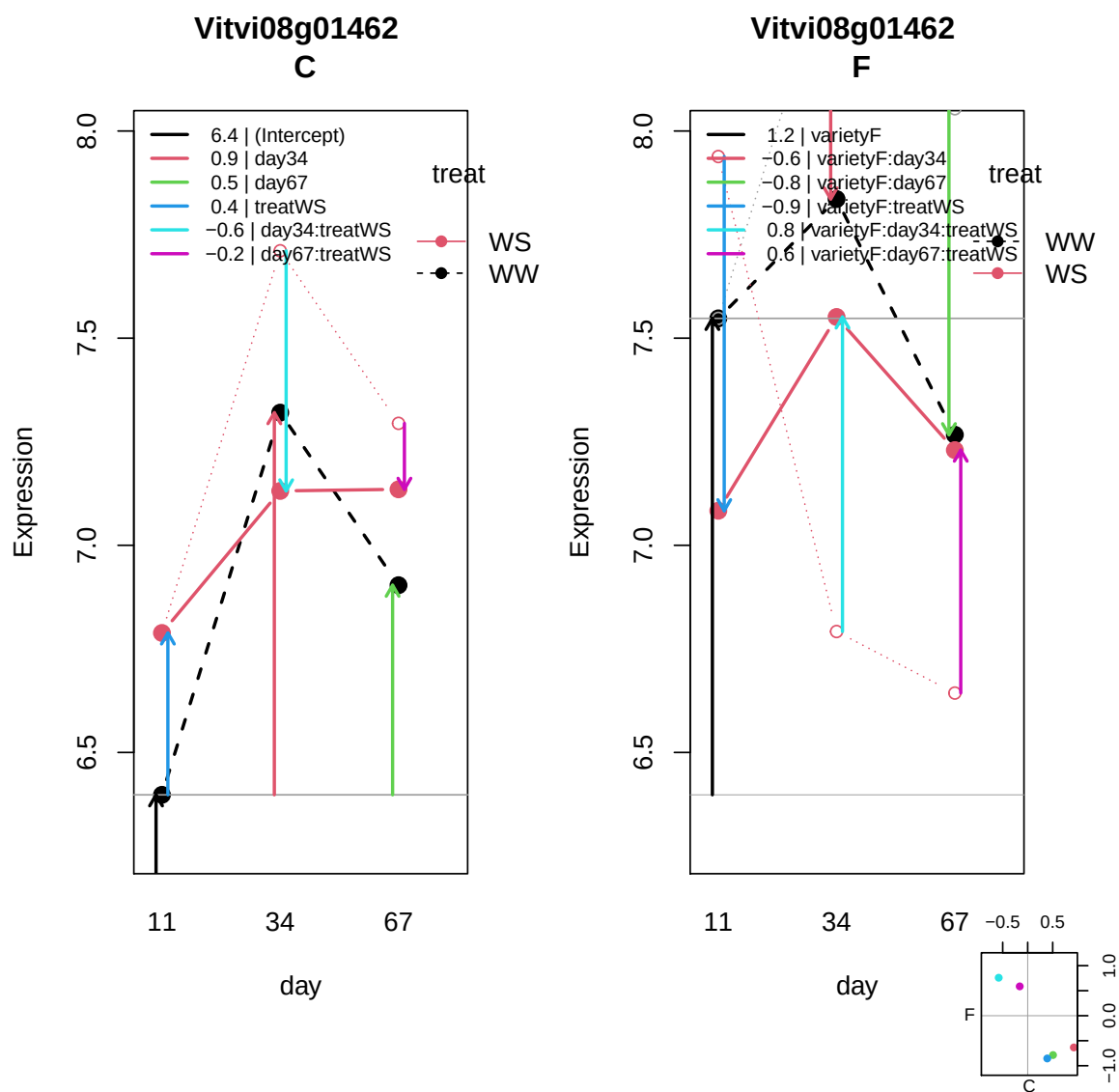
```

> fit1[varname,]$coefficients

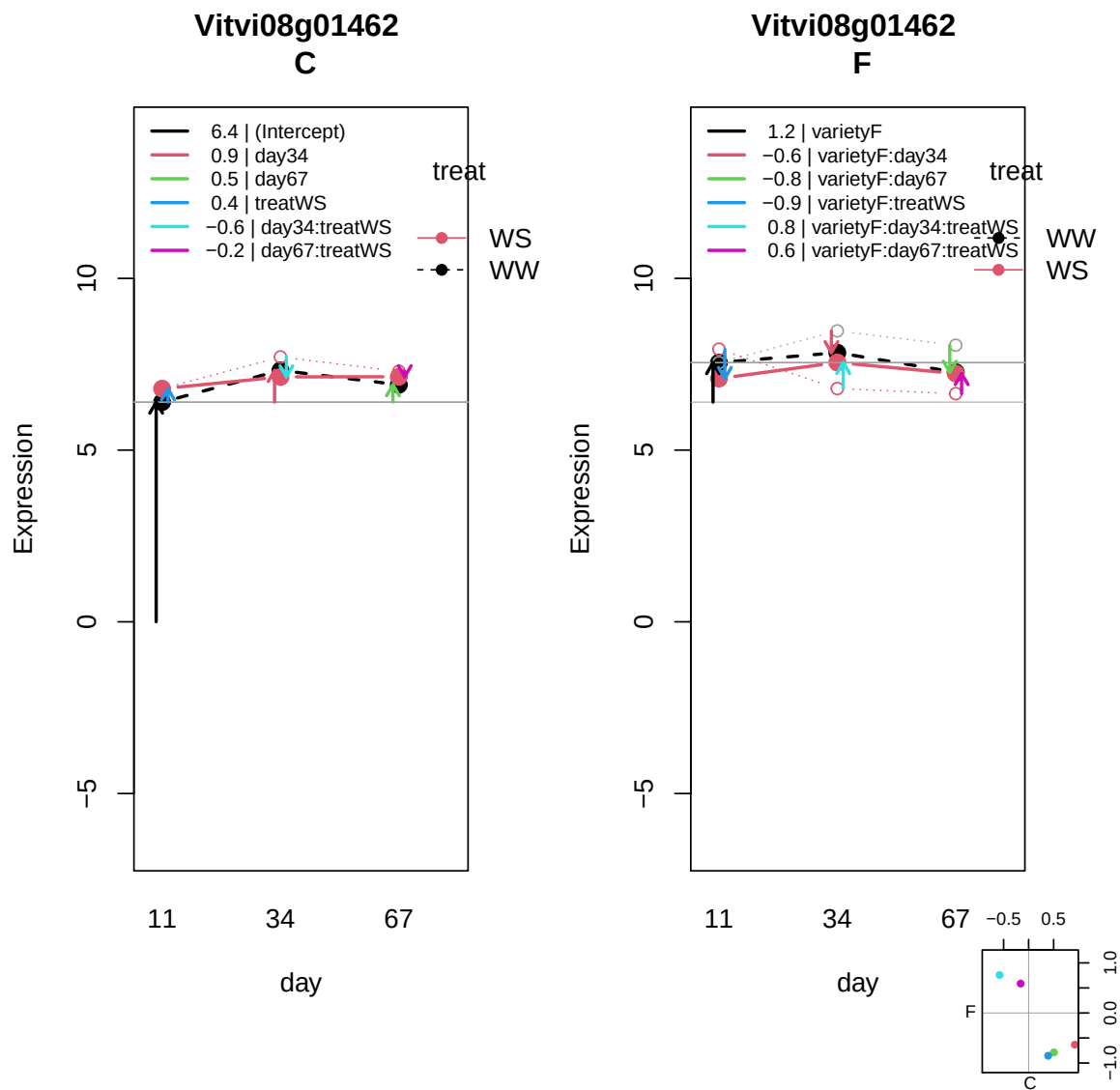
              (Intercept)  varietyF      day34      day67
Vitvi08g01462      6.397702  1.150003  0.9224856  0.5059578
              treatWS  varietyF:day34  varietyF:day67
Vitvi08g01462  0.390689      -0.6343737      -0.7868102
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi08g01462      -0.8550038      -0.5796251      -0.1592277
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi08g01462              0.759207              0.5864065

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

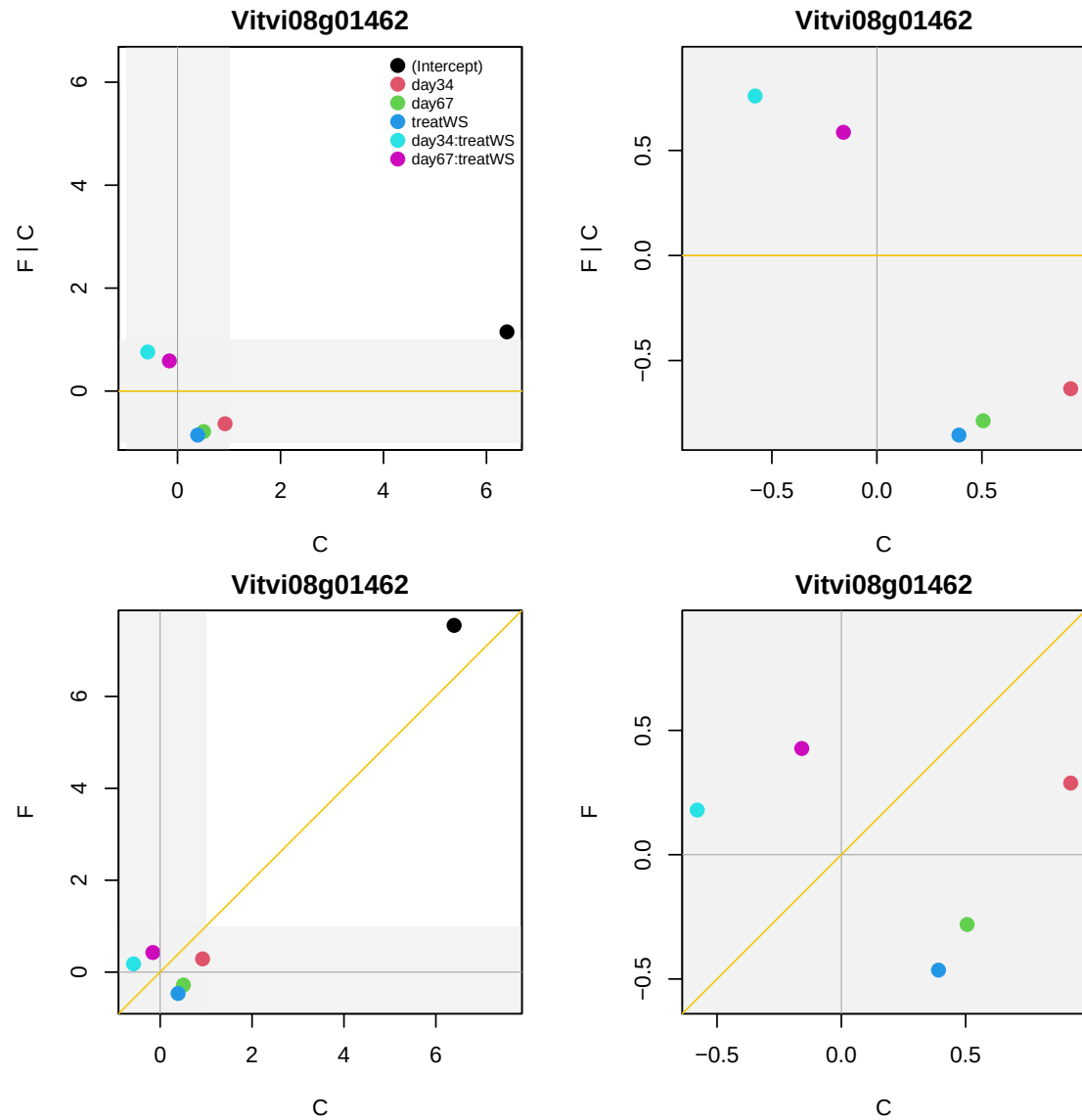


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

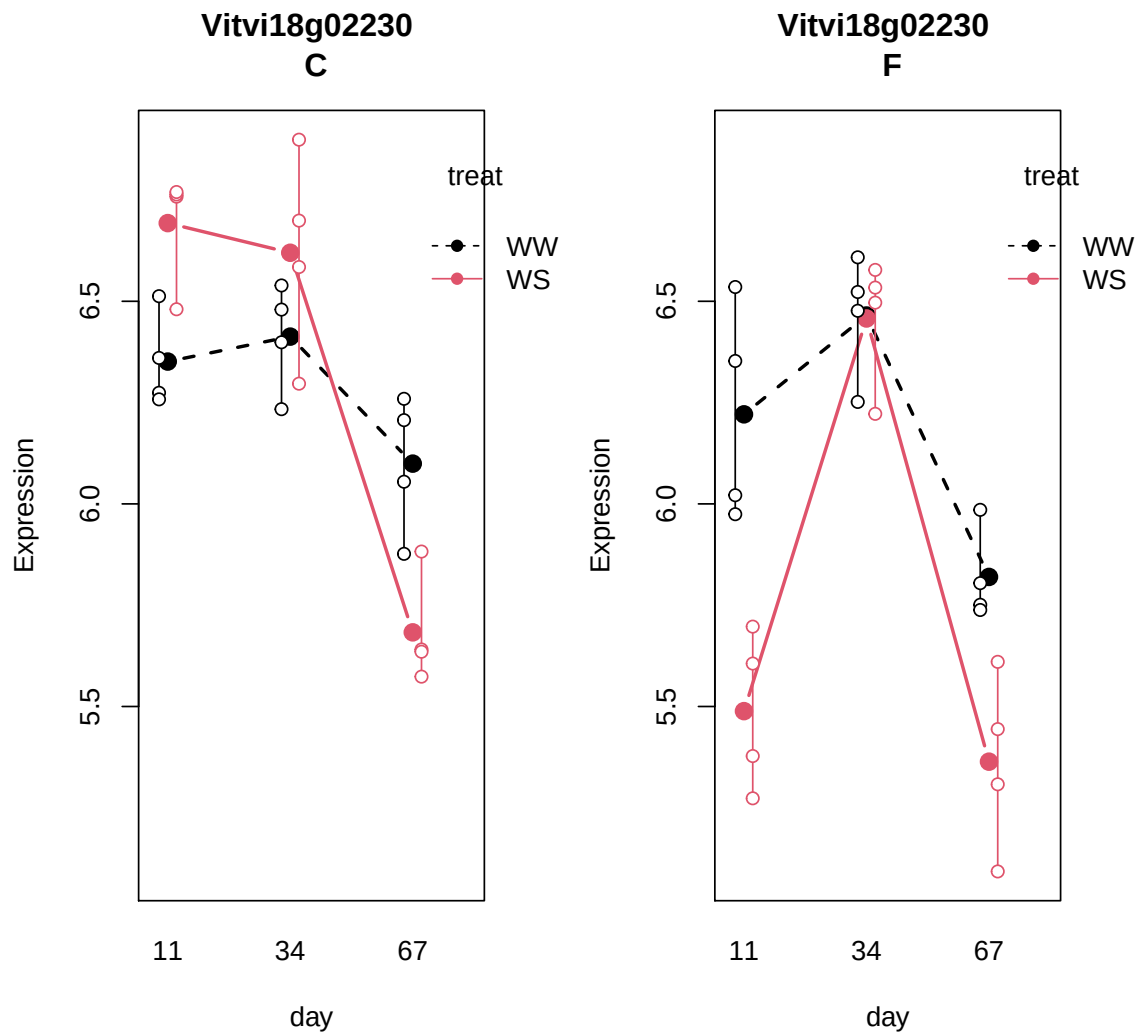
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



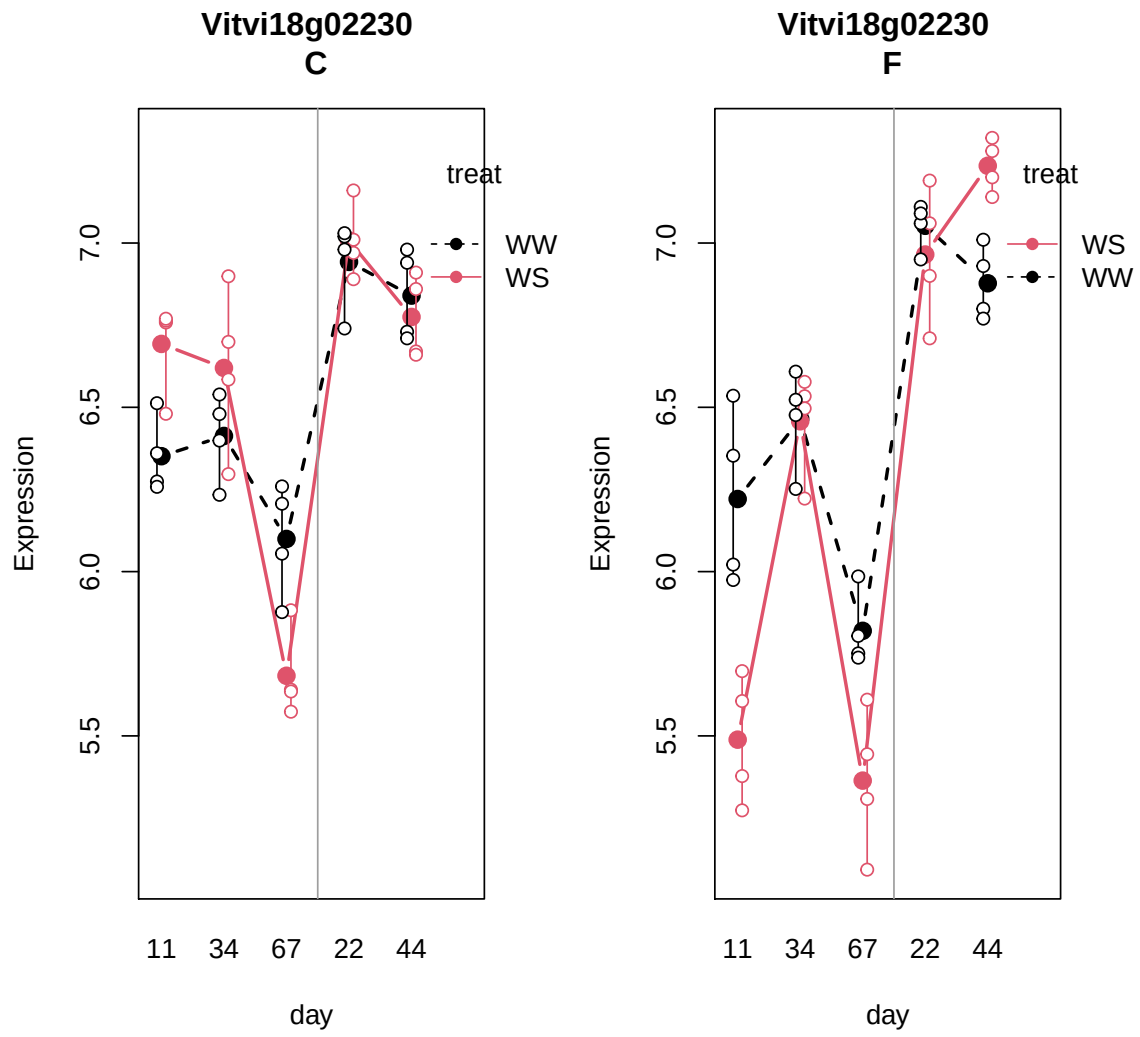
6.7.7 Vitvi18g02230

Coefficient varietyF:treatWS for Vitvi18g02230.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi18g02230 -1.074117 6.139546 -5.96967 5.849822e-07
      adj.P.Val      B
Vitvi18g02230 0.001229803 5.996188
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

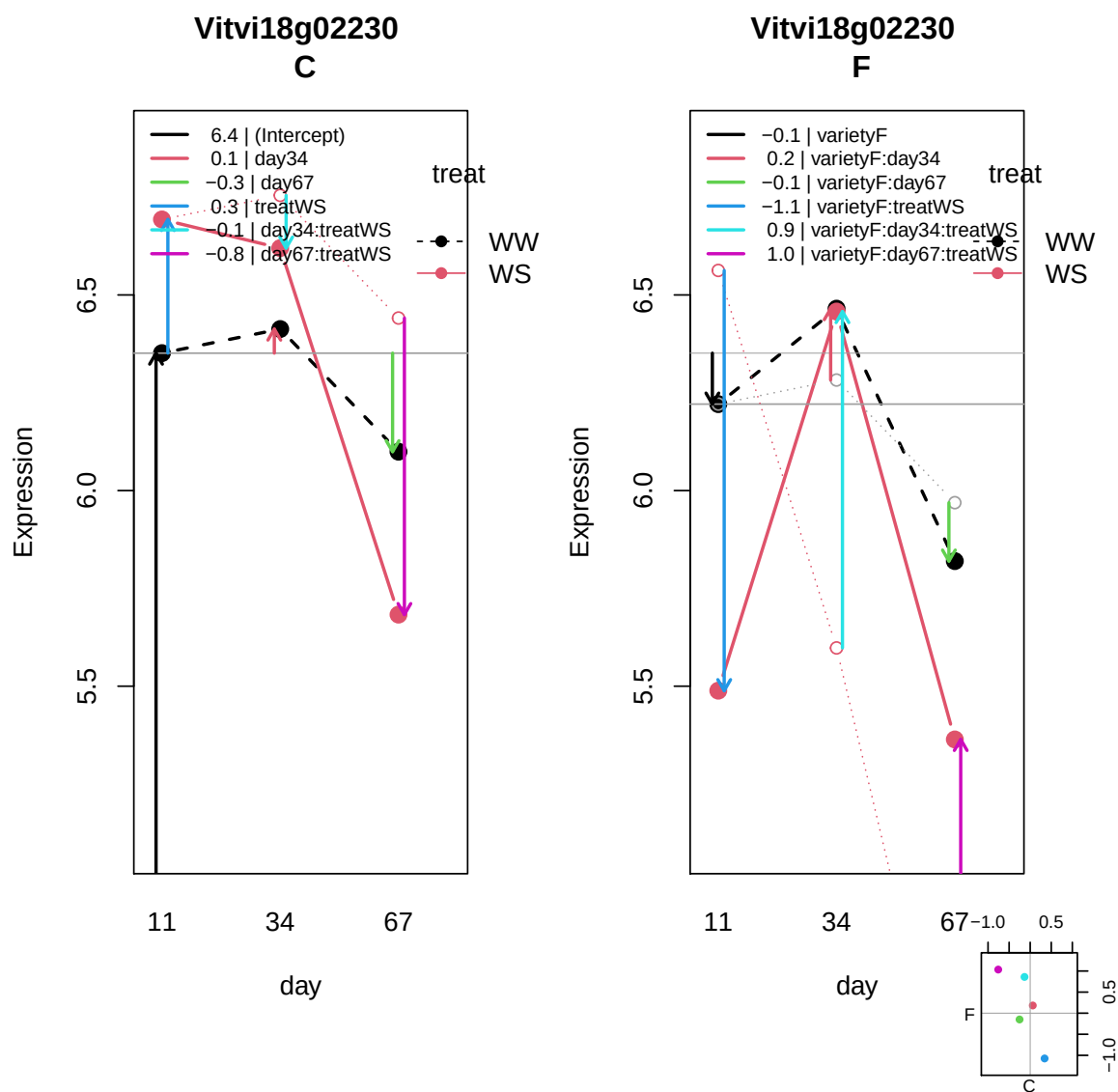
              (Intercept)    varietyF      day34      day67
Vitvi18g02230      6.351251 -0.1302961 0.06153389 -0.2519093
              treatWS  varietyF:day34  varietyF:day67
Vitvi18g02230  0.3417017      0.1824121      -0.1493208
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi18g02230      -1.074117      -0.1347191      -0.7580791
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi18g02230              0.8597643              1.034607

```

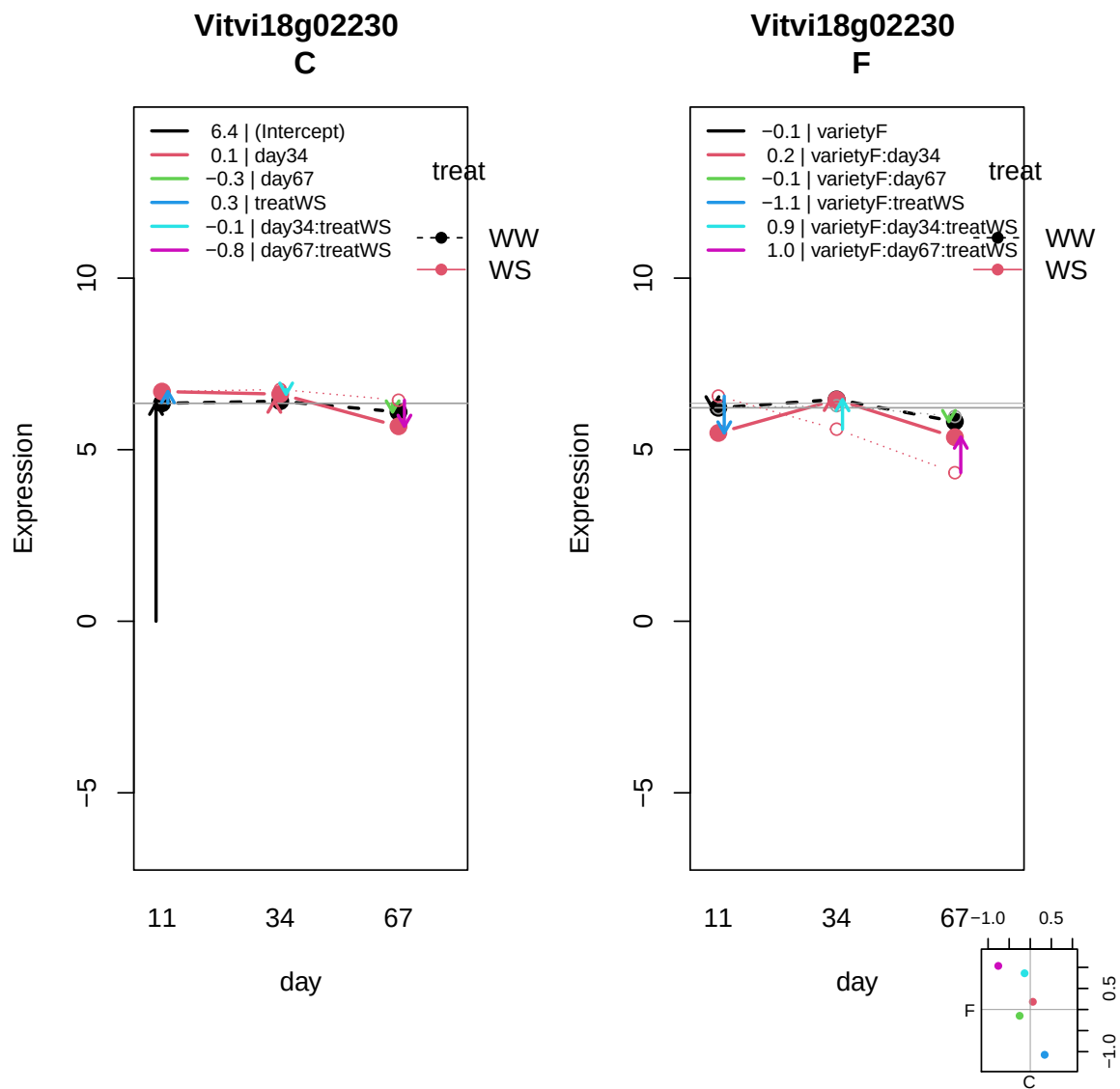
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

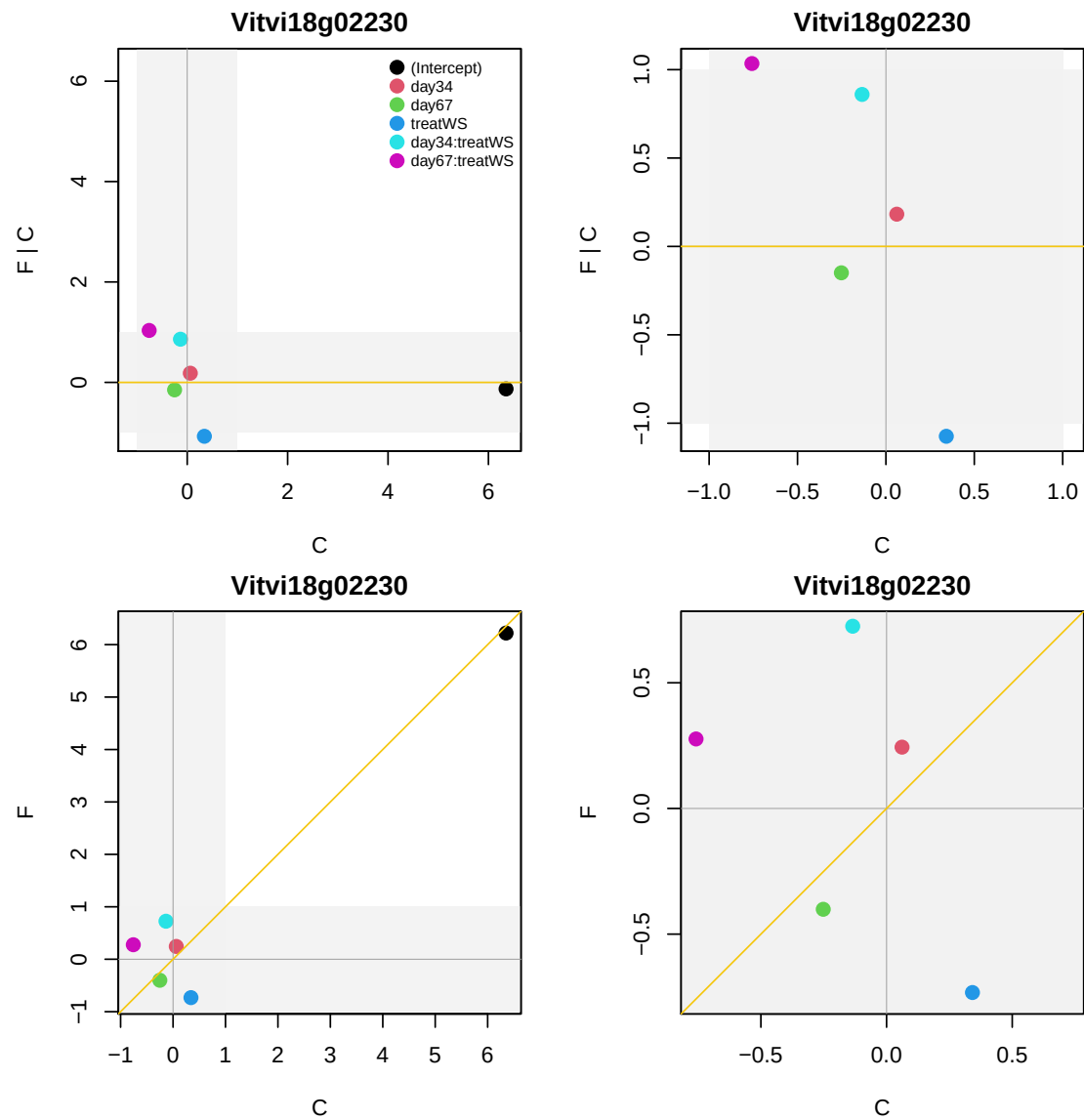


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

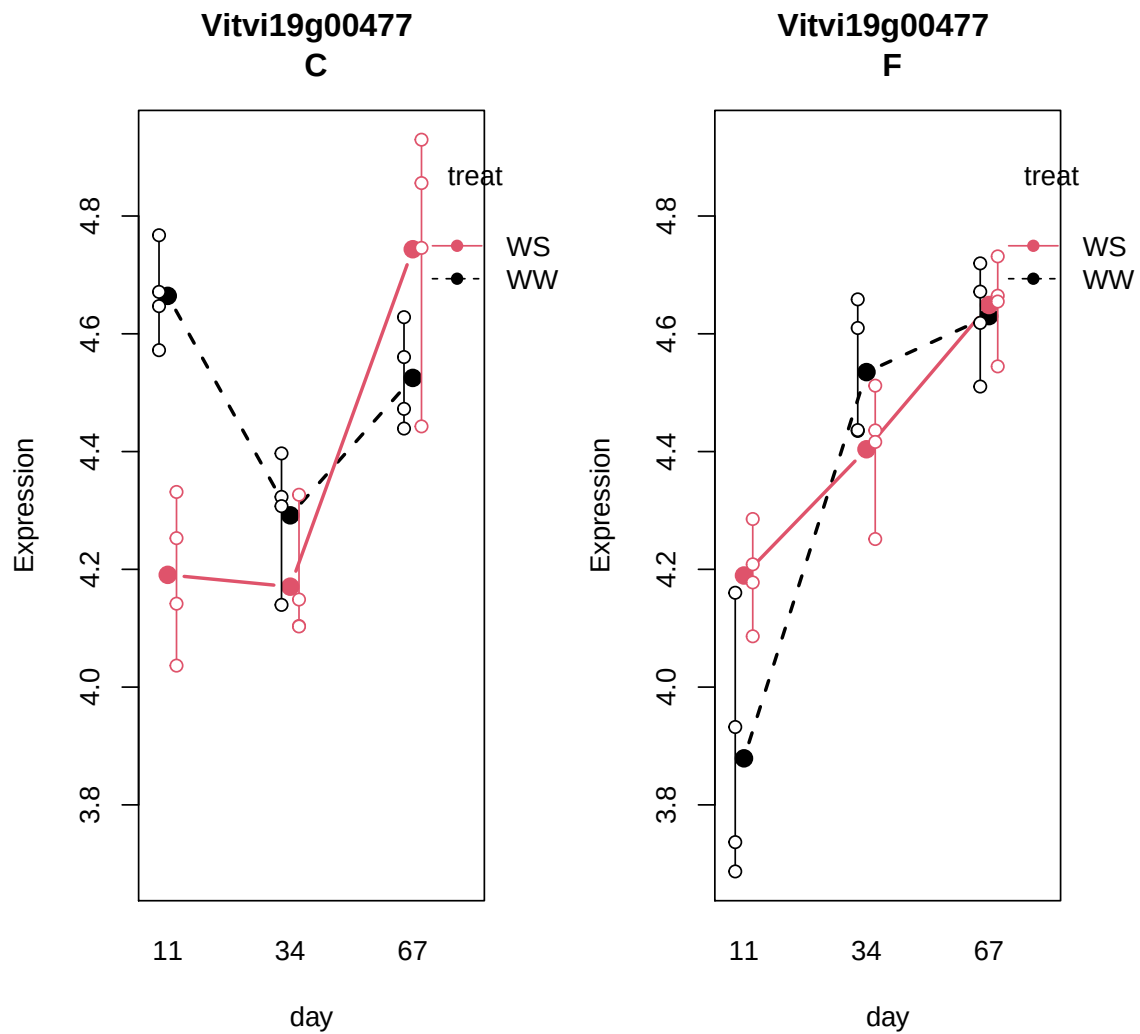


6.7.8 Vitvi19g00477

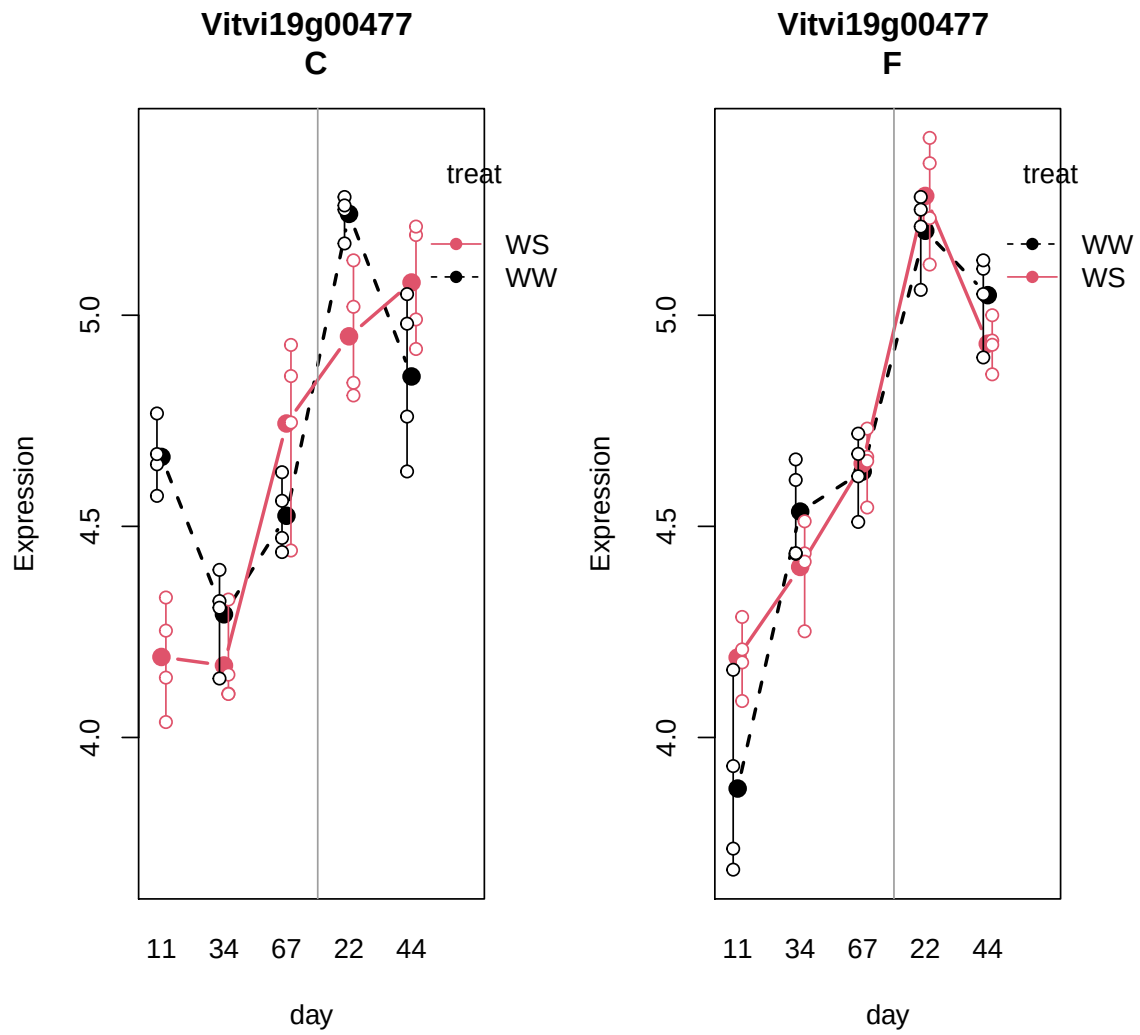
Coefficient varietyF:treatWS for Vitvi19g00477.

```
> tt[varname,]
              logFC AveExpr      t      P.Value
Vitvi19g00477 0.7842366 4.40603 5.915969 6.942267e-07
              adj.P.Val      B
Vitvi19g00477 0.001229803 5.839656

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

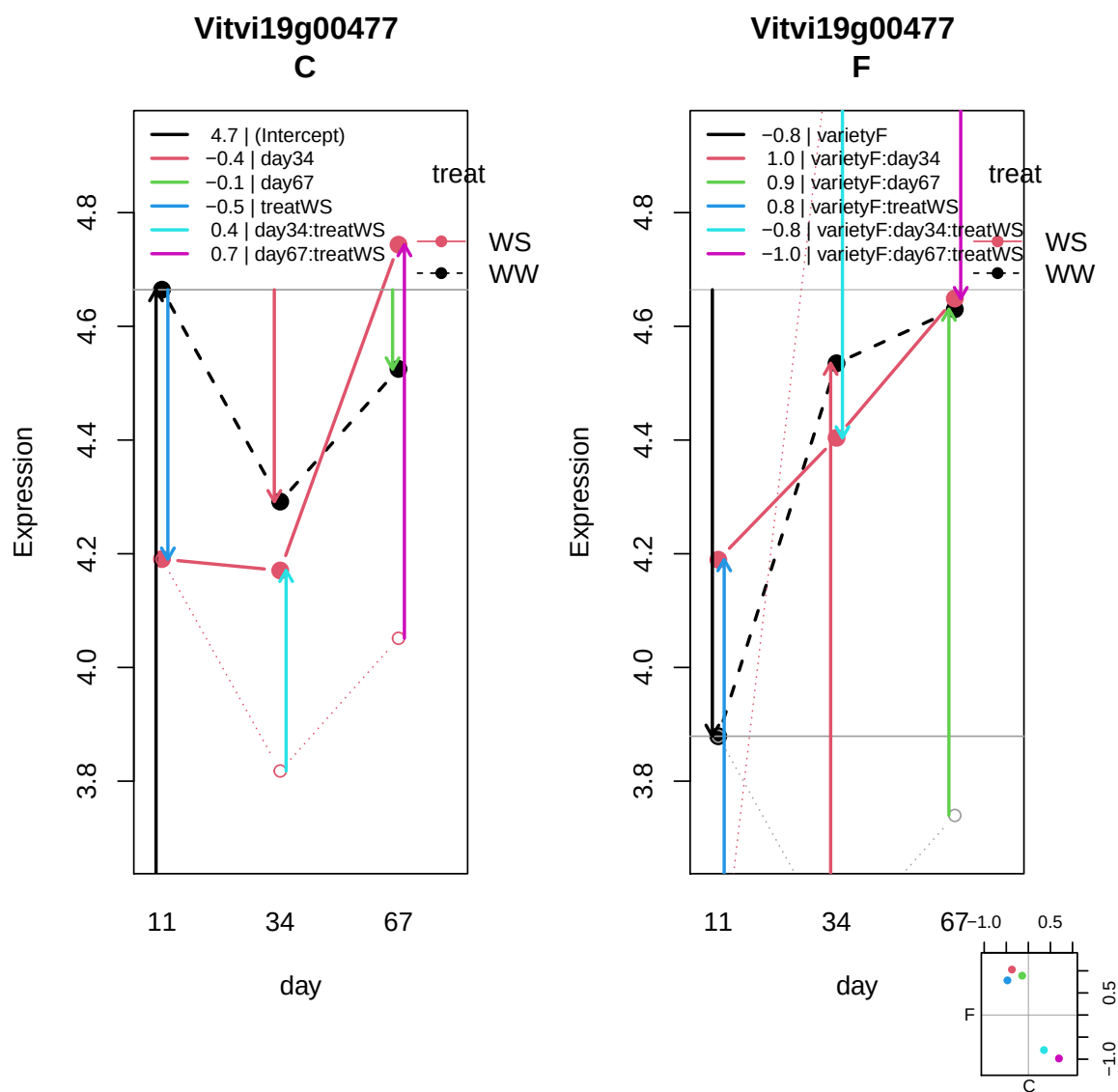
              (Intercept)  varietyF      day34      day67
Vitvi19g00477      4.66442 -0.785371 -0.3727075 -0.139342
              treatWS varietyF:day34 varietyF:day67
Vitvi19g00477 -0.4737632      1.028603      0.8903223
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi19g00477      0.7842366      0.3526084      0.6922593
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi19g00477      -0.79411      -0.9838641

```

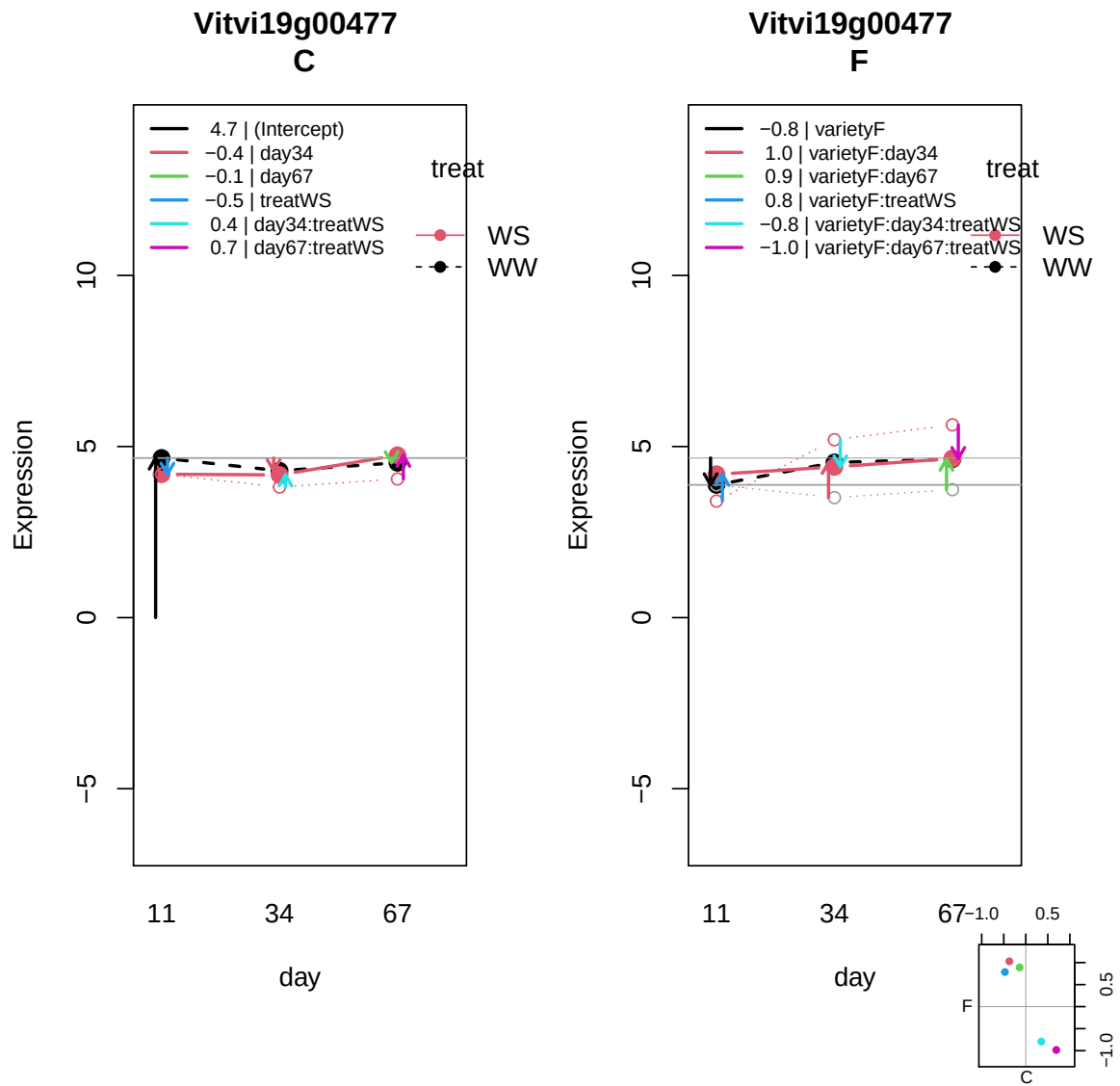
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

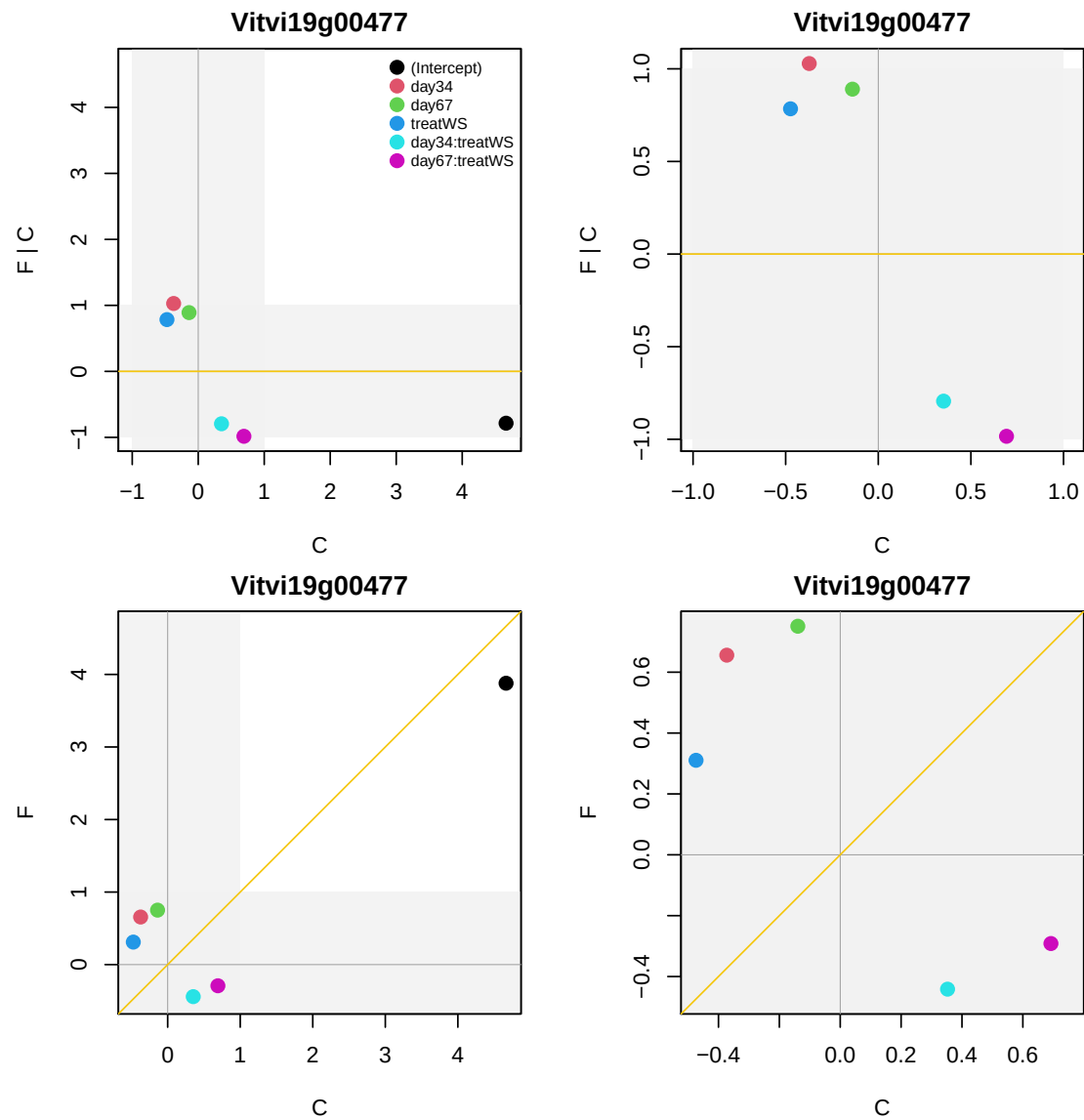


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

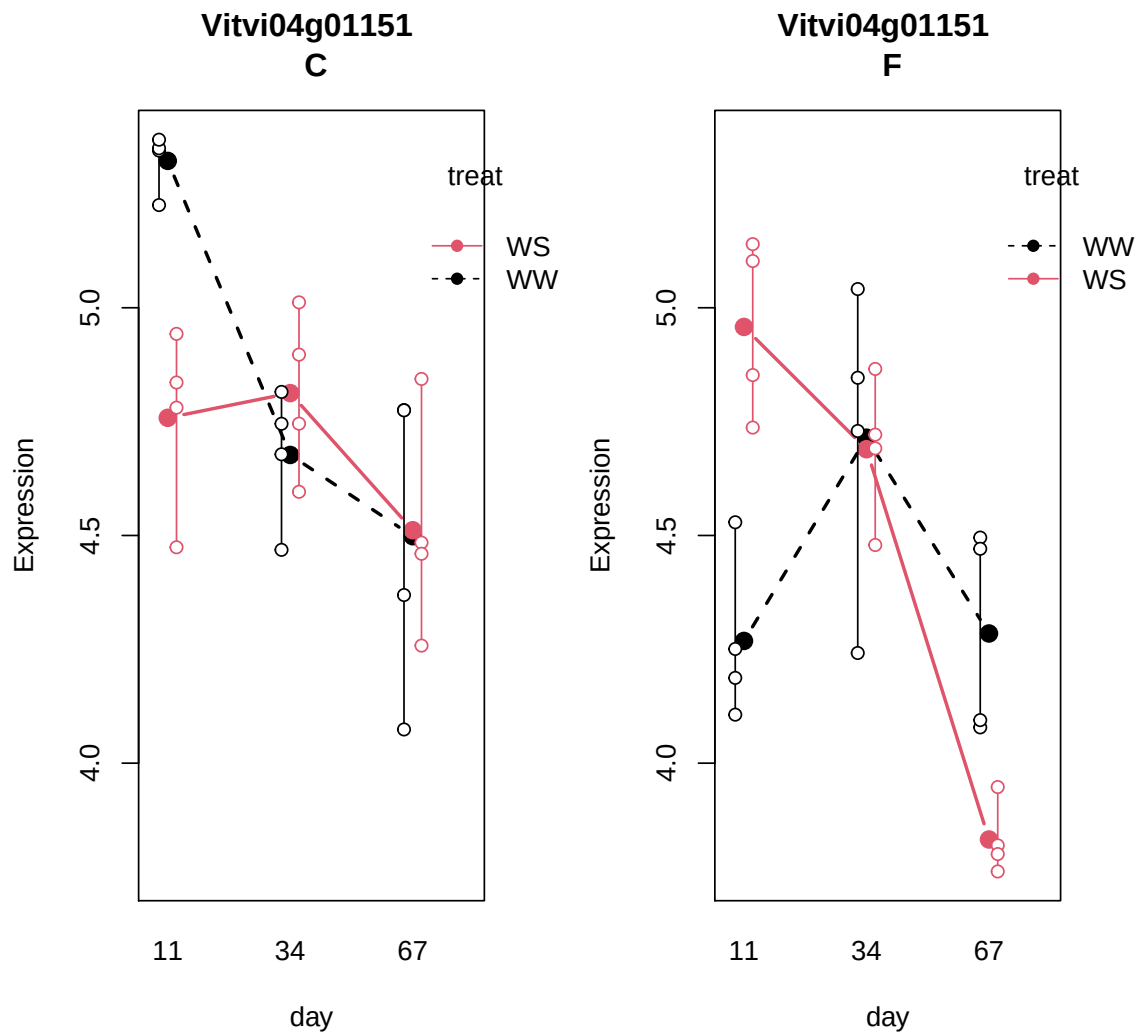


6.7.9 Vitvi04g01151

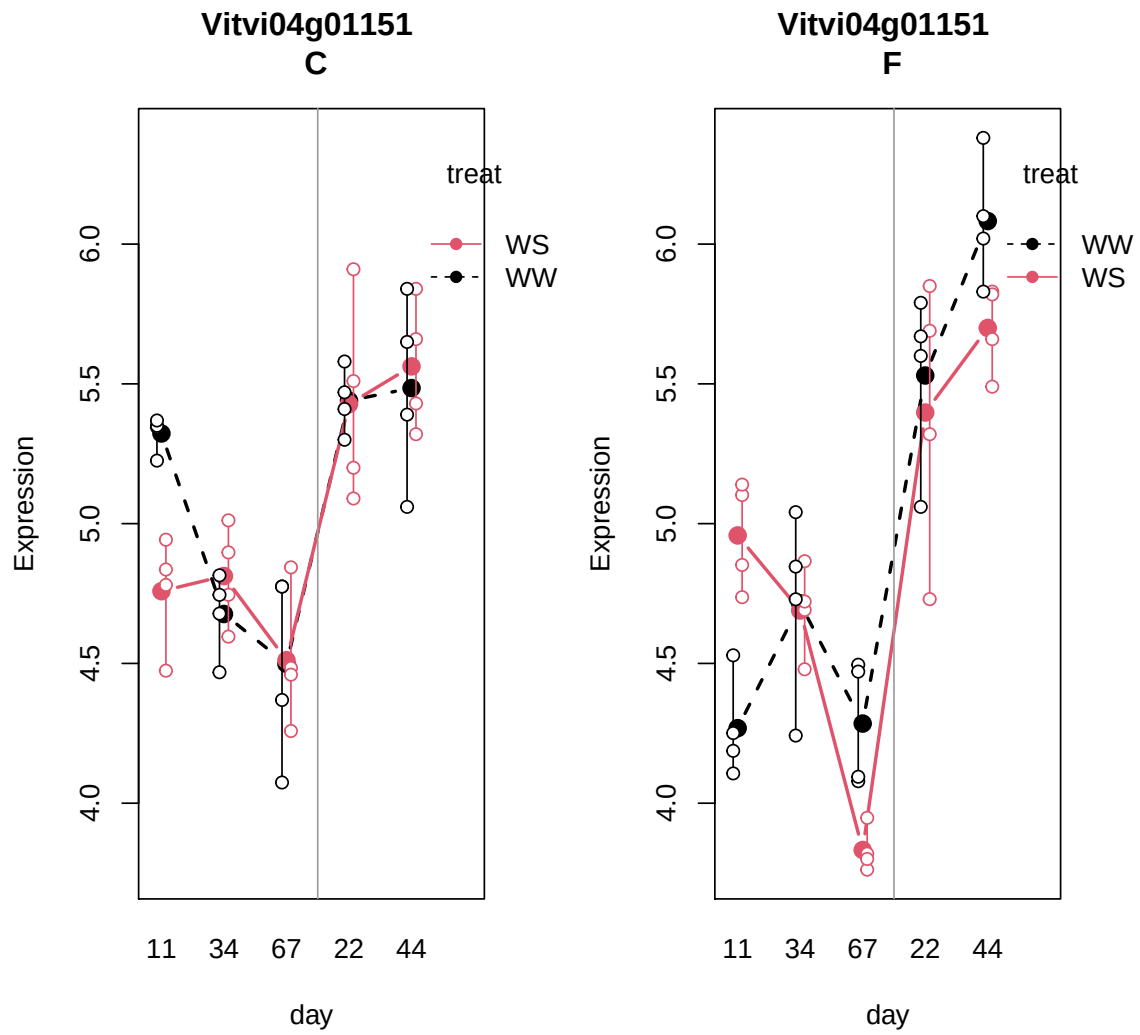
Coefficient varietyF:treatWS for Vitvi04g01151.

```
> tt[varname,]
      logFC AveExpr      t    P.Value
Vitvi04g01151 1.253631 4.610617 5.901861 7.26166e-07
      adj.P.Val      B
Vitvi04g01151 0.001229803 5.798526

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```




```
> fit1[varname,]$coefficients
```

```

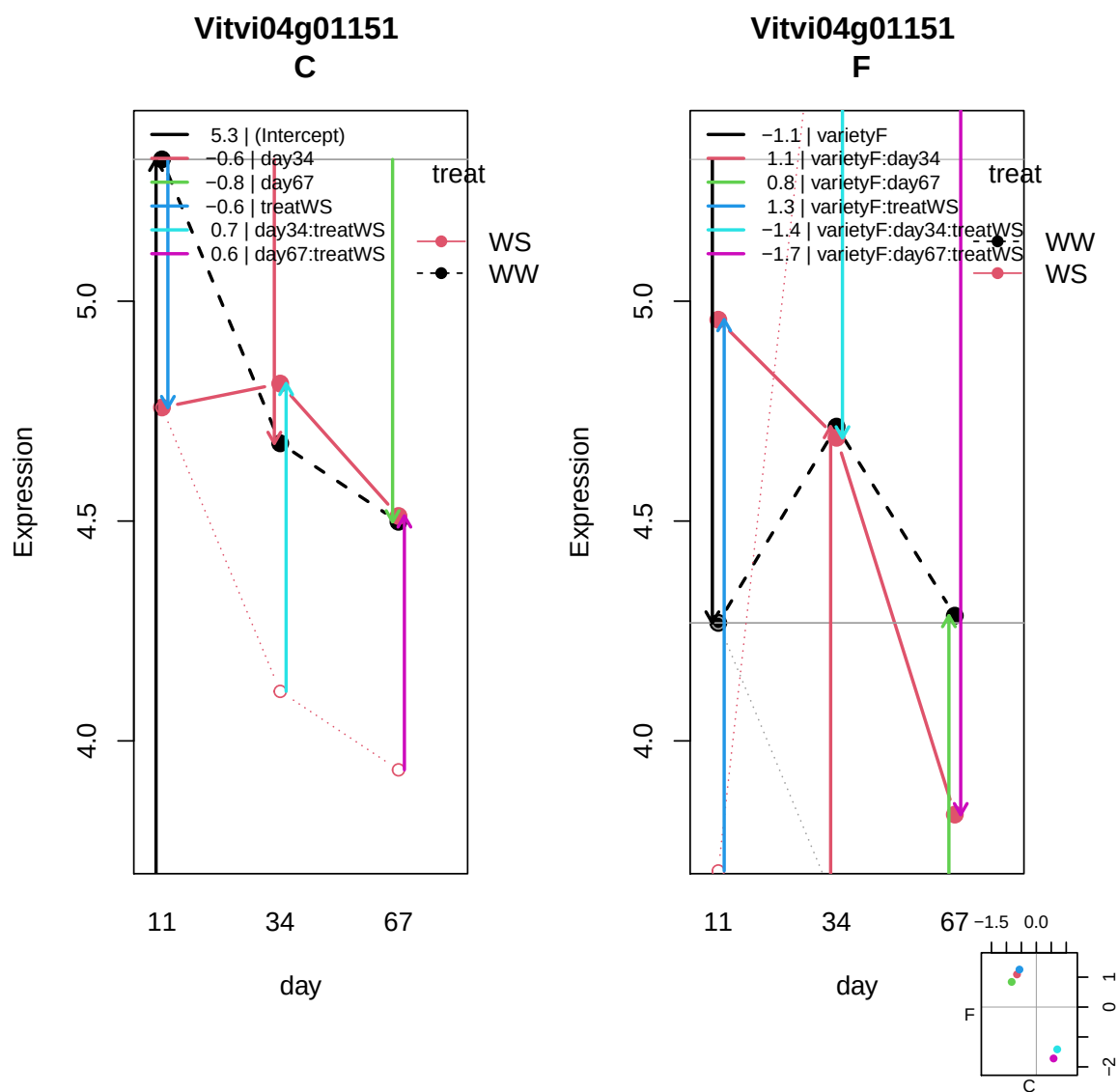
              (Intercept)  varietyF      day34      day67
Vitvi04g01151    5.322487 -1.054111 -0.6457074 -0.8241672
              treatWS varietyF:day34 varietyF:day67
Vitvi04g01151 -0.5641574      1.092011      0.8405768
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi04g01151      1.253631      0.6999694      0.5772996
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi04g01151      -1.414795      -1.719143

```

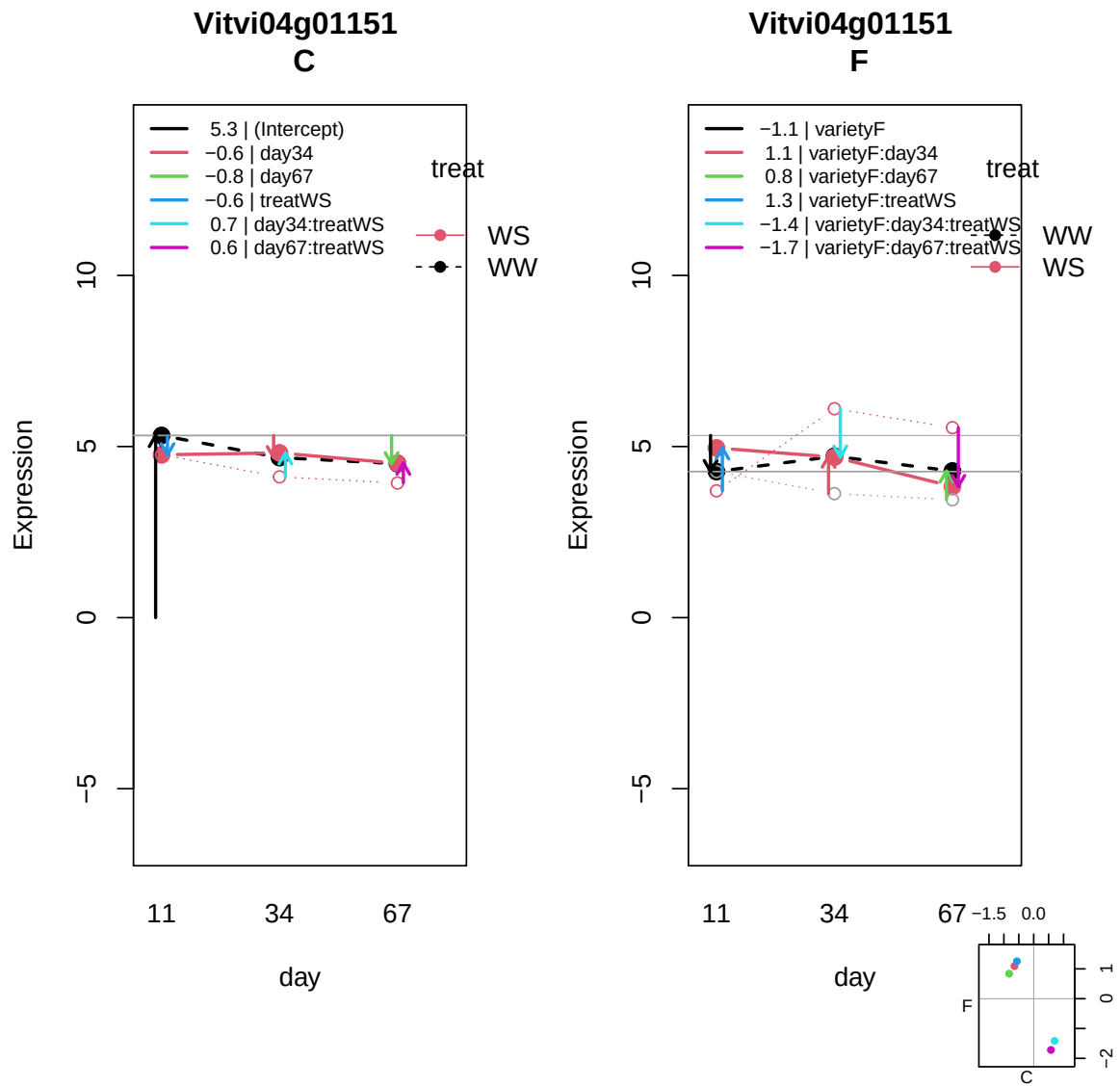
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

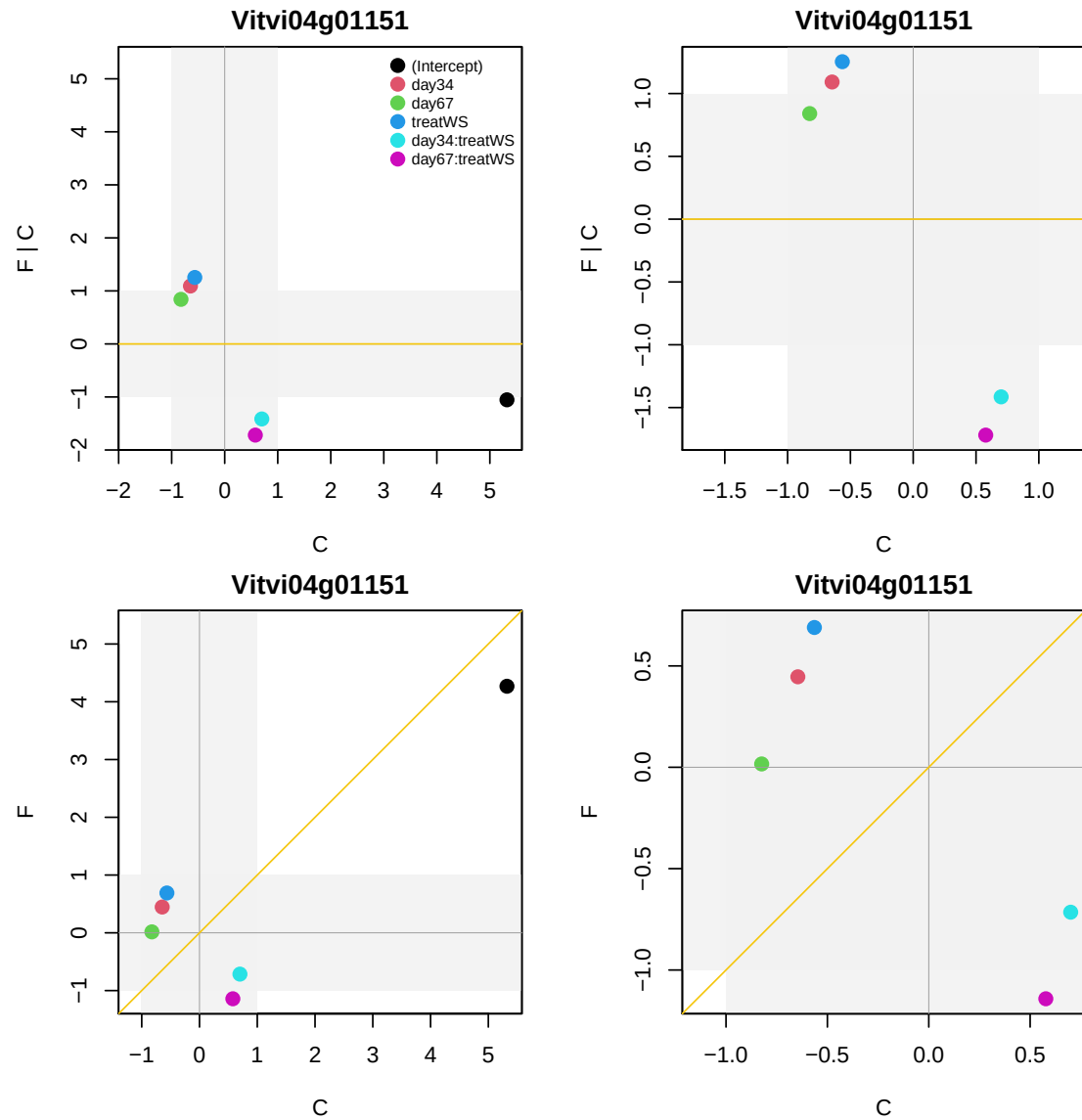


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

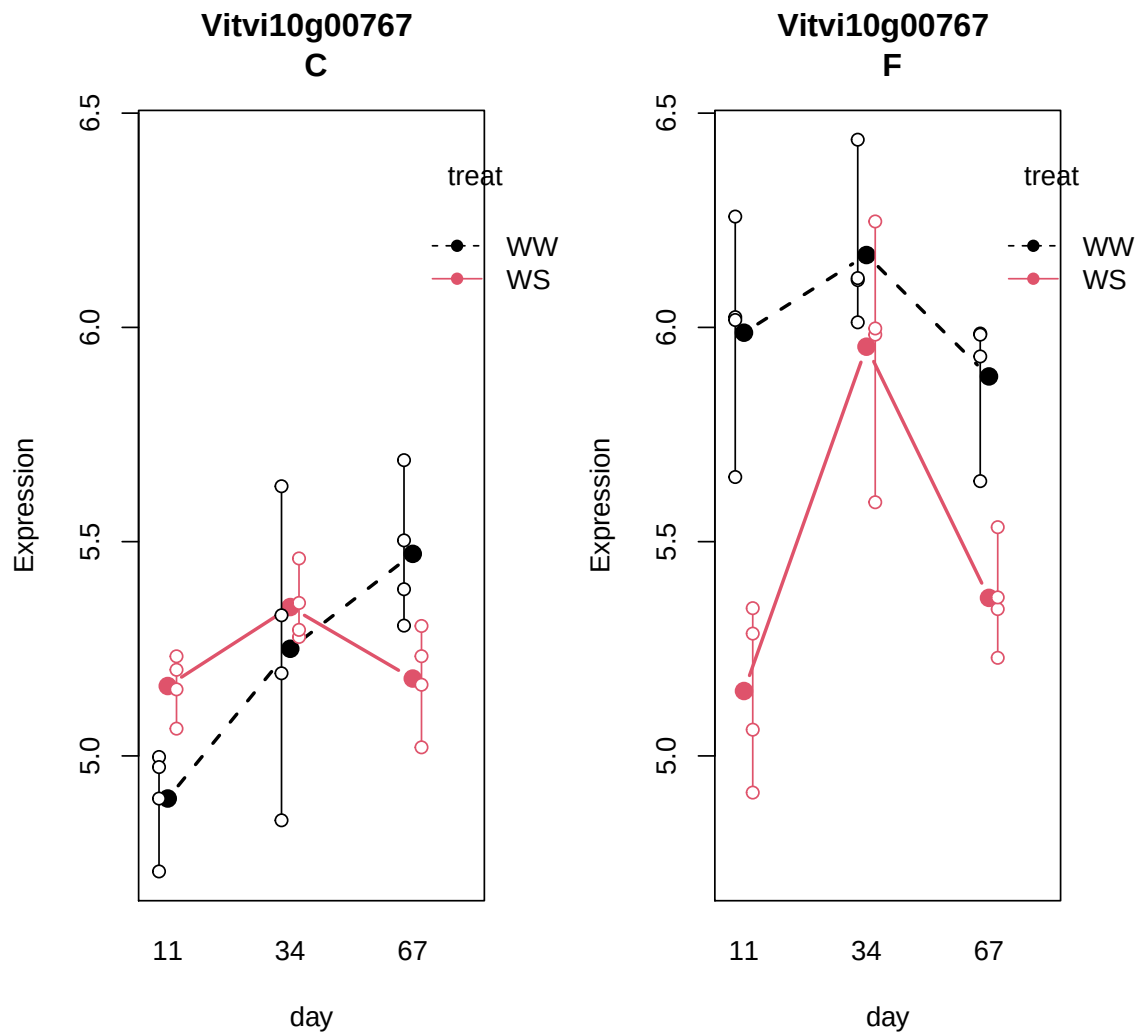
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



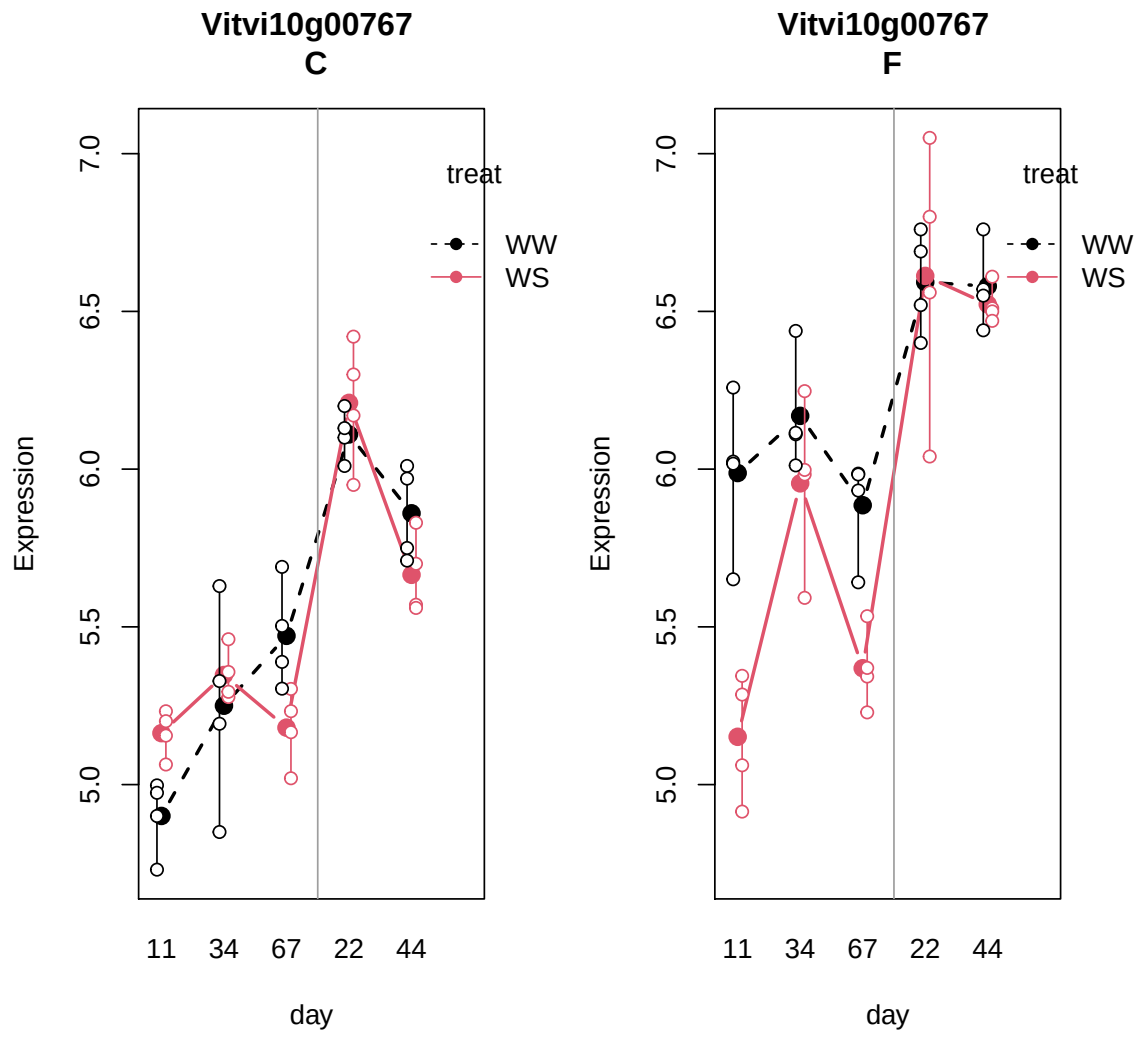
6.7.10 Vitvi10g00767

Coefficient varietyF:treatWS for Vitvi10g00767.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi10g00767 -1.098653 5.485861 -5.807084 9.823383e-07
      adj.P.Val      B
Vitvi10g00767 0.001368895 5.522152
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

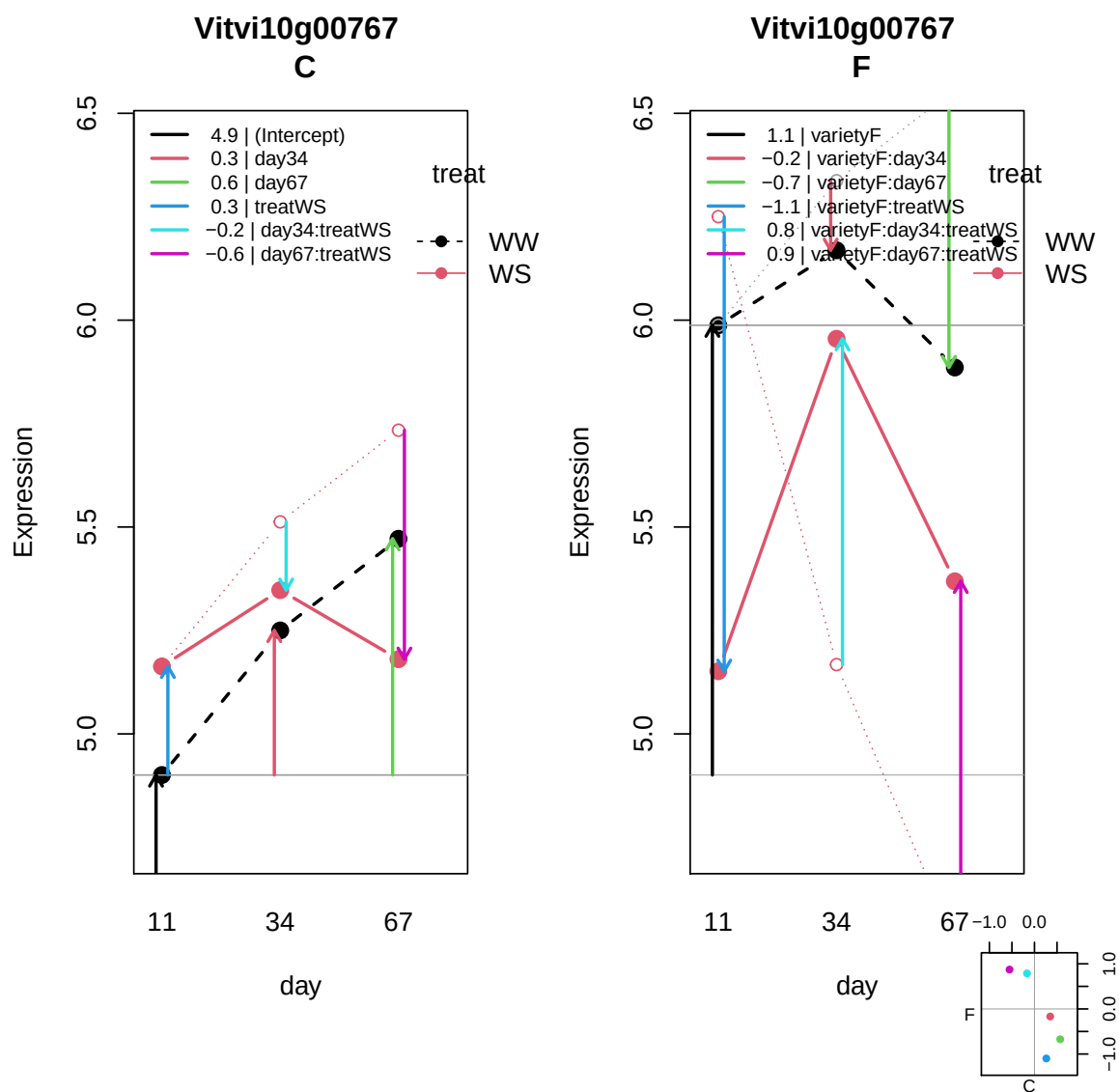


```

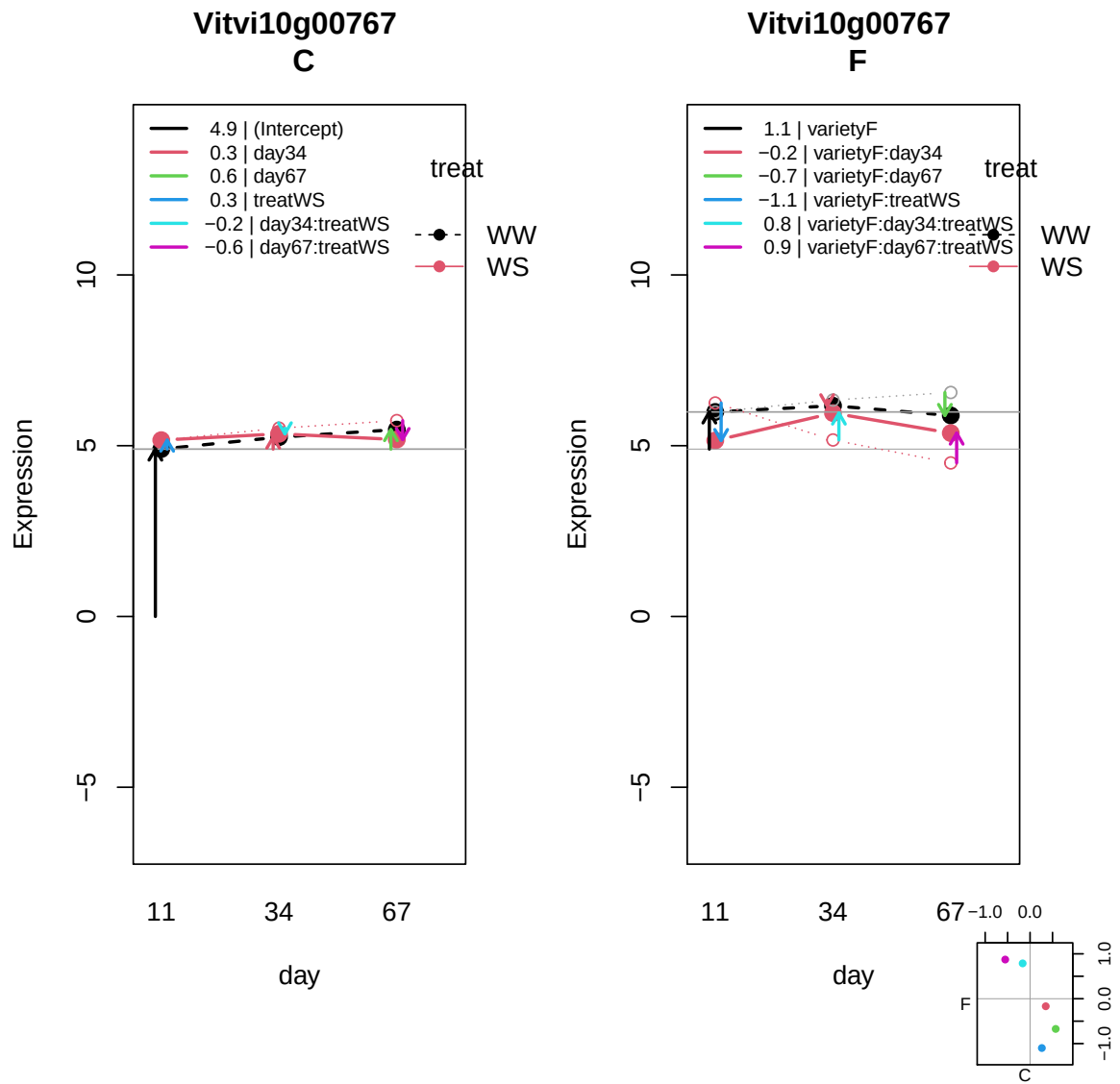
> fit1[varname,]$coefficients
              (Intercept)  varietyF      day34      day67
Vitvi10g00767      4.900588  1.087025  0.3494284  0.5709398
              treatWS  varietyF:day34  varietyF:day67
Vitvi10g00767  0.2625087      -0.1682259      -0.673007
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi10g00767      -1.098653      -0.1651542      -0.5535108
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi10g00767      0.7874455      0.8729166

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

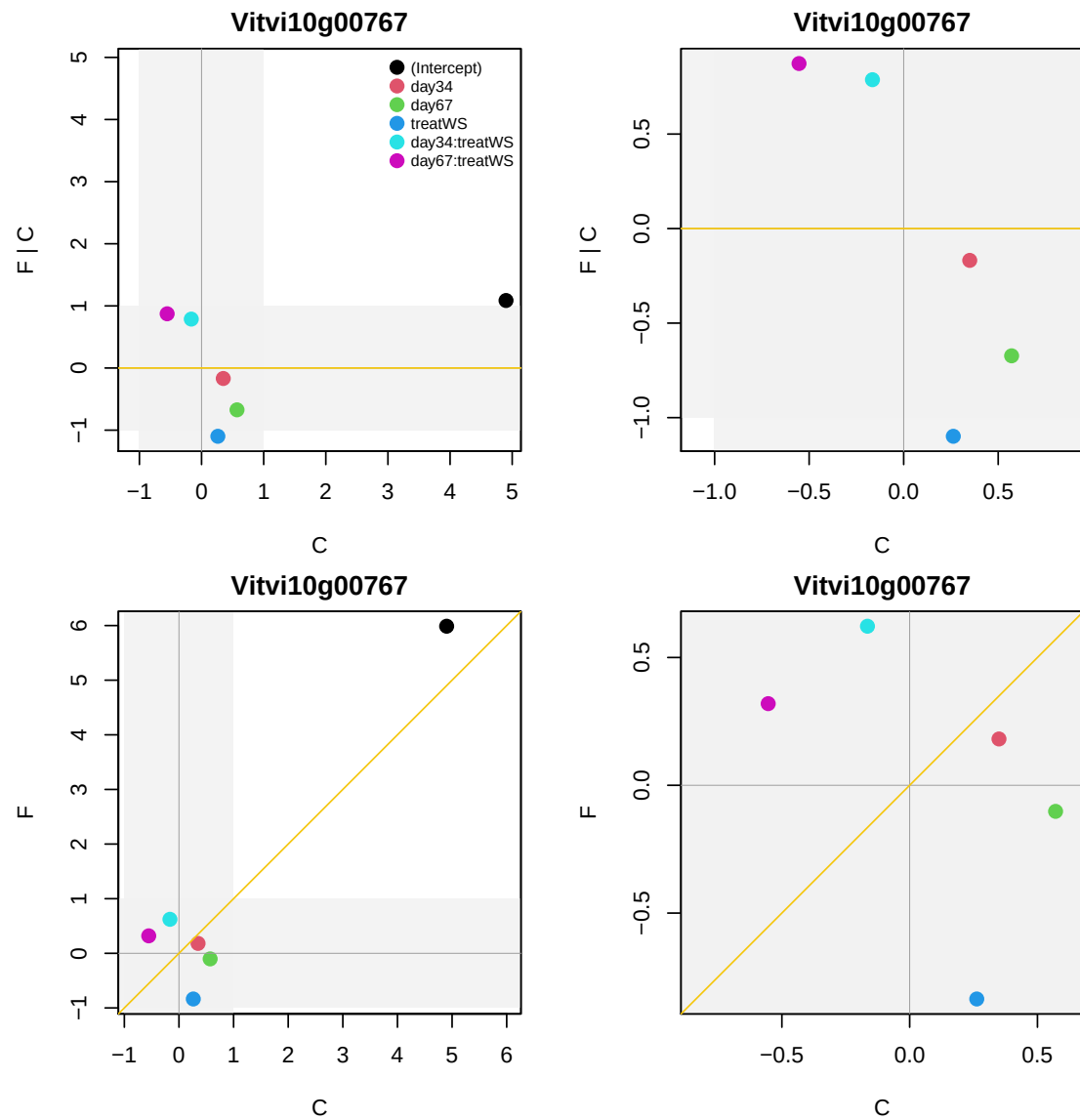


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



6.8 day34:treatWS

6.8.1 NA

Coefficient day34:treatWS for NA.

```
> tt[varname,]  
      logFC AveExpr  t P.Value adj.P.Val  B  
NA      NA      NA NA      NA      NA NA  
  
> plot.interactions(varname,phdata=pd,data=exprs)  
Warning in min(x): no non-missing arguments to min; returning Inf  
Warning in max(x): no non-missing arguments to max; returning -Inf  
Error in plot.window(...): need finite 'ylim' values
```

```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
Warning in min(x): no non-missing arguments to min; returning Inf
Warning in max(x): no non-missing arguments to max; returning -Inf
Error in plot.window(...): need finite 'ylim' values
```

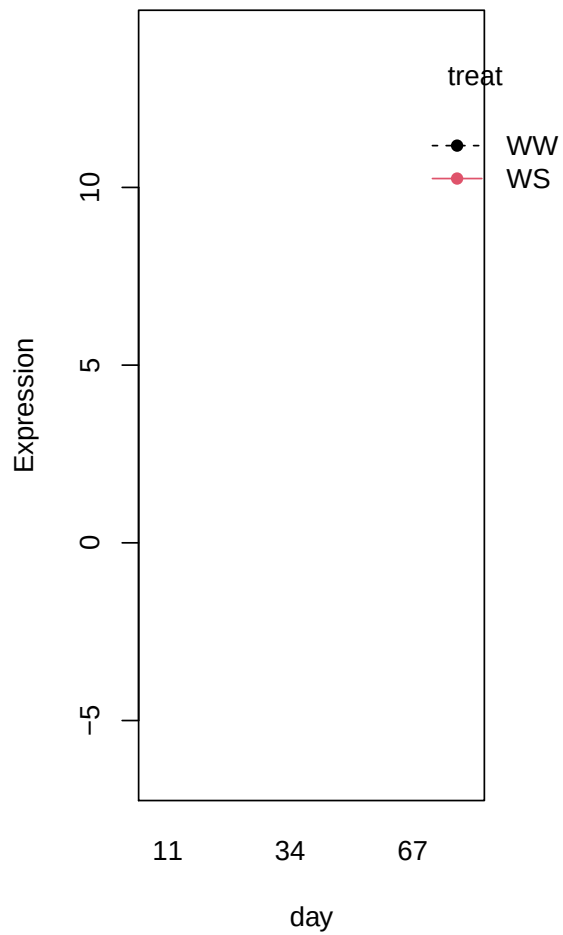
```

> fit1[varname,]$coefficients
Error in subsetListOfArrays(object, i, j, IJ = IJ, IX = IX, I = I, JX = JX): S
> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)
Warning in min(x): no non-missing arguments to min; returning Inf
Warning in max(x): no non-missing arguments to max; returning -Inf
Error in plot.window(...): need finite 'ylim' values

```

```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```

```
Error in subsetListOfArrays(object, i, j, IJ = IJ, IX = IX, I = I, JX = JX): S
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
Error in subsetListOfArrays(object, i, j, IJ = IJ, IX = IX, I = I, JX = JX): S
> plot.coefficients(2:6)
Error in subsetListOfArrays(object, i, j, IJ = IJ, IX = IX, I = I, JX = JX): S
> plot.coefficients(1:6, add=TRUE)
Error in subsetListOfArrays(object, i, j, IJ = IJ, IX = IX, I = I, JX = JX): S
> plot.coefficients(2:6, add=TRUE)
Error in subsetListOfArrays(object, i, j, IJ = IJ, IX = IX, I = I, JX = JX): S
```

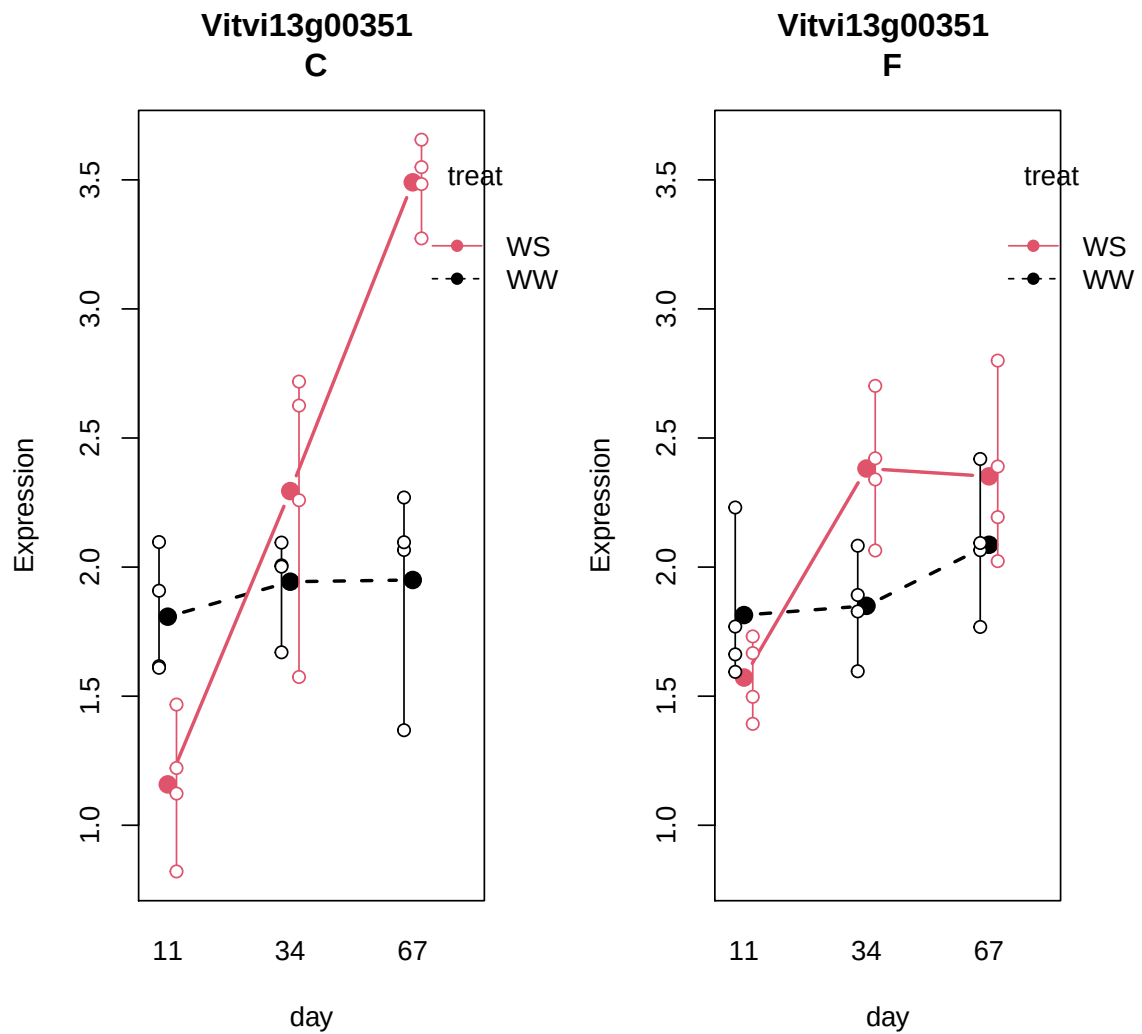
6.9 day67:treatWS

6.9.1 Vitvi13g00351

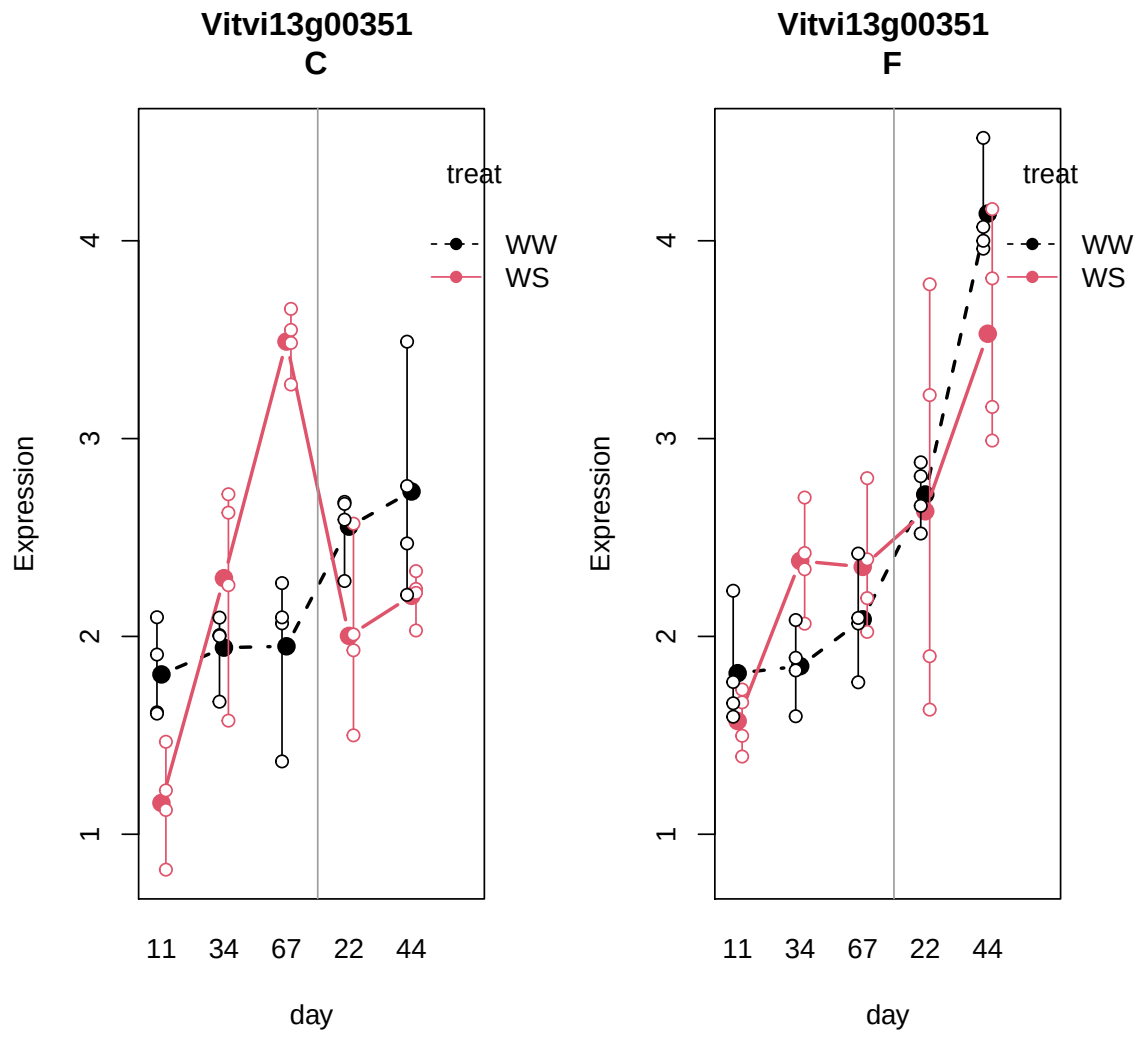
Coefficient day67:treatWS for Vitvi13g00351.

```
> tt[varname,]
               logFC  AveExpr      t      P.Value
Vitvi13g00351 2.190008 2.058368 7.678412 2.674206e-09
               adj.P.Val      B
Vitvi13g00351 4.076024e-05 10.95781

> plot.interactions(varname, phdata=pd, data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

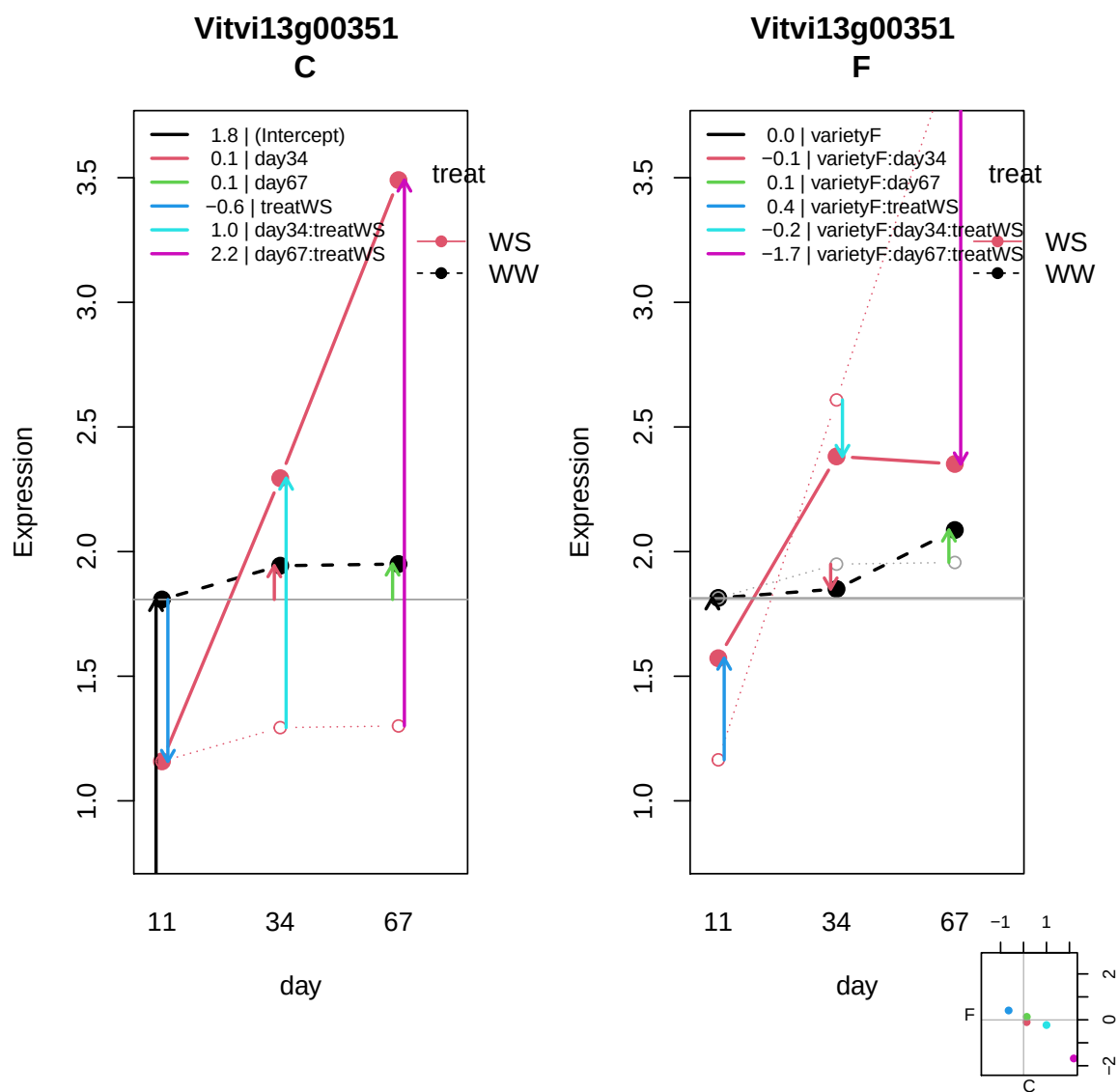
              (Intercept)      varietyF      day34      day67
Vitvi13g00351      1.807909 0.006258569 0.1354823 0.142129
              treatWS varietyF:day34 varietyF:day67
Vitvi13g00351     -0.6496104      -0.09980071      0.1301378
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi13g00351           0.4076132          1.000607          2.190008
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi13g00351           -0.22664              -1.682929

```

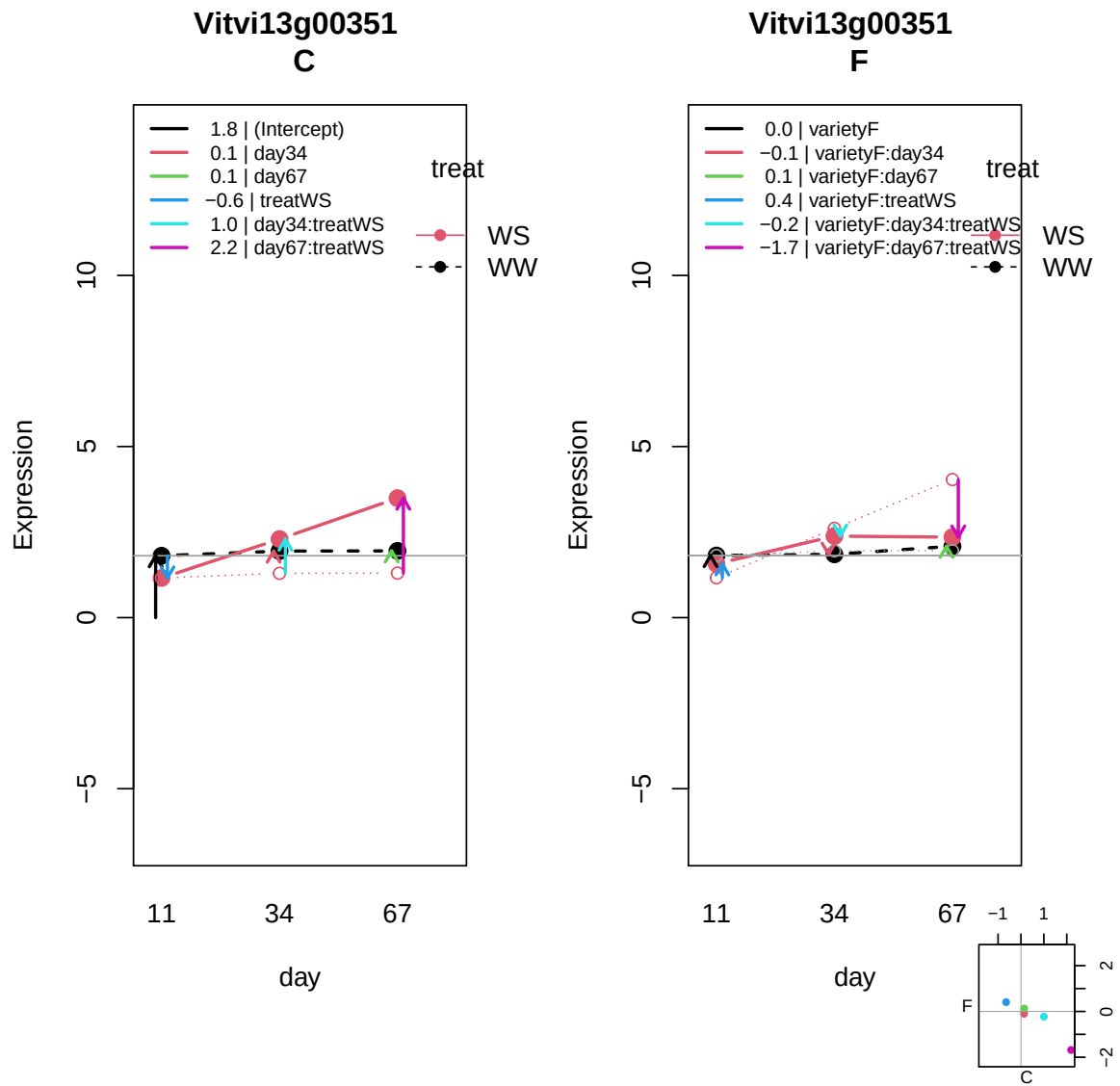
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

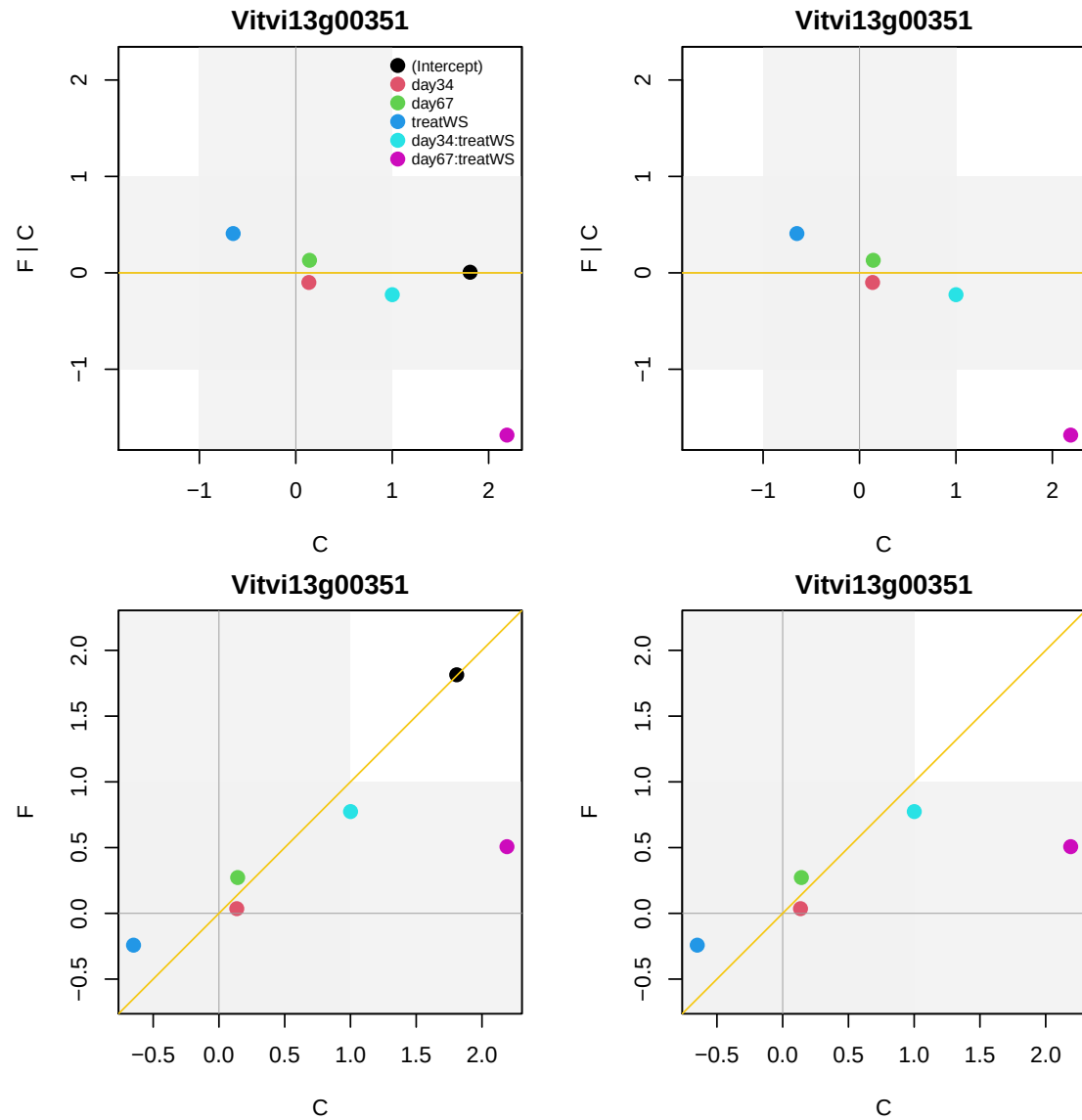


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

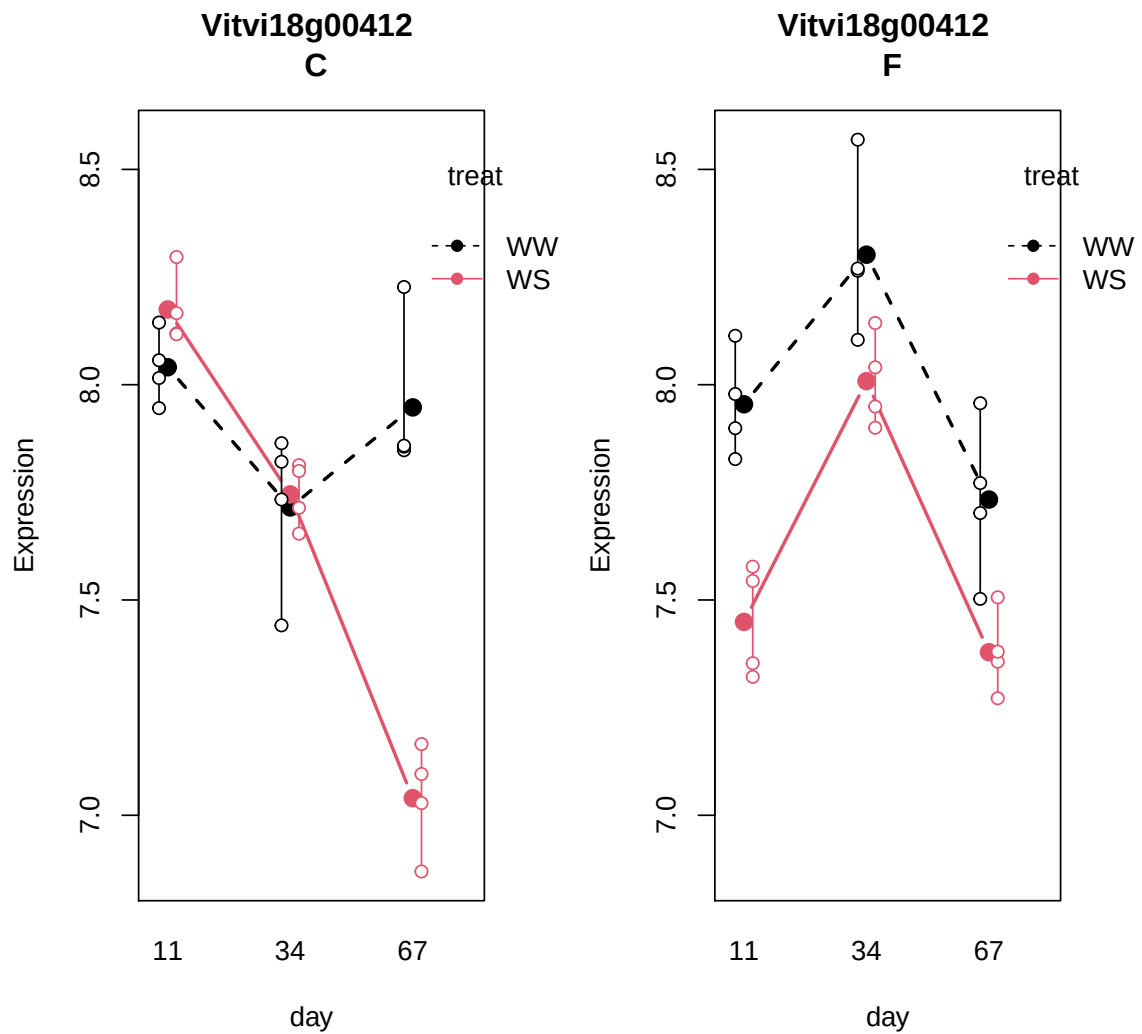


6.9.2 Vitvi18g00412

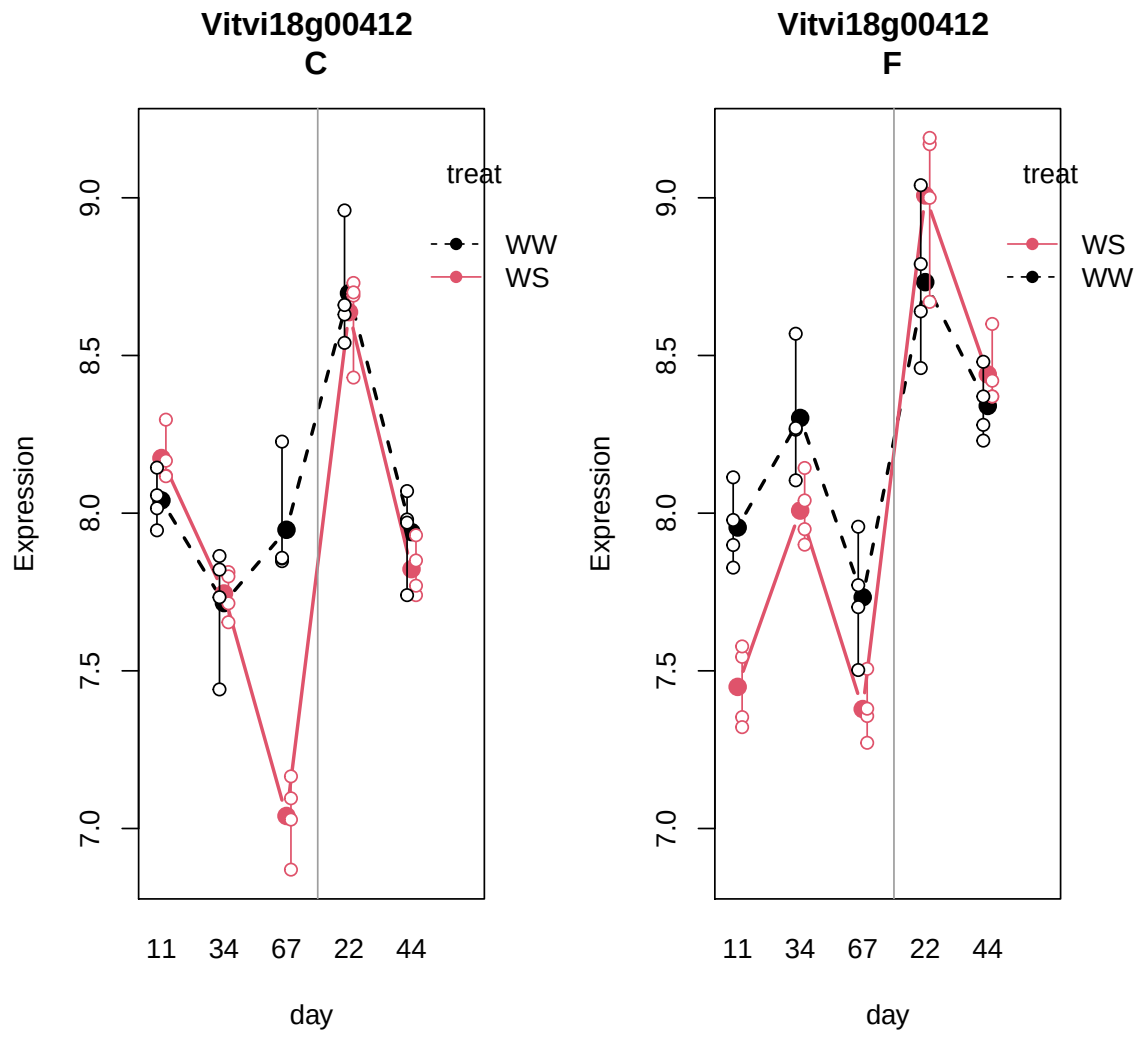
Coefficient day67:treatWS for Vitvi18g00412.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi18g00412 -1.041682 7.790681 -7.241465 1.041589e-08
      adj.P.Val      B
Vitvi18g00412 6.442583e-05 9.719926

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

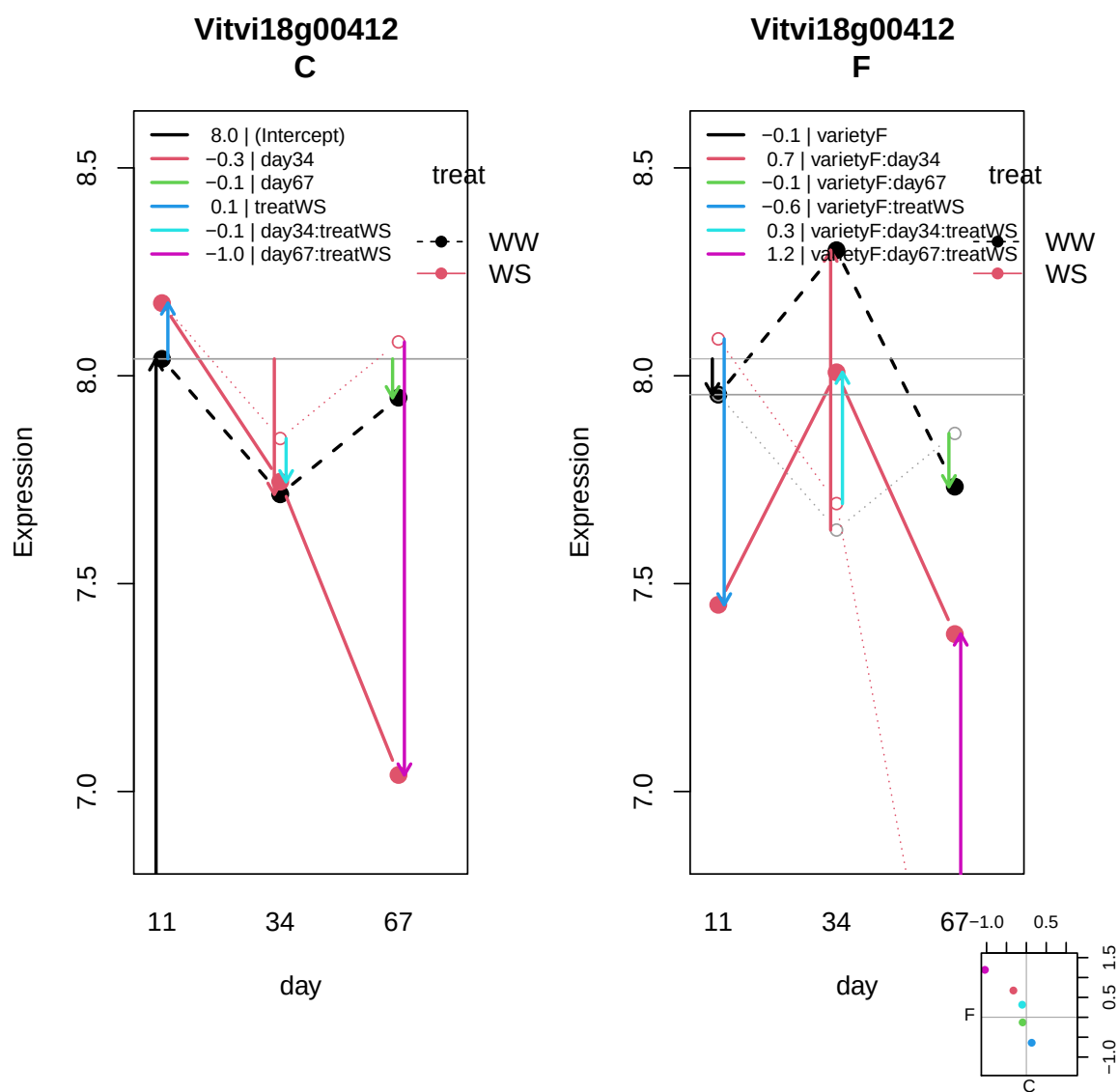
              (Intercept)      varietyF      day34
Vitvi18g00412      8.040546 -0.08600379 -0.3256205
              day67      treatWS      varietyF:day34
Vitvi18g00412 -0.09324598  0.1341617      0.6729616
              varietyF:day67      varietyF:treatWS      day34:treatWS
Vitvi18g00412      -0.128028      -0.6396099      -0.1038779
              day67:treatWS      varietyF:day34:treatWS
Vitvi18g00412      -1.041682      0.315688
              varietyF:day67:treatWS
Vitvi18g00412      1.192538

```

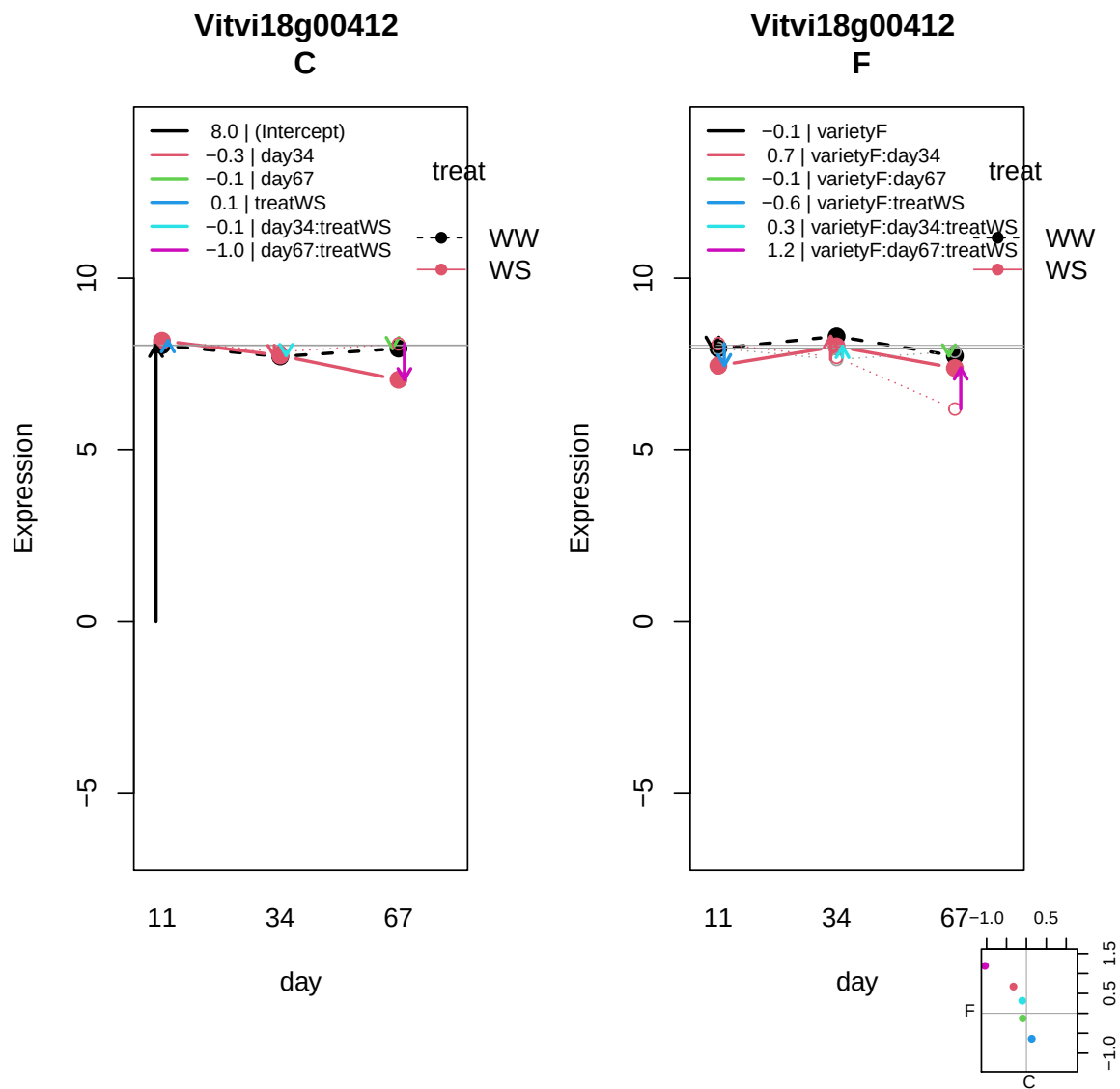
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

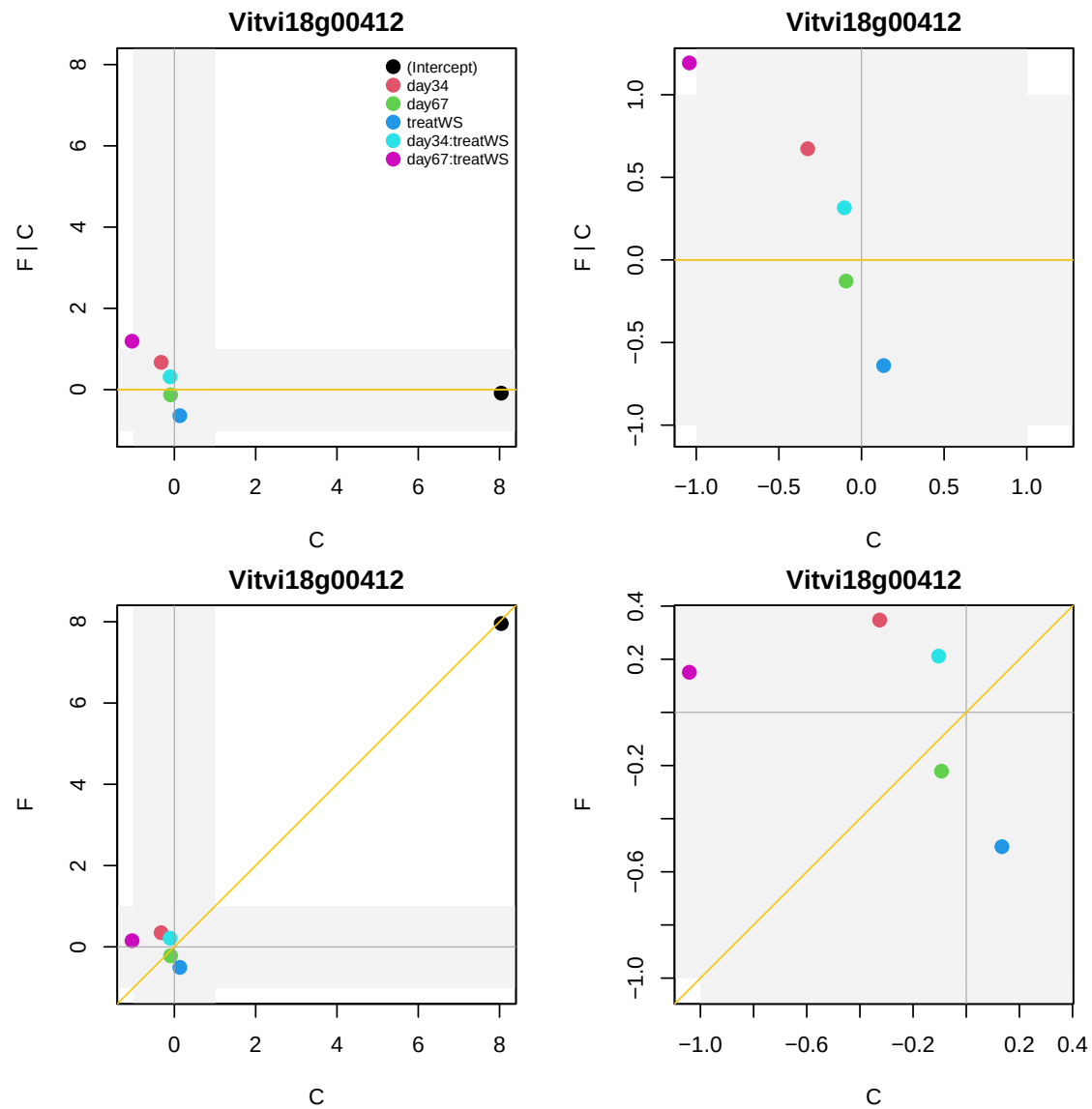


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

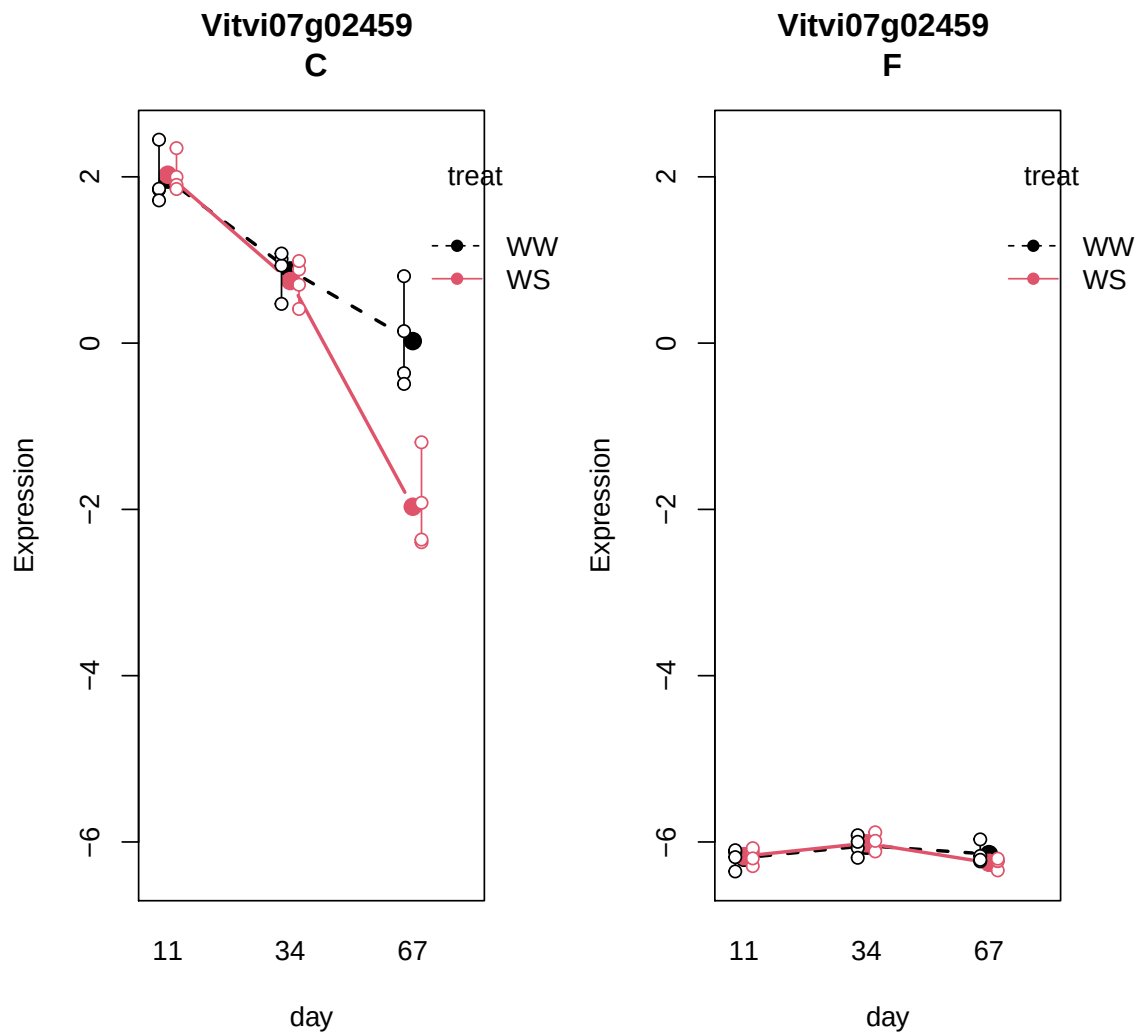


6.9.3 Vitvi07g02459

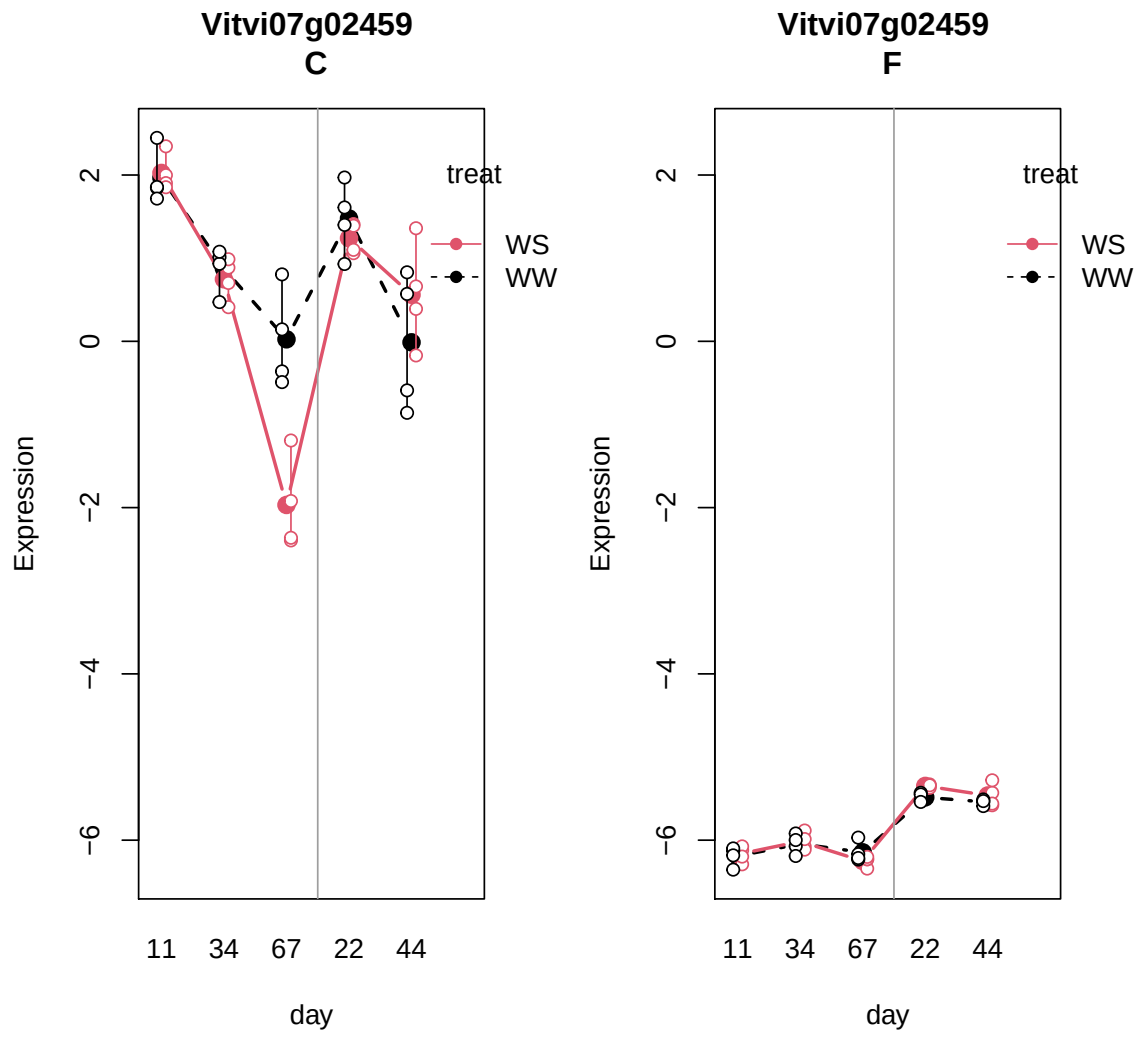
Coefficient day67:treatWS for Vitvi07g02459.

```
> tt[varname,]
               logFC  AveExpr      t      P.Value
Vitvi07g02459 -2.051239 -2.762547 -7.178666 1.268059e-08
               adj.P.Val      B
Vitvi07g02459 6.442583e-05 9.540323

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

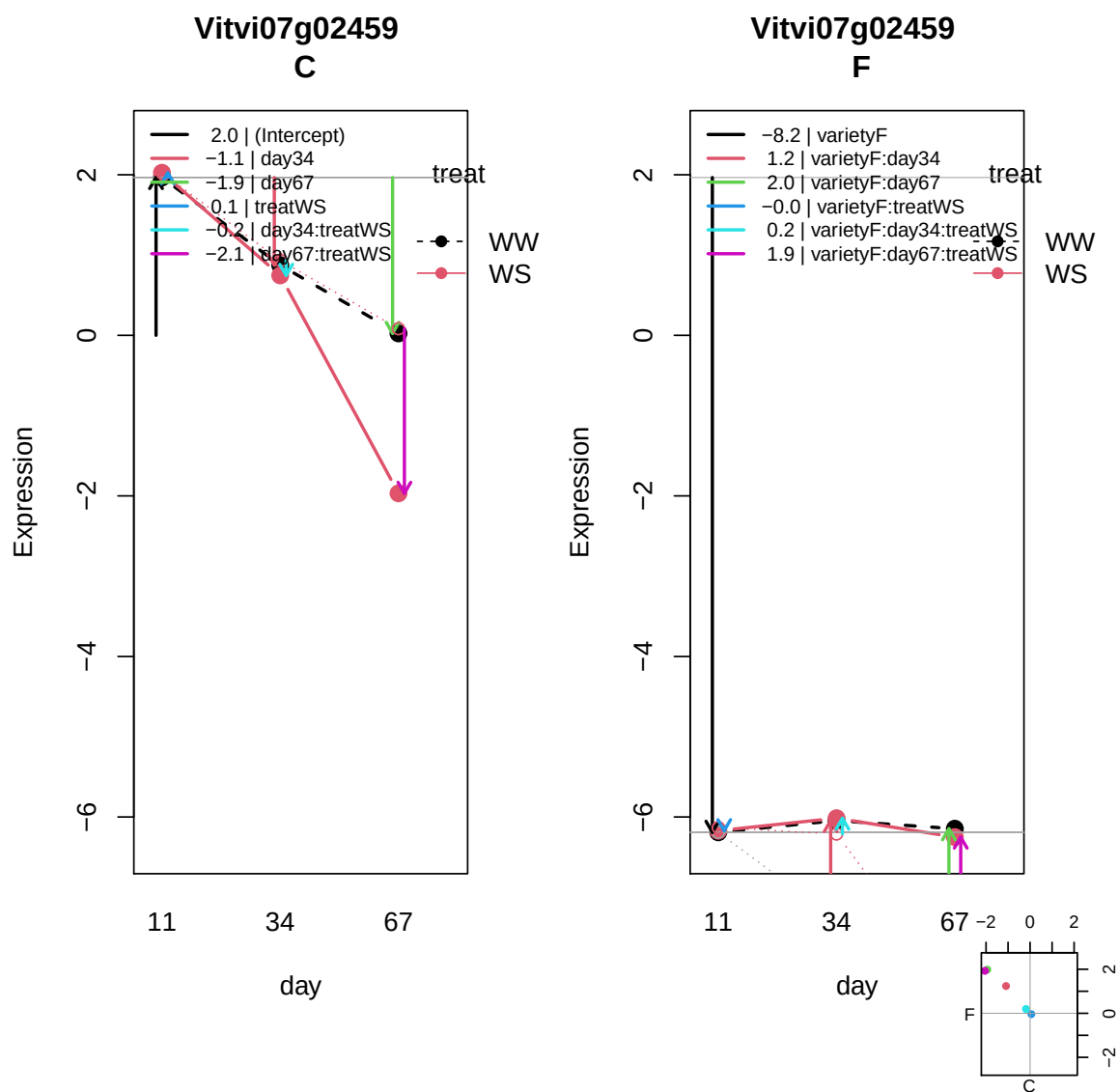
              (Intercept)  varietyF      day34      day67
Vitvi07g02459      1.966023 -8.15664 -1.092073 -1.941781
              treatWS  varietyF:day34  varietyF:day67
Vitvi07g02459  0.05896097      1.237736      1.986067
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi07g02459      -0.03903429      -0.1863305      -2.051239
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi07g02459              0.1961398              1.927146

```

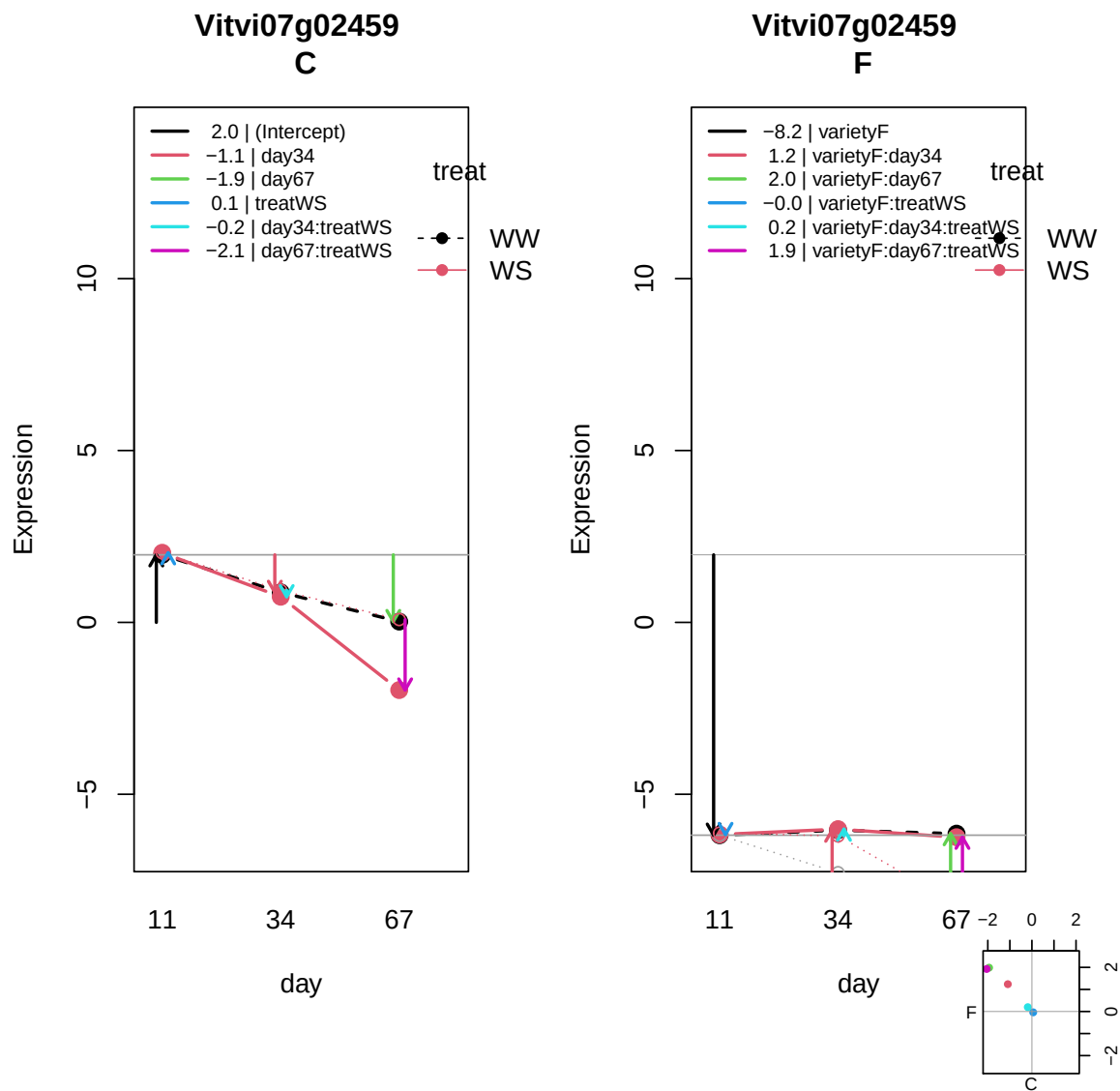
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

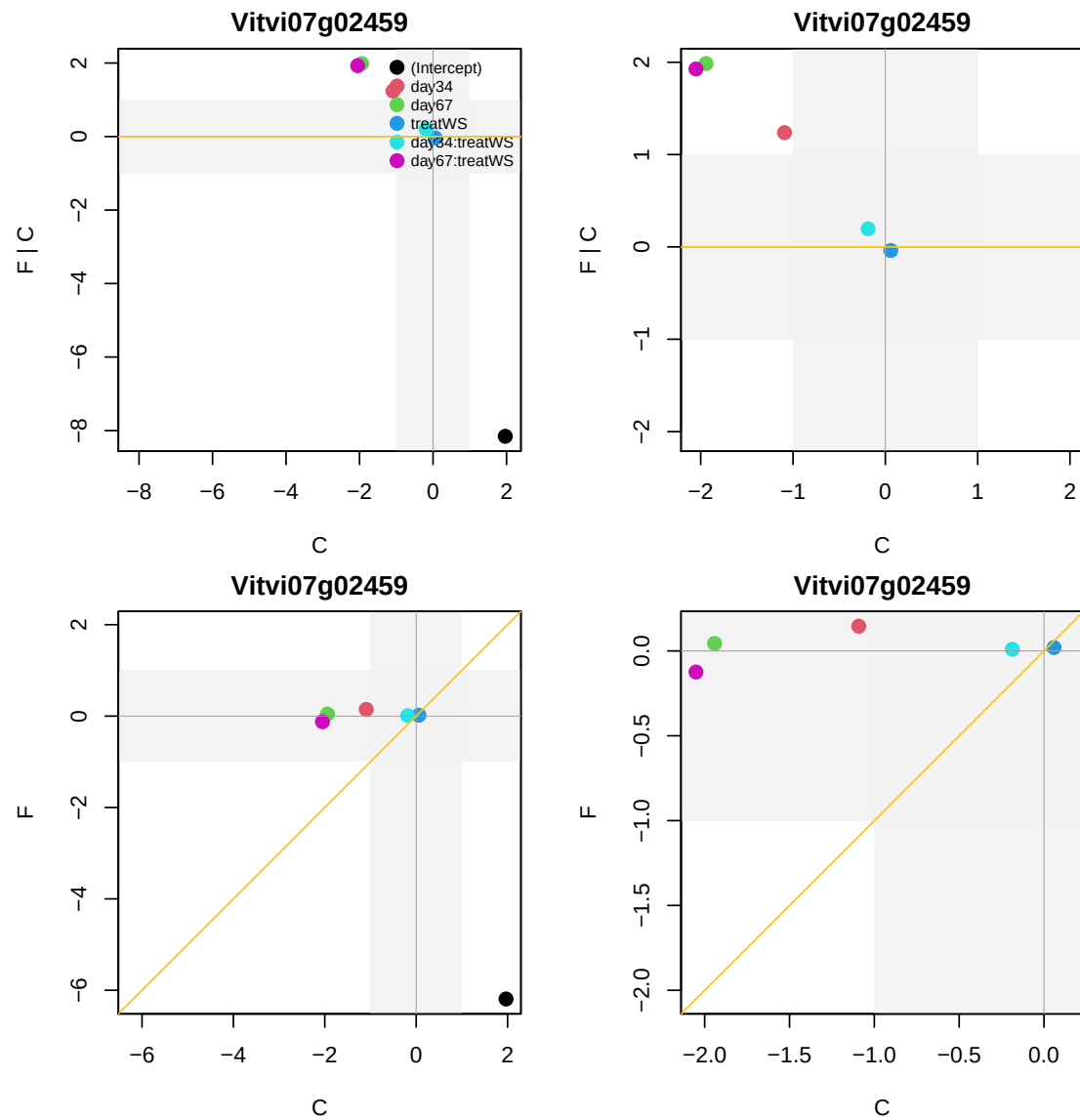


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

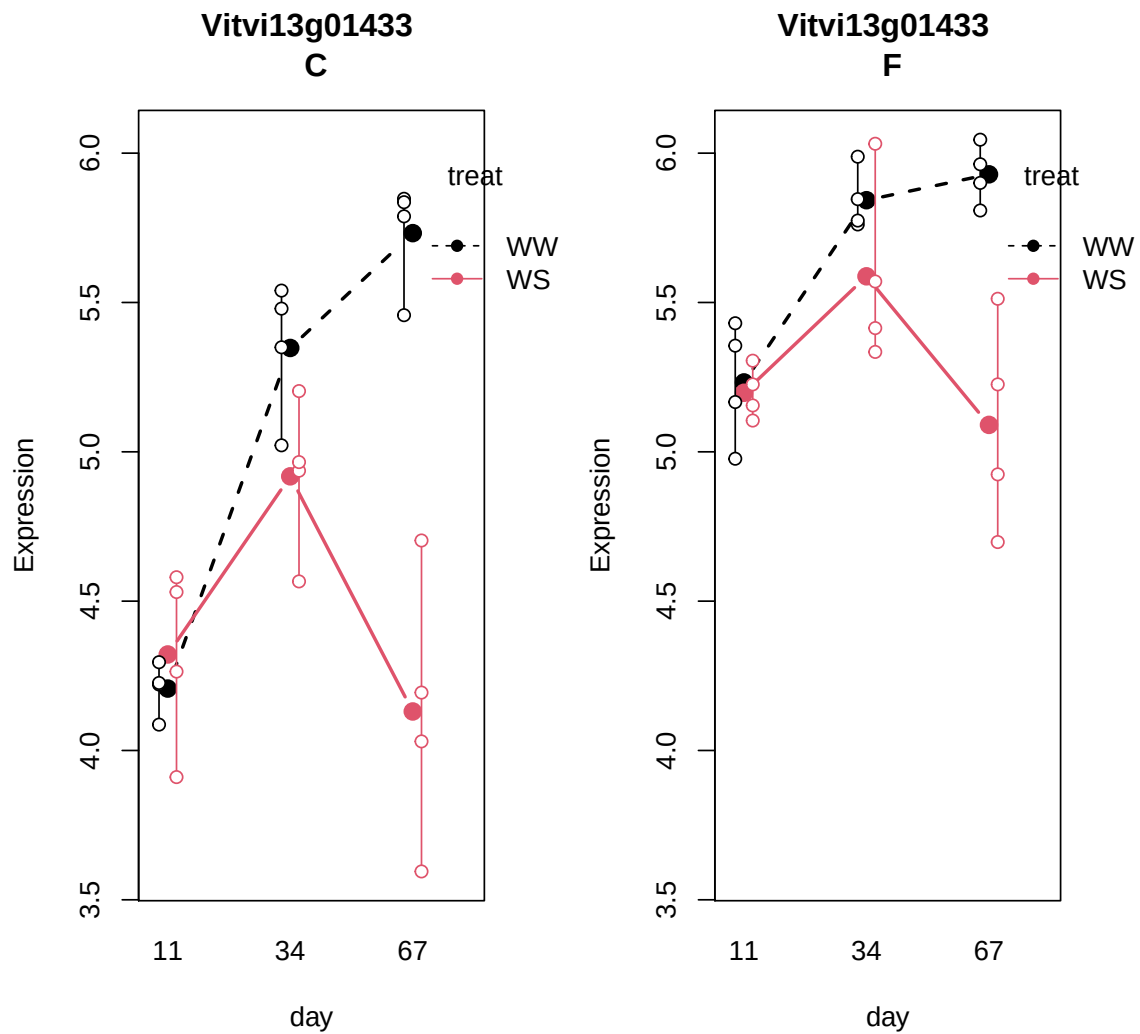


6.9.4 Vitvi13g01433

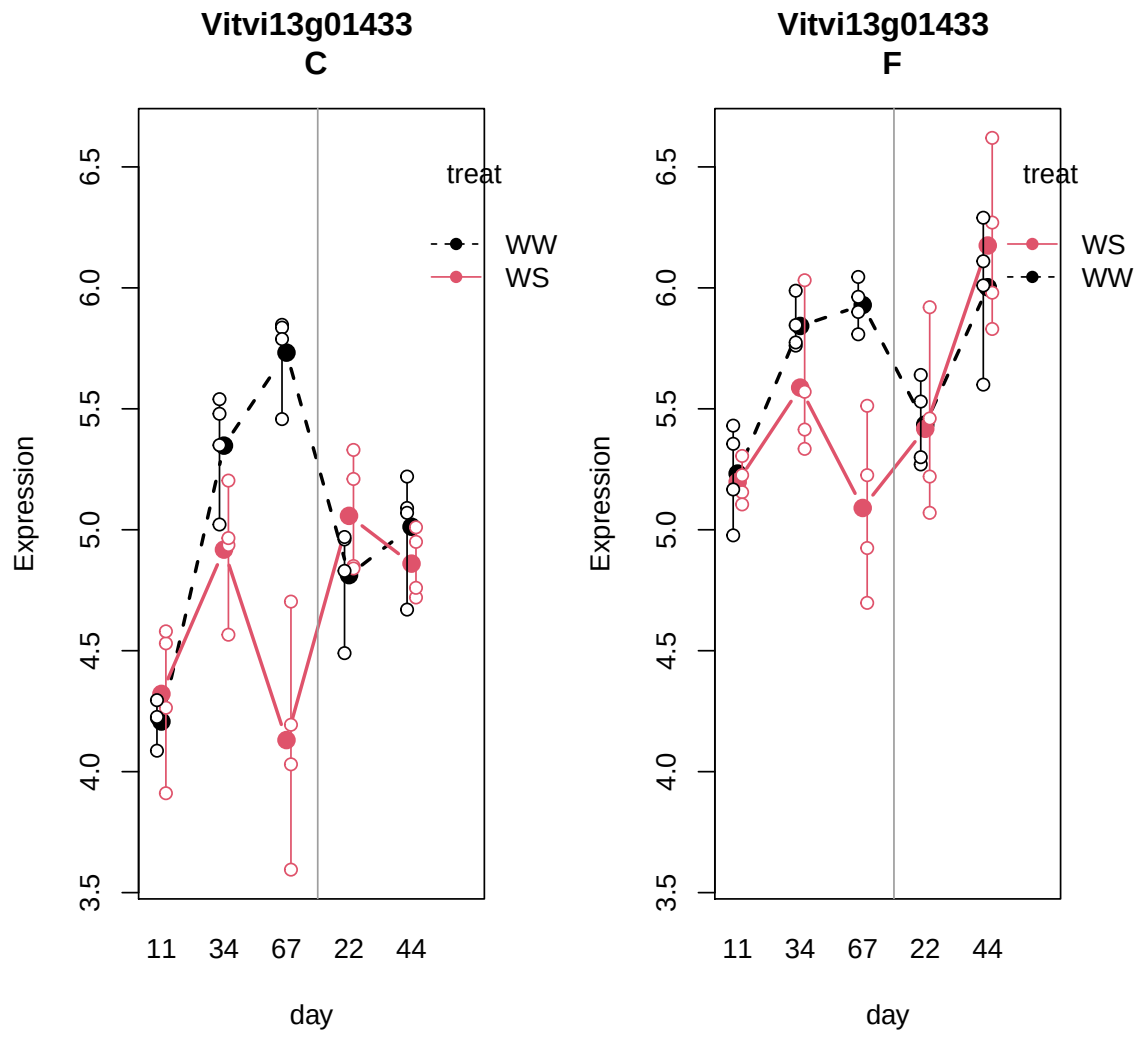
Coefficient day67:treatWS for Vitvi13g01433.

```
> tt[varname,]
      logFC AveExpr      t    P.Value
Vitvi13g01433 -1.715745 5.128052 -6.909845 2.95337e-08
      adj.P.Val      B
Vitvi13g01433 0.0001078579 8.767234

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```




```
> fit1[varname,]$coefficients
```

```

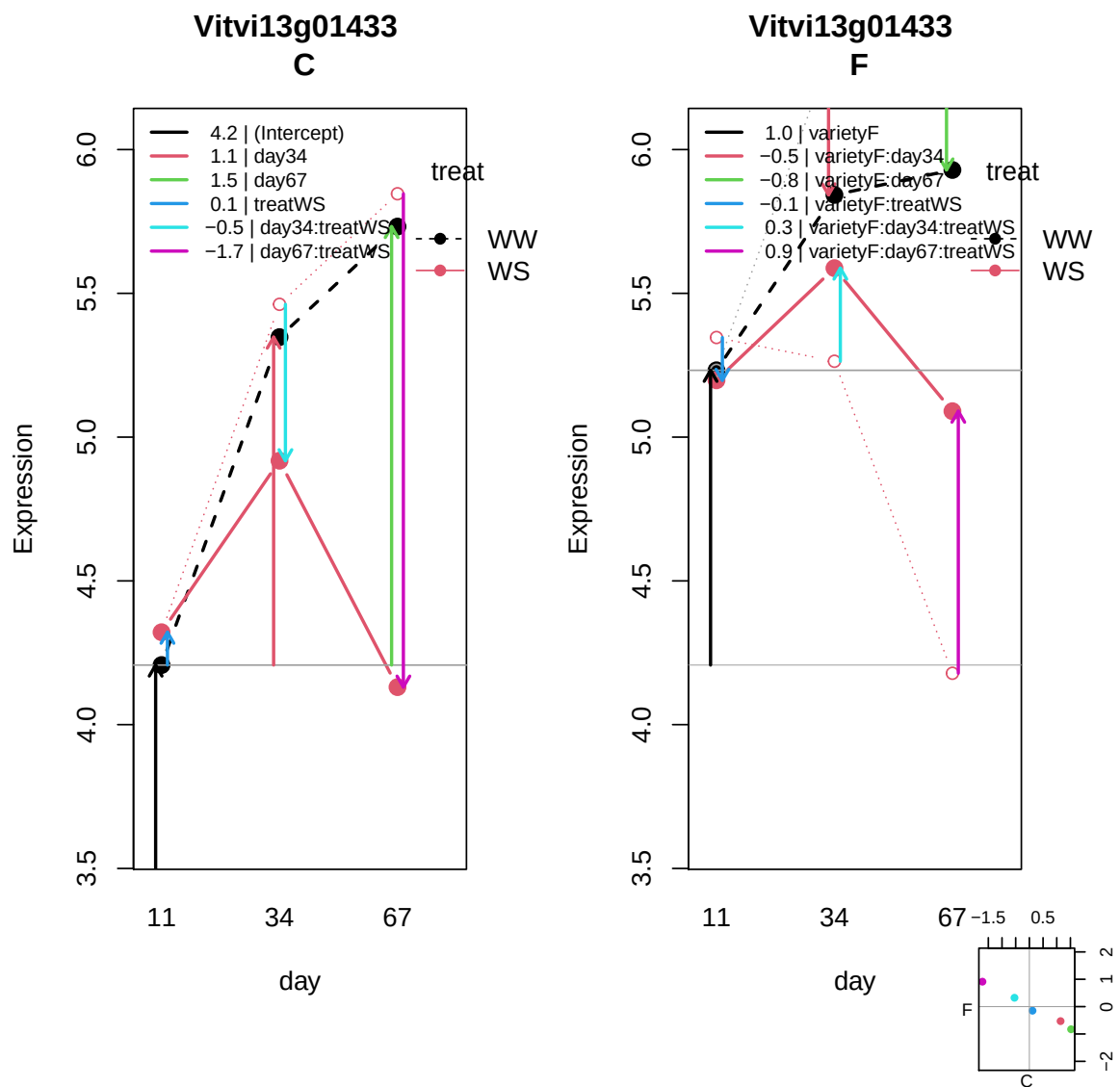
      (Intercept) varietyF    day34    day67
Vitvi13g01433    4.207291 1.025063 1.140474 1.524934
      treatWS varietyF:day34 varietyF:day67
Vitvi13g01433  0.1141185    -0.5303685    -0.8281758
      varietyF:treatWS day34:treatWS day67:treatWS
Vitvi13g01433    -0.1487923    -0.543954    -1.715745
      varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi13g01433         0.3238333         0.9114486

```

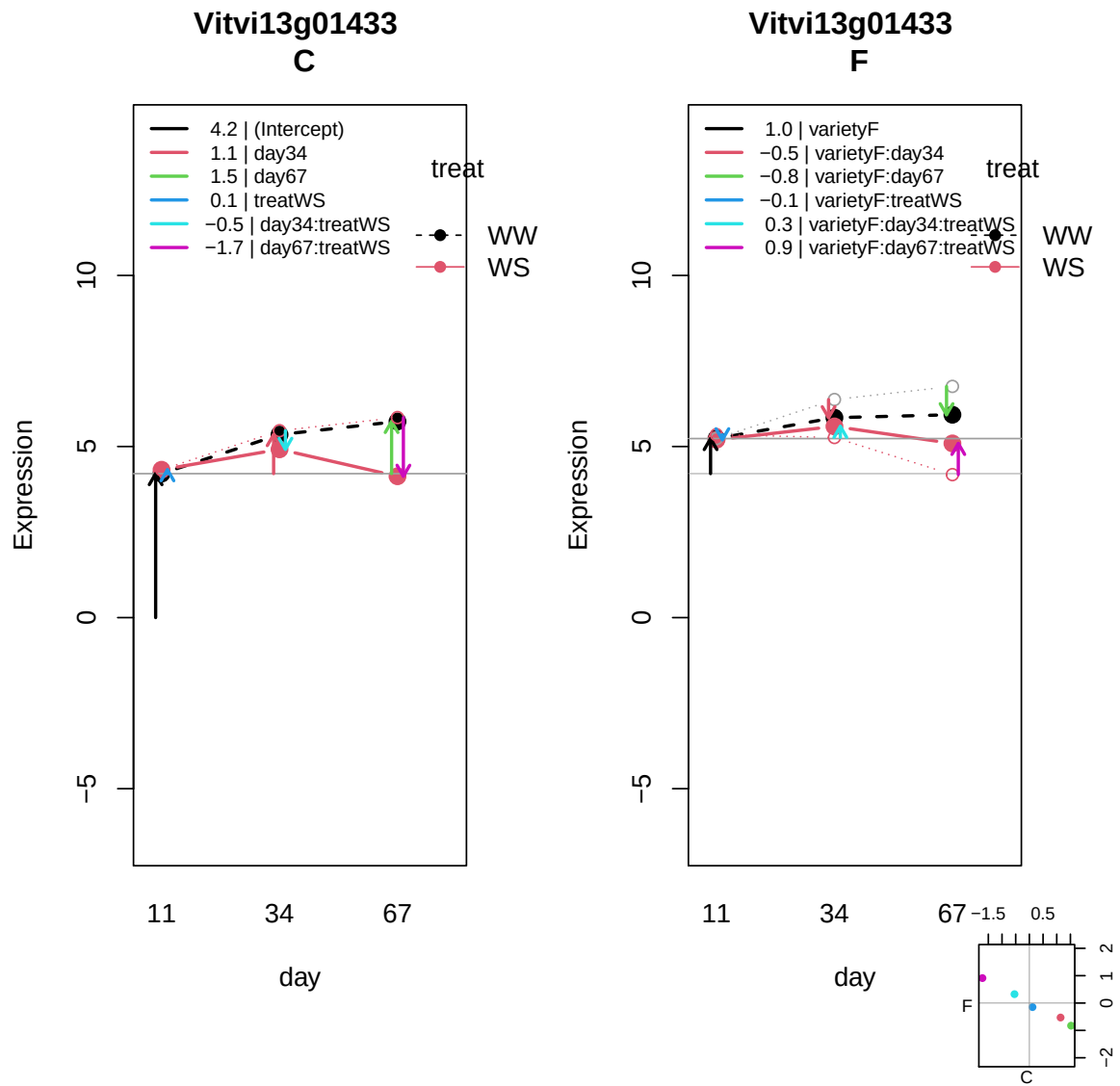
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

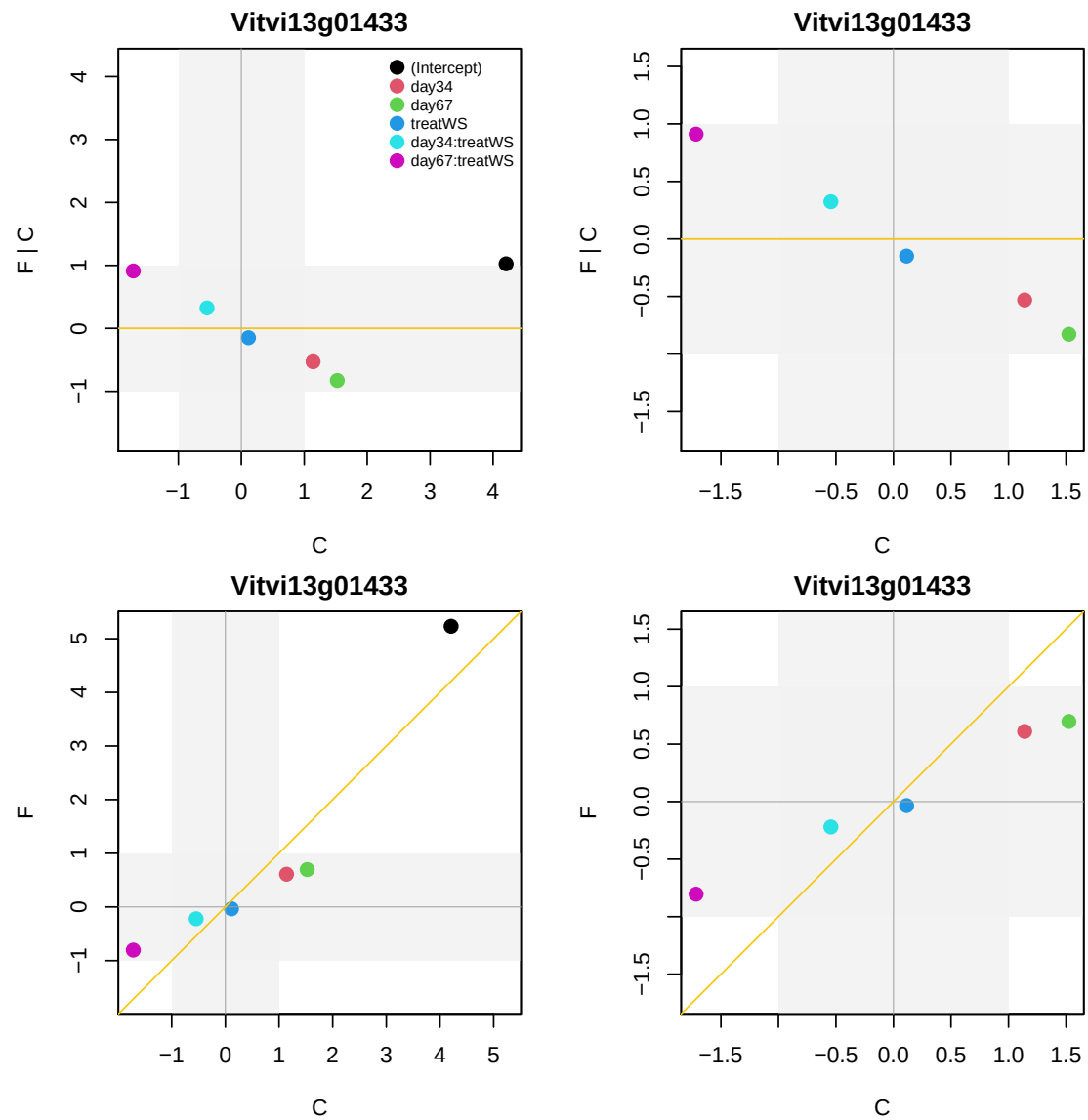


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

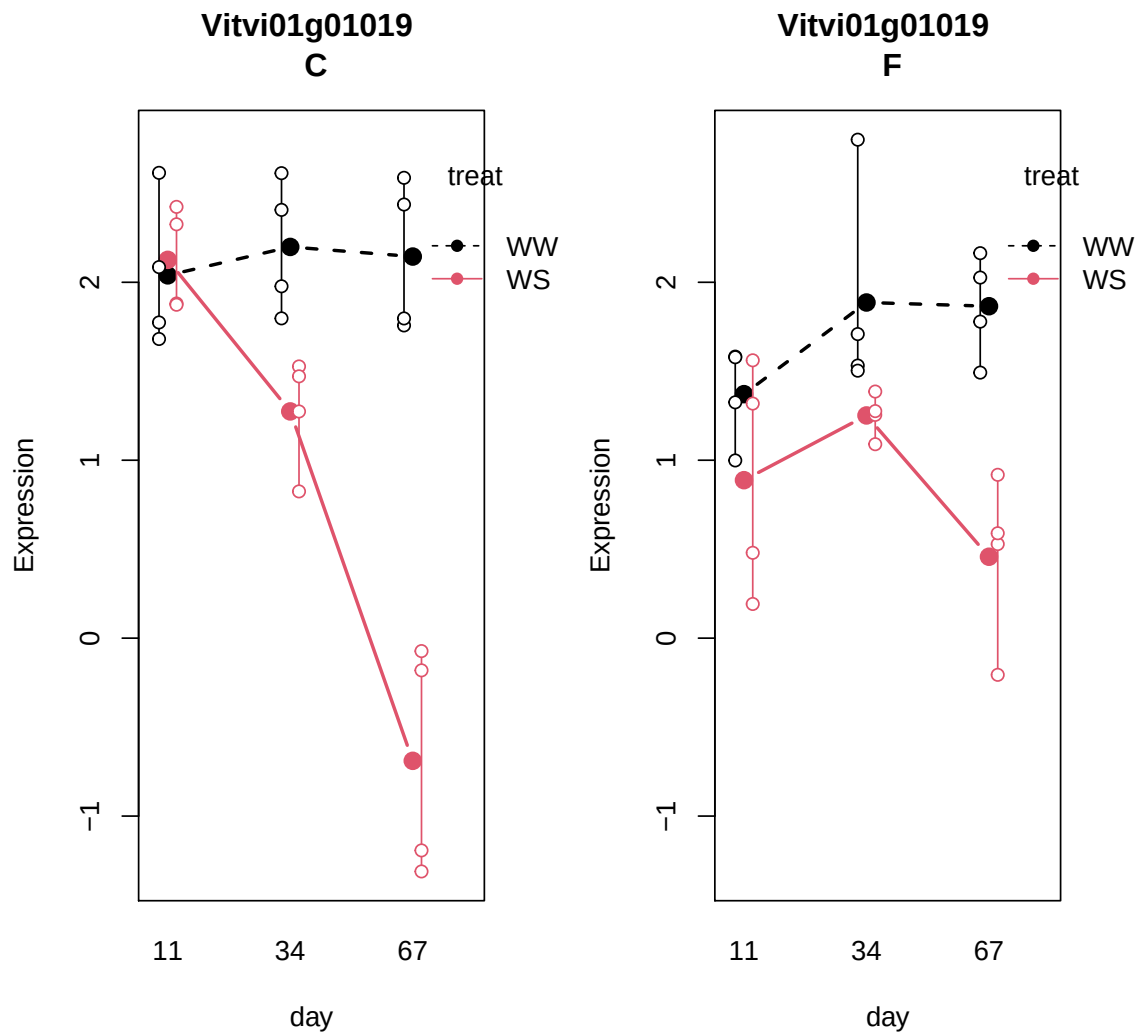
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



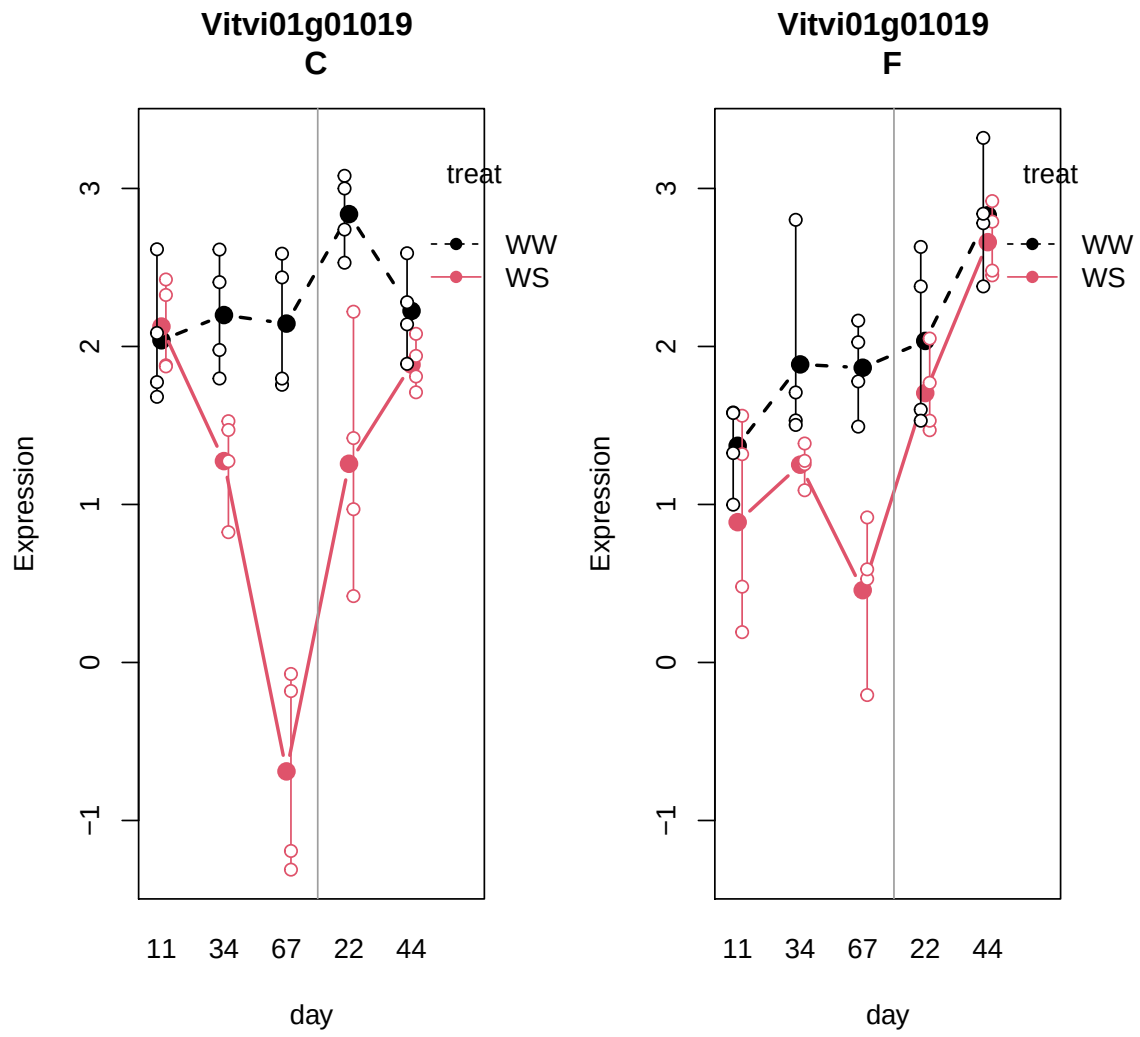
6.9.5 Vitvi01g01019

Coefficient day67:treatWS for Vitvi01g01019.

```
> tt[varname,]
               logFC  AveExpr          t      P.Value
Vitvi01g01019 -2.921216  1.401094 -6.827213 3.833611e-08
               adj.P.Val        B
Vitvi01g01019 0.0001078579  8.52831
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

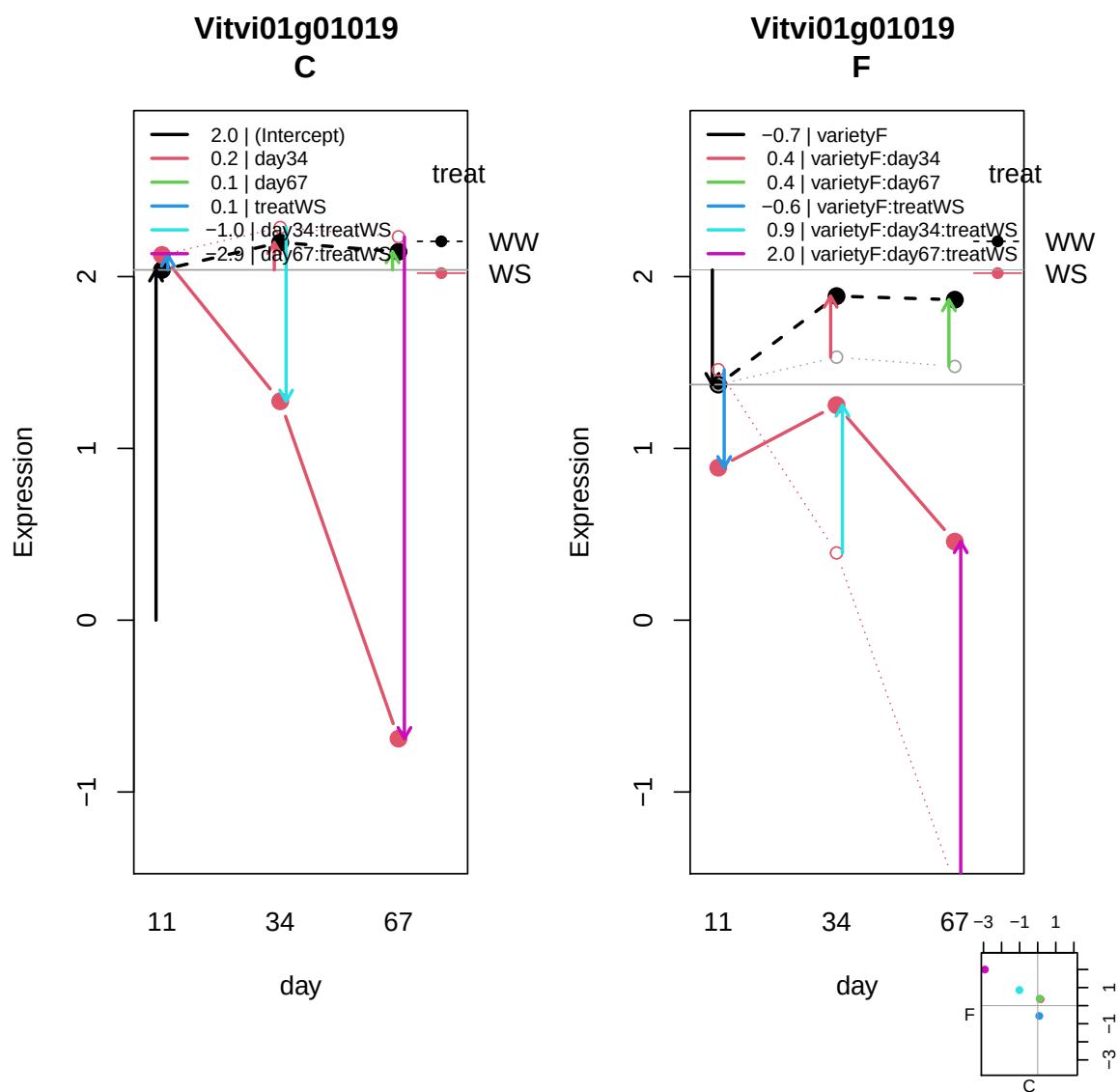
              (Intercept)  varietyF    day34    day67
Vitvi01g01019    2.038943 -0.6677019 0.1597643 0.1056758
              treatWS varietyF:day34 varietyF:day67
Vitvi01g01019  0.08710684    0.3554153    0.388481
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi01g01019    -0.5705012    -1.011533    -2.921216
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi01g01019          0.8601508          1.996678

```

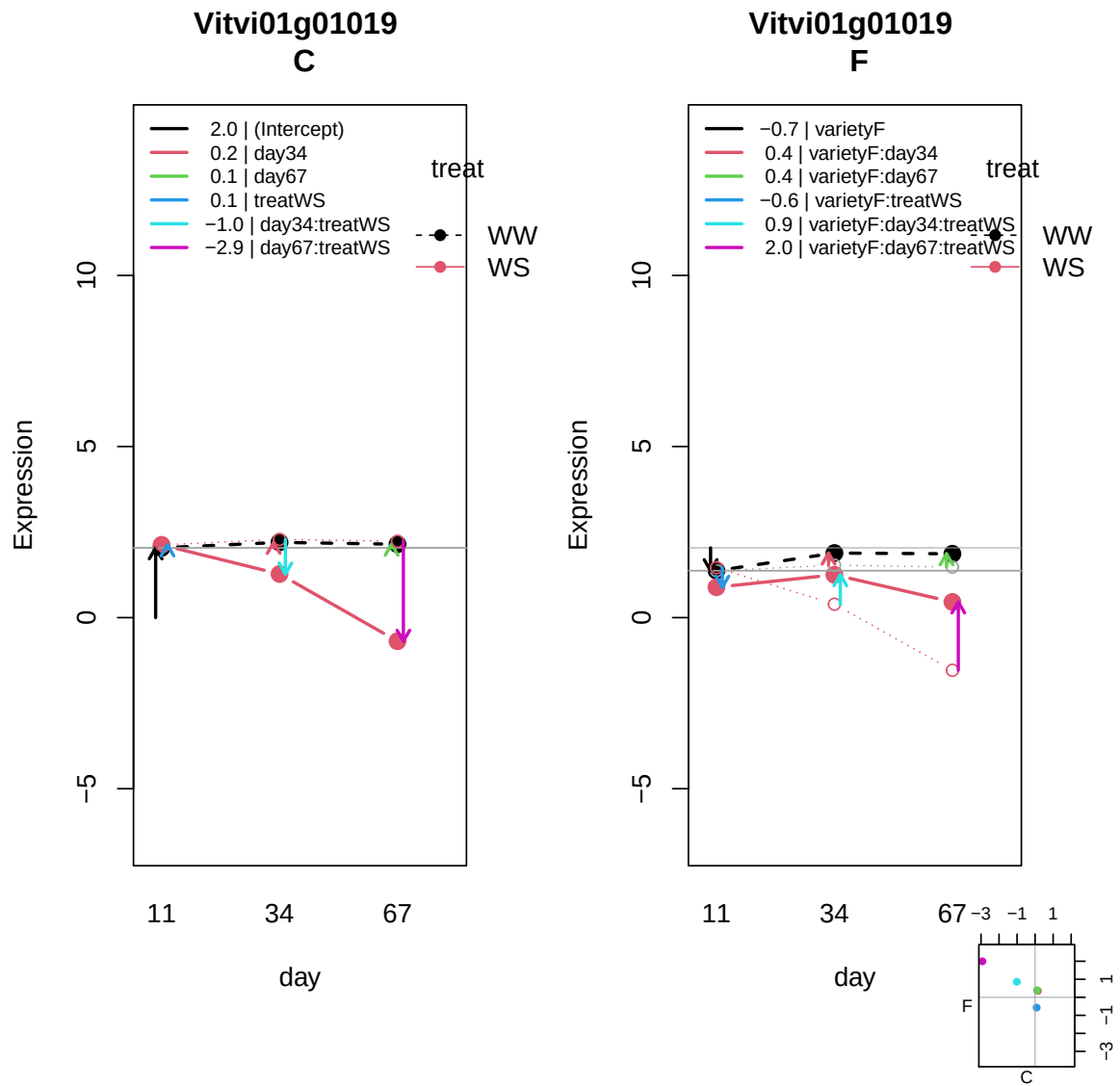
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

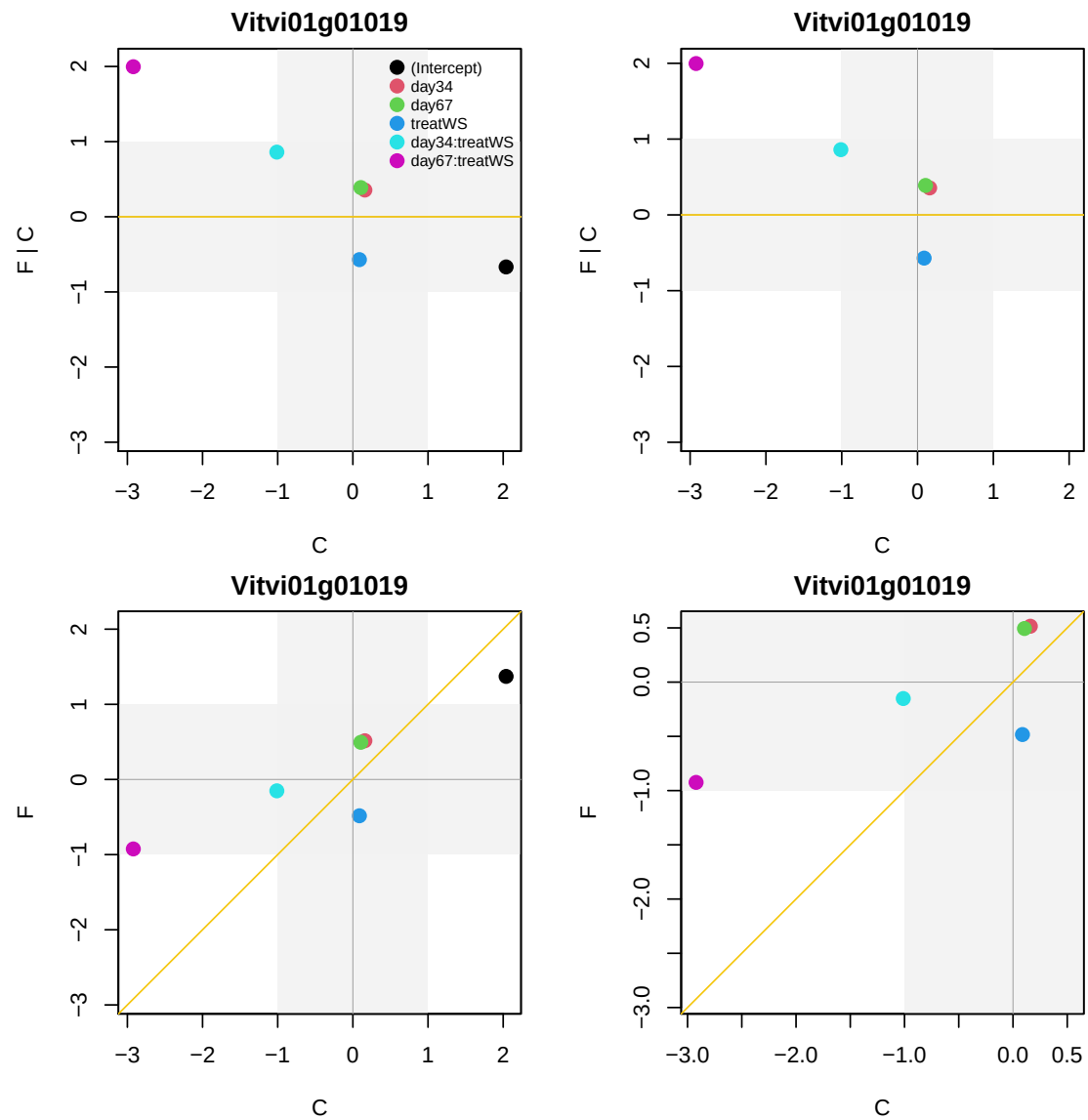


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

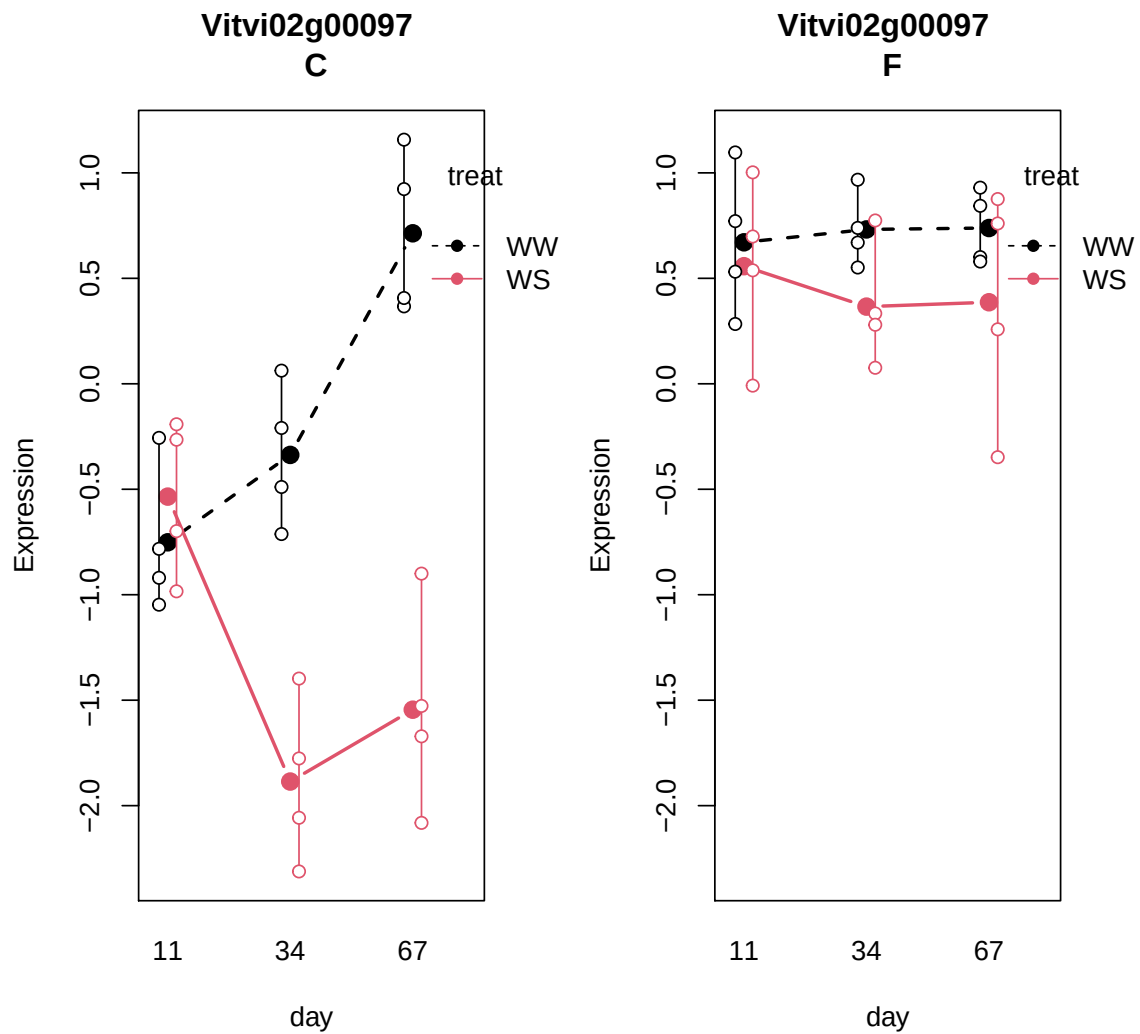


6.9.6 Vitvi02g00097

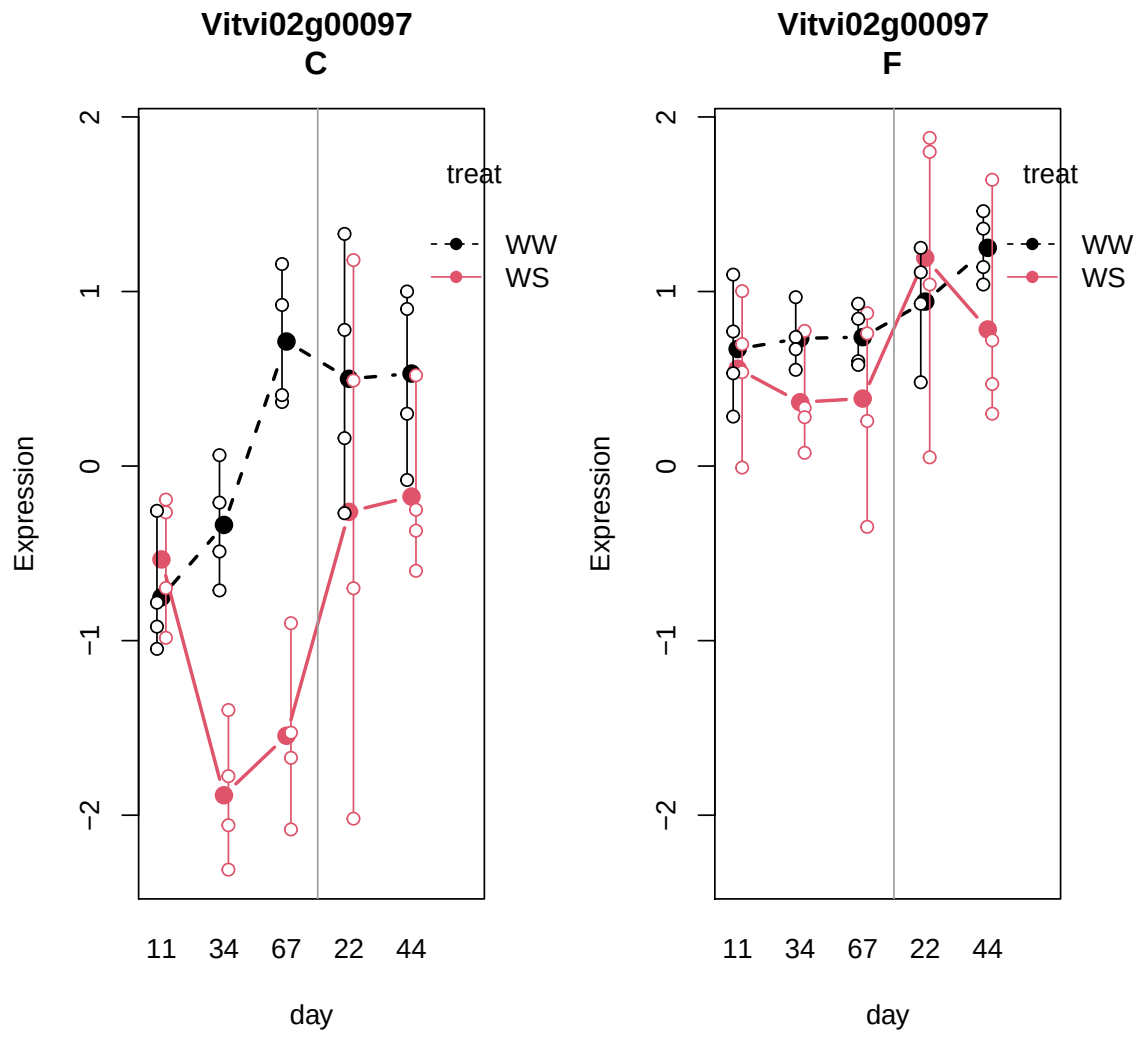
Coefficient day67:treatWS for Vitvi02g00097.

```
> tt[varname,]
      logFC    AveExpr      t    P.Value
Vitvi02g00097 -2.475188 -0.07419447 -6.794898 4.245817e-08
      adj.P.Val      B
Vitvi02g00097 0.0001078579 8.434723

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

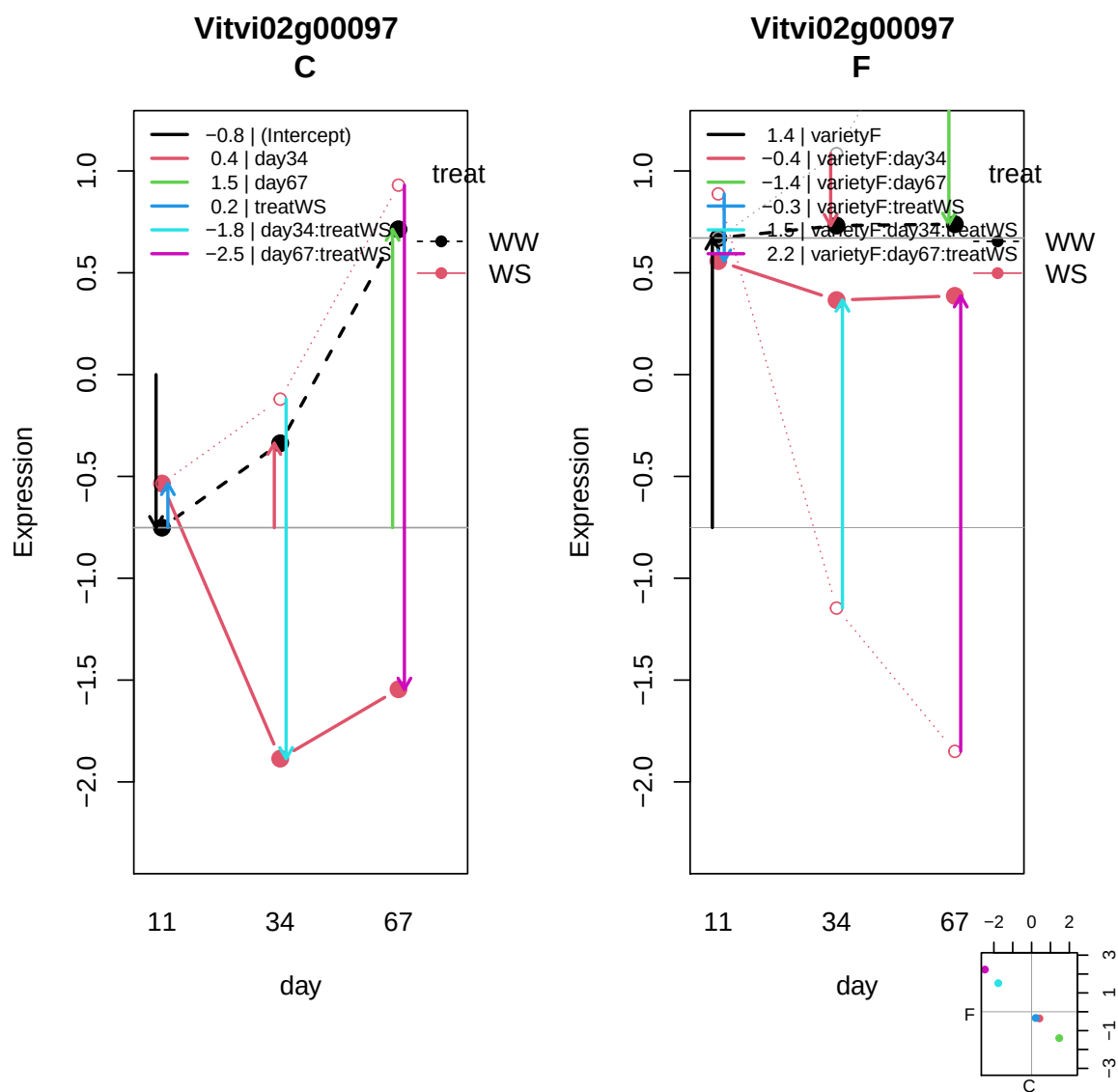
      (Intercept) varietyF      day34      day67
Vitvi02g00097 -0.7515241  1.42221 0.4143203 1.465005
      treatWS varietyF:day34 varietyF:day67
Vitvi02g00097  0.2166107   -0.3532285   -1.397242
      varietyF:treatWS day34:treatWS day67:treatWS
Vitvi02g00097   -0.3298226   -1.765223   -2.475188
      varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi02g00097           1.512492           2.236468

```

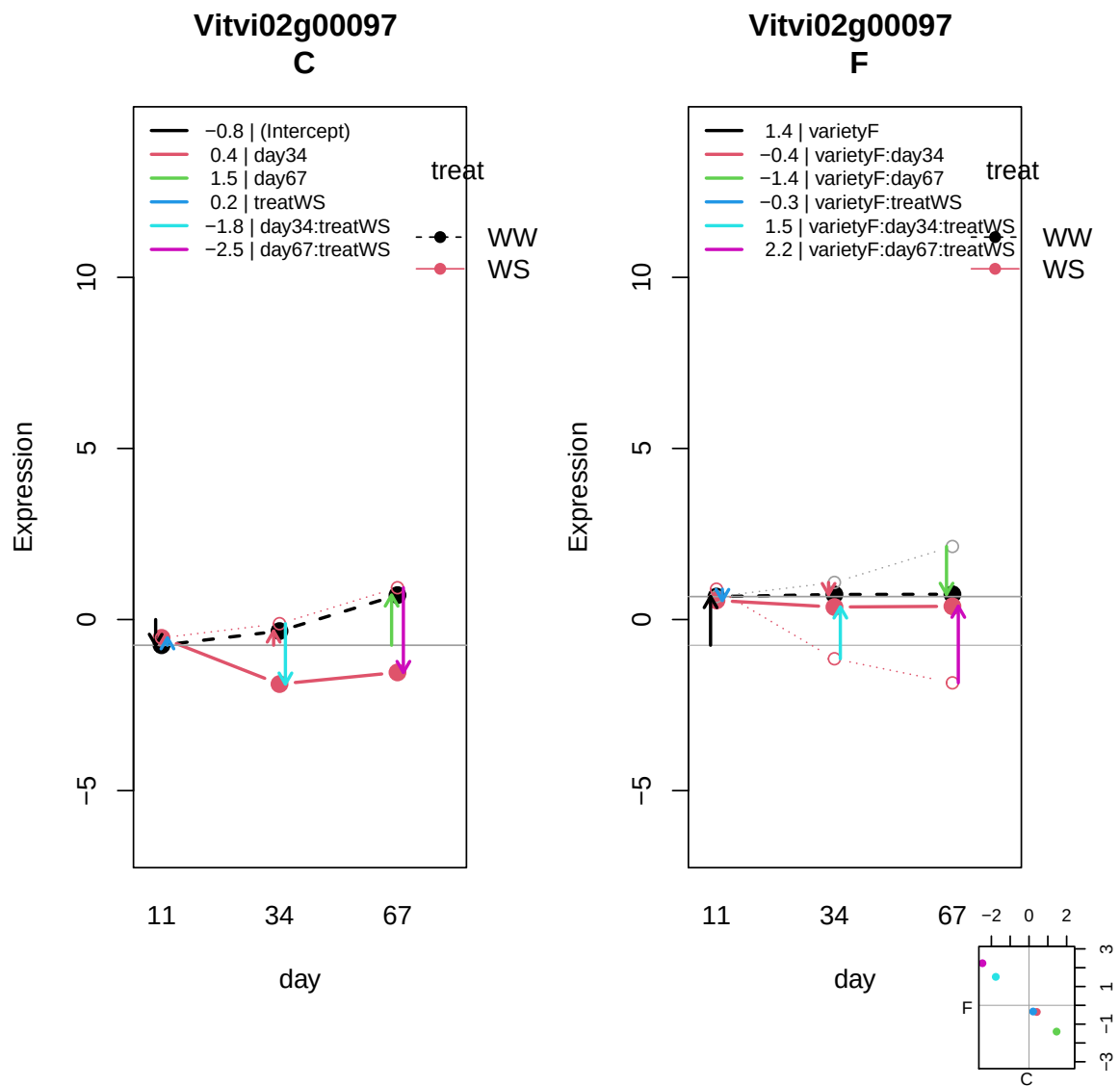
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

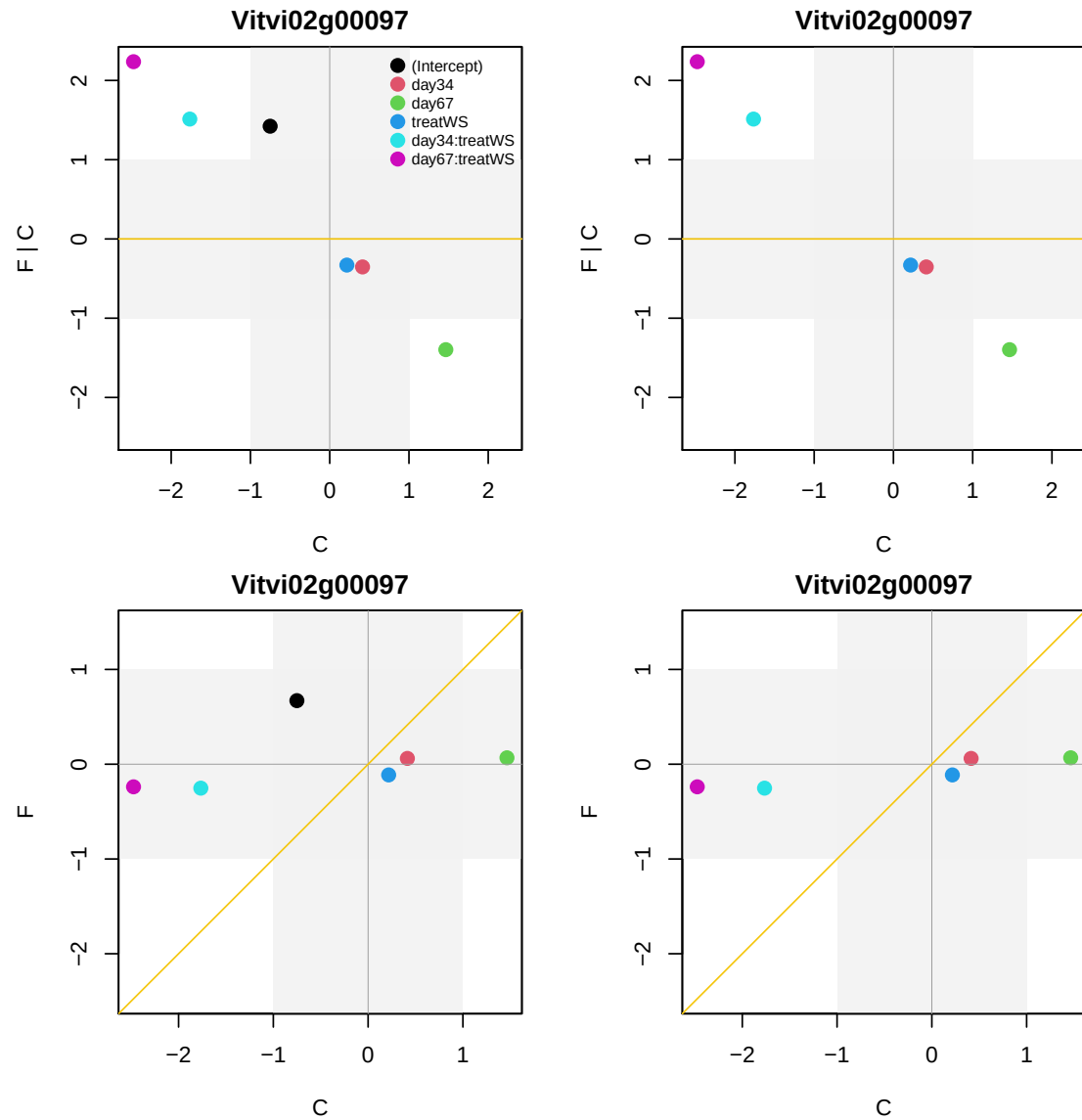


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

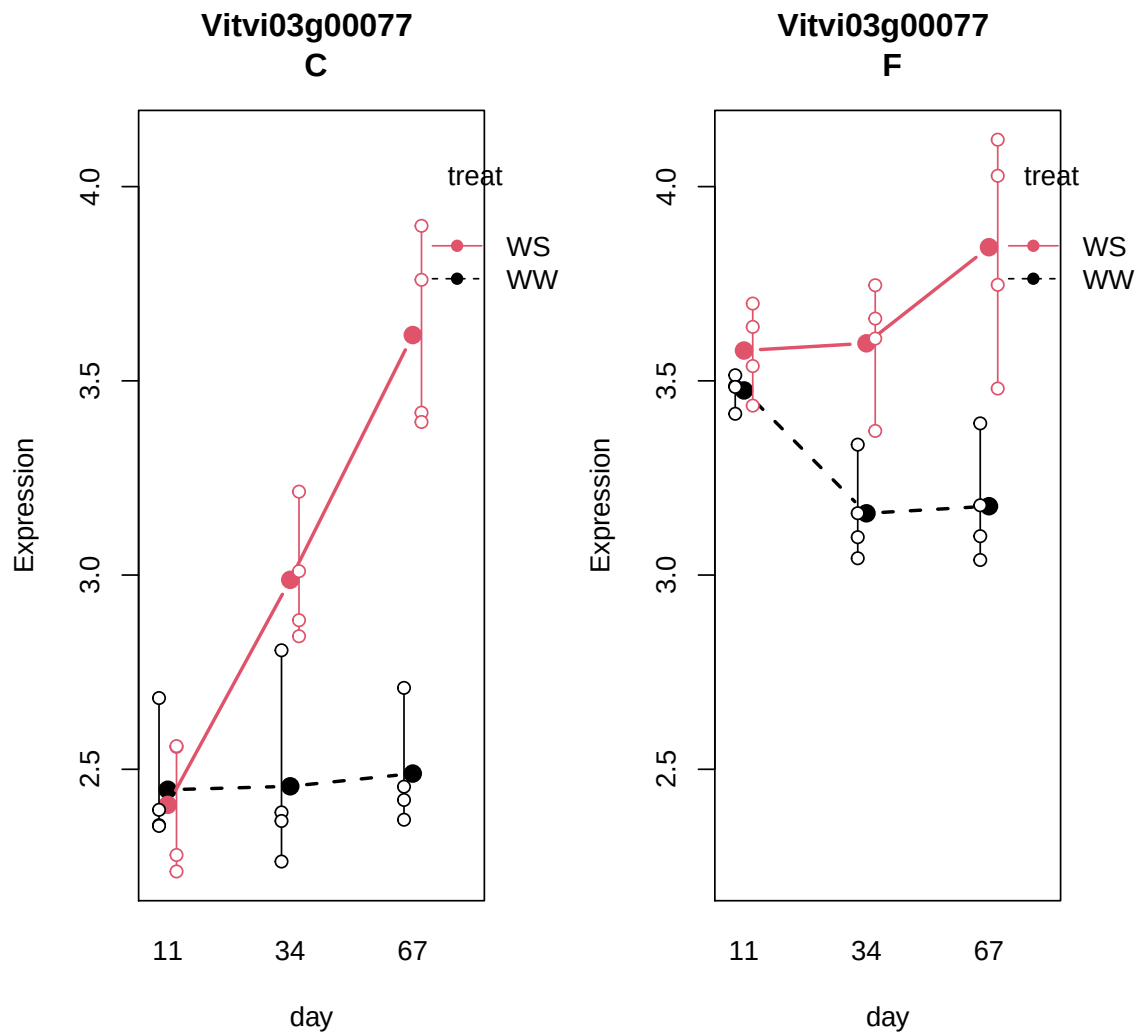
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



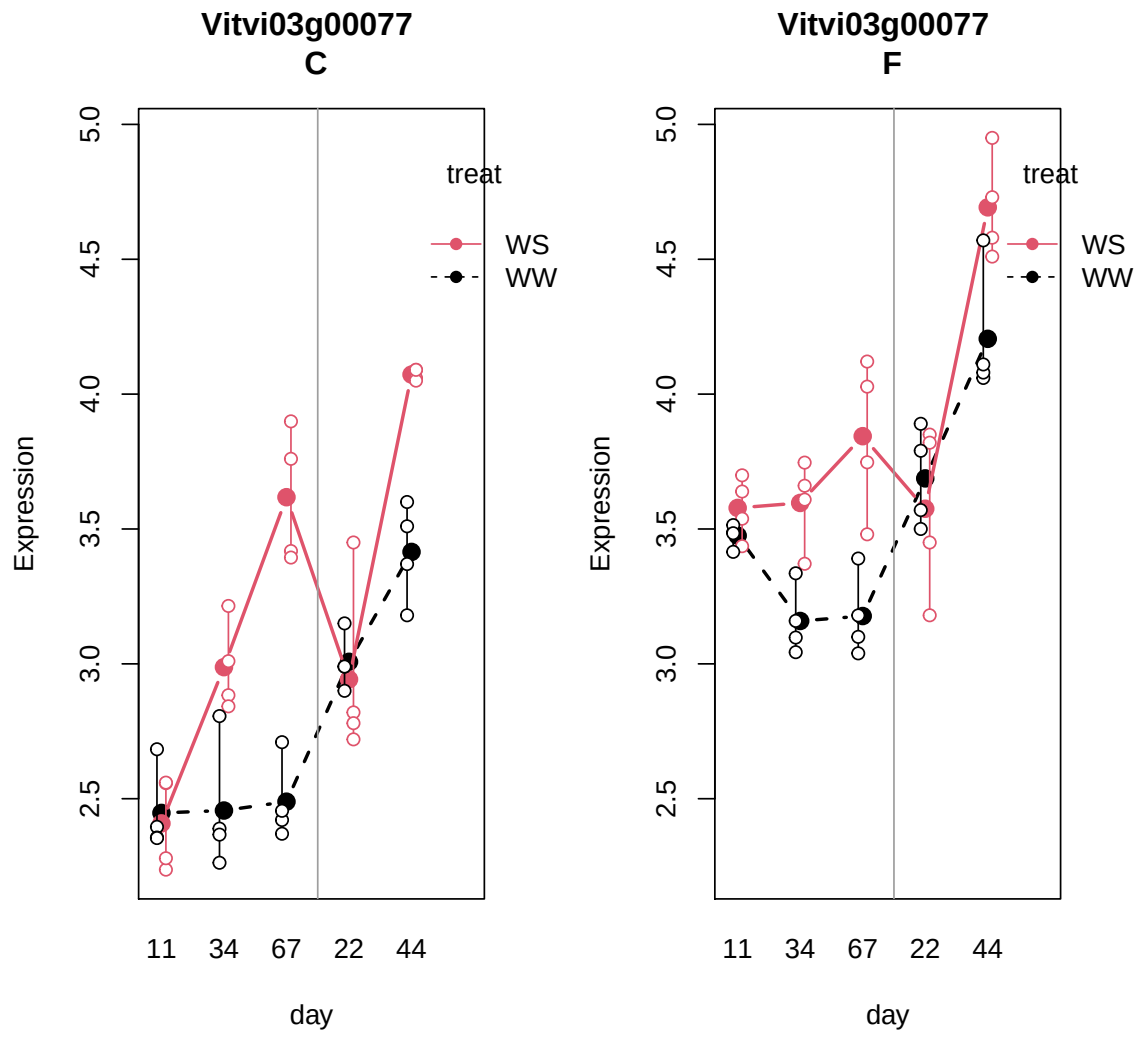
6.9.7 Vitvi03g00077

Coefficient day67:treatWS for Vitvi03g00077.

```
> tt[varname,]
               logFC  AveExpr      t      P.Value
Vitvi03g00077 1.167722 3.103066 6.426054 1.367367e-07
               adj.P.Val      B
Vitvi03g00077 0.0002874399 7.361222
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

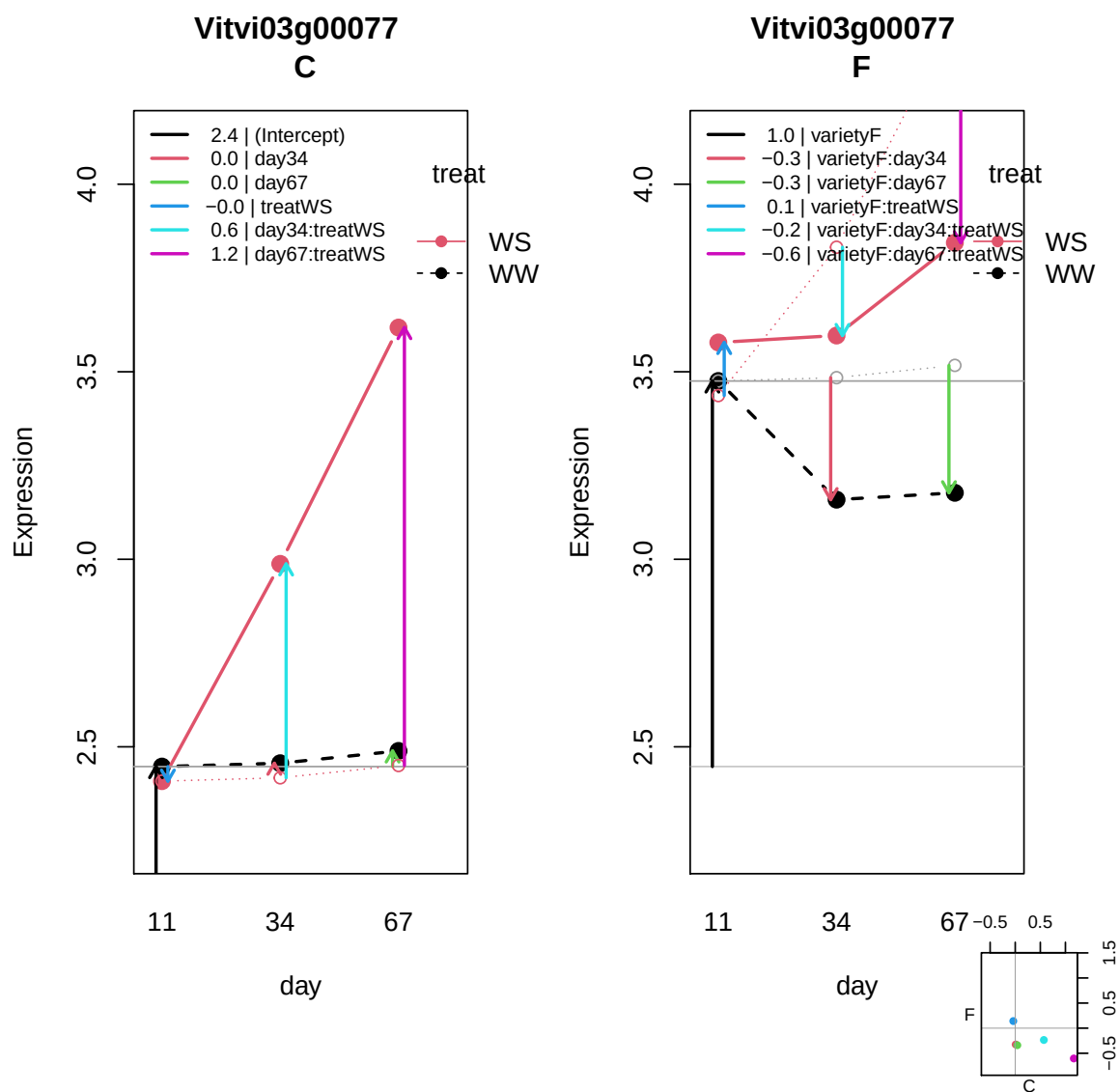
              (Intercept) varietyF      day34      day67
Vitvi03g00077      2.447311 1.028039 0.008908821 0.04167384
              treatWS varietyF:day34 varietyF:day67
Vitvi03g00077 -0.03886651      -0.3253087      -0.3397595
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi03g00077      0.1415669      0.570379      1.167722
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi03g00077      -0.2354354      -0.6036461

```

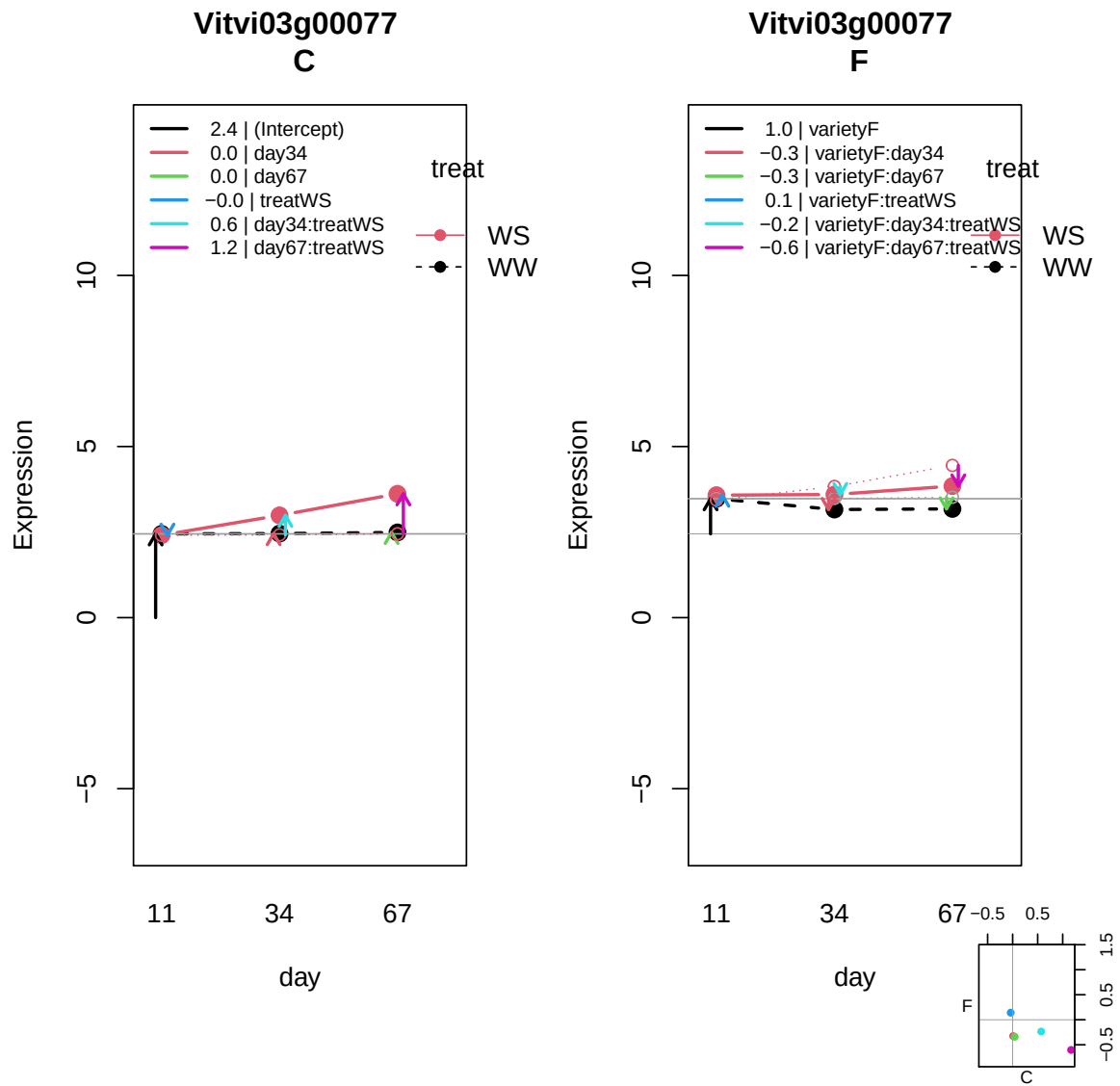
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

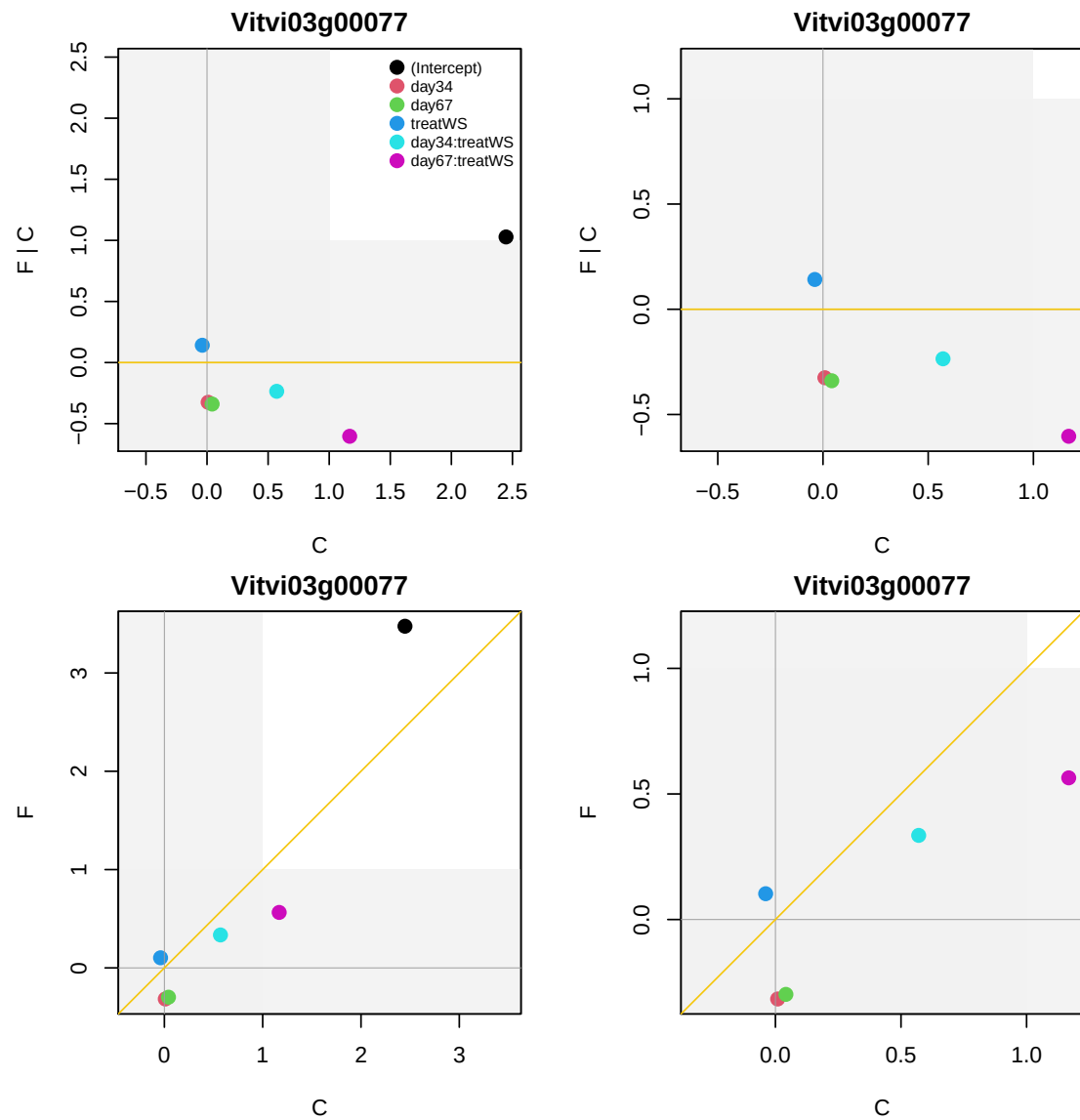



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

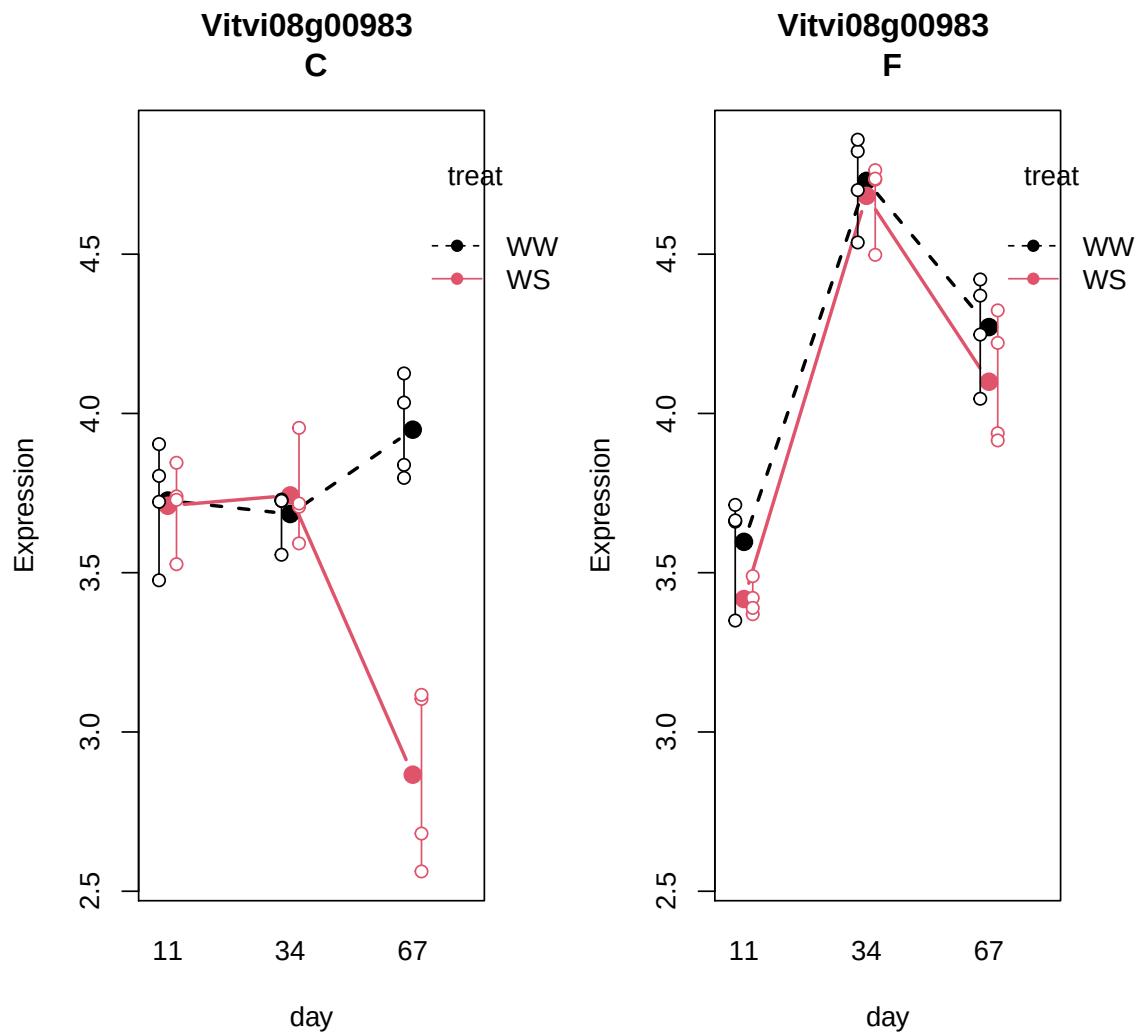


6.9.8 Vitvi08g00983

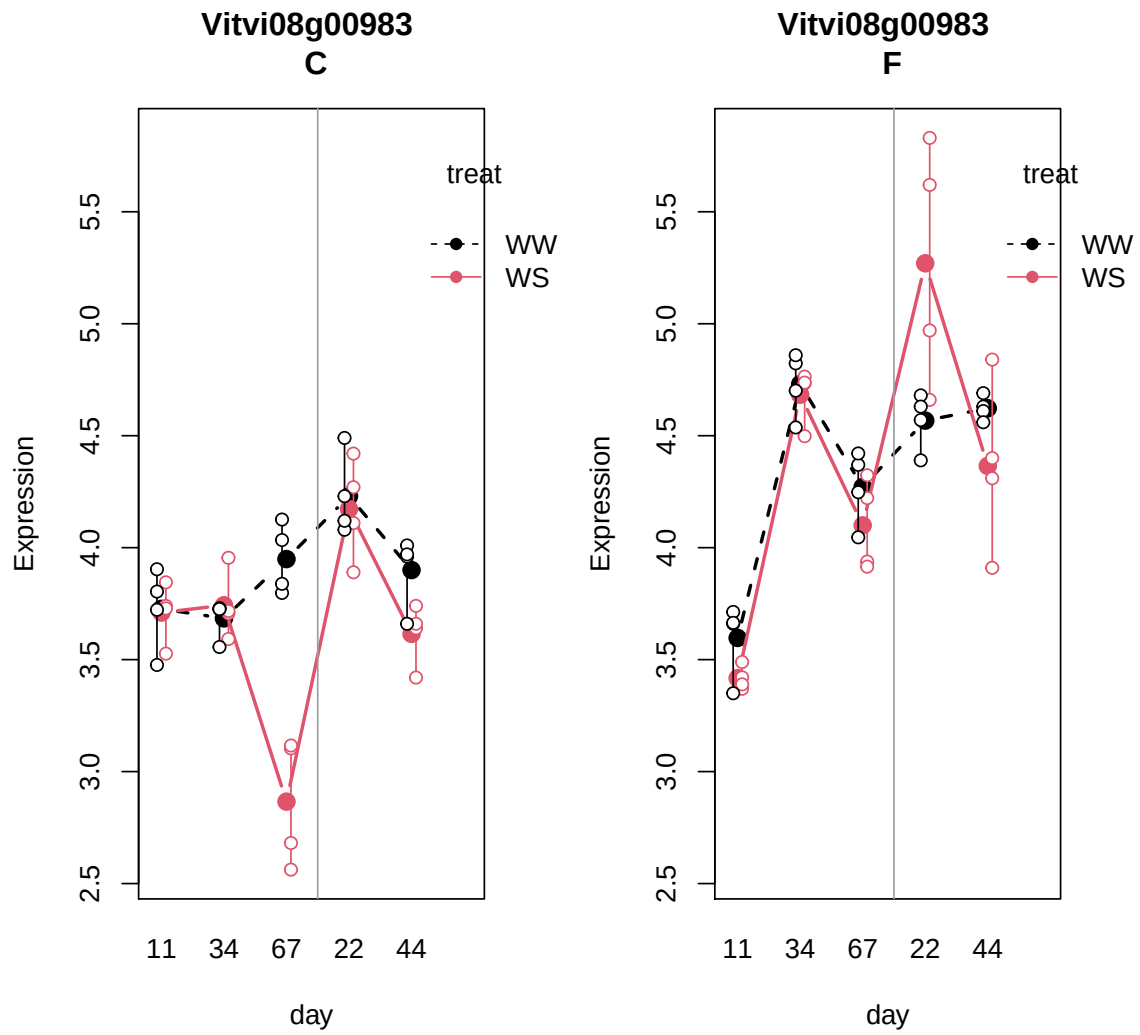
Coefficient day67:treatWS for Vitvi08g00983.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi08g00983 -1.066627 3.873078 -6.395123 1.508673e-07
      adj.P.Val      B
Vitvi08g00983 0.0002874399 7.270818

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

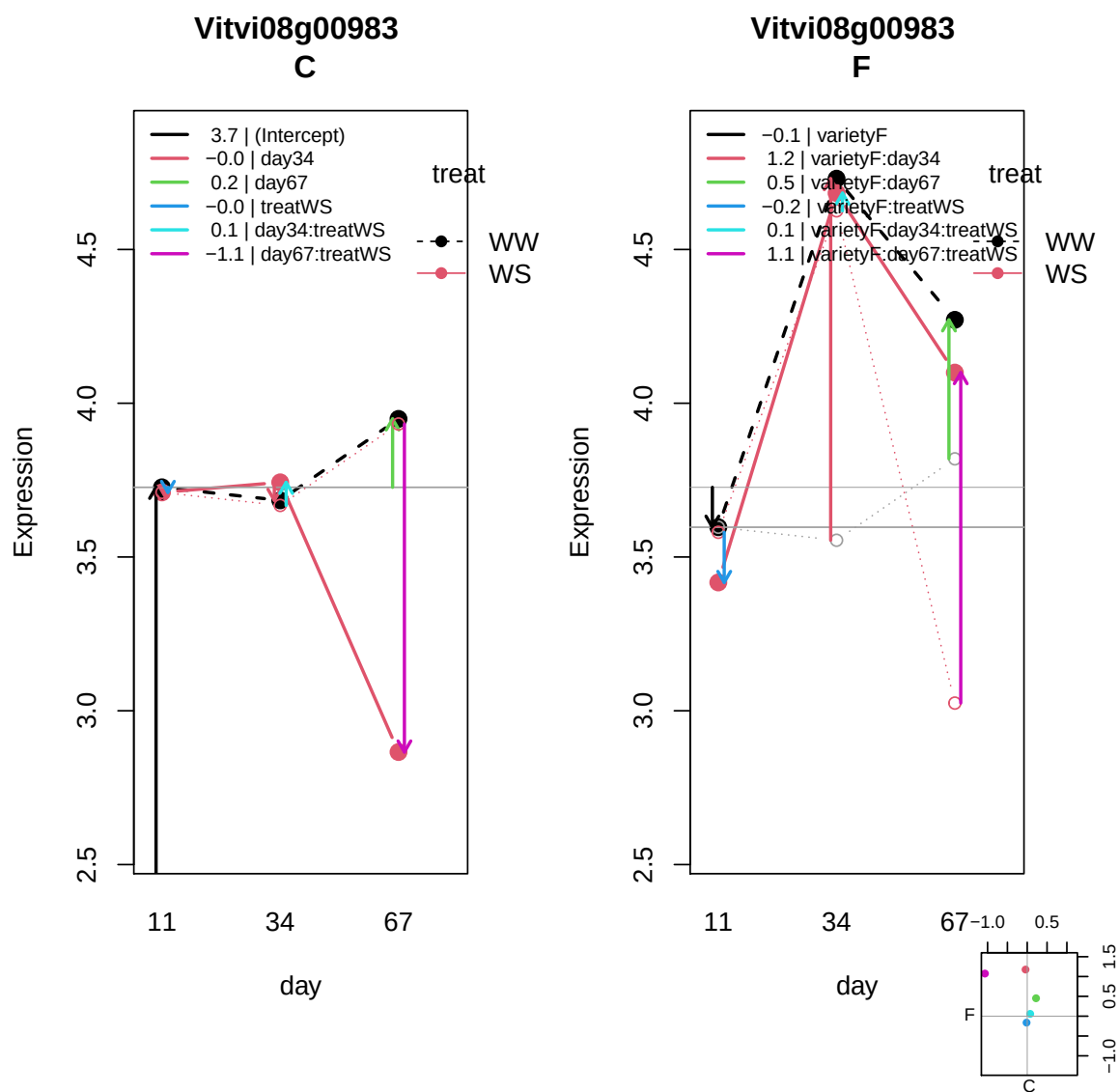
              (Intercept)      varietyF      day34      day67
Vitvi08g00983      3.726617 -0.1297562 -0.04235621 0.222391
              treatWS varietyF:day34 varietyF:day67
Vitvi08g00983 -0.01650467      1.175648      0.4518797
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi08g00983      -0.1630257      0.0750294      -1.066627
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi08g00983              0.05757768              1.074595

```

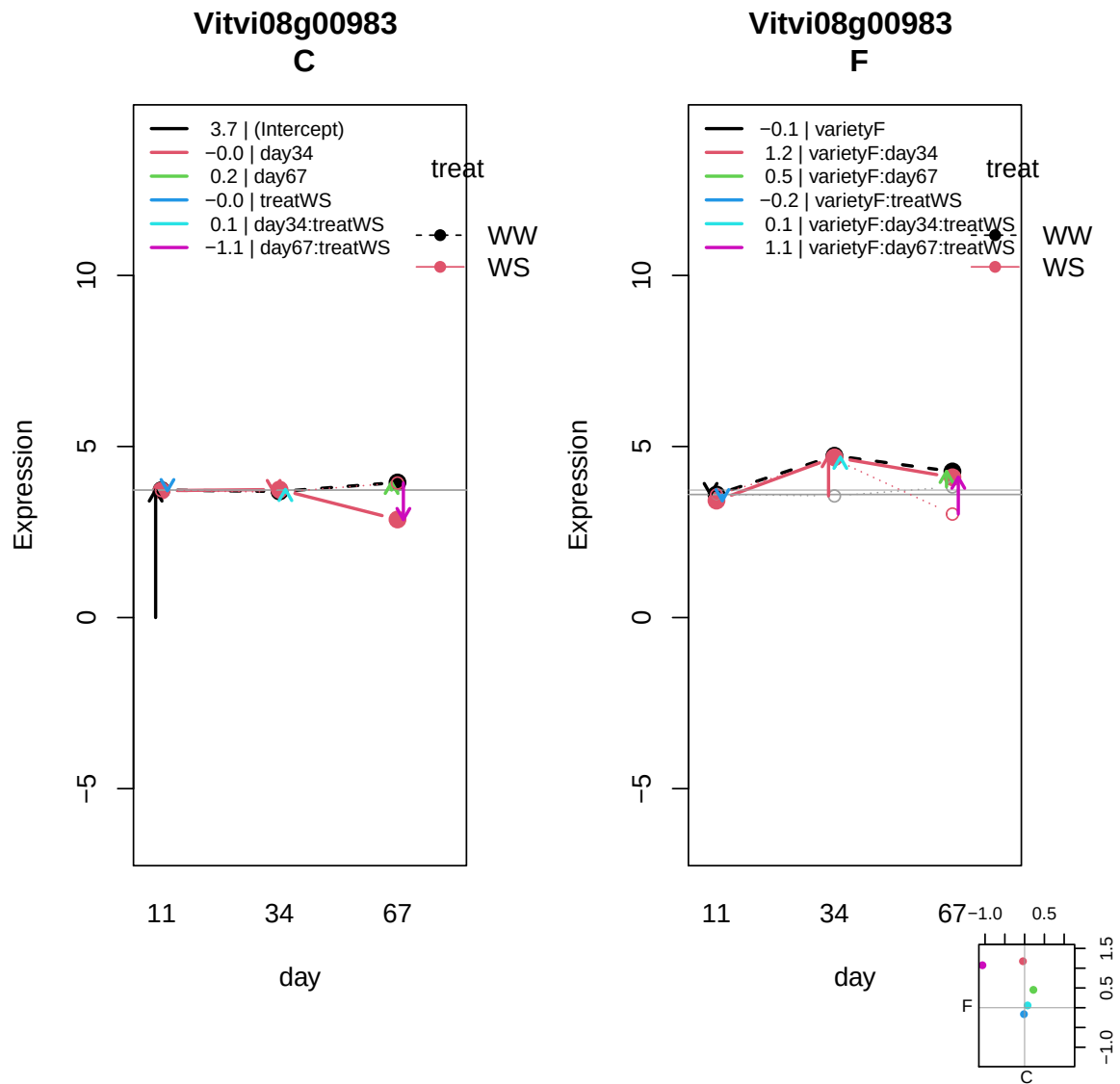
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

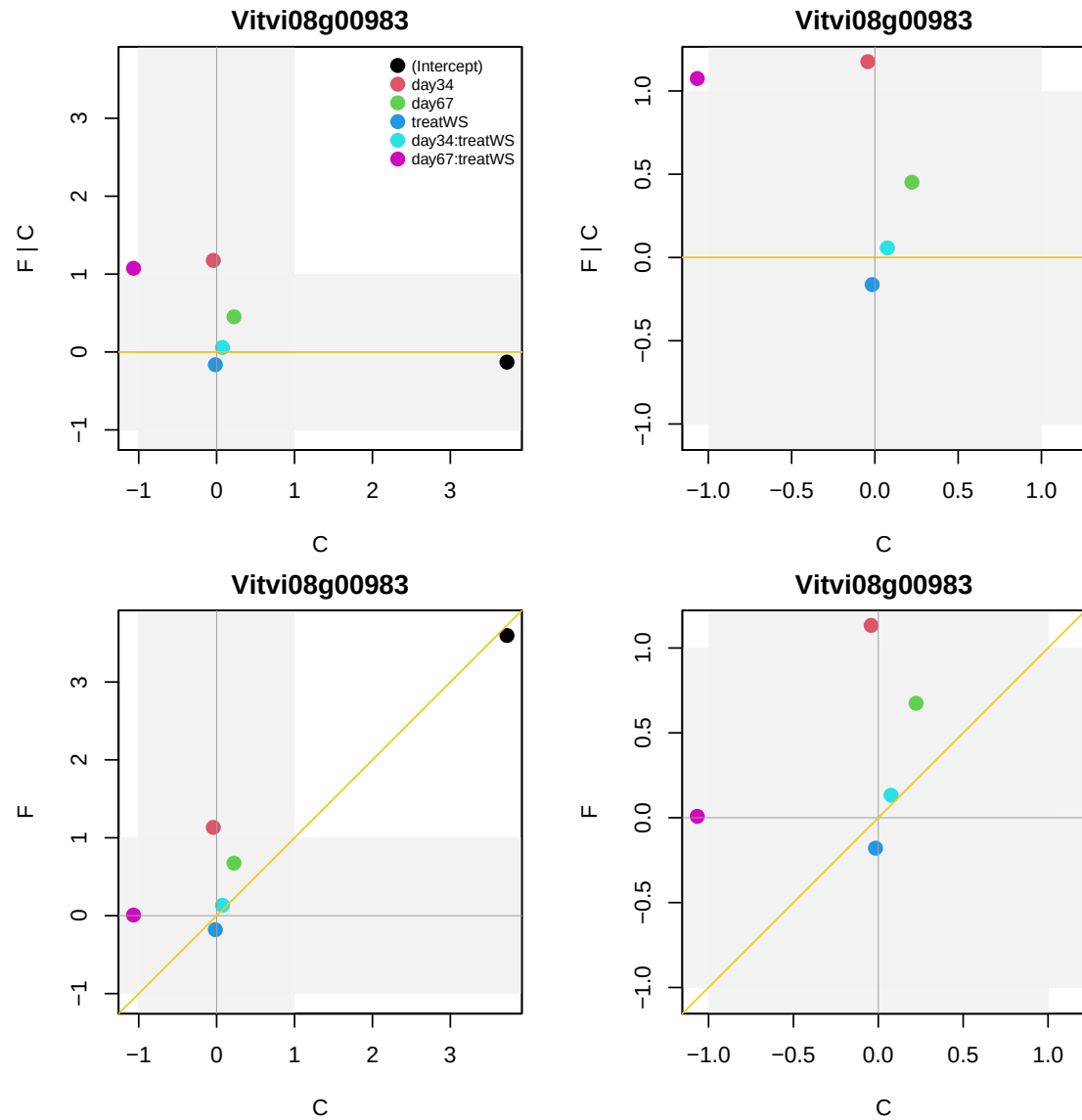


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

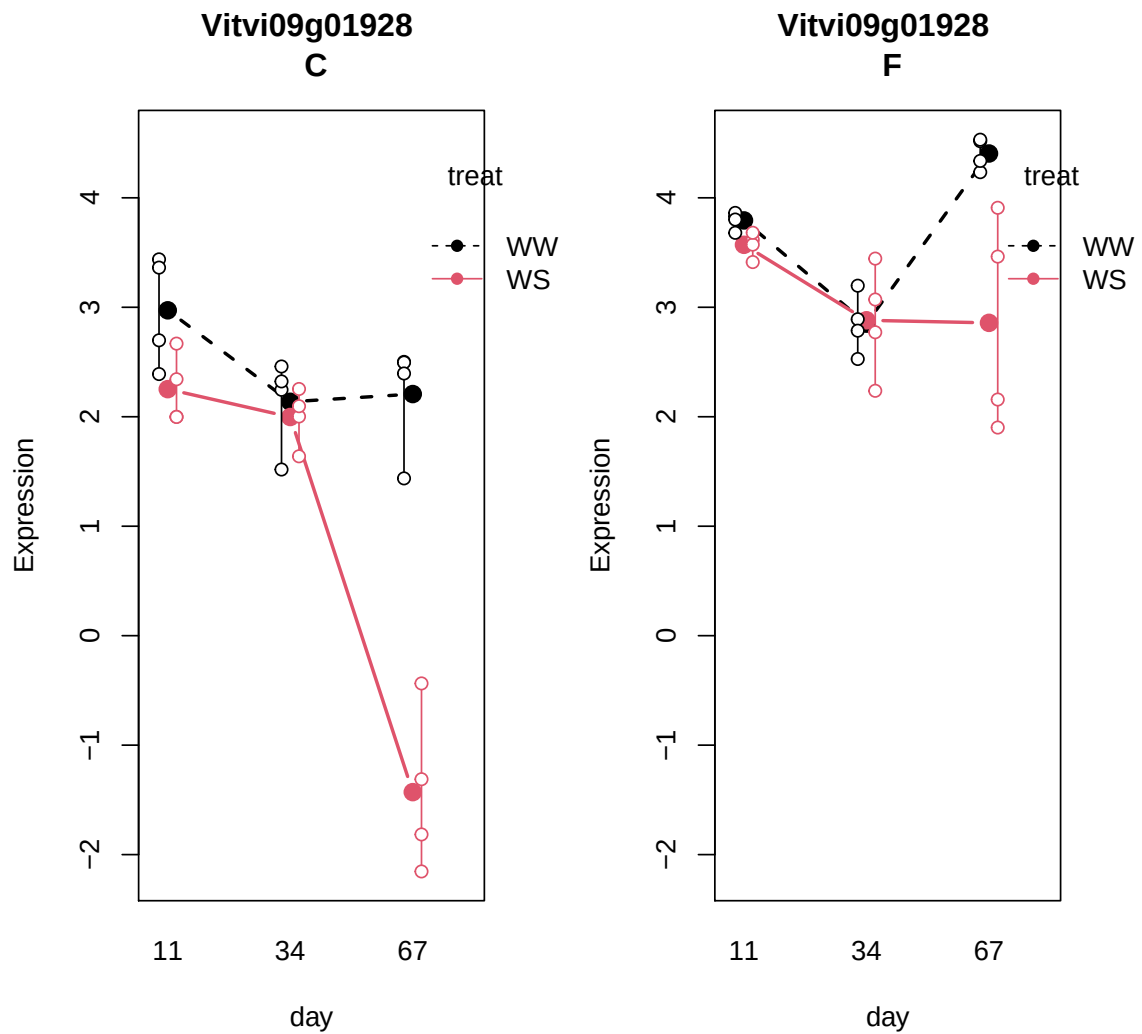


6.9.9 Vitvi09g01928

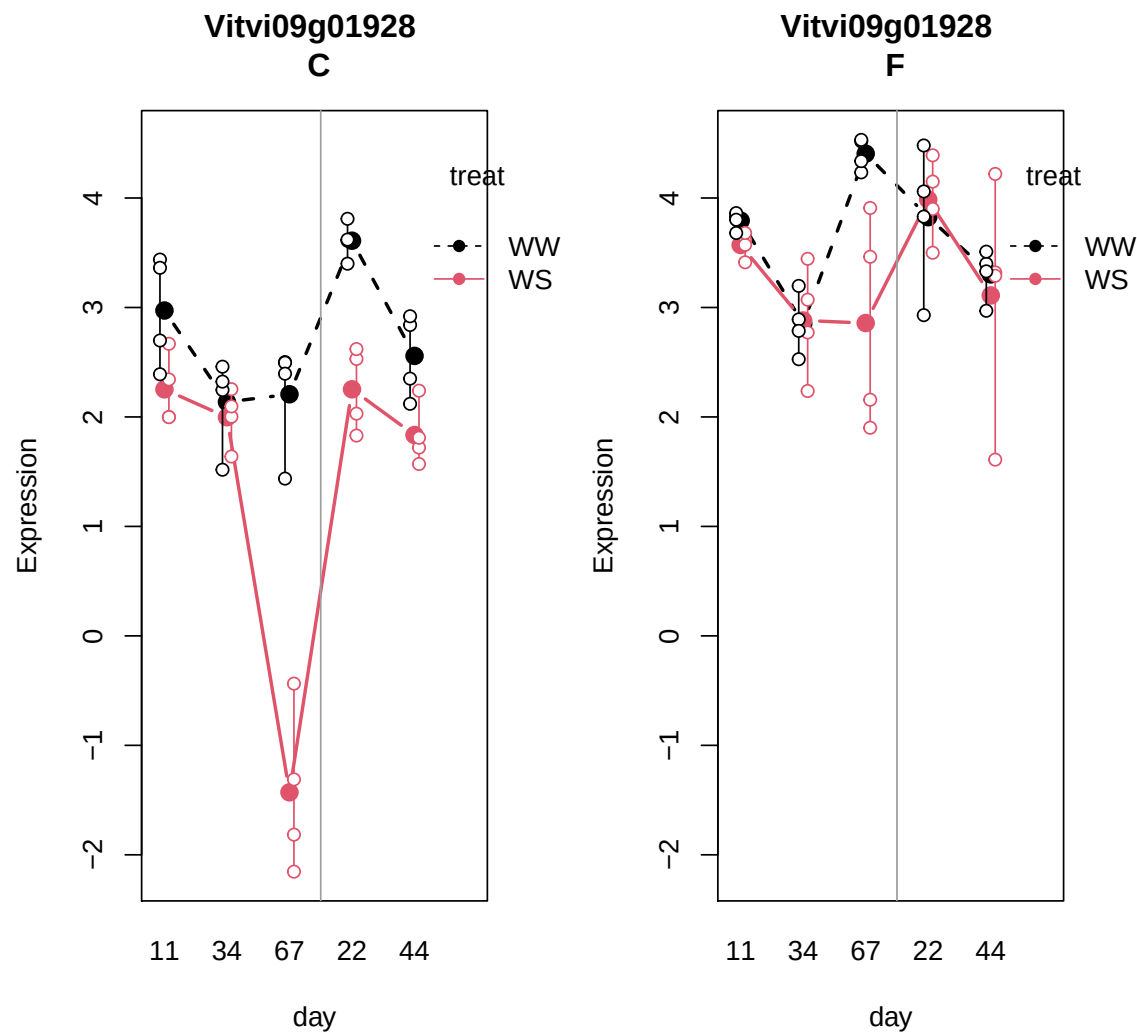
Coefficient day67:treatWS for Vitvi09g01928.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi09g01928 -2.916259 2.541232 -6.256754 2.343277e-07
      adj.P.Val      B
Vitvi09g01928 0.0003968469 6.865817

> plot.interactions(varname, phdata=pd, data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

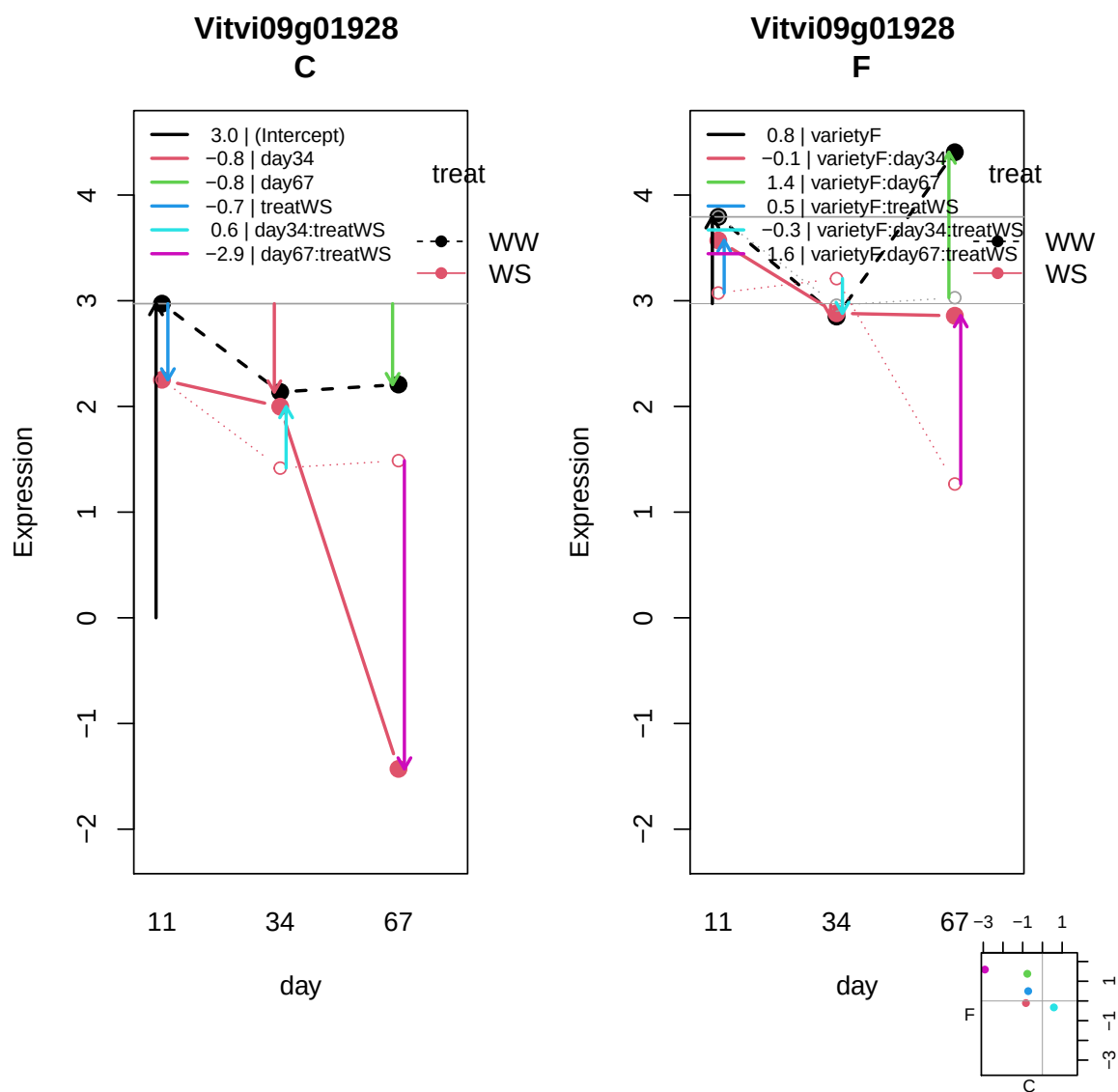
              (Intercept)  varietyF      day34      day67
Vitvi09g01928      2.972176 0.8212865 -0.8356482 -0.7650112
              treatWS varietyF:day34 varietyF:day67
Vitvi09g01928 -0.7201228      -0.1073809      1.376399
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi09g01928      0.4974106      0.5813031      -2.916259
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi09g01928      -0.3278482      1.591815

```

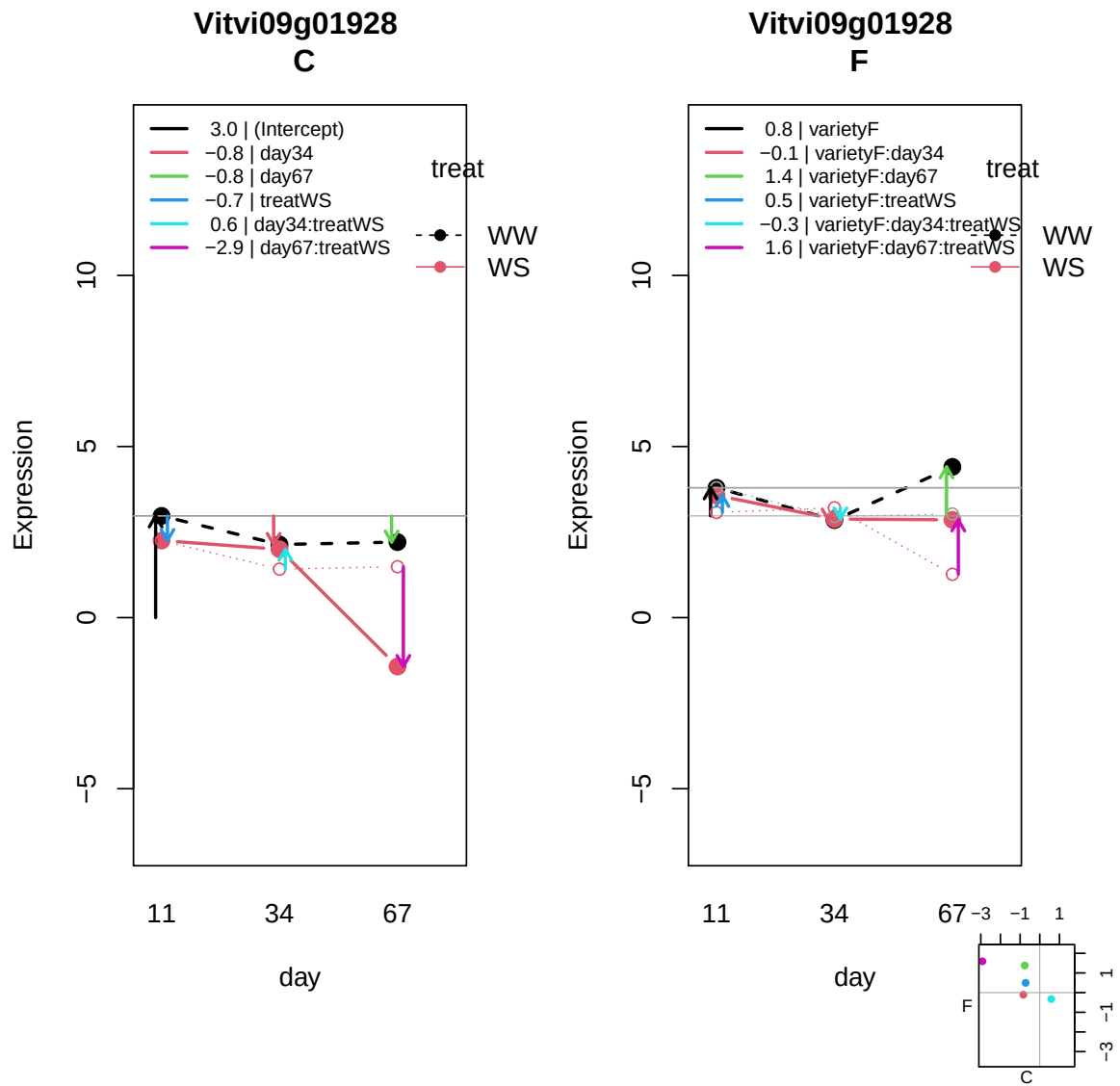
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

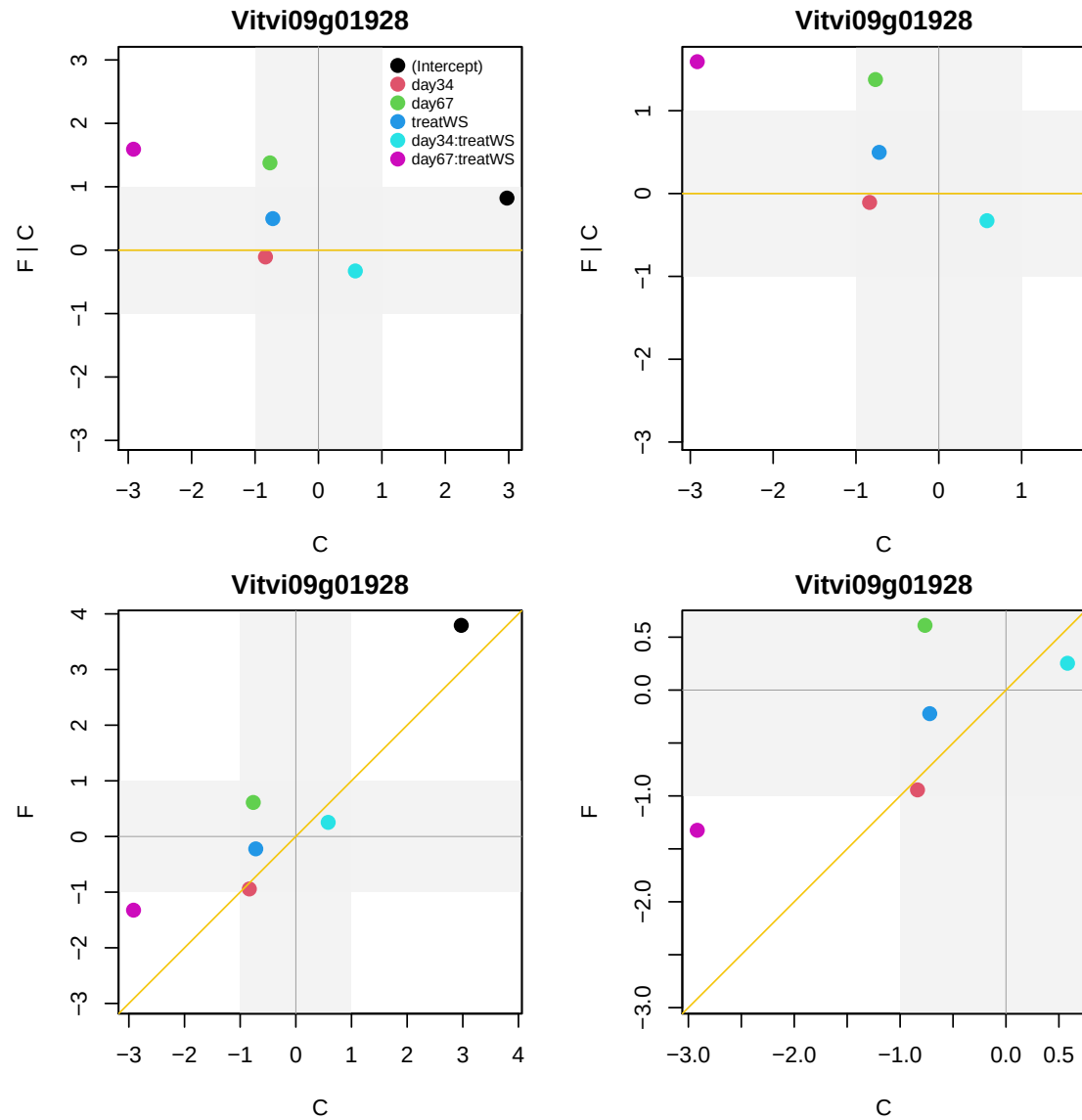


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

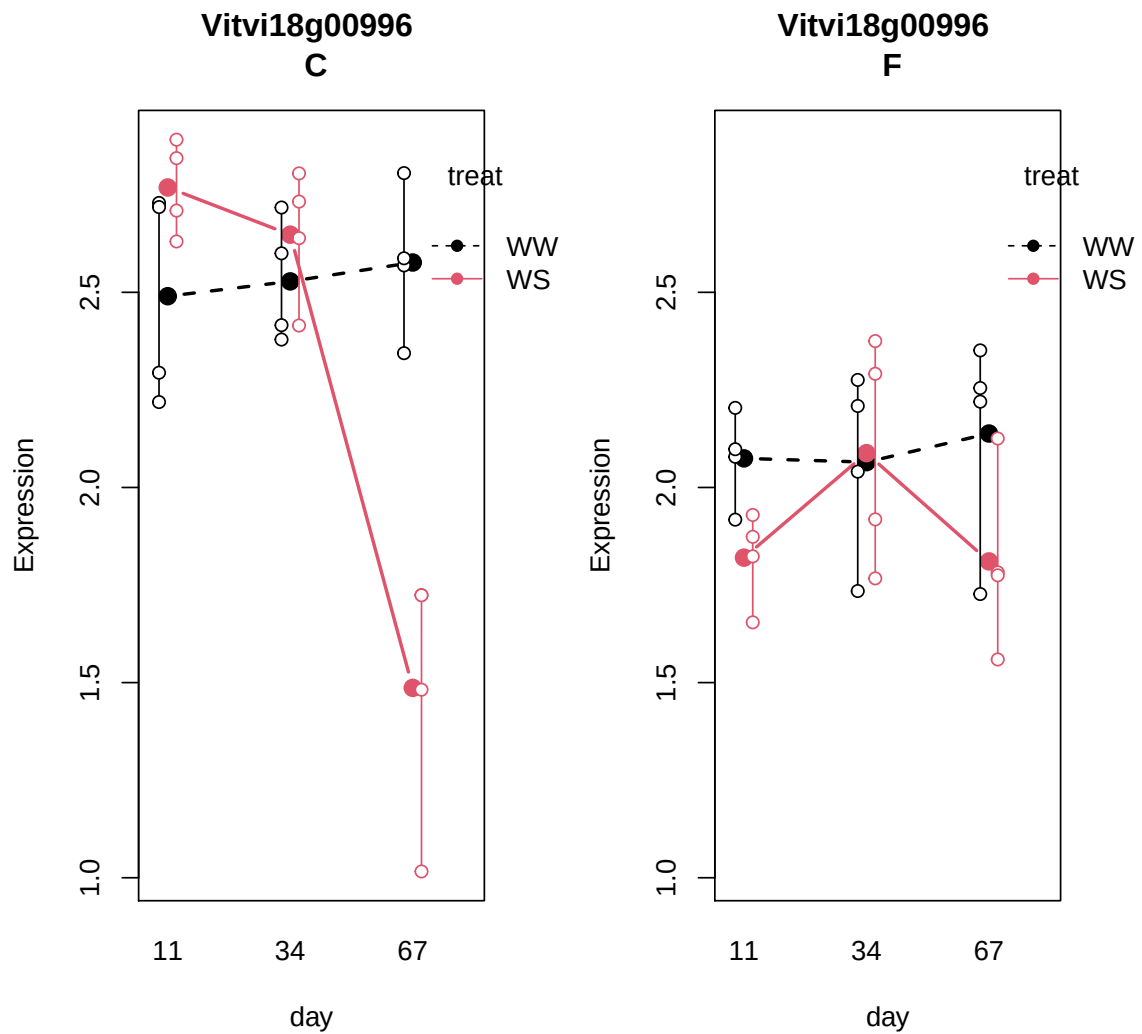


6.9.10 Vitvi18g00996

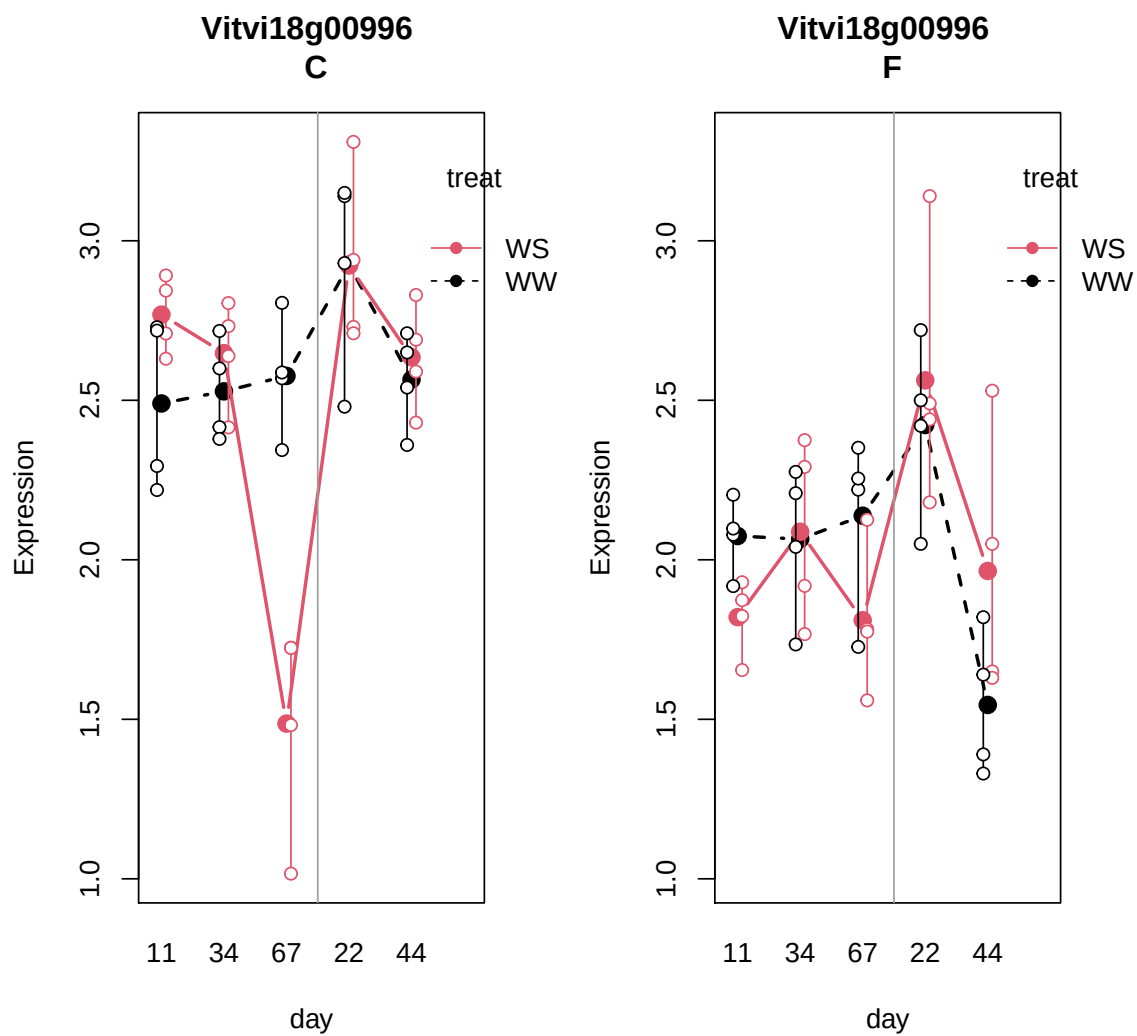
Coefficient day67:treatWS for Vitvi18g00996.

```
> tt[varname,]
               logFC  AveExpr          t      P.Value
Vitvi18g00996 -1.368438  2.207796 -6.20349  2.776483e-07
               adj.P.Val          B
Vitvi18g00996  0.0004231915  6.709694

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

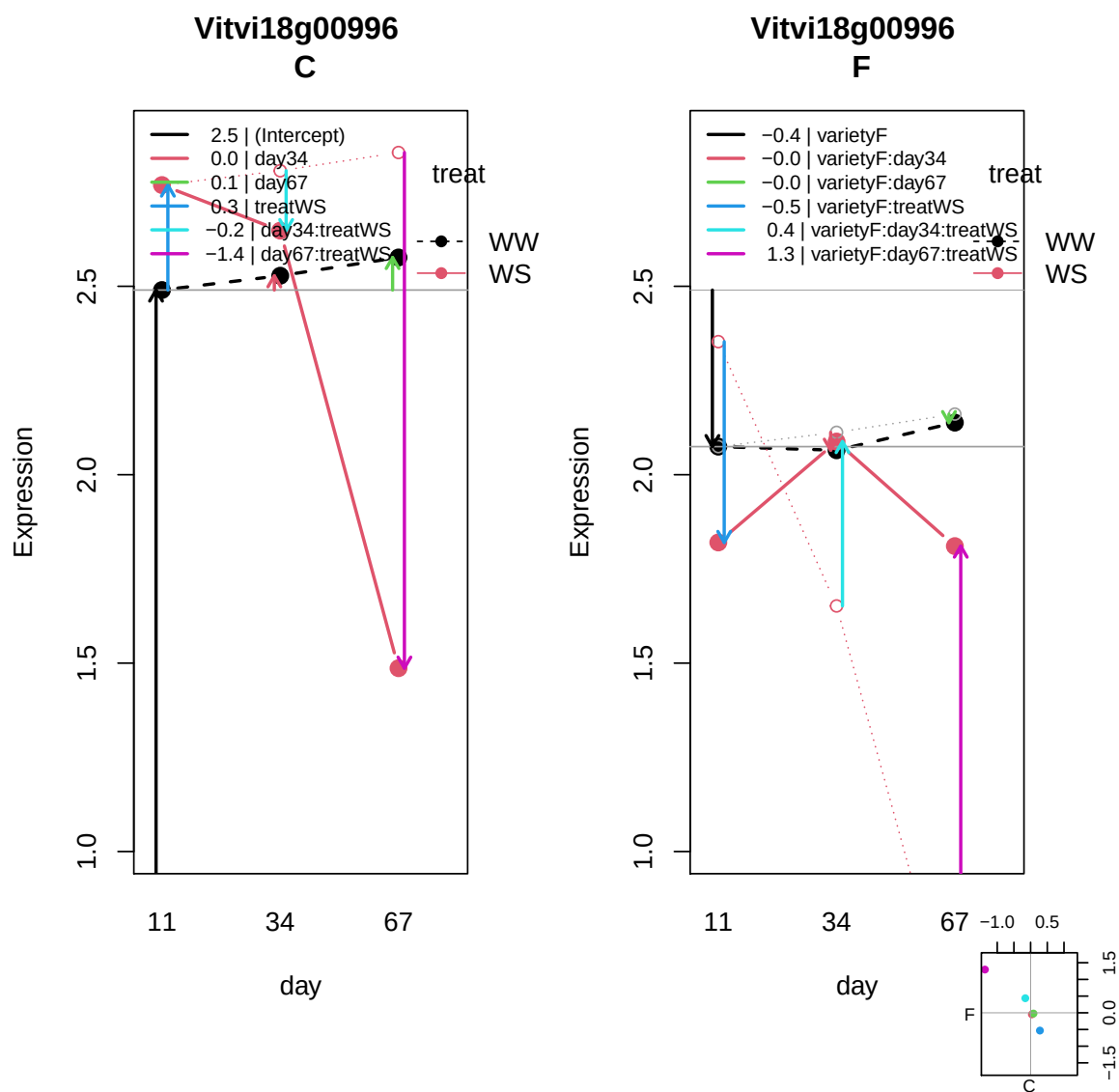
              (Intercept)  varietyF      day34      day67
Vitvi18g00996    2.490048 -0.415522  0.03793528  0.08635992
              treatWS  varietyF:day34  varietyF:day67
Vitvi18g00996  0.2785758   -0.04760083   -0.02269748
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi18g00996   -0.5328651   -0.158848   -1.368438
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi18g00996           0.4361812           1.295062

```

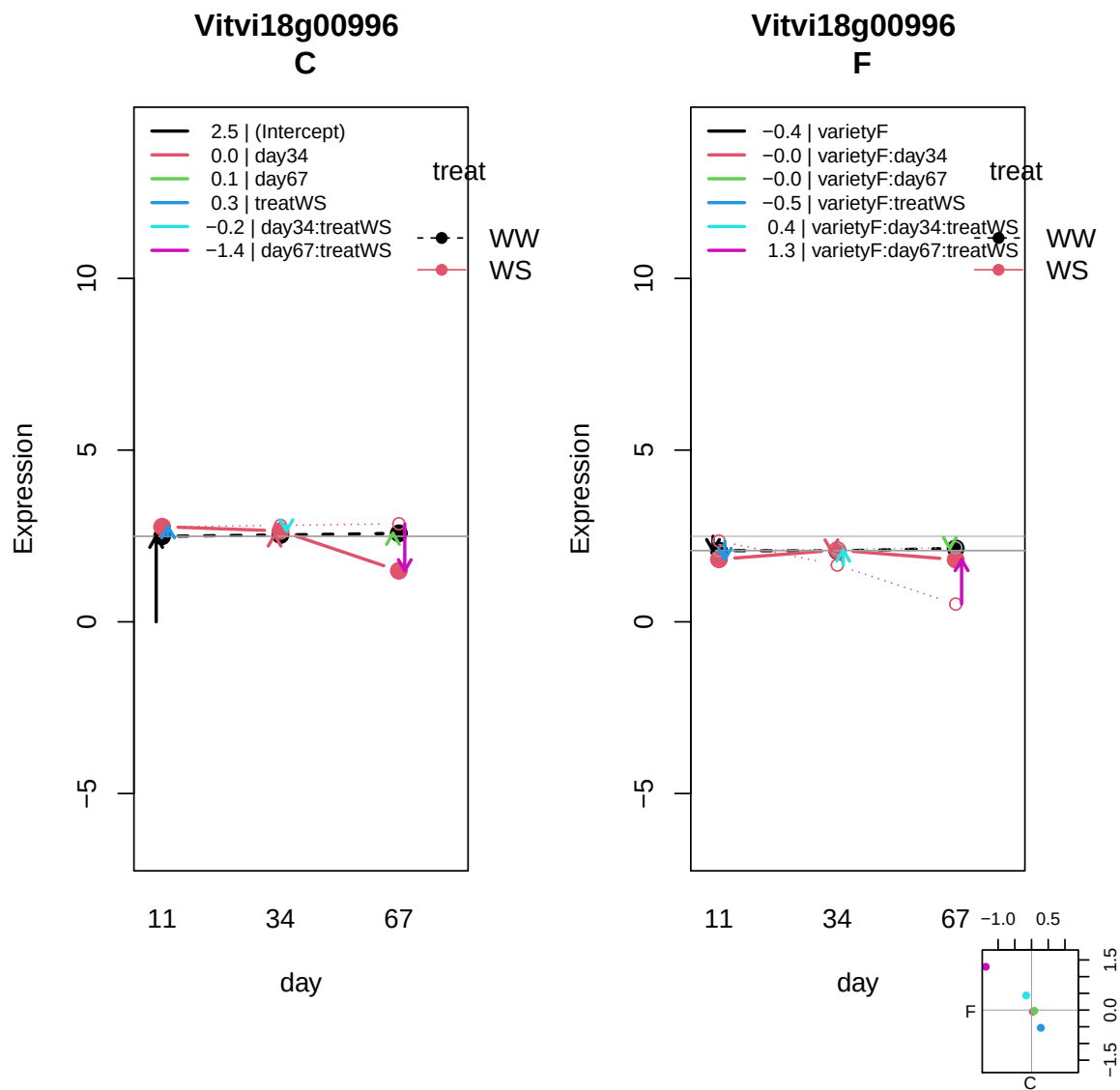
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

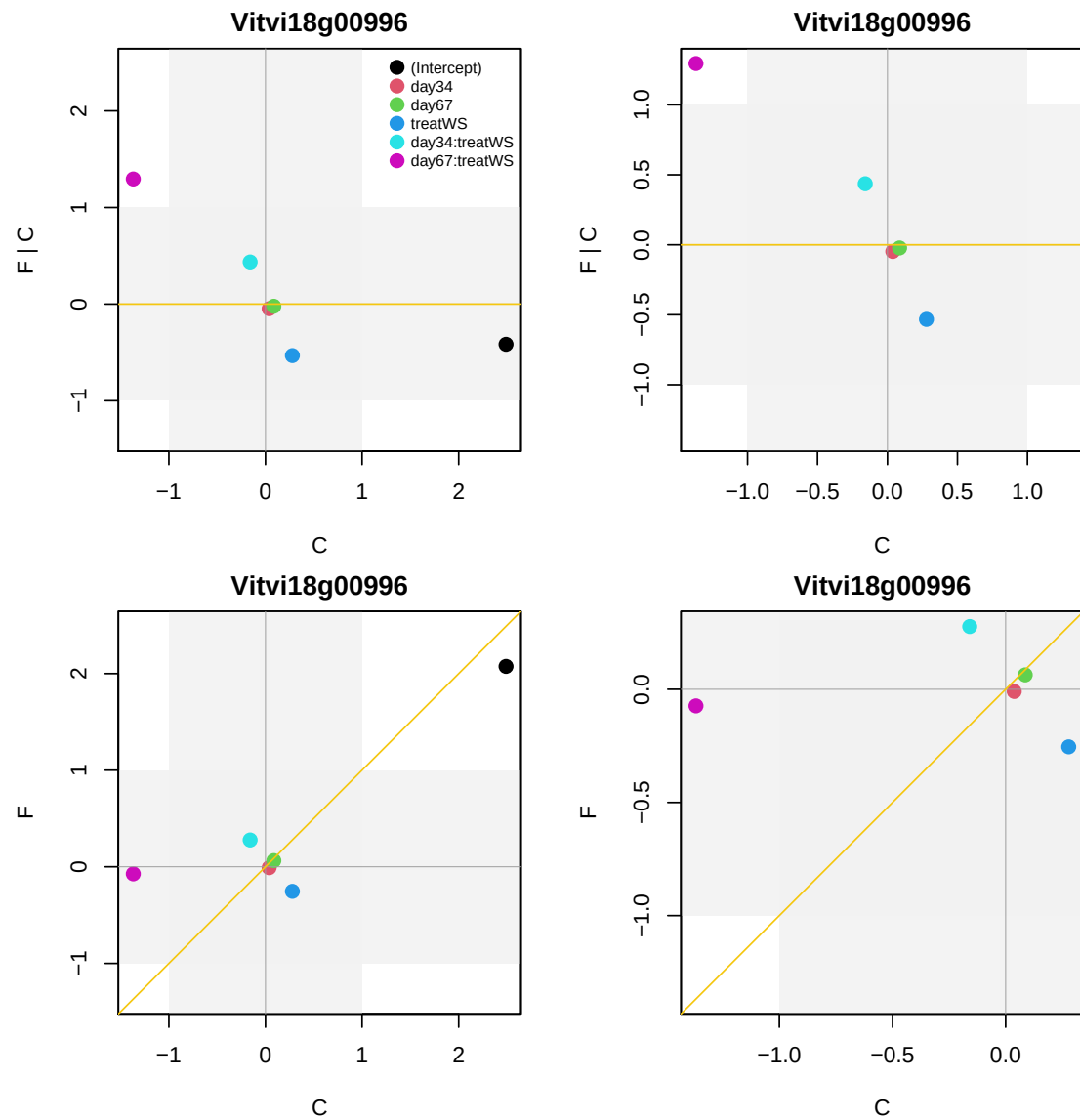


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



6.10 varietyF:day34:treatWS

6.10.1 NA

Coefficient varietyF:day34:treatWS for NA.

```
> tt[varname,]
      logFC AveExpr  t P.Value adj.P.Val  B
NA      NA      NA NA      NA      NA NA
> plot.interactions(varname, phdata=pd, data=exprs)
Warning in min(x): no non-missing arguments to min; returning Inf
Warning in max(x): no non-missing arguments to max; returning -Inf
Error in plot.window(...): need finite 'ylim' values
```

```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
Warning in min(x): no non-missing arguments to min; returning Inf
Warning in max(x): no non-missing arguments to max; returning -Inf
Error in plot.window(...): need finite 'ylim' values
```

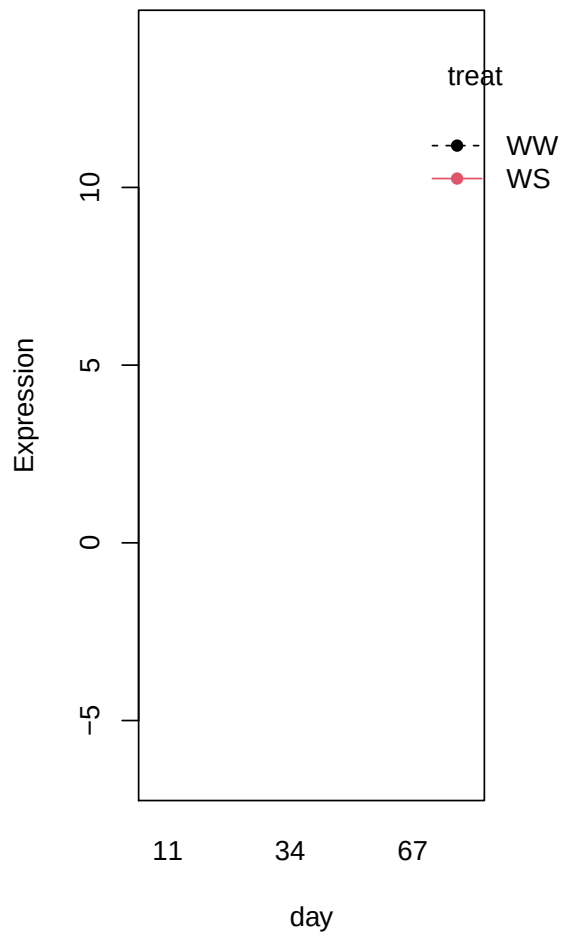
```

> fit1[varname,]$coefficients
Error in subsetListOfArrays(object, i, j, IJ = IJ, IX = IX, I = I, JX = JX): S
> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)
Warning in min(x): no non-missing arguments to min; returning Inf
Warning in max(x): no non-missing arguments to max; returning -Inf
Error in plot.window(...): need finite 'ylim' values

```

```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```

```
Error in subsetListOfArrays(object, i, j, IJ = IJ, IX = IX, I = I, JX = JX): S
```



Coefficient plot

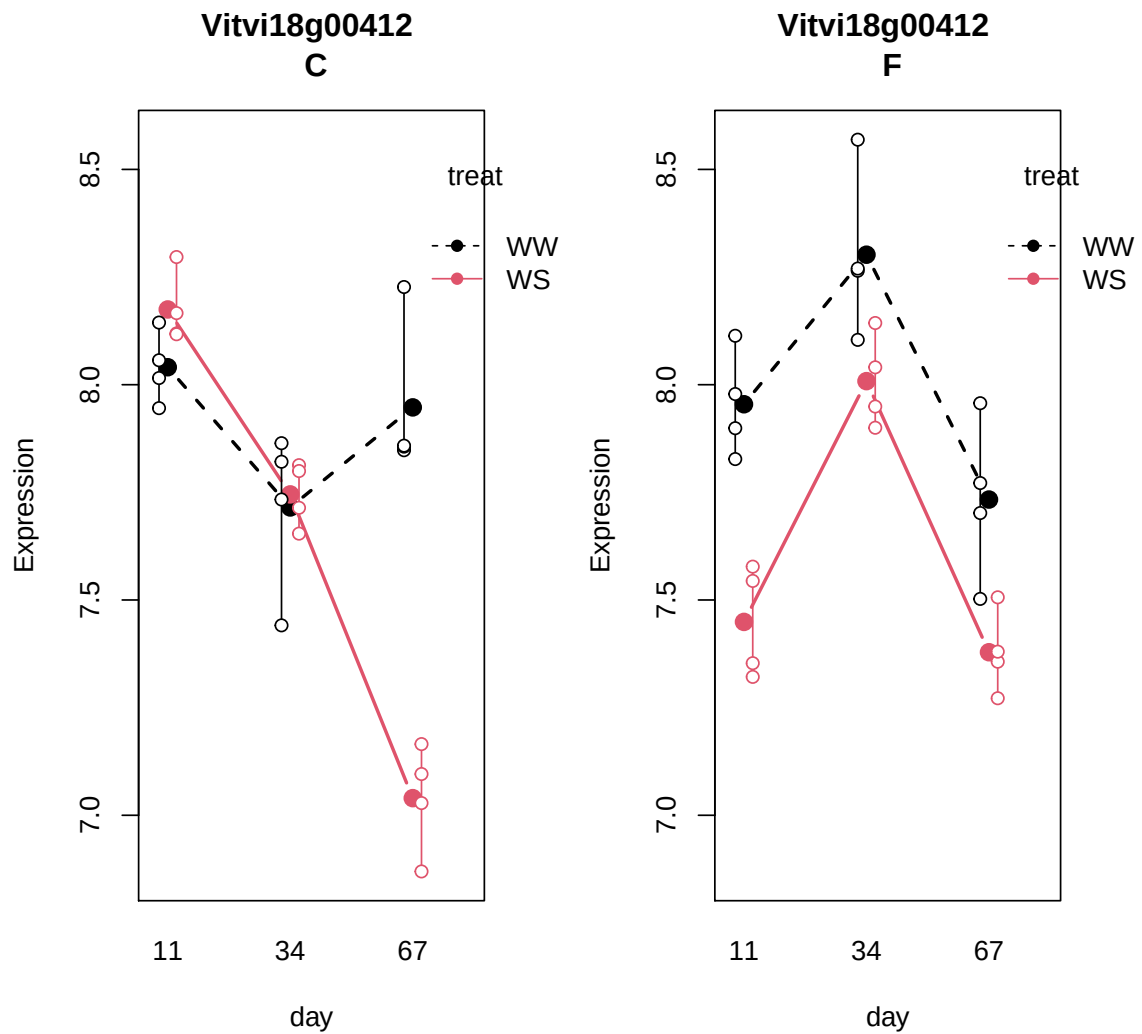
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
Error in subsetListOfArrays(object, i, j, IJ = IJ, IX = IX, I = I, JX = JX): S
> plot.coefficients(2:6)
Error in subsetListOfArrays(object, i, j, IJ = IJ, IX = IX, I = I, JX = JX): S
> plot.coefficients(1:6, add=TRUE)
Error in subsetListOfArrays(object, i, j, IJ = IJ, IX = IX, I = I, JX = JX): S
> plot.coefficients(2:6, add=TRUE)
Error in subsetListOfArrays(object, i, j, IJ = IJ, IX = IX, I = I, JX = JX): S
```

6.11 varietyF:day67:treatWS

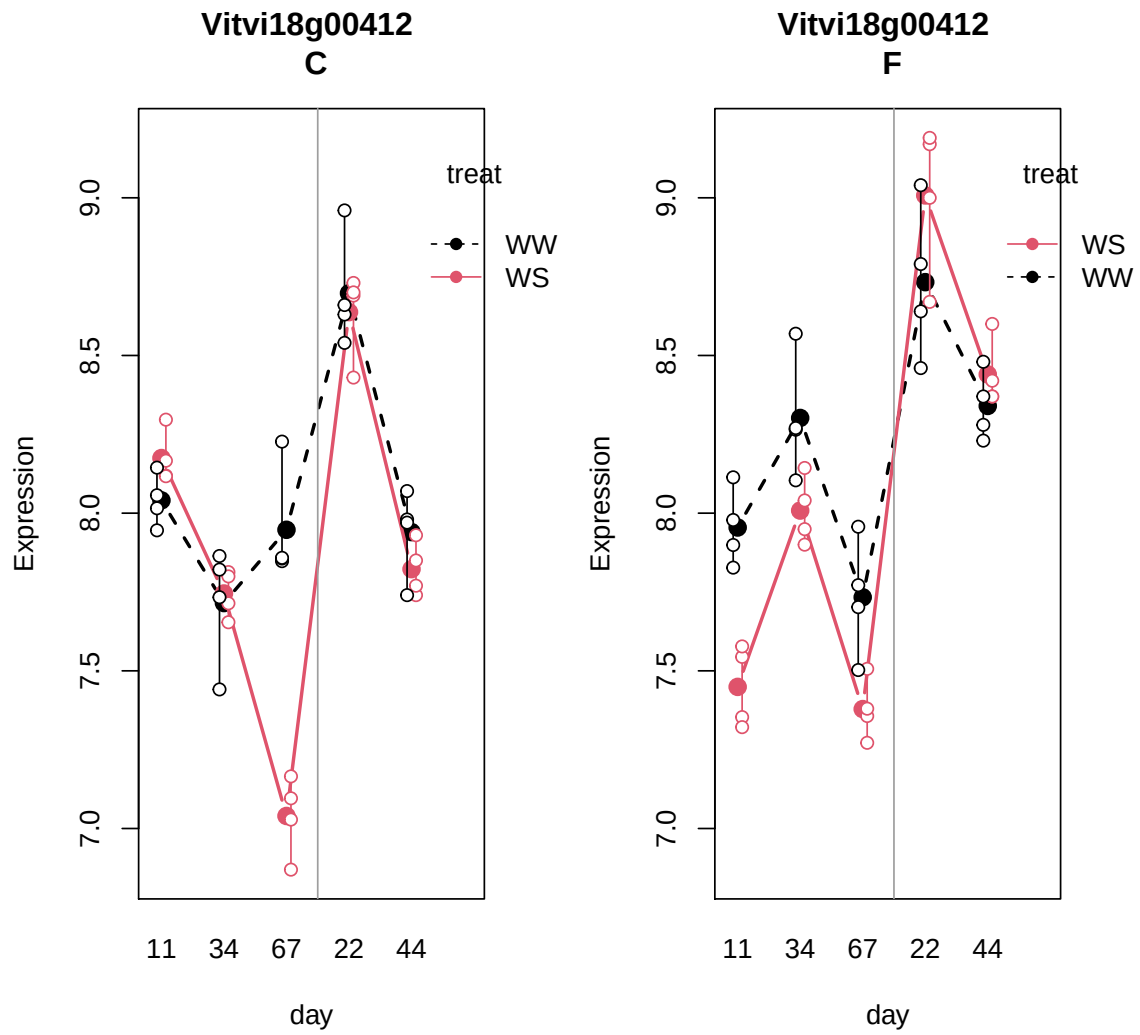
6.11.1 Vitvi18g00412

Coefficient varietyF:day67:treatWS for Vitvi18g00412.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi18g00412 1.192538 7.790681 5.862035 8.244817e-07
      adj.P.Val      B
Vitvi18g00412 0.007765025 5.54951
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

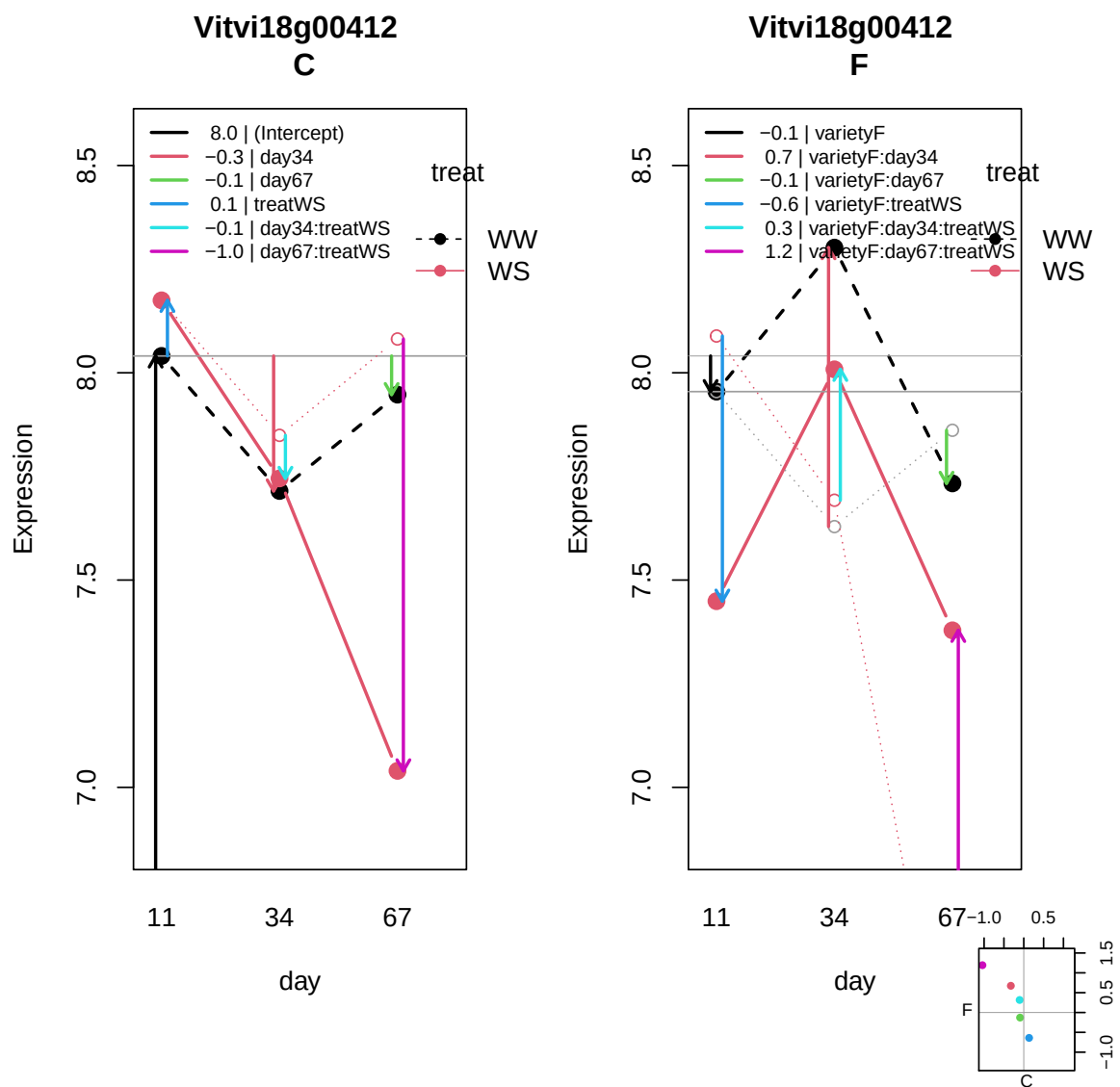
              (Intercept)      varietyF      day34
Vitvi18g00412      8.040546 -0.08600379 -0.3256205
              day67      treatWS varietyF:day34
Vitvi18g00412 -0.09324598  0.1341617      0.6729616
              varietyF:day67 varietyF:treatWS day34:treatWS
Vitvi18g00412      -0.128028      -0.6396099      -0.1038779
              day67:treatWS varietyF:day34:treatWS
Vitvi18g00412      -1.041682      0.315688
              varietyF:day67:treatWS
Vitvi18g00412      1.192538

```

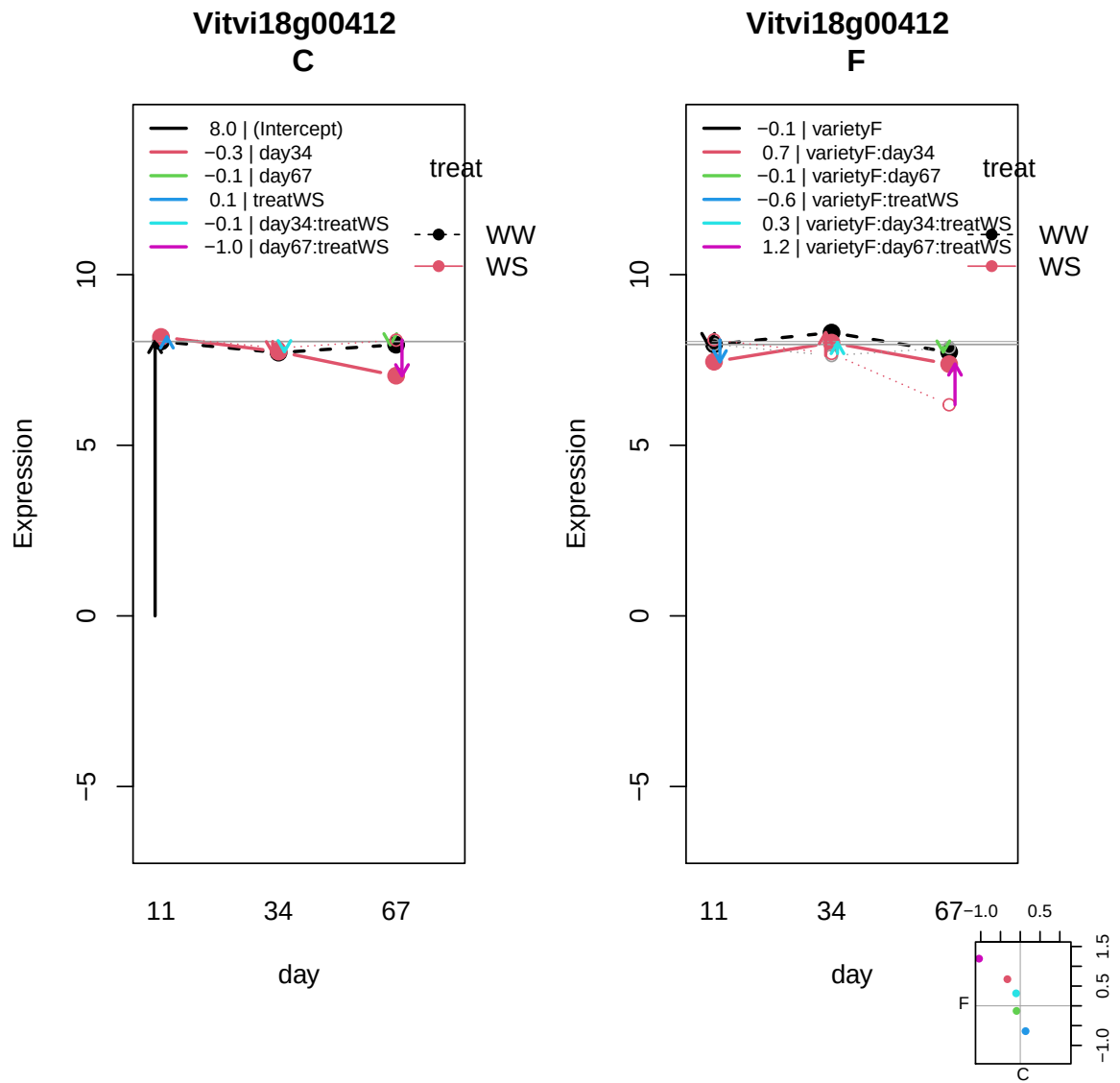
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

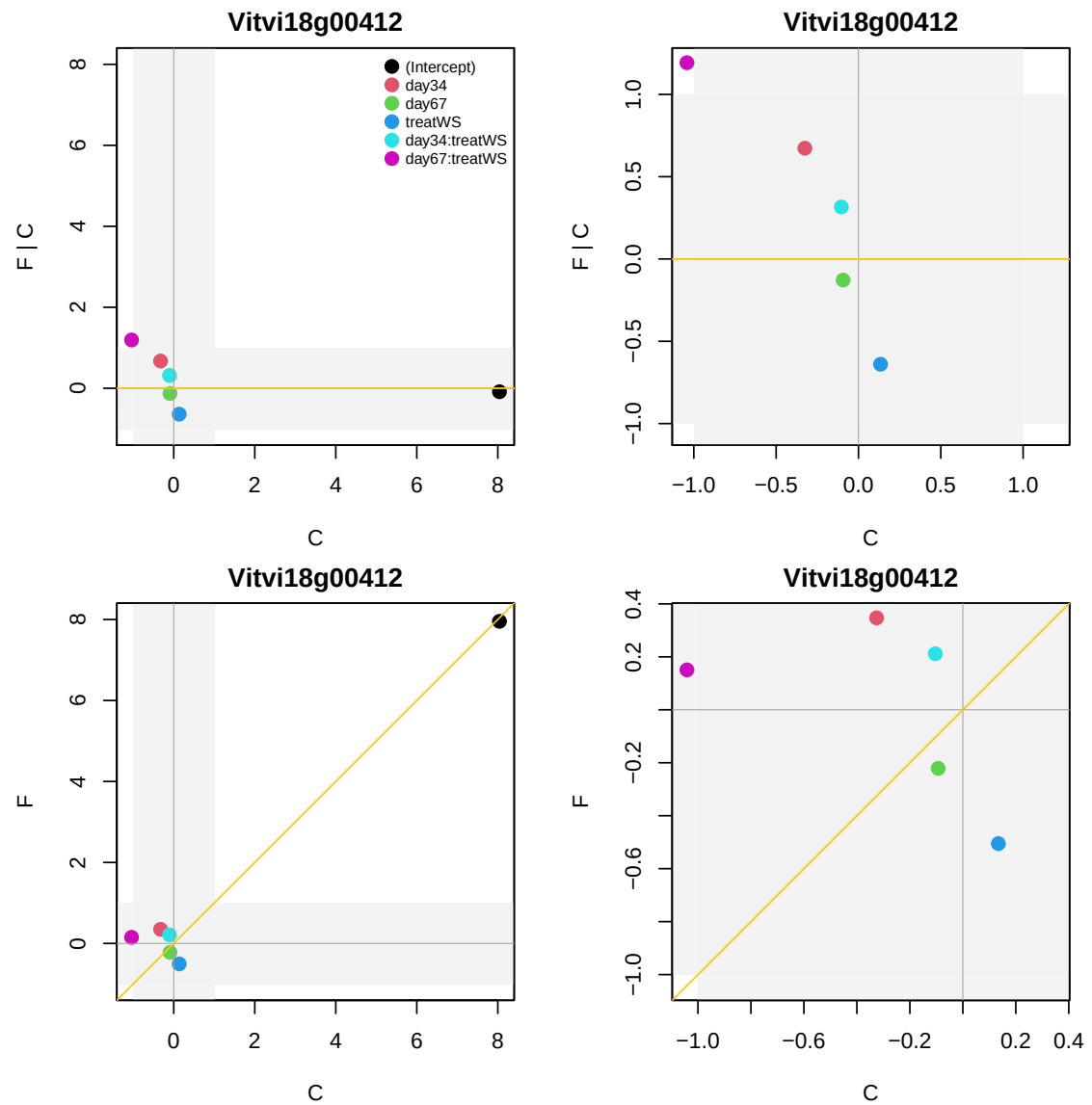


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

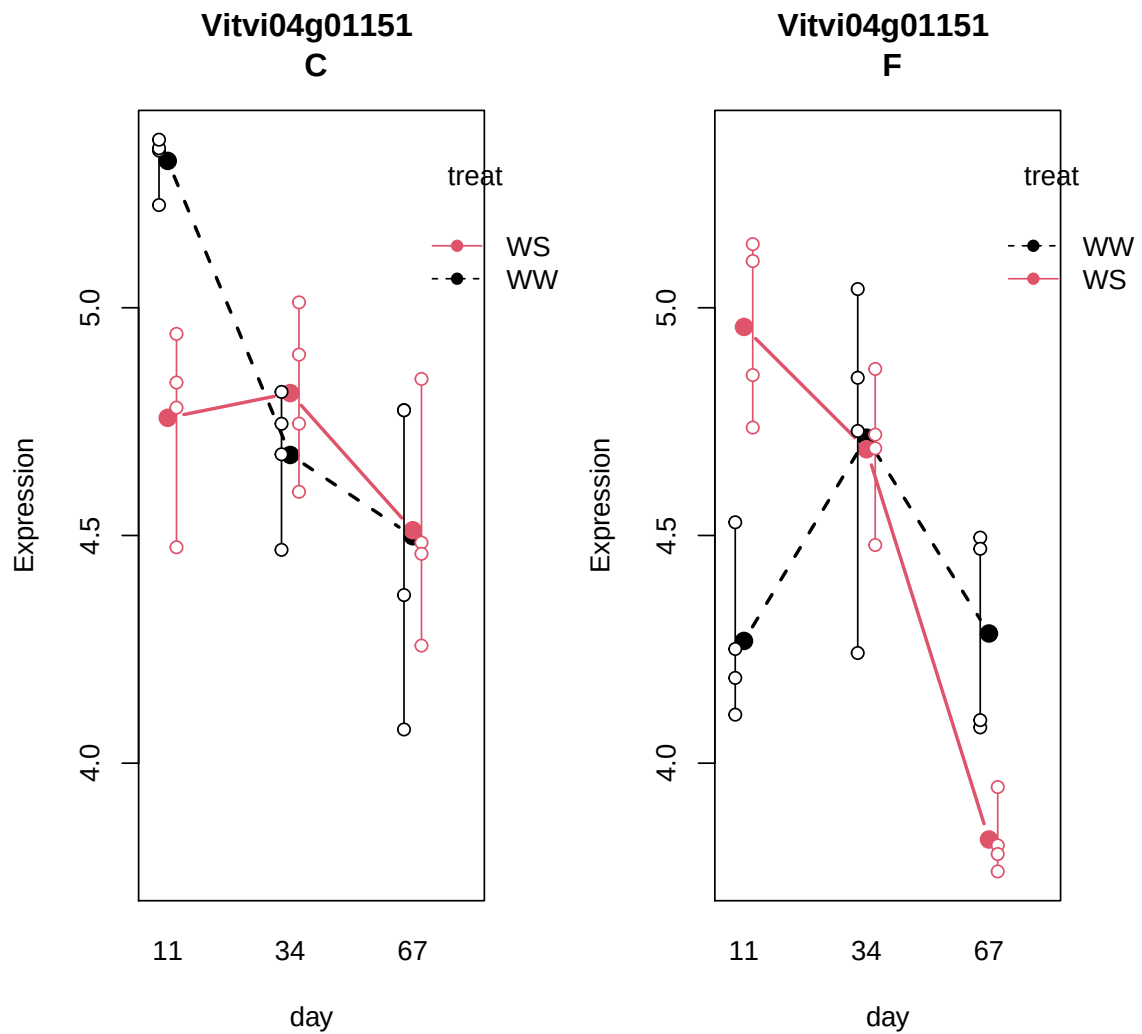


6.11.2 Vitvi04g01151

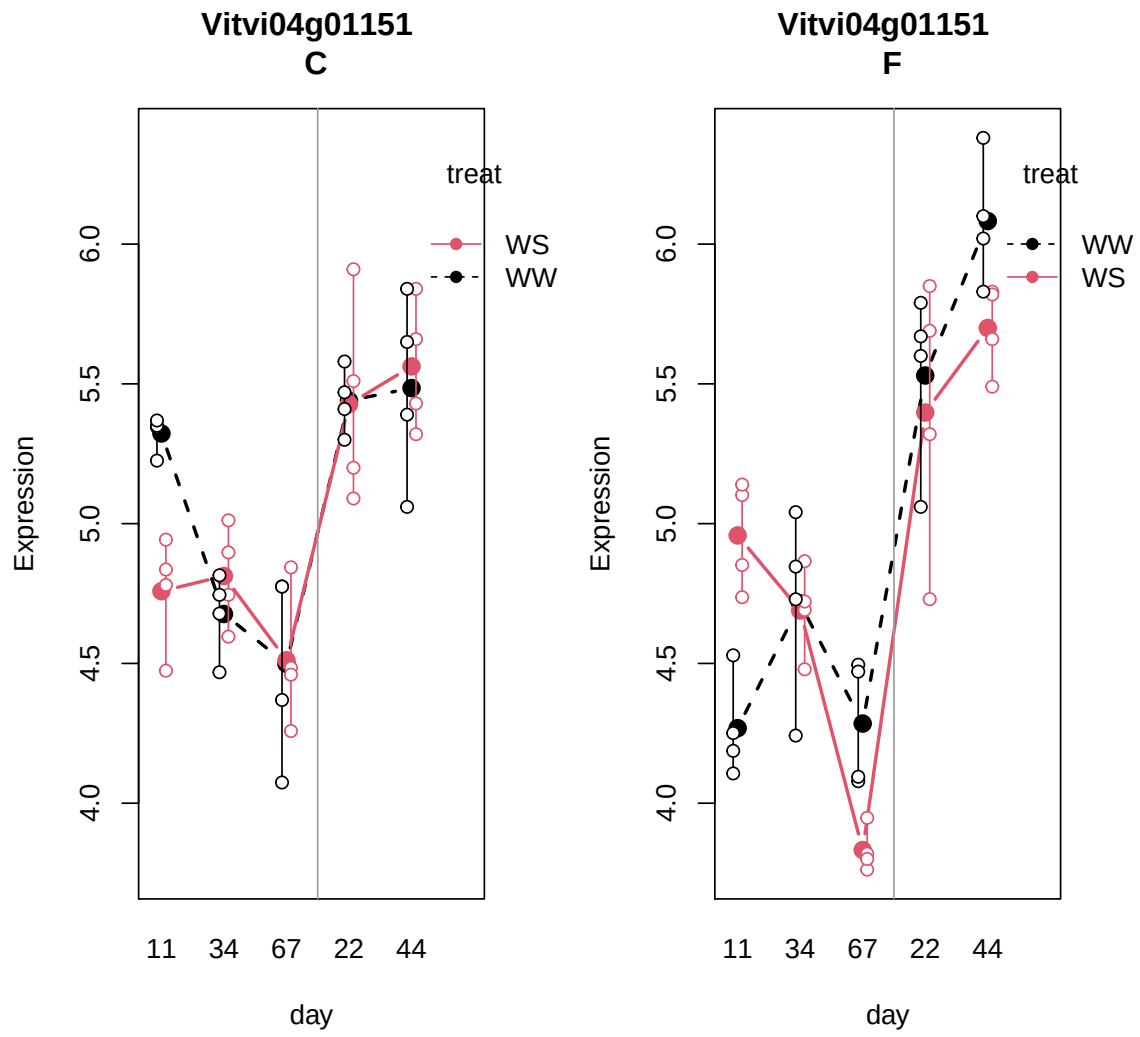
Coefficient varietyF:day67:treatWS for Vitvi04g01151.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi04g01151 -1.719143 4.610617 -5.7229 1.284651e-06
      adj.P.Val      B
Vitvi04g01151 0.007765025 5.156719

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

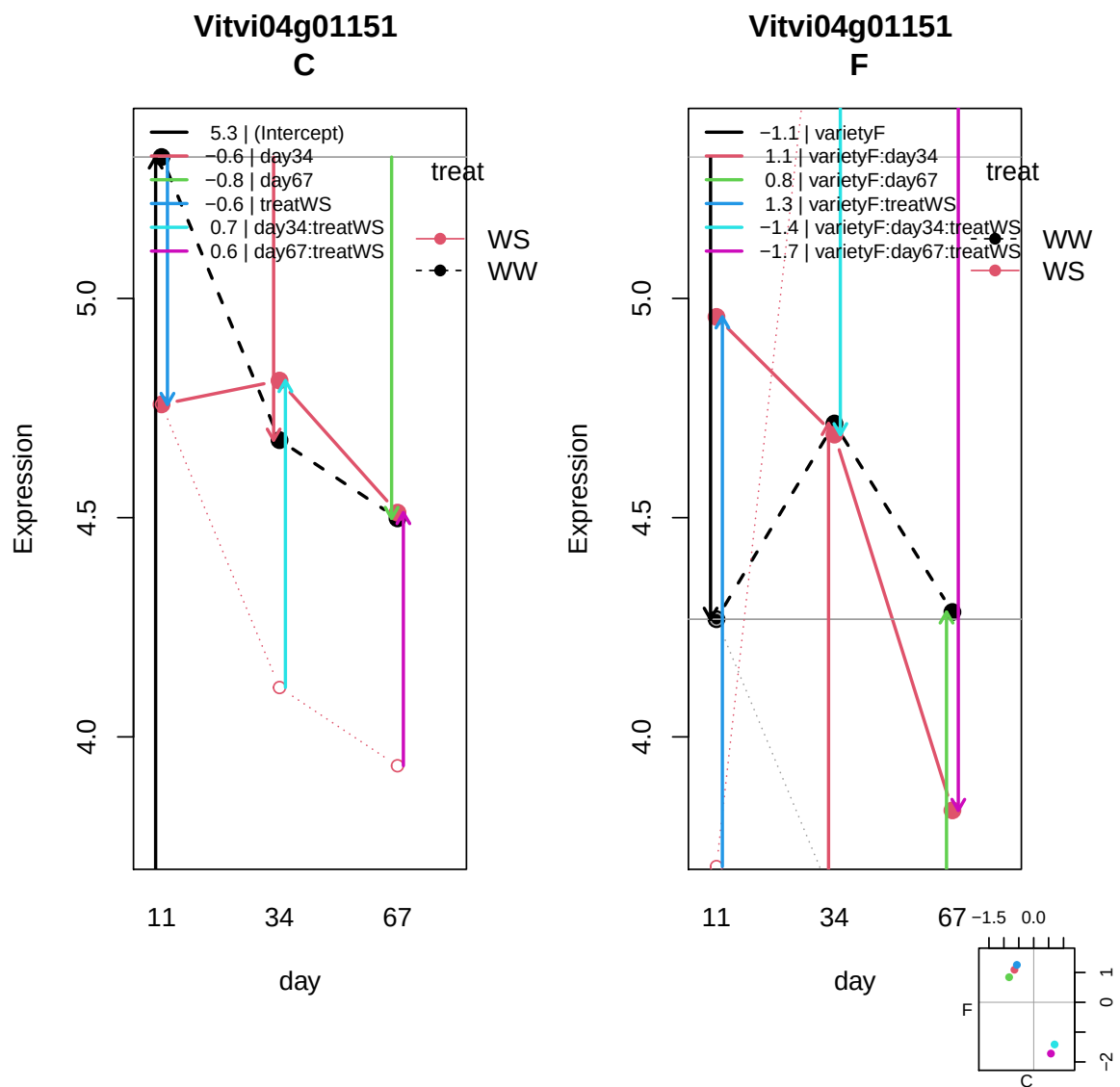
              (Intercept)  varietyF      day34      day67
Vitvi04g01151      5.322487 -1.054111 -0.6457074 -0.8241672
              treatWS varietyF:day34 varietyF:day67
Vitvi04g01151 -0.5641574      1.092011      0.8405768
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi04g01151      1.253631      0.6999694      0.5772996
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi04g01151      -1.414795      -1.719143

```

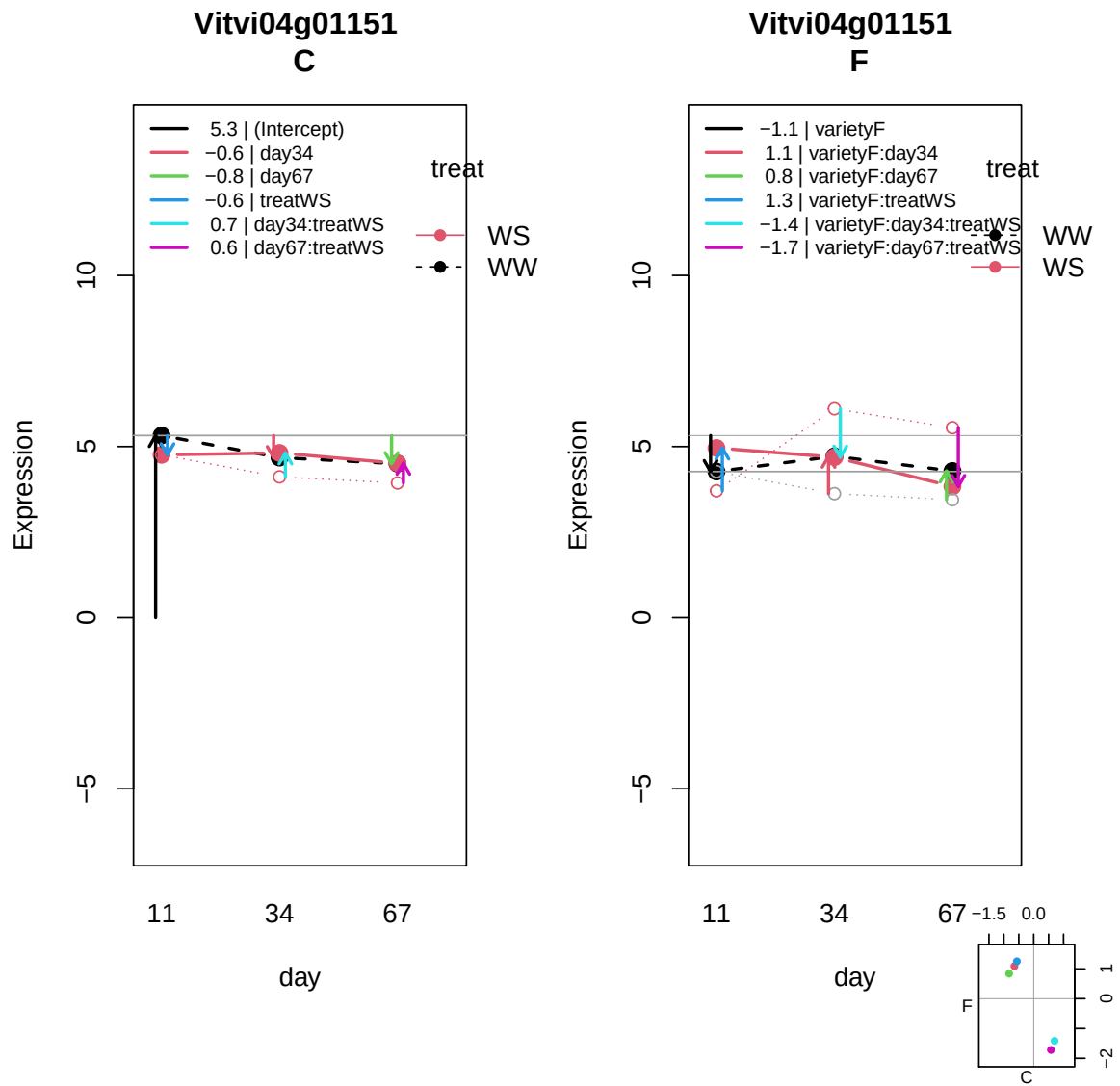
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

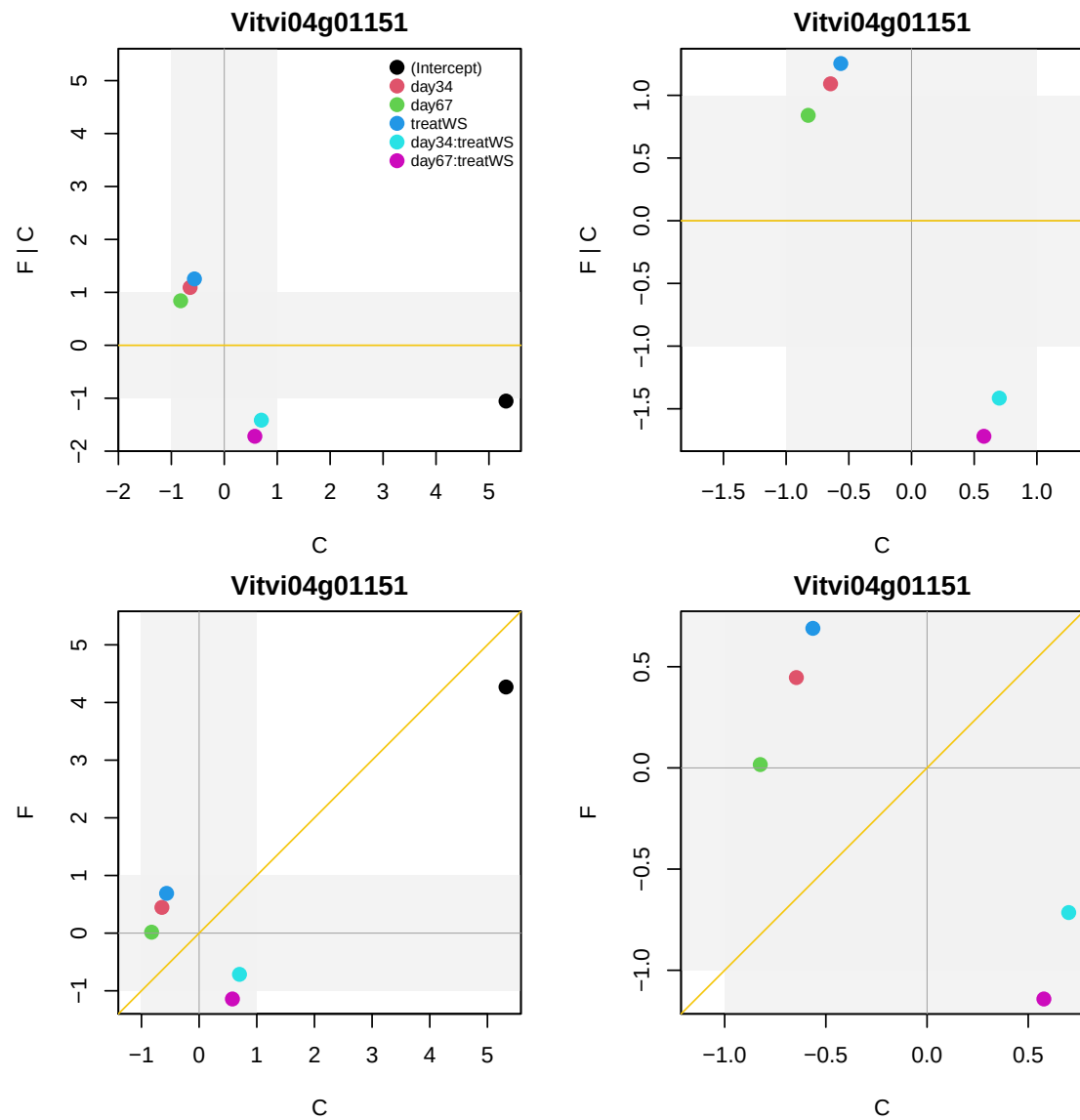



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

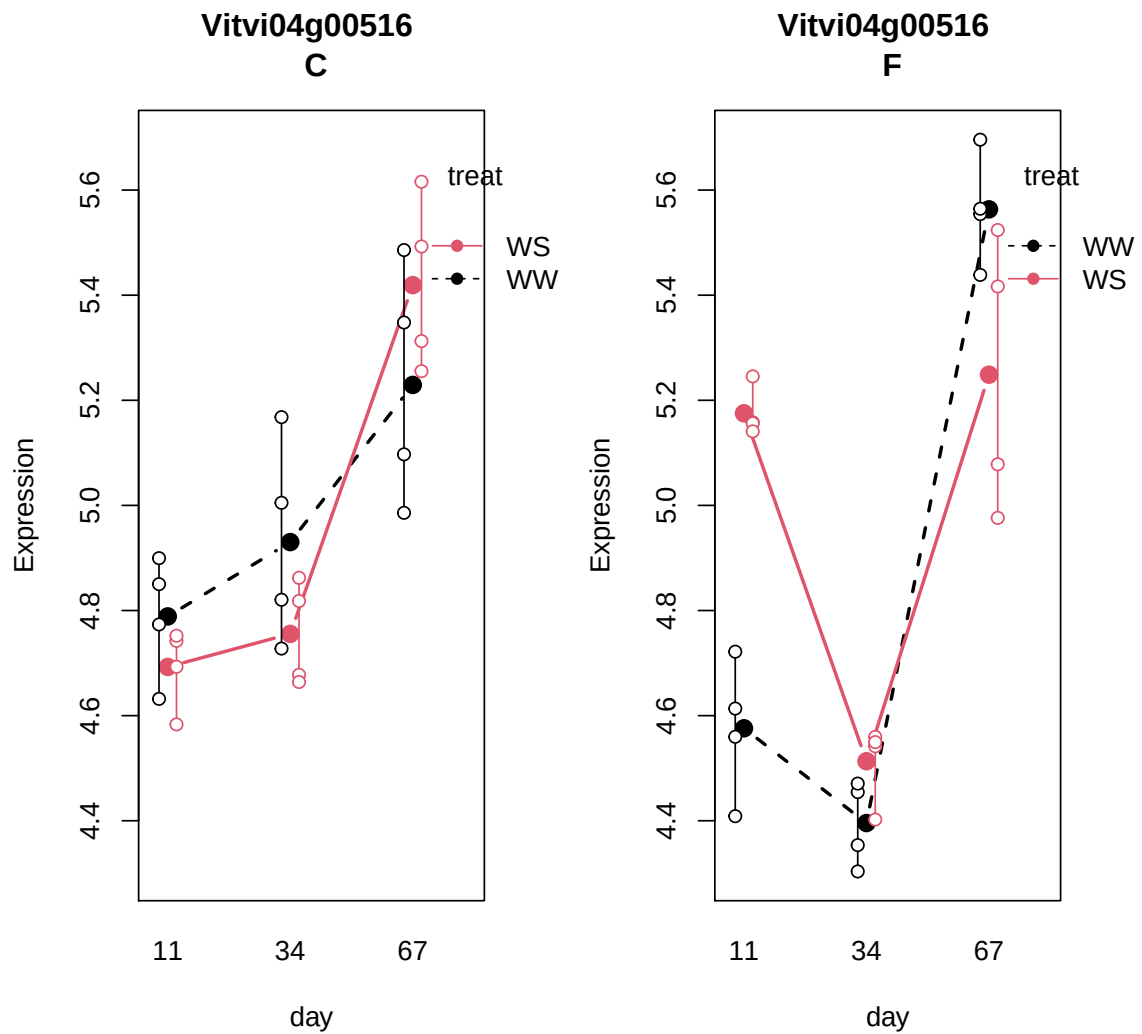


6.11.3 Vitvi04g00516

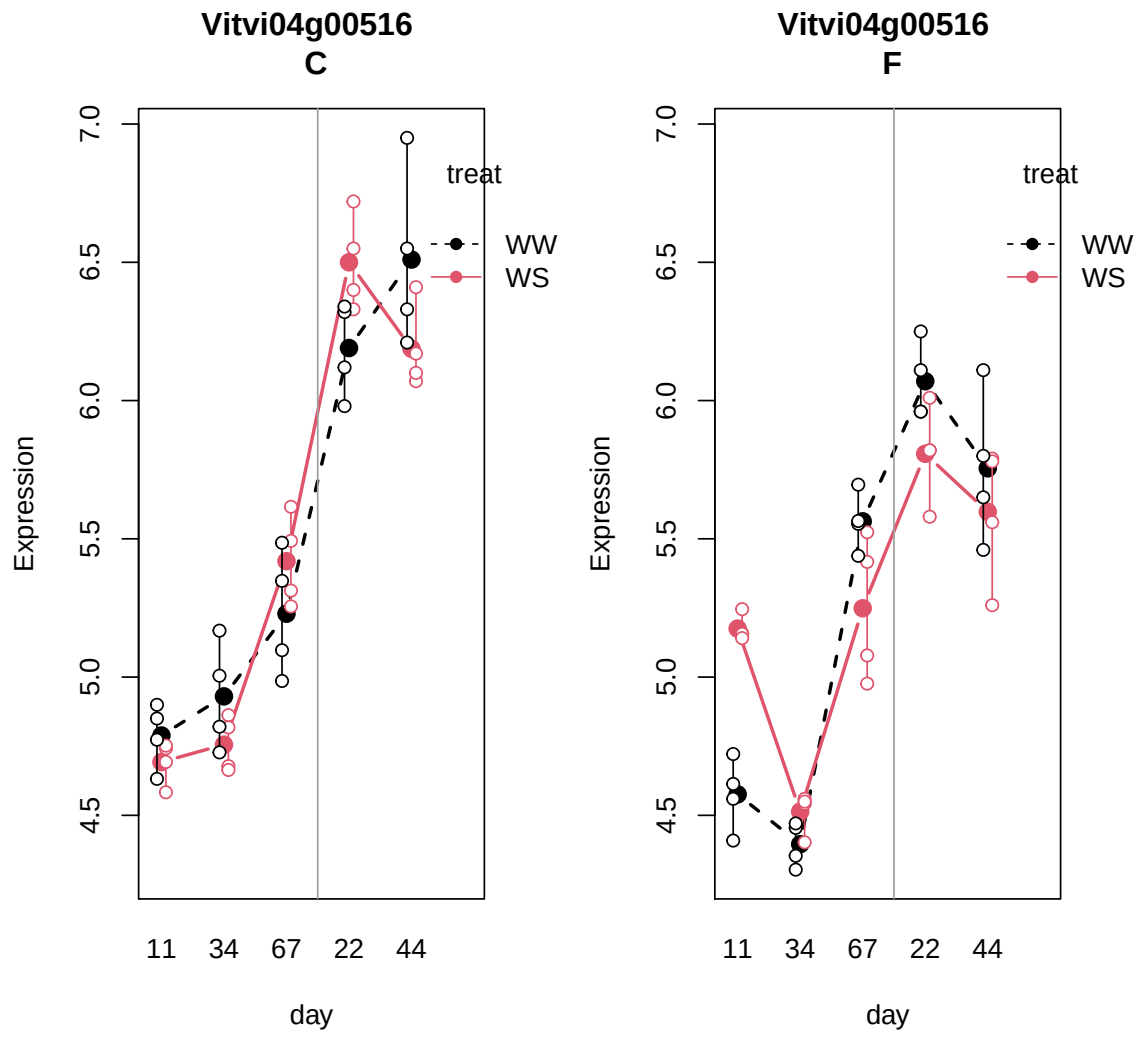
Coefficient varietyF:day67:treatWS for Vitvi04g00516.

```
> tt[varname,]
      logFC AveExpr      t    P.Value
Vitvi04g00516 -1.199862 4.940625 -5.626454 1.74668e-06
      adj.P.Val      B
Vitvi04g00516 0.007765025 4.884319

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

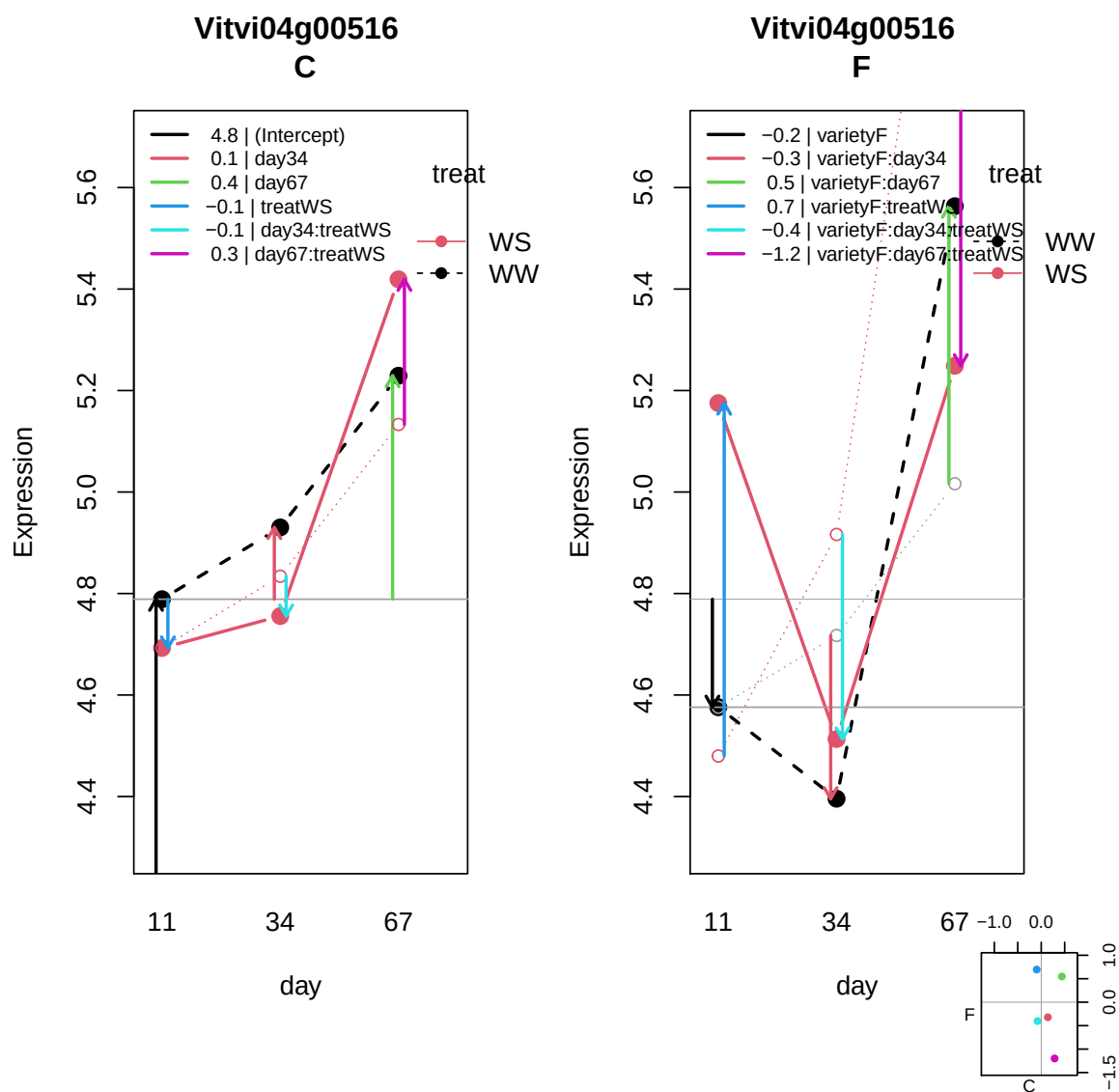
              (Intercept)  varietyF    day34    day67
Vitvi04g00516    4.788785 -0.212839  0.141422  0.4404113
              treatWS  varietyF:day34  varietyF:day67
Vitvi04g00516 -0.09612852    -0.3217211    0.5469517
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi04g00516    0.695423    -0.0785396    0.2860656
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi04g00516    -0.4030931    -1.199862

```

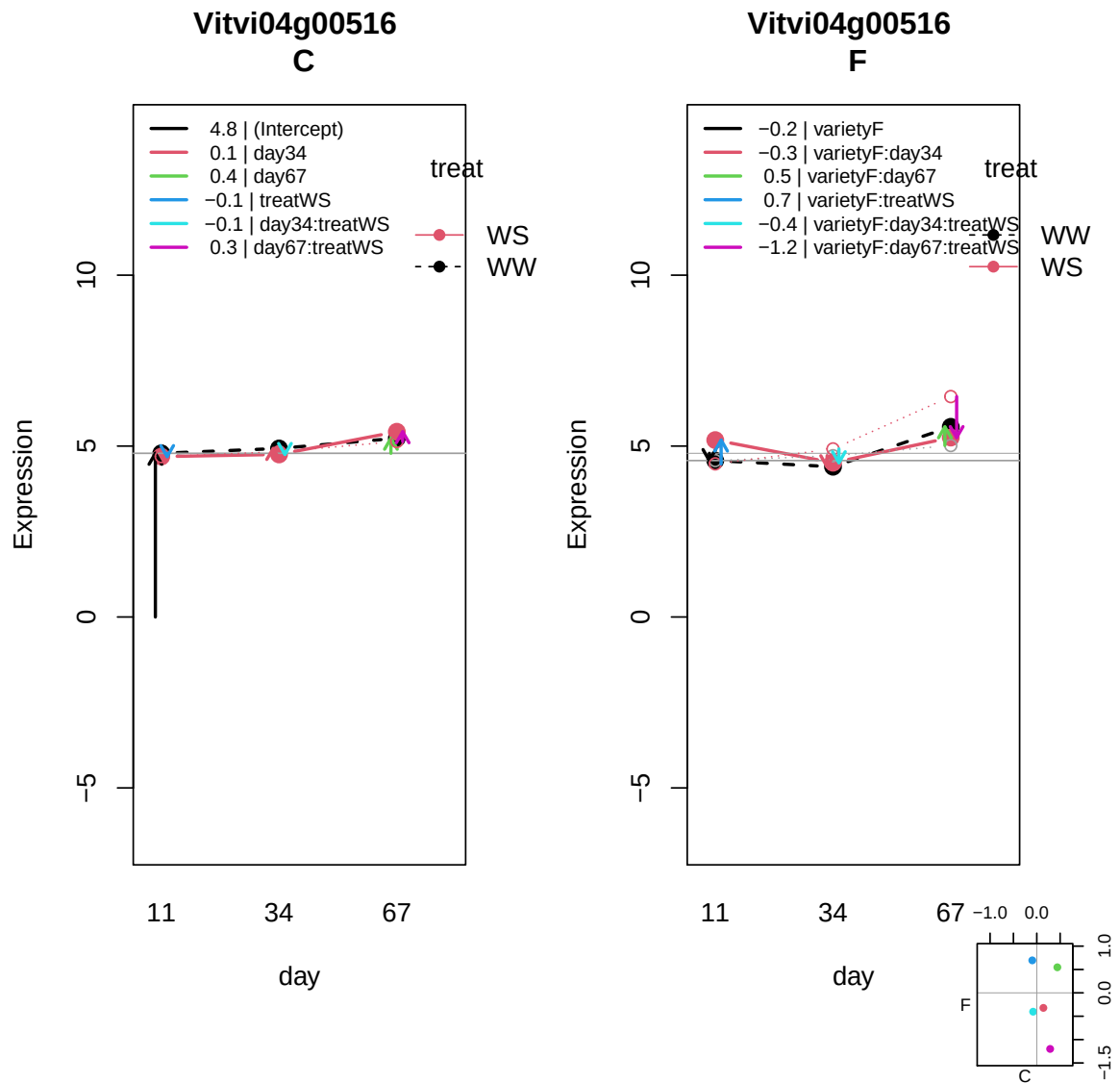
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

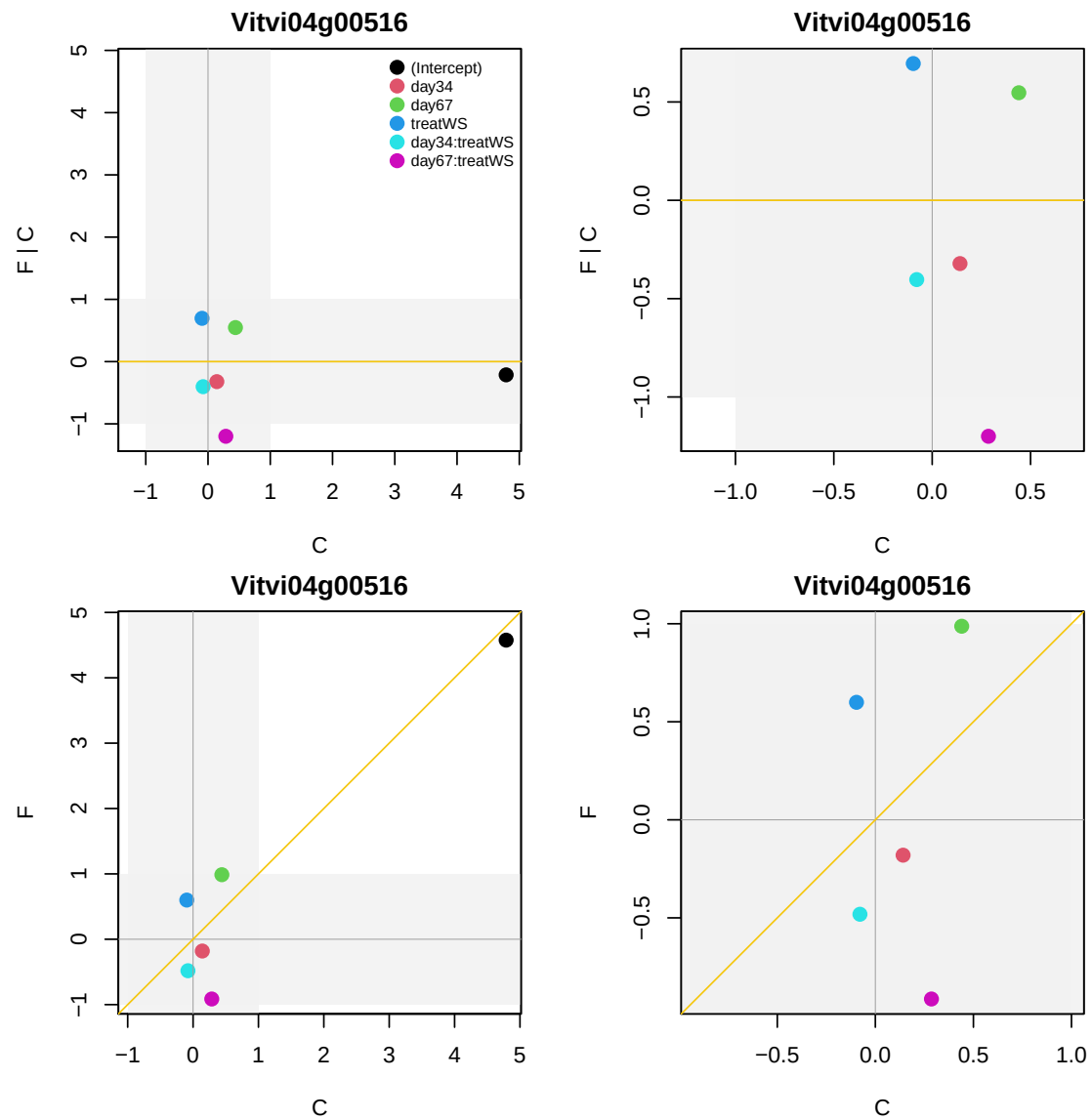


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

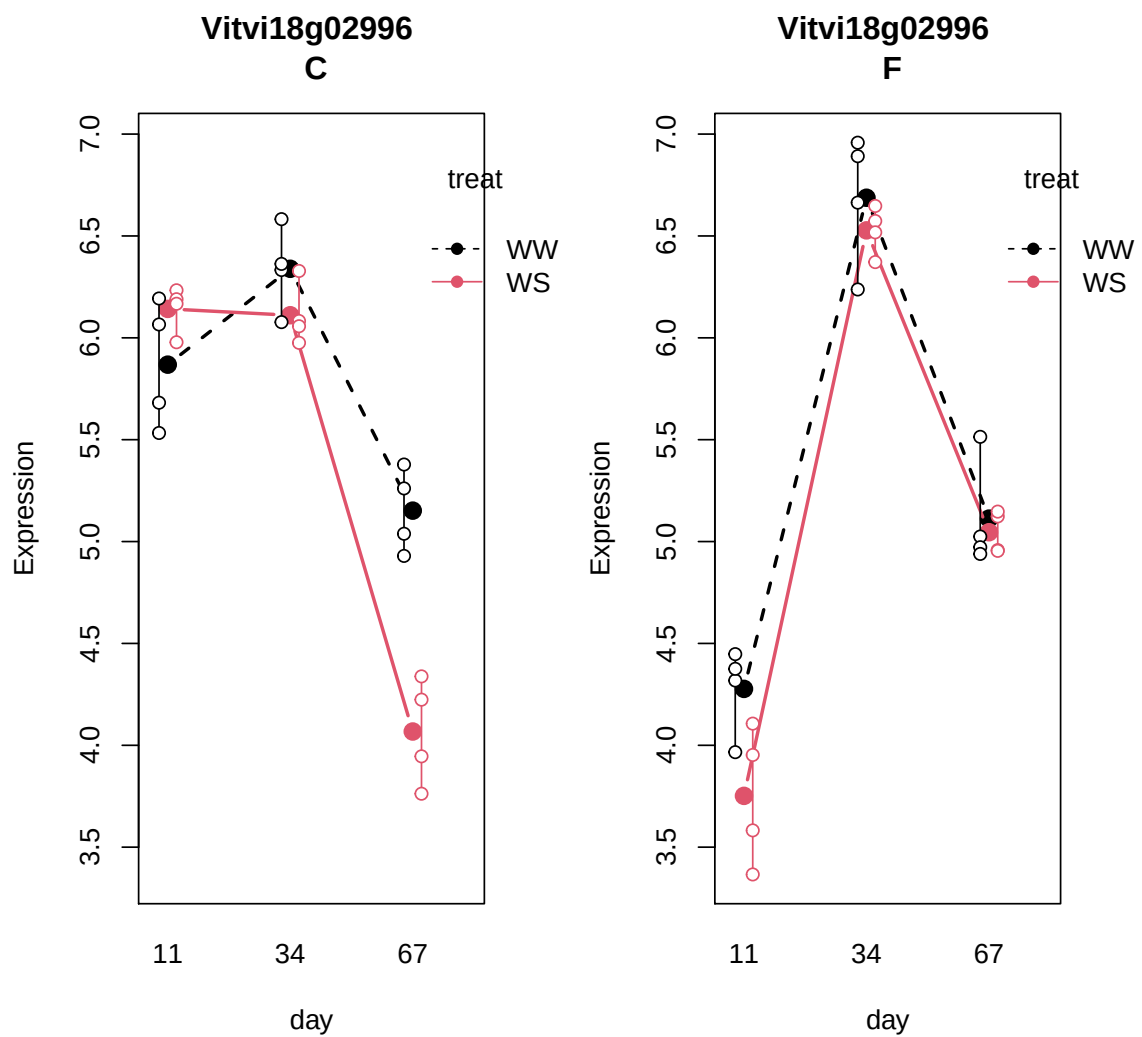
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



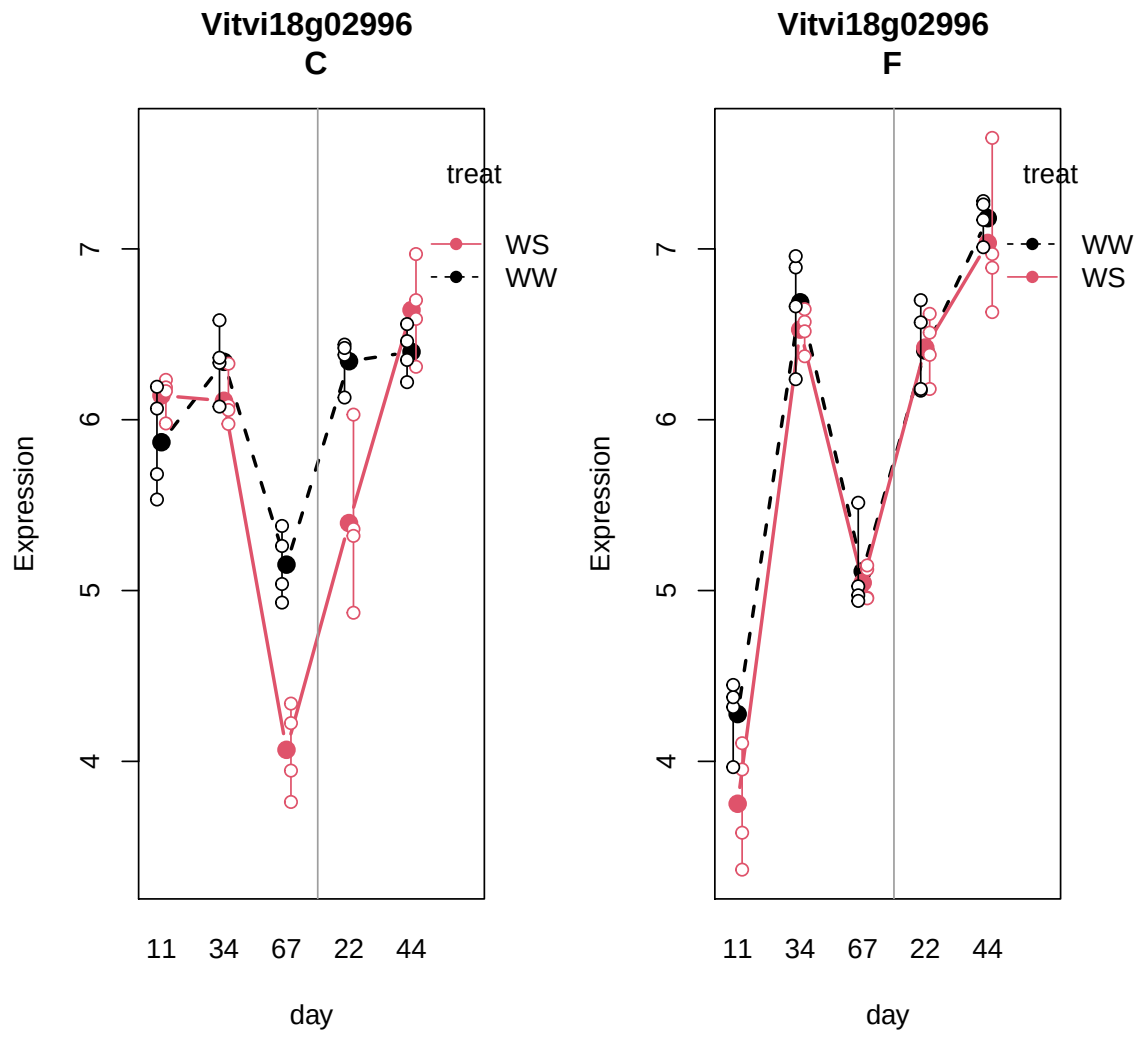
6.11.4 Vitvi18g02996

Coefficient varietyF:day67:treatWS for Vitvi18g02996.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi18g02996 1.816026 5.423452 5.578034 2.037797e-06
      adj.P.Val      B
Vitvi18g02996 0.007765025 4.747558
> plot.interactions(varname,phdata=pd,data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

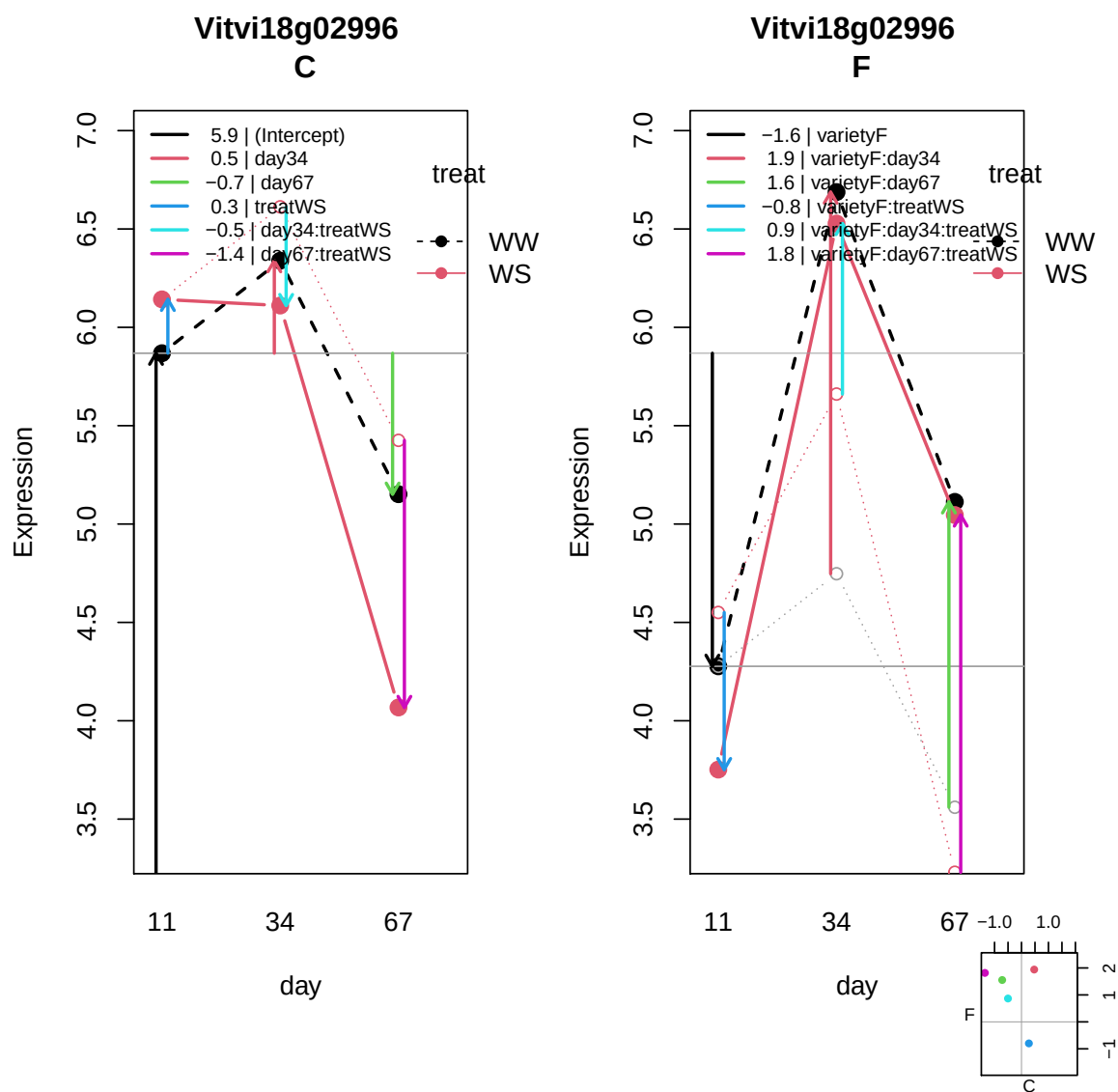
      (Intercept)  varietyF    day34    day67
Vitvi18g02996    5.86831 -1.591485 0.4705151 -0.7165768
      treatWS varietyF:day34 varietyF:day67
Vitvi18g02996 0.273761    1.940244    1.552319
      varietyF:treatWS day34:treatWS day67:treatWS
Vitvi18g02996   -0.7987514   -0.5017815   -1.357851
      varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi18g02996      0.8666614      1.816026

```

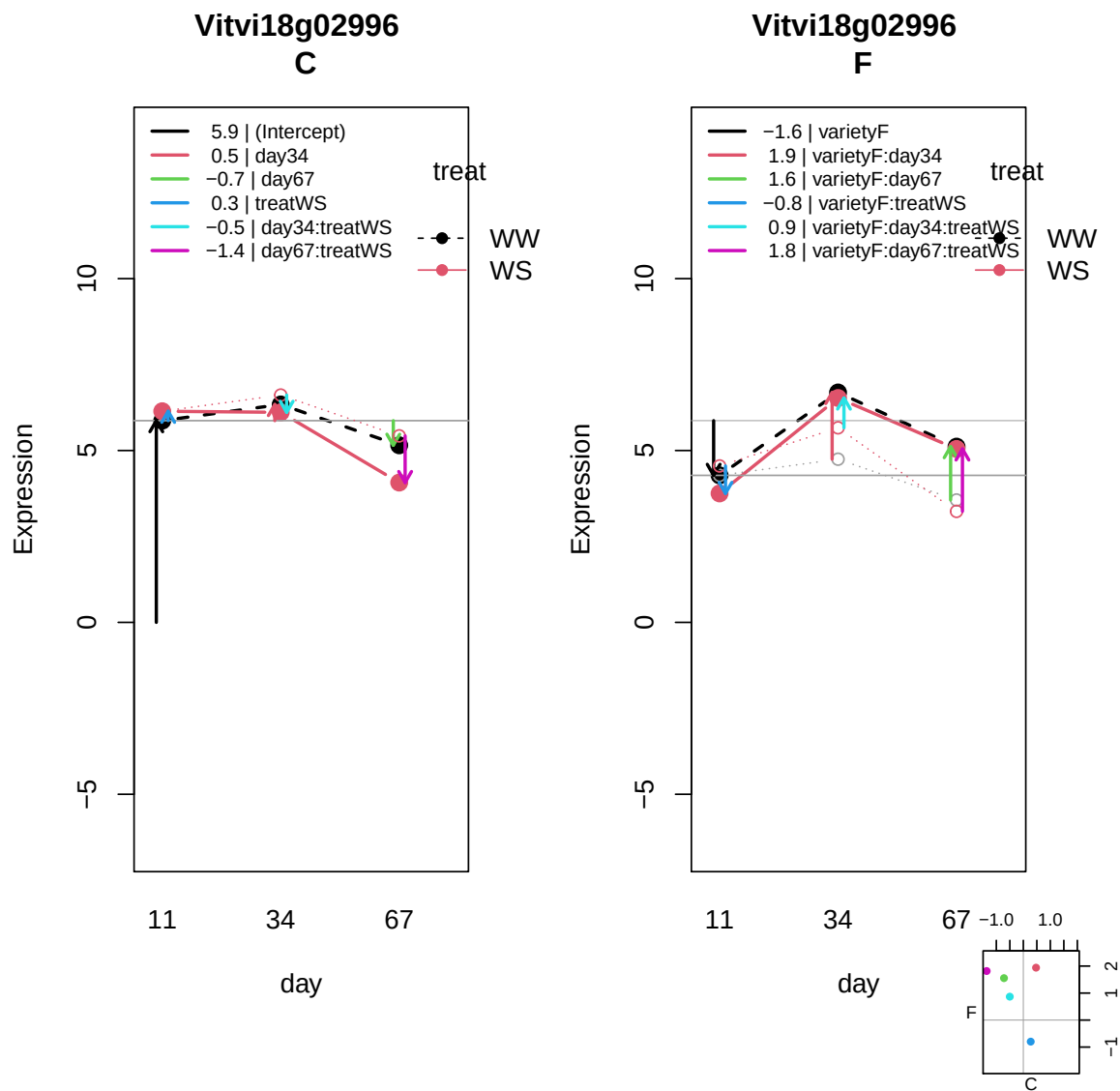
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

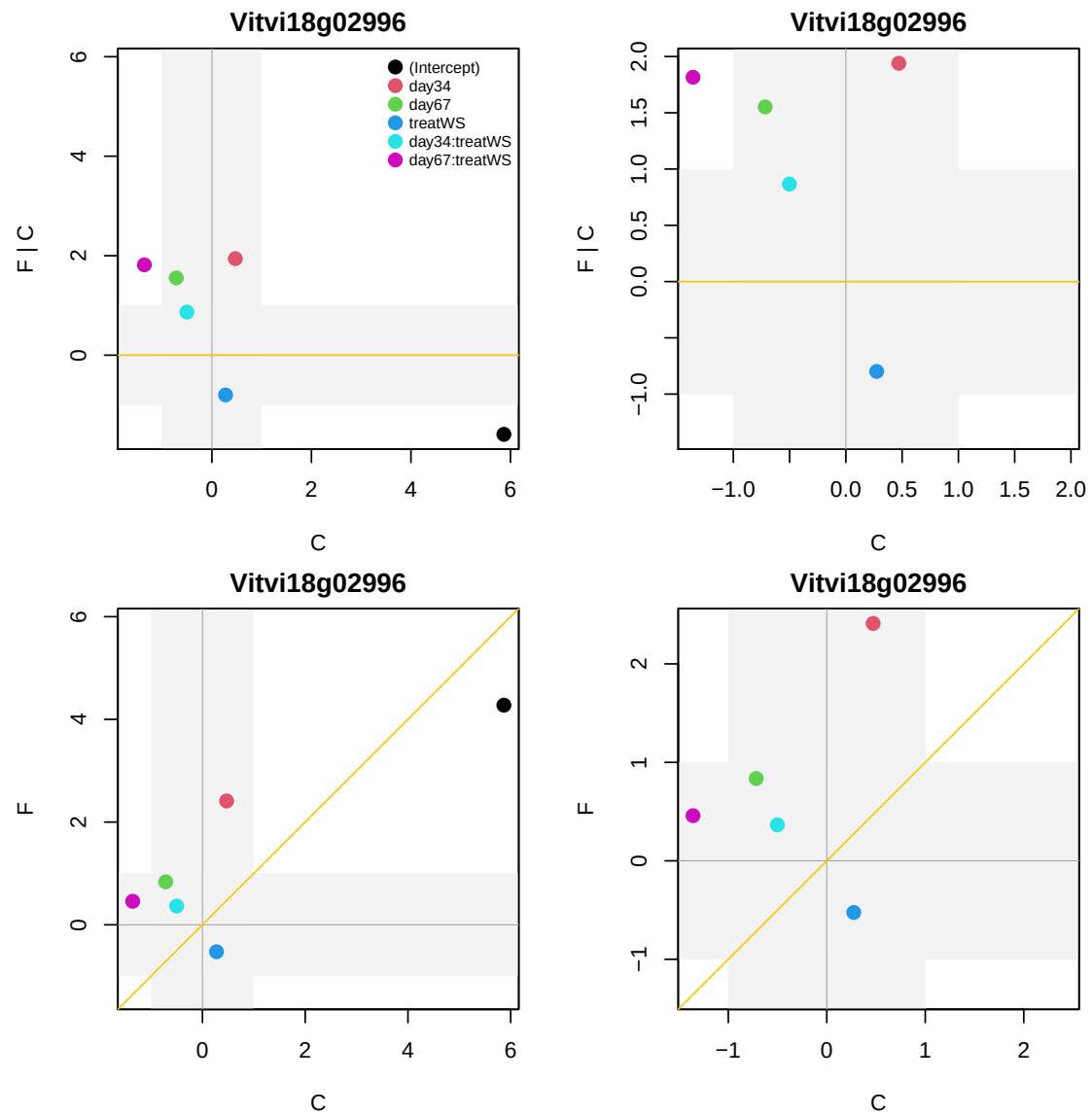


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

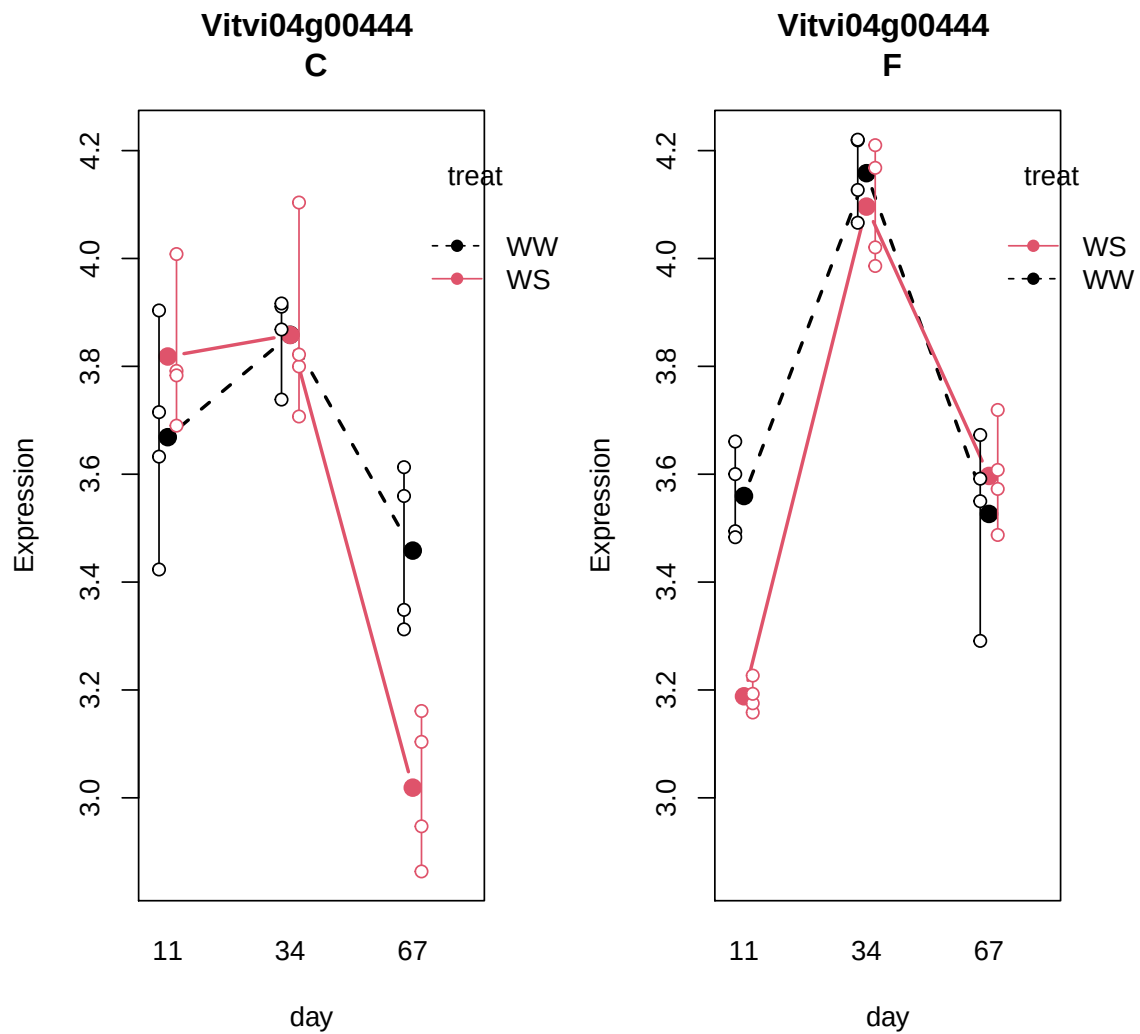


6.11.5 Vitvi04g00444

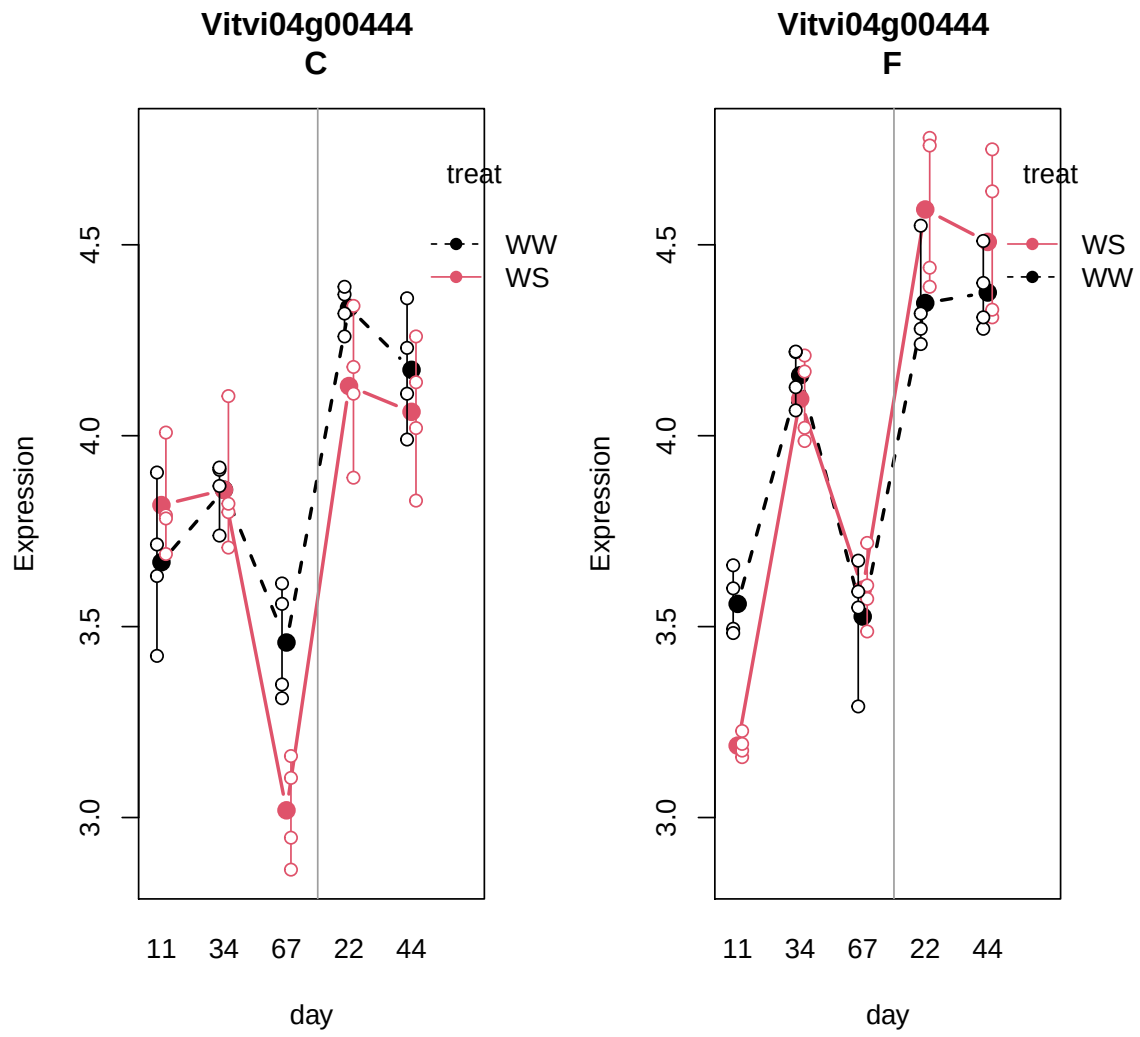
Coefficient varietyF:day67:treatWS for Vitvi04g00444.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi04g00444 1.030873 3.650504 5.434365 3.218083e-06
      adj.P.Val      B
Vitvi04g00444 0.009288349 4.341895

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

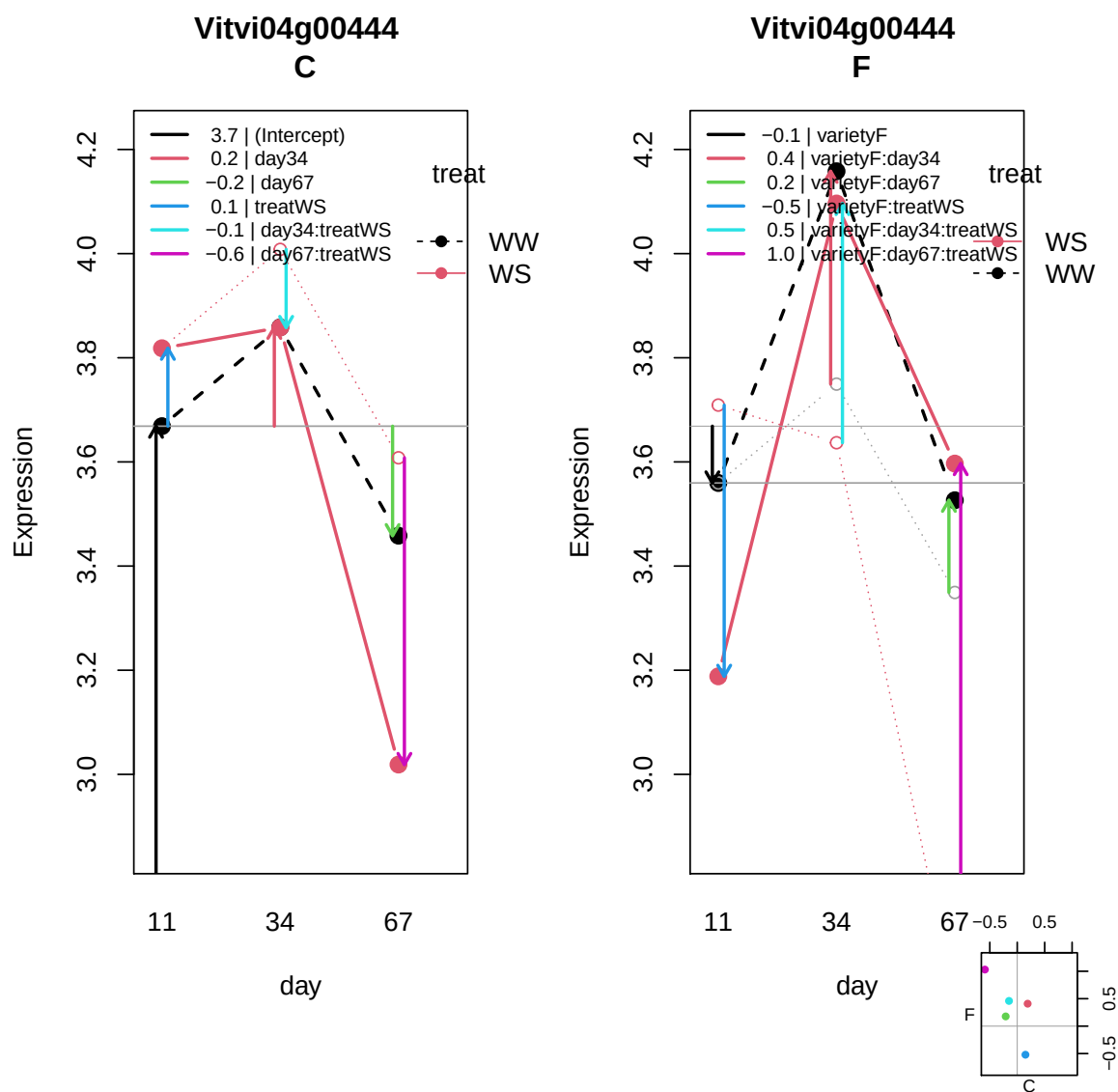
              (Intercept)    varietyF    day34    day67
Vitvi04g00444    3.668669 -0.1091024 0.1898289 -0.2103013
              treatWS varietyF:day34 varietyF:day67
Vitvi04g00444 0.1495887    0.4087521    0.1770916
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi04g00444    -0.5209253    -0.1499734    -0.589106
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi04g00444    0.4593696                1.030873

```

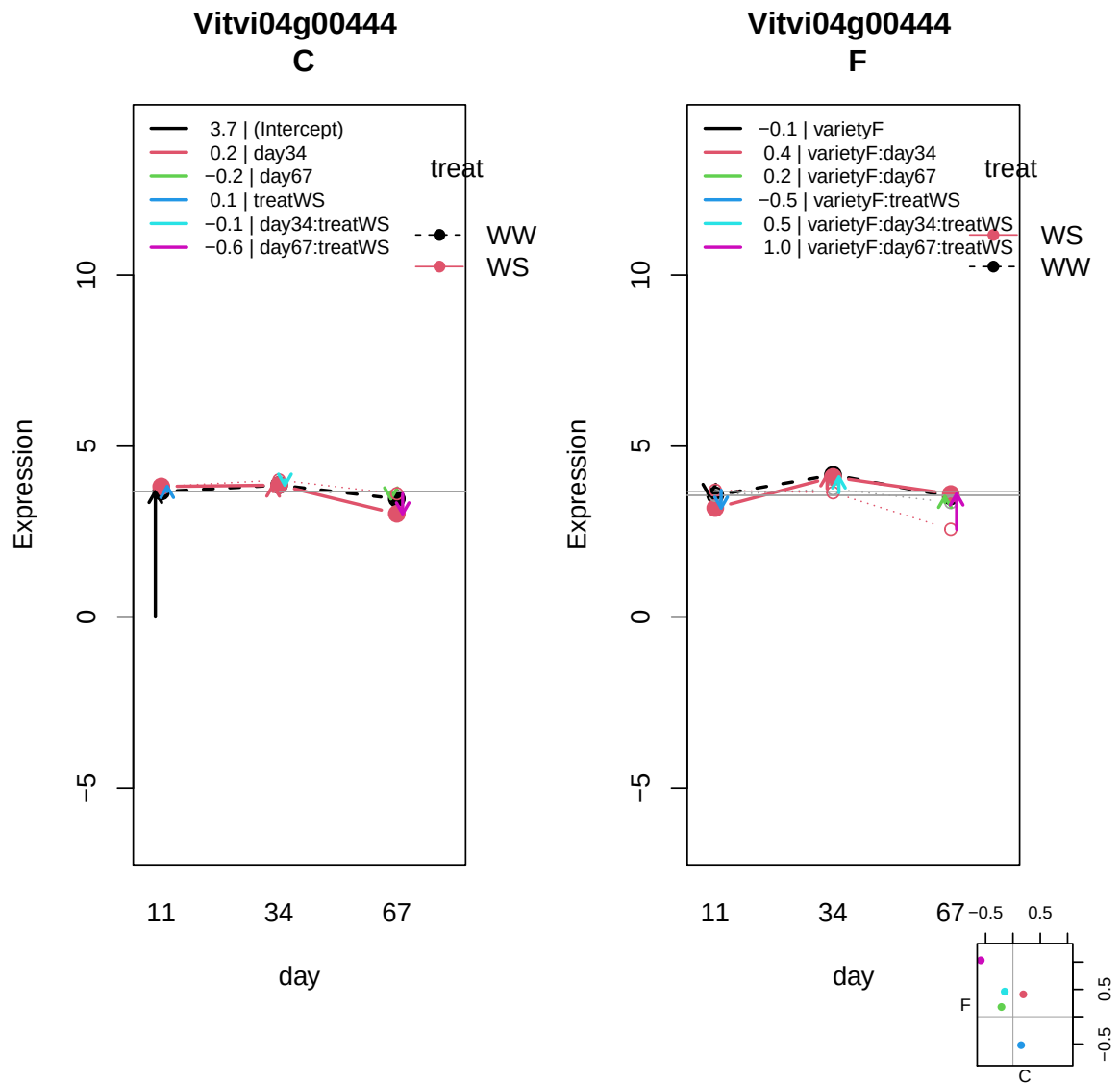
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

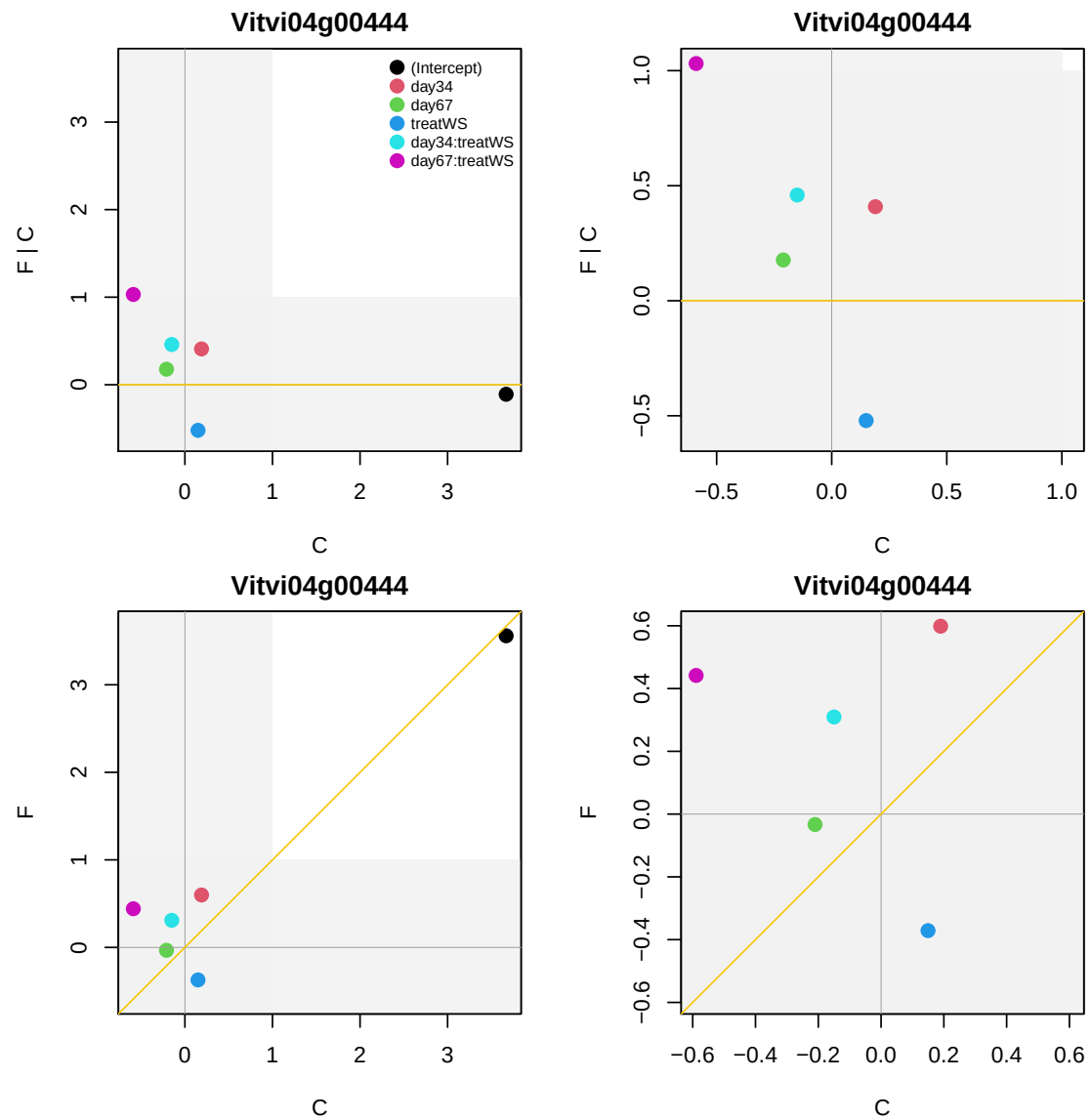


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

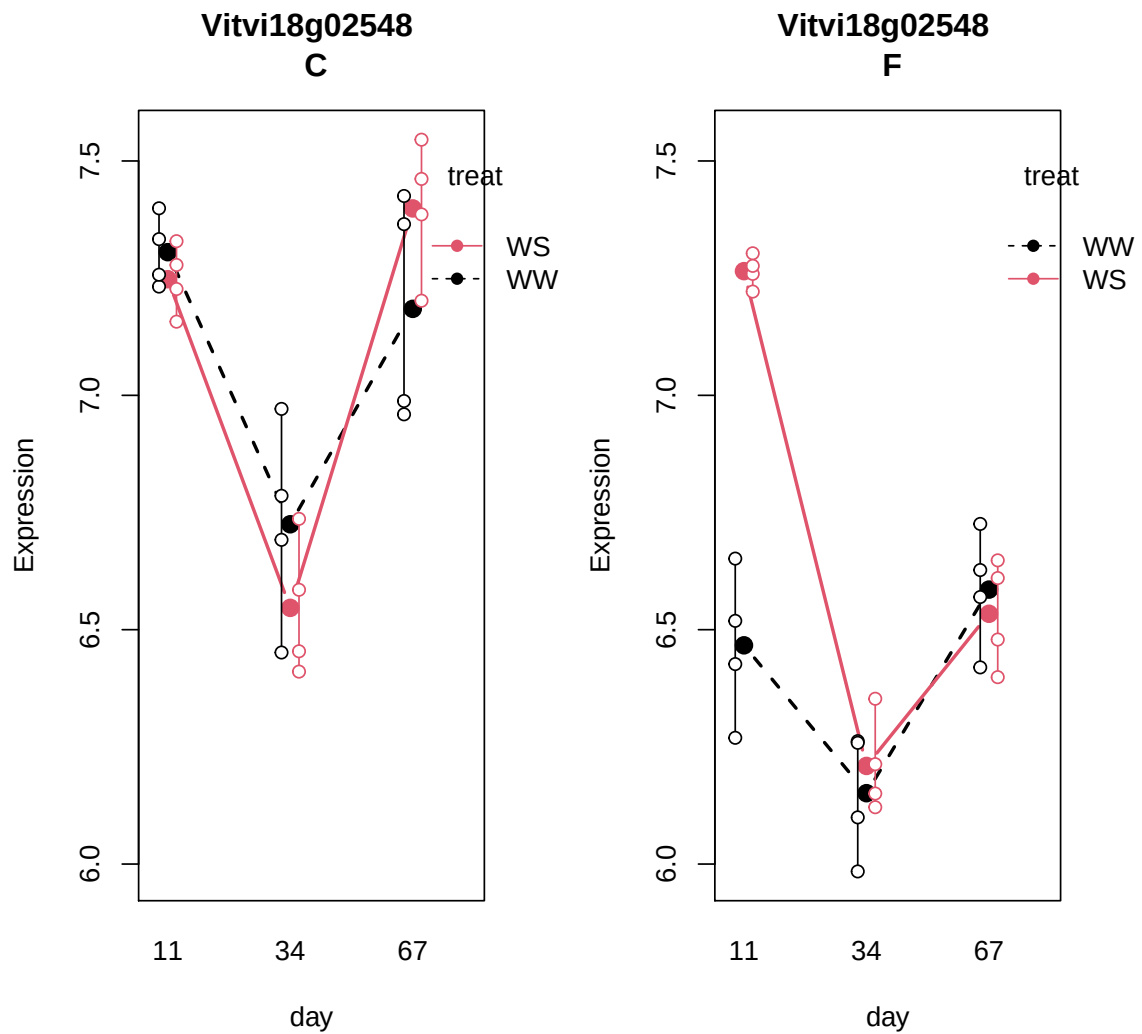


6.11.6 Vitvi18g02548

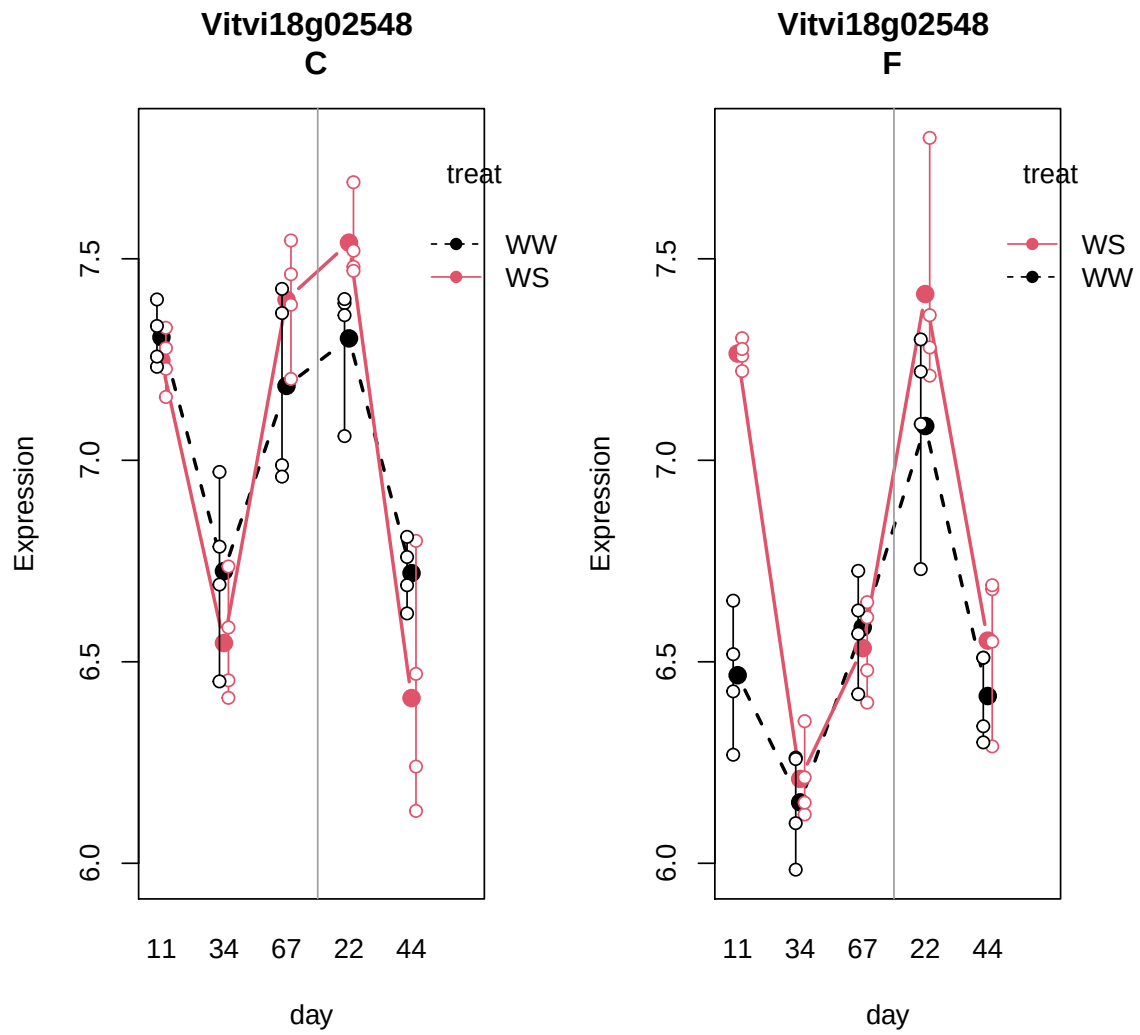
Coefficient varietyF:day67:treatWS for Vitvi18g02548.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi18g02548 -1.121847 6.801621 -5.376667 3.865282e-06
      adj.P.Val      B
Vitvi18g02548 0.009288349 4.179087

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

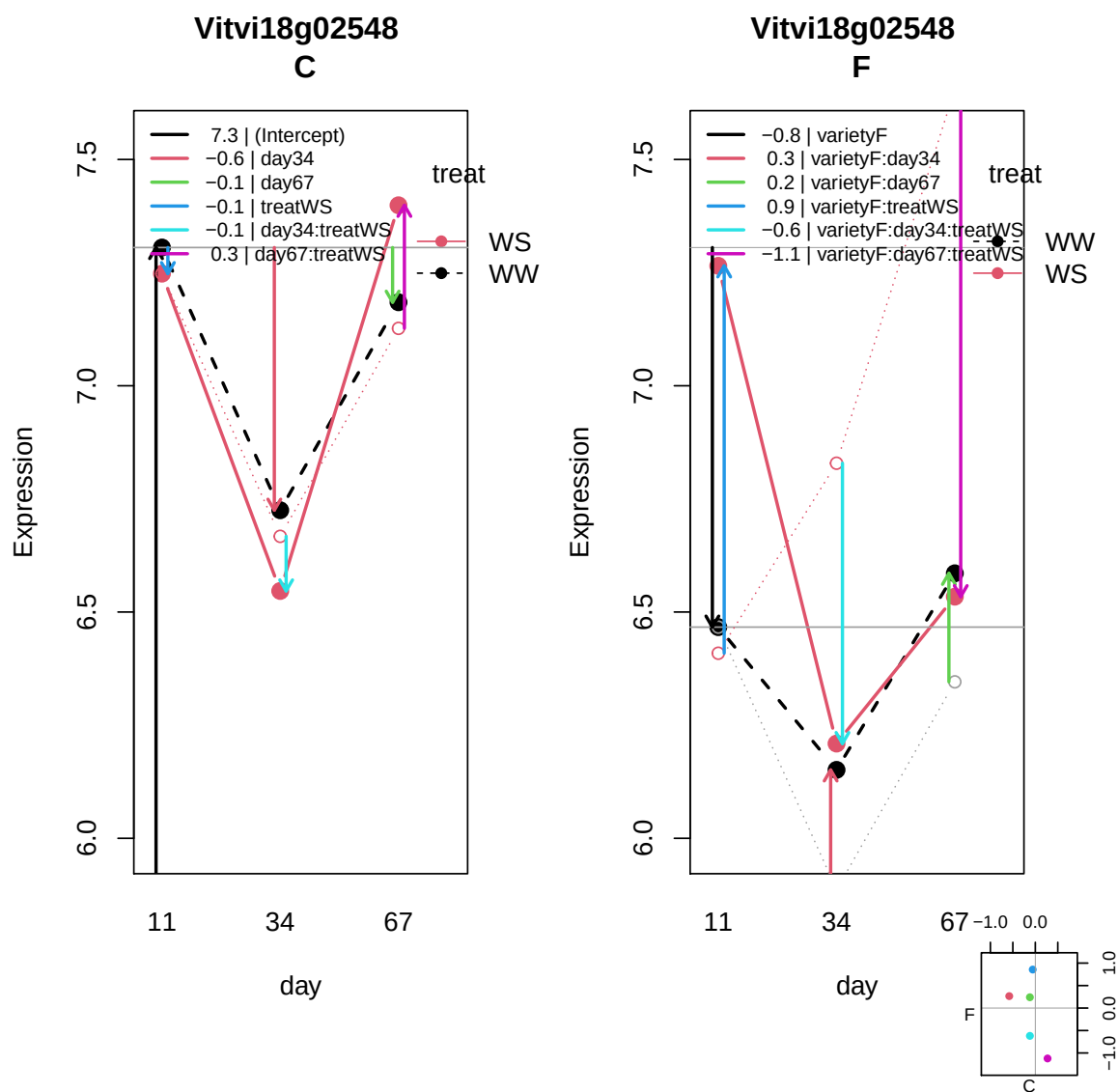
              (Intercept)  varietyF    day34    day67
Vitvi18g02548    7.305416 -0.8387877 -0.58048 -0.1209297
              treatWS  varietyF:day34  varietyF:day67
Vitvi18g02548 -0.05768038    0.2650136    0.2398368
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi18g02548    0.8559986    -0.1207098    0.2719429
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi18g02548    -0.6194148                -1.121847

```

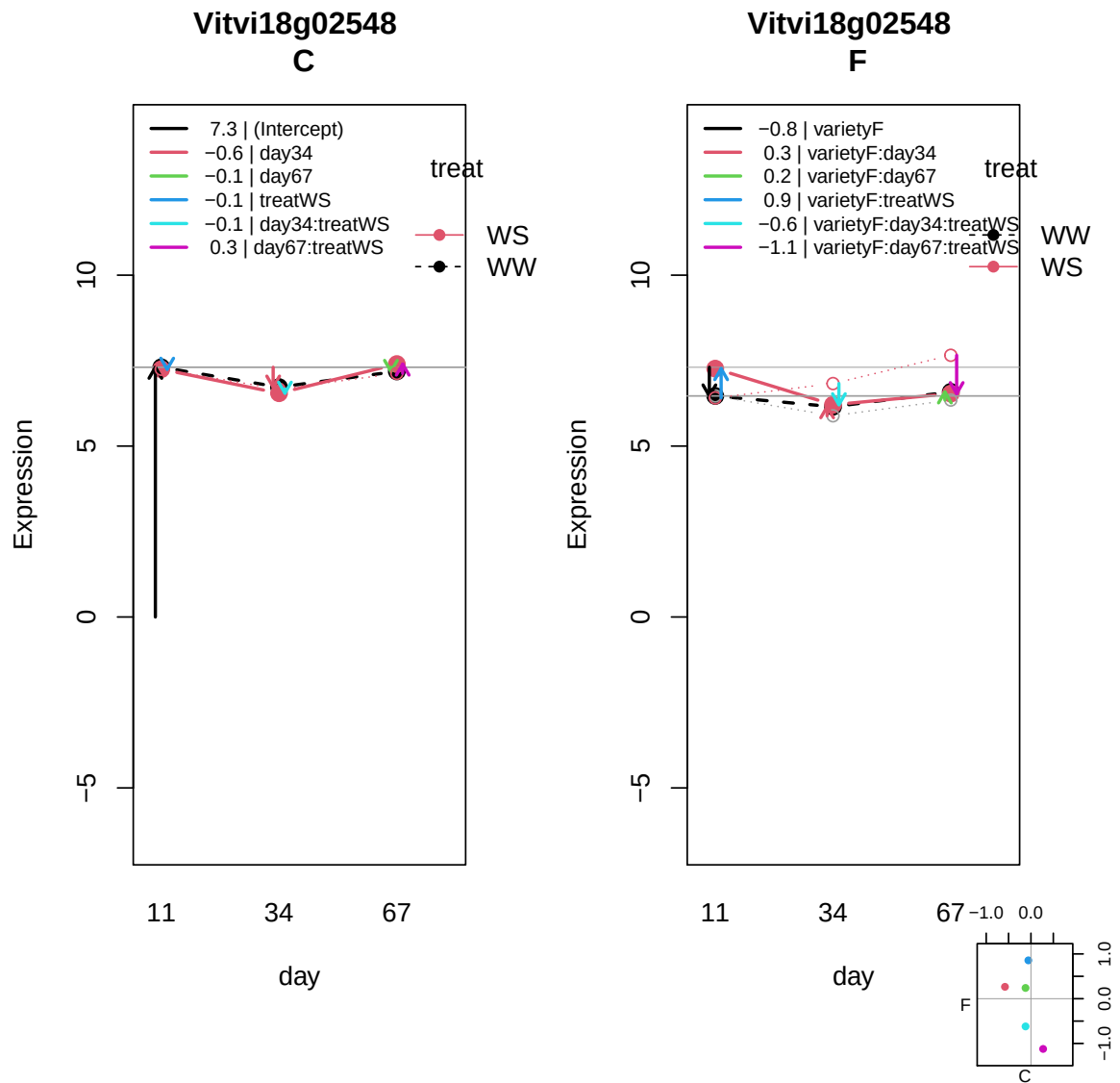
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

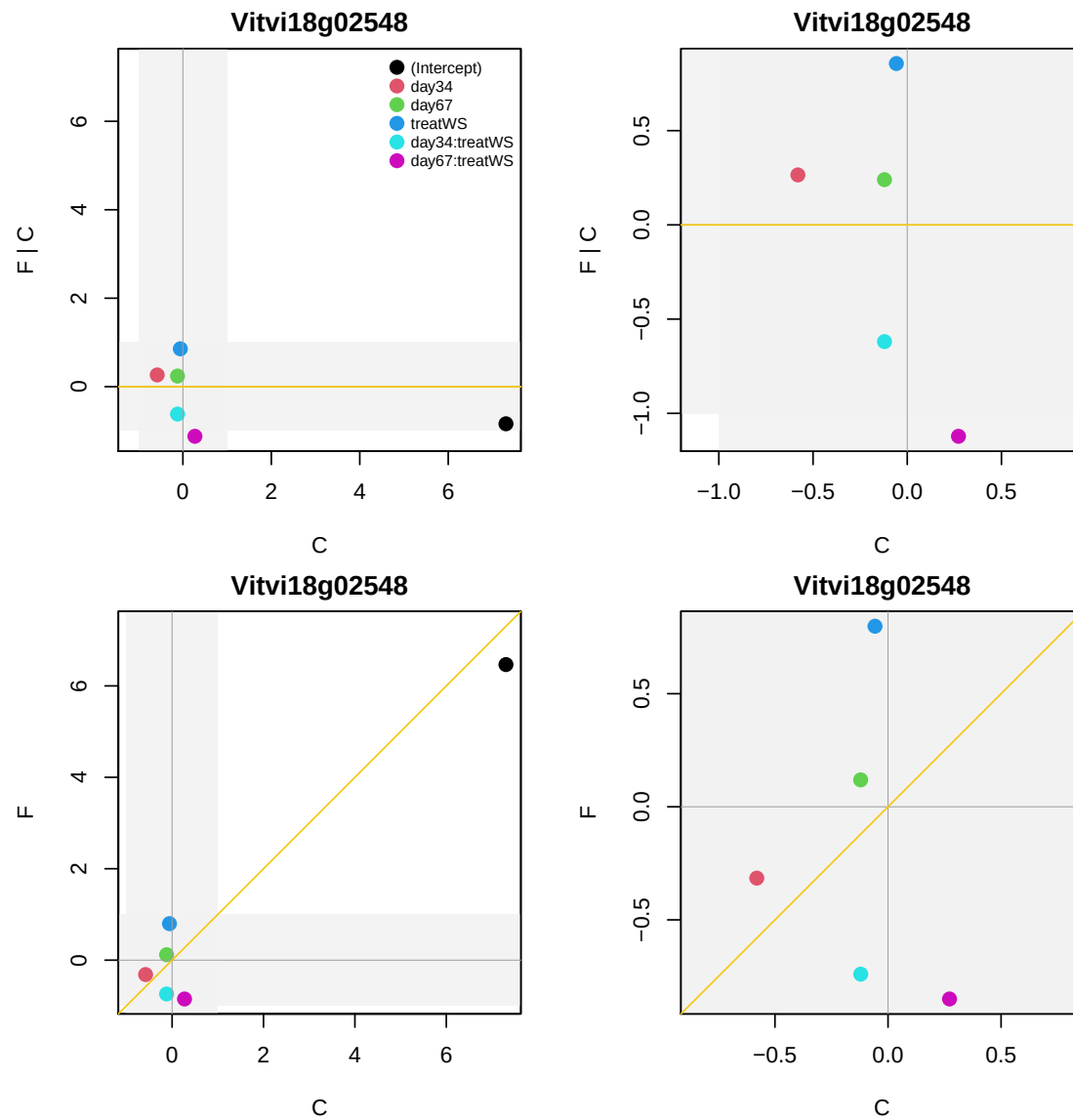


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

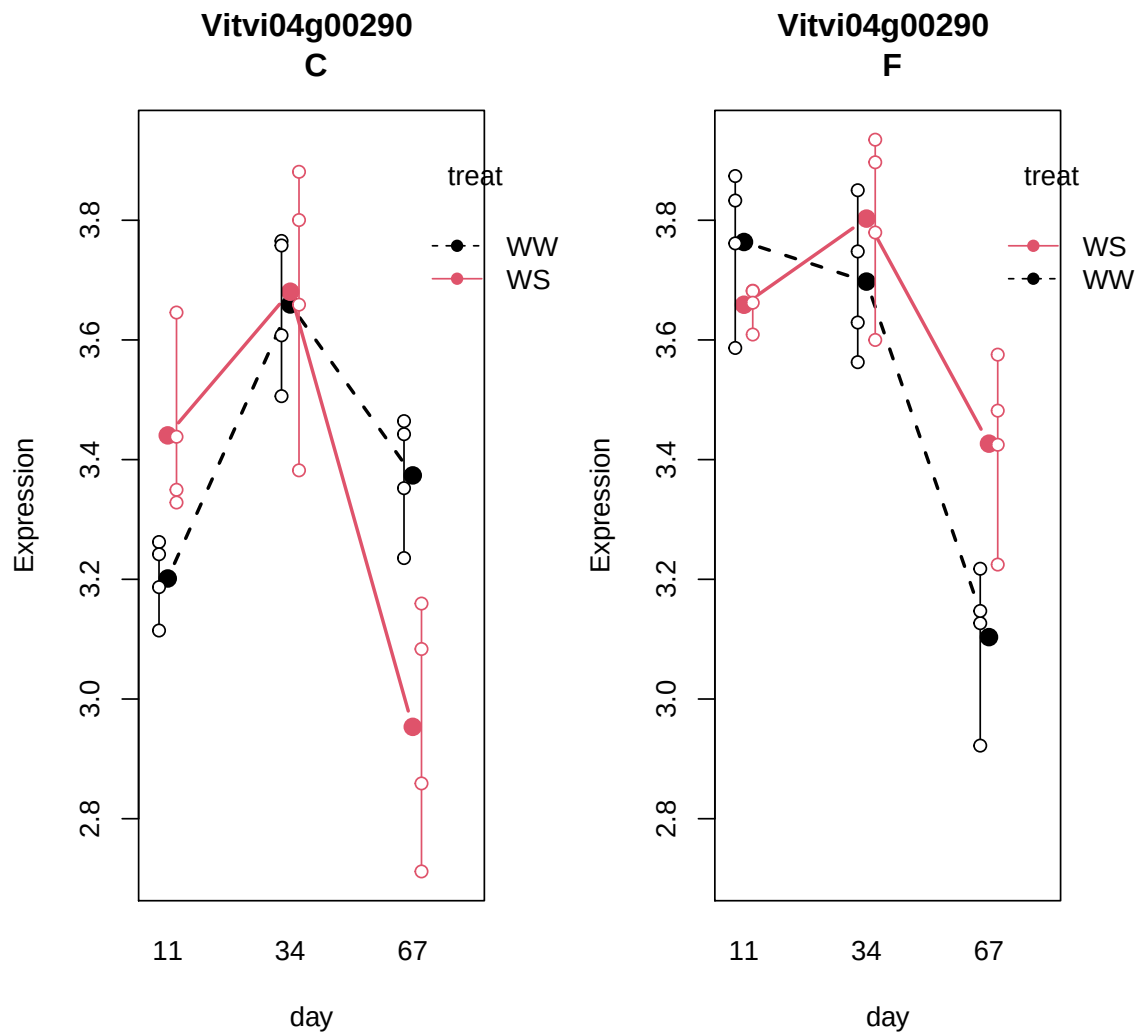
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



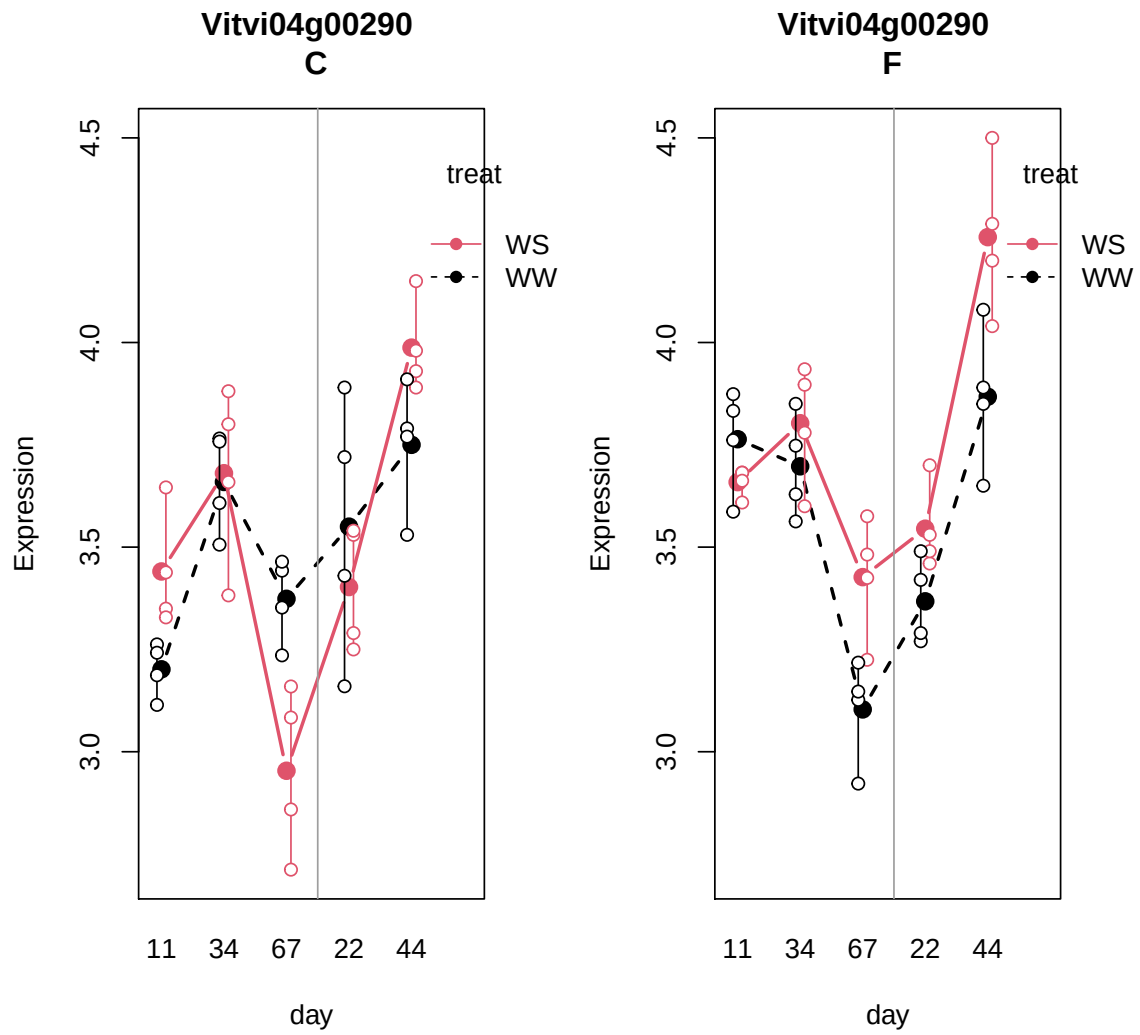
6.11.7 Vitvi04g00290

Coefficient varietyF:day67:treatWS for Vitvi04g00290.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi04g00290 1.087439 3.480137 5.306635 4.826987e-06
      adj.P.Val      B
Vitvi04g00290 0.009288349 3.981604
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```




```
> fit1[varname,]$coefficients
```

```

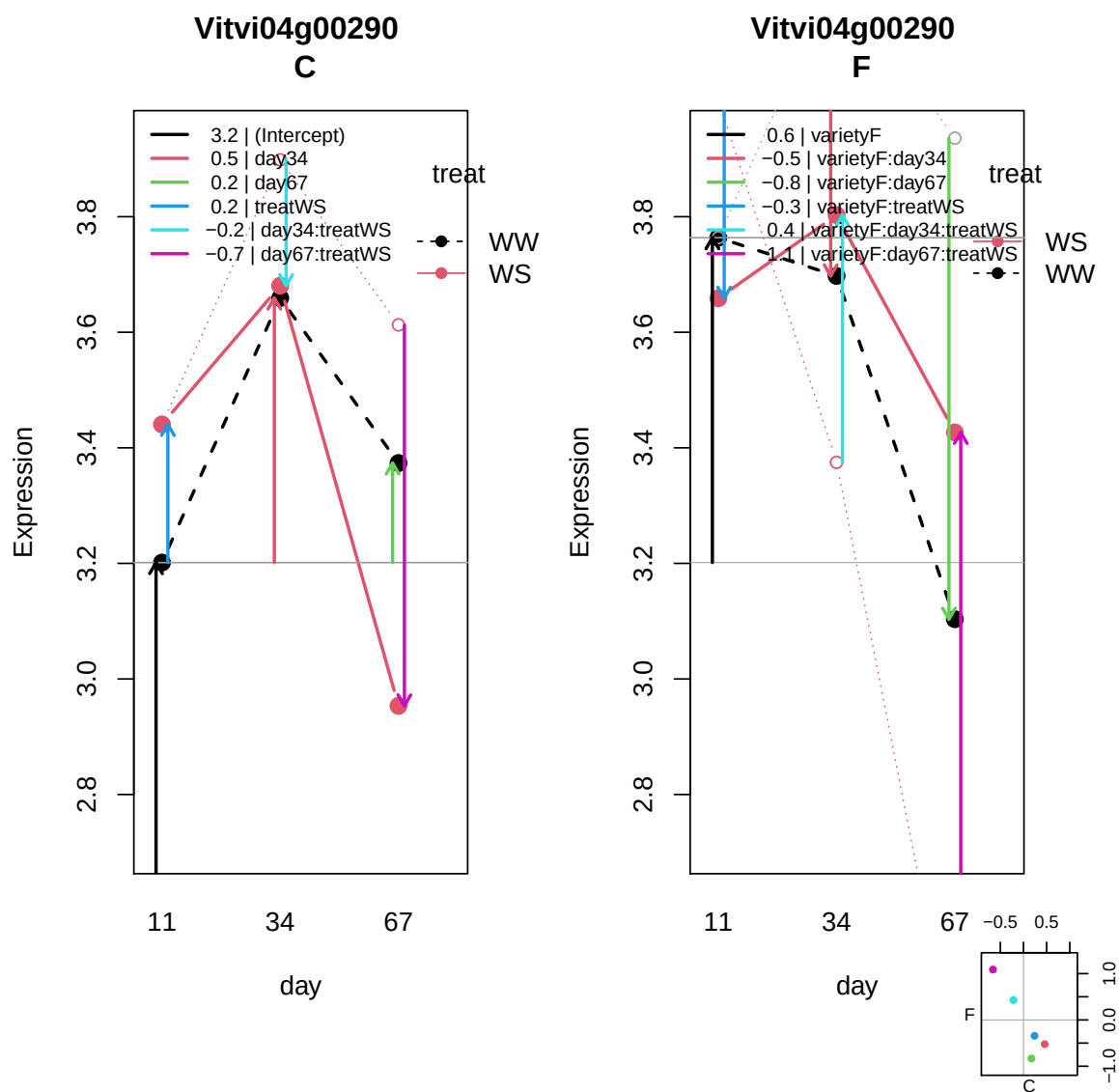
              (Intercept)  varietyF    day34    day67
Vitvi04g00290      3.201395 0.5622684 0.4578618 0.172266
              treatWS  varietyF:day34  varietyF:day67
Vitvi04g00290 0.2391043      -0.524043      -0.8325229
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi04g00290      -0.3439667      -0.2177961      -0.6592897
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi04g00290              0.4279241              1.087439

```

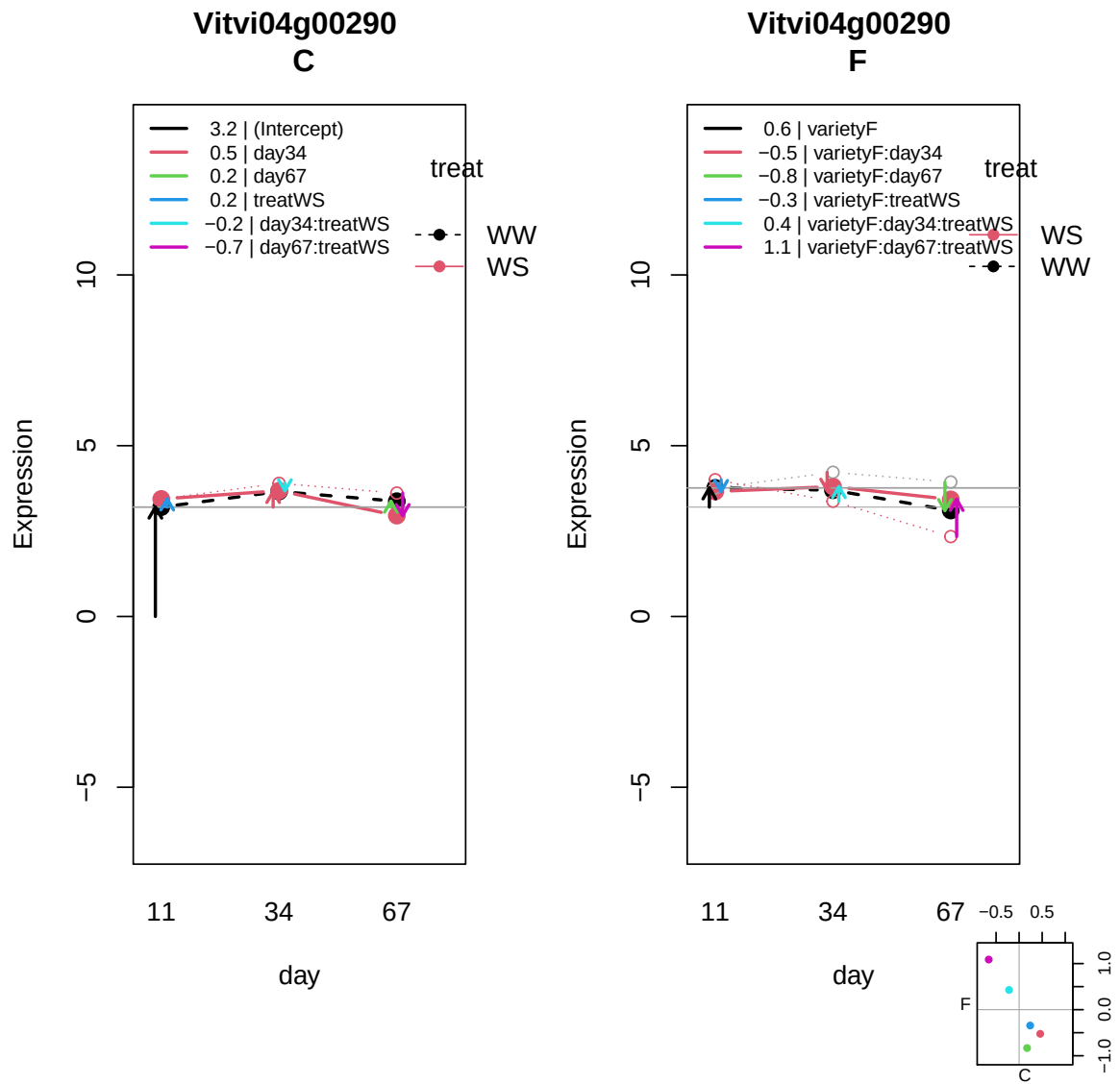
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

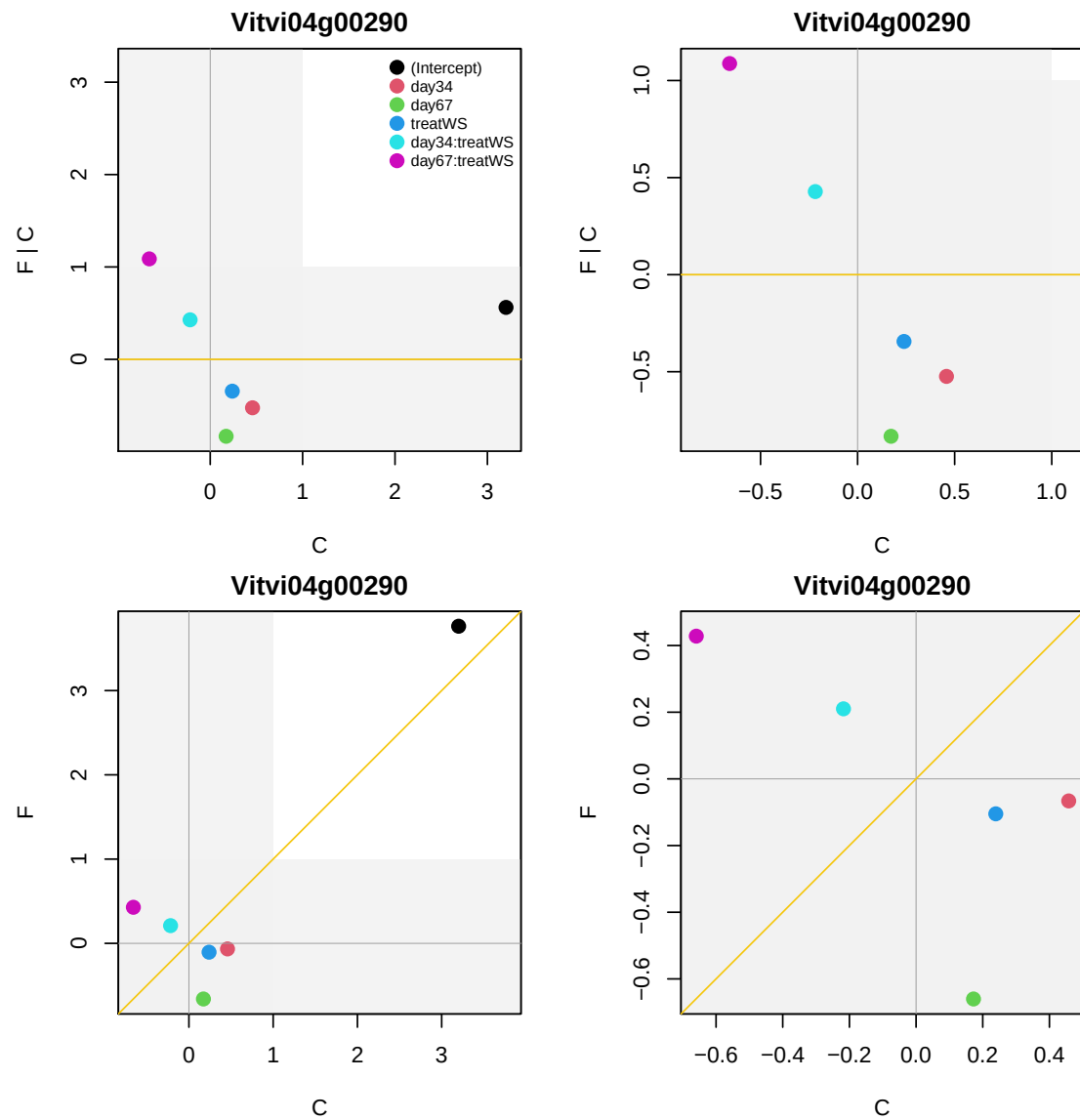


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

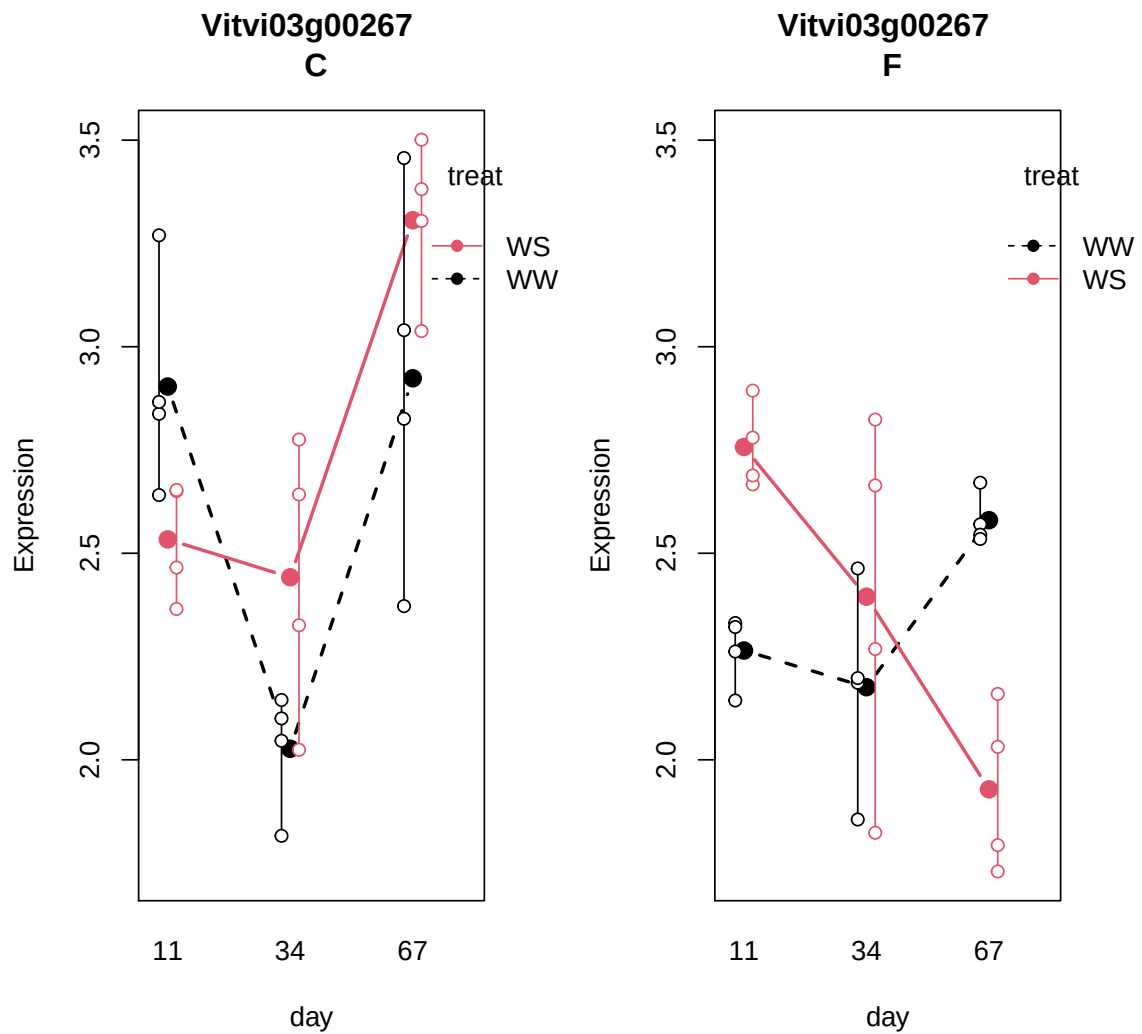
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



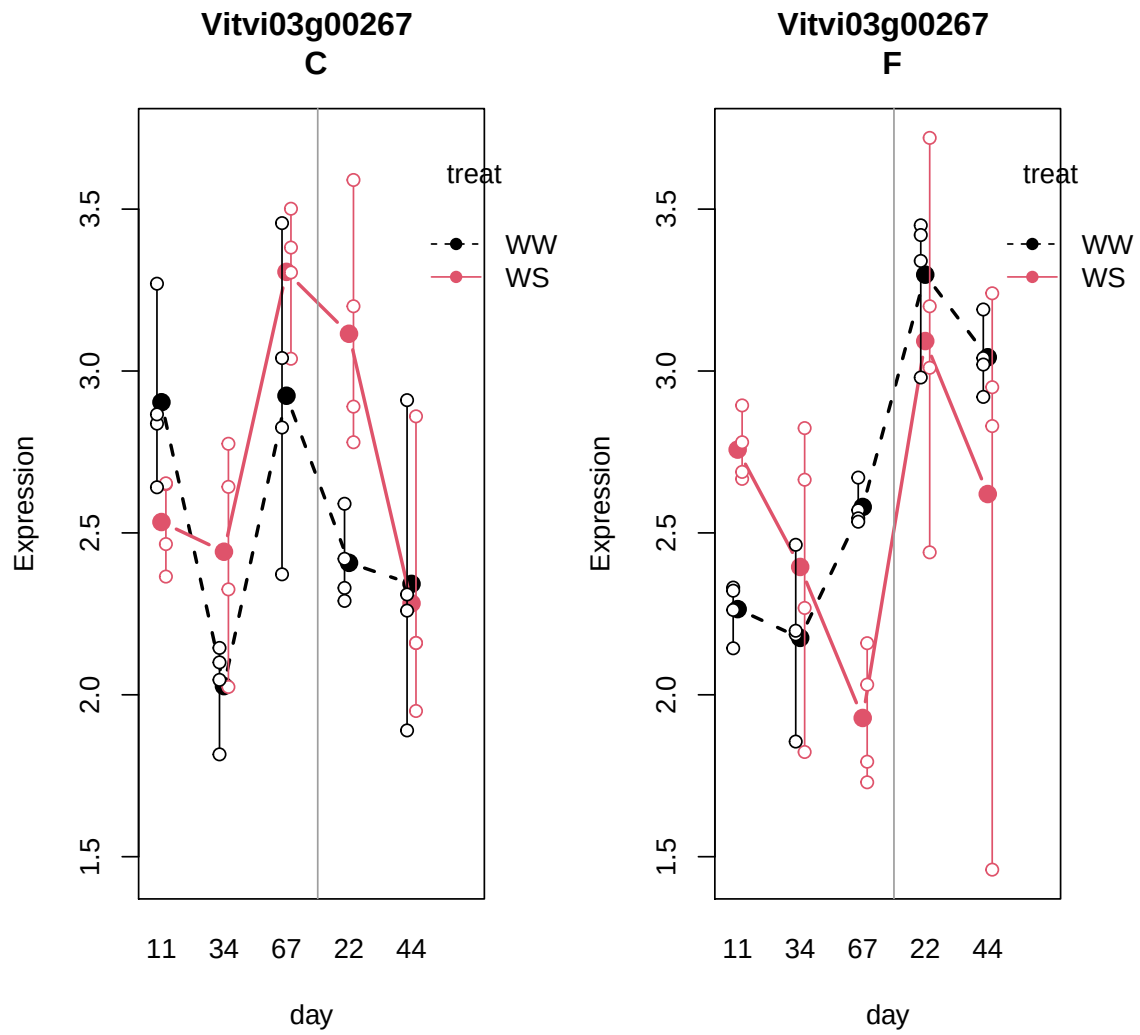
6.11.8 Vitvi03g00267

Coefficient varietyF:day67:treatWS for Vitvi03g00267.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi03g00267 -1.896814 2.519721 -5.303504 4.875134e-06
      adj.P.Val      B
Vitvi03g00267 0.009288349 3.97278
> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

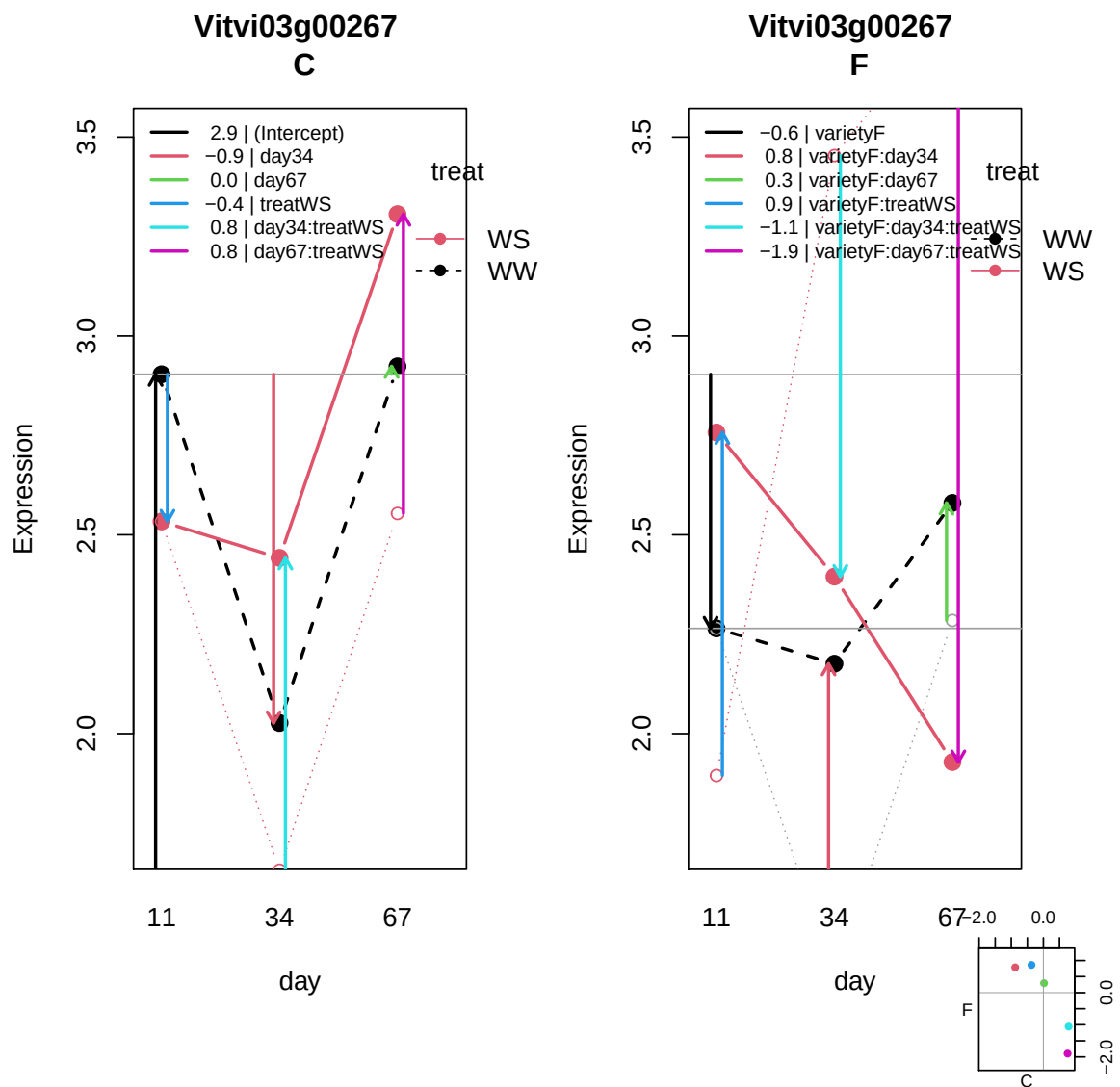
              (Intercept)    varietyF      day34      day67
Vitvi03g00267      2.903581 -0.6389835 -0.8768198 0.02003062
              treatWS varietyF:day34 varietyF:day67
Vitvi03g00267 -0.3699818      0.7880069      0.2954646
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi03g00267      0.8626162      0.785076      0.7525721
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi03g00267      -1.058637      -1.896814

```

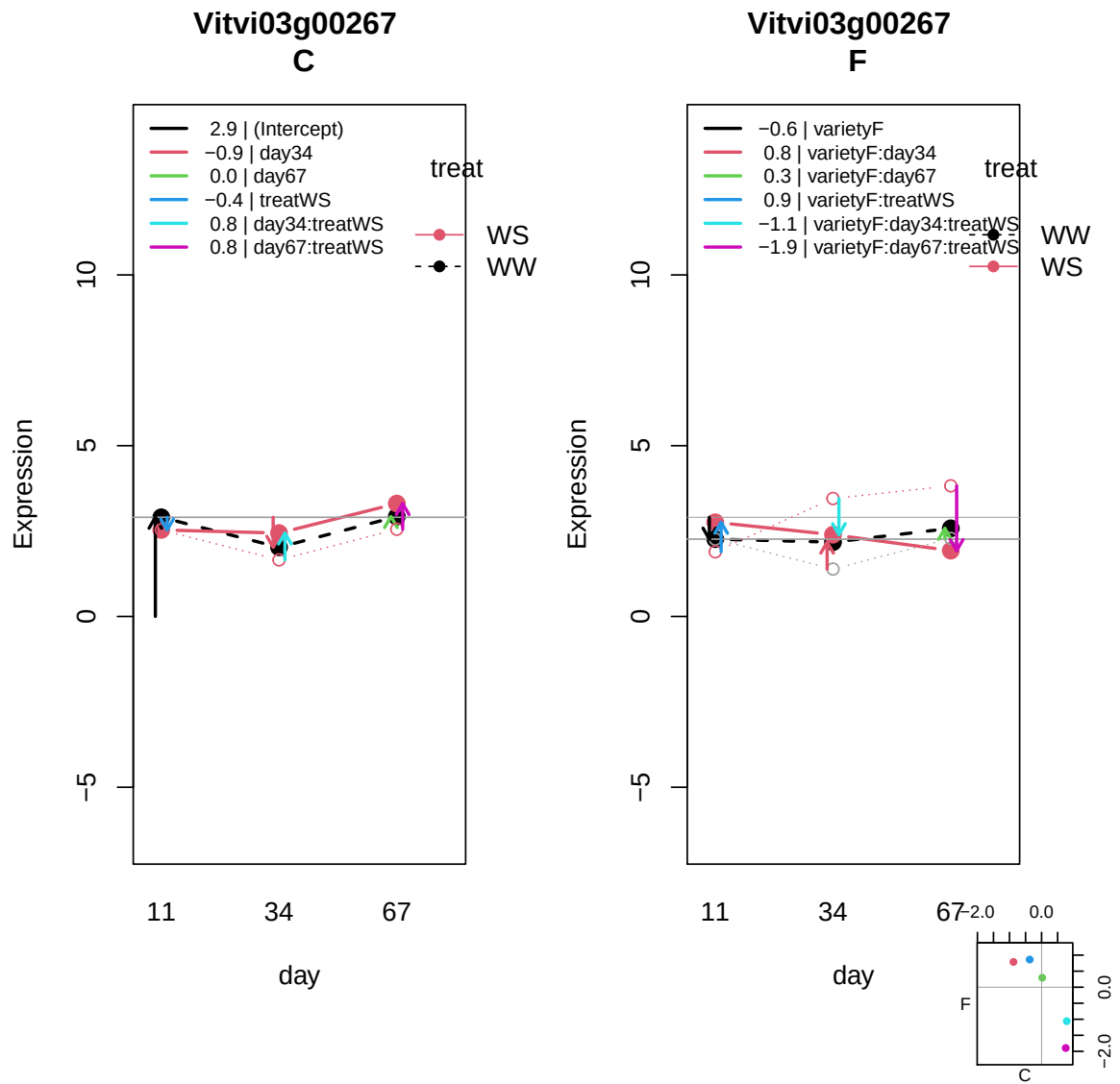
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

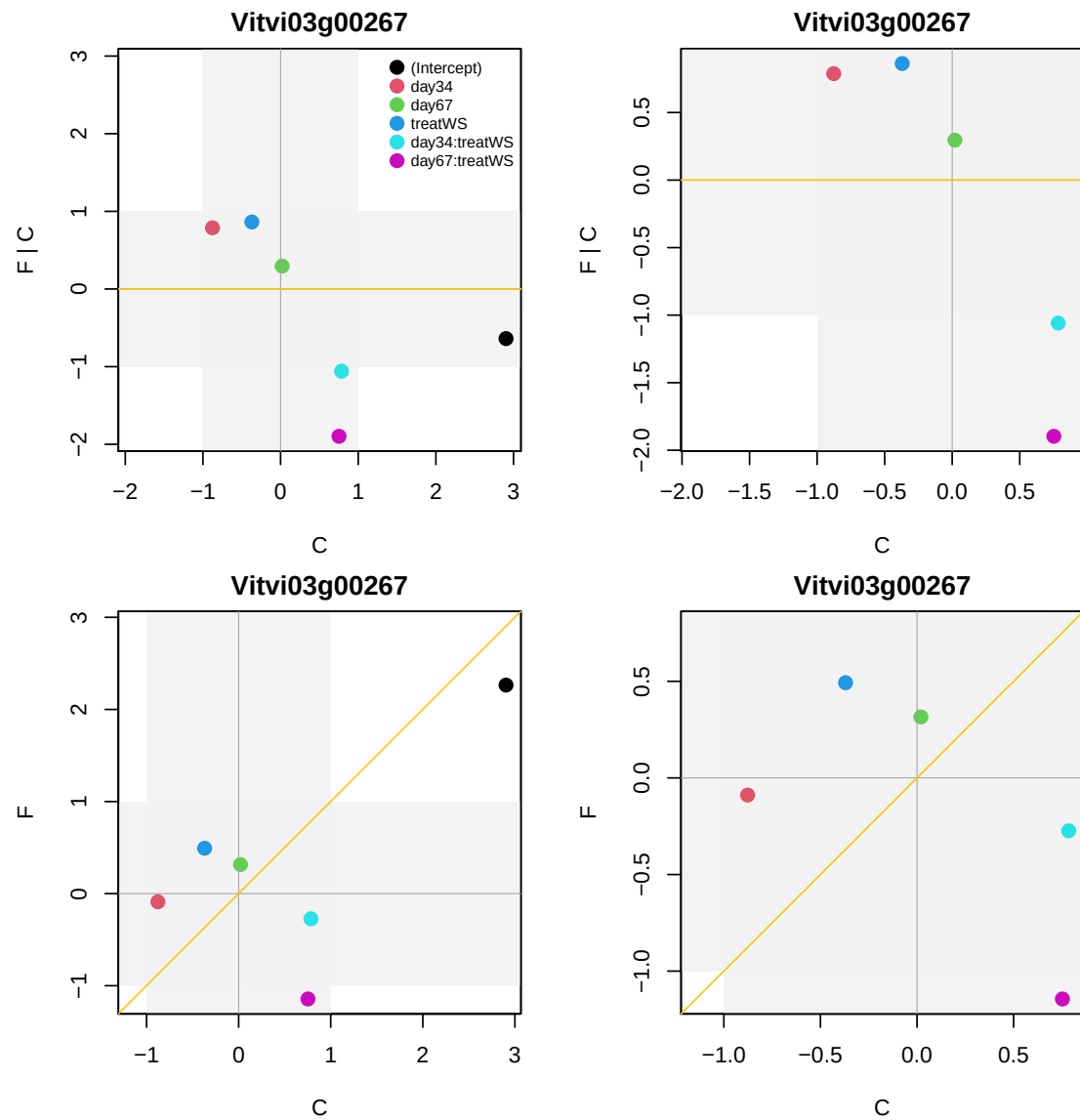


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

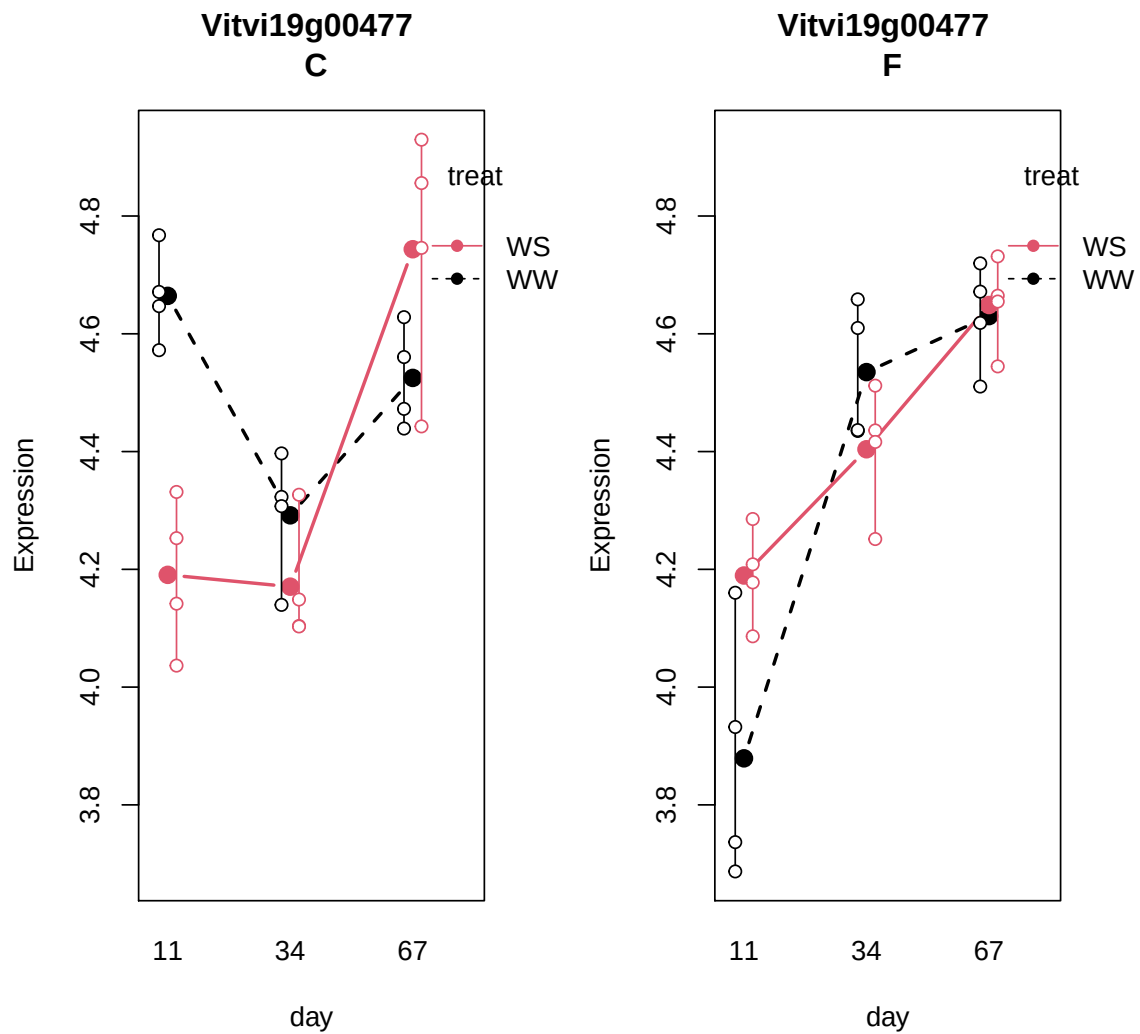
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



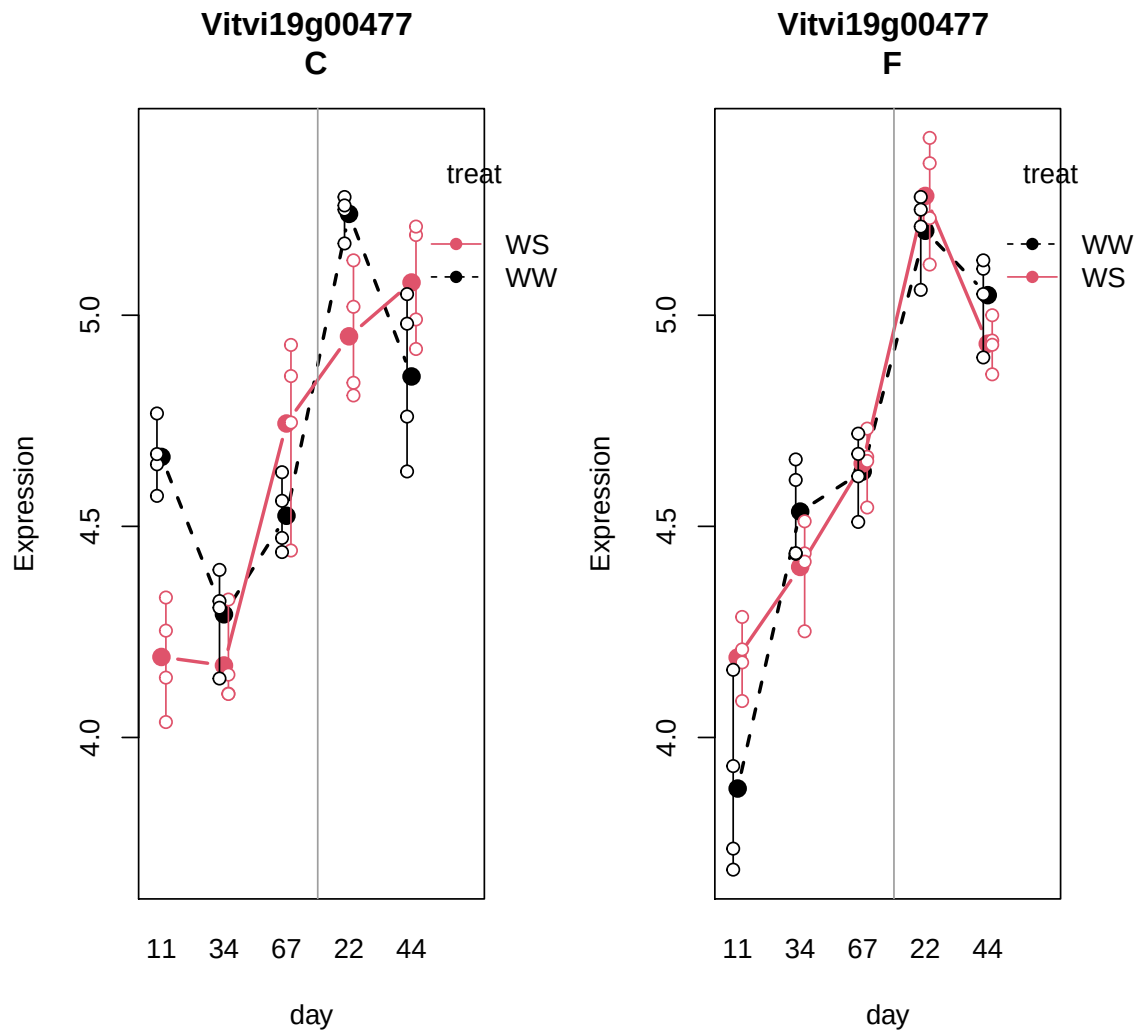
6.11.9 Vitvi19g00477

Coefficient varietyF:day67:treatWS for Vitvi19g00477.

```
> tt[varname,]
              logFC AveExpr          t      P.Value
Vitvi19g00477 -0.9838641 4.40603 -5.248062 5.811461e-06
              adj.P.Val          B
Vitvi19g00477 0.009317083 3.816571
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

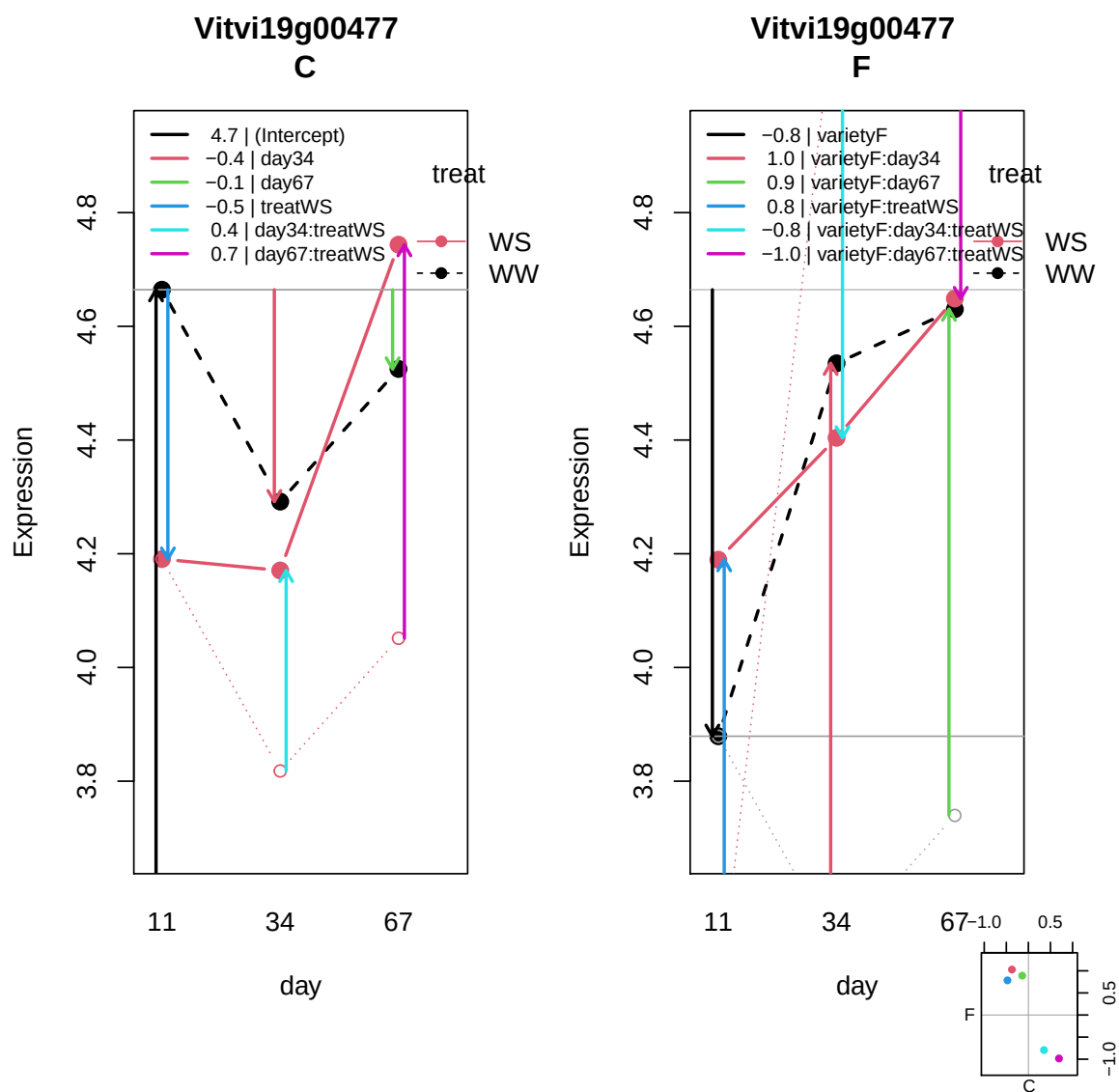
              (Intercept)  varietyF      day34      day67
Vitvi19g00477      4.66442 -0.785371 -0.3727075 -0.139342
              treatWS varietyF:day34 varietyF:day67
Vitvi19g00477 -0.4737632      1.028603      0.8903223
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi19g00477      0.7842366      0.3526084      0.6922593
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi19g00477      -0.79411      -0.9838641

```

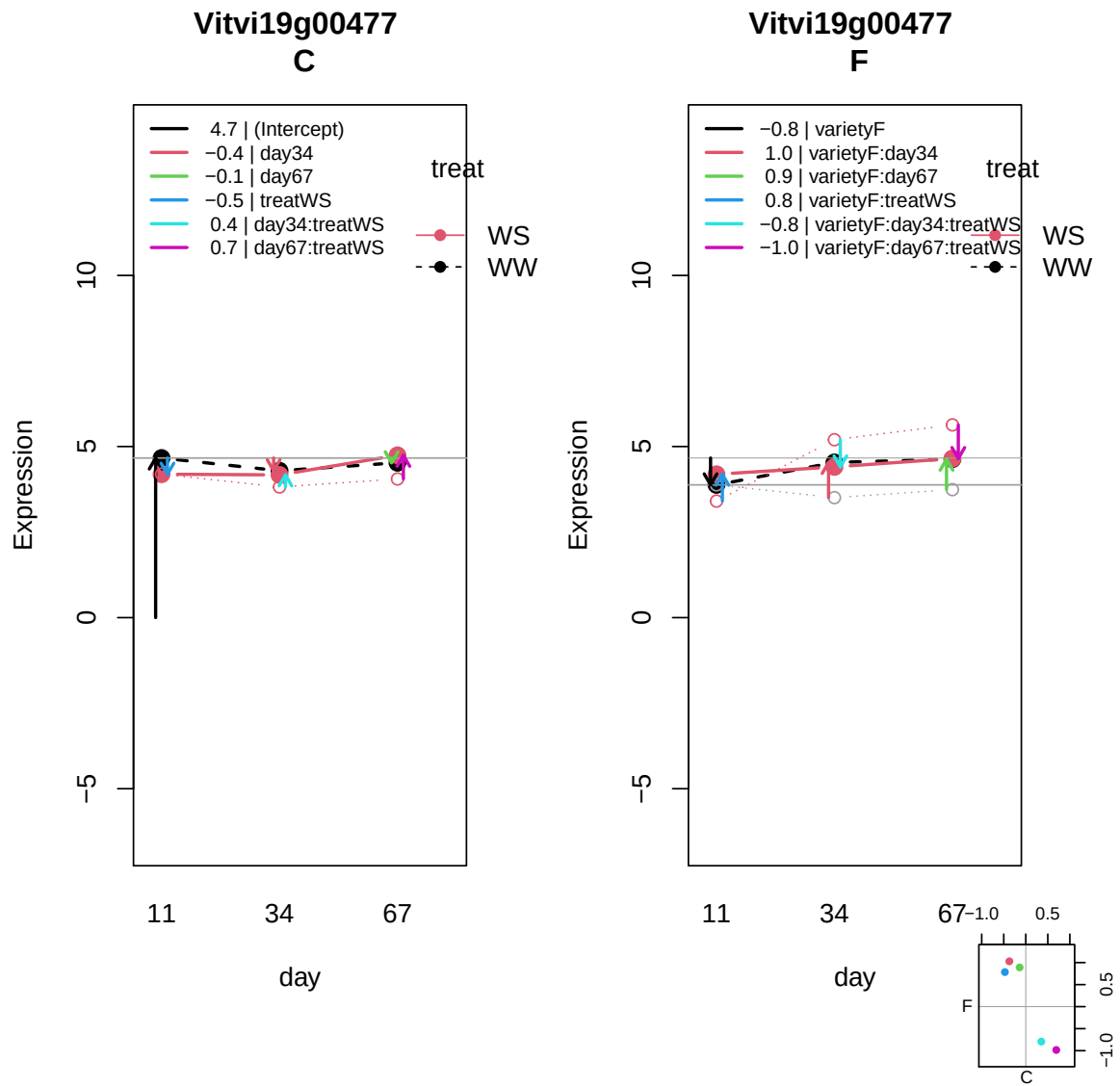
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

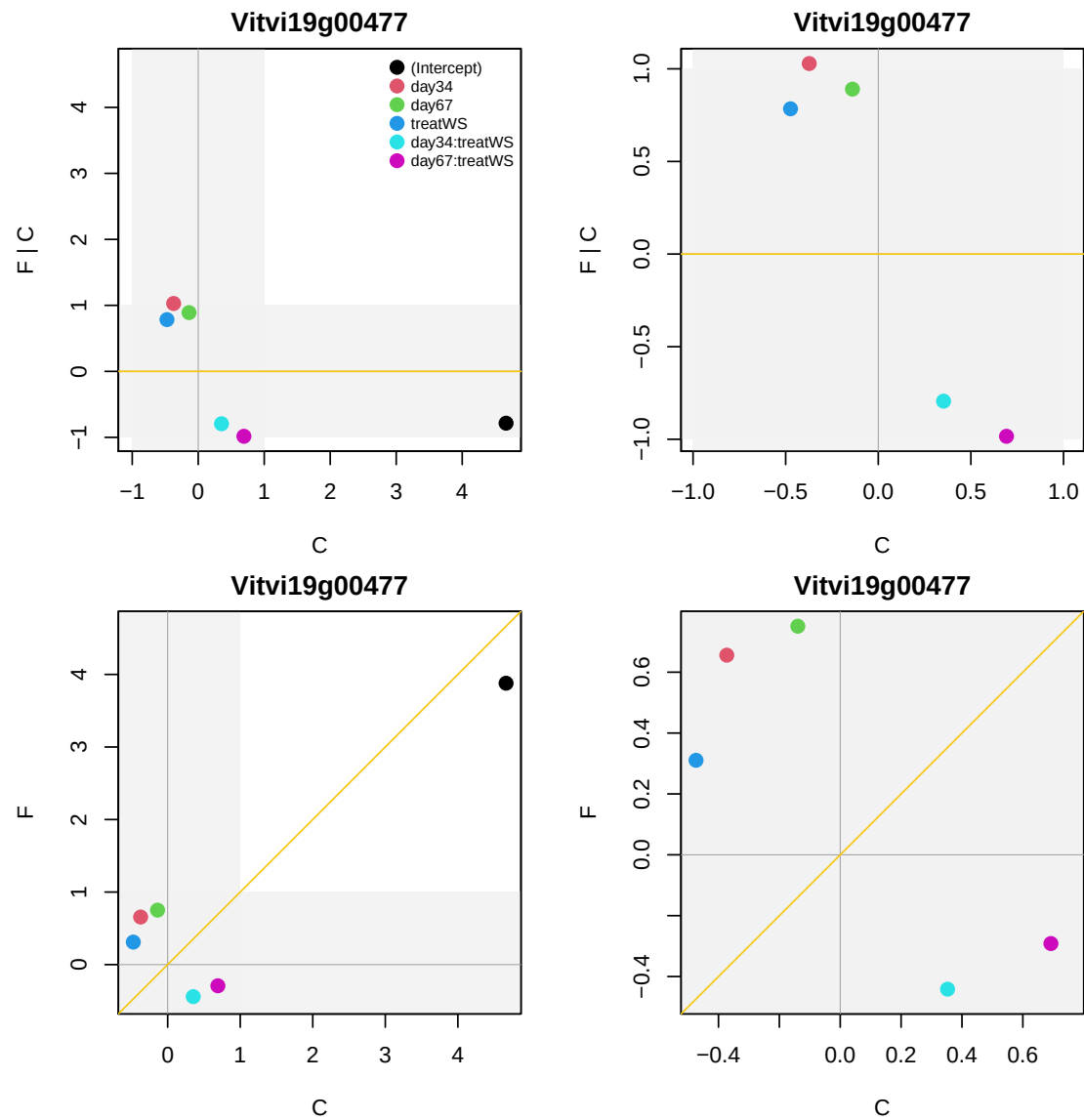


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

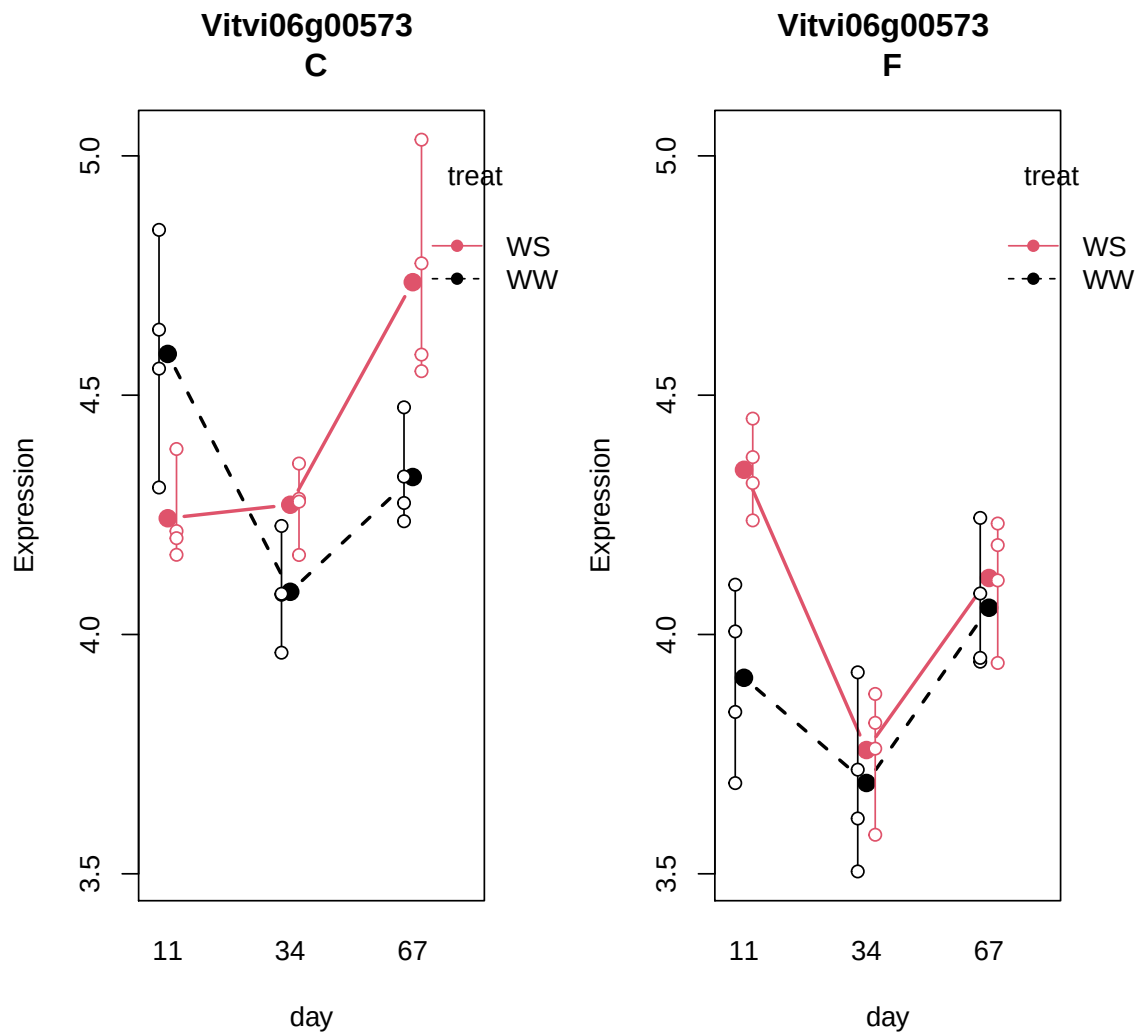


6.11.10 Vitvi06g00573

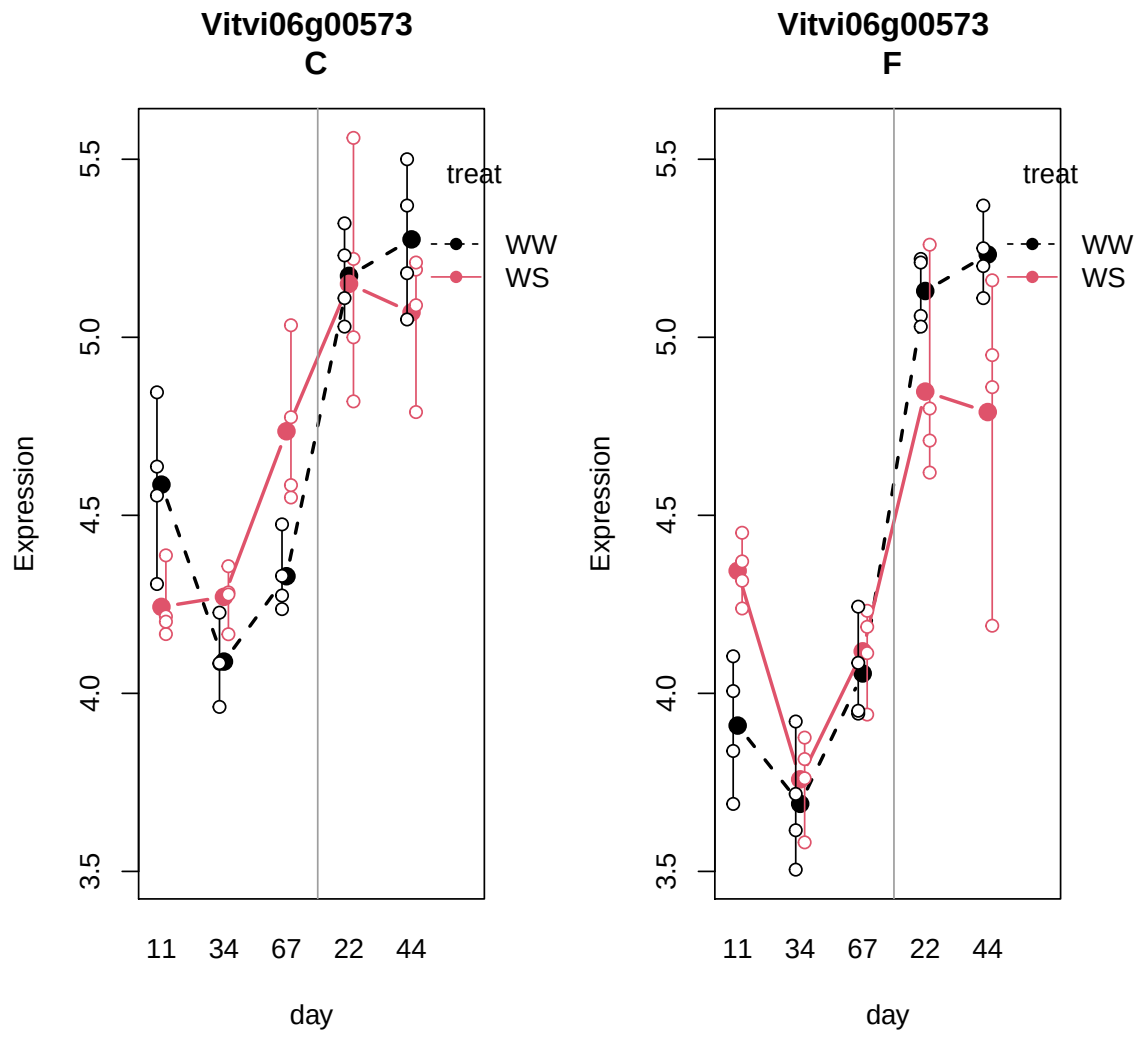
Coefficient varietyF:day67:treatWS for Vitvi06g00573.

```
> tt[varname,]
               logFC  AveExpr          t      P.Value
Vitvi06g00573 -1.122871  4.177512 -5.232098 6.112769e-06
               adj.P.Val          B
Vitvi06g00573 0.009317083  3.771618

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

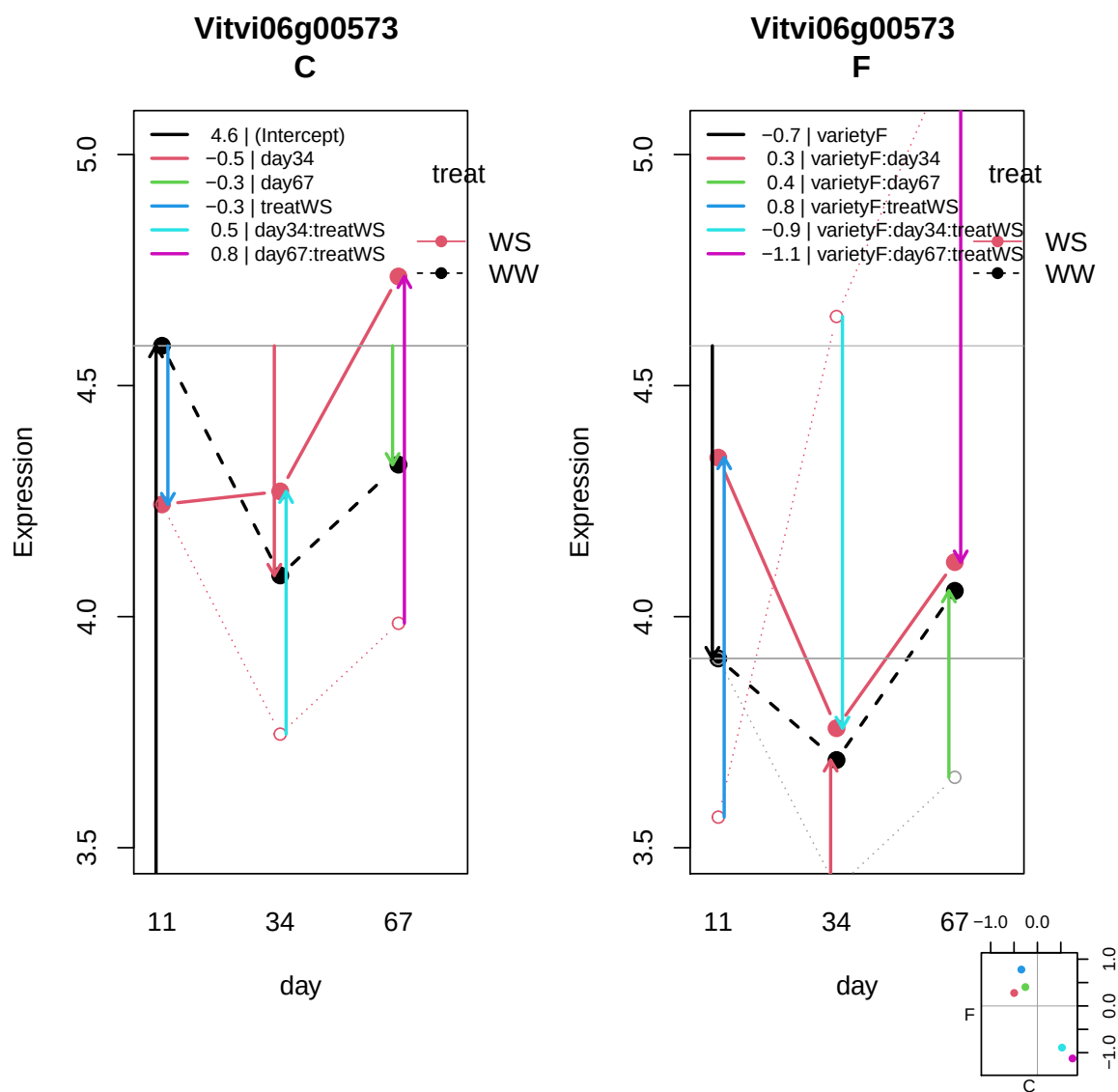
              (Intercept)    varietyF      day34      day67
Vitvi06g00573      4.5862 -0.6766772 -0.4970012 -0.2572256
              treatWS varietyF:day34 varietyF:day67
Vitvi06g00573 -0.3433686      0.2772267      0.4035675
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi06g00573      0.7779406      0.5252232      0.7504635
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi06g00573      -0.8909893      -1.122871

```

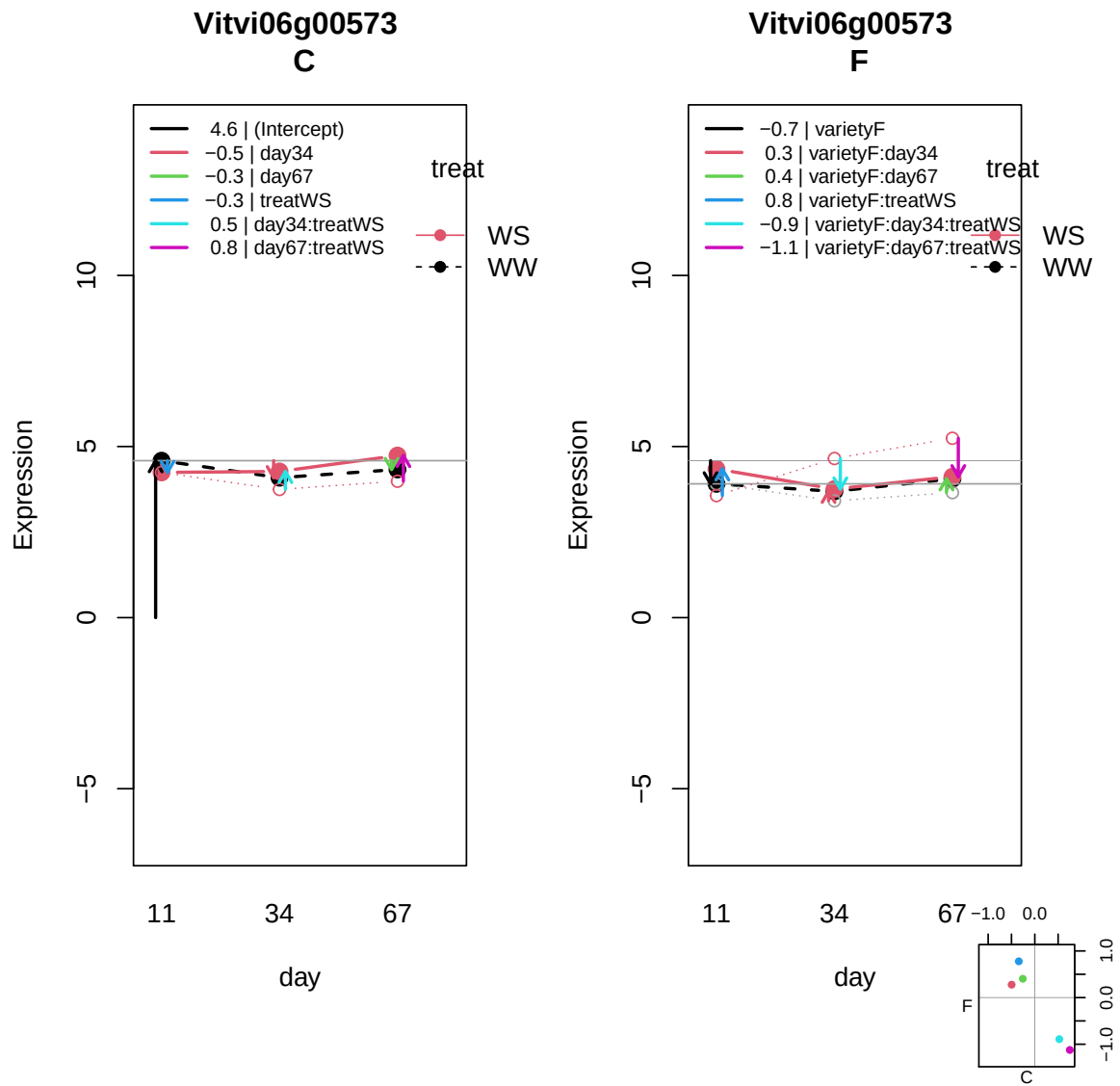
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

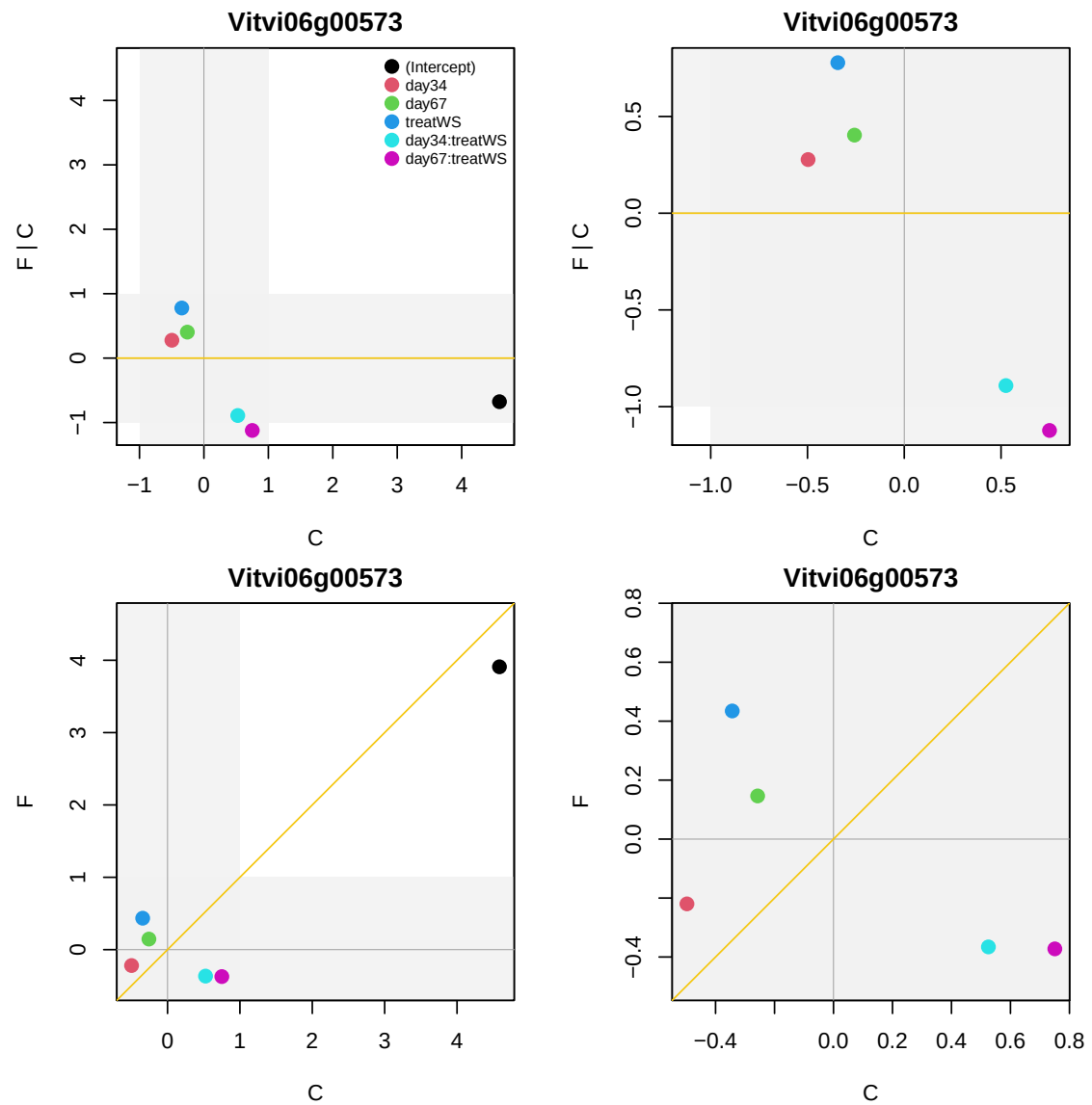



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



```
> which <- ncol(fit1$coefficients)
> cname <- colnames(fit1$coefficients)[which]
> cname
[1] "varietyF:day67:treatWS"
```

6.12 varietyF:day67:treatWS

```
> which <- ncol(fit1[1:6,]$coefficients)
> which

[1] 12

> #comps[8,]
> tt <- topTable(fit1,coef=which, number=Inf)
> alpha <- 0.05
> table(tt$adj.P.Val < alpha)
```

```
FALSE TRUE
15118  124
```

```
> head(tt)
```

	logFC	AveExpr	t	P.Value
Vitvi18g00412	1.192538	7.790681	5.862035	8.244817e-07
Vitvi04g01151	-1.719143	4.610617	-5.722900	1.284651e-06
Vitvi04g00516	-1.199862	4.940625	-5.626454	1.746680e-06
Vitvi18g02996	1.816026	5.423452	5.578034	2.037797e-06
Vitvi04g00444	1.030873	3.650504	5.434365	3.218083e-06
Vitvi18g02548	-1.121847	6.801621	-5.376667	3.865282e-06

	adj.P.Val	B
Vitvi18g00412	0.007765025	5.549510
Vitvi04g01151	0.007765025	5.156719
Vitvi04g00516	0.007765025	4.884319
Vitvi18g02996	0.007765025	4.747558
Vitvi04g00444	0.009288349	4.341895
Vitvi18g02548	0.009288349	4.179087

Expressions in exprs, phenodata in pd

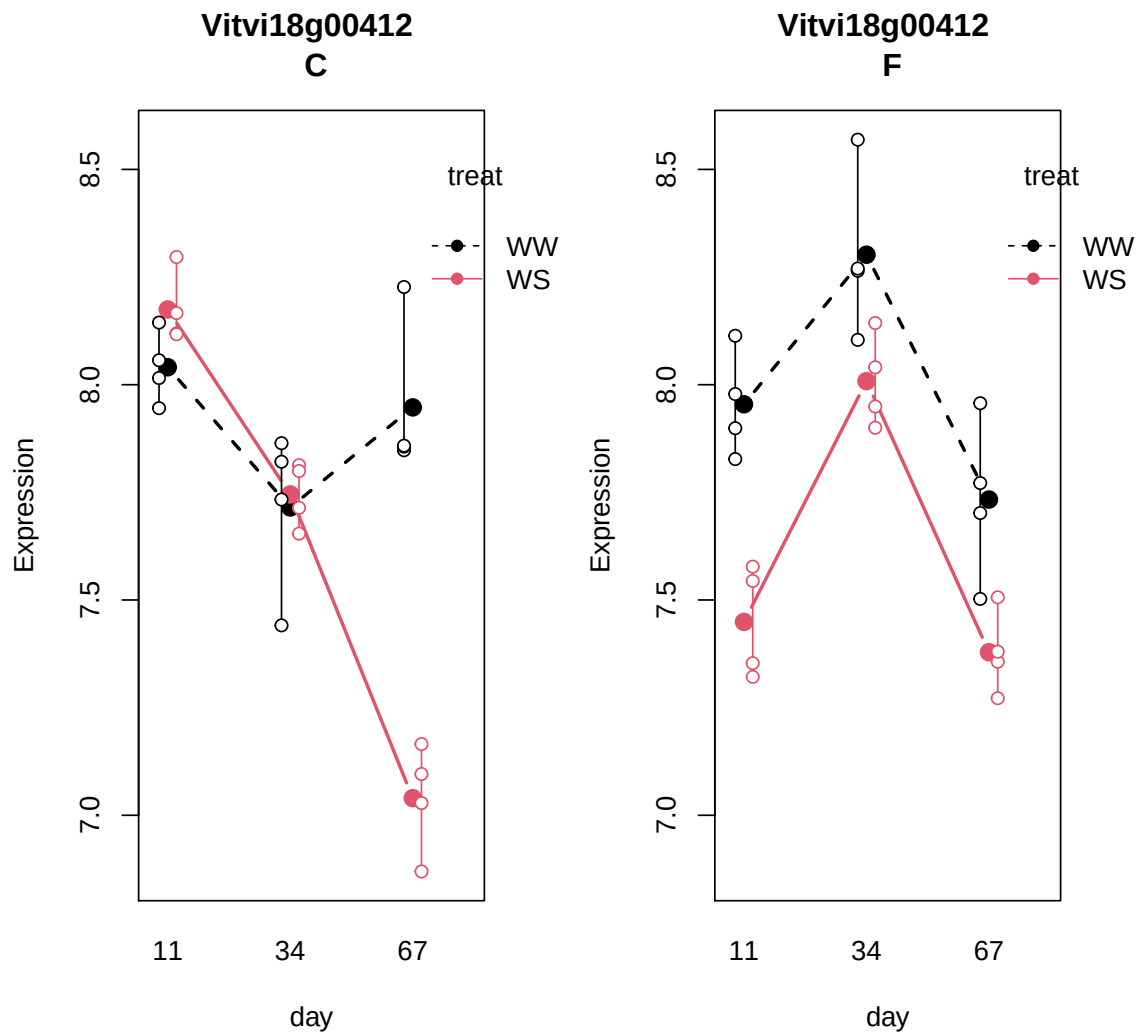
```
> out <- ""
> filter <- tt$adj.P.Val < alpha
> for ( varname in rownames(tt)[filter])
+ out <- paste(out,knit_child("20aa_interaction-plots.rnw",quiet=TRUE))
```

```
Warning in doTryCatch(return(expr), name, parentenv, handler): zero-length ar
Warning in doTryCatch(return(expr), name, parentenv, handler): zero-length ar
Warning in doTryCatch(return(expr), name, parentenv, handler): zero-length ar
Warning in doTryCatch(return(expr), name, parentenv, handler): zero-length ar
Warning in doTryCatch(return(expr), name, parentenv, handler): zero-length ar
Warning in doTryCatch(return(expr), name, parentenv, handler): zero-length ar
Warning in doTryCatch(return(expr), name, parentenv, handler): zero-length ar
```

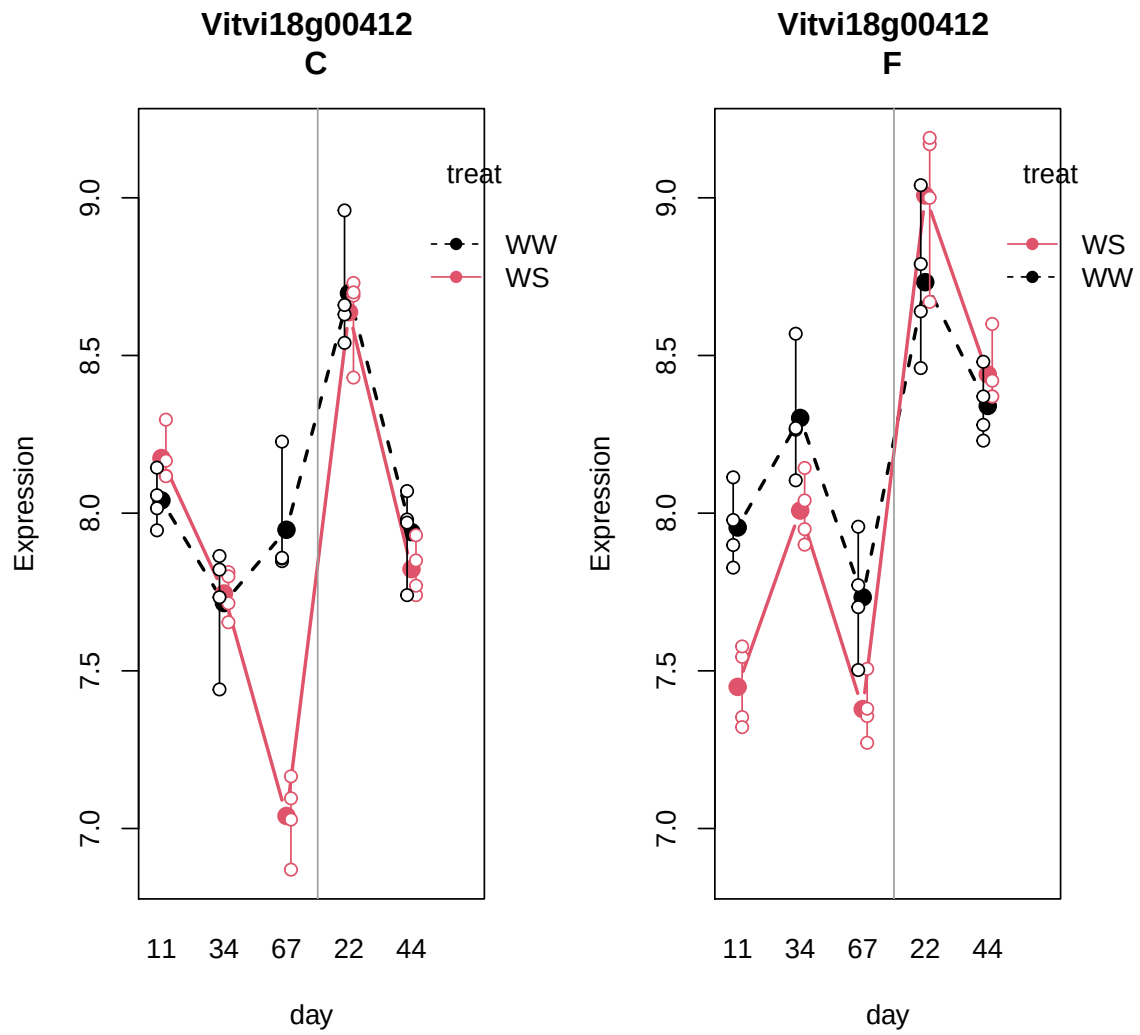
6.12.1 Vitvi18g00412

Coefficient varietyF:day67:treatWS for Vitvi18g00412.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi18g00412 1.192538 7.790681 5.862035 8.244817e-07
      adj.P.Val      B
Vitvi18g00412 0.007765025 5.54951
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

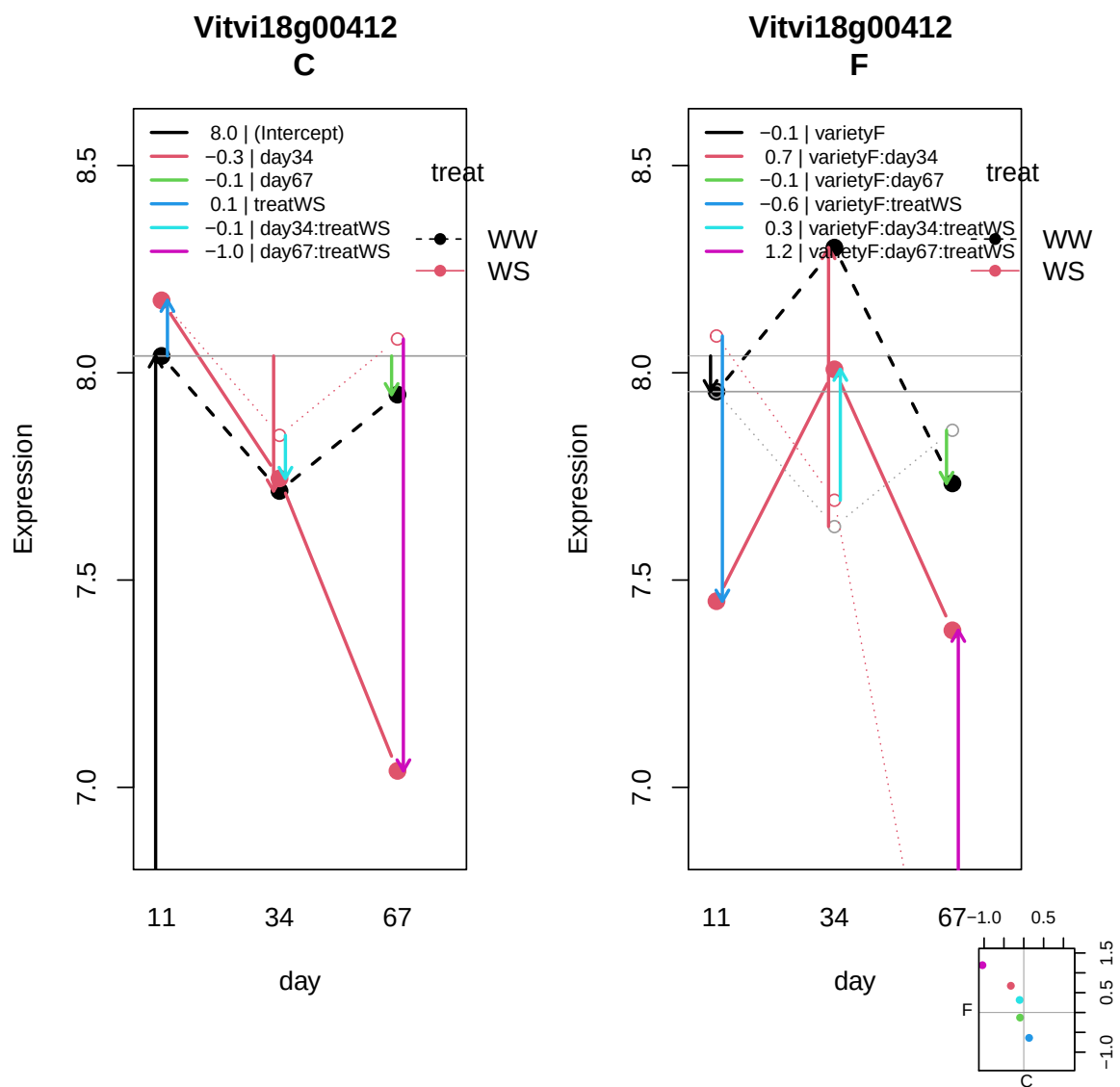
              (Intercept)      varietyF      day34
Vitvi18g00412      8.040546 -0.08600379 -0.3256205
              day67      treatWS varietyF:day34
Vitvi18g00412 -0.09324598  0.1341617      0.6729616
              varietyF:day67 varietyF:treatWS day34:treatWS
Vitvi18g00412      -0.128028      -0.6396099      -0.1038779
              day67:treatWS varietyF:day34:treatWS
Vitvi18g00412      -1.041682      0.315688
              varietyF:day67:treatWS
Vitvi18g00412      1.192538

```

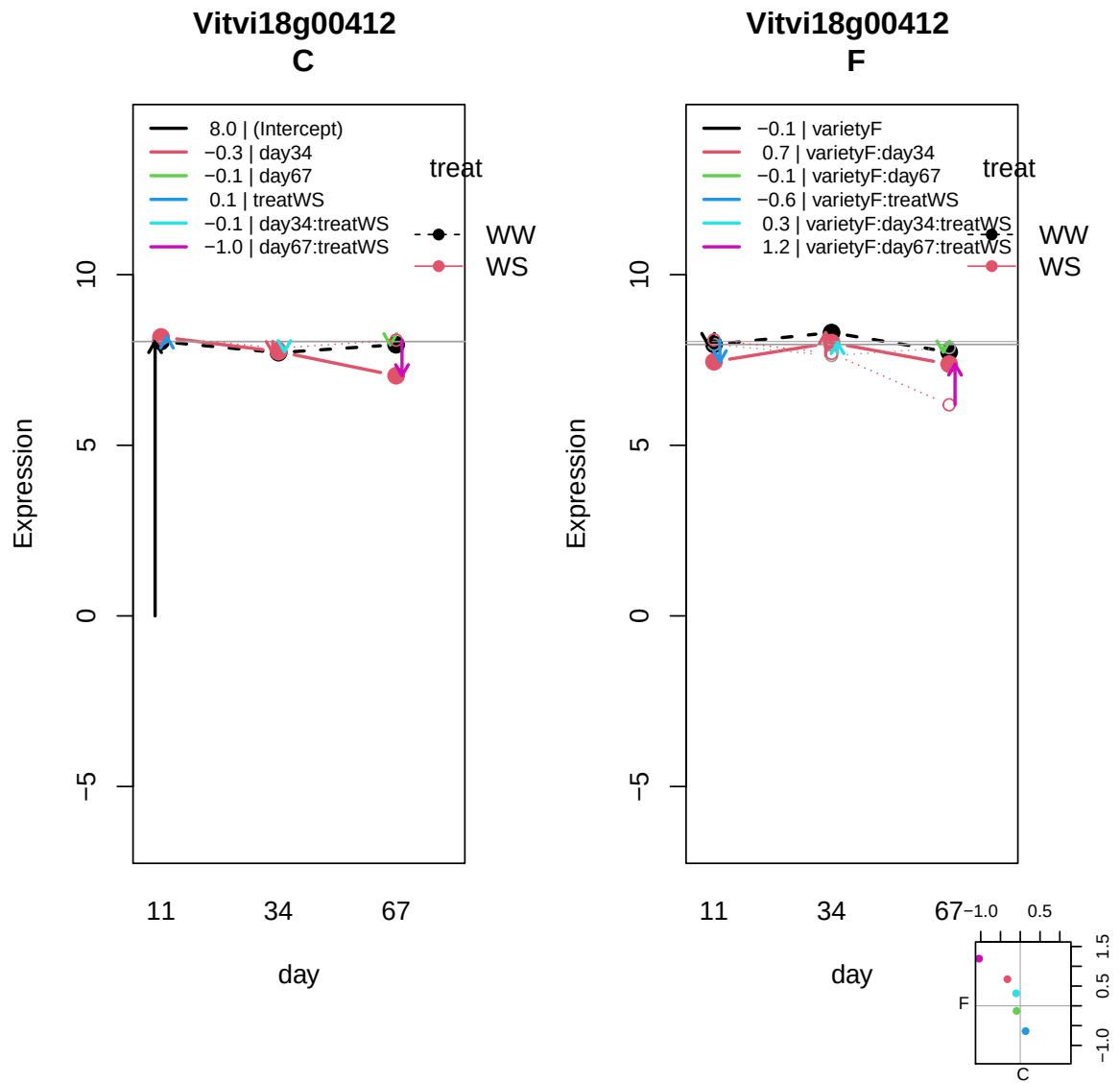
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

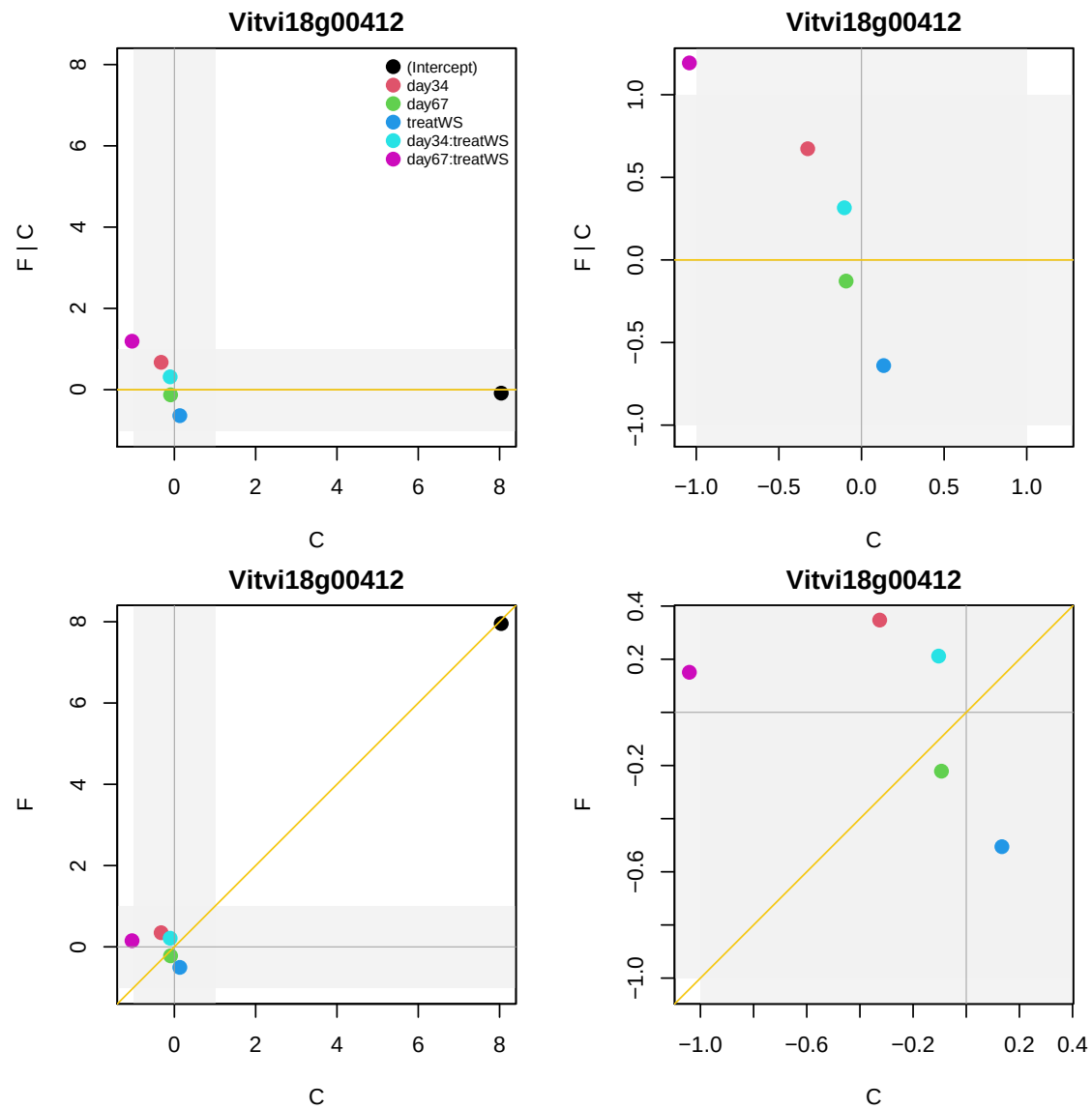


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

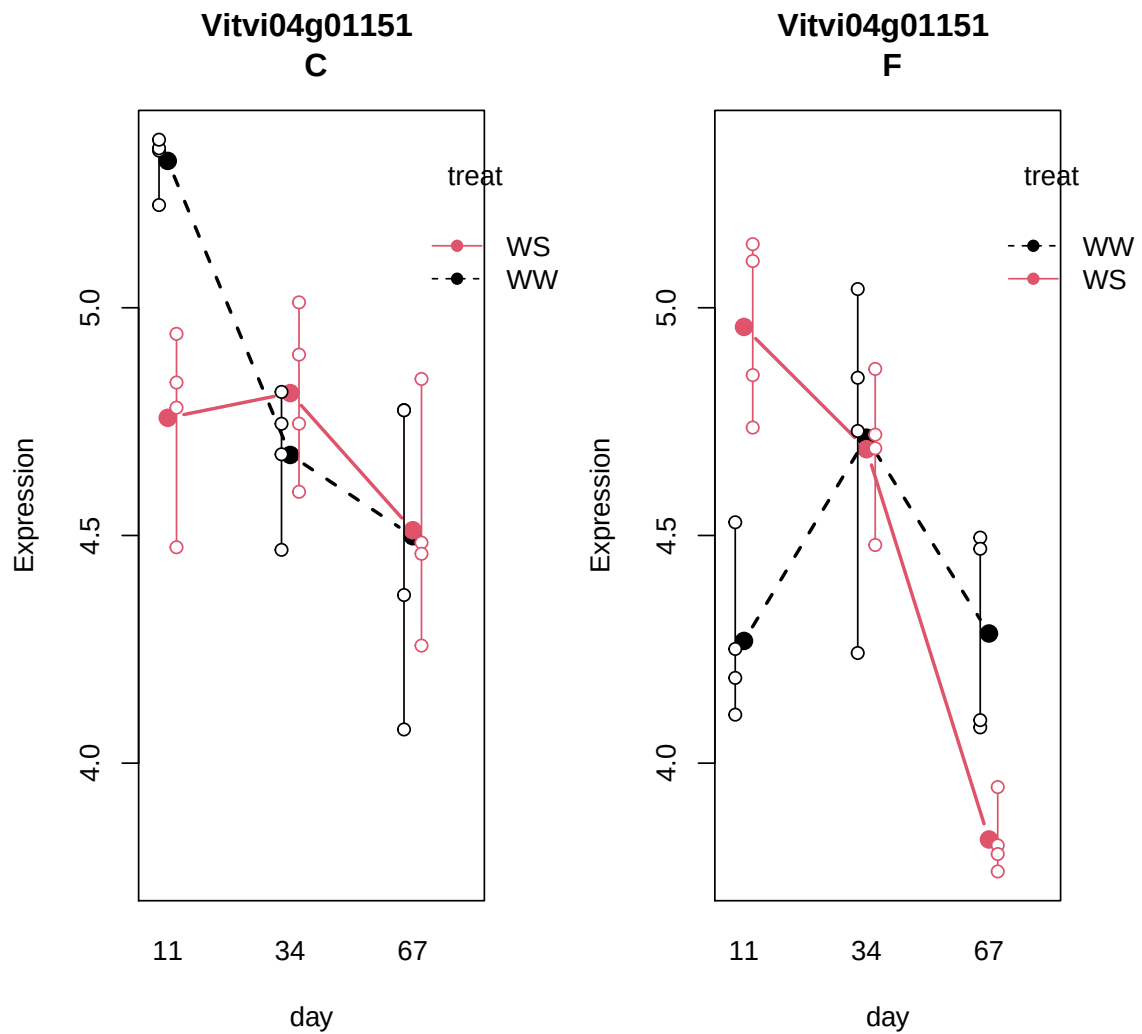


6.12.2 Vitvi04g01151

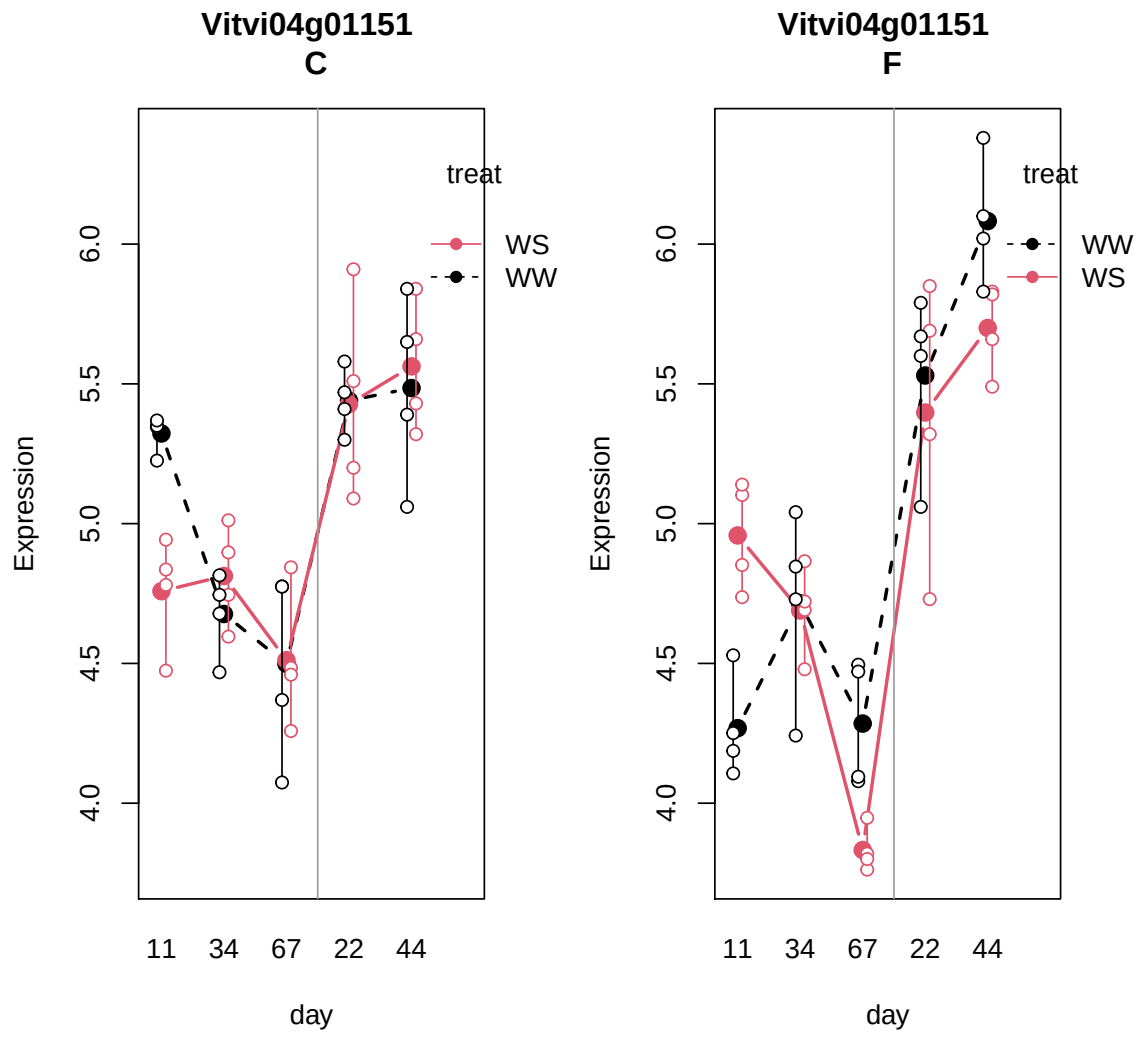
Coefficient varietyF:day67:treatWS for Vitvi04g01151.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi04g01151 -1.719143 4.610617 -5.7229 1.284651e-06
      adj.P.Val      B
Vitvi04g01151 0.007765025 5.156719

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

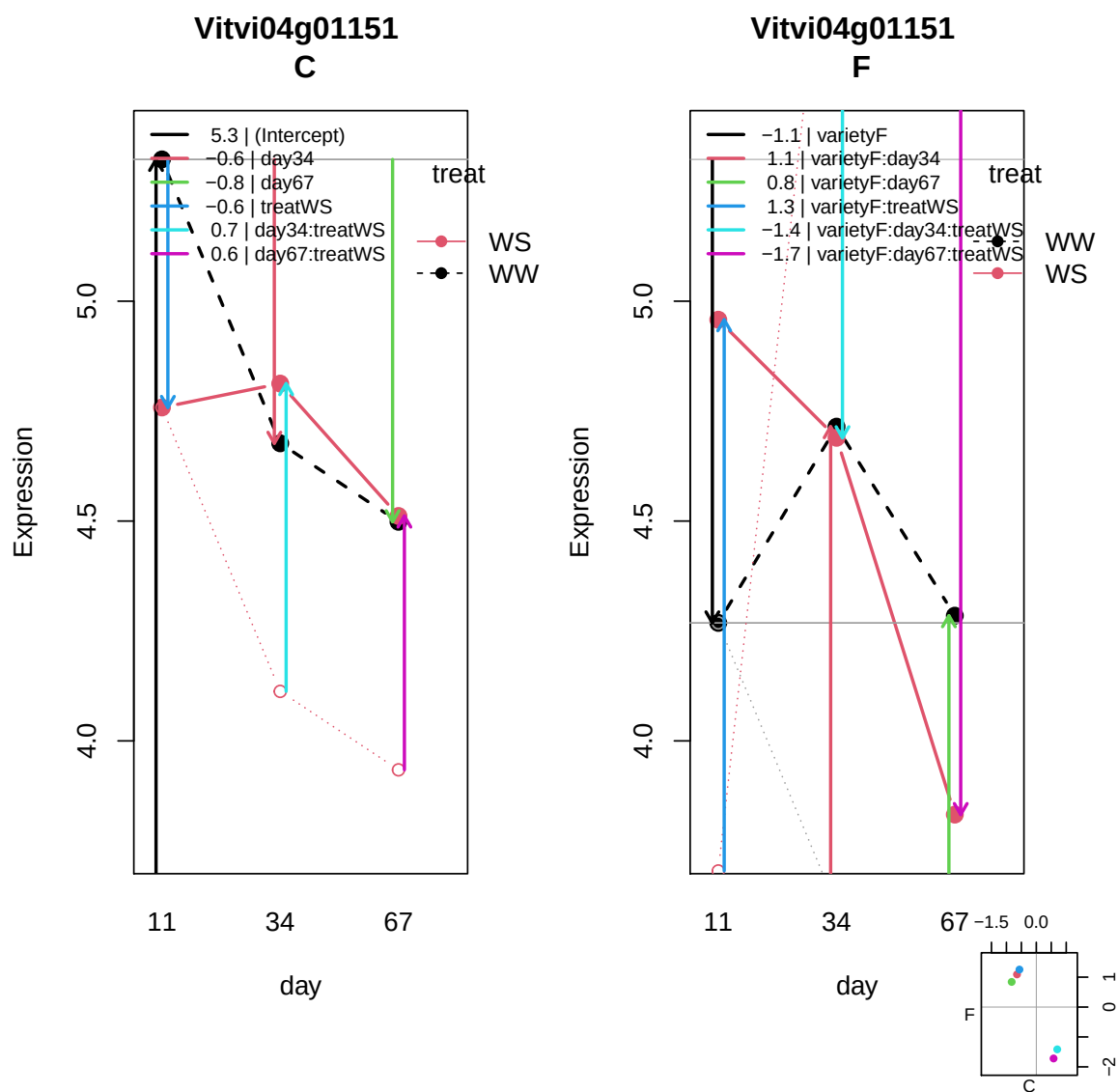
              (Intercept)  varietyF      day34      day67
Vitvi04g01151    5.322487 -1.054111 -0.6457074 -0.8241672
              treatWS varietyF:day34 varietyF:day67
Vitvi04g01151 -0.5641574      1.092011      0.8405768
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi04g01151      1.253631      0.6999694      0.5772996
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi04g01151      -1.414795      -1.719143

```

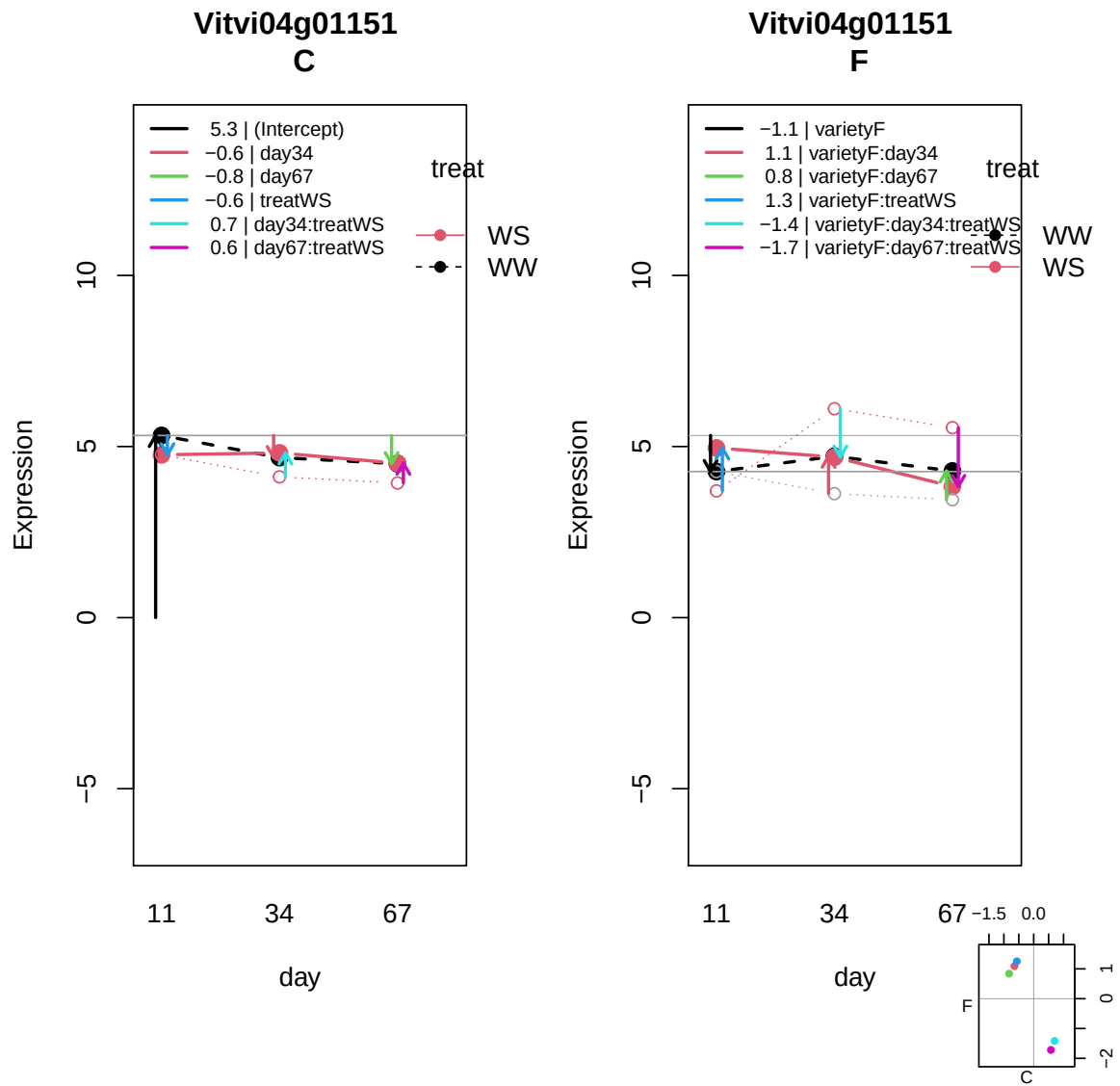
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

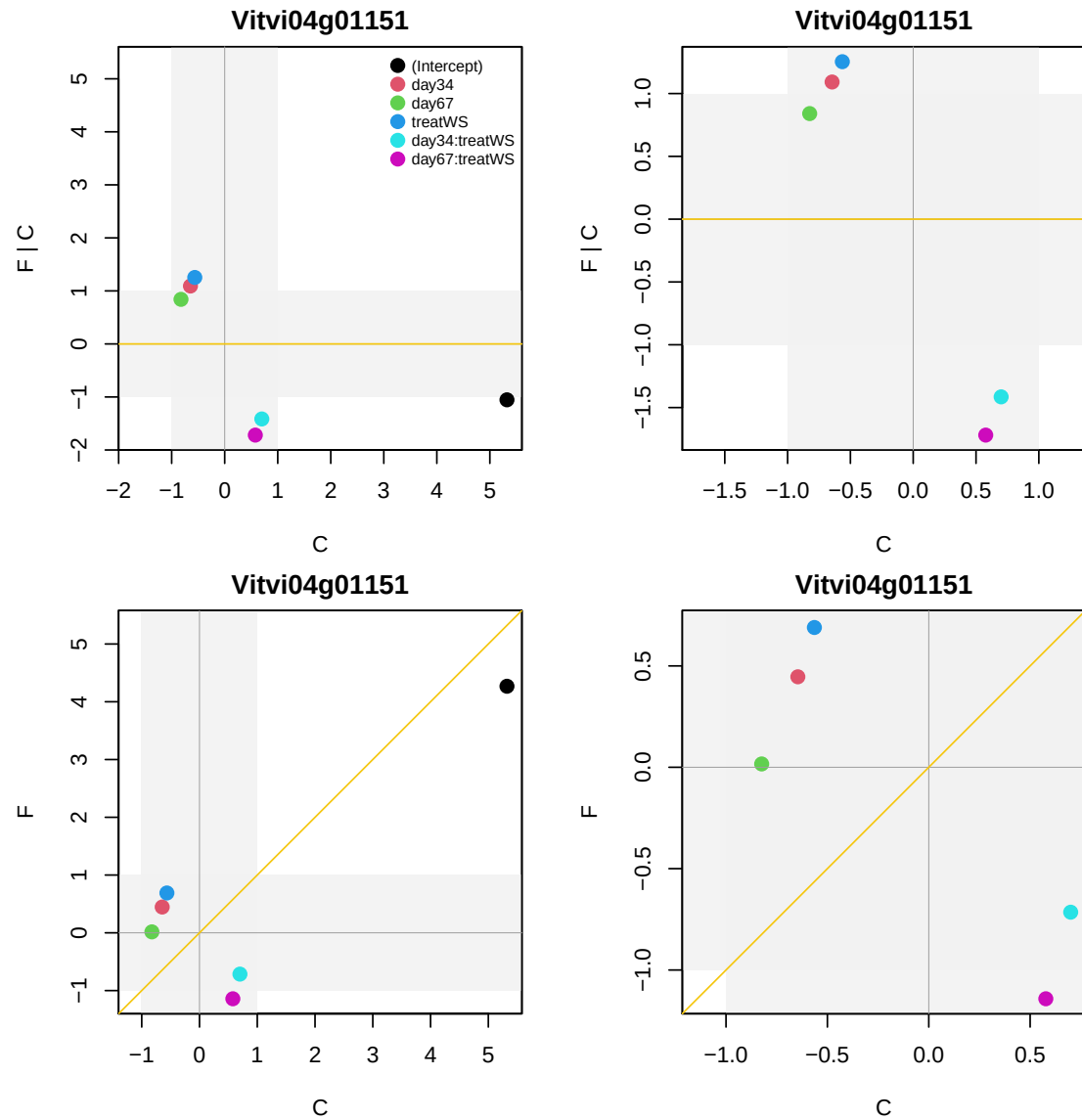


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

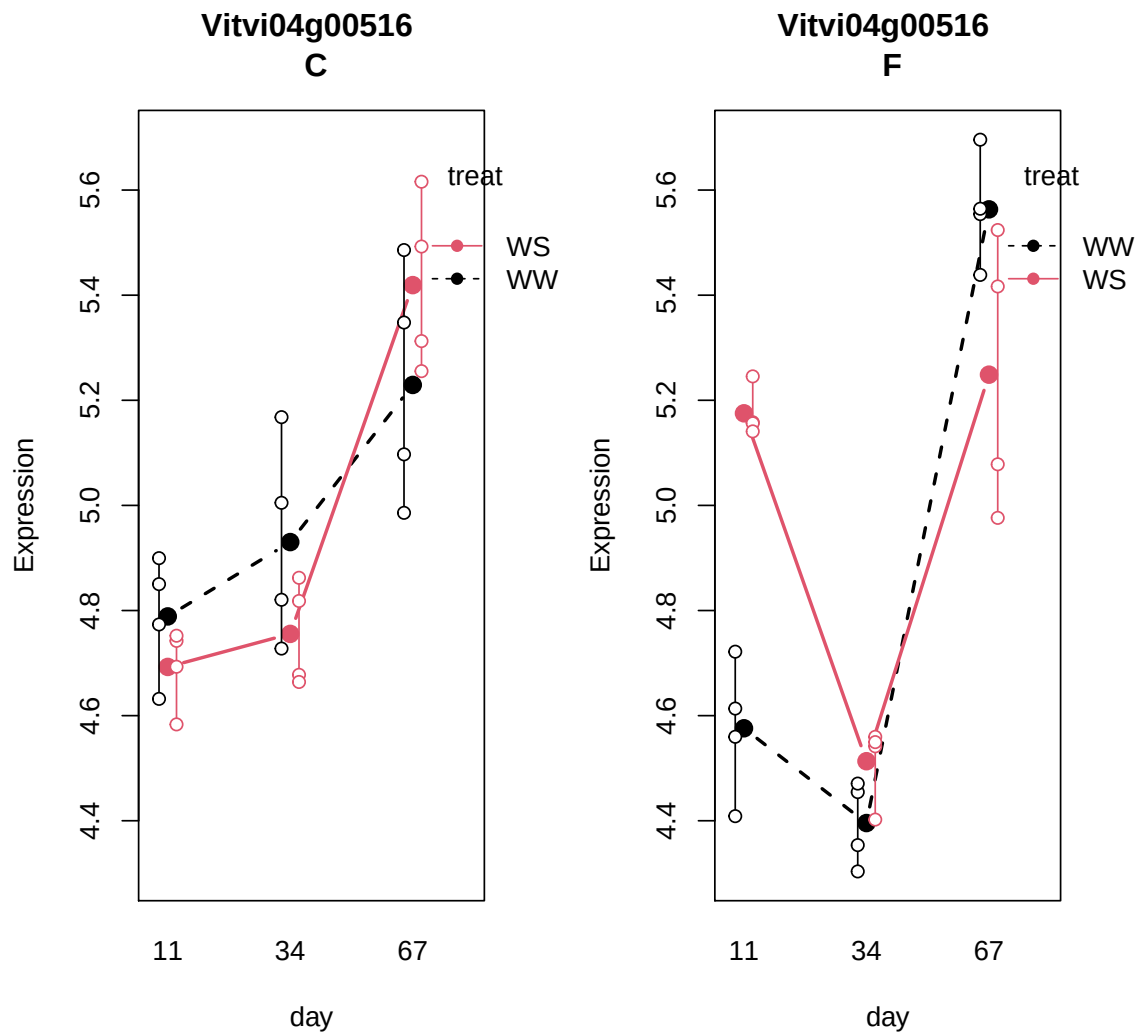
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



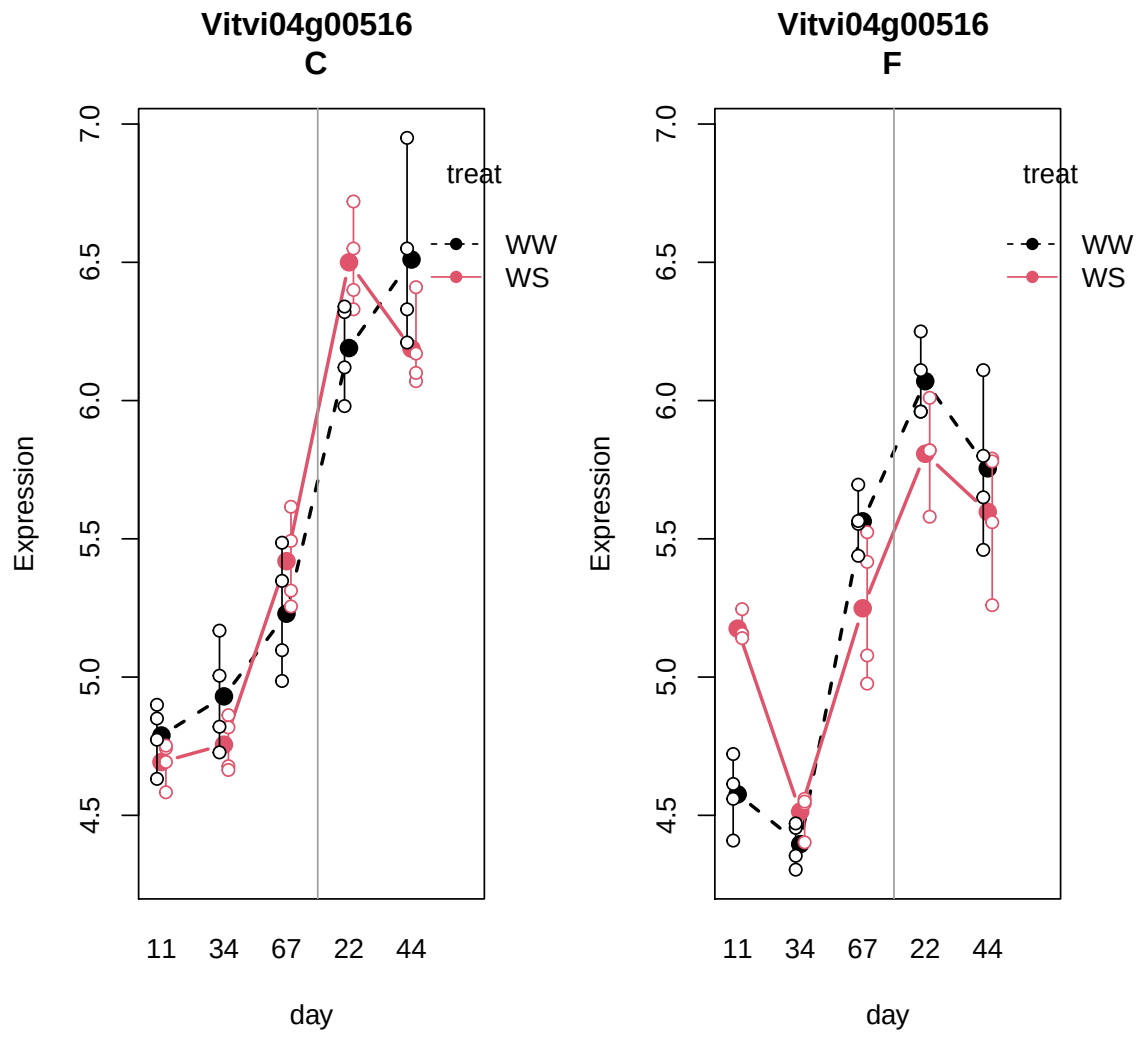
6.12.3 Vitvi04g00516

Coefficient varietyF:day67:treatWS for Vitvi04g00516.

```
> tt[varname,]
      logFC AveExpr      t    P.Value
Vitvi04g00516 -1.199862 4.940625 -5.626454 1.74668e-06
      adj.P.Val      B
Vitvi04g00516 0.007765025 4.884319
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

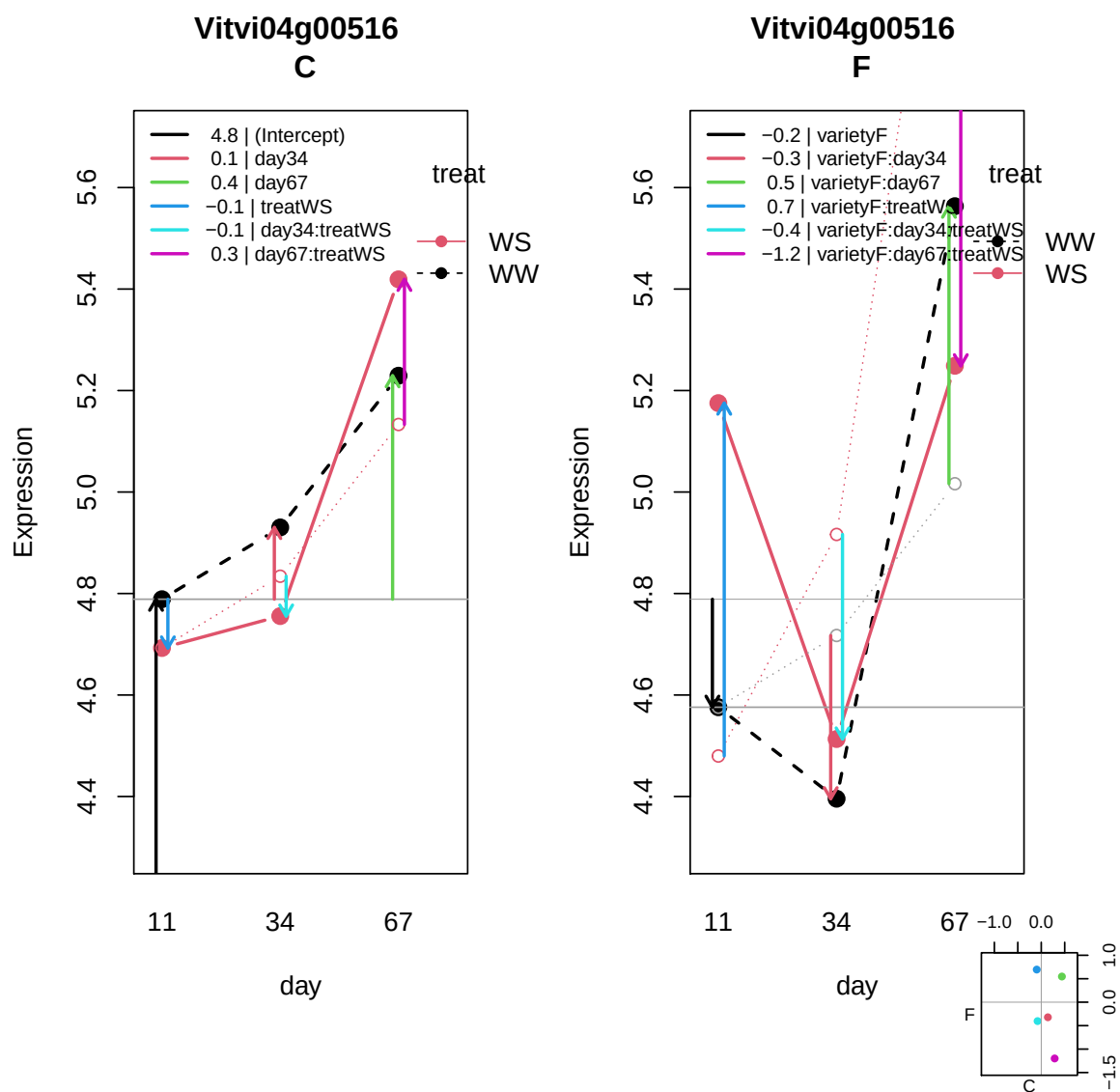
              (Intercept)  varietyF    day34    day67
Vitvi04g00516    4.788785 -0.212839  0.141422  0.4404113
              treatWS  varietyF:day34  varietyF:day67
Vitvi04g00516 -0.09612852    -0.3217211    0.5469517
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi04g00516    0.695423    -0.0785396    0.2860656
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi04g00516    -0.4030931    -1.199862

```

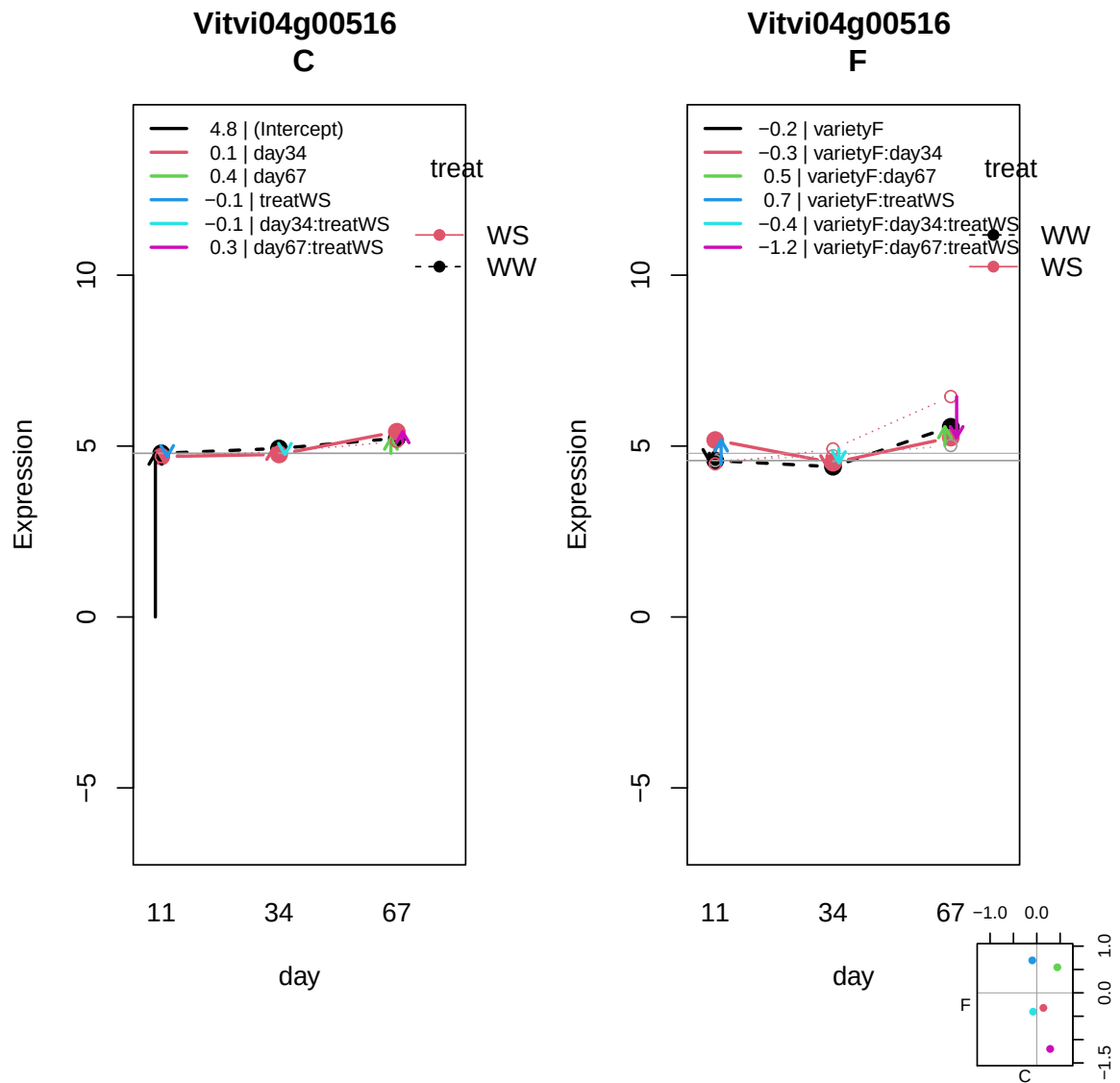
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

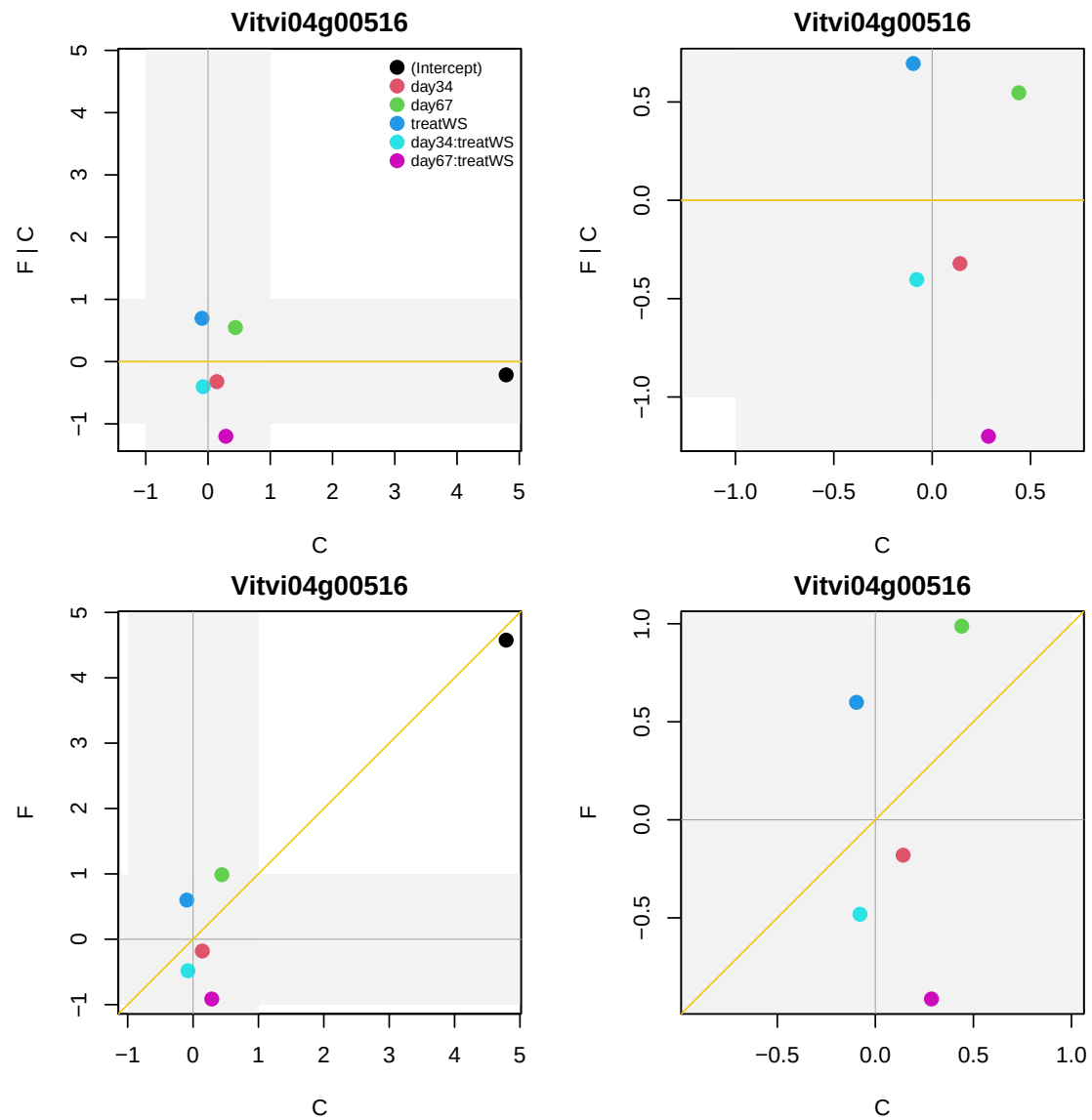



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

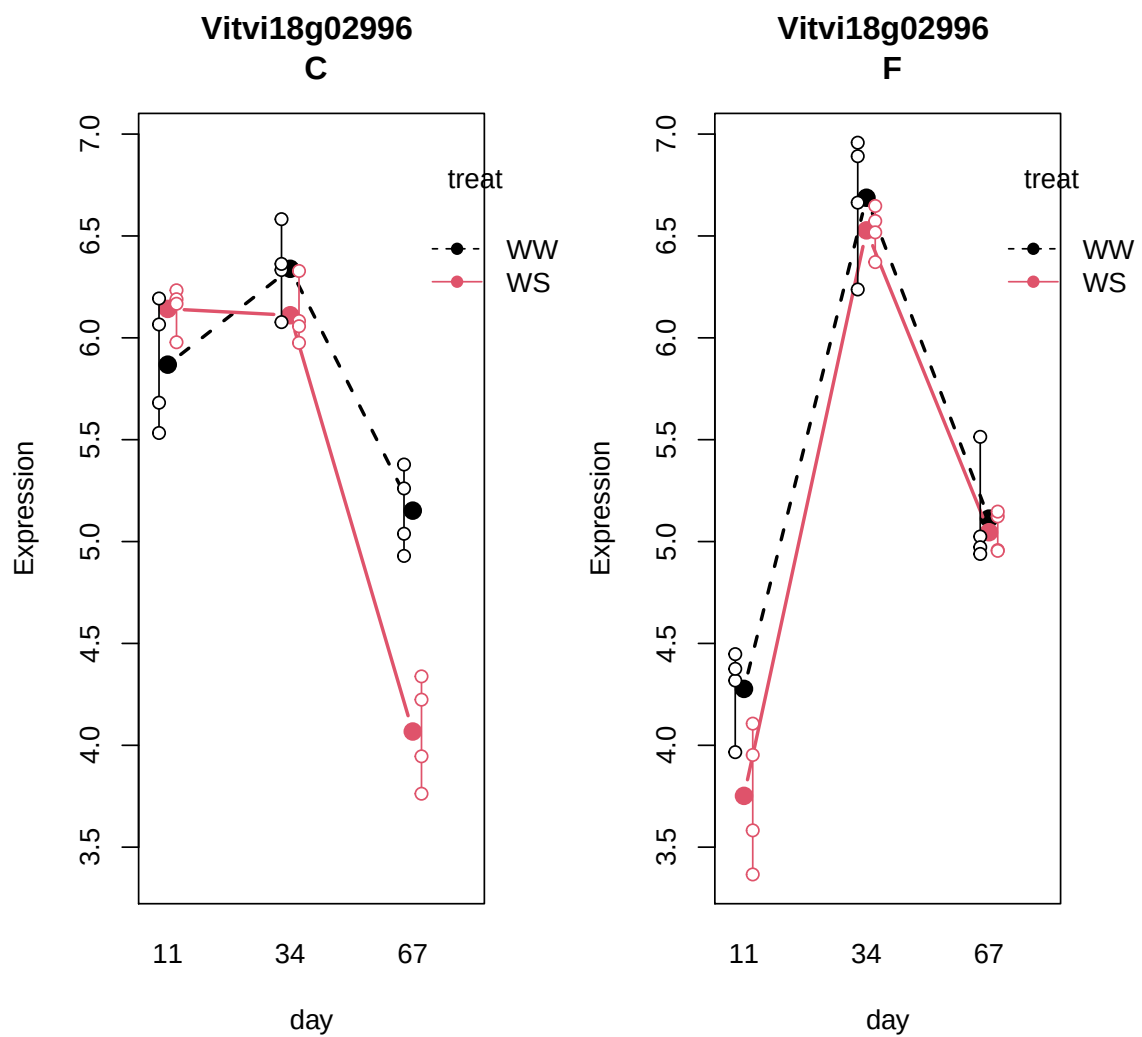
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



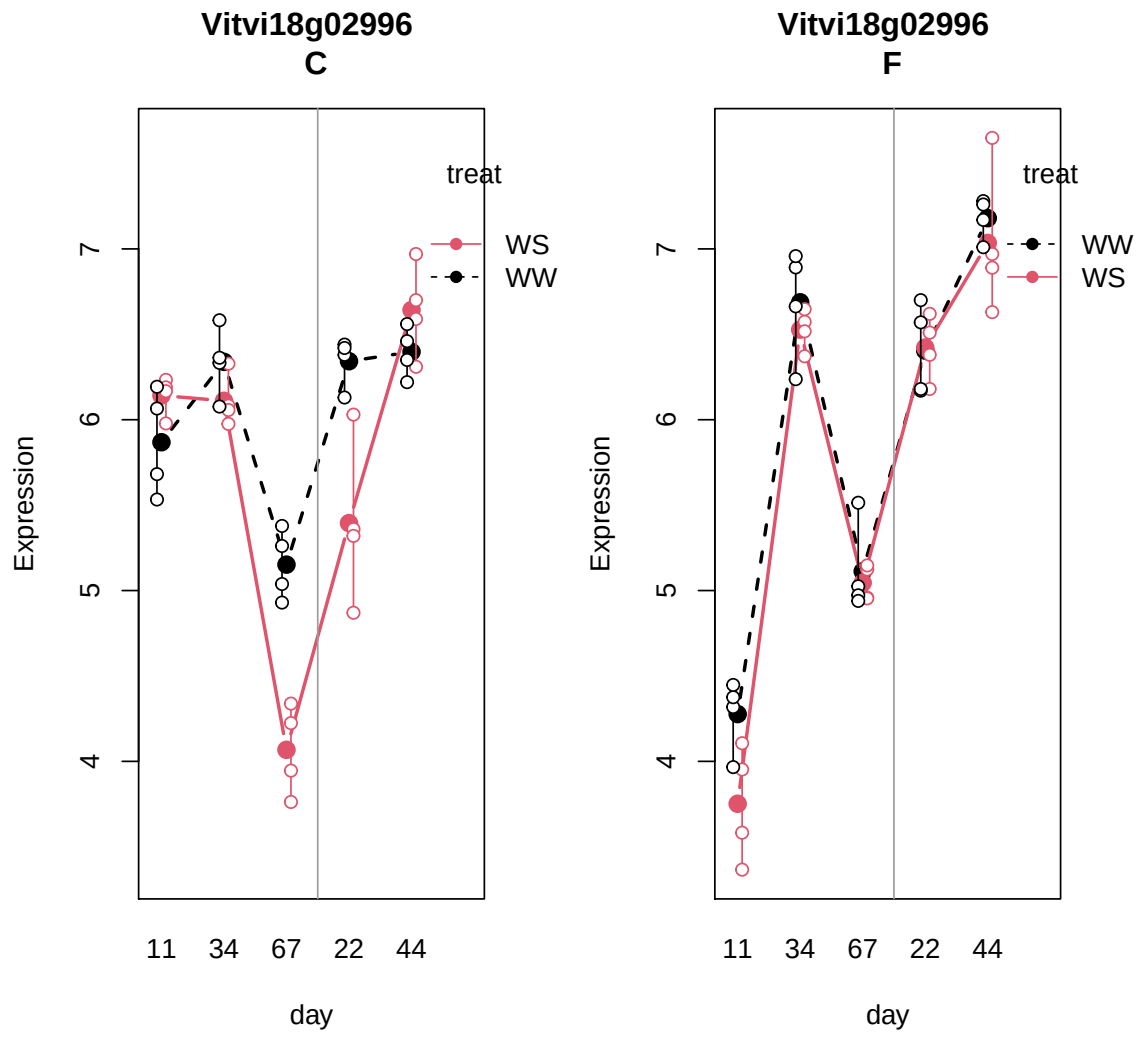
6.12.4 Vitvi18g02996

Coefficient varietyF:day67:treatWS for Vitvi18g02996.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi18g02996 1.816026 5.423452 5.578034 2.037797e-06
      adj.P.Val      B
Vitvi18g02996 0.007765025 4.747558
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

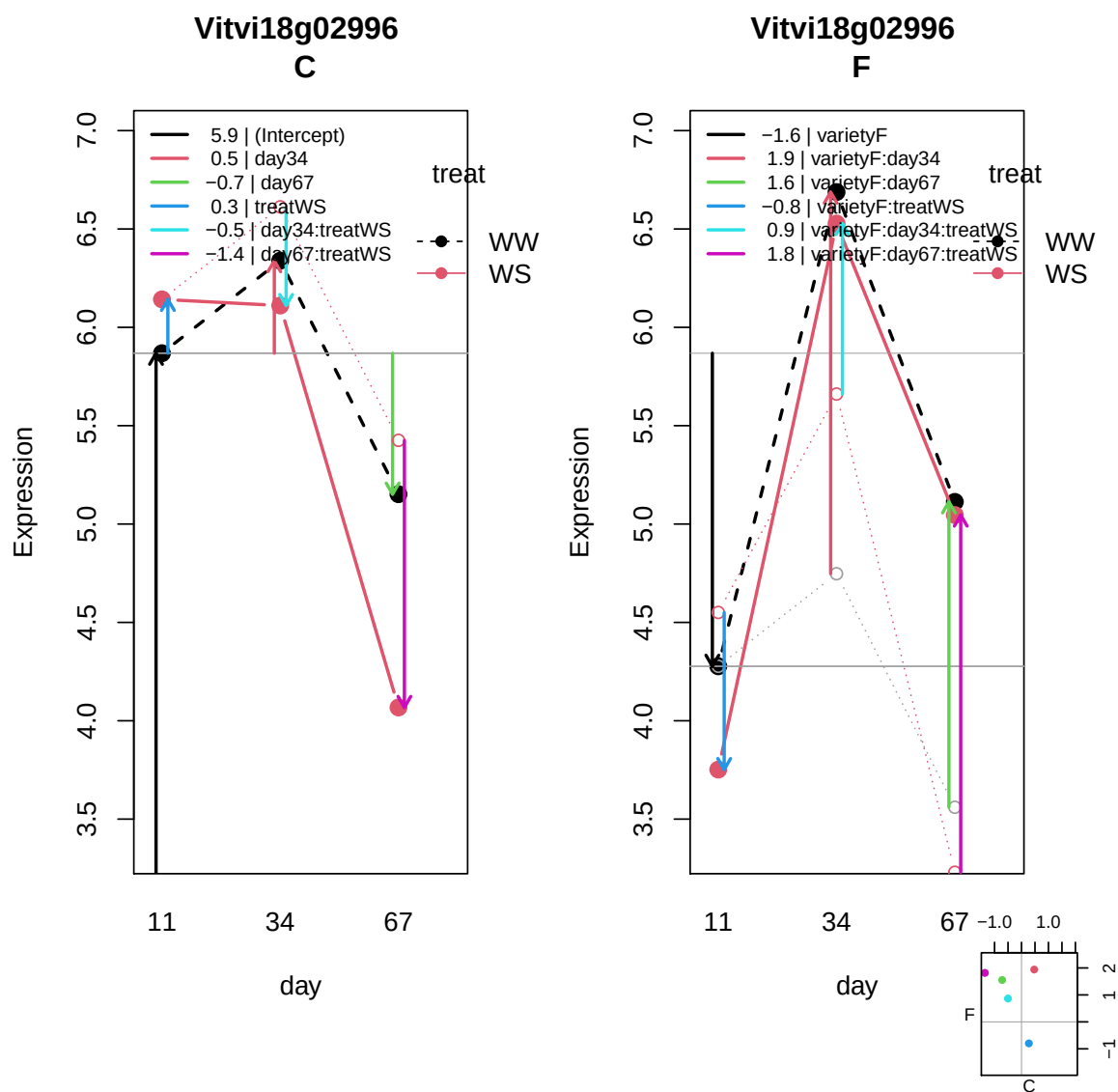
              (Intercept)  varietyF    day34    day67
Vitvi18g02996      5.86831 -1.591485 0.4705151 -0.7165768
              treatWS varietyF:day34 varietyF:day67
Vitvi18g02996 0.273761      1.940244      1.552319
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi18g02996      -0.7987514    -0.5017815    -1.357851
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi18g02996              0.8666614              1.816026

```

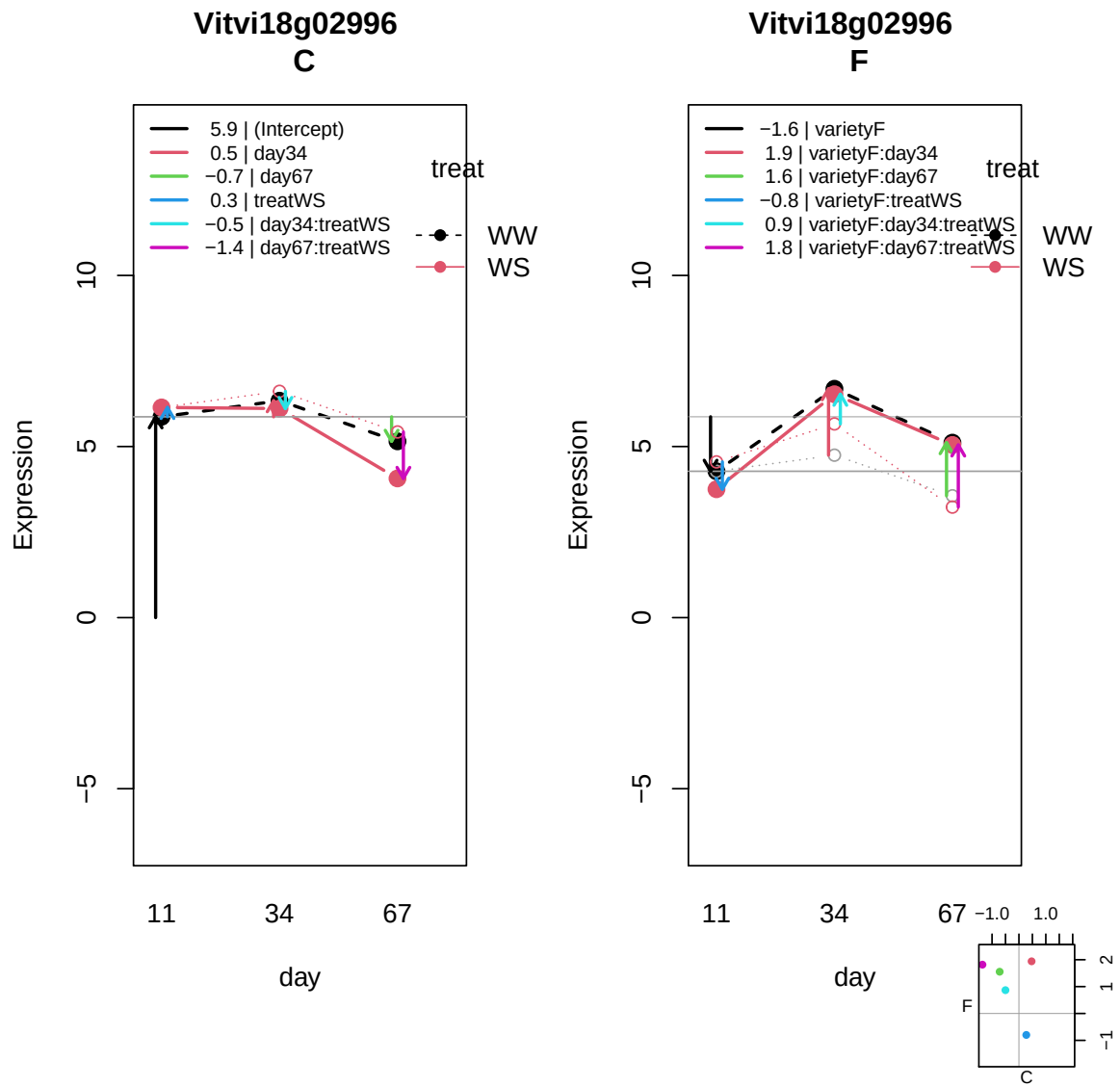
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

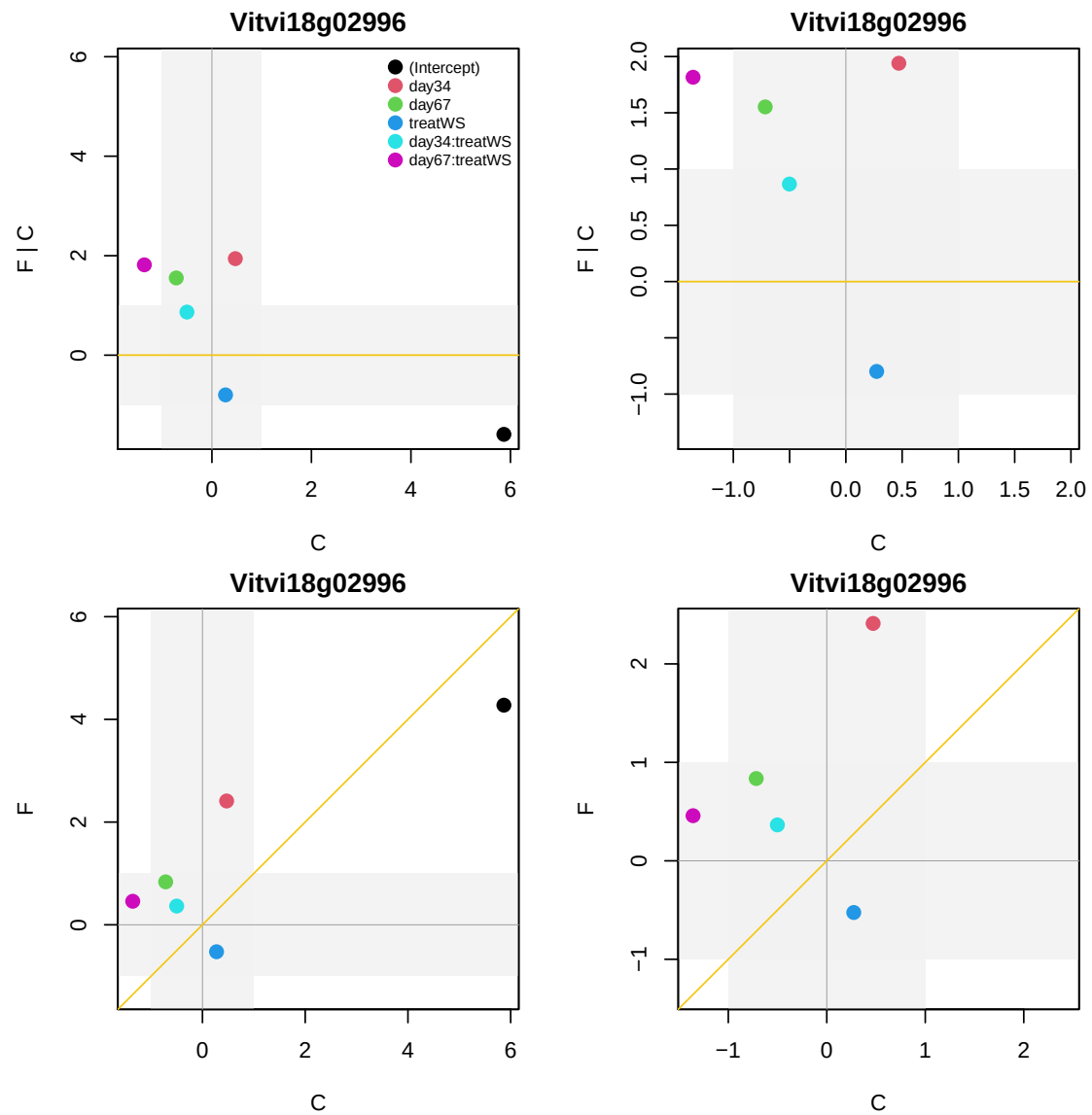


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

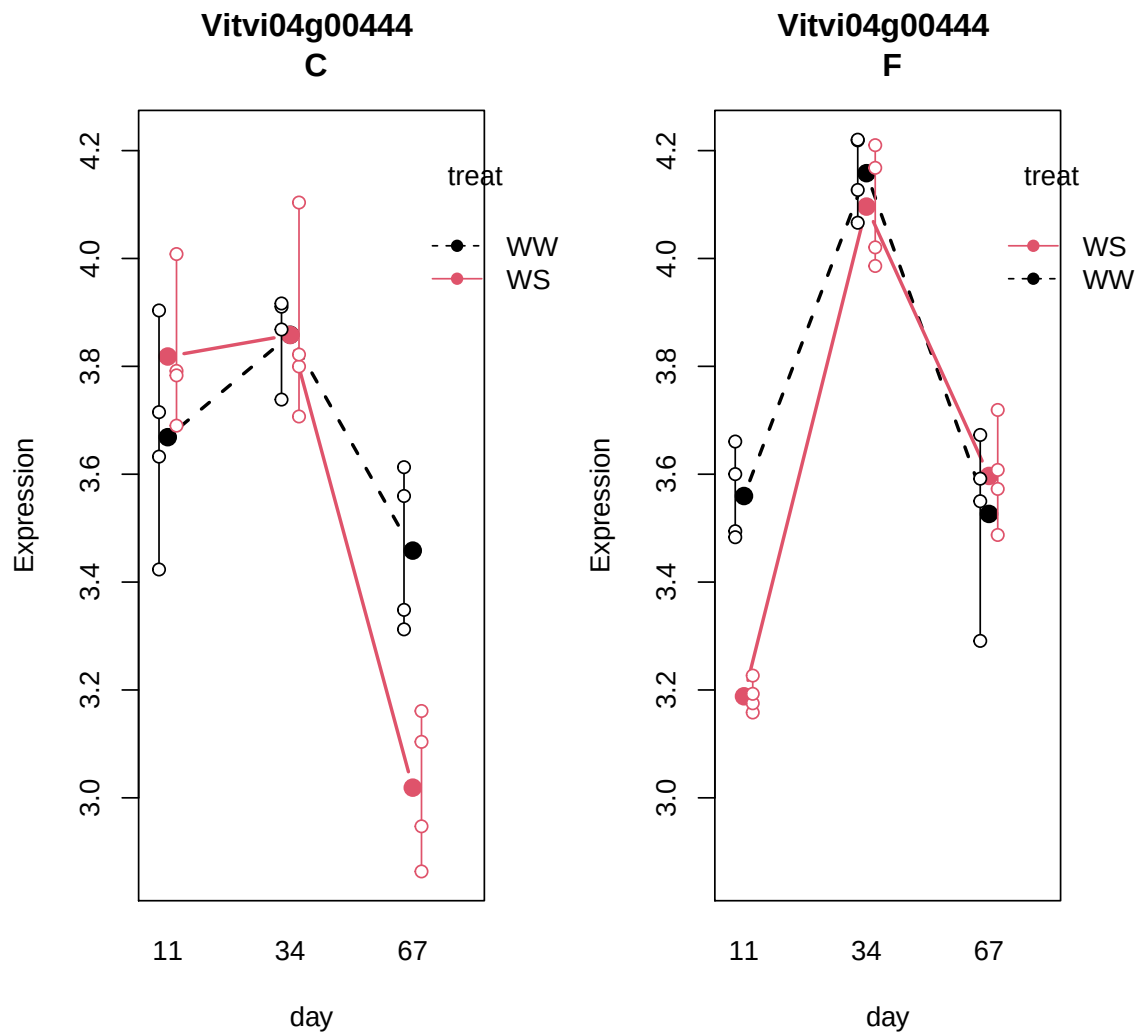
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



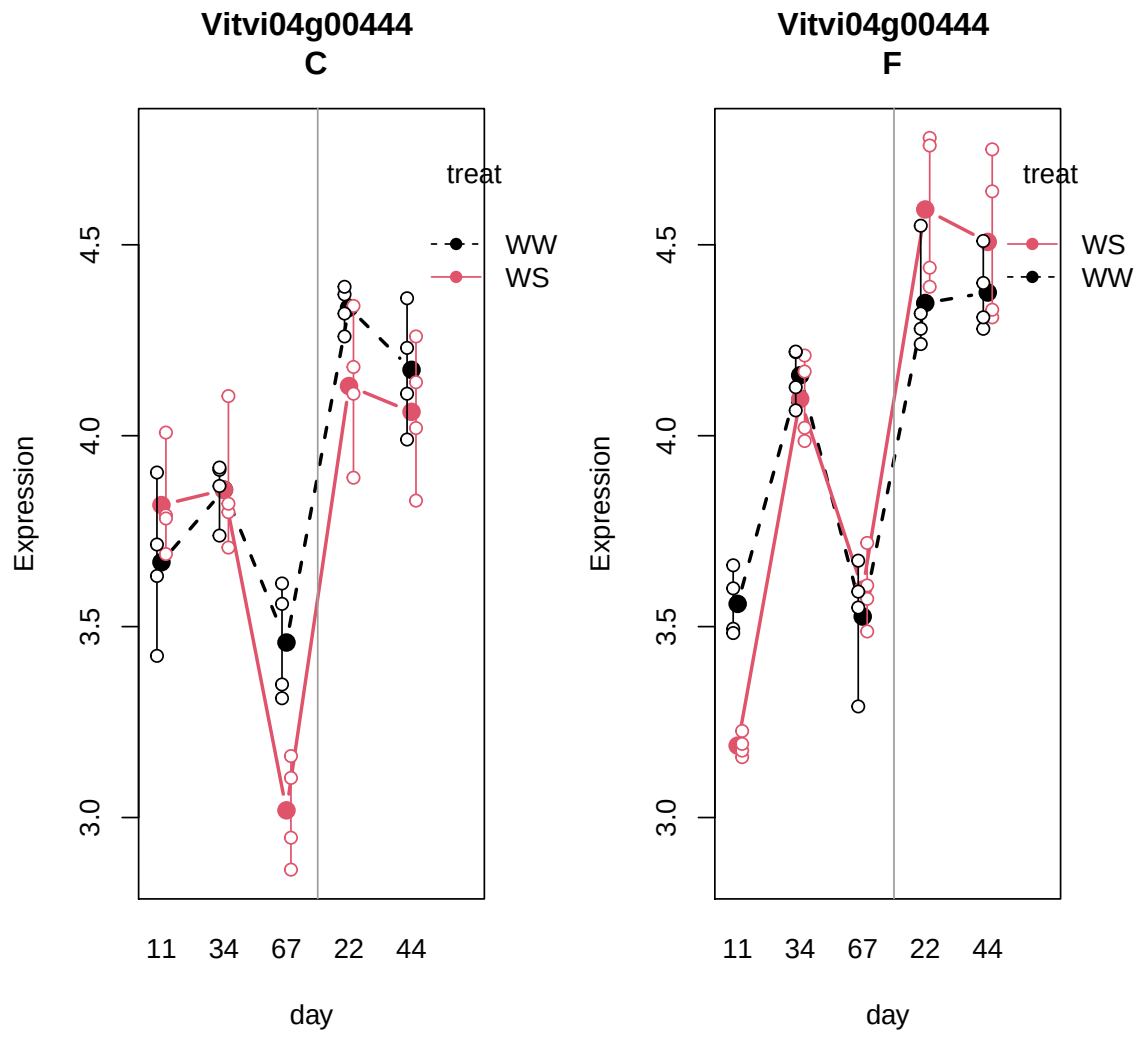
6.12.5 Vitvi04g00444

Coefficient varietyF:day67:treatWS for Vitvi04g00444.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi04g00444 1.030873 3.650504 5.434365 3.218083e-06
      adj.P.Val      B
Vitvi04g00444 0.009288349 4.341895
> plot.interactions(varname,phdata=pd,data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

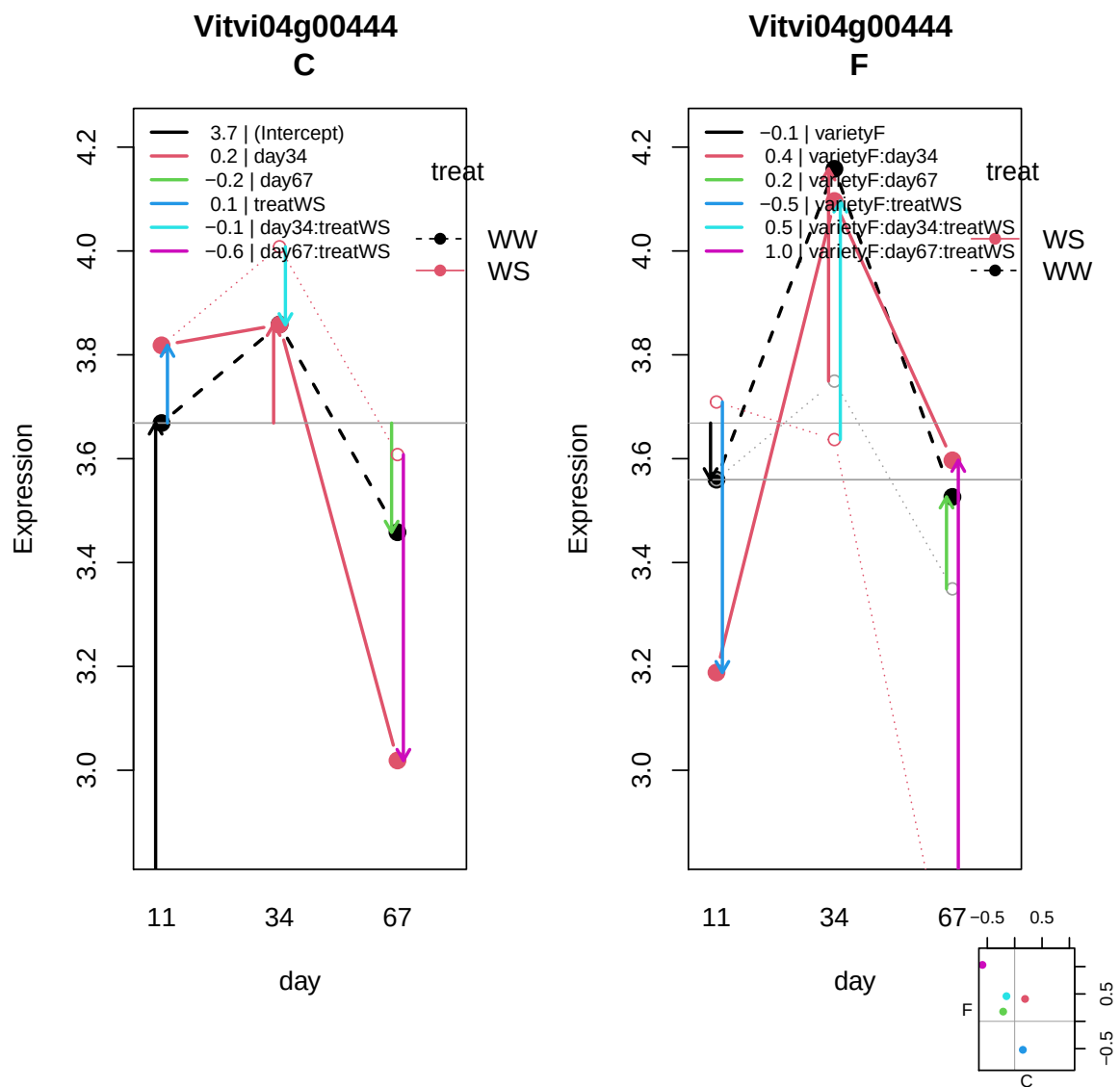
              (Intercept)    varietyF    day34    day67
Vitvi04g00444    3.668669 -0.1091024 0.1898289 -0.2103013
              treatWS varietyF:day34 varietyF:day67
Vitvi04g00444 0.1495887    0.4087521    0.1770916
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi04g00444    -0.5209253    -0.1499734    -0.589106
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi04g00444    0.4593696                1.030873

```

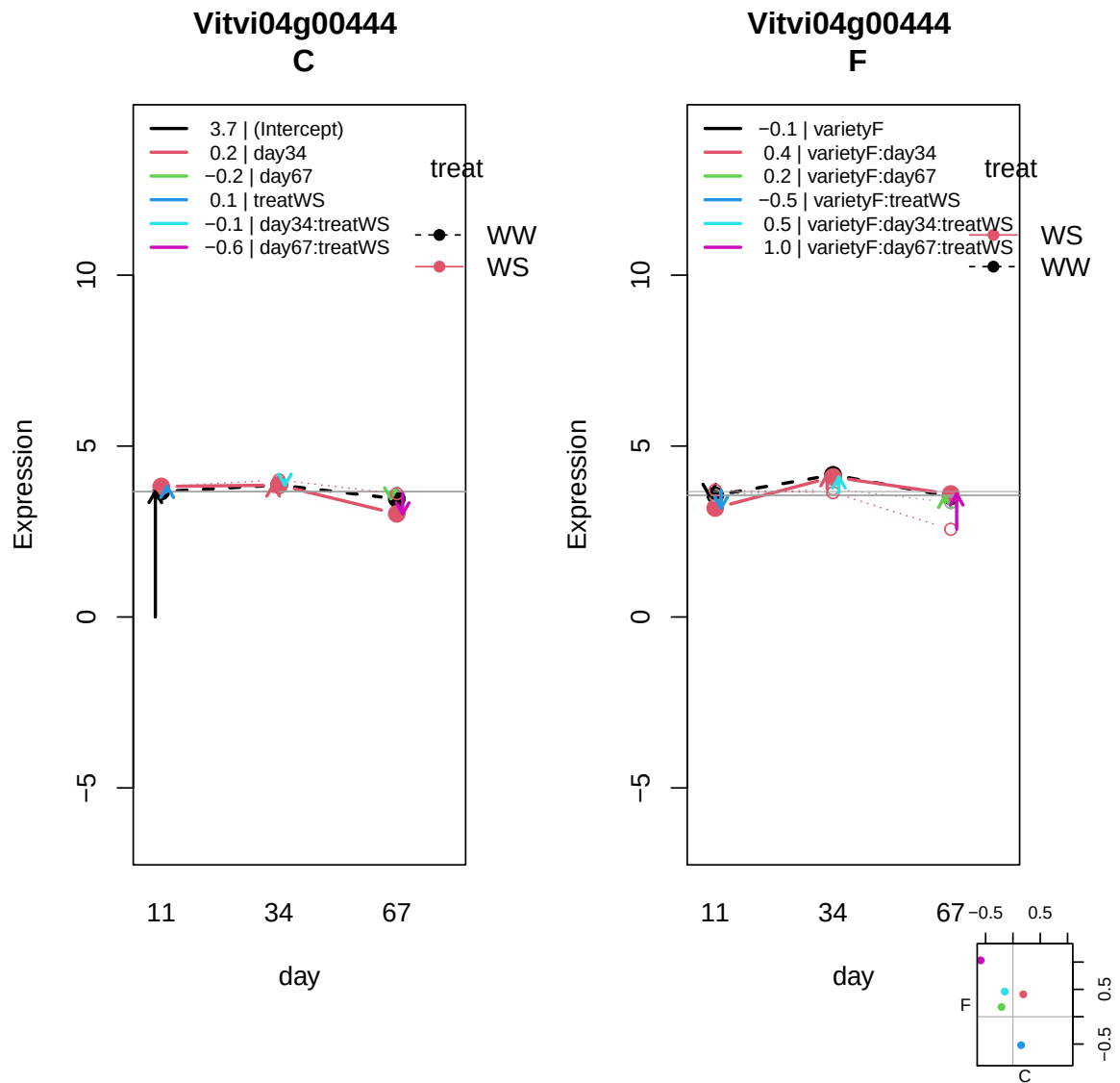
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

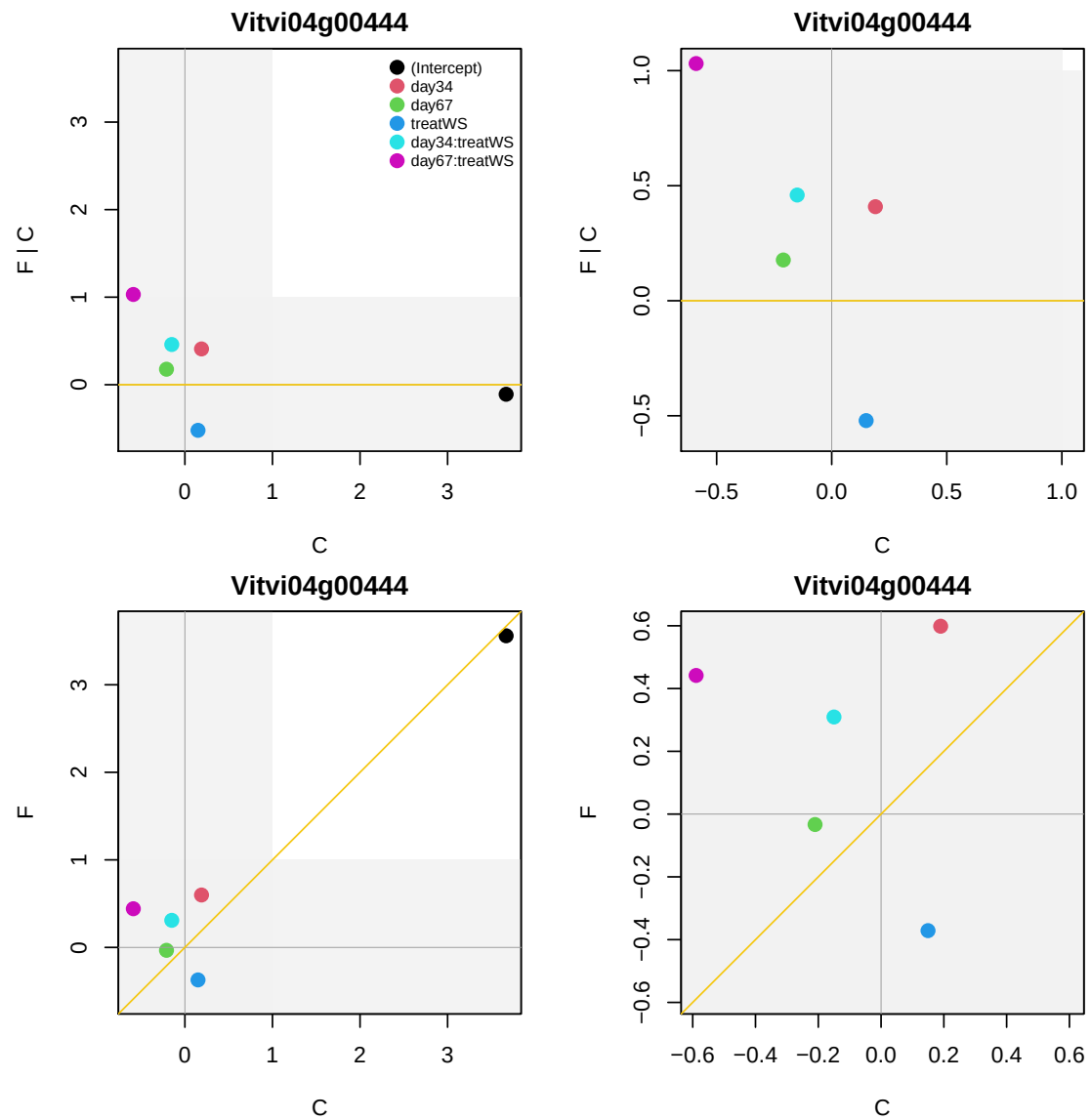


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

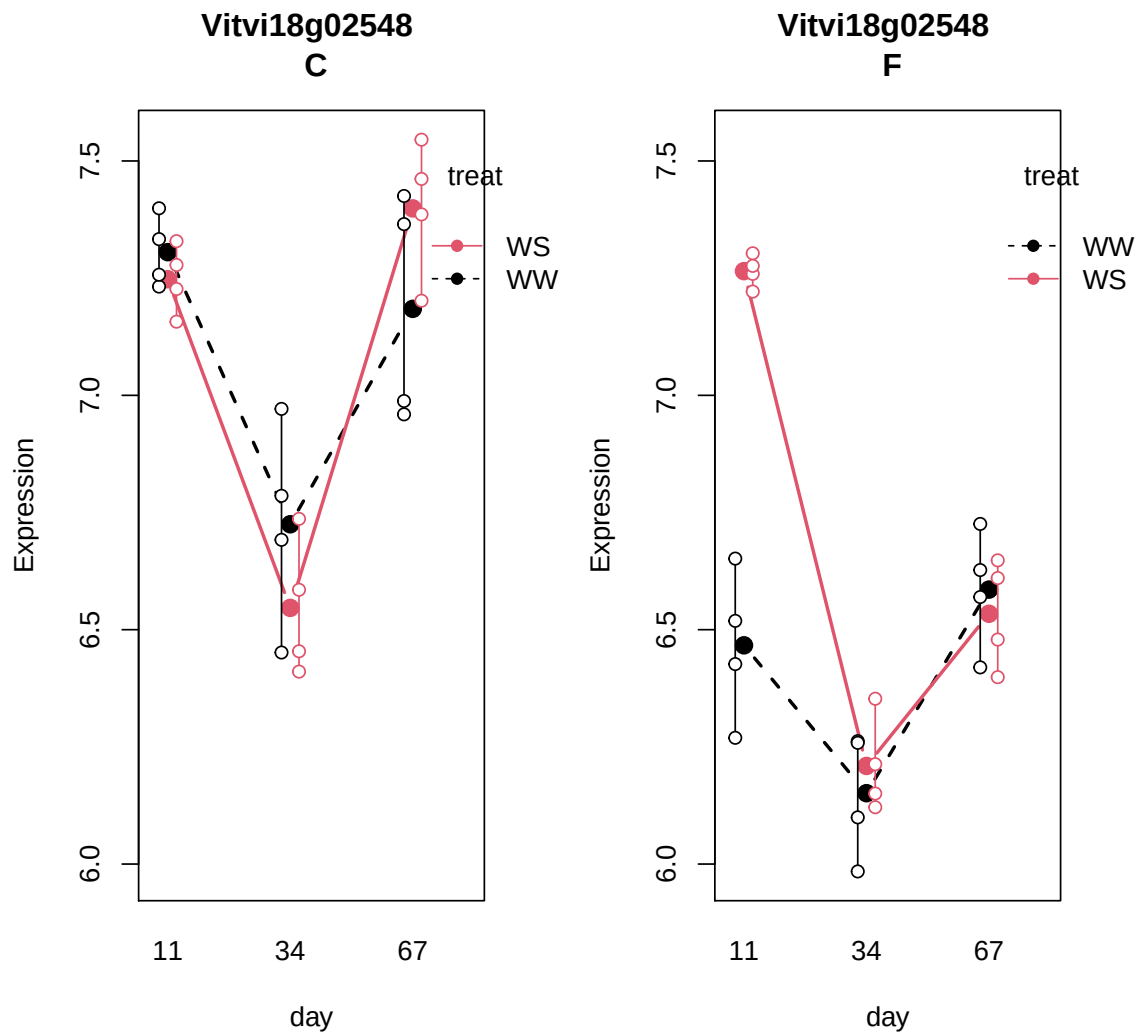


6.12.6 Vitvi18g02548

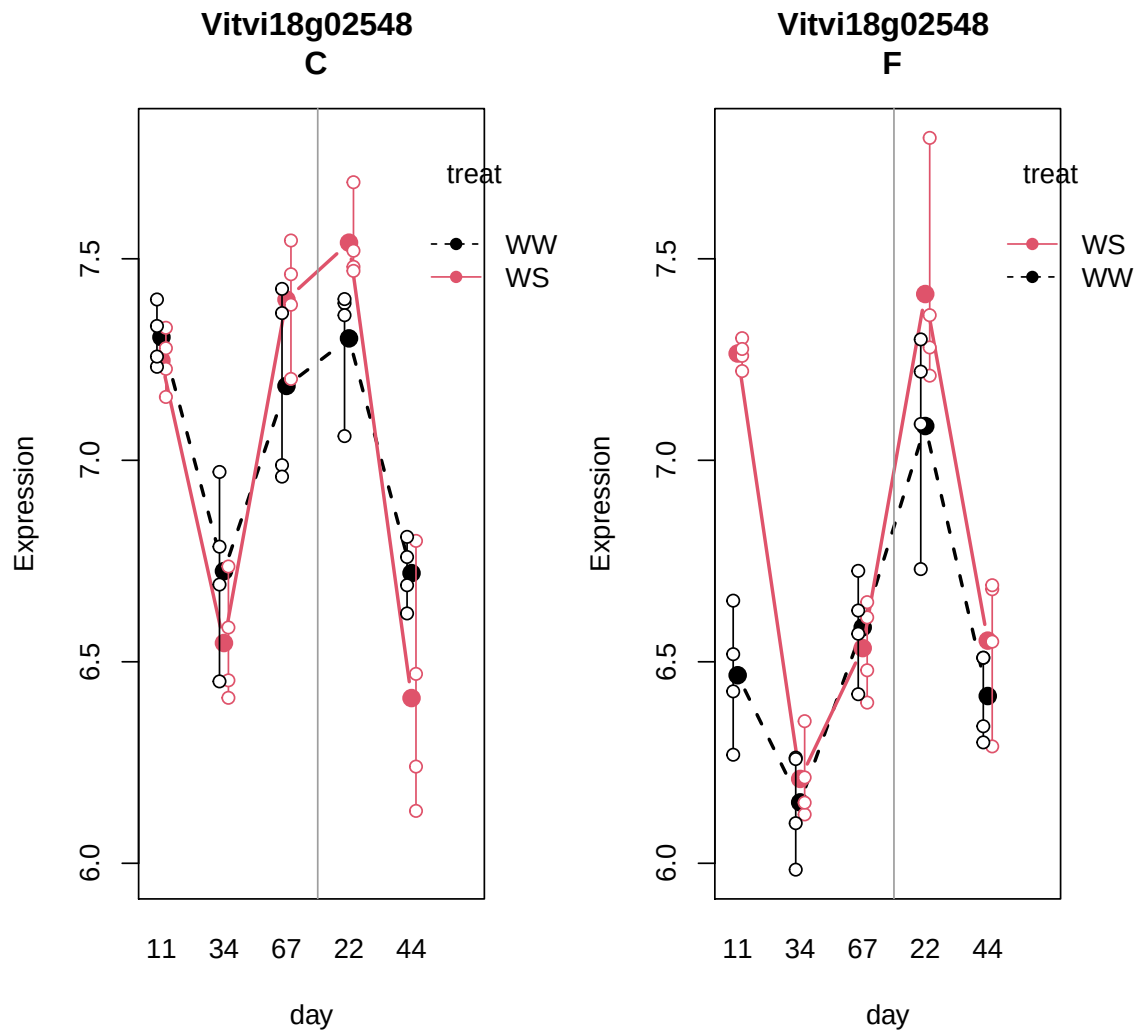
Coefficient varietyF:day67:treatWS for Vitvi18g02548.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi18g02548 -1.121847 6.801621 -5.376667 3.865282e-06
      adj.P.Val      B
Vitvi18g02548 0.009288349 4.179087

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

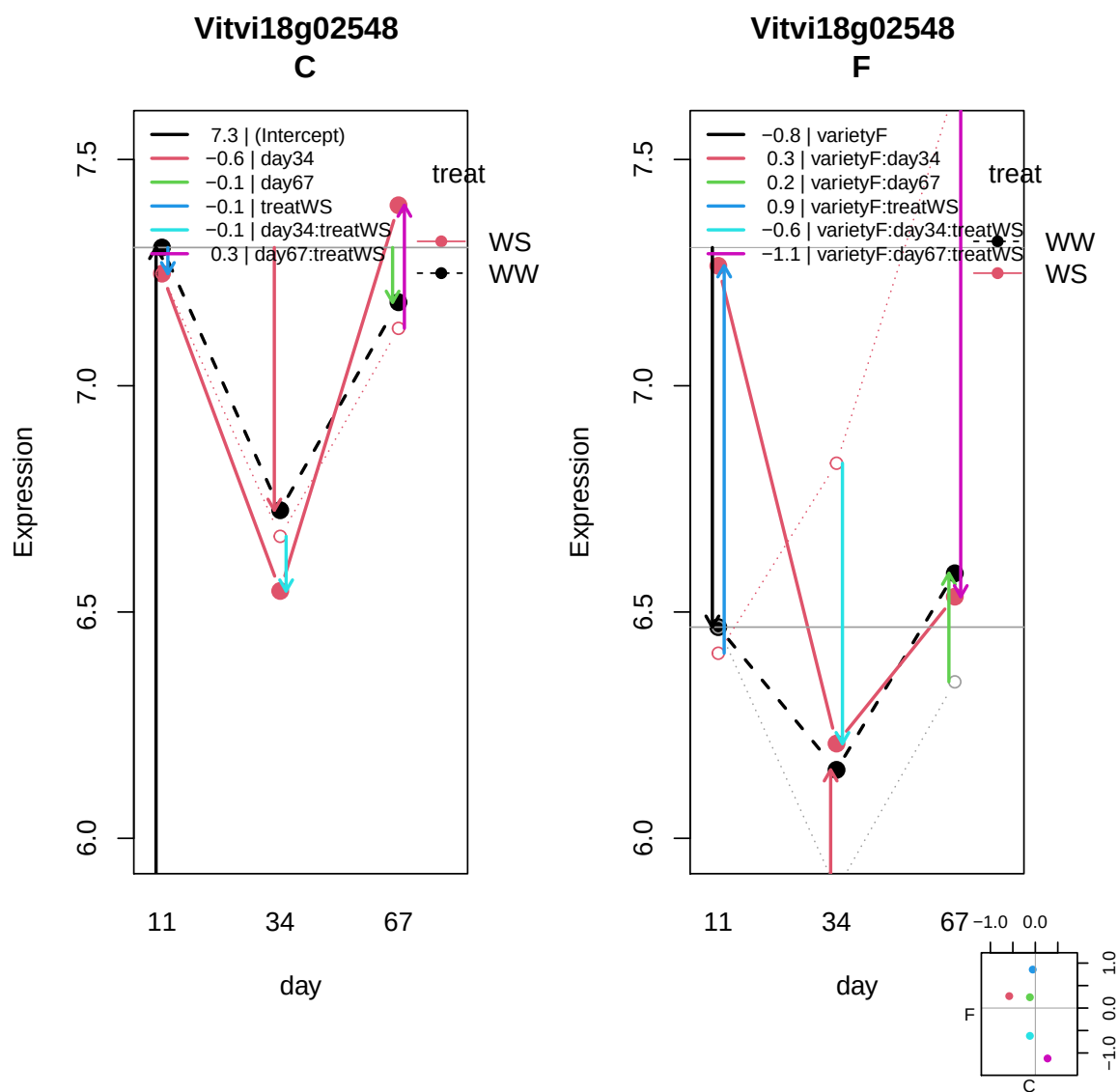
              (Intercept)  varietyF    day34      day67
Vitvi18g02548    7.305416 -0.8387877 -0.58048 -0.1209297
              treatWS  varietyF:day34  varietyF:day67
Vitvi18g02548 -0.05768038    0.2650136    0.2398368
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi18g02548    0.8559986    -0.1207098    0.2719429
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi18g02548    -0.6194148                -1.121847

```

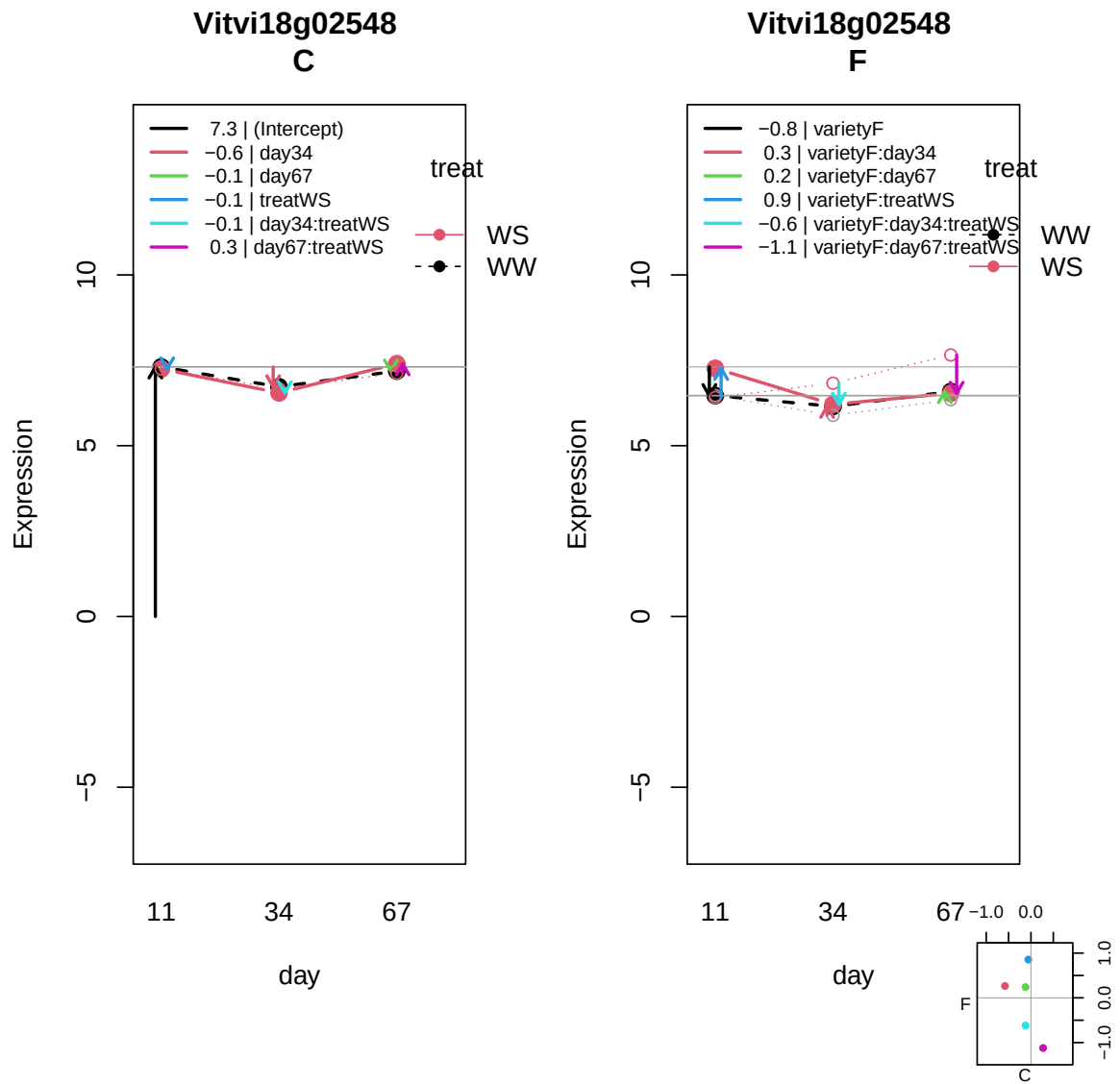
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

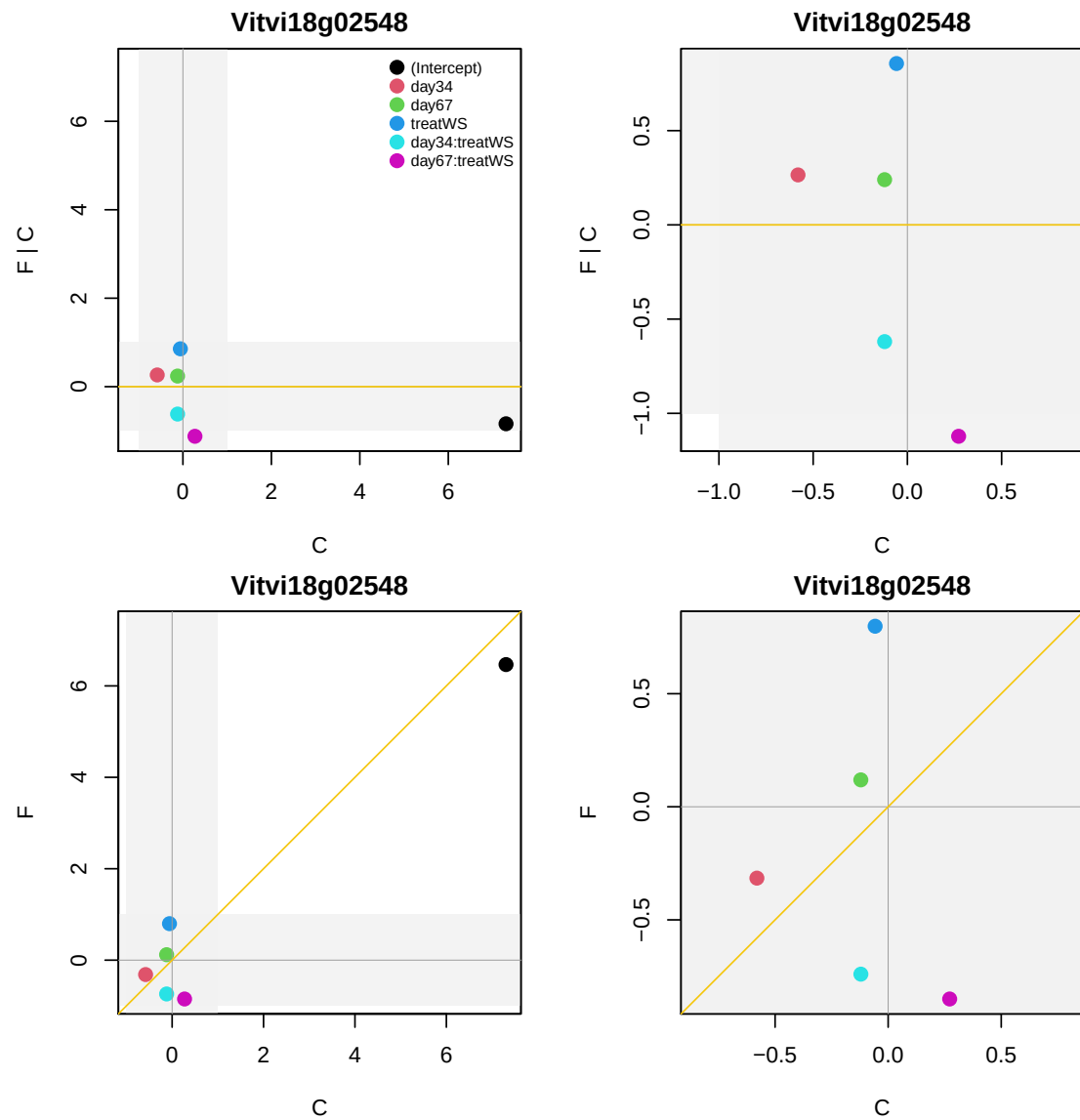


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

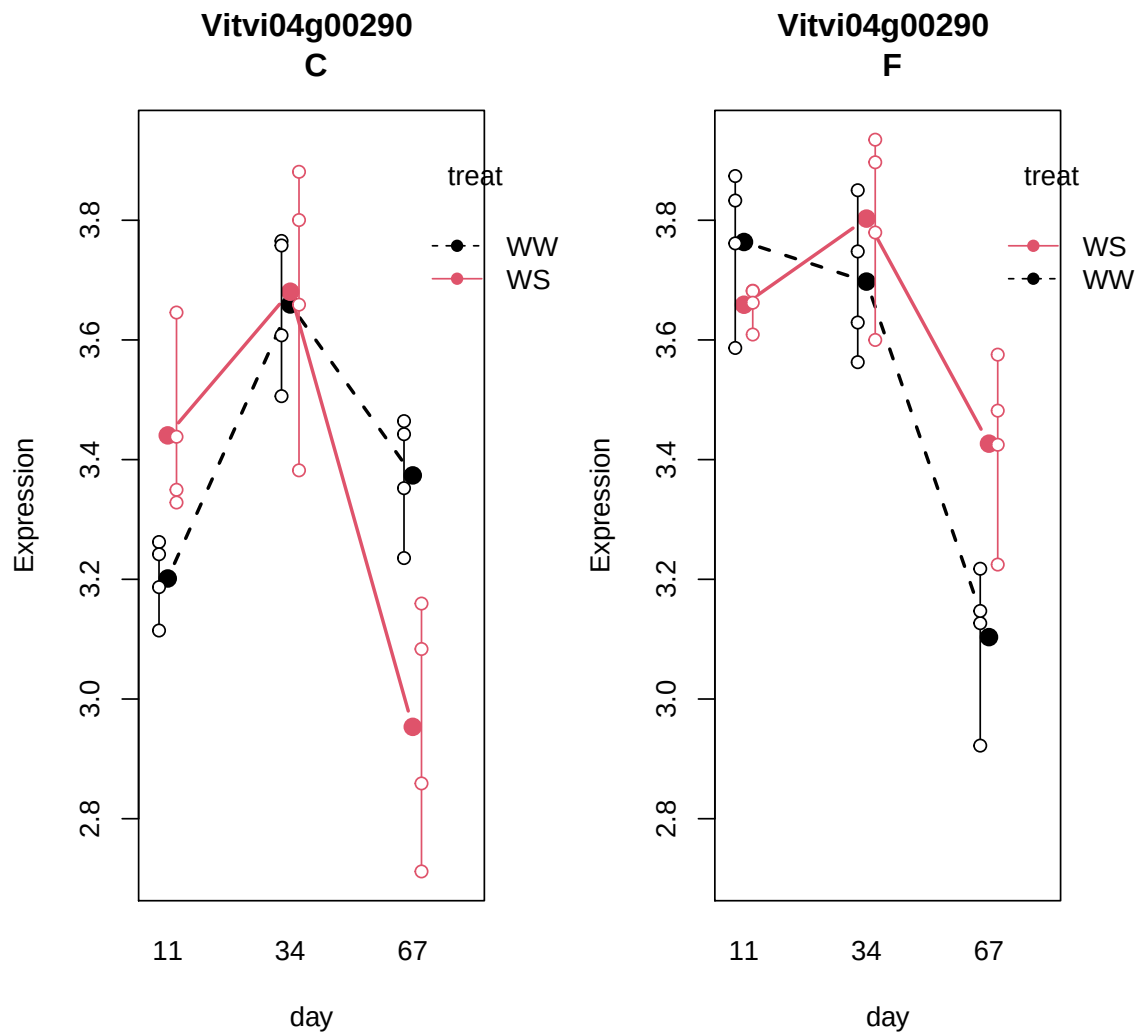
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



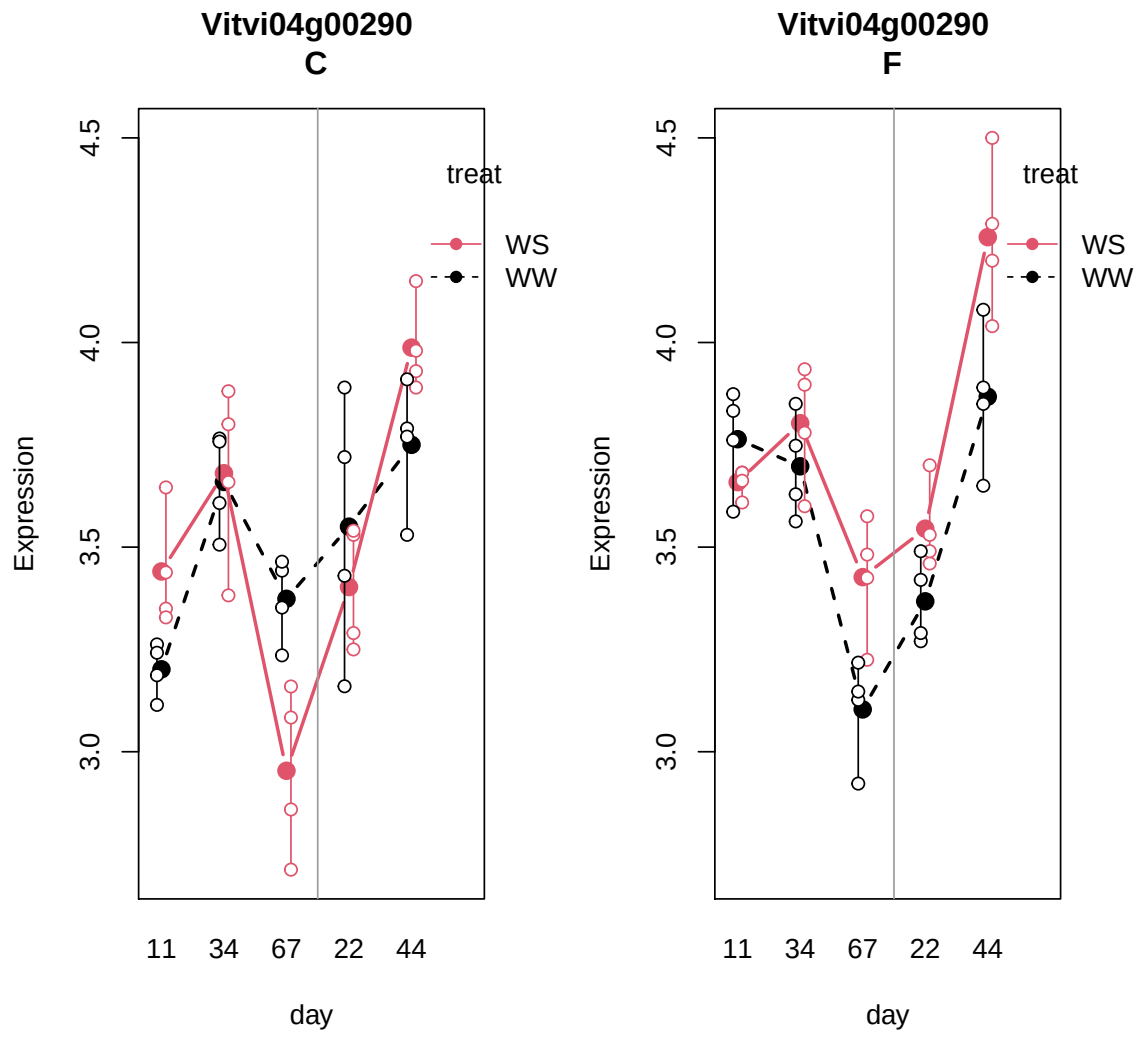
6.12.7 Vitvi04g00290

Coefficient varietyF:day67:treatWS for Vitvi04g00290.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi04g00290 1.087439 3.480137 5.306635 4.826987e-06
      adj.P.Val      B
Vitvi04g00290 0.009288349 3.981604
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

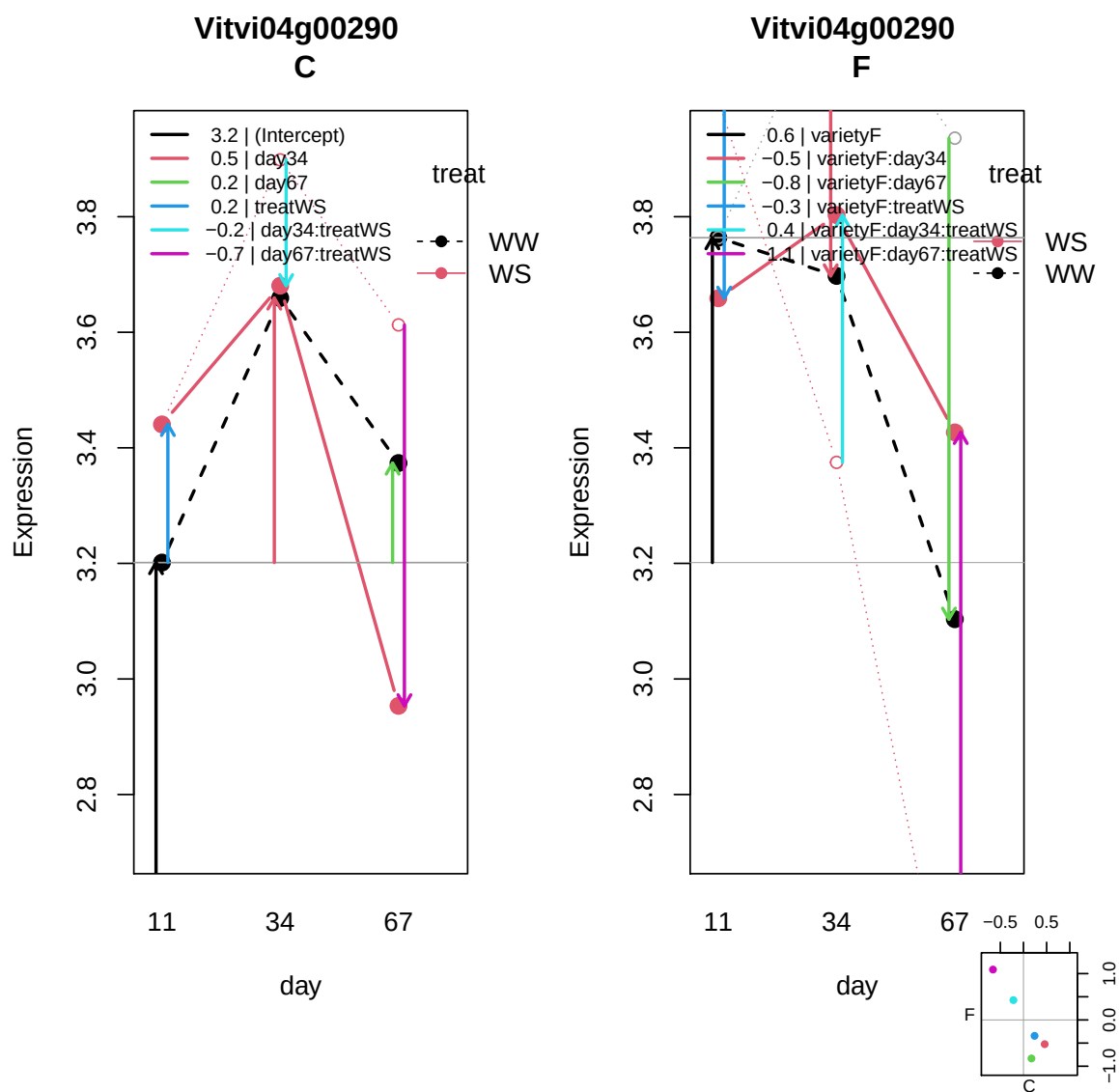
              (Intercept)  varietyF    day34    day67
Vitvi04g00290      3.201395 0.5622684 0.4578618 0.172266
              treatWS  varietyF:day34  varietyF:day67
Vitvi04g00290 0.2391043      -0.524043      -0.8325229
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi04g00290      -0.3439667      -0.2177961      -0.6592897
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi04g00290              0.4279241              1.087439

```

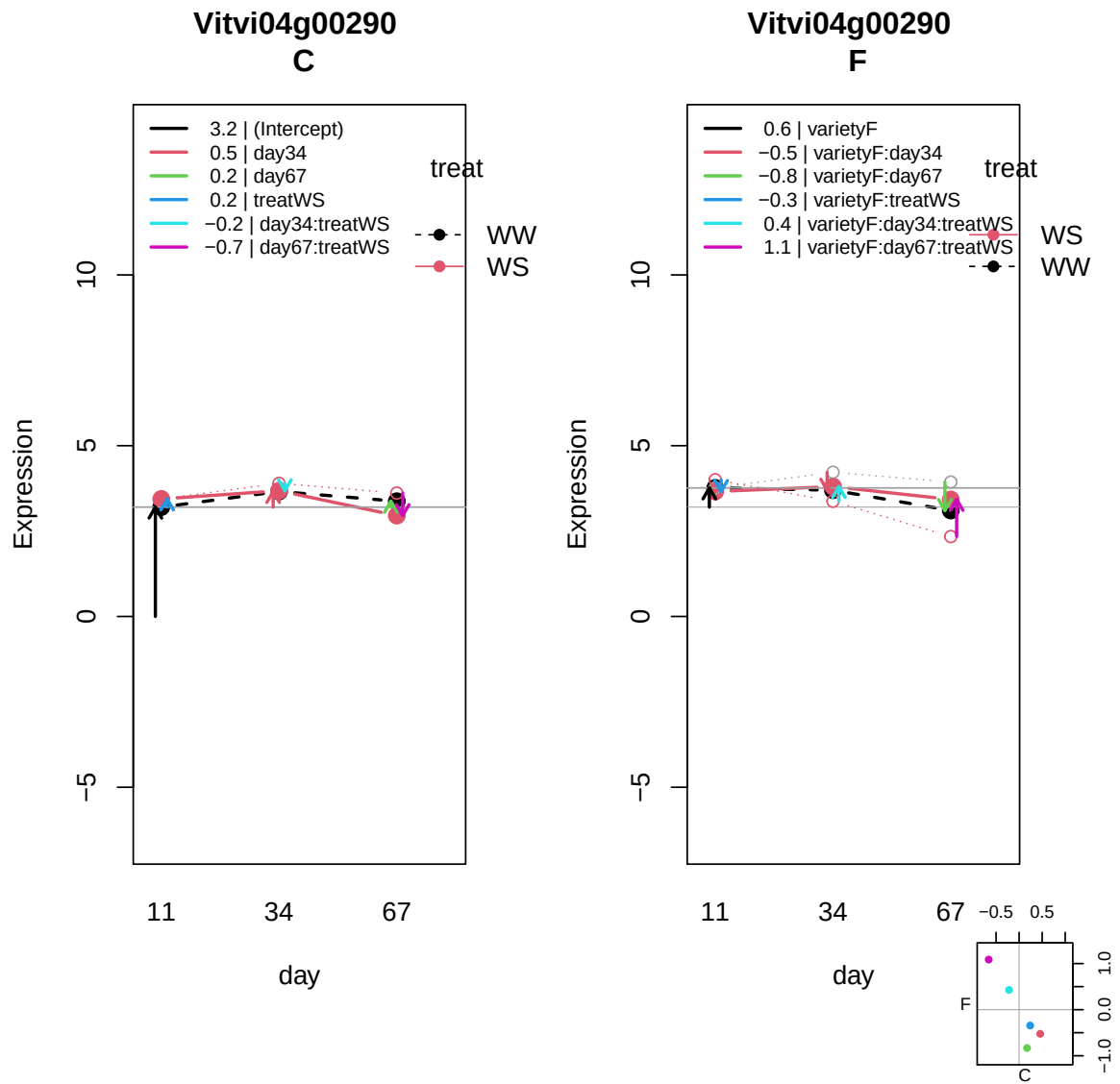
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

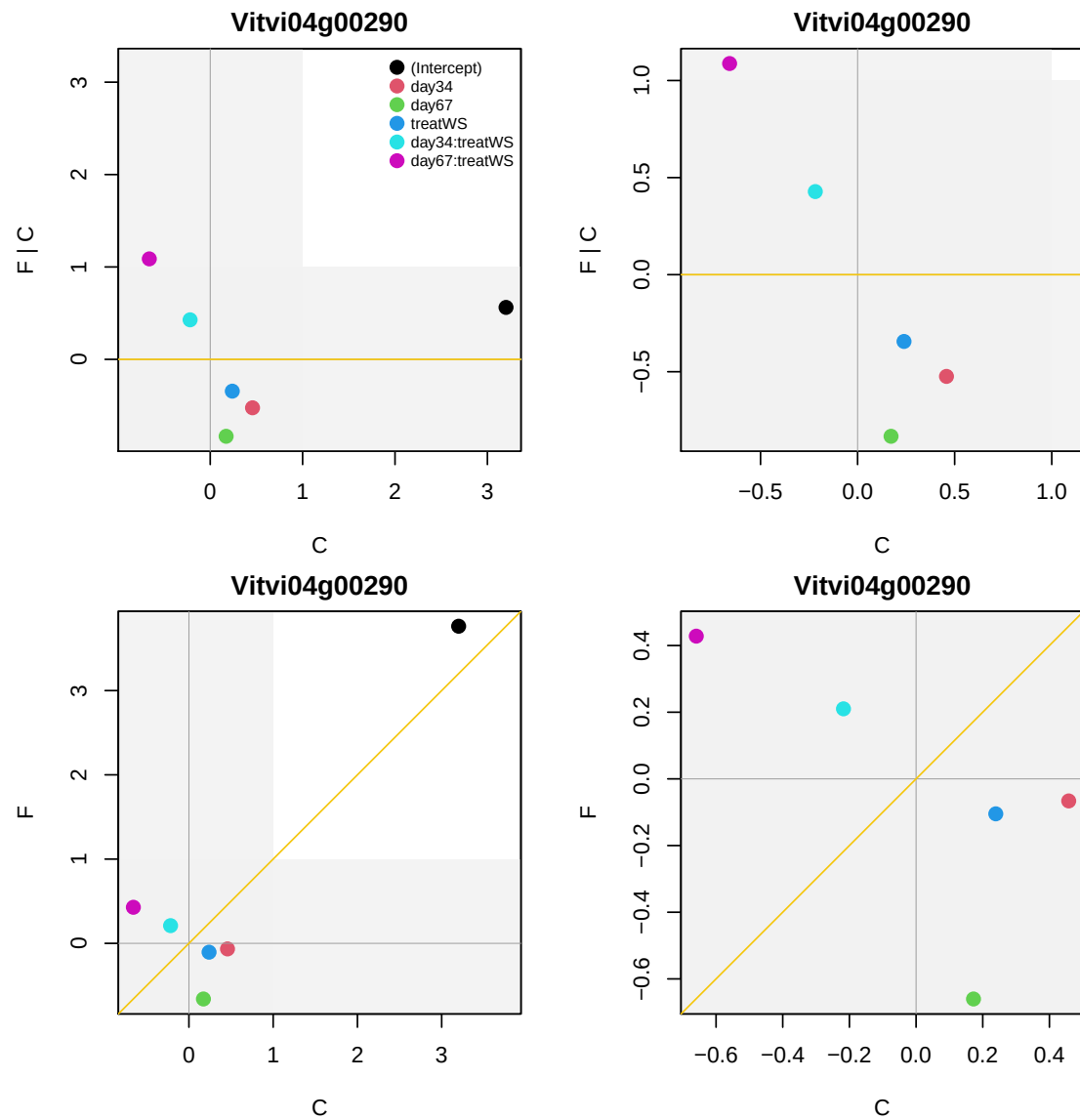


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

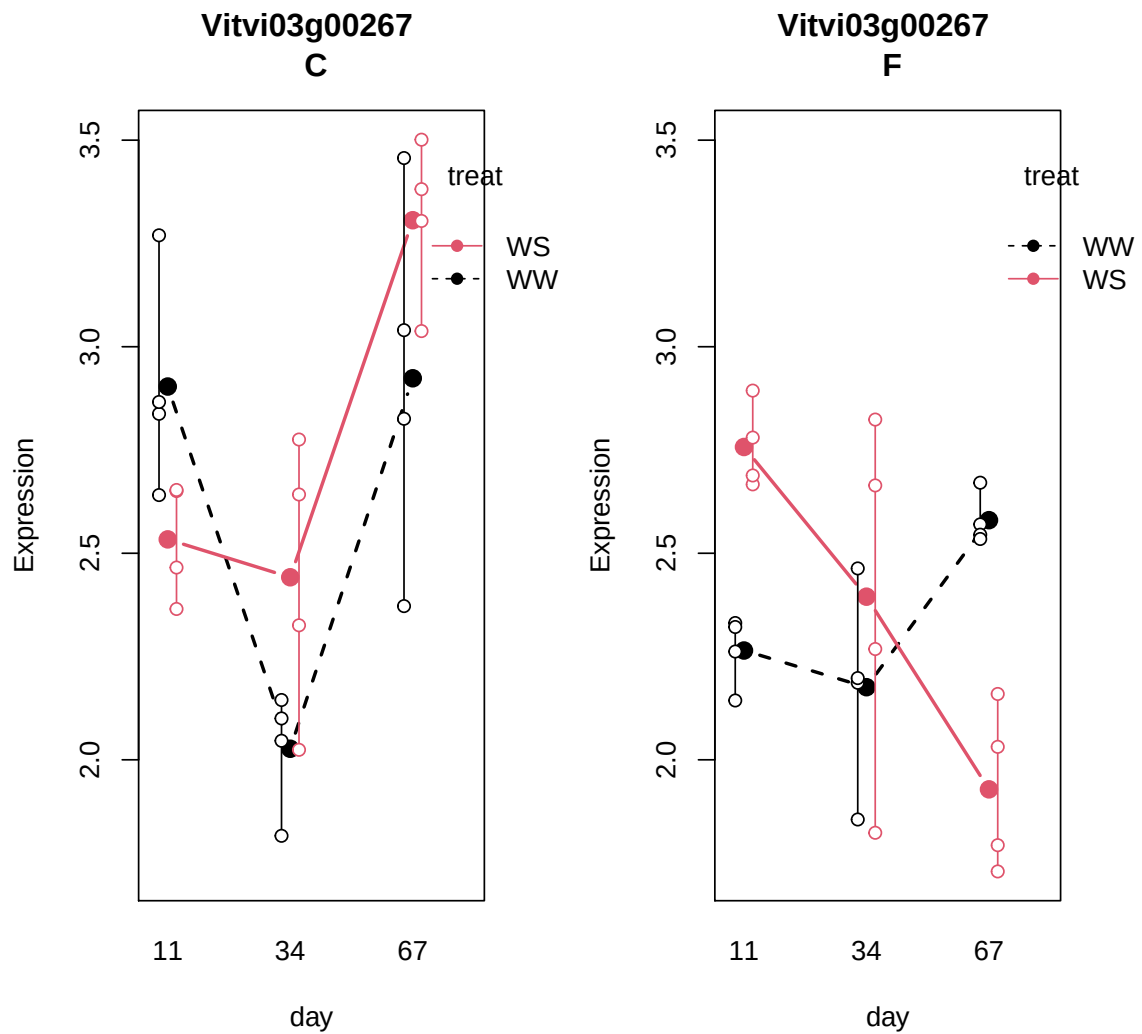
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



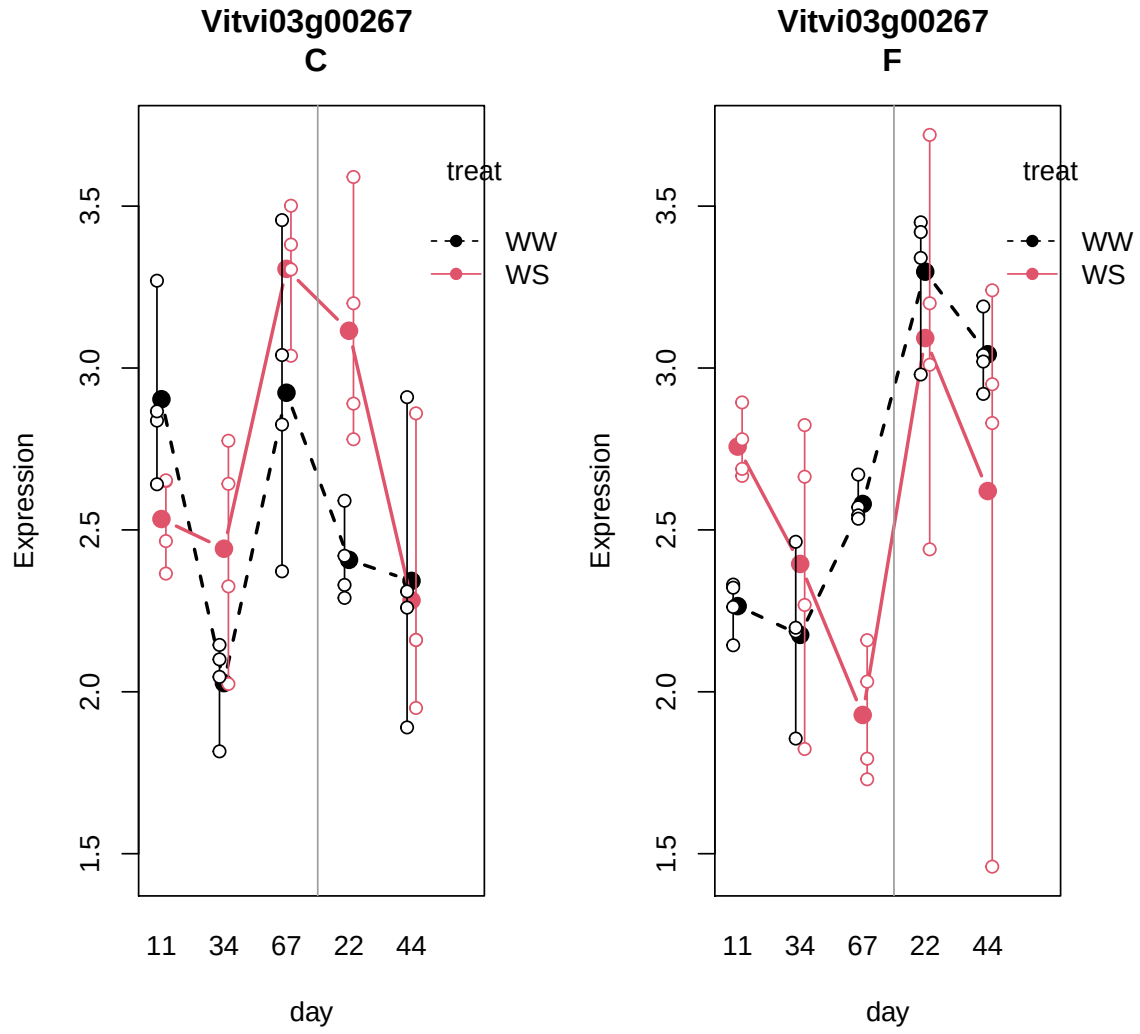
6.12.8 Vitvi03g00267

Coefficient varietyF:day67:treatWS for Vitvi03g00267.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi03g00267 -1.896814 2.519721 -5.303504 4.875134e-06
      adj.P.Val      B
Vitvi03g00267 0.009288349 3.97278
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```




```
> fit1[varname,]$coefficients
```

```

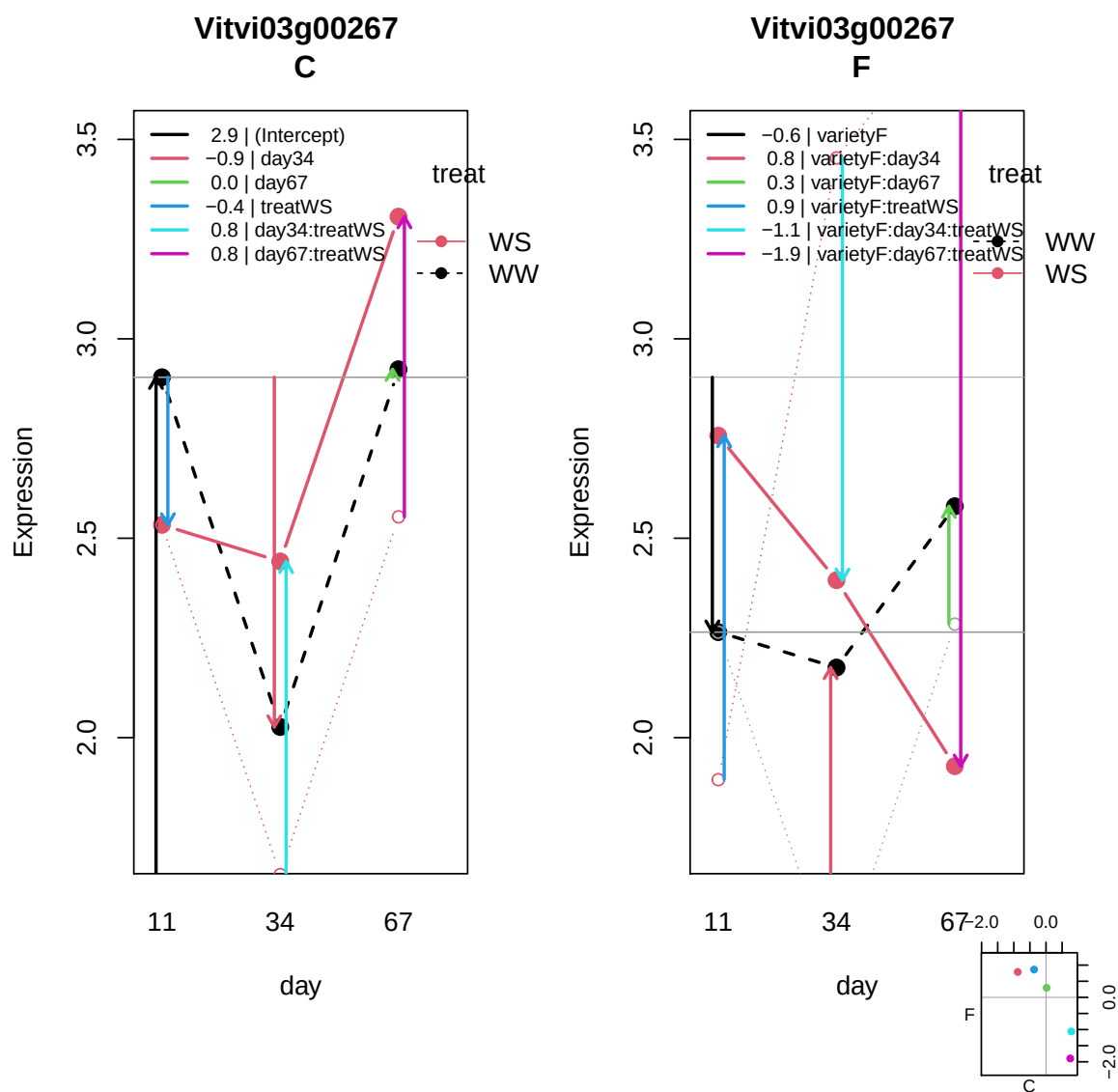
              (Intercept)    varietyF      day34      day67
Vitvi03g00267      2.903581 -0.6389835 -0.8768198 0.02003062
              treatWS varietyF:day34 varietyF:day67
Vitvi03g00267    -0.3699818      0.7880069      0.2954646
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi03g00267          0.8626162      0.785076      0.7525721
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi03g00267          -1.058637          -1.896814

```

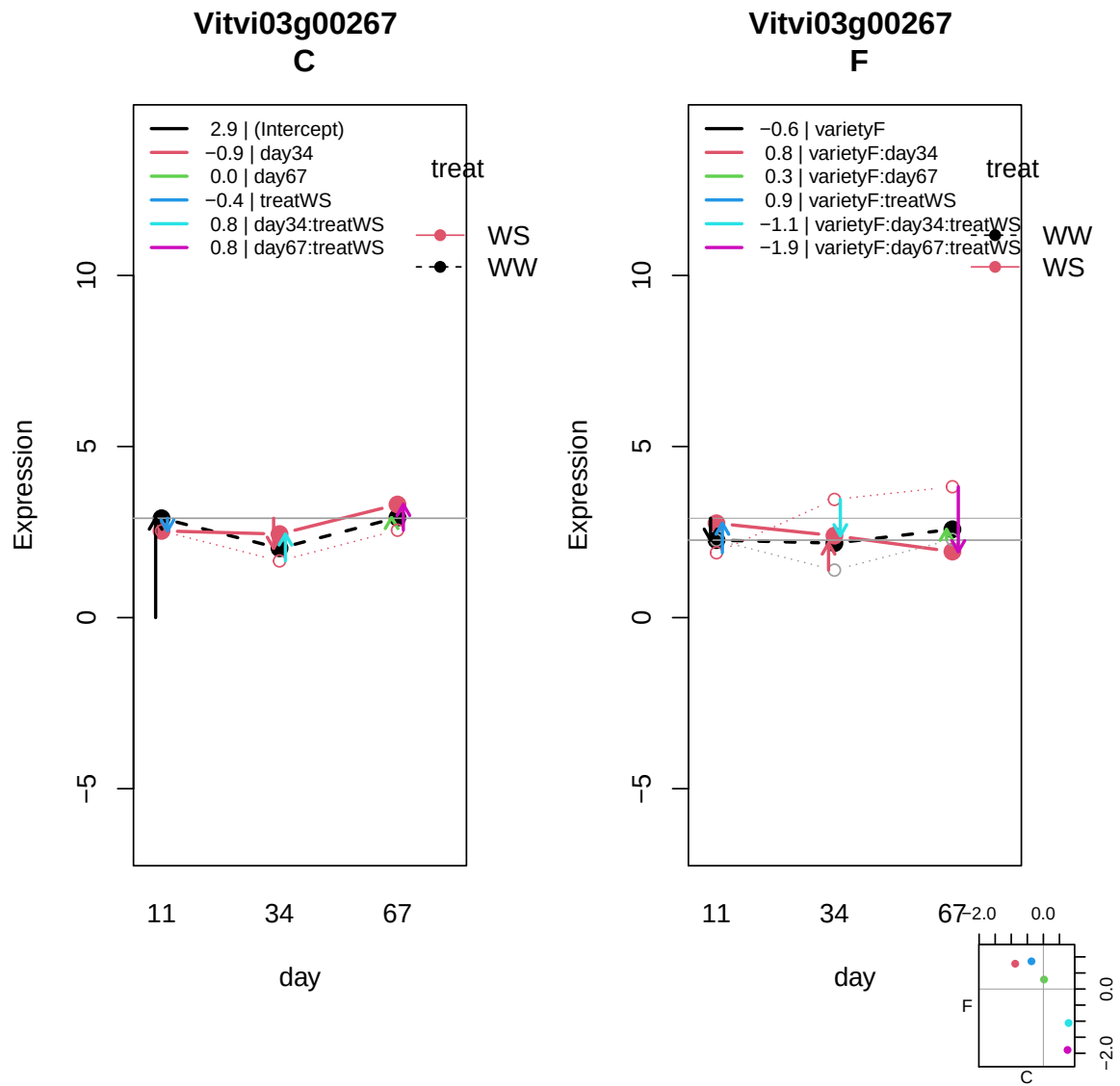
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

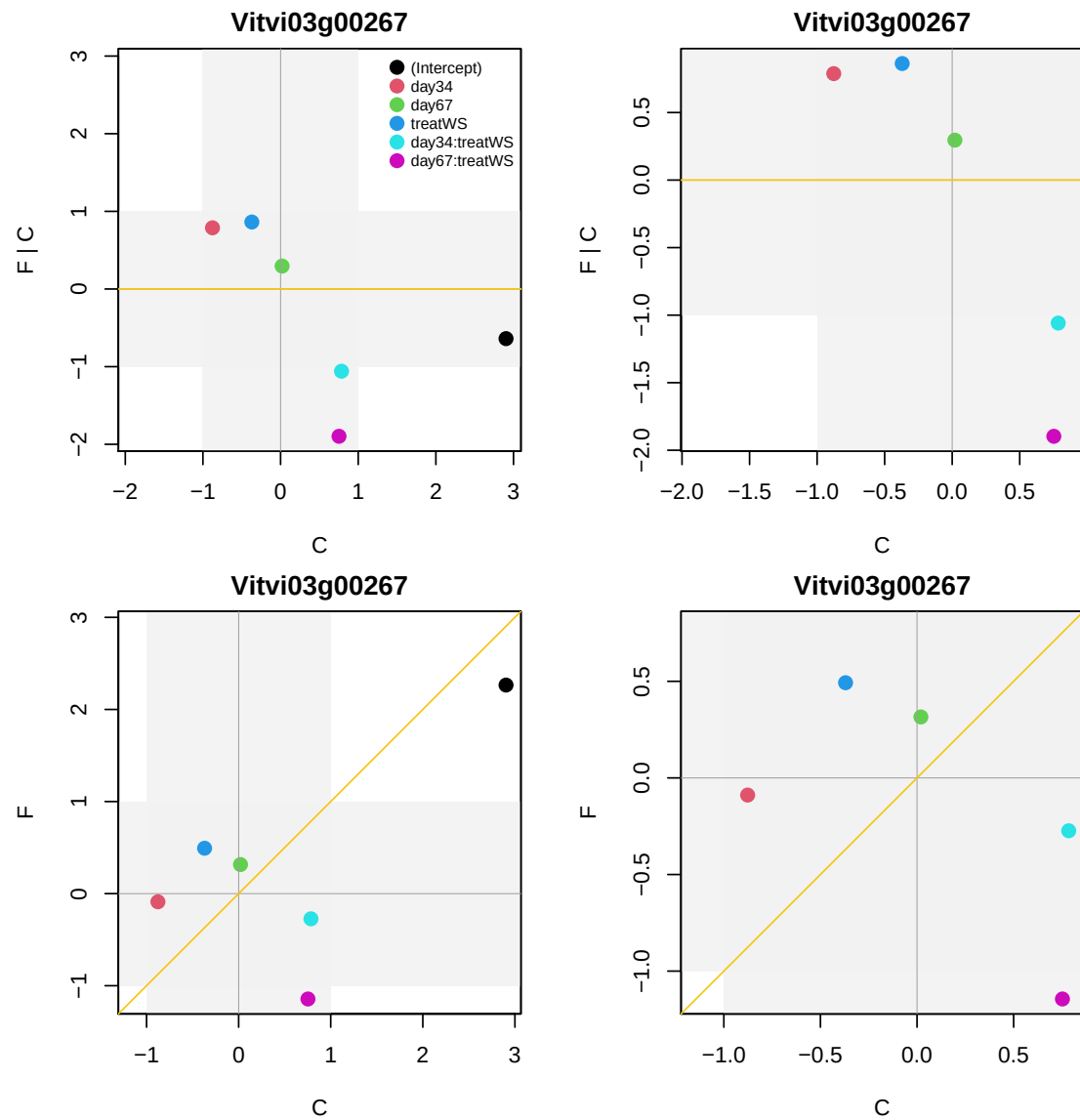


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

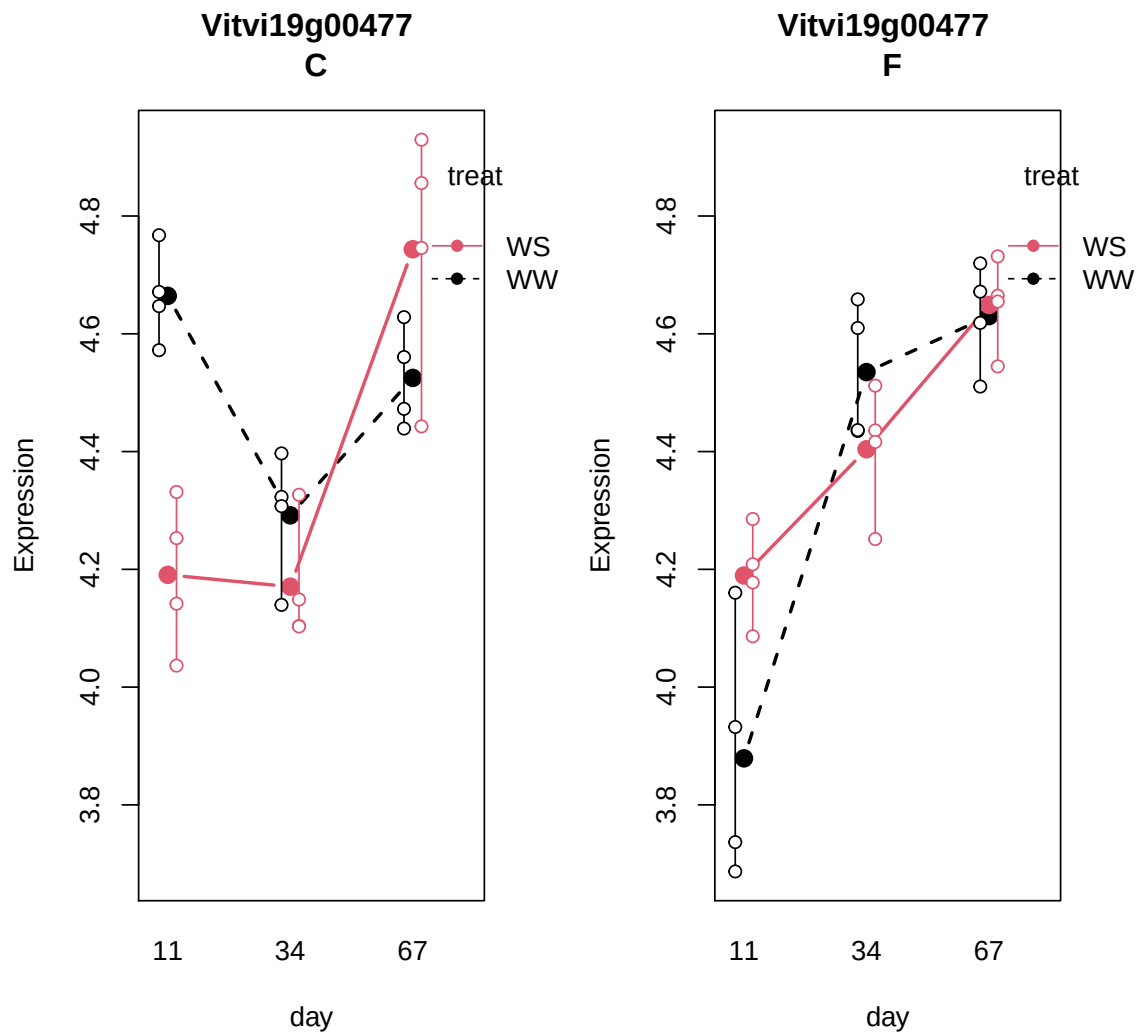
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



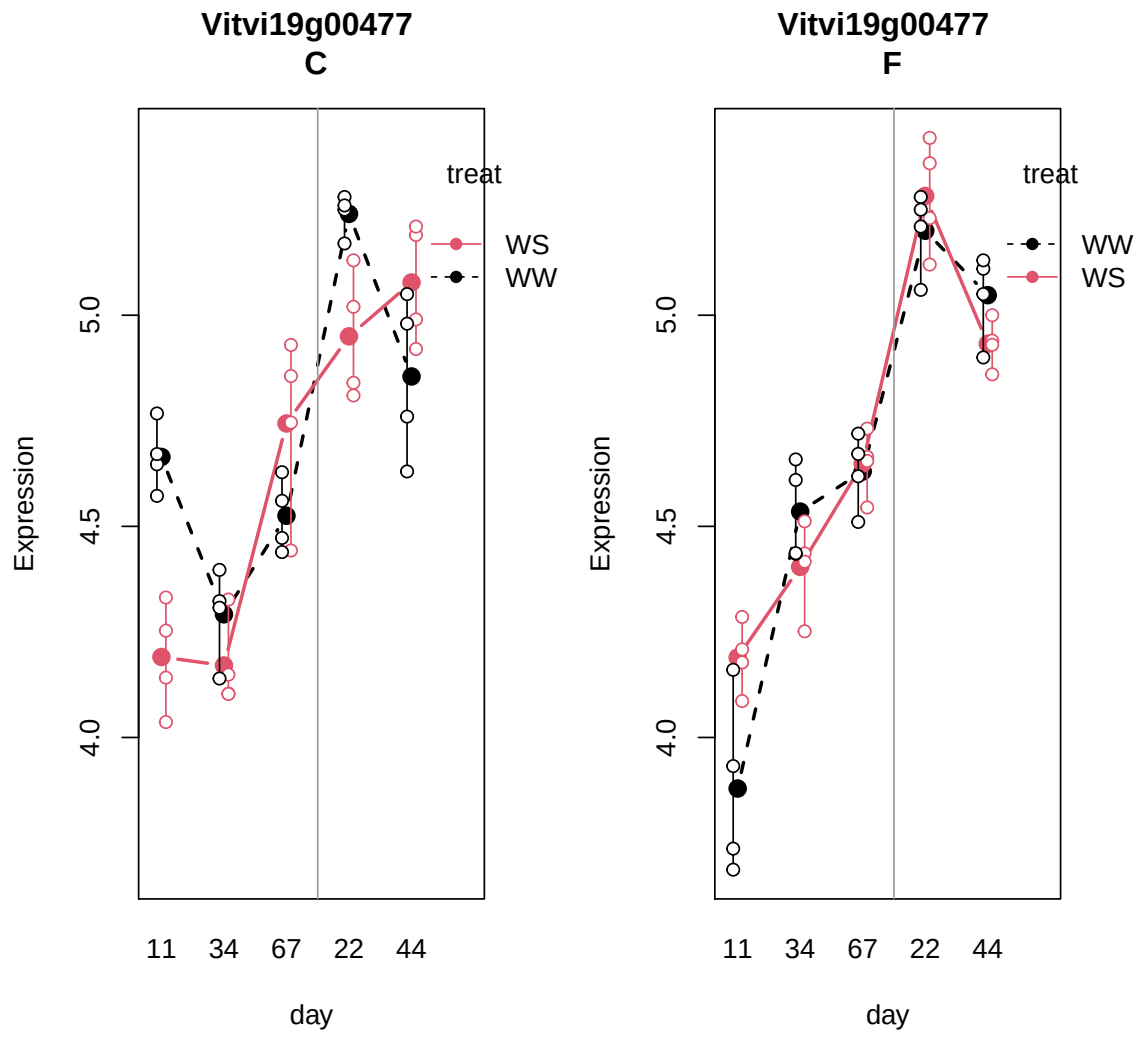
6.12.9 Vitvi19g00477

Coefficient varietyF:day67:treatWS for Vitvi19g00477.

```
> tt[varname,]
              logFC AveExpr          t      P.Value
Vitvi19g00477 -0.9838641 4.40603 -5.248062 5.811461e-06
              adj.P.Val          B
Vitvi19g00477 0.009317083 3.816571
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

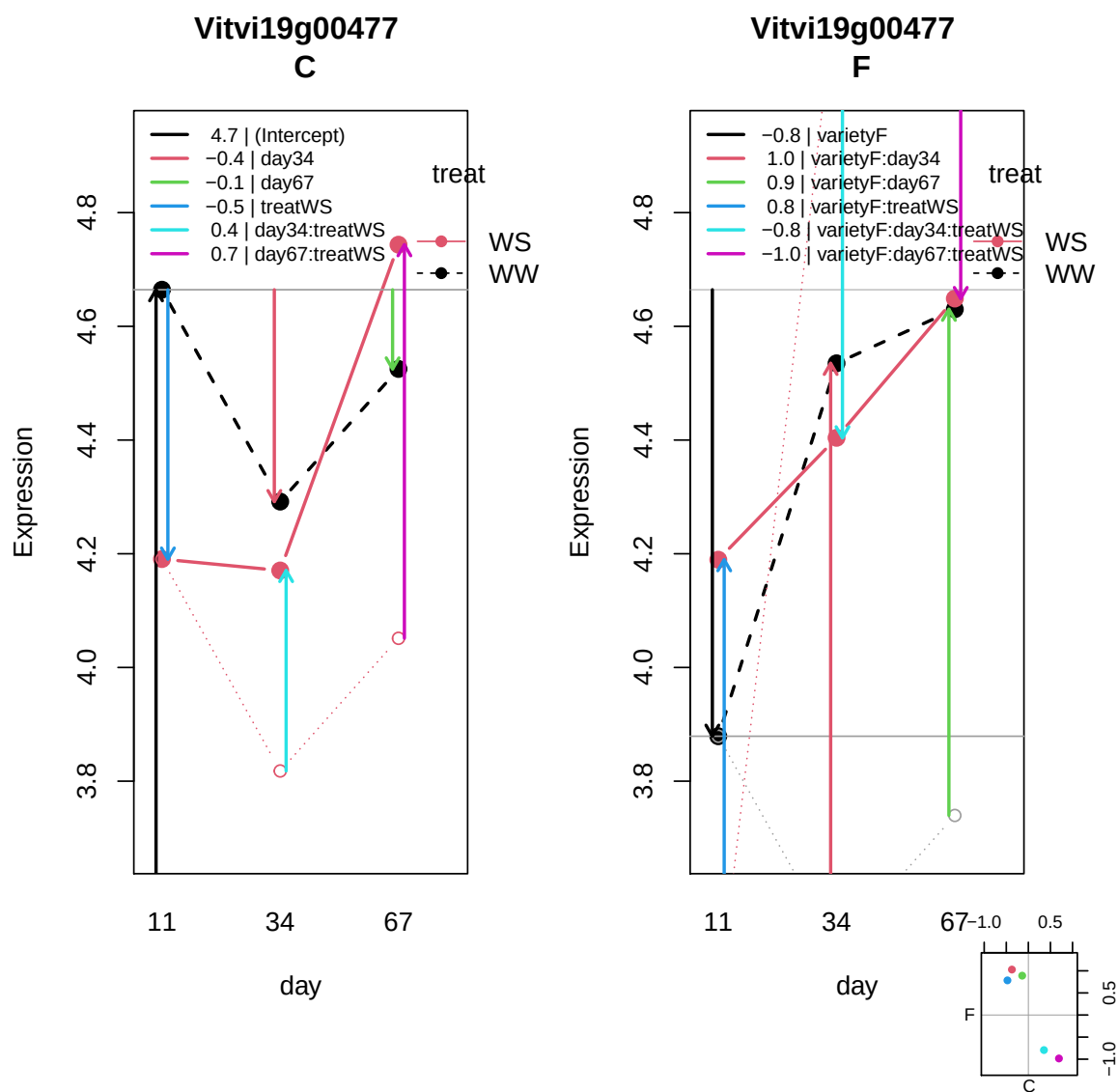
              (Intercept)  varietyF      day34      day67
Vitvi19g00477      4.66442 -0.785371 -0.3727075 -0.139342
              treatWS varietyF:day34 varietyF:day67
Vitvi19g00477 -0.4737632      1.028603      0.8903223
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi19g00477      0.7842366      0.3526084      0.6922593
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi19g00477      -0.79411      -0.9838641

```

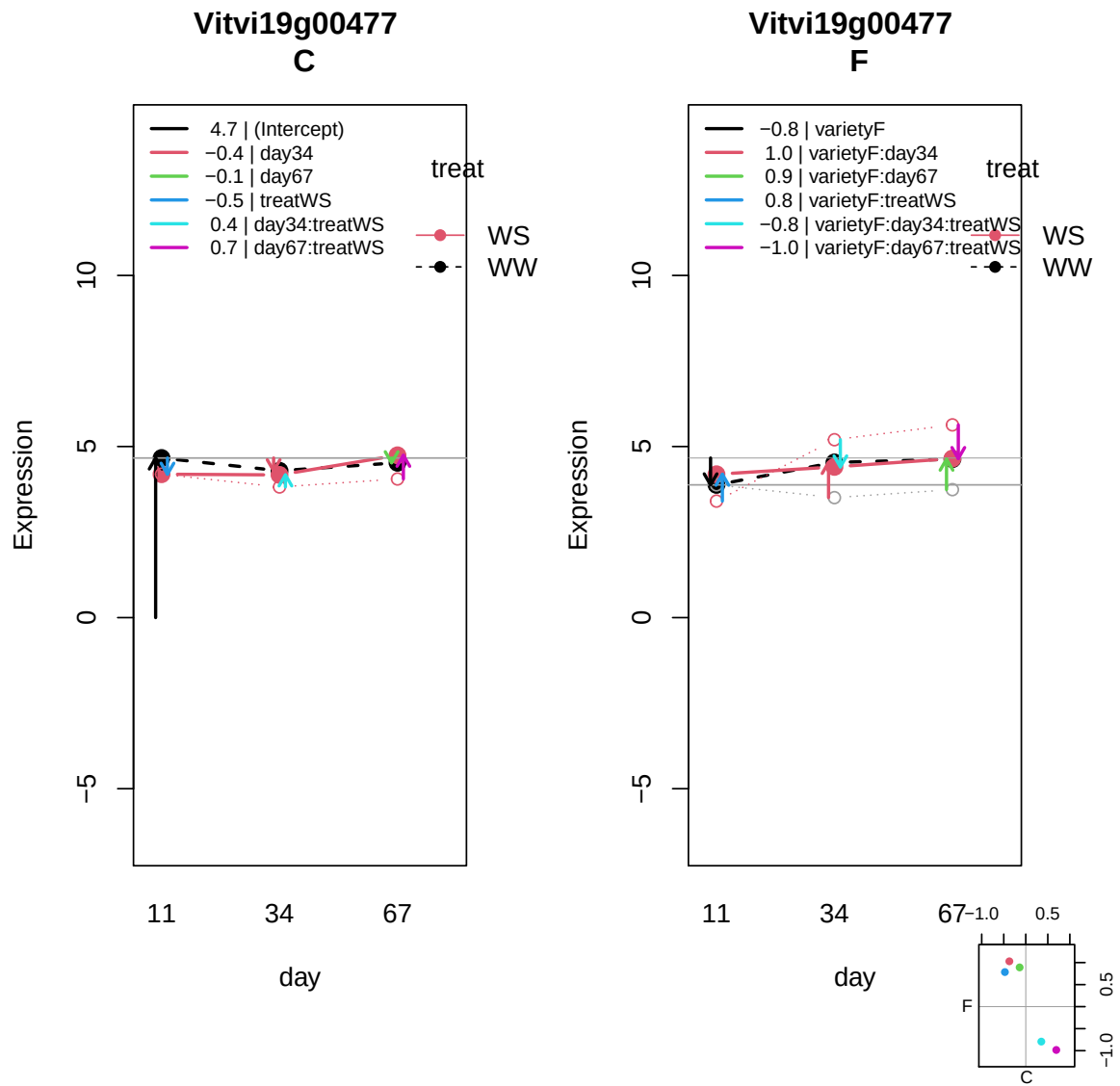
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

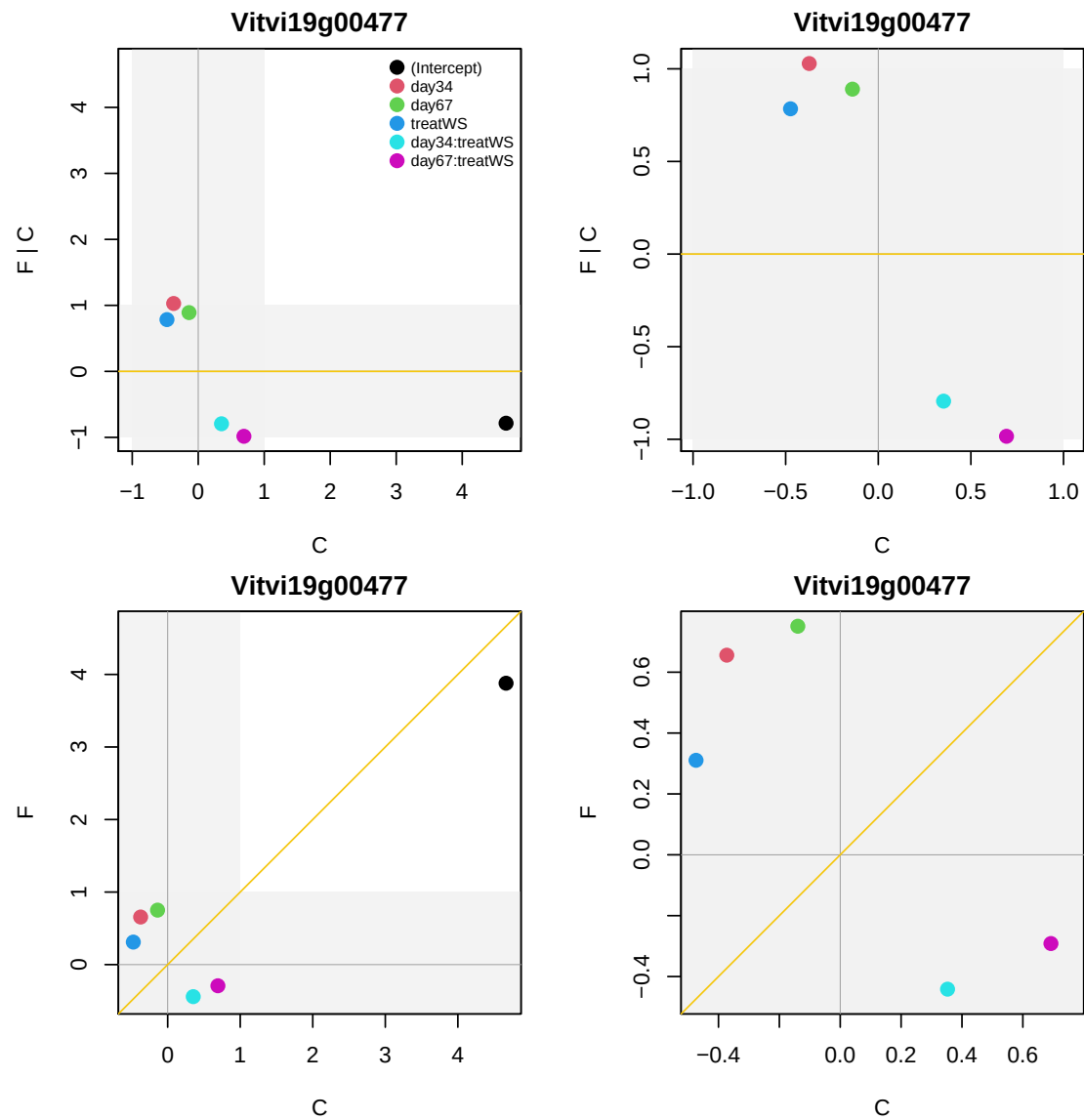


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

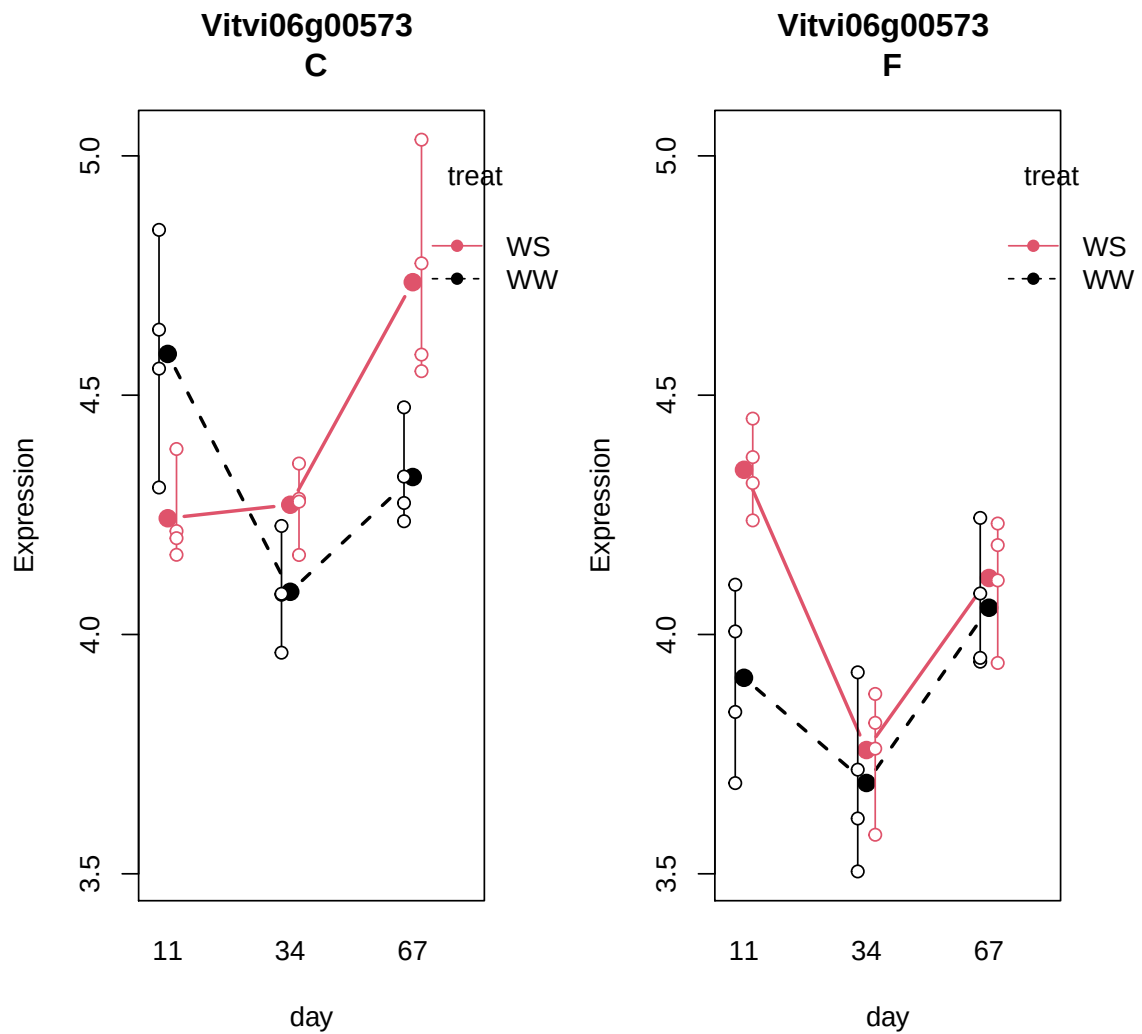


6.12.10 Vitvi06g00573

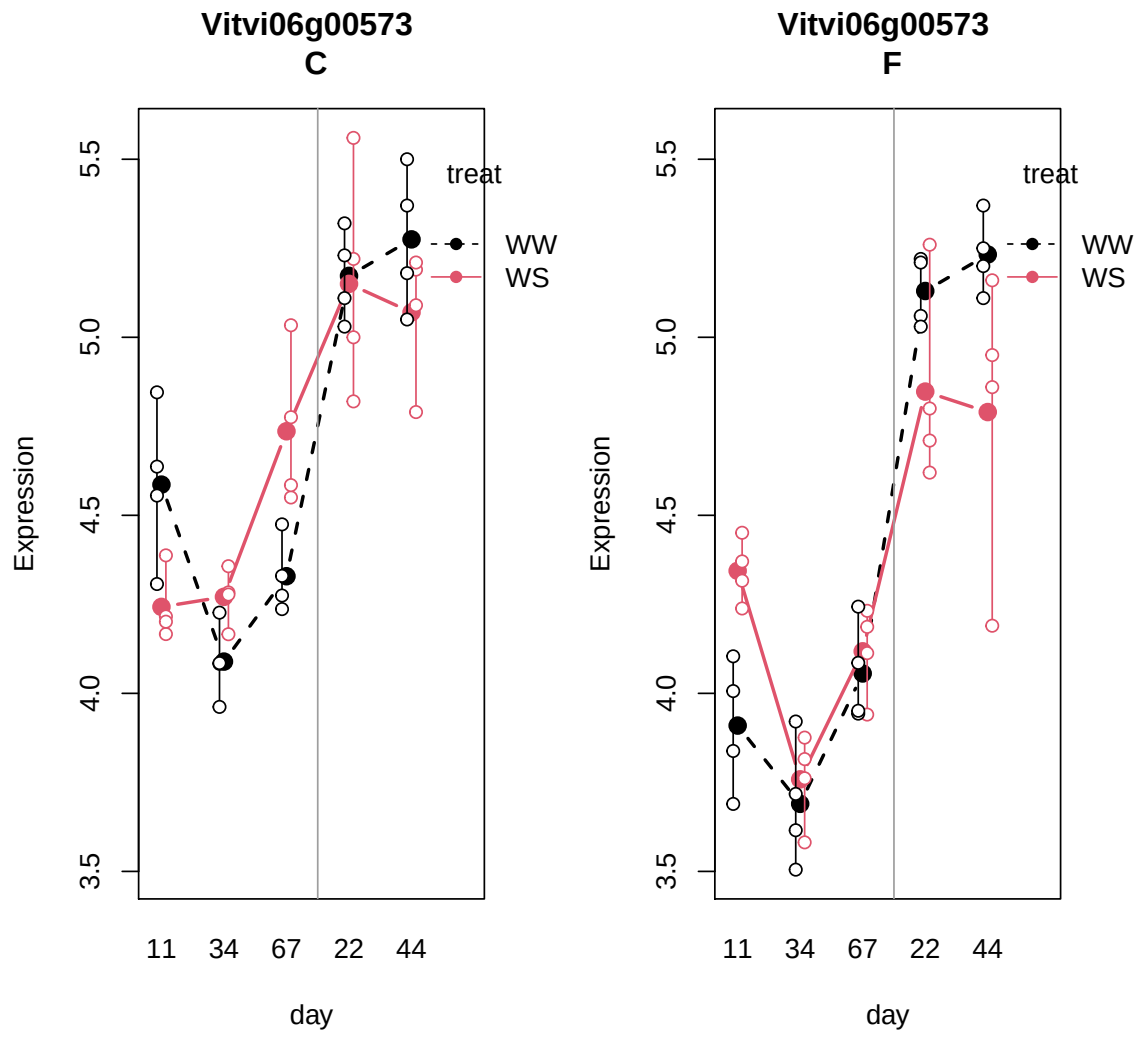
Coefficient varietyF:day67:treatWS for Vitvi06g00573.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi06g00573 -1.122871 4.177512 -5.232098 6.112769e-06
      adj.P.Val      B
Vitvi06g00573 0.009317083 3.771618

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

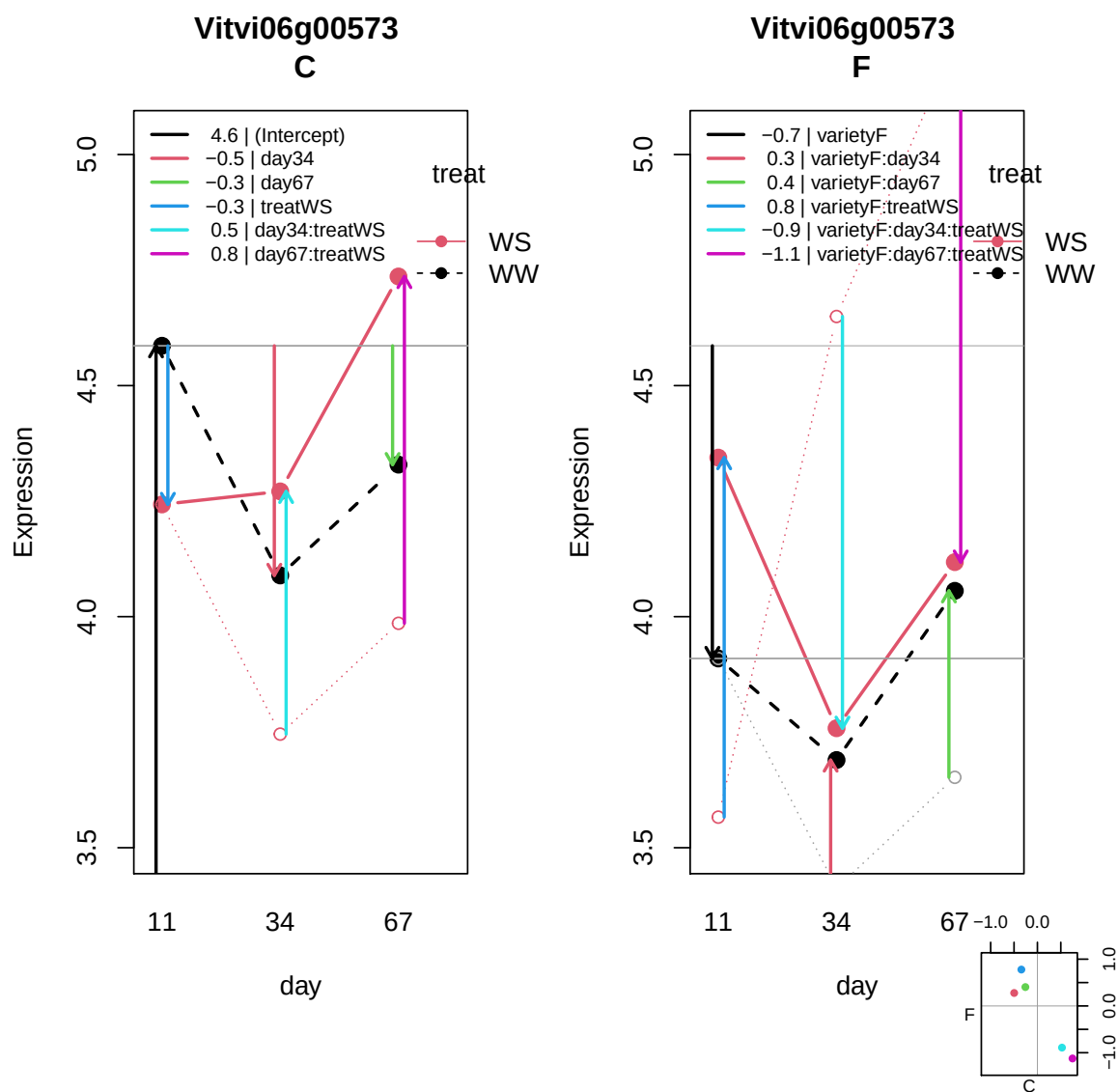
              (Intercept)    varietyF      day34      day67
Vitvi06g00573      4.5862 -0.6766772 -0.4970012 -0.2572256
              treatWS varietyF:day34 varietyF:day67
Vitvi06g00573 -0.3433686      0.2772267      0.4035675
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi06g00573      0.7779406      0.5252232      0.7504635
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi06g00573      -0.8909893      -1.122871

```

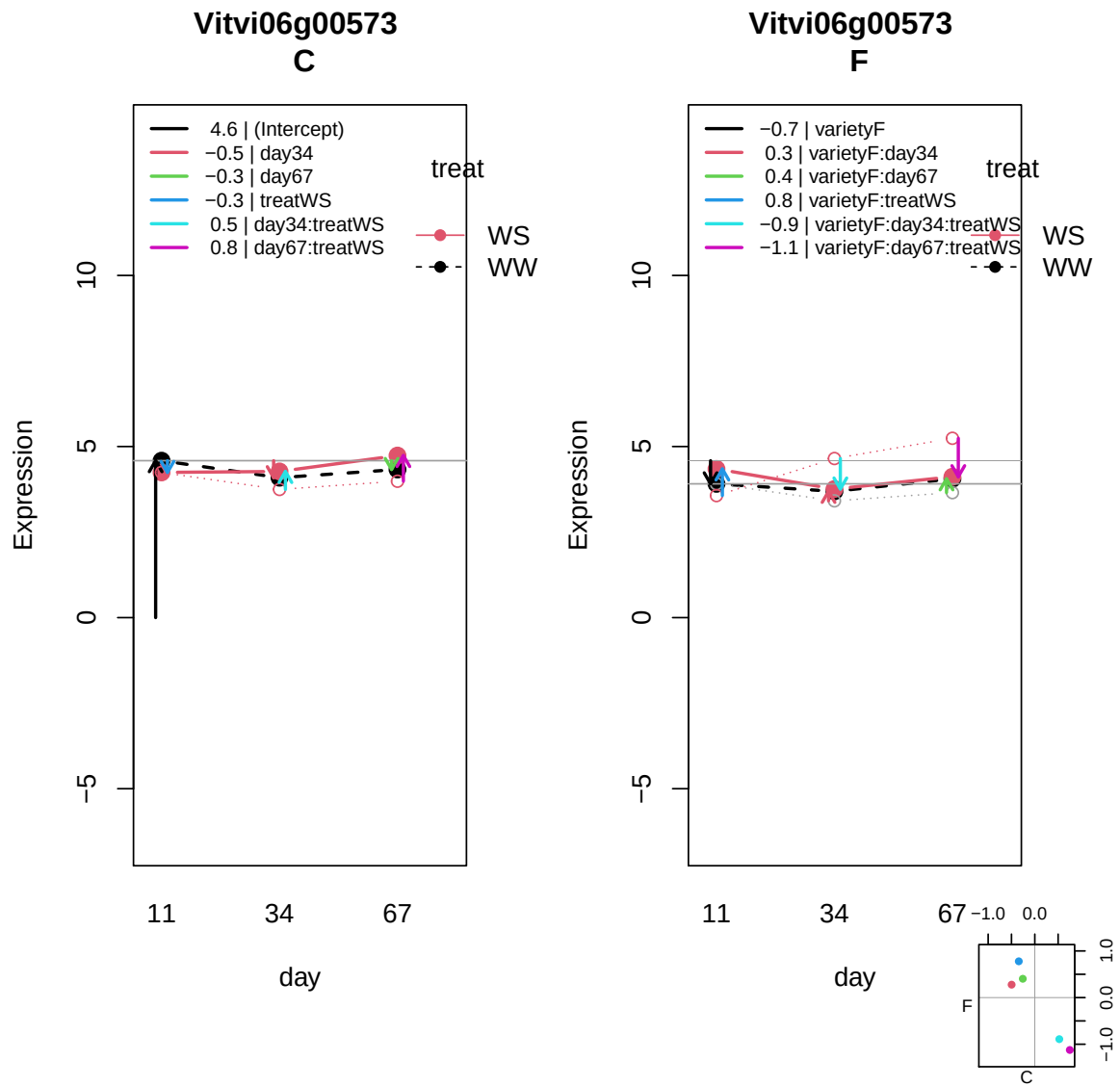
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

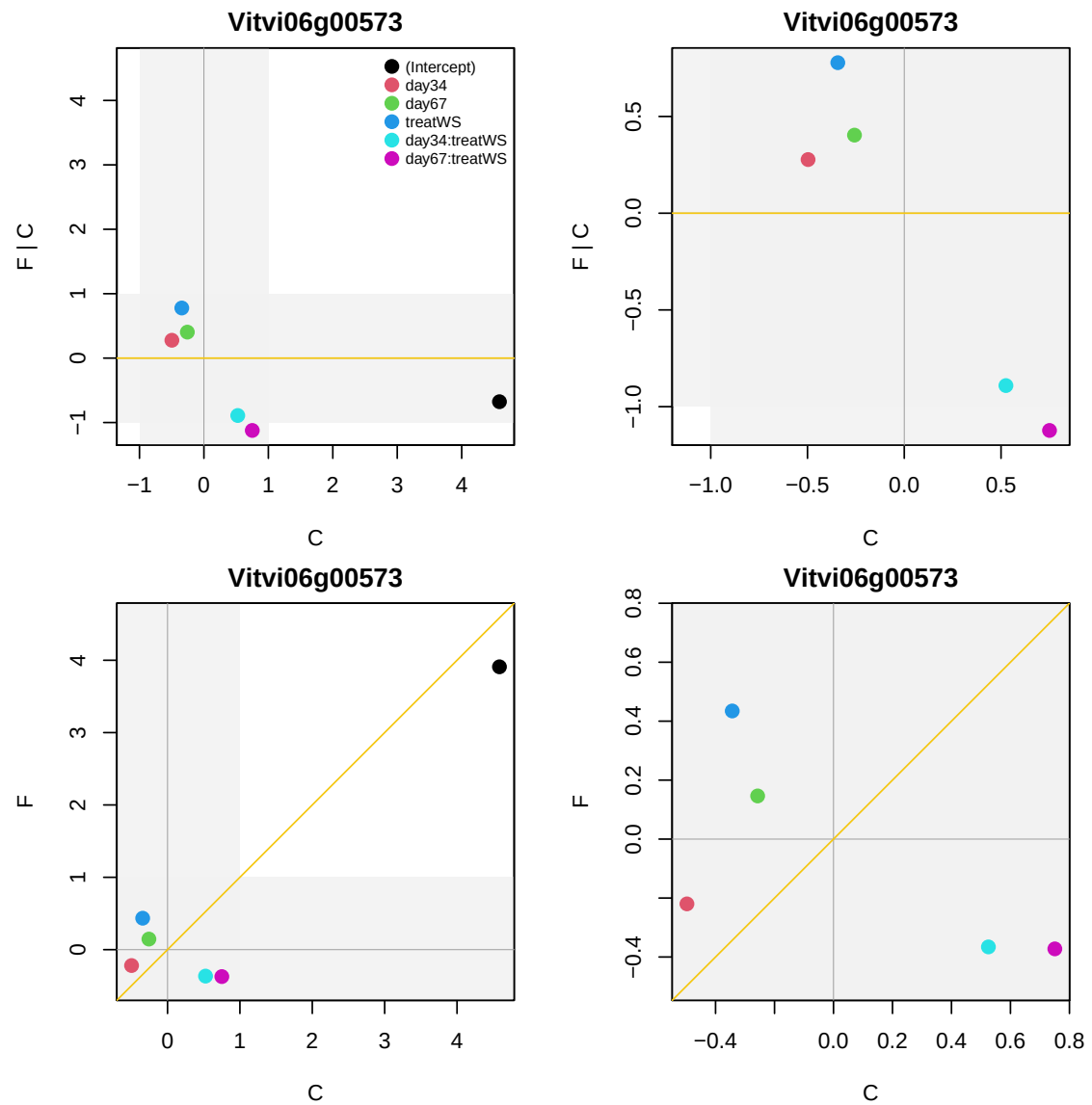


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

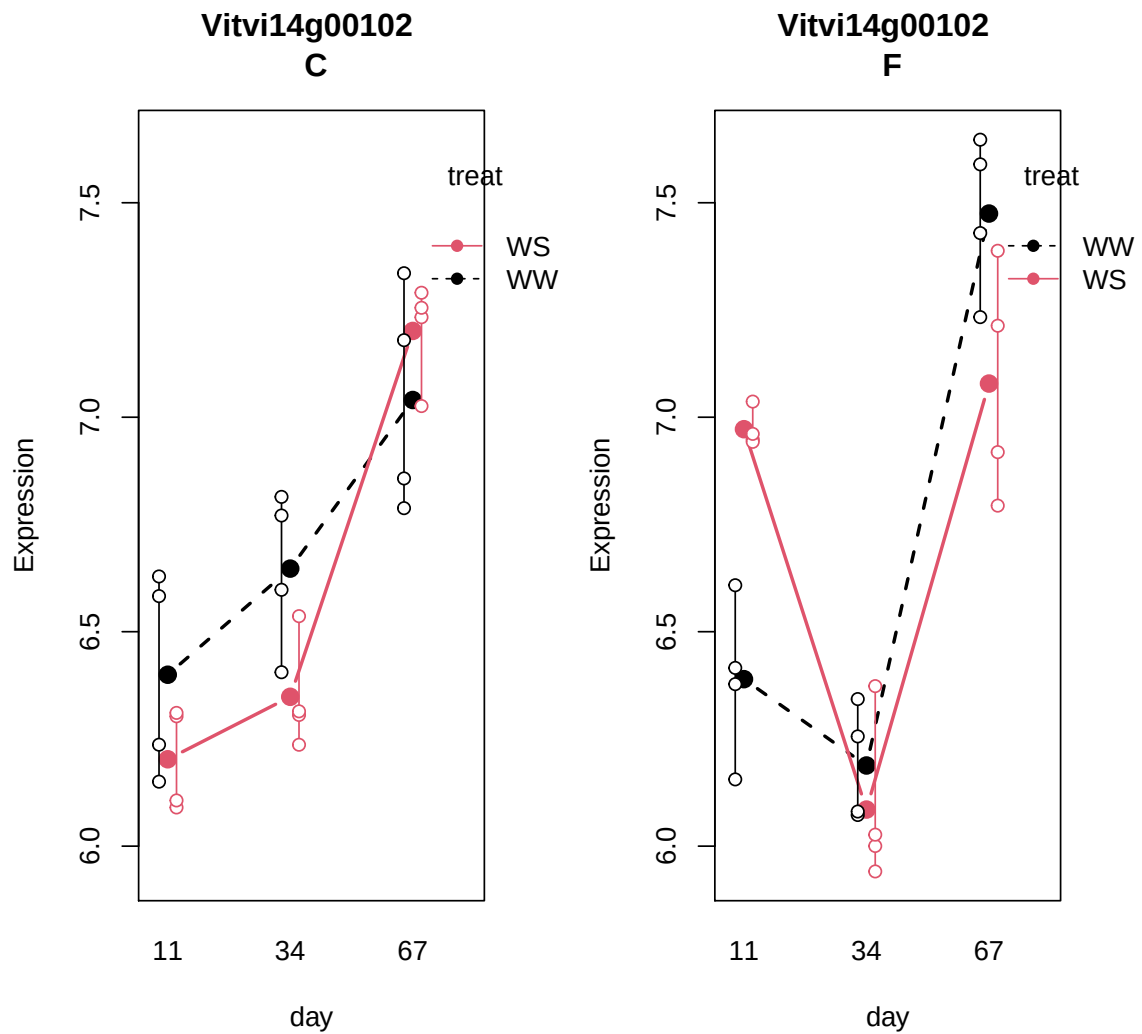


6.12.11 Vitvi14g00102

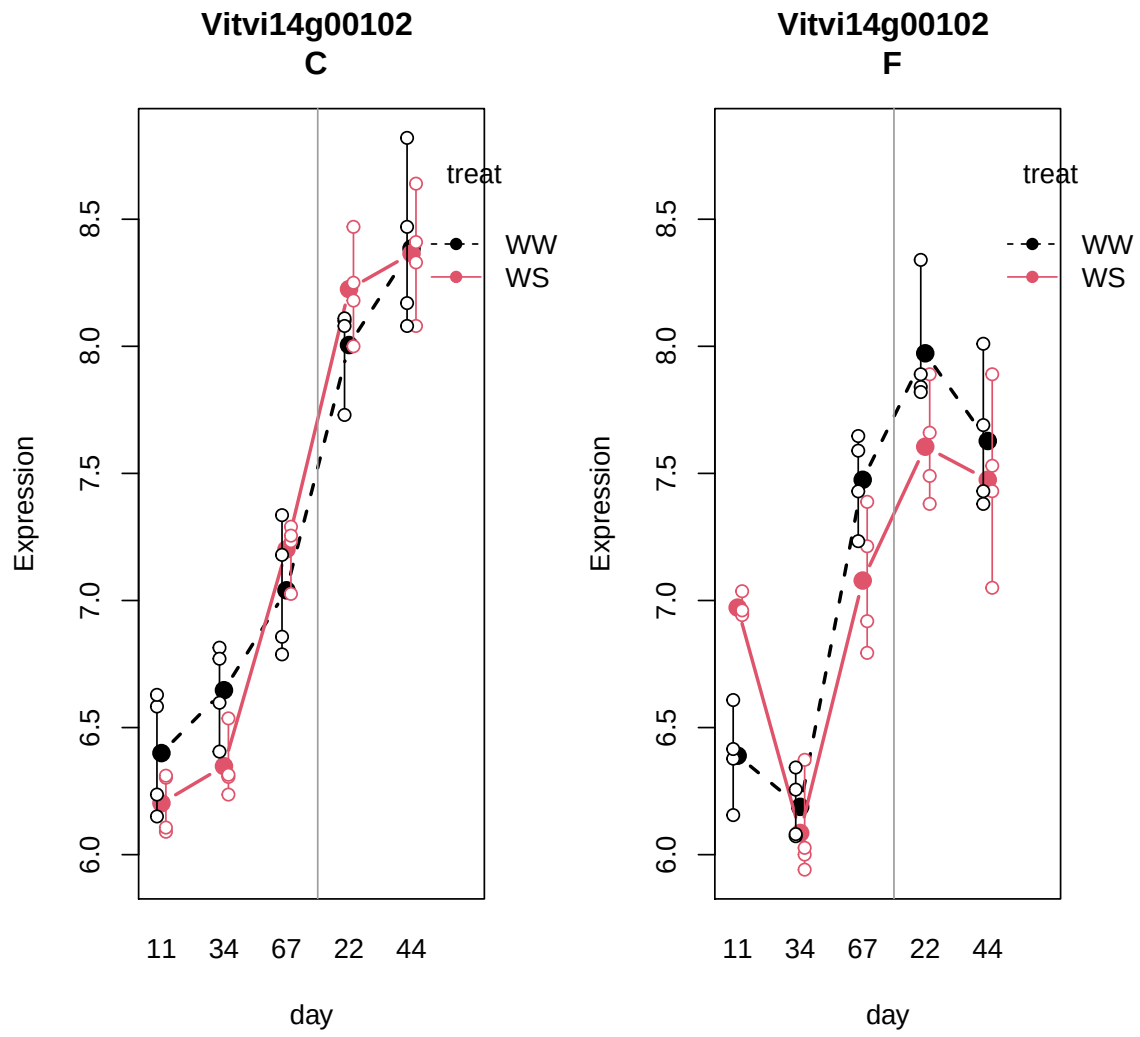
Coefficient varietyF:day67:treatWS for Vitvi14g00102.

```
> tt[varname,]
      logFC AveExpr      t    P.Value
Vitvi14g00102 -1.337176 6.668885 -5.113667 8.889059e-06
      adj.P.Val      B
Vitvi14g00102  0.012317 3.438515

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

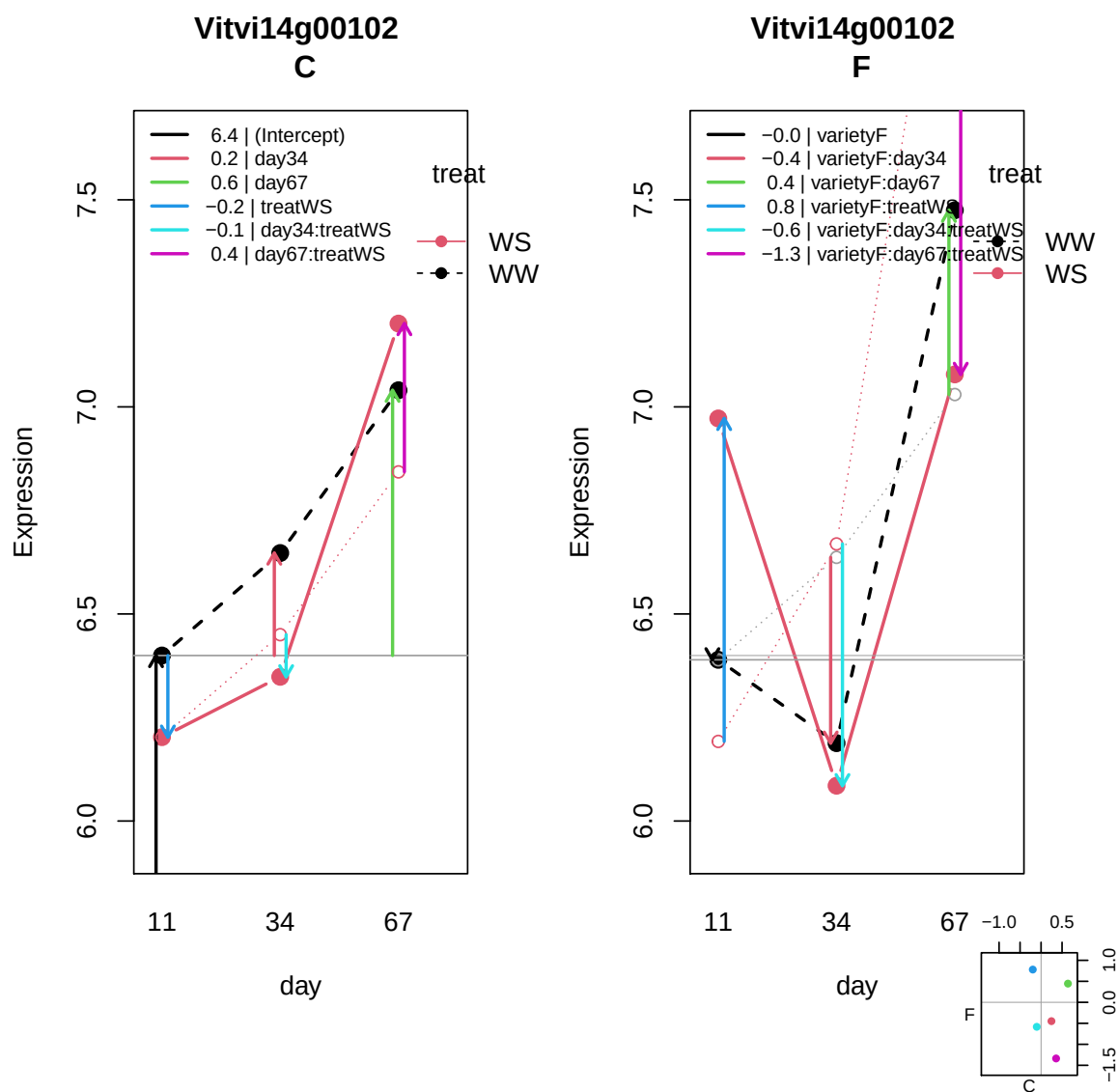
              (Intercept)    varietyF    day34    day67
Vitvi14g00102    6.399648 -0.01035155  0.24742  0.6404737
              treatWS    varietyF:day34    varietyF:day67
Vitvi14g00102   -0.1971057      -0.4486845      0.4450346
              varietyF:treatWS    day34:treatWS    day67:treatWS
Vitvi14g00102      0.7798427      -0.1017636      0.3580806
              varietyF:day34:treatWS    varietyF:day67:treatWS
Vitvi14g00102      -0.5836767              -1.337176

```

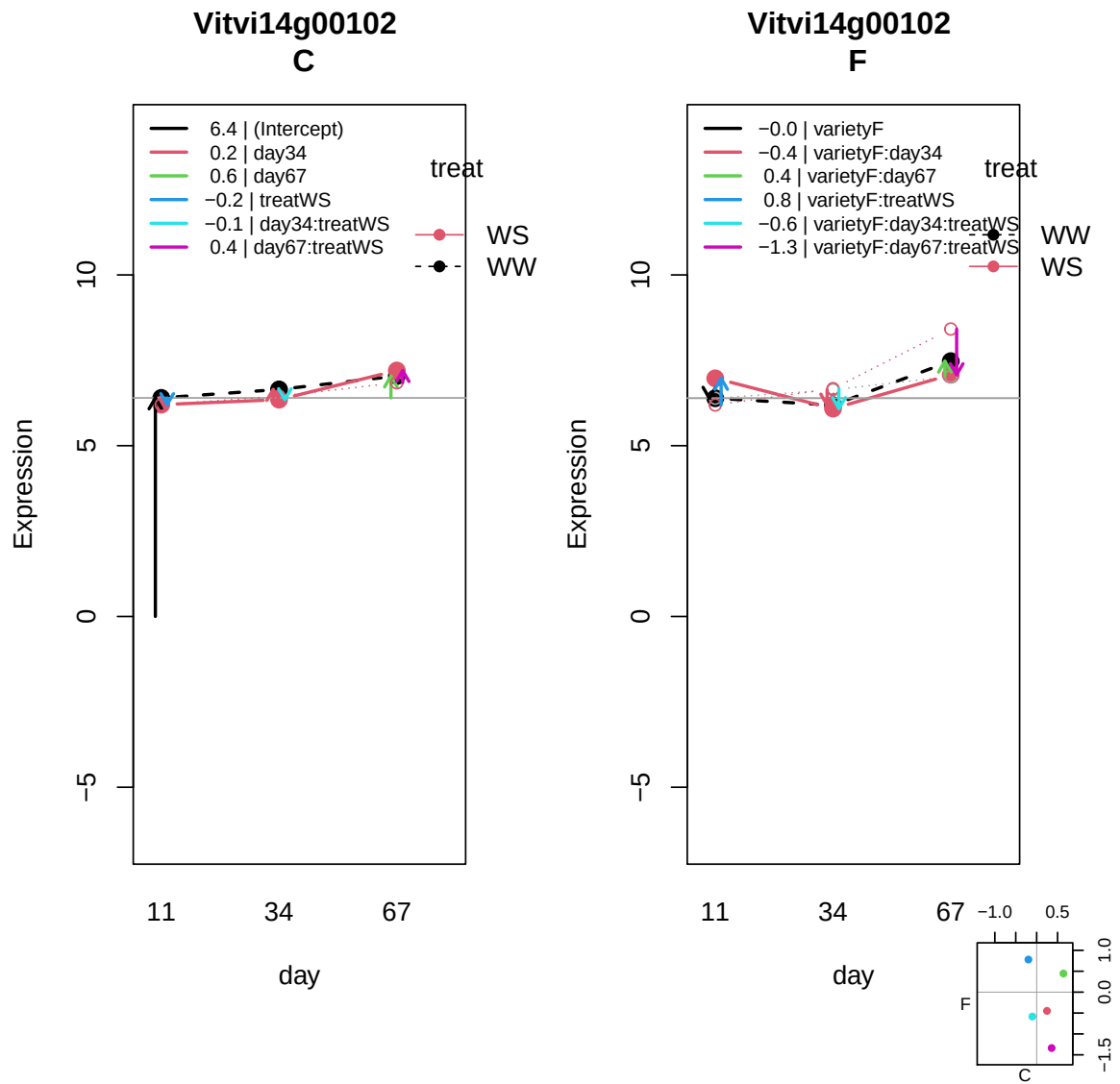
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

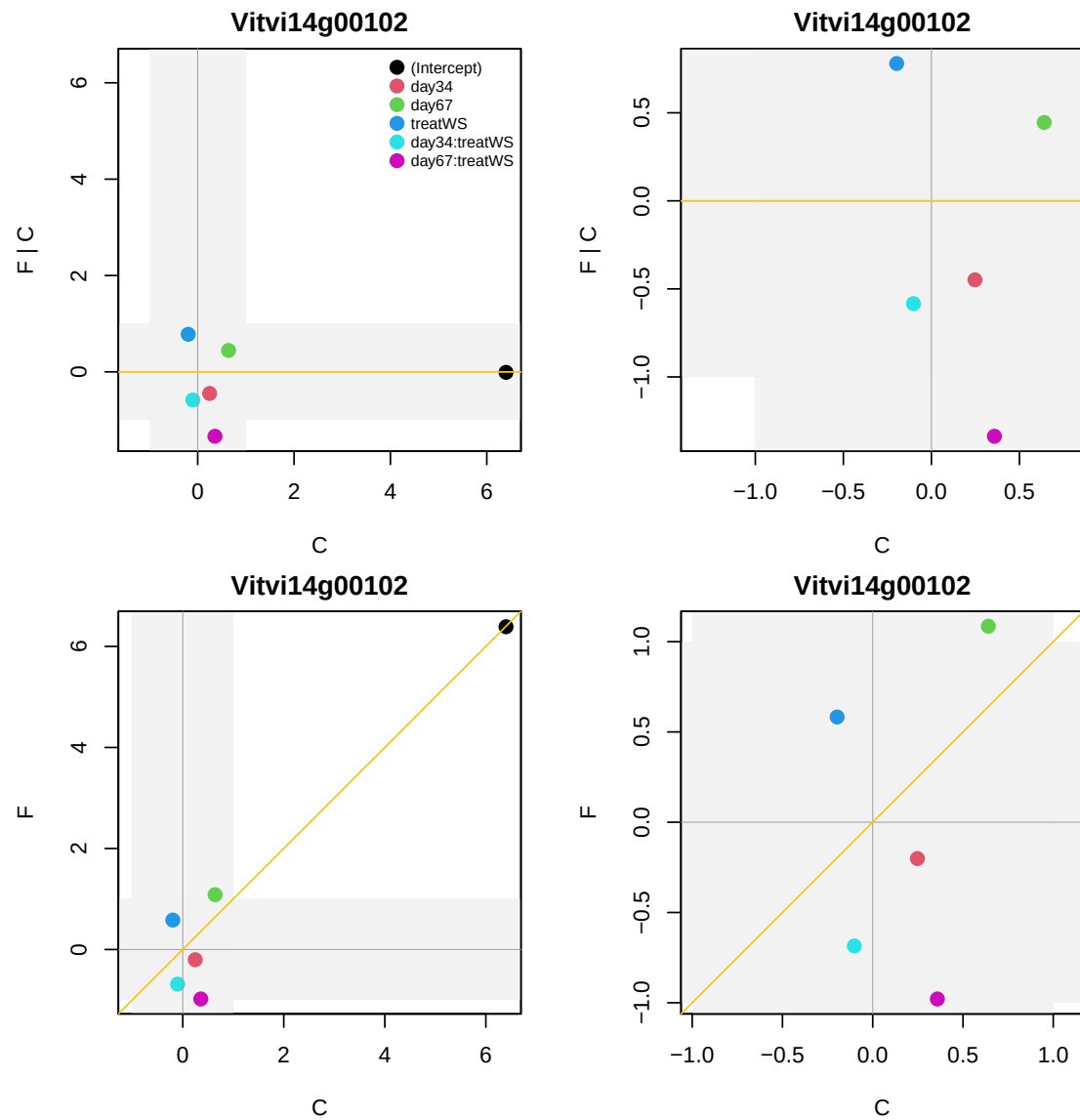



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

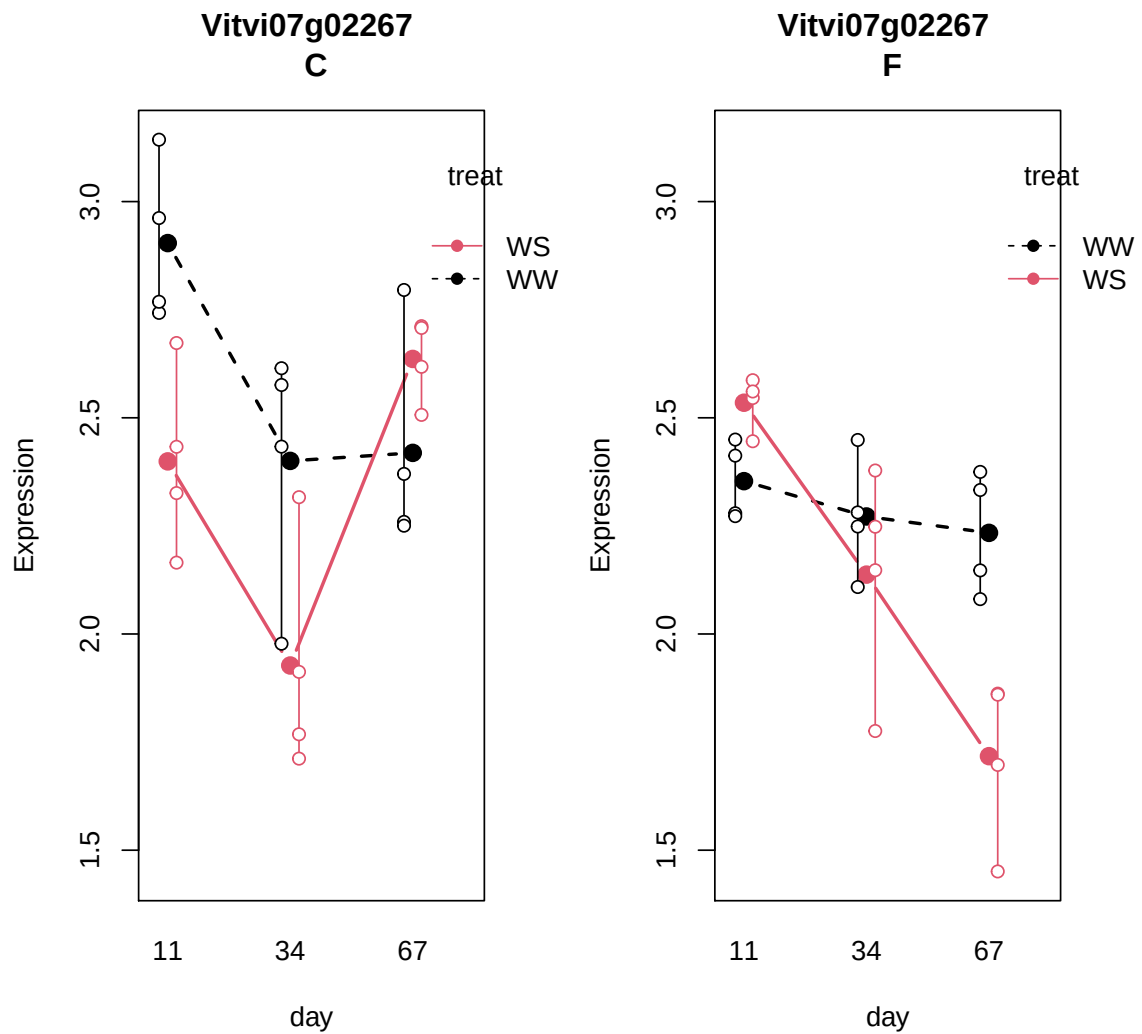
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



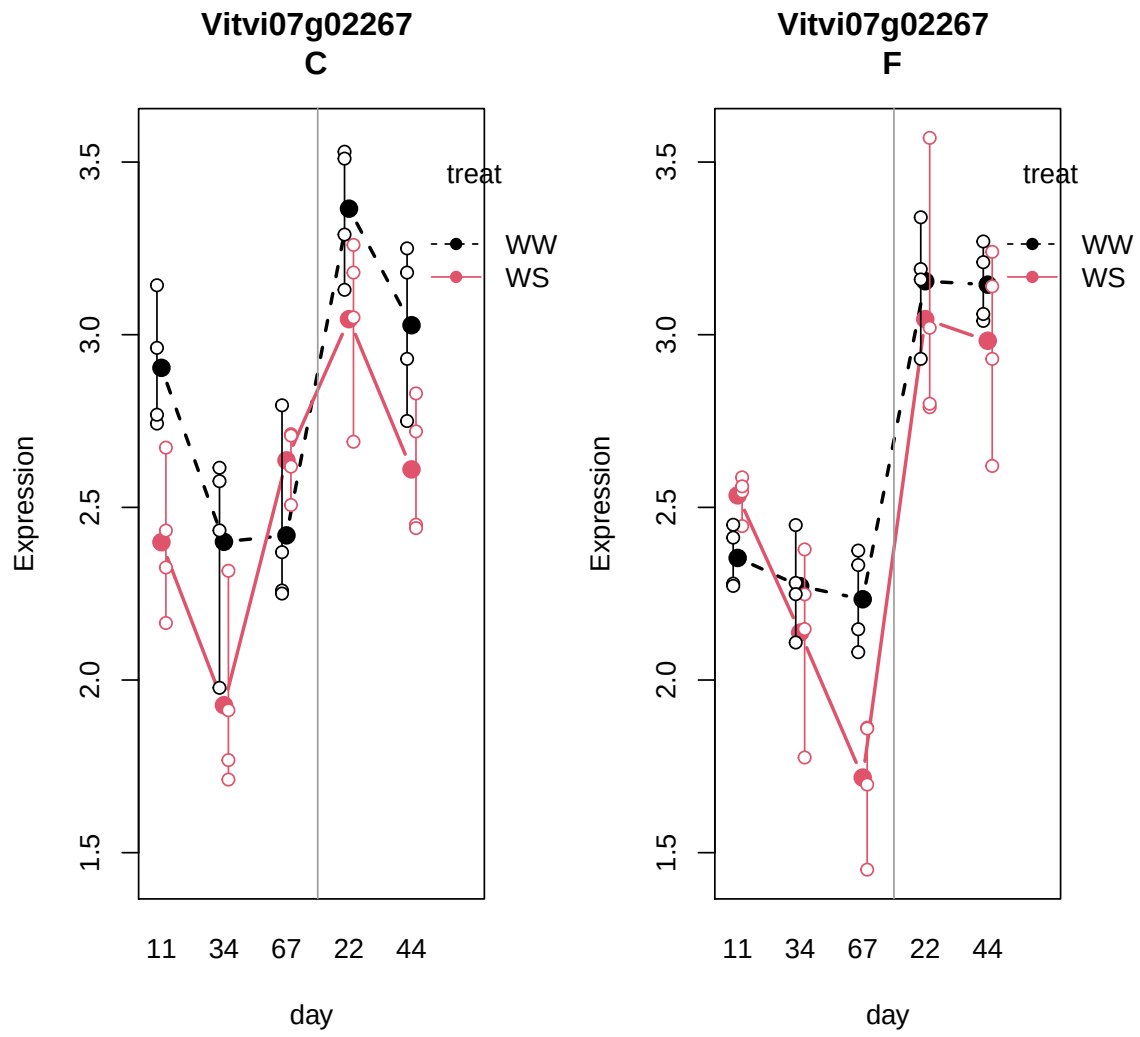
6.12.12 Vitvi07g02267

Coefficient varietyF:day67:treatWS for Vitvi07g02267.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi07g02267 -1.419847 2.327875 -5.066942 1.030106e-05
      adj.P.Val      B
Vitvi07g02267 0.01308406 3.30732
> plot.interactions(varname,phdata=pd,data=exprs)
```

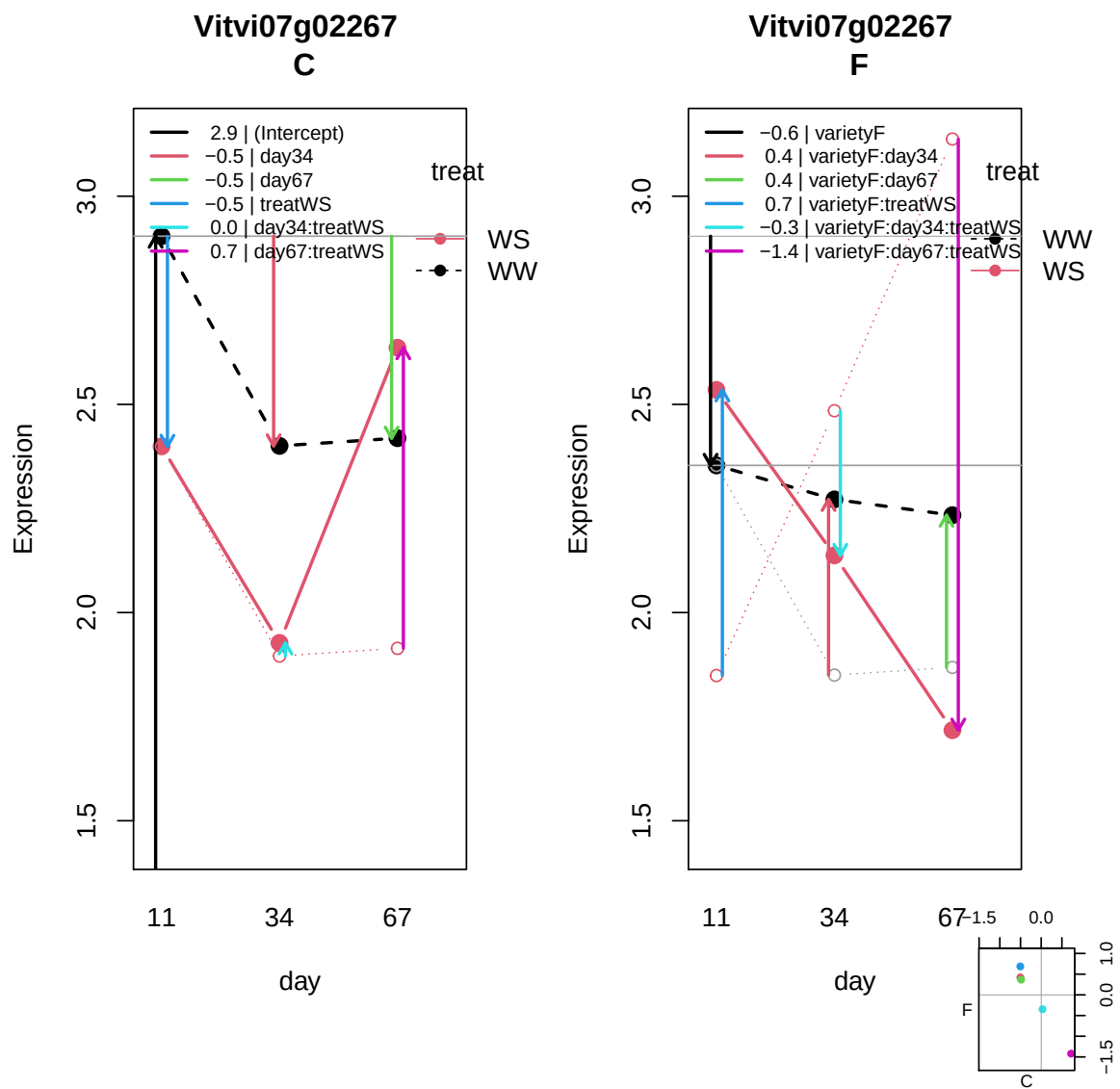


```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

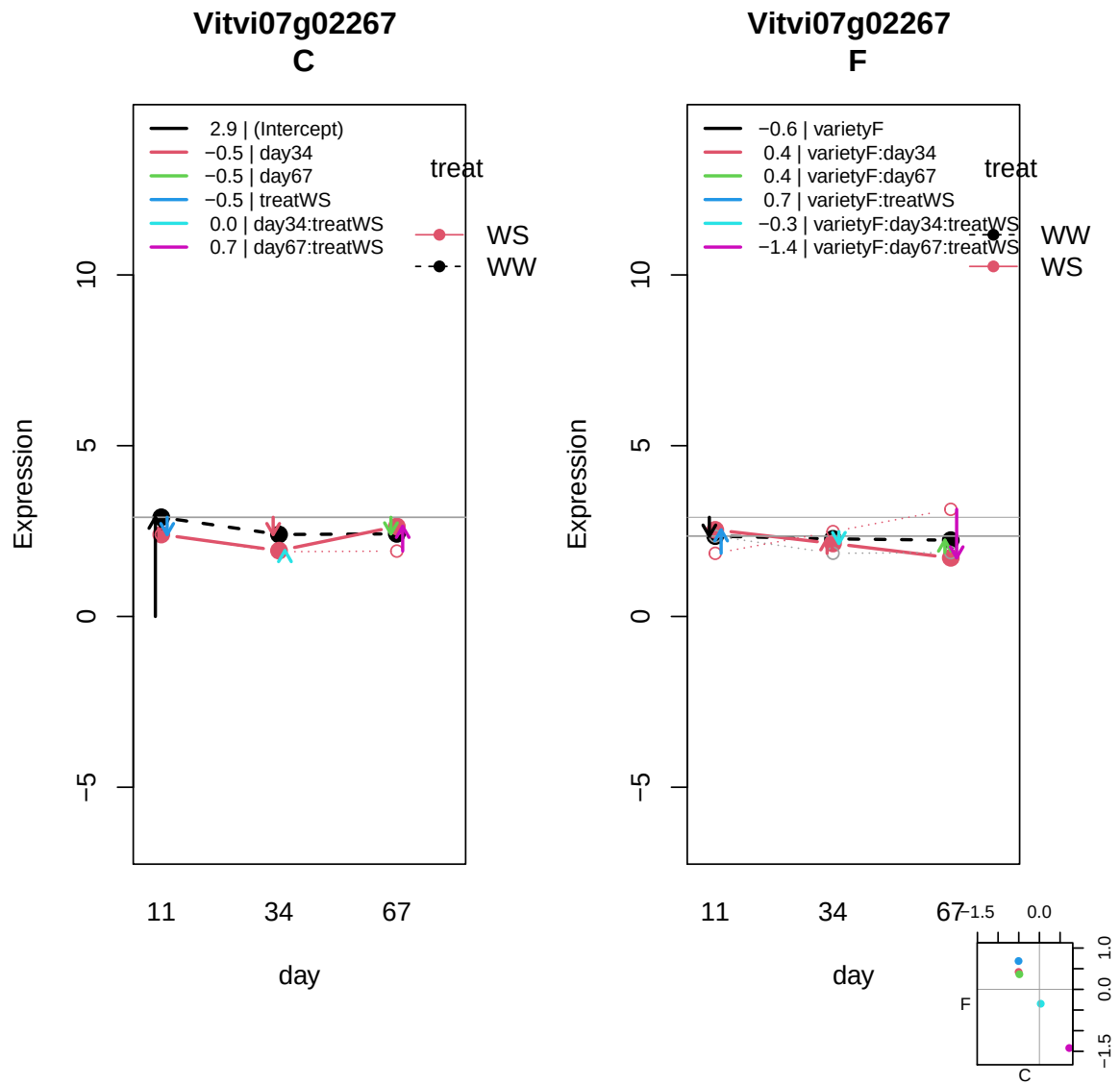


```
(Intercept)      varietyF      day34      day67
Vitvi07g02267    2.904034 -0.550563 -0.5037018 -0.4851578
               treatWS varietyF:day34 varietyF:day67
Vitvi07g02267 -0.5048207      0.4220081      0.3655757
               varietyF:treatWS day34:treatWS day67:treatWS
Vitvi07g02267      0.6861858      0.03164067      0.7220595
               varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi07g02267      -0.3474481      -1.419847

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)
```

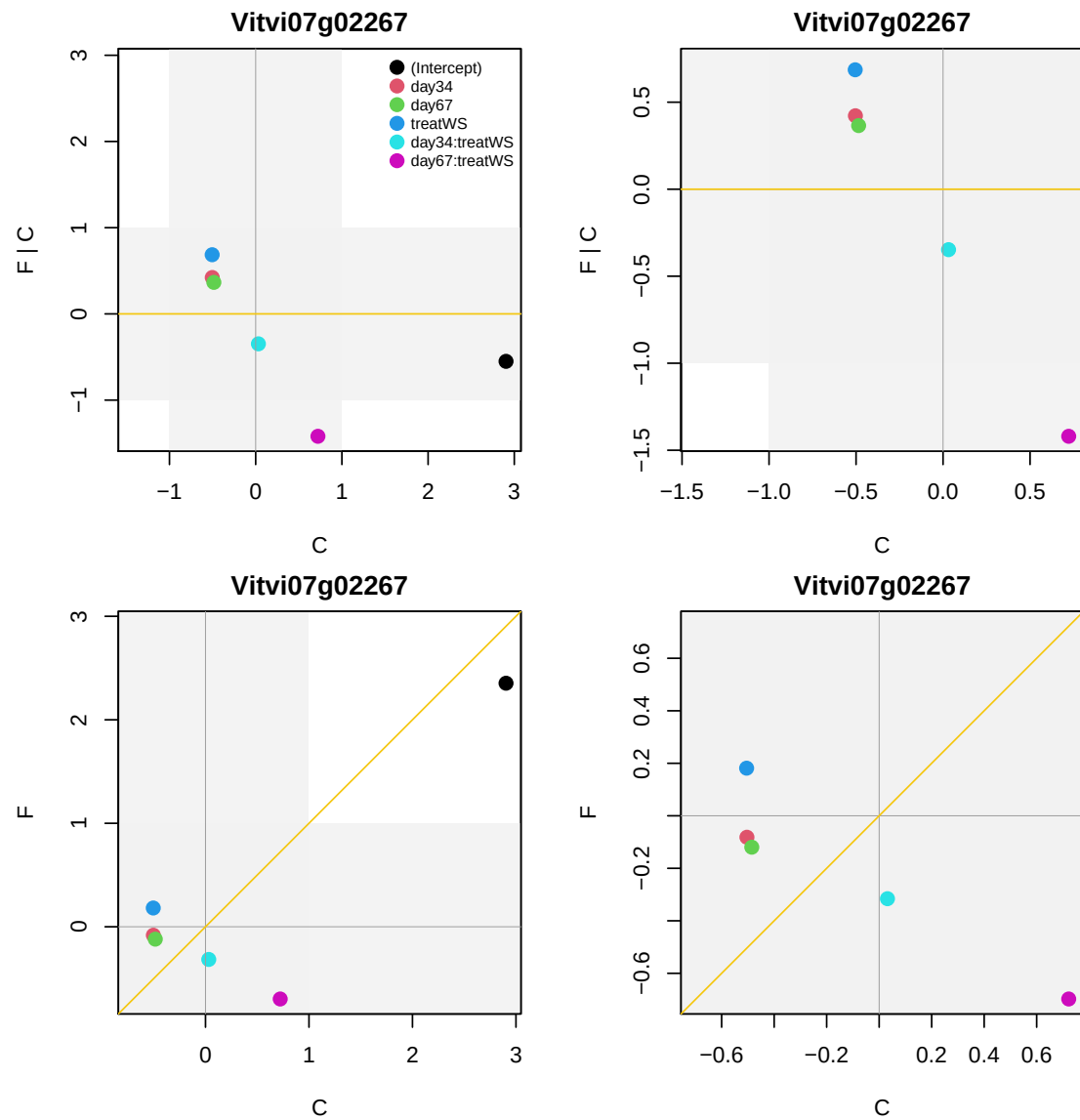


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

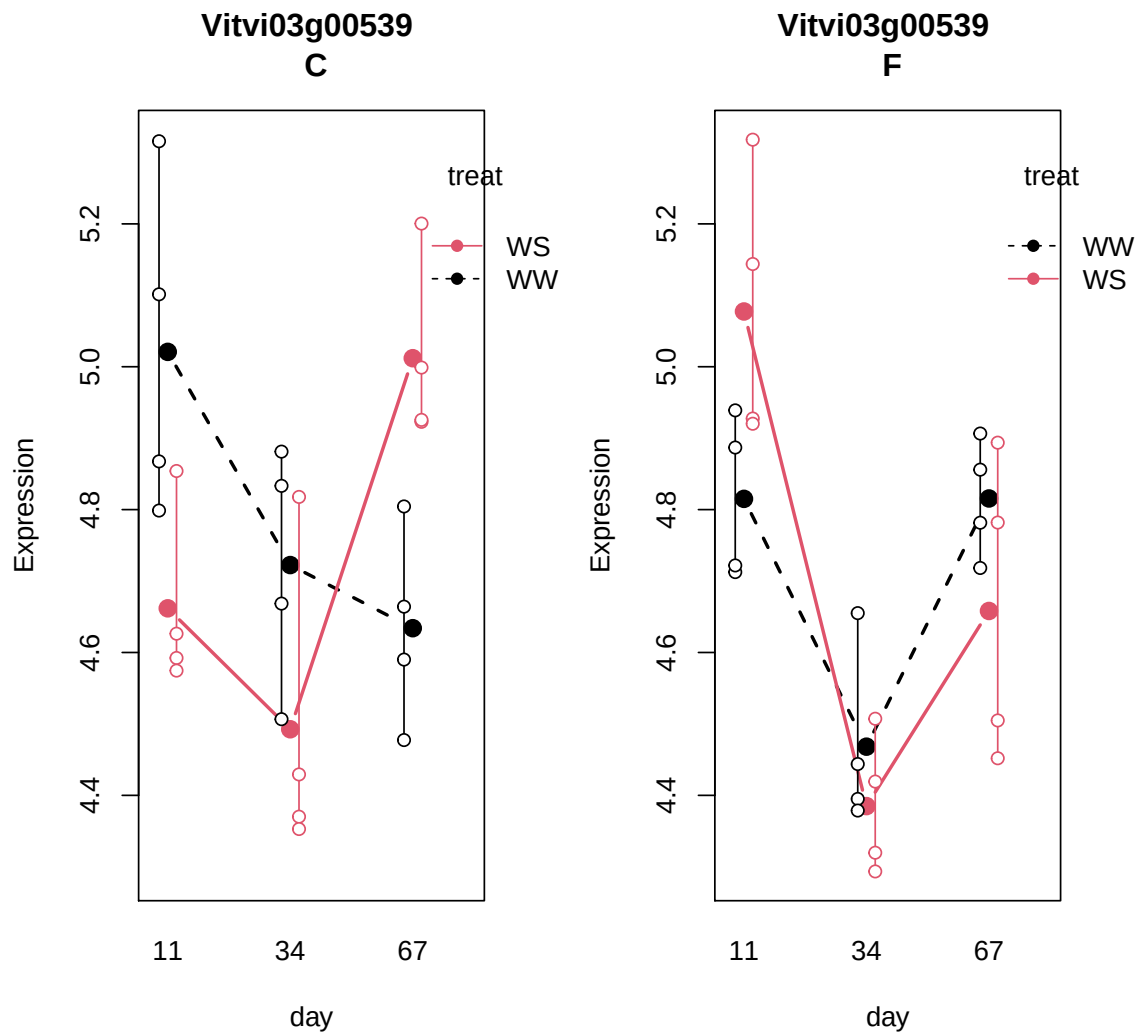


6.12.13 Vitvi03g00539

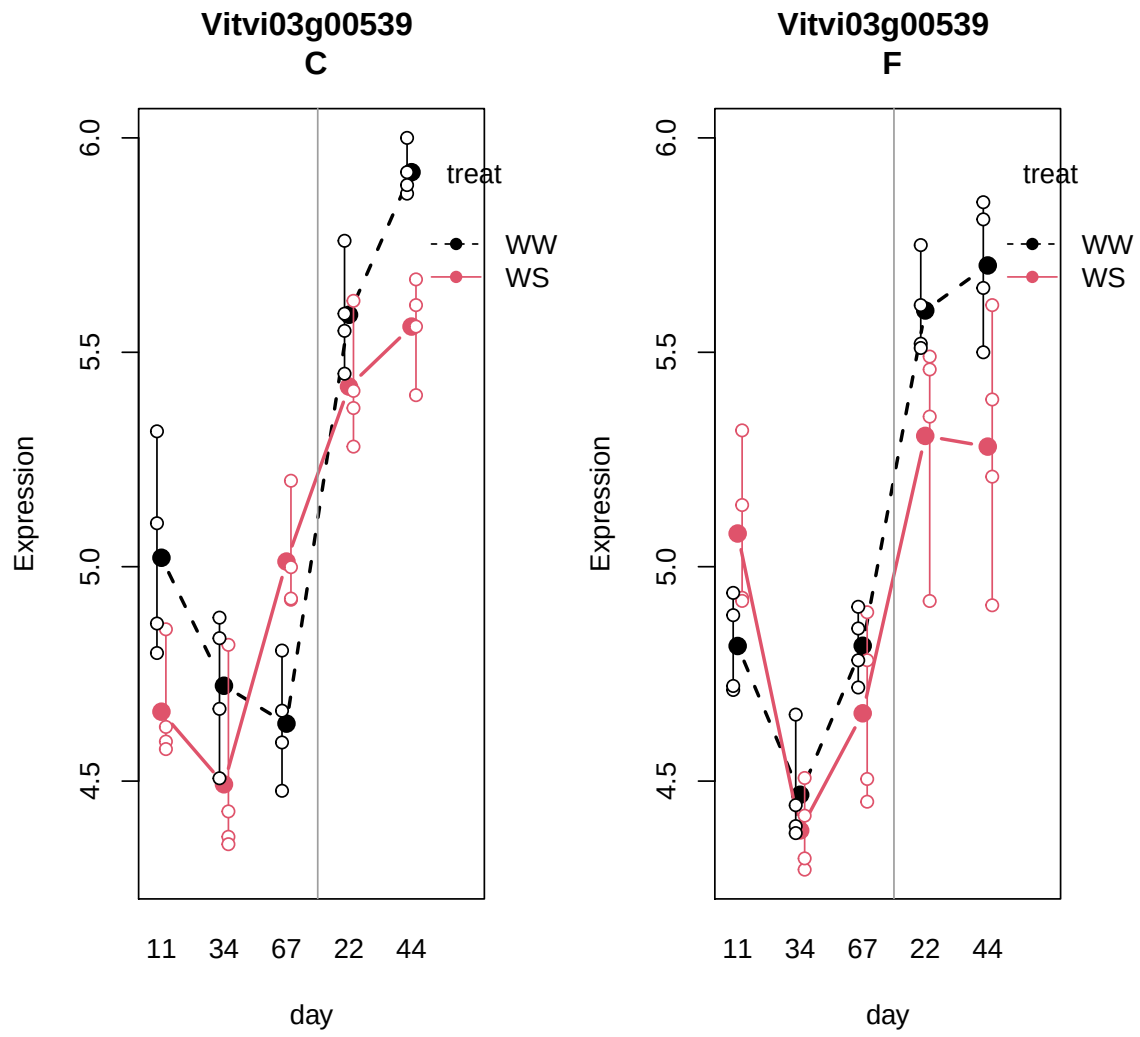
Coefficient varietyF:day67:treatWS for Vitvi03g00539.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi03g00539 -1.156736 4.730225 -4.982499 1.343945e-05
      adj.P.Val      B
Vitvi03g00539 0.01575724 3.070598

> plot.interactions(varname,phdata=pd,data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

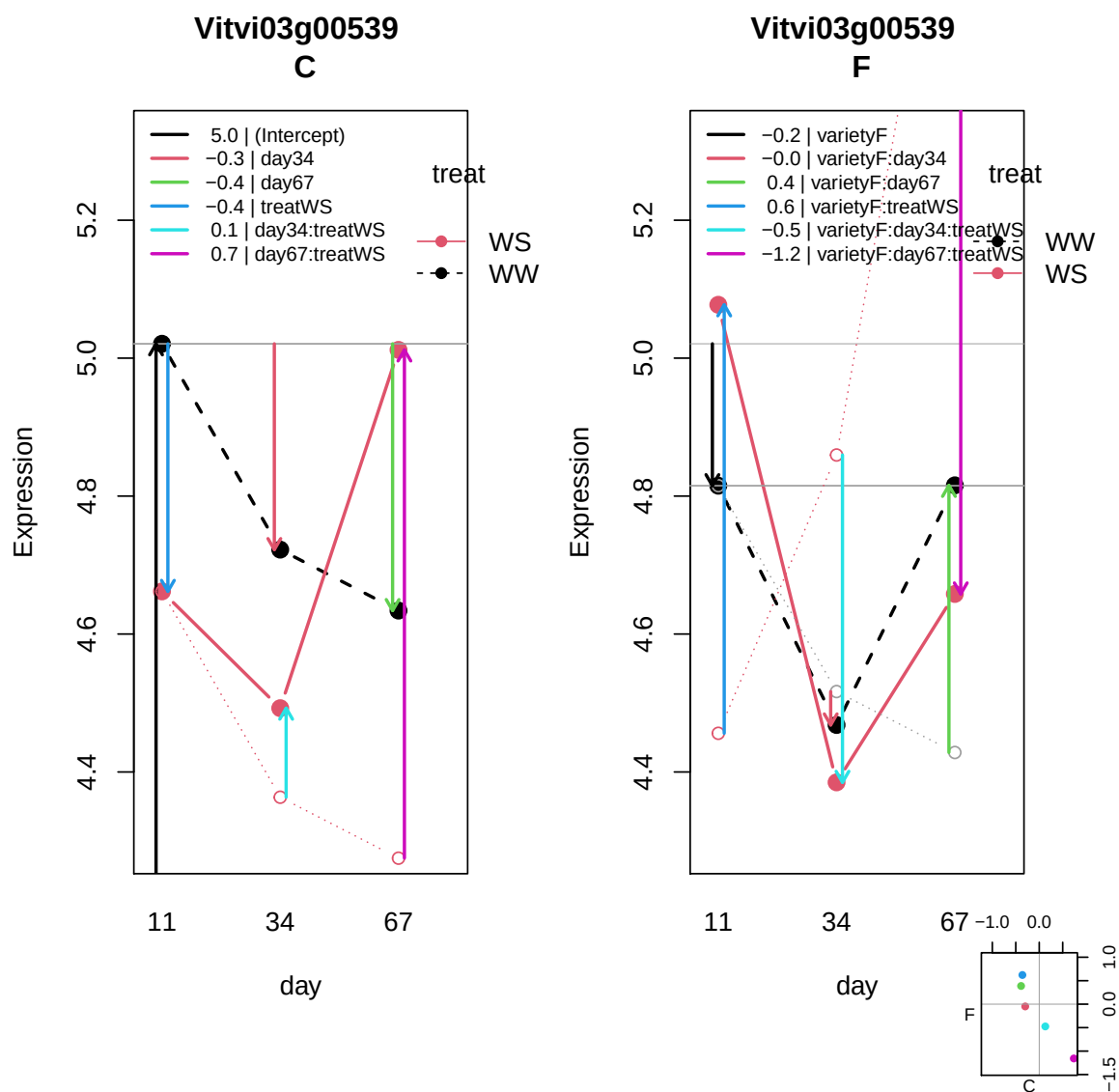
              (Intercept)    varietyF      day34      day67
Vitvi03g00539      5.020815 -0.2057642 -0.2984355 -0.3868084
              treatWS varietyF:day34 varietyF:day67
Vitvi03g00539 -0.3589882      -0.04846846      0.3873565
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi03g00539      0.6212921      0.129123      0.736942
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi03g00539      -0.4746345      -1.156736

```

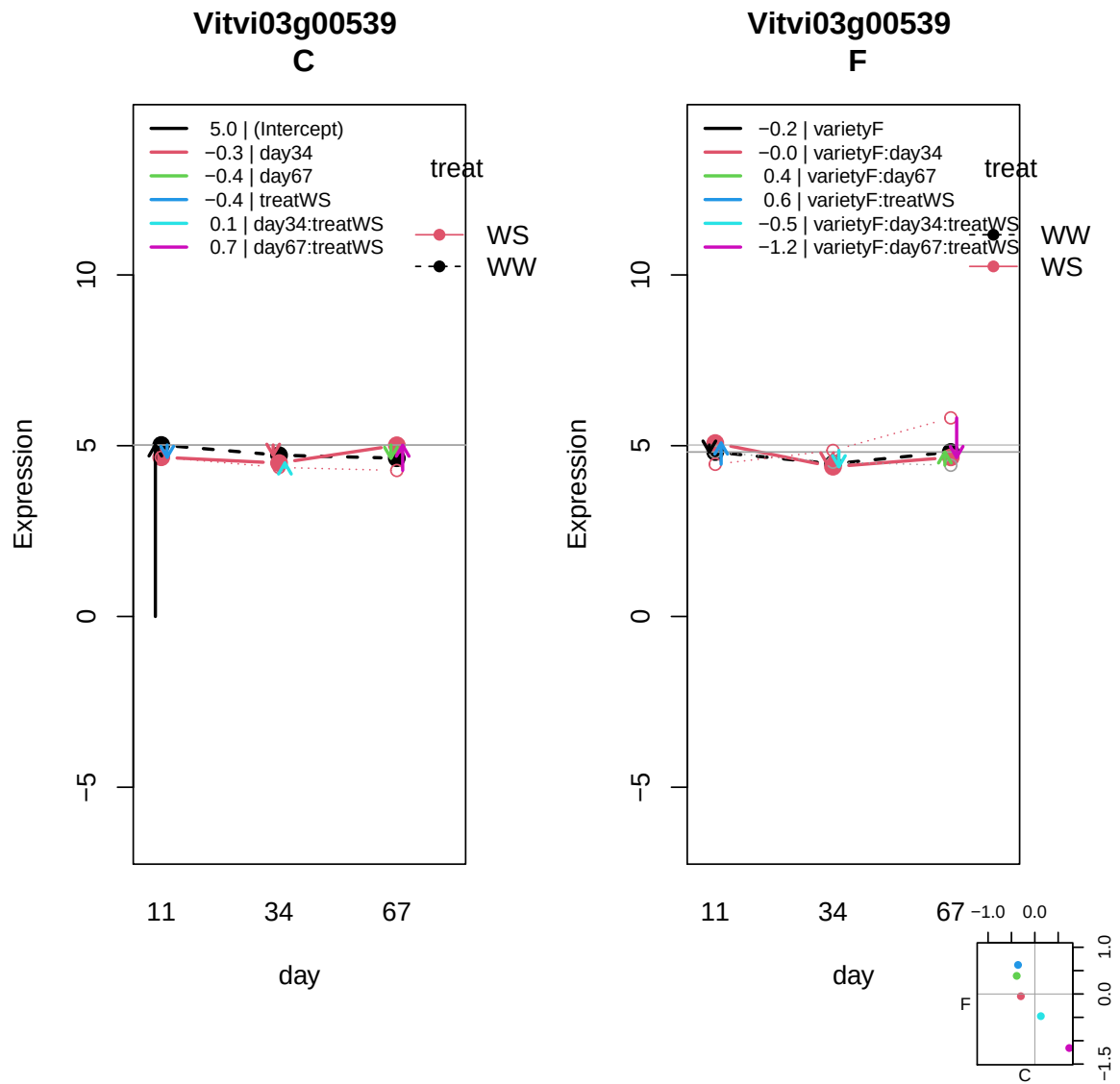
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

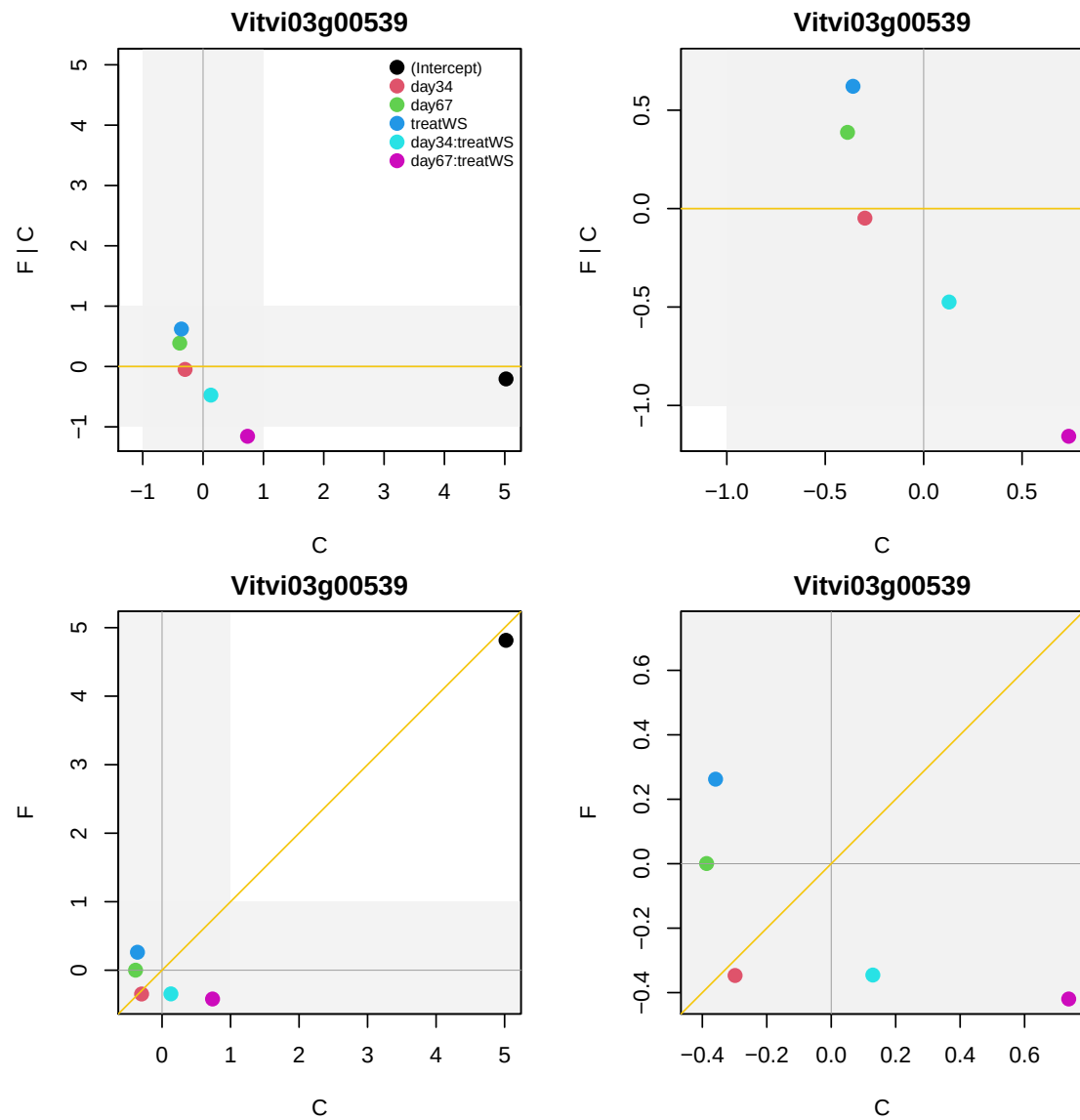


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

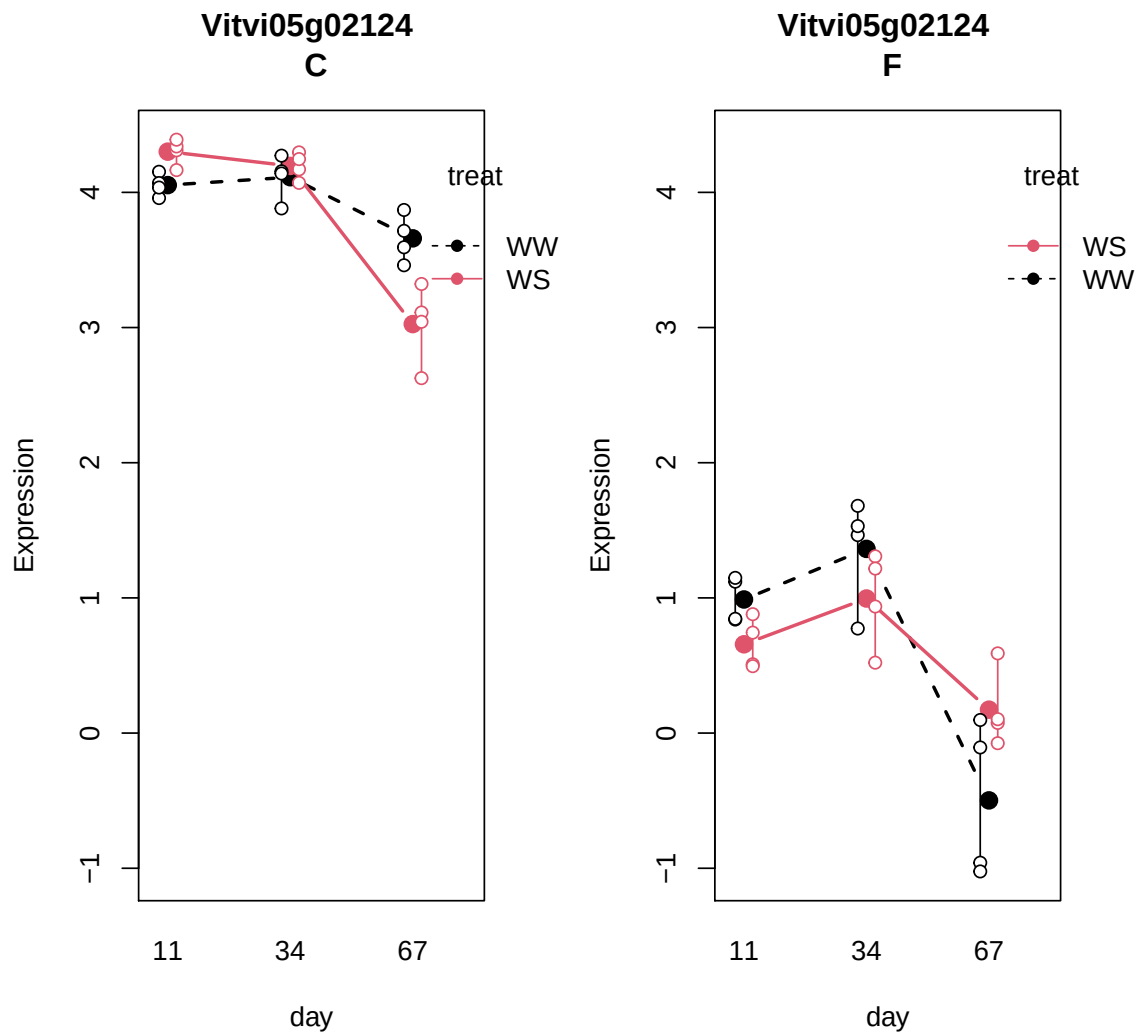


6.12.14 Vitvi05g02124

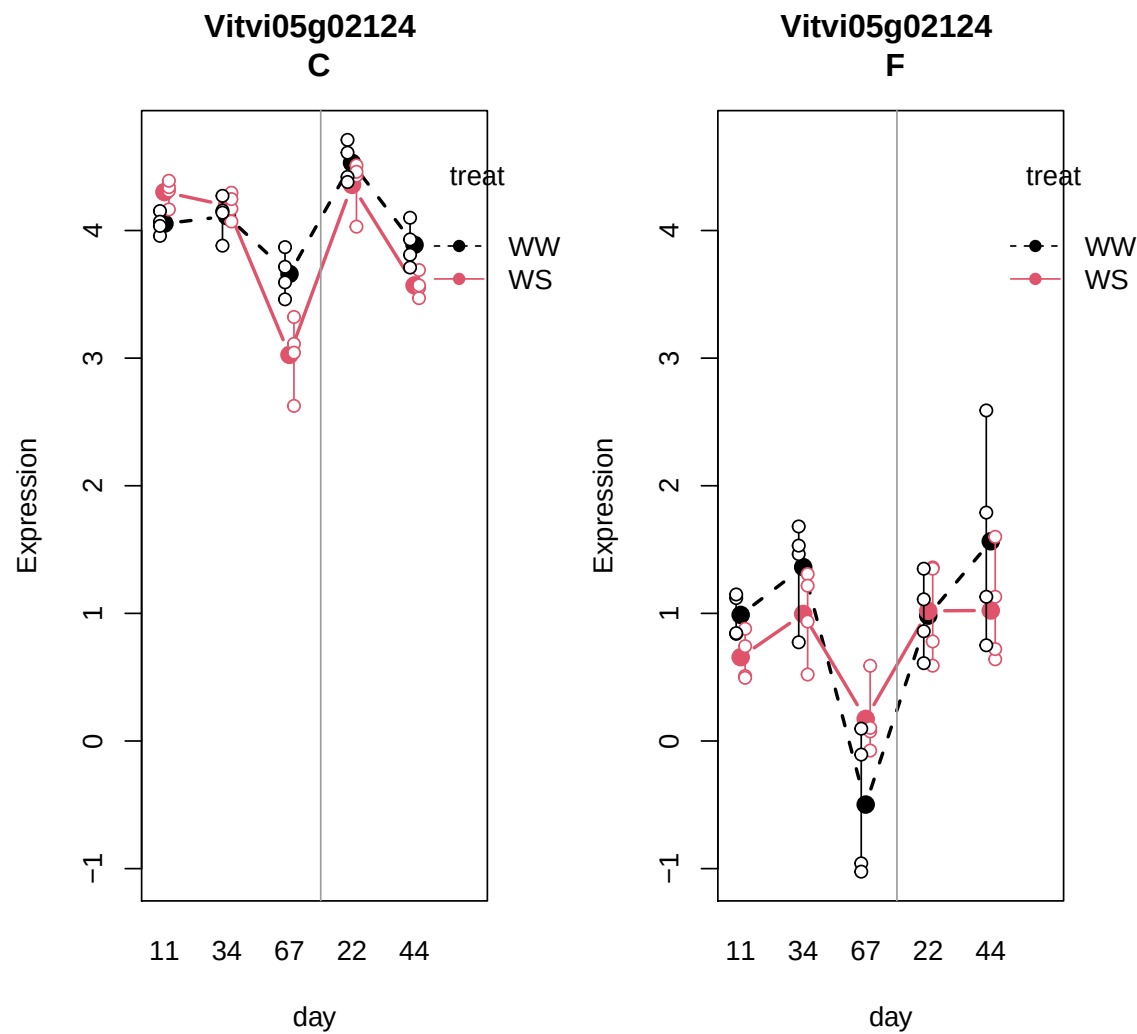
Coefficient varietyF:day67:treatWS for Vitvi05g02124.

```
> tt[varname,]
               logFC AveExpr      t      P.Value
Vitvi05g02124 1.884552 2.25217 4.864372 1.947345e-05
               adj.P.Val      B
Vitvi05g02124 0.02120103 2.740408

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

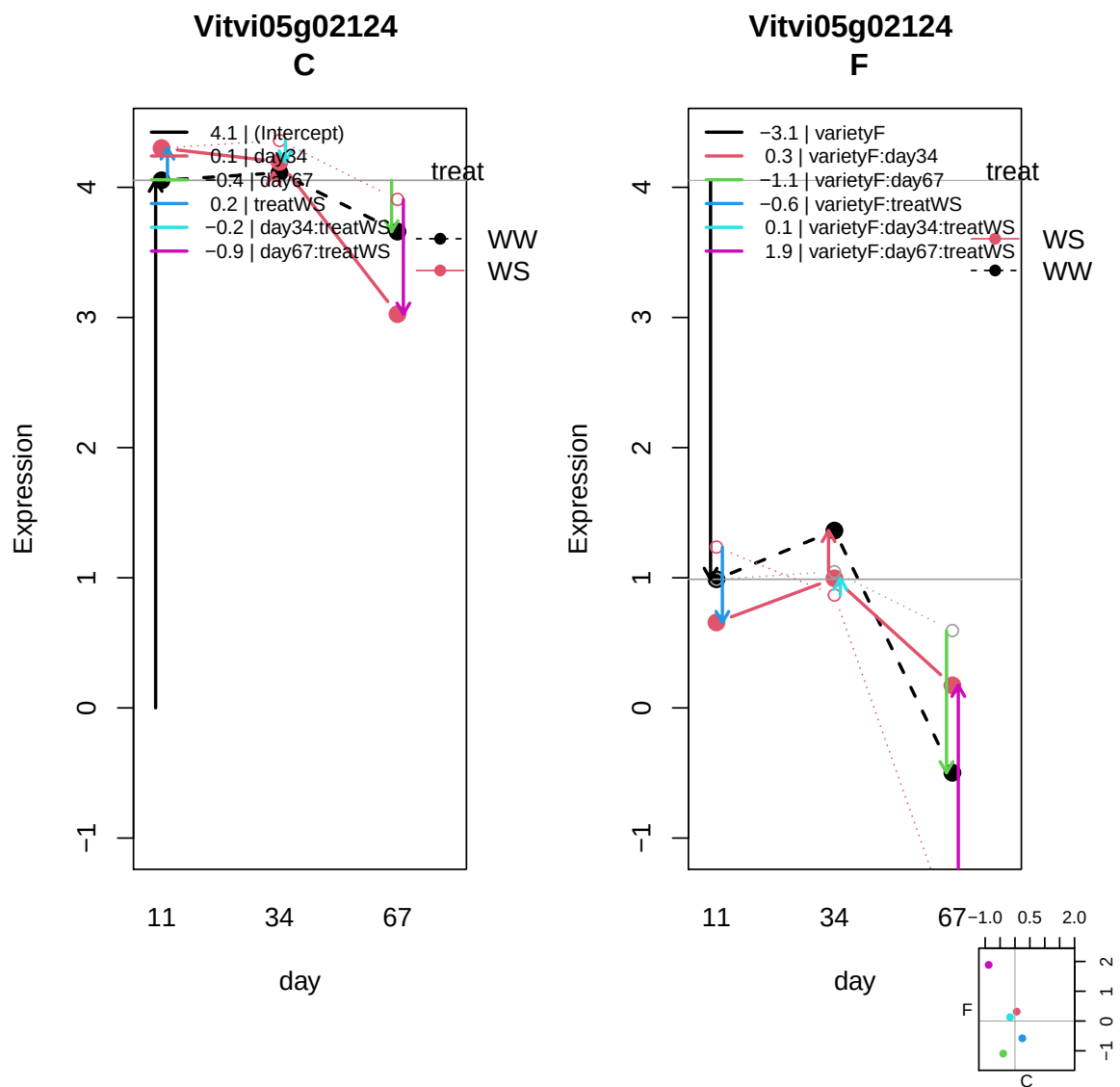
              (Intercept)  varietyF      day34      day67
Vitvi05g02124    4.053736 -3.065467  0.05831749 -0.3938936
              treatWS  varietyF:day34  varietyF:day67
Vitvi05g02124  0.2475274      0.3159028      -1.092325
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi05g02124      -0.5791236      -0.1639761      -0.8818706
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi05g02124              0.1285136              1.884552

```

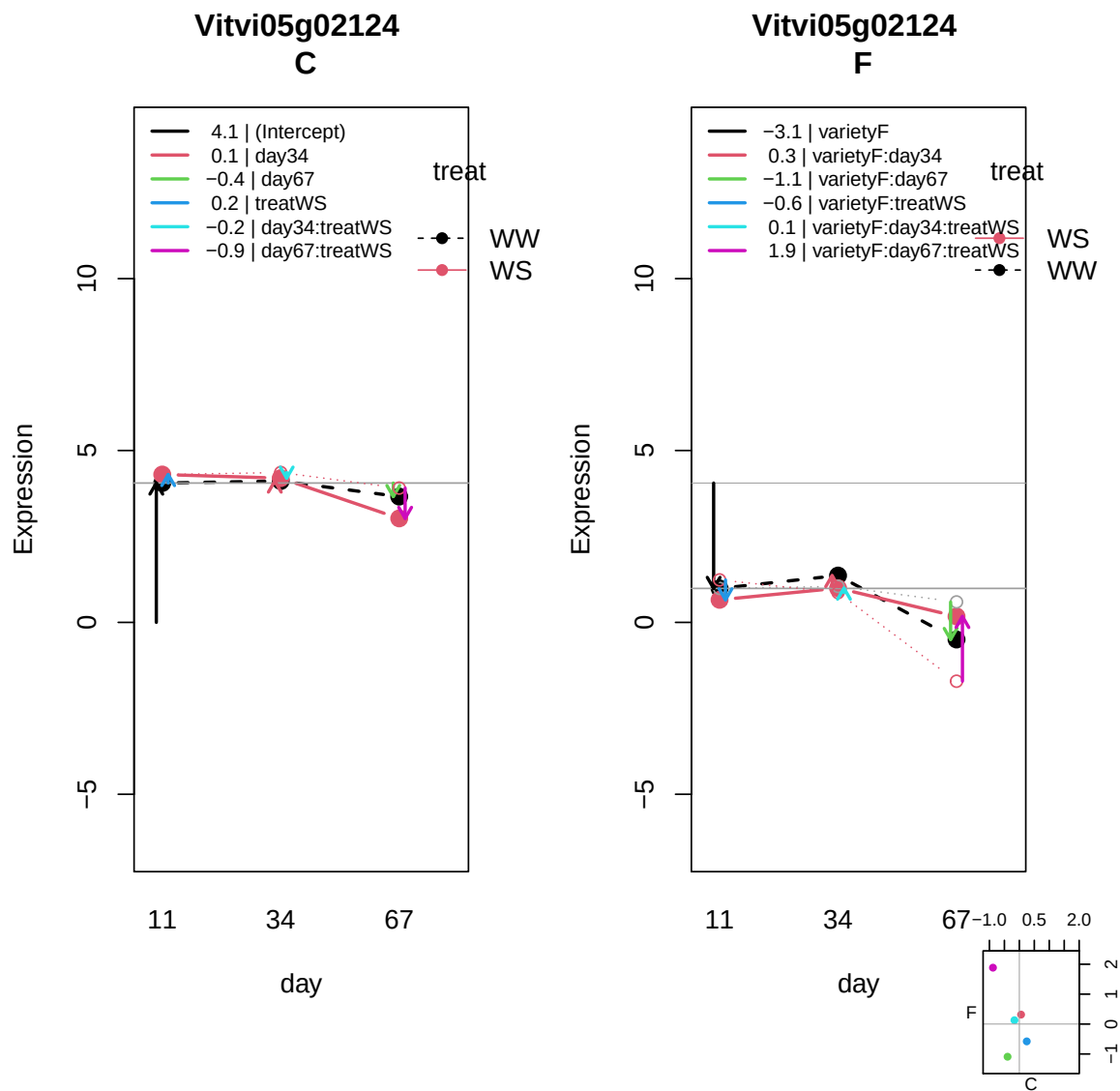
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

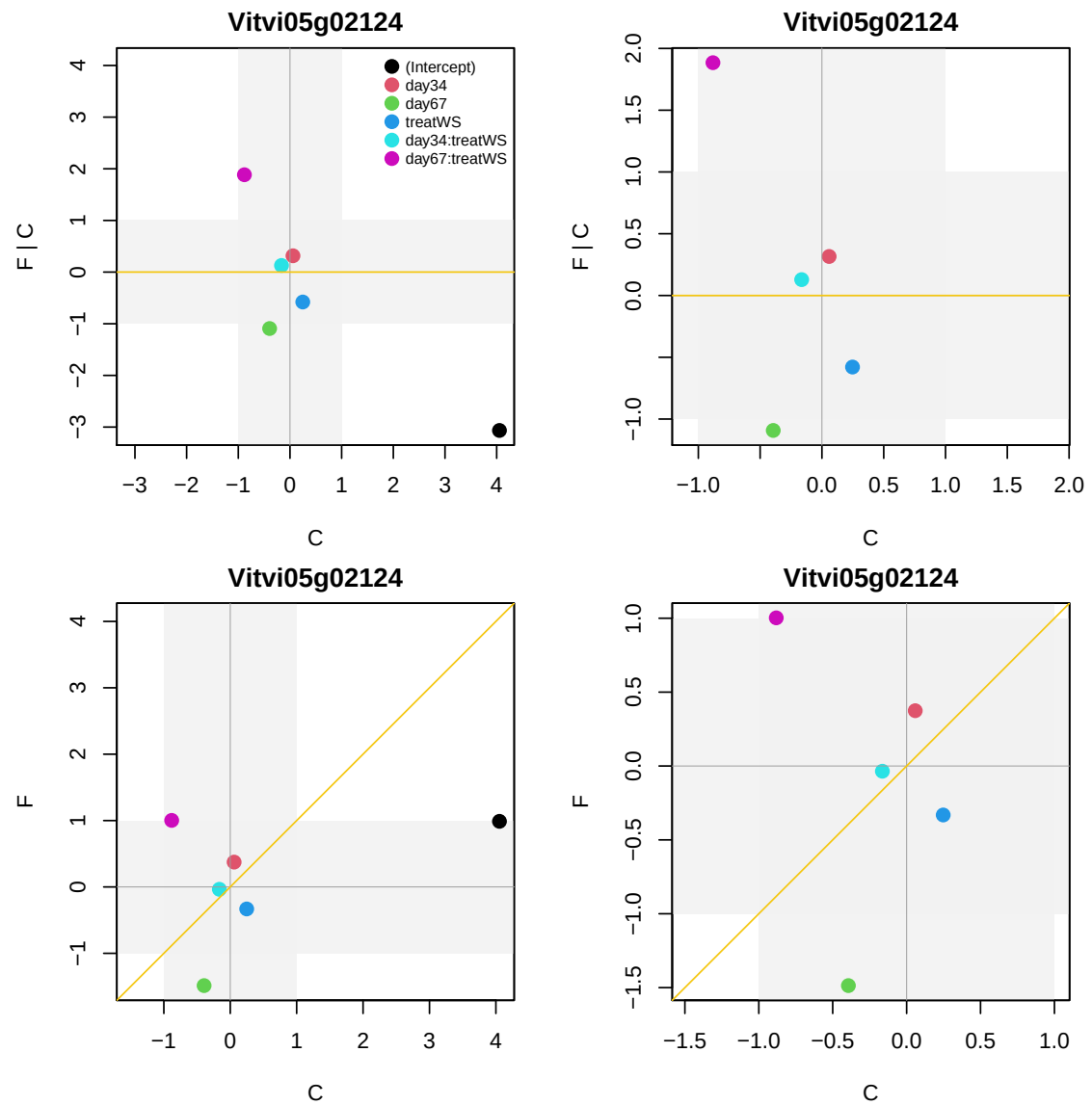


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

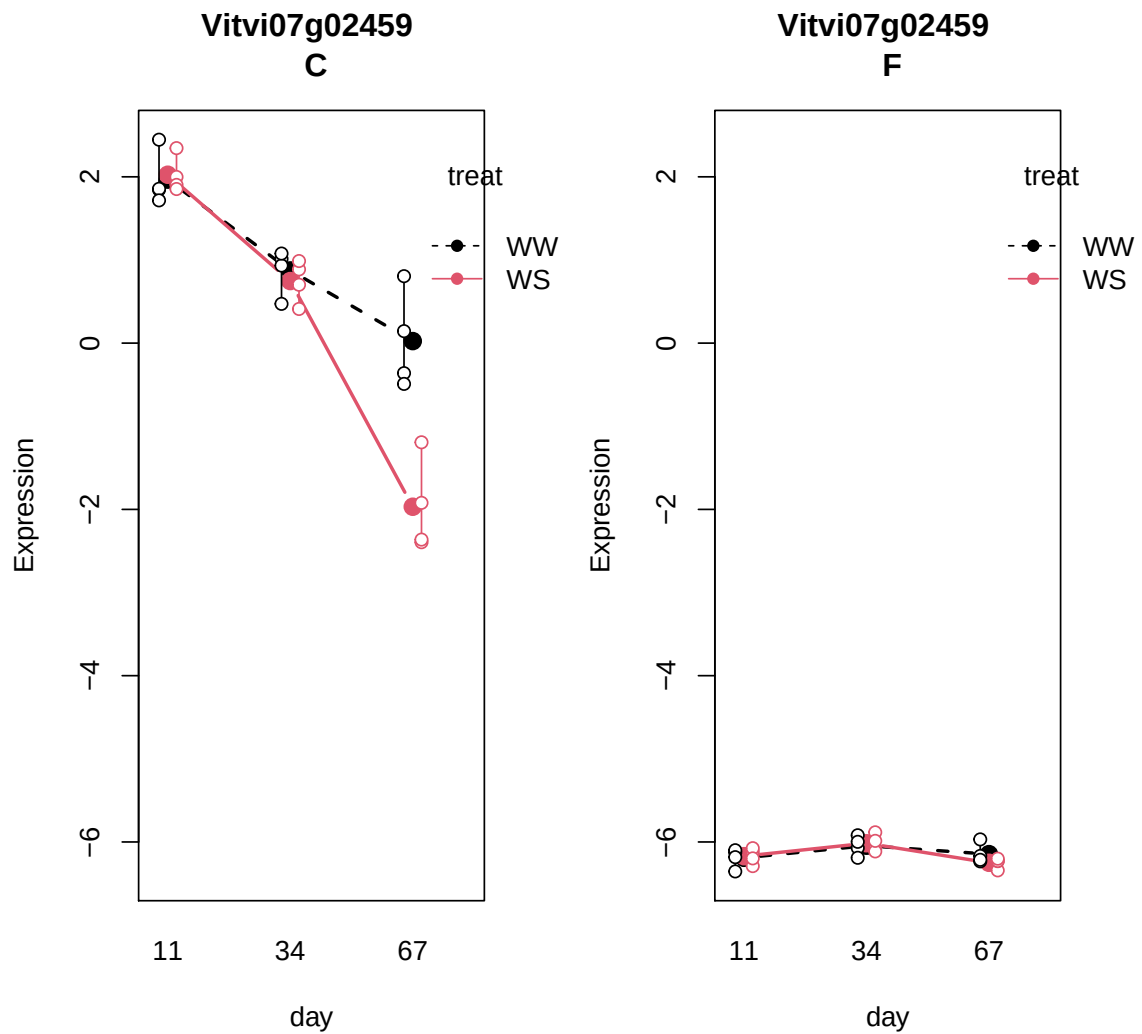


6.12.15 Vitvi07g02459

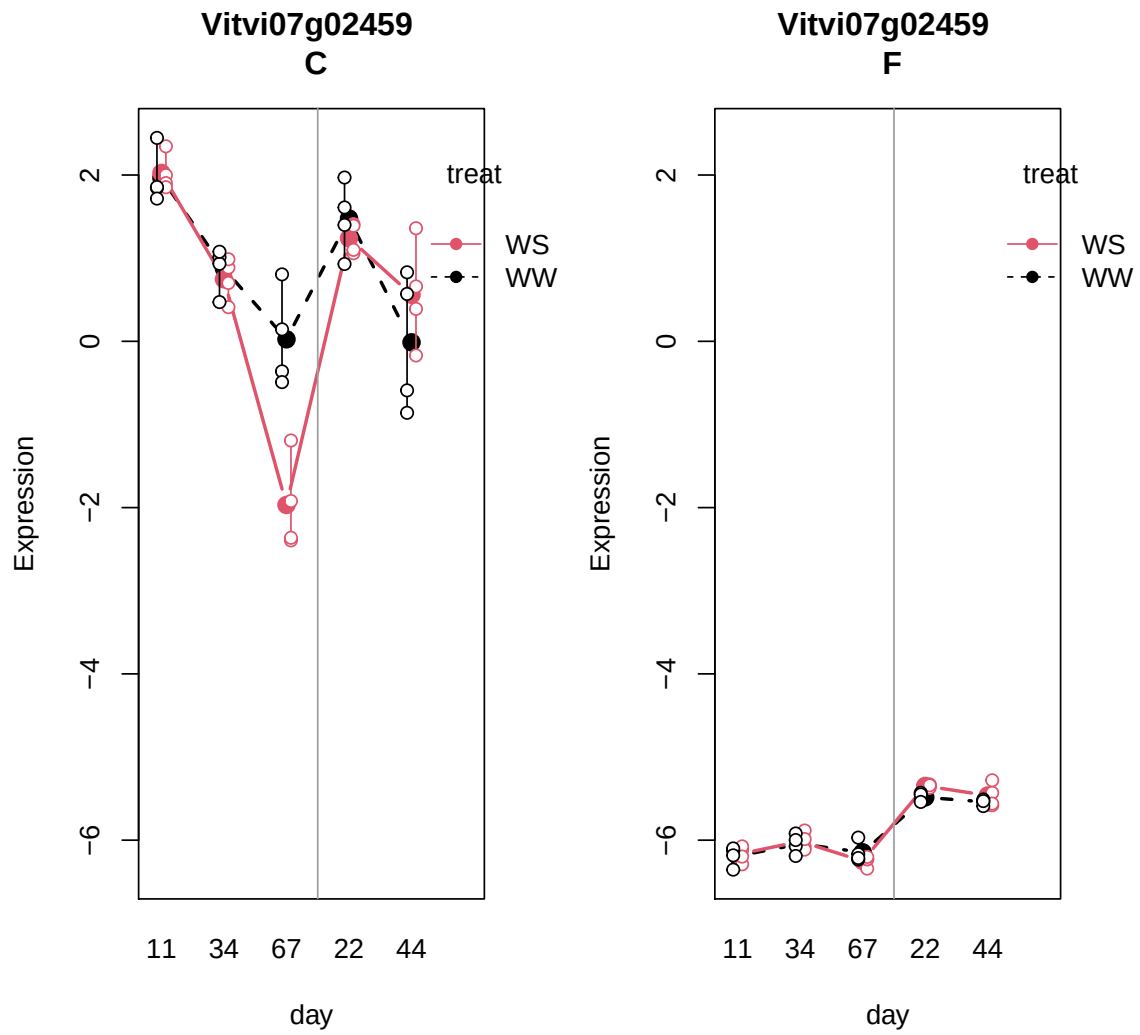
Coefficient varietyF:day67:treatWS for Vitvi07g02459.

```
> tt[varname,]
              logFC  AveExpr      t      P.Value
Vitvi07g02459 1.927146 -2.762547 4.768997 2.624178e-05
              adj.P.Val      B
Vitvi07g02459 0.02666515 2.474776

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

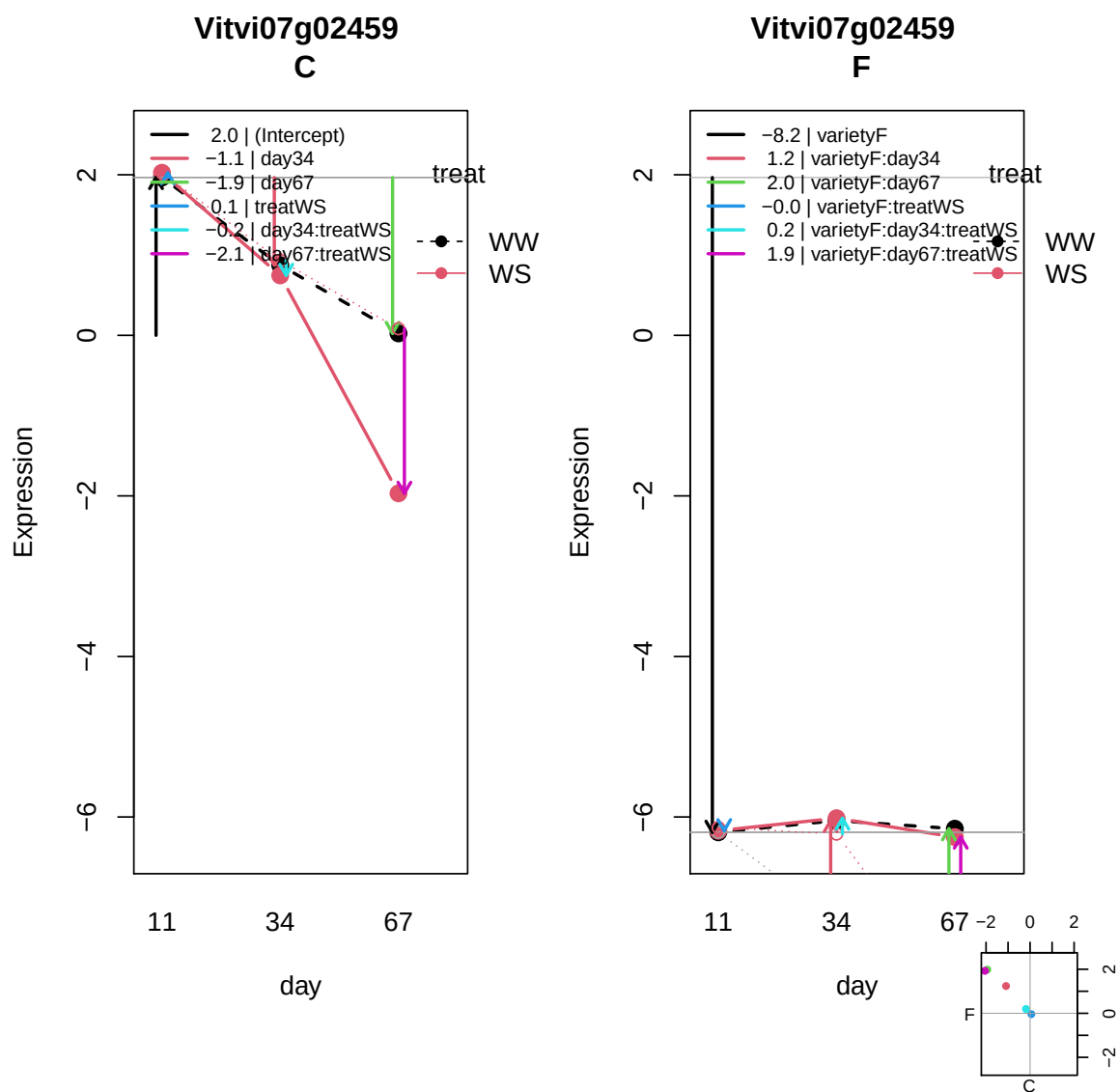
              (Intercept)  varietyF      day34      day67
Vitvi07g02459      1.966023 -8.15664 -1.092073 -1.941781
              treatWS  varietyF:day34  varietyF:day67
Vitvi07g02459  0.05896097      1.237736      1.986067
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi07g02459      -0.03903429      -0.1863305      -2.051239
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi07g02459              0.1961398              1.927146

```

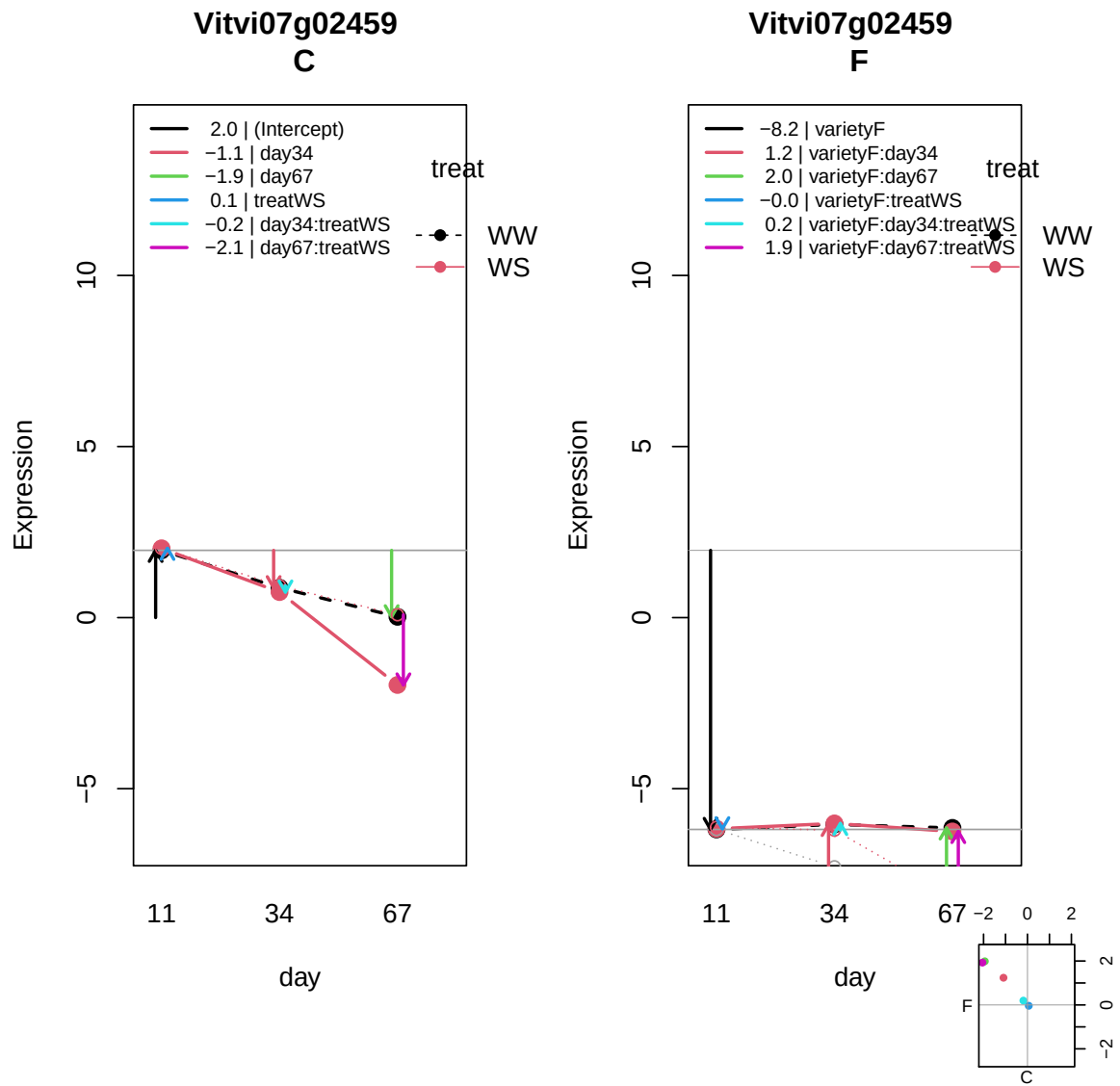
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

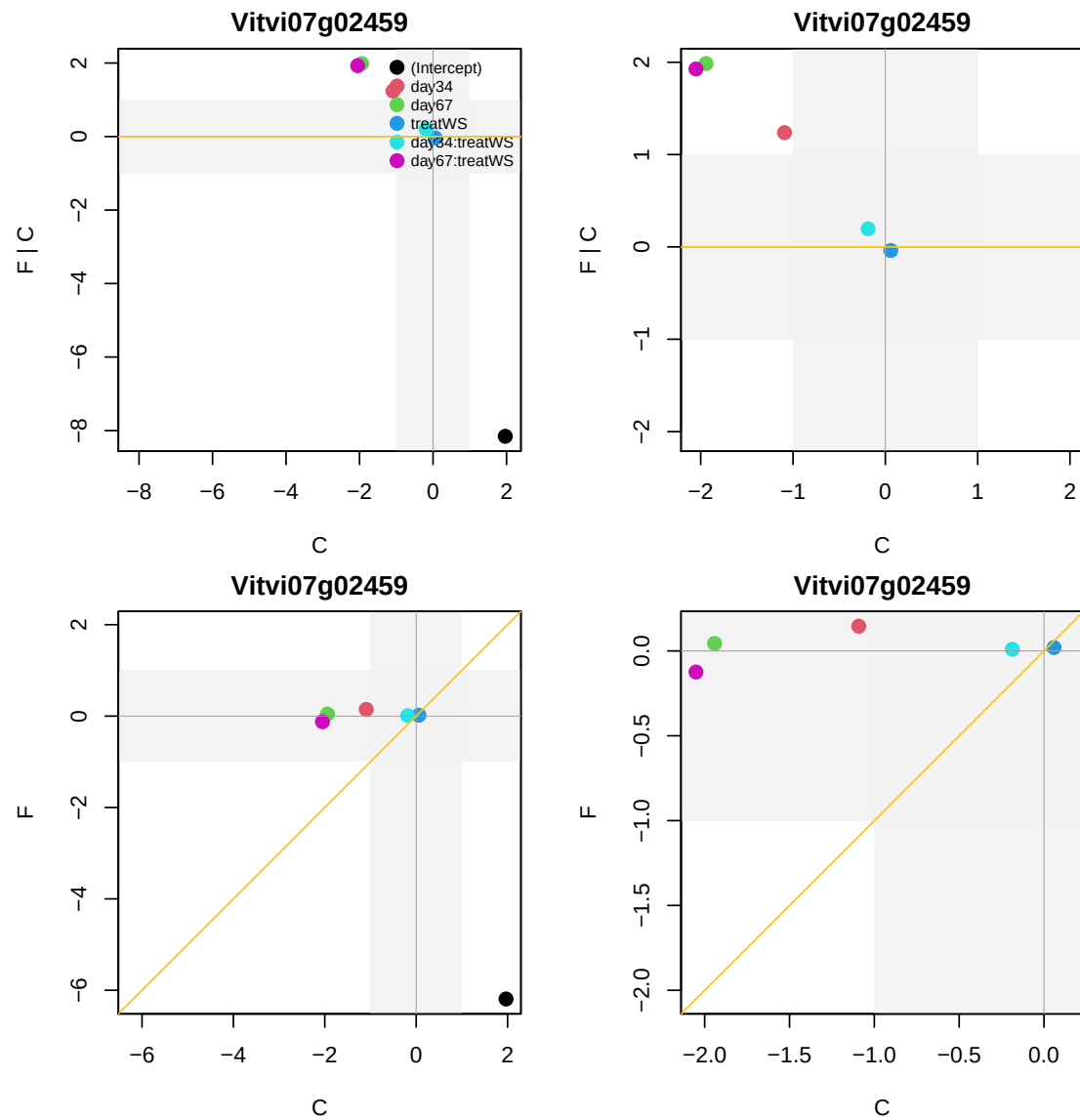


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

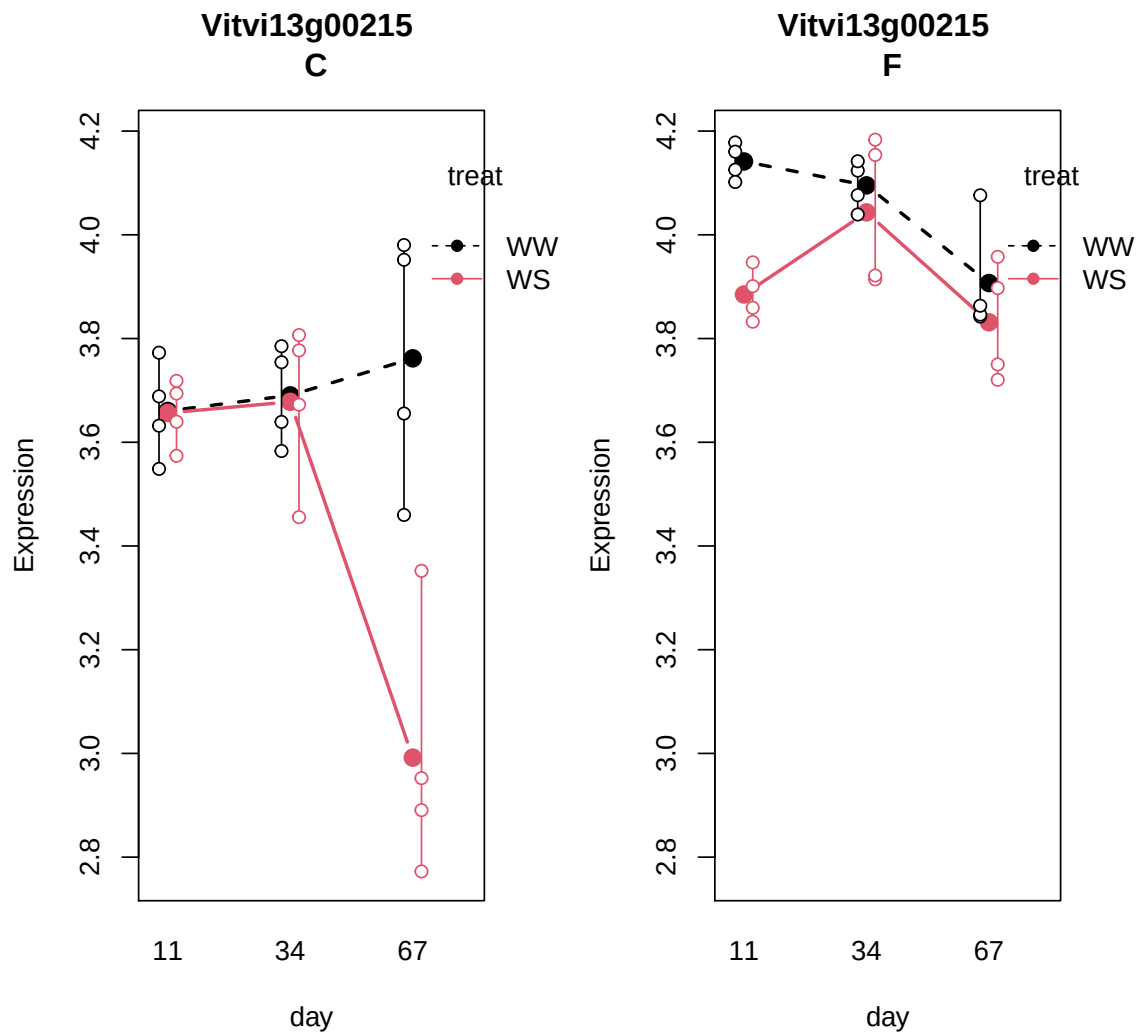


6.12.16 Vitvi13g00215

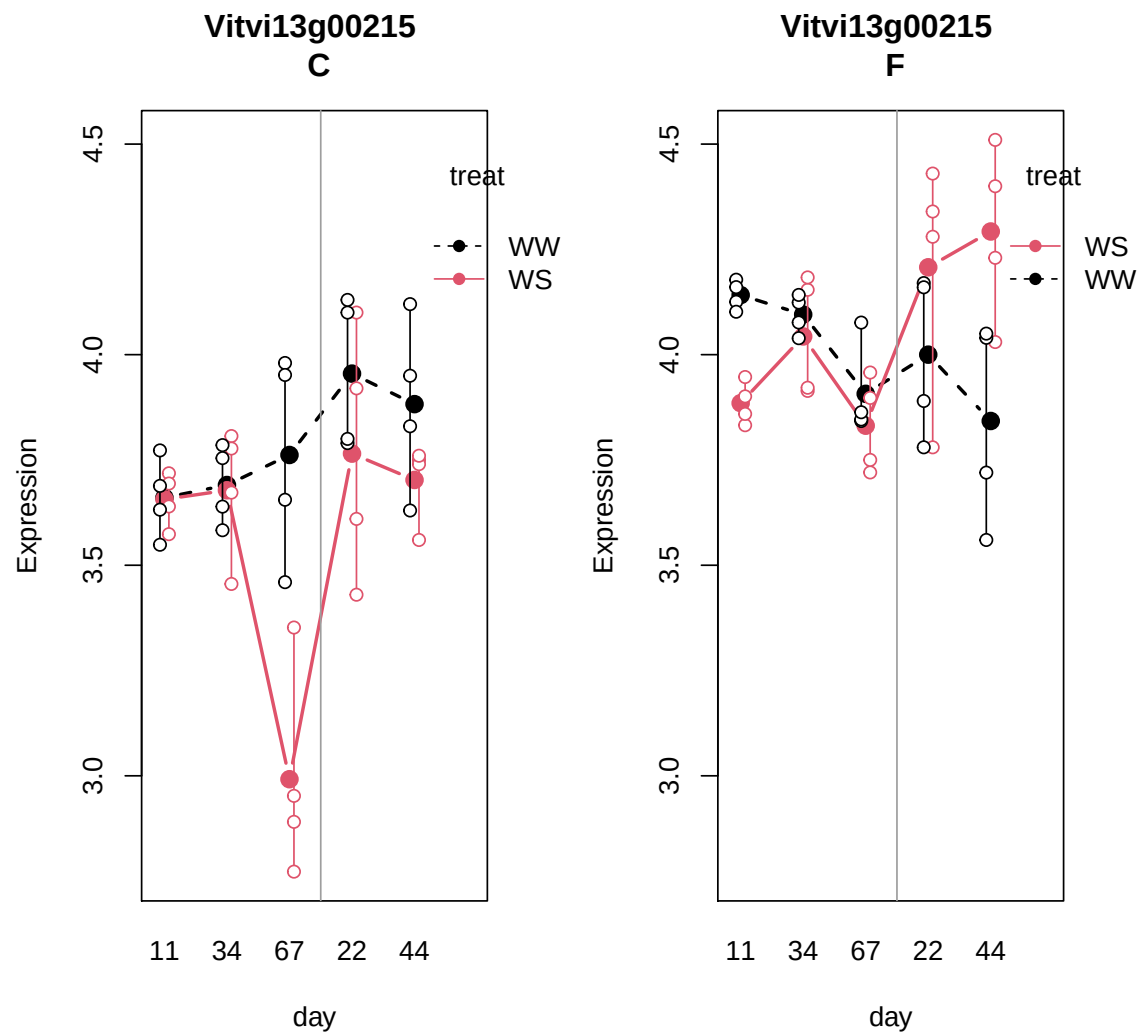
Coefficient varietyF:day67:treatWS for Vitvi13g00215.

```
> tt[varname,]
      logFC AveExpr      t    P.Value
Vitvi13g00215 0.9468188 3.778525 4.715192 3.1036e-05
      adj.P.Val      B
Vitvi13g00215 0.02832795 2.325351

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```




```
> fit1[varname,]$coefficients
```

```

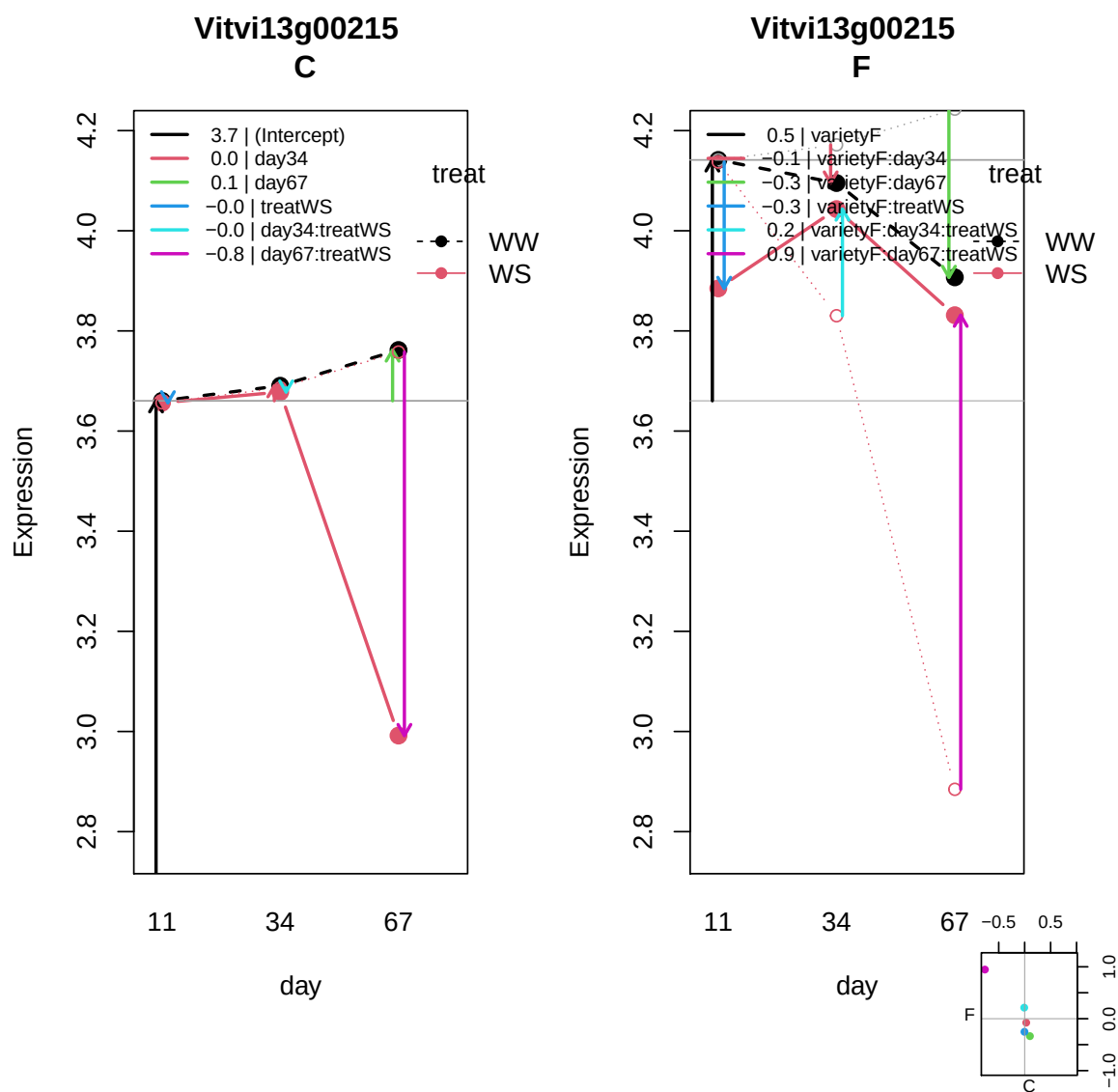
              (Intercept)  varietyF      day34    day67
Vitvi13g00215      3.660409 0.4810513 0.03005558 0.10142
              treatWS  varietyF:day34  varietyF:day67
Vitvi13g00215 -0.003993712    -0.07619883    -0.3358667
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi13g00215      -0.2525479   -0.008488888    -0.7659477
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi13g00215              0.2129667              0.9468188

```

```

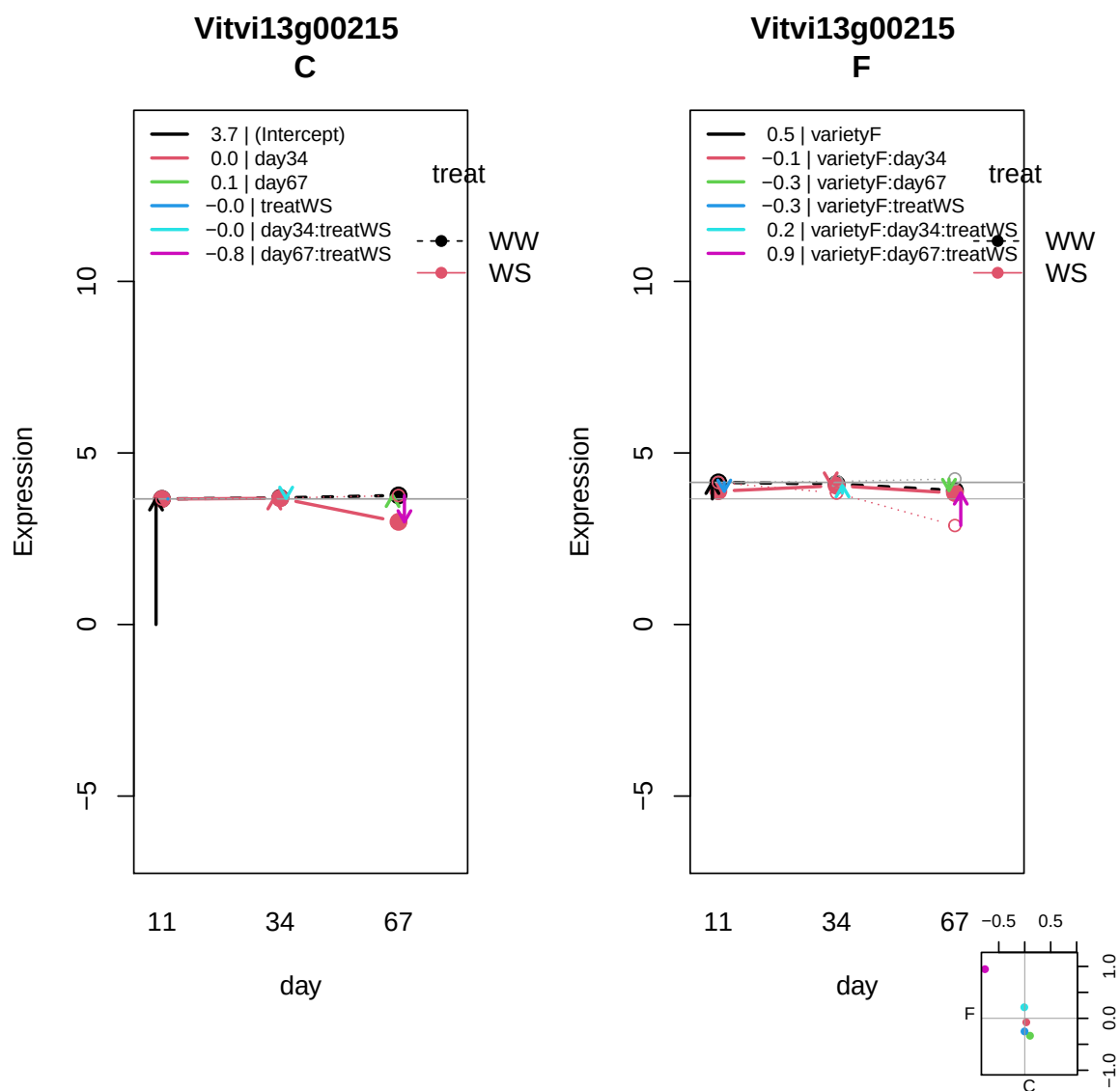
> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



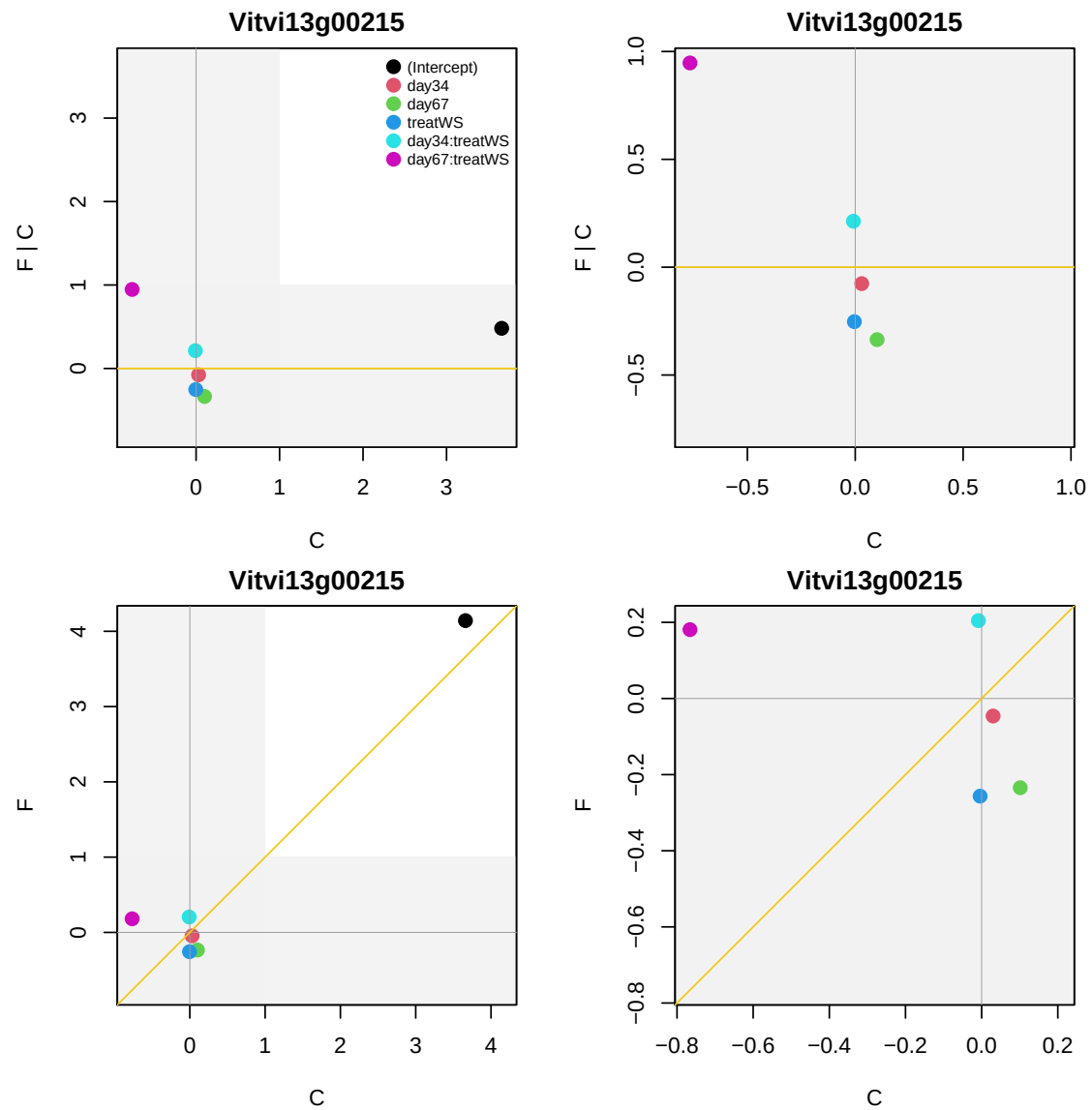
```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```

Warning in arrows(1:ndays + d, es, 1:ndays + d, esF, col = cl + 1:ndays, : zero



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

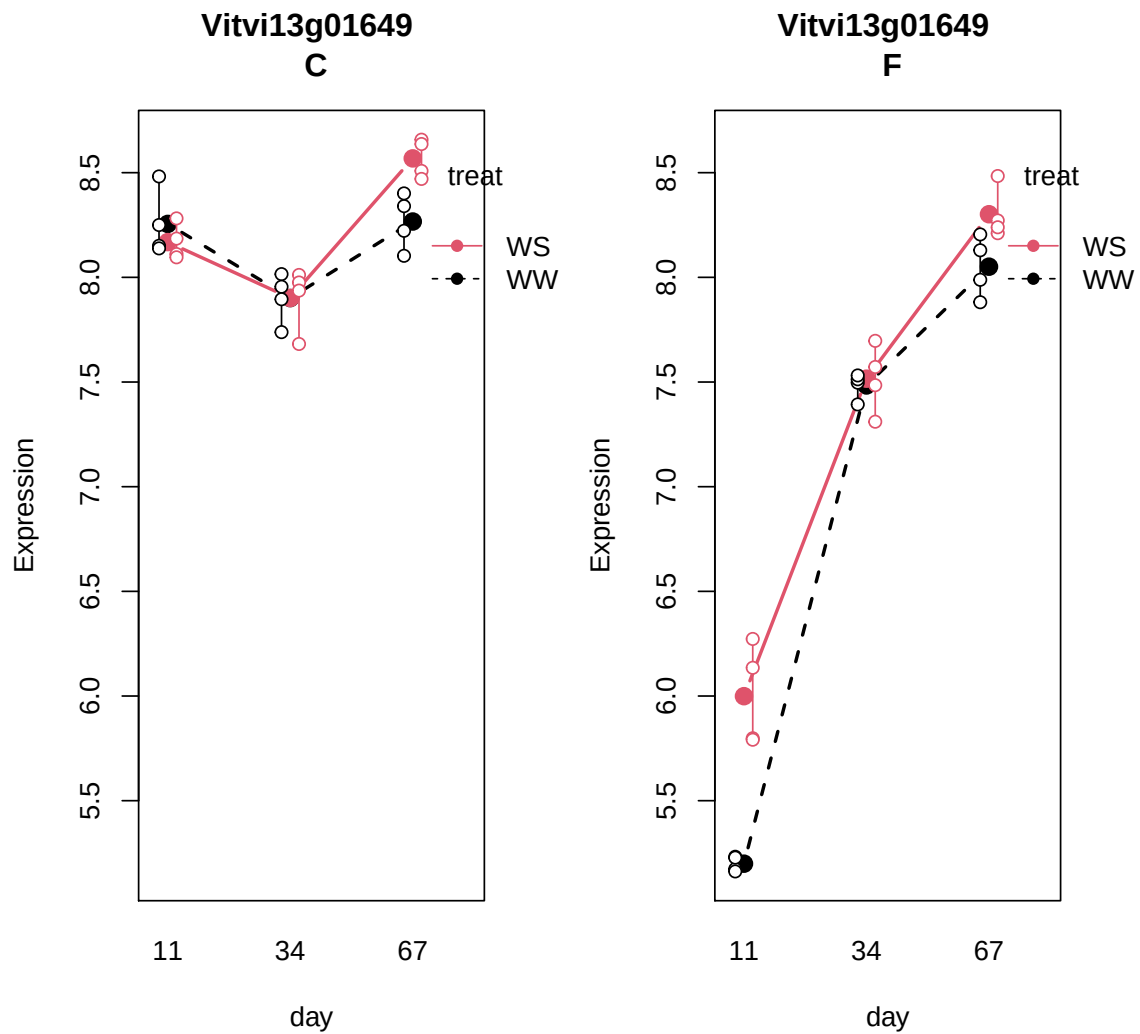


6.12.17 Vitvi13g01649

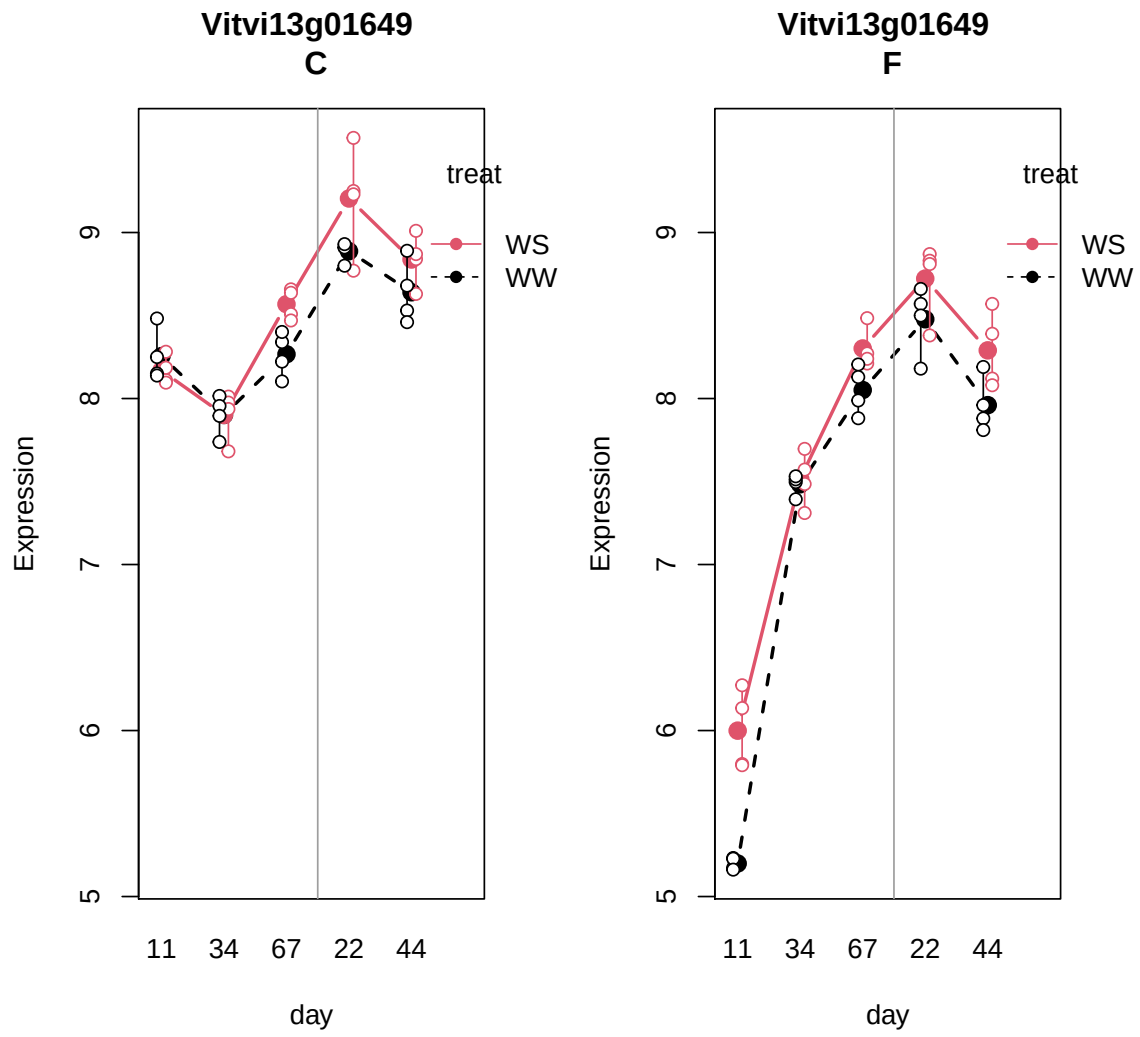
Coefficient varietyF:day67:treatWS for Vitvi13g01649.

```
> tt[varname,]
              logFC AveExpr      t      P.Value
Vitvi13g01649 -0.9381926  7.634288 -4.70562 3.197511e-05
              adj.P.Val      B
Vitvi13g01649 0.02832795  2.298804

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

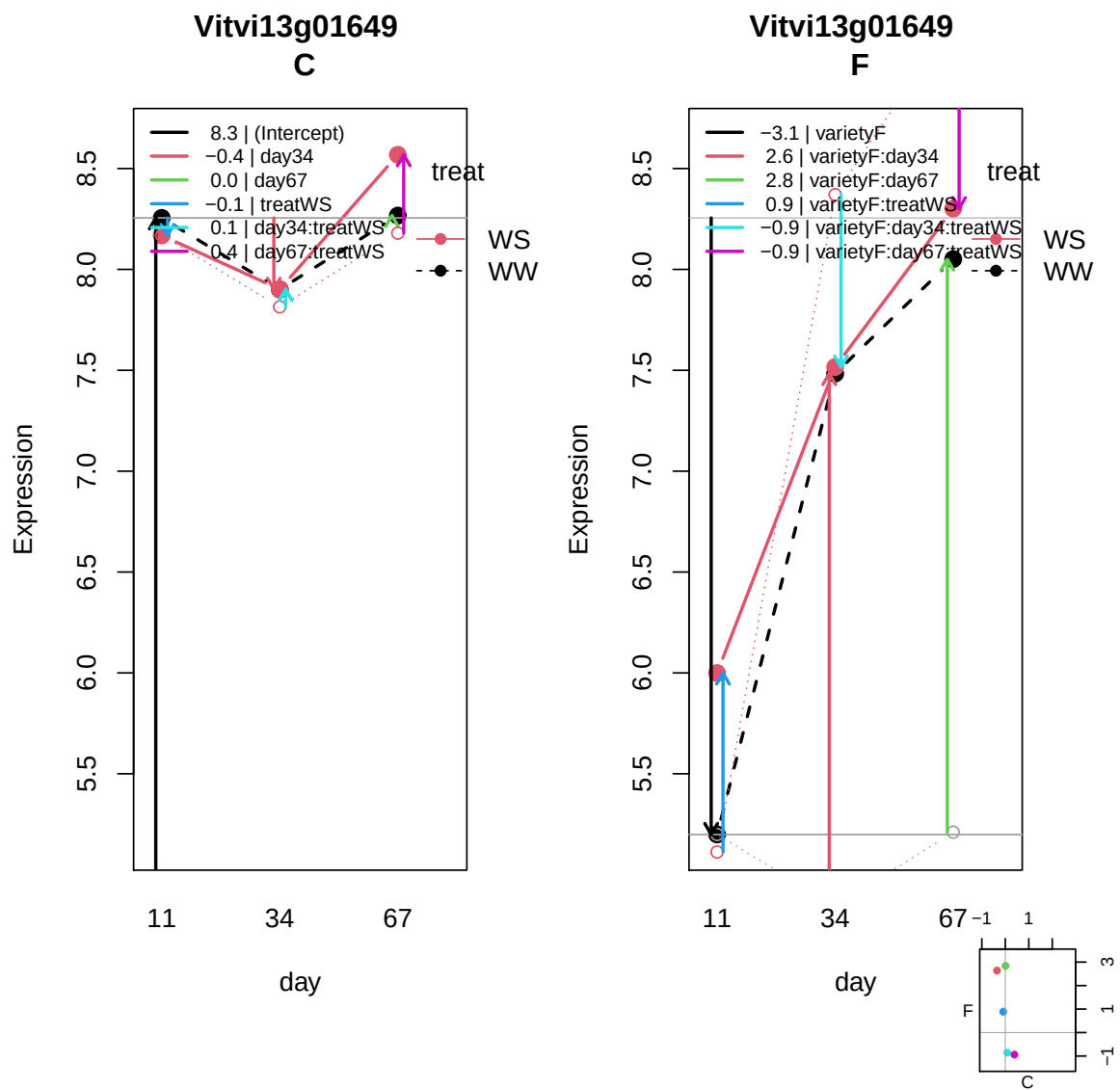
              (Intercept)  varietyF      day34      day67
Vitvi13g01649      8.255266 -3.056203 -0.3541708 0.01136536
              treatWS  varietyF:day34  varietyF:day67
Vitvi13g01649 -0.08684799      2.638707      2.840556
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi13g01649      0.8870657      0.08713344      0.3884909
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi13g01649      -0.8549865      -0.9381926

```

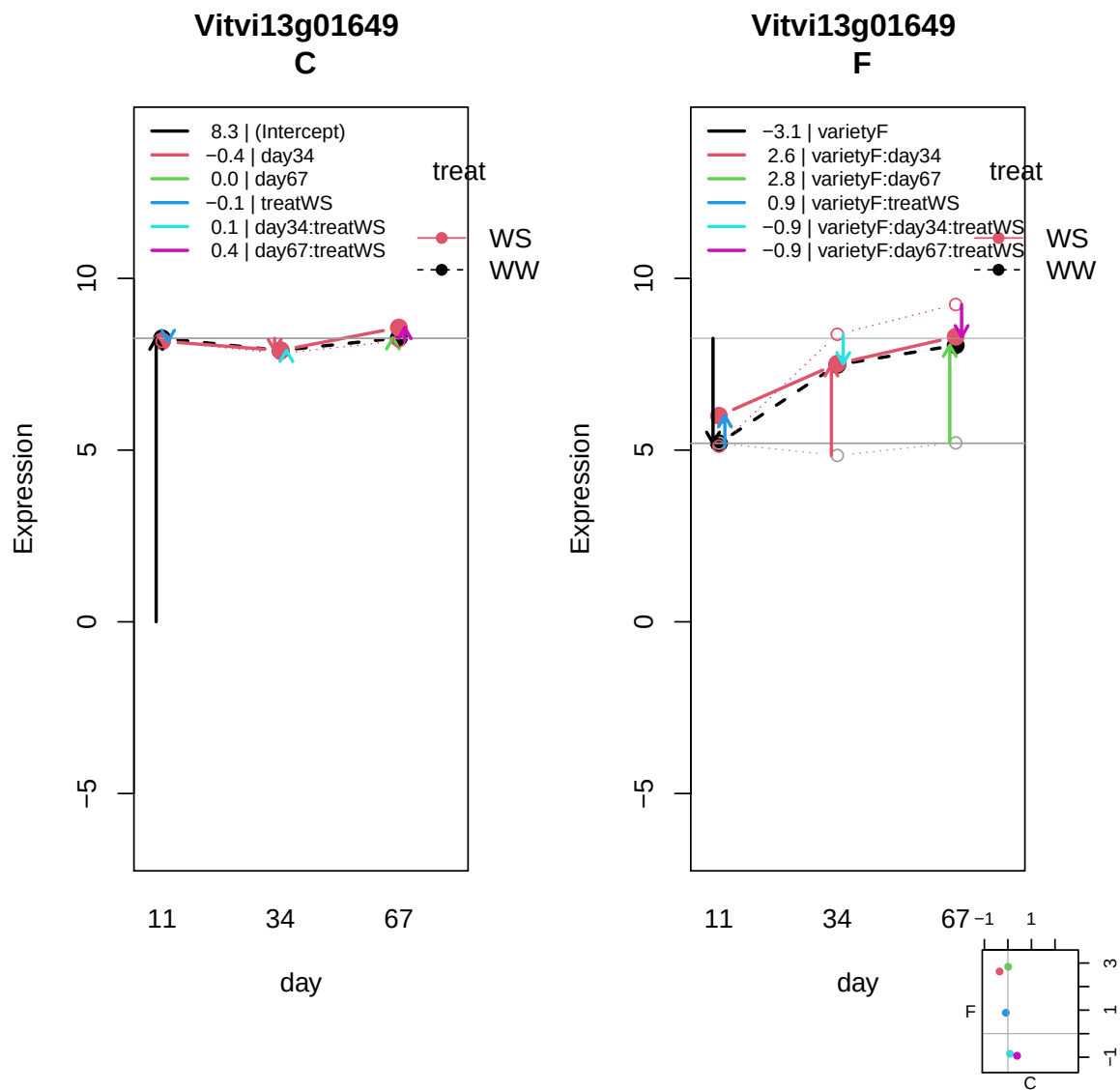
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

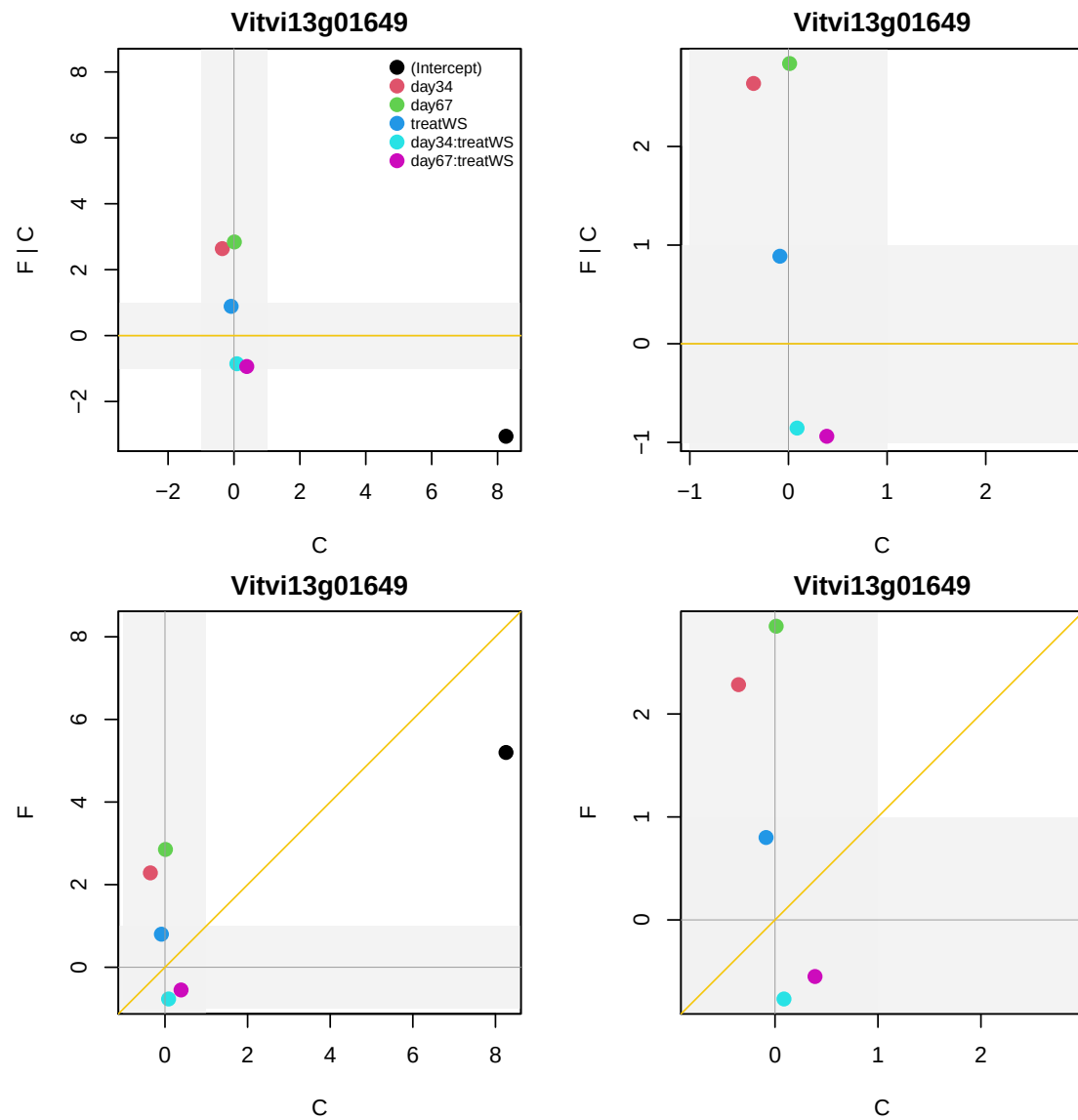


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

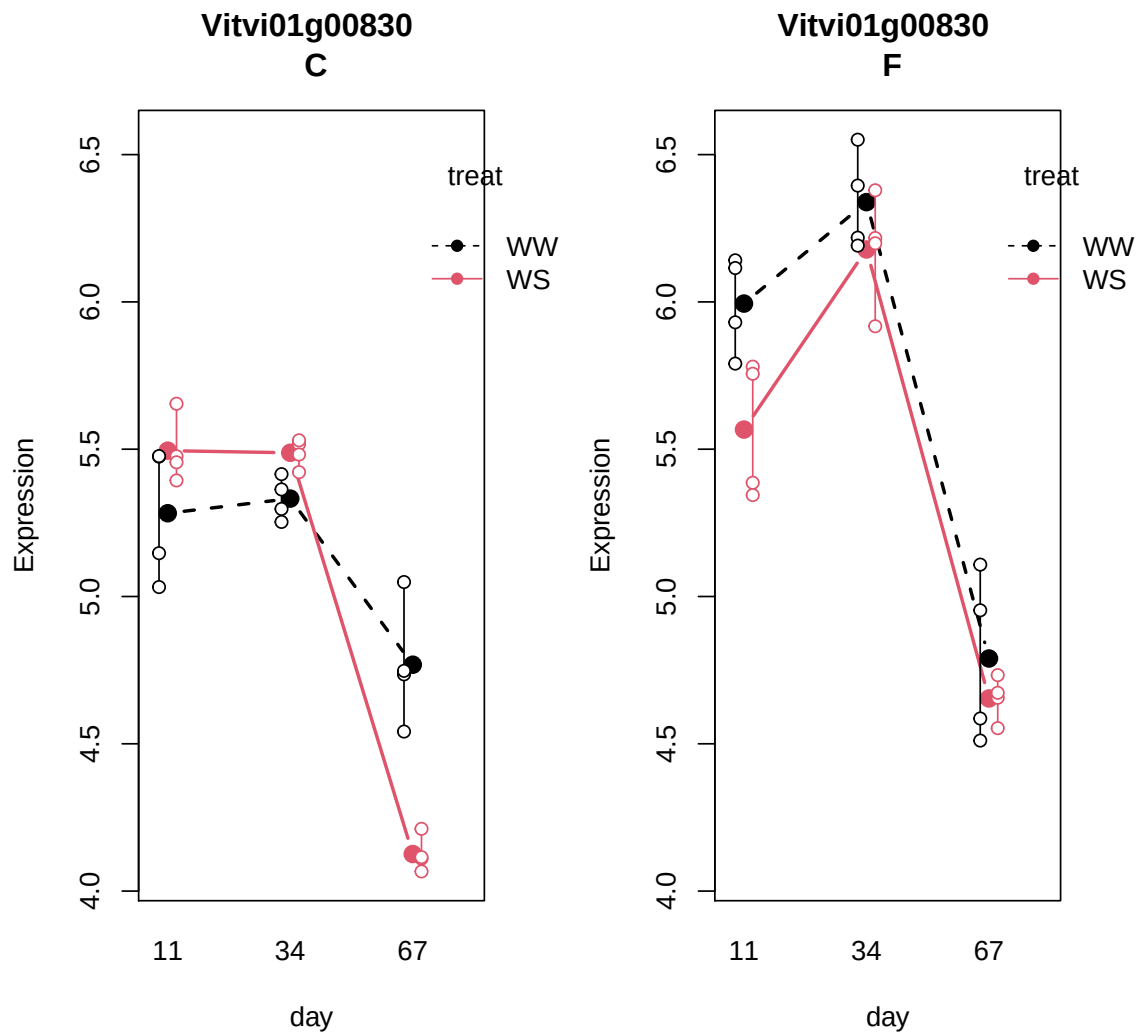
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



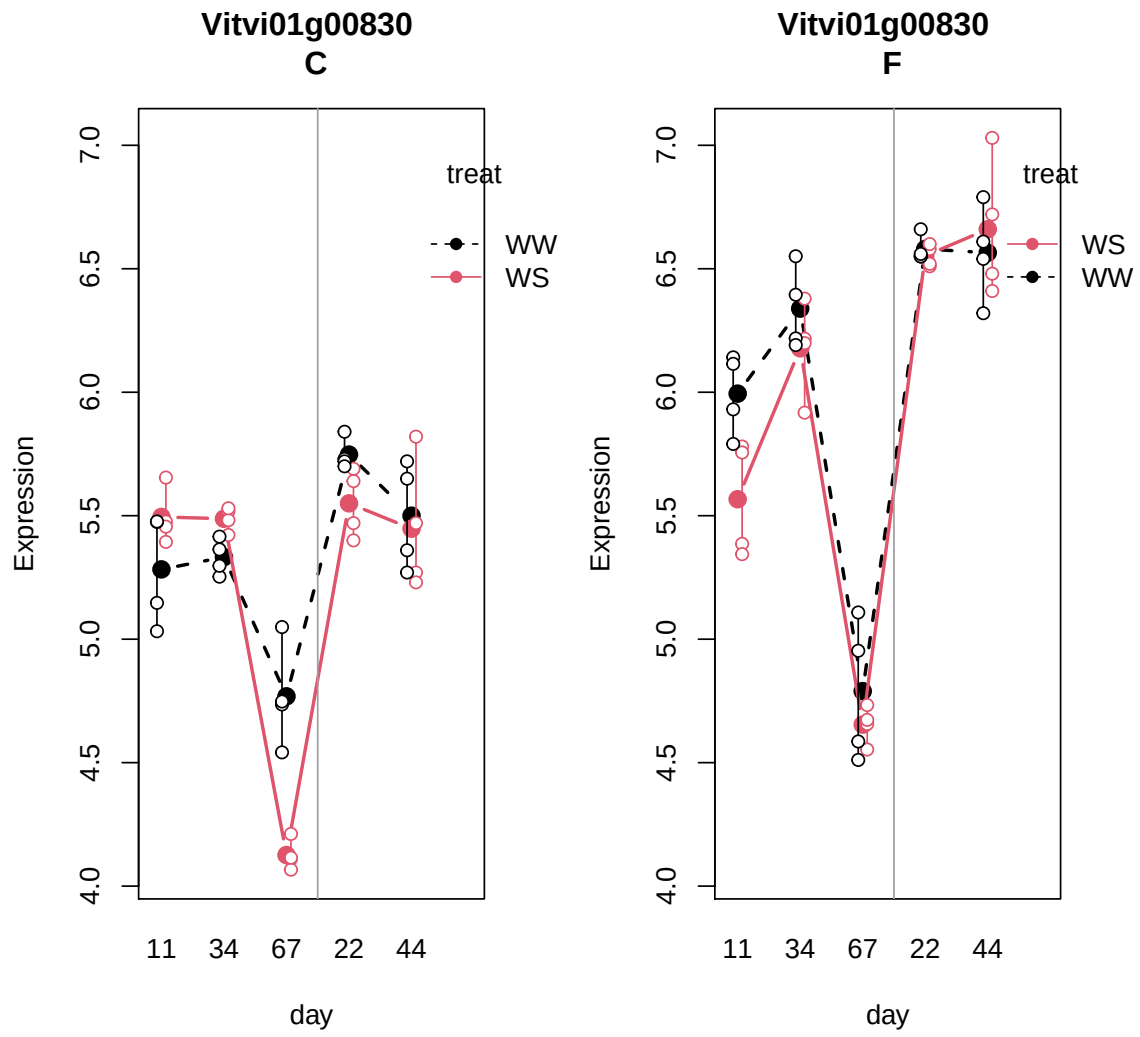
6.12.18 Vitvi01g00830

Coefficient varietyF:day67:treatWS for Vitvi01g00830.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi01g00830 1.147069 5.334426 4.673193 3.536982e-05
      adj.P.Val      B
Vitvi01g00830 0.02832795 2.20895
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

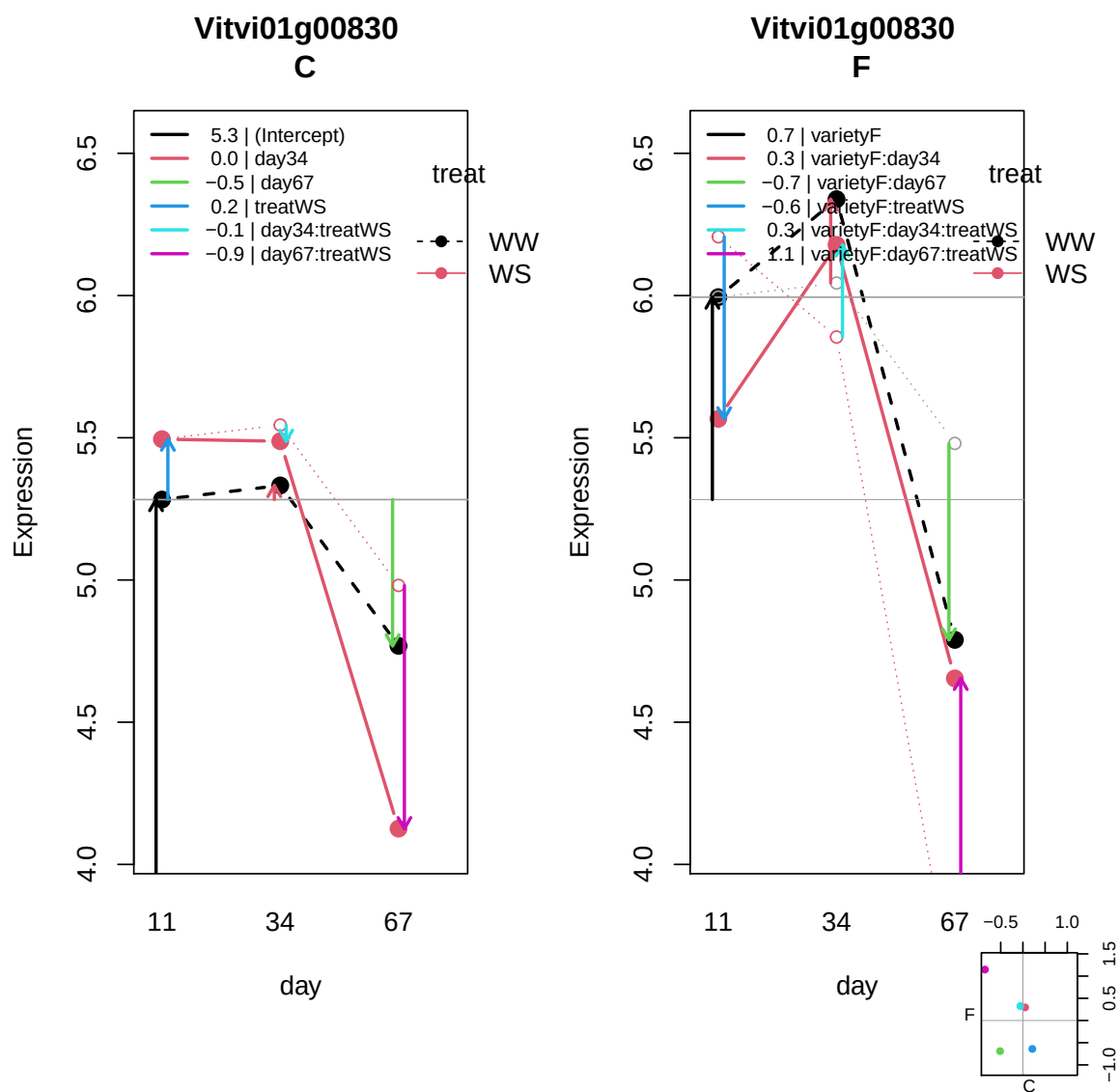
              (Intercept)  varietyF      day34      day67
Vitvi01g00830      5.282632 0.7117147 0.04963028 -0.5141891
              treatWS varietyF:day34 varietyF:day67
Vitvi01g00830 0.2123678      0.2946821      -0.6905942
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi01g00830      -0.6400595 -0.05682441 -0.8549941
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi01g00830      0.3238429      1.147069

```

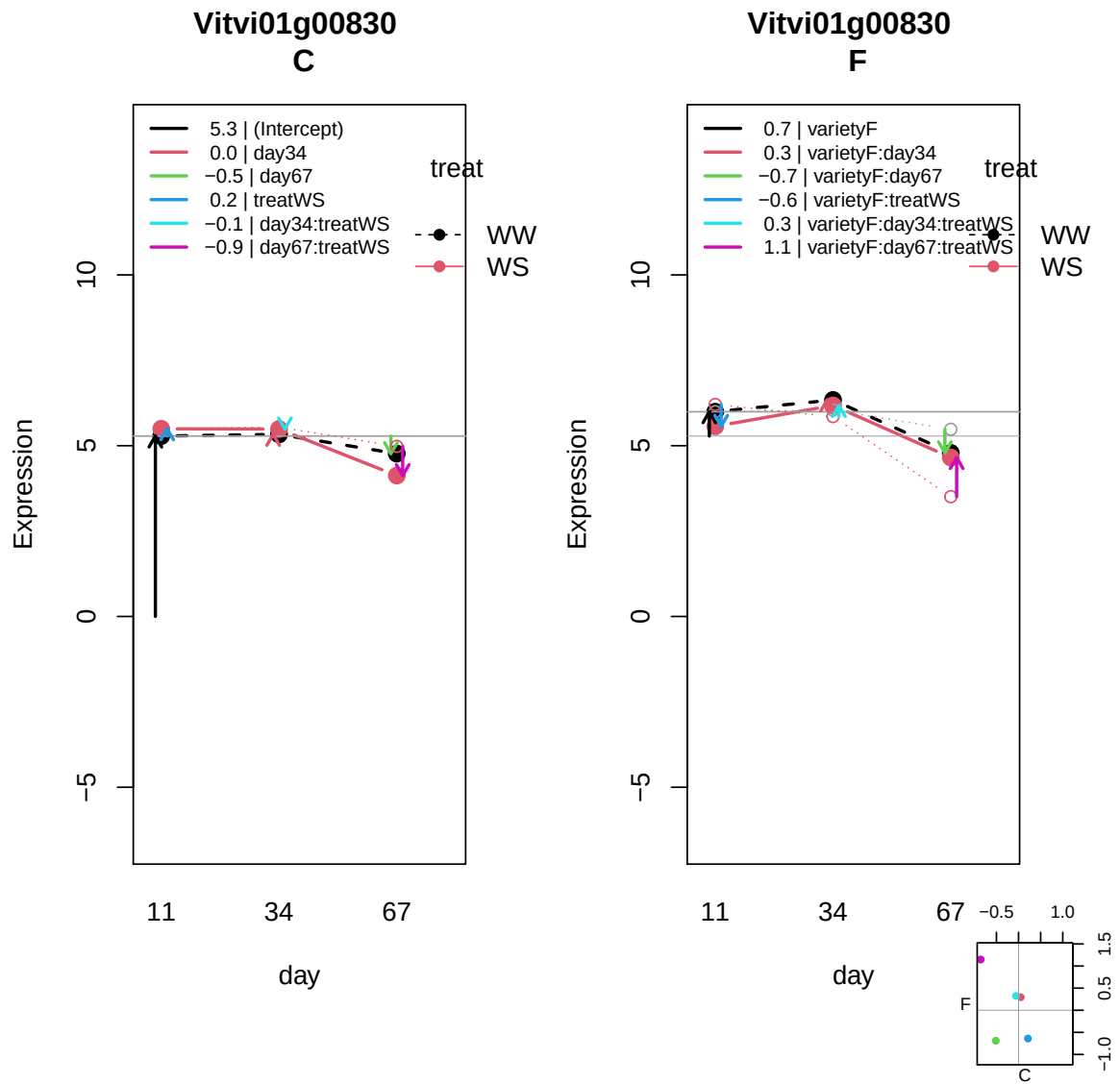
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

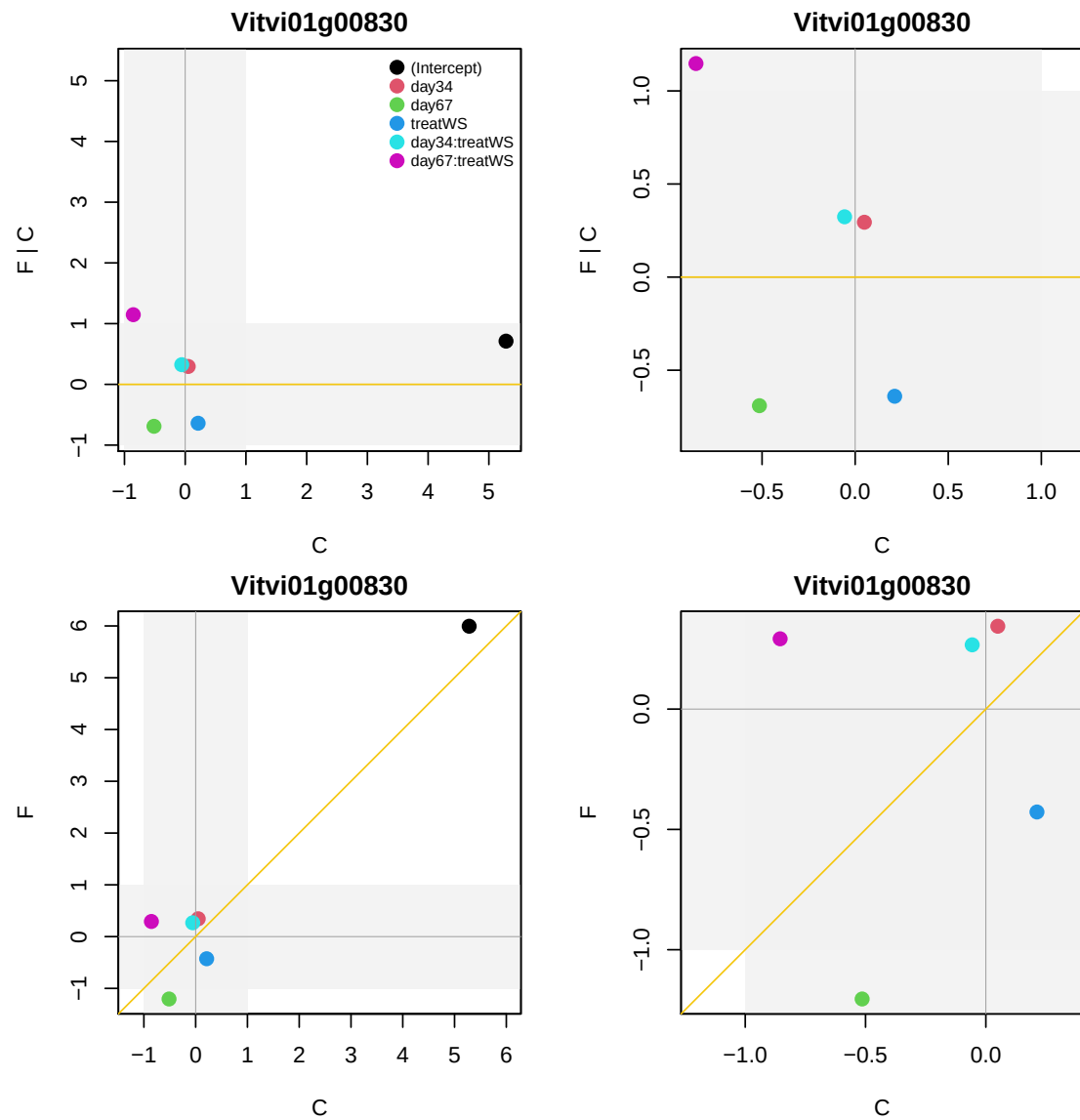


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

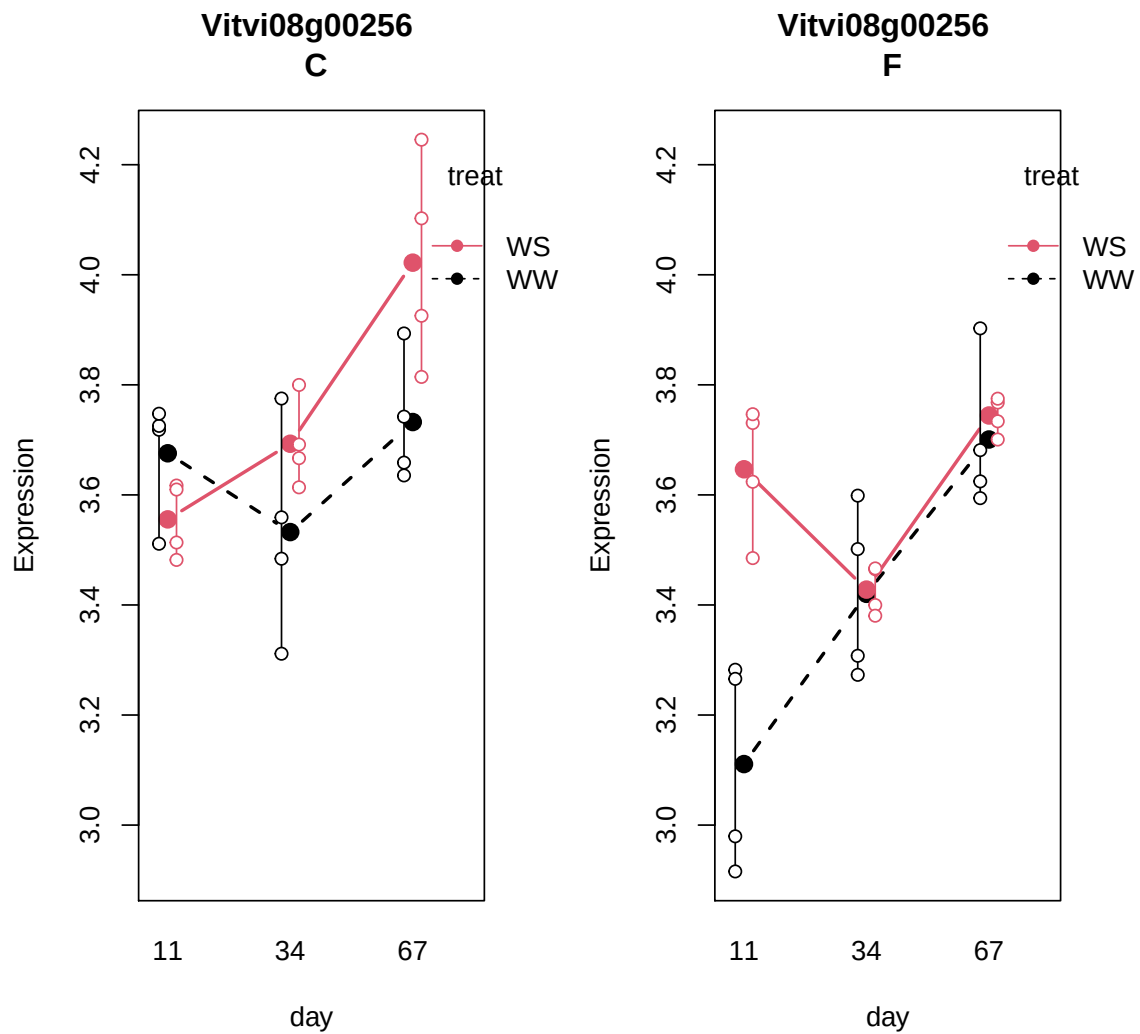


6.12.19 Vitvi08g00256

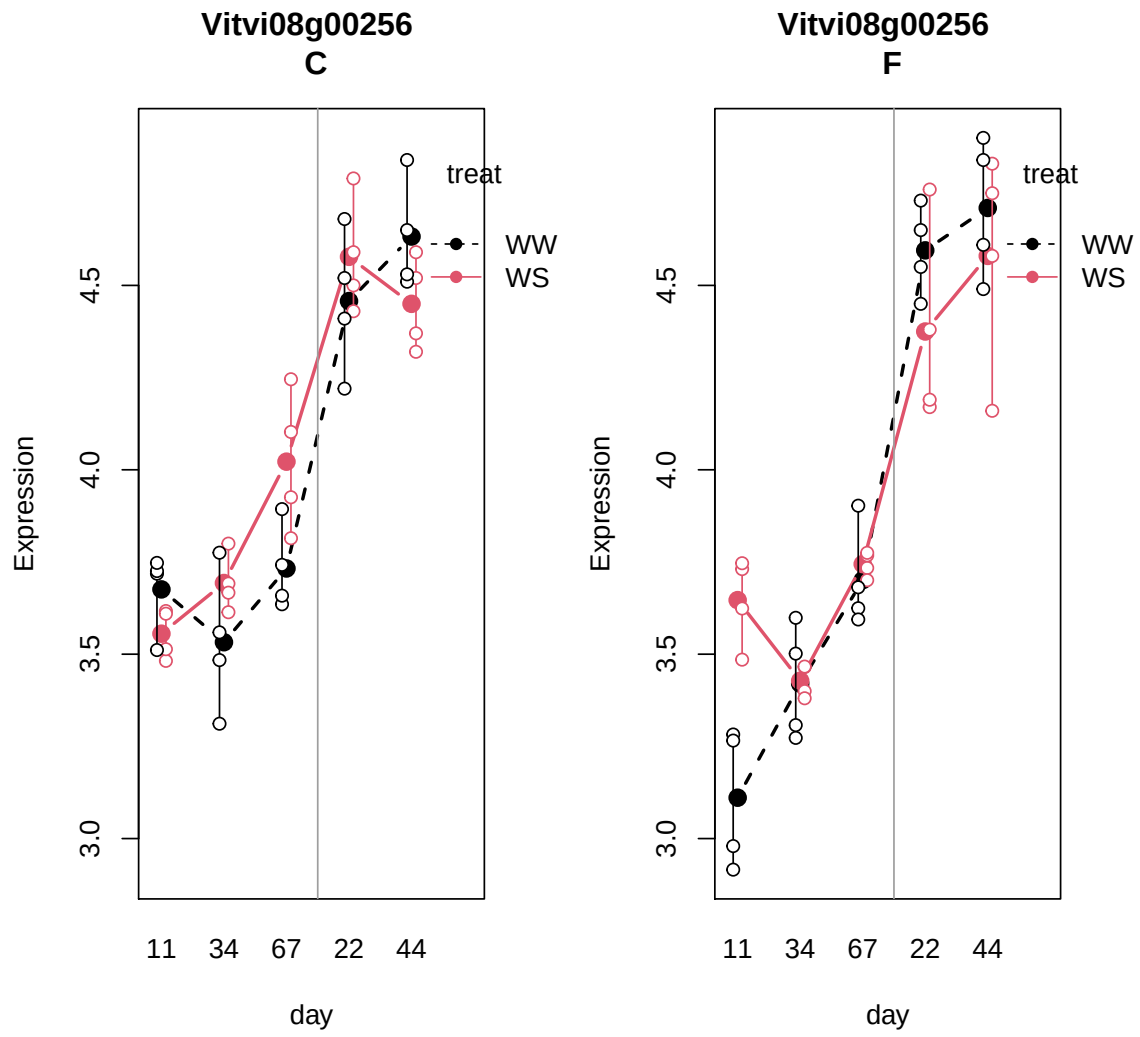
Coefficient varietyF:day67:treatWS for Vitvi08g00256.

```
> tt[varname,]
              logFC AveExpr      t      P.Value
Vitvi08g00256 -0.9018603 3.605129 -4.657418 3.714744e-05
              adj.P.Val      B
Vitvi08g00256 0.02832795 2.165284

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

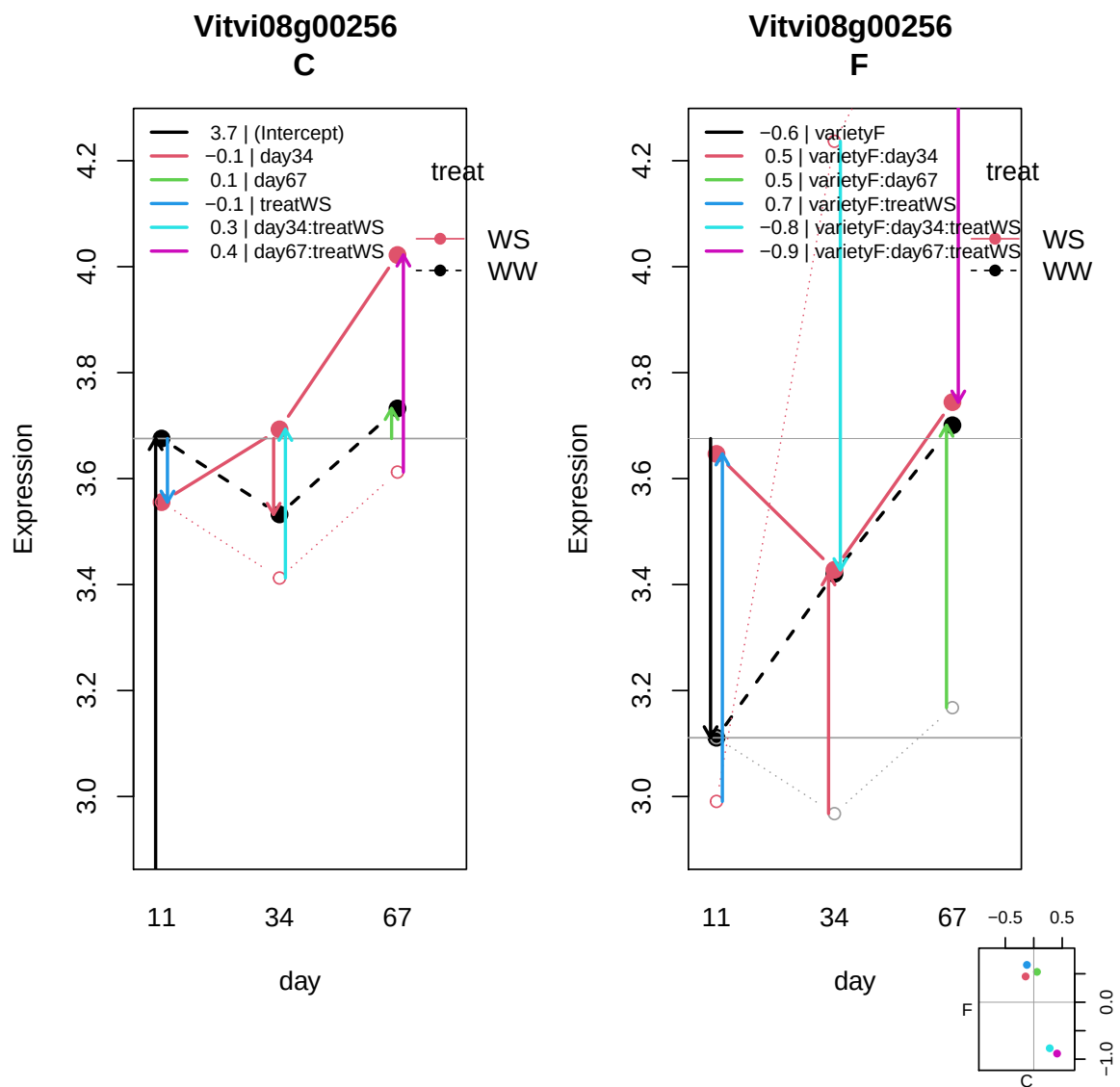
      (Intercept)  varietyF    day34    day67
Vitvi08g00256    3.675634 -0.564798 -0.143194 0.05677155
      treatWS varietyF:day34 varietyF:day67
Vitvi08g00256 -0.1201026    0.4525917    0.5330728
      varietyF:treatWS day34:treatWS day67:treatWS
Vitvi08g00256    0.655862    0.2806173    0.4097173
      varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi08g00256    -0.8086949    -0.9018603

```

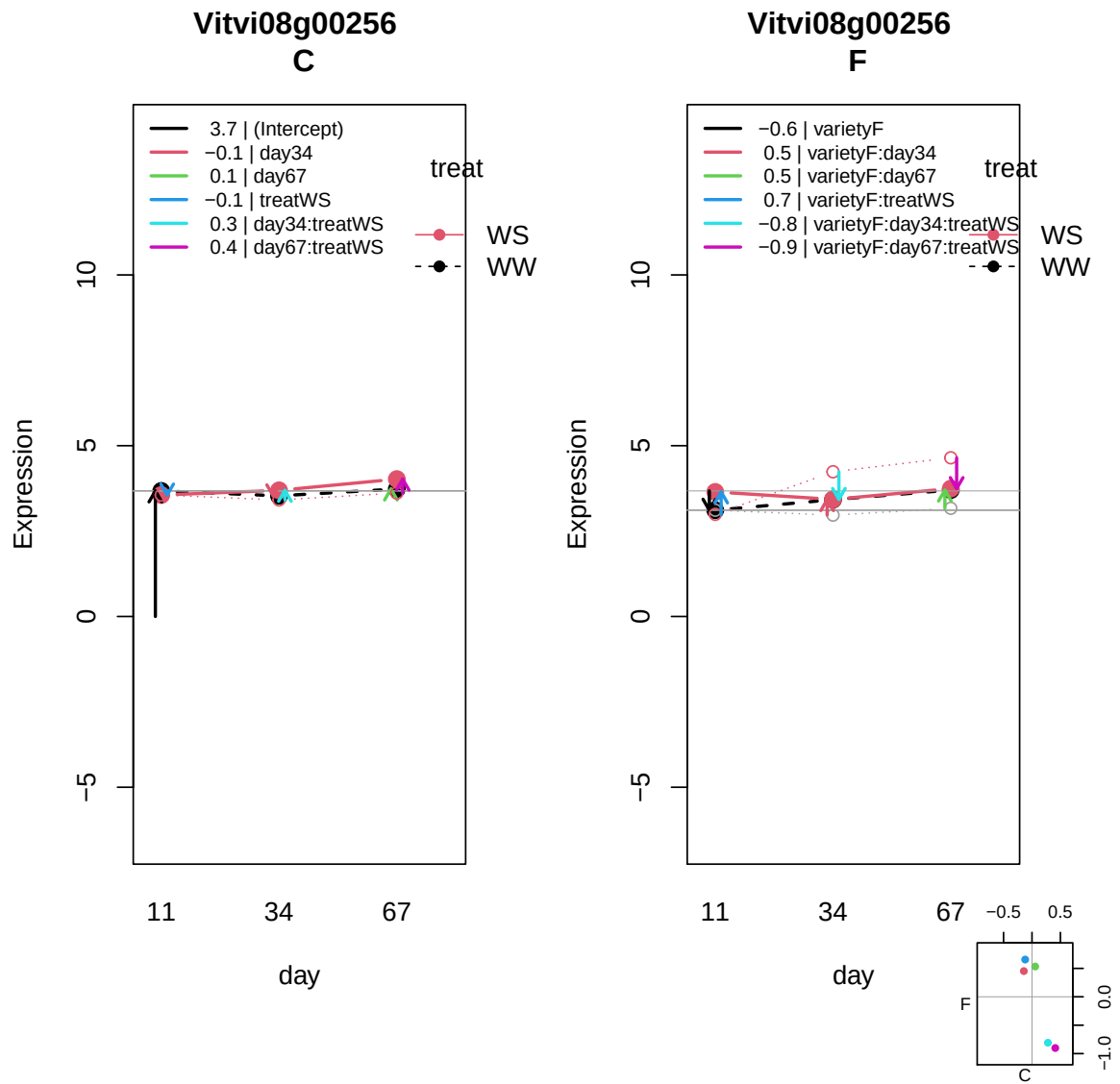
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

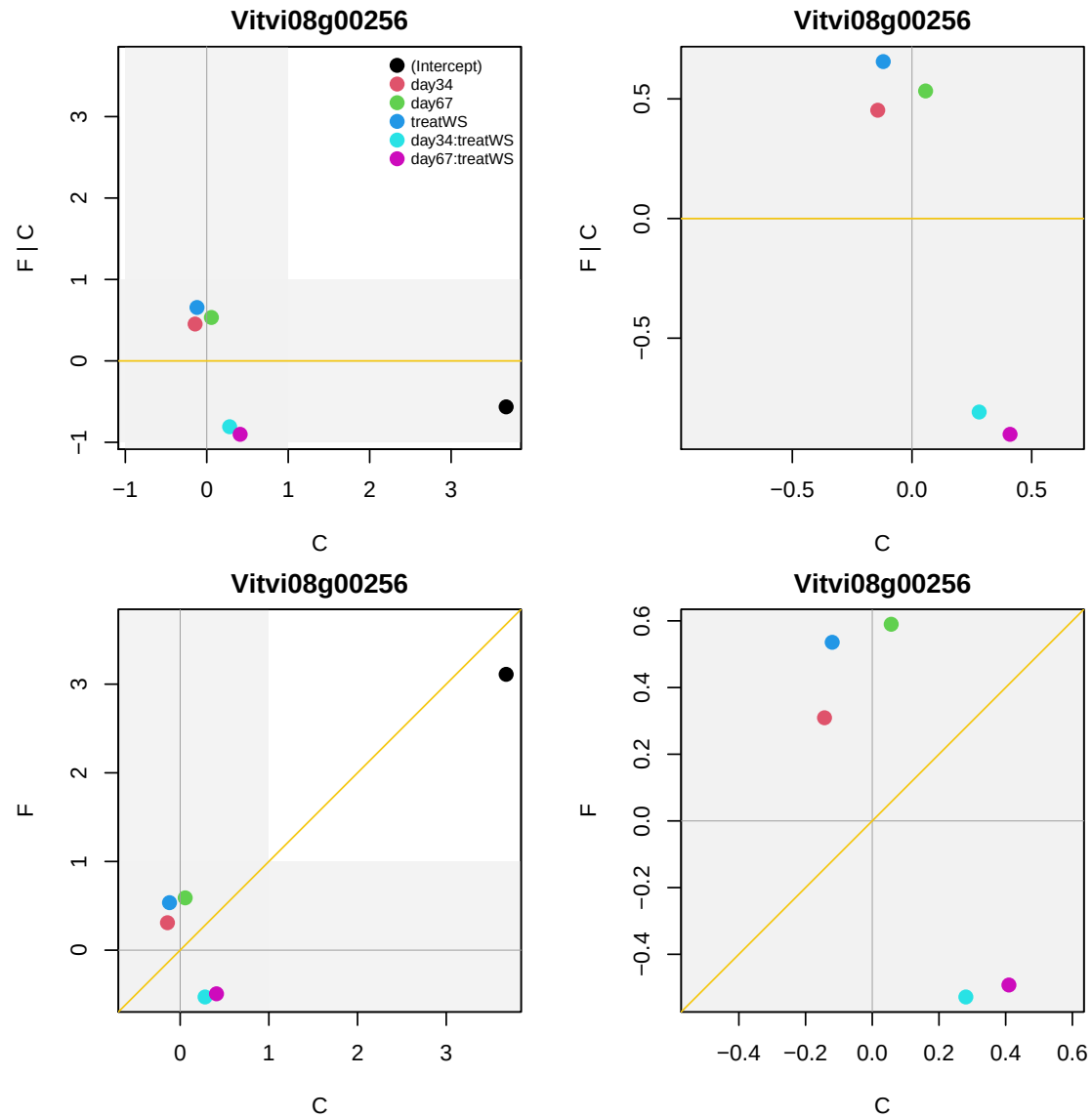



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

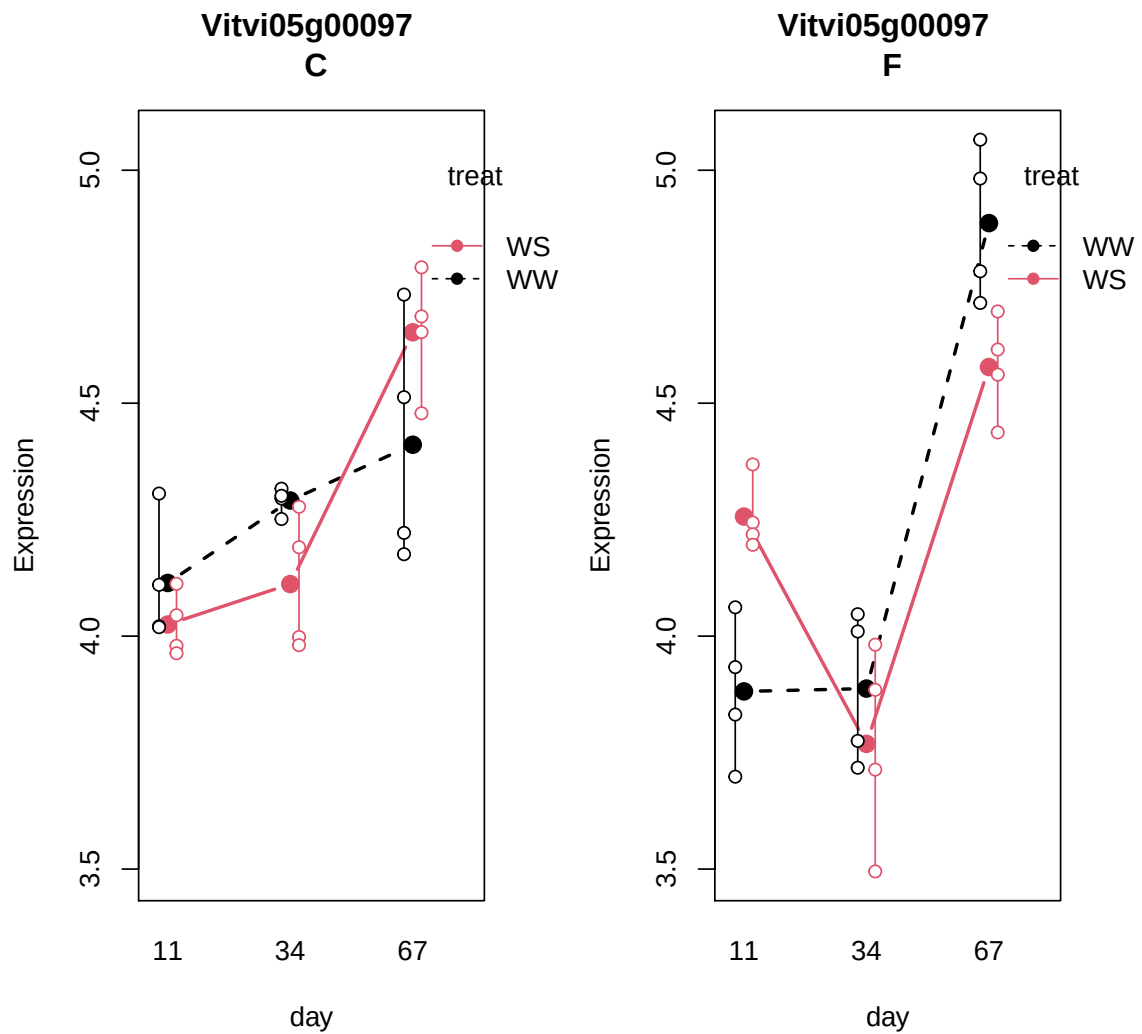


6.12.20 Vitvi05g00097

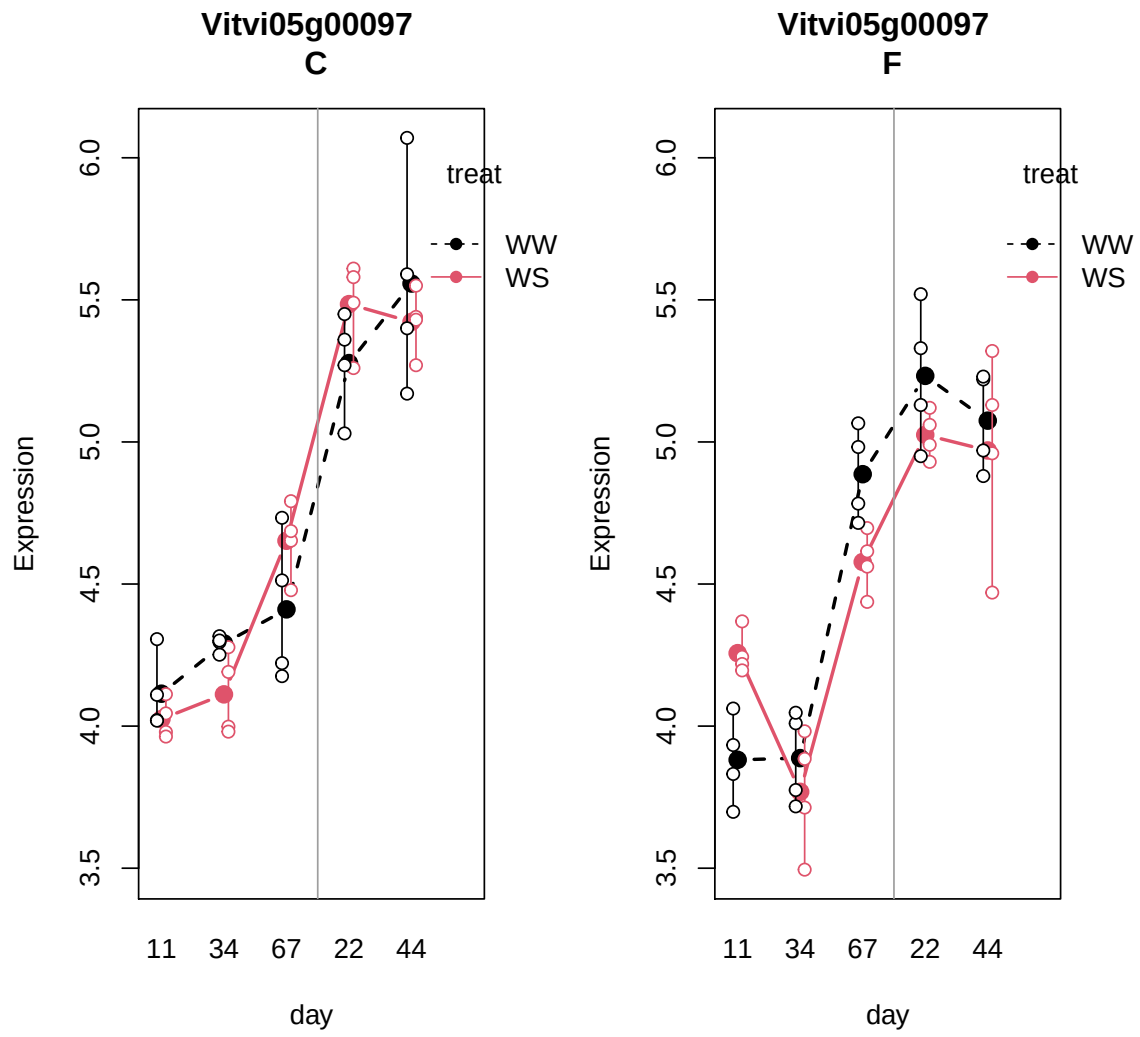
Coefficient varietyF:day67:treatWS for Vitvi05g00097.

```
> tt[varname,]
      logFC AveExpr      t    P.Value
Vitvi05g00097 -1.014832 4.238604 -4.657215 3.717091e-05
      adj.P.Val      B
Vitvi05g00097 0.02832795 2.164721

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

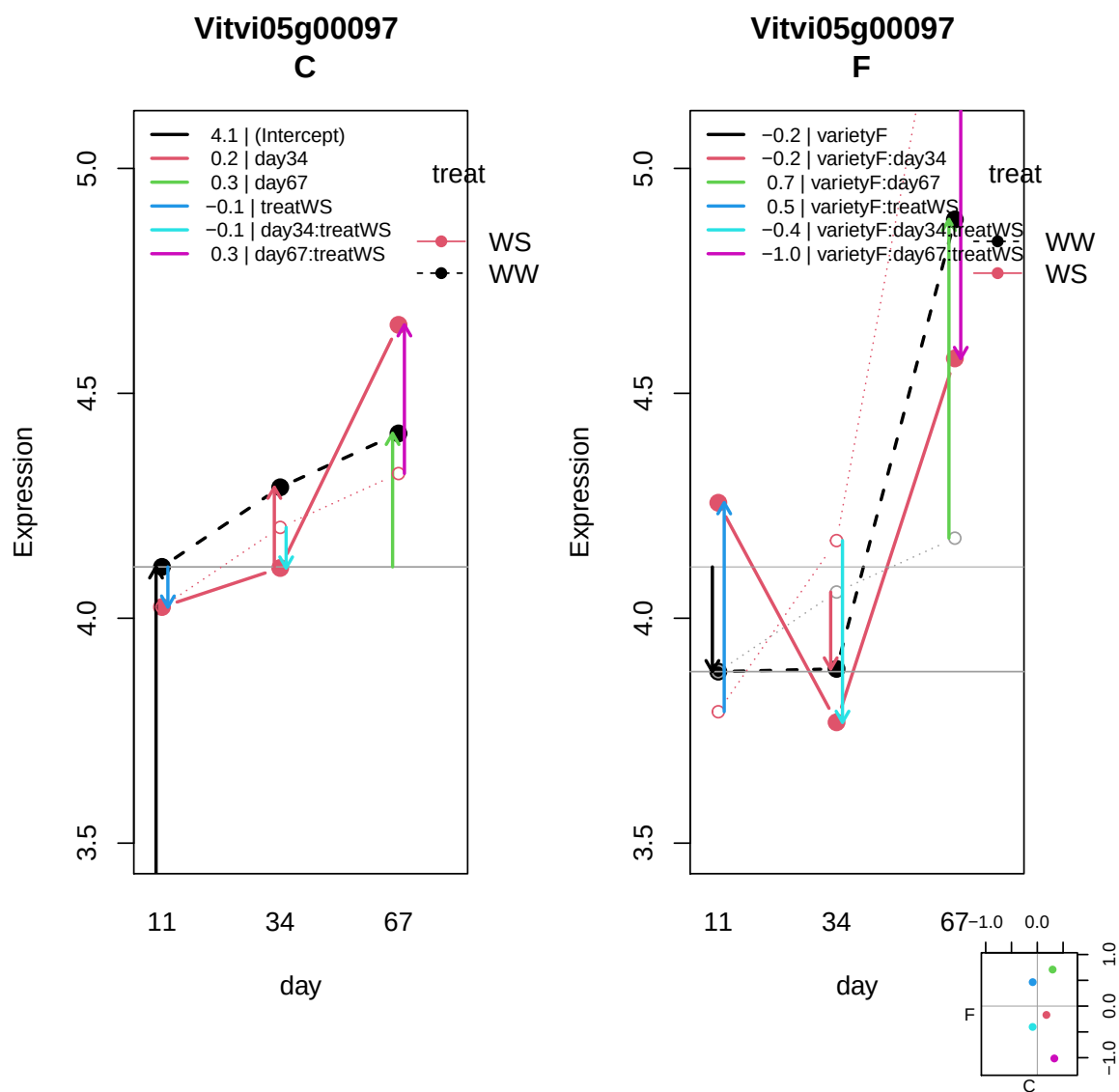
              (Intercept)  varietyF    day34    day67
Vitvi05g00097    4.114105 -0.232796  0.1770137  0.2967212
              treatWS  varietyF:day34  varietyF:day67
Vitvi05g00097 -0.08917594    -0.1709055    0.7084881
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi05g00097    0.4645672    -0.09019939    0.3305786
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi05g00097    -0.4039136                -1.014832

```

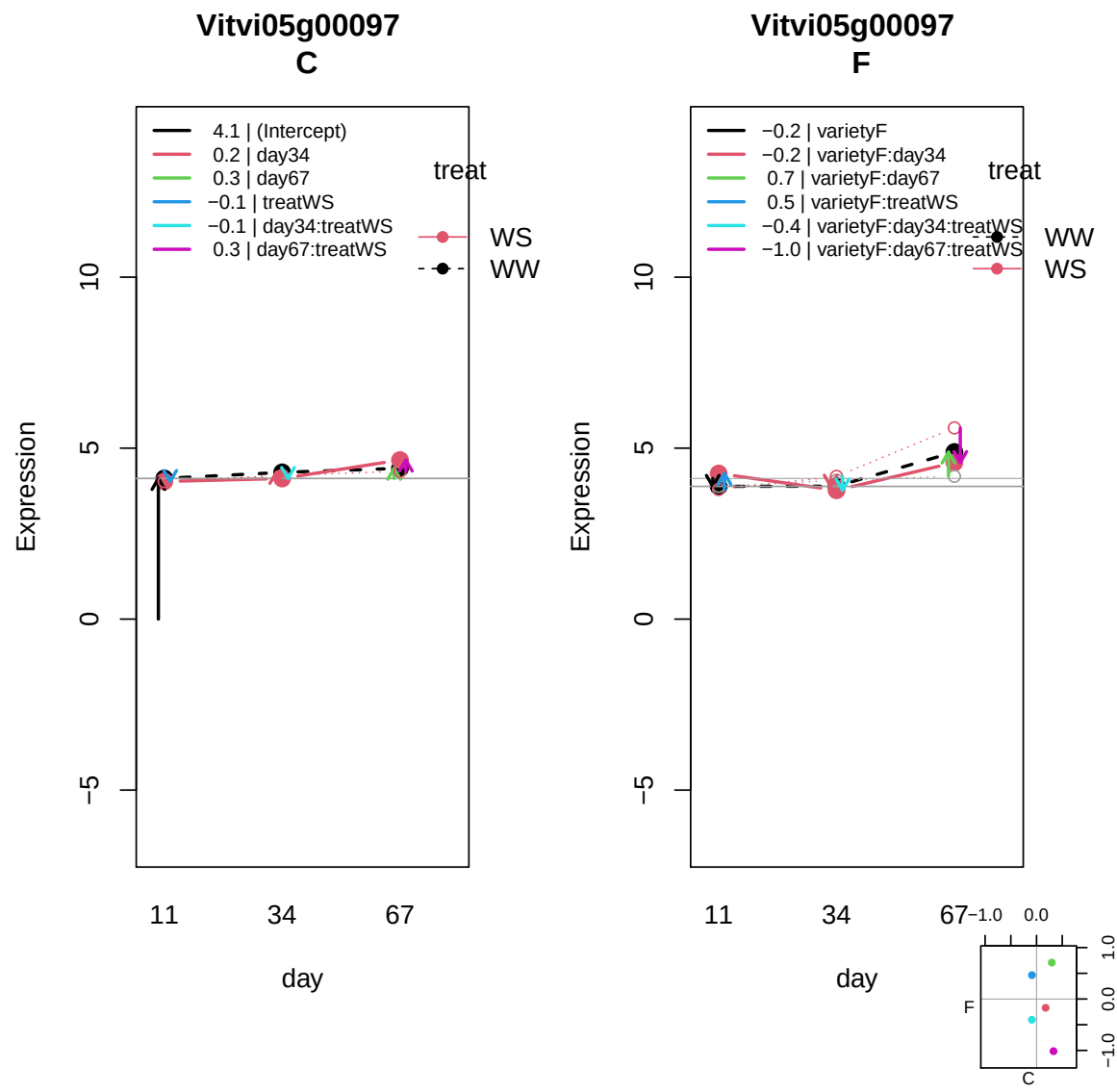
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

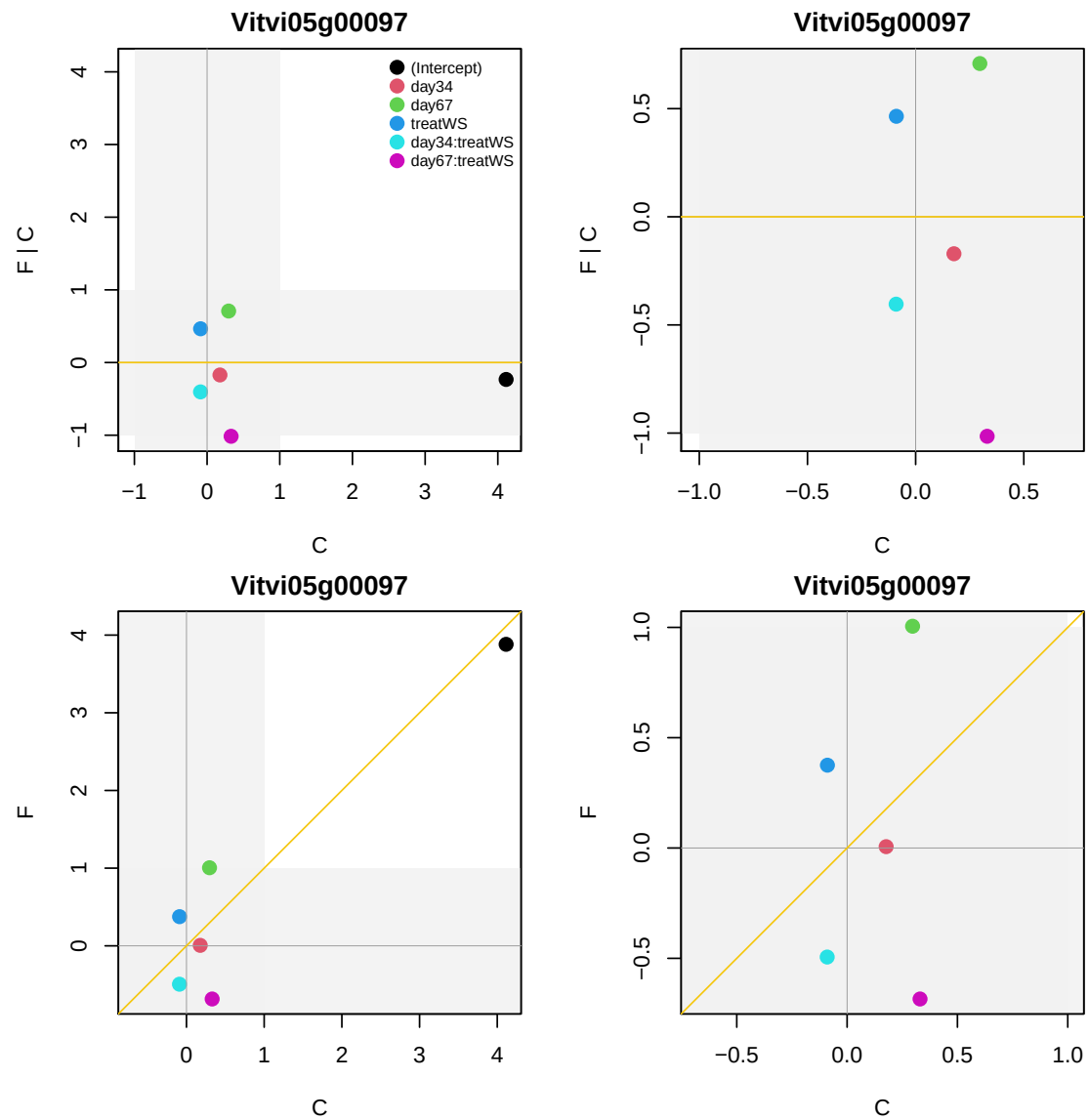


```
> coefs <- plot.interactions(varname,  
+ coef=fit1[varname,]$coefficients,  
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

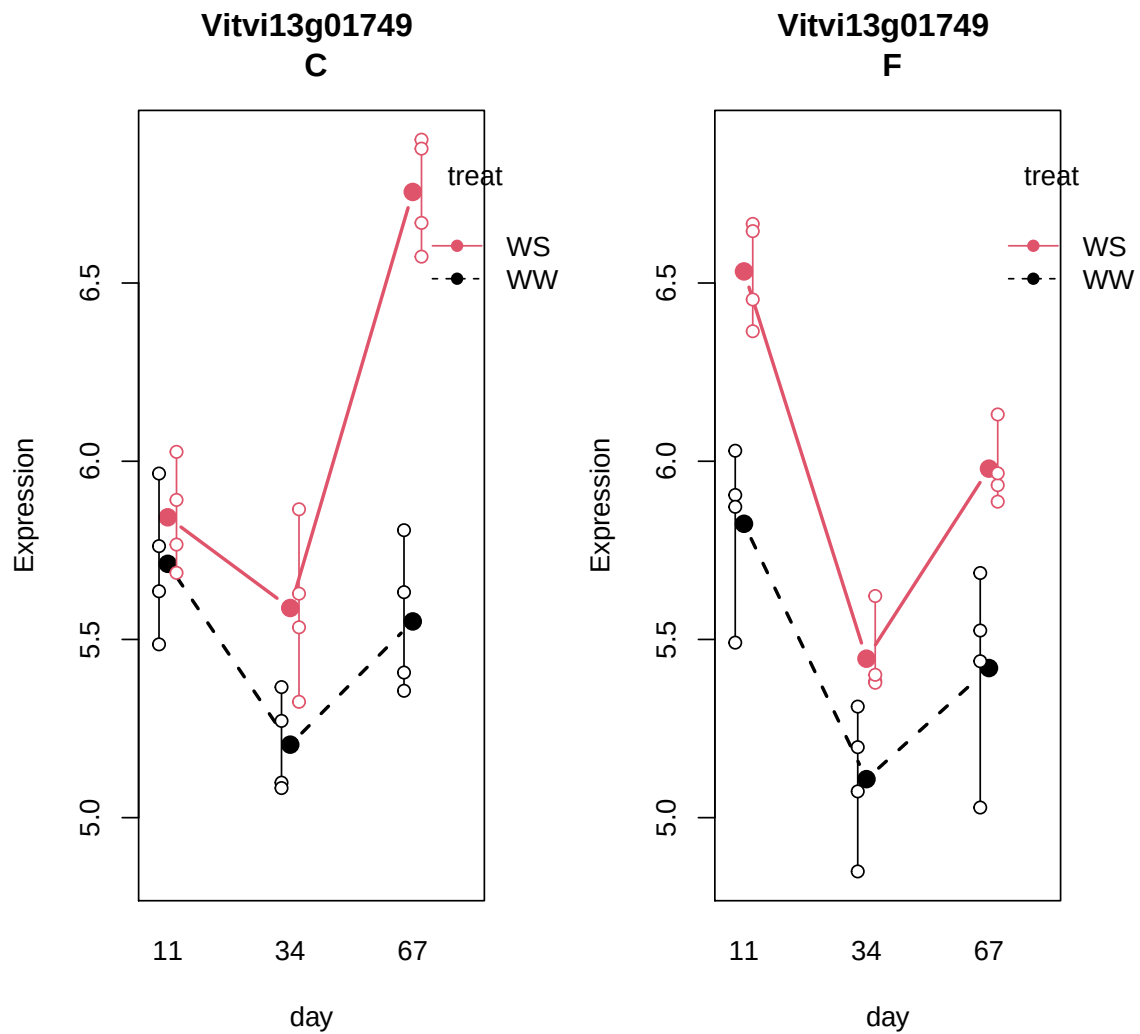


6.12.21 Vitvi13g01749

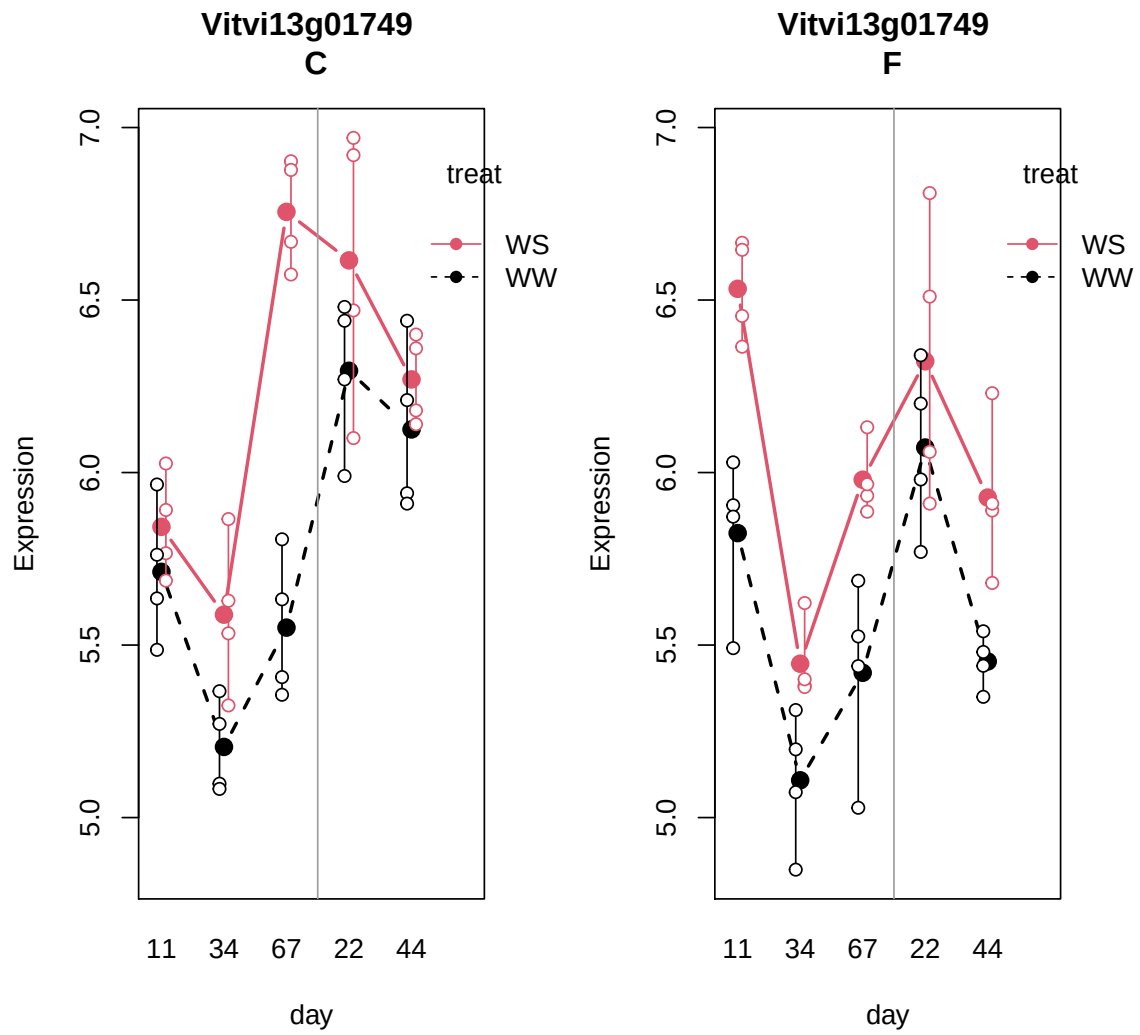
Coefficient varietyF:day67:treatWS for Vitvi13g01749.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi13g01749 -1.222933 5.746996 -4.607406 4.338521e-05
      adj.P.Val      B
Vitvi13g01749 0.02867414 2.027062

> plot.interactions(varname, phdata=pd, data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

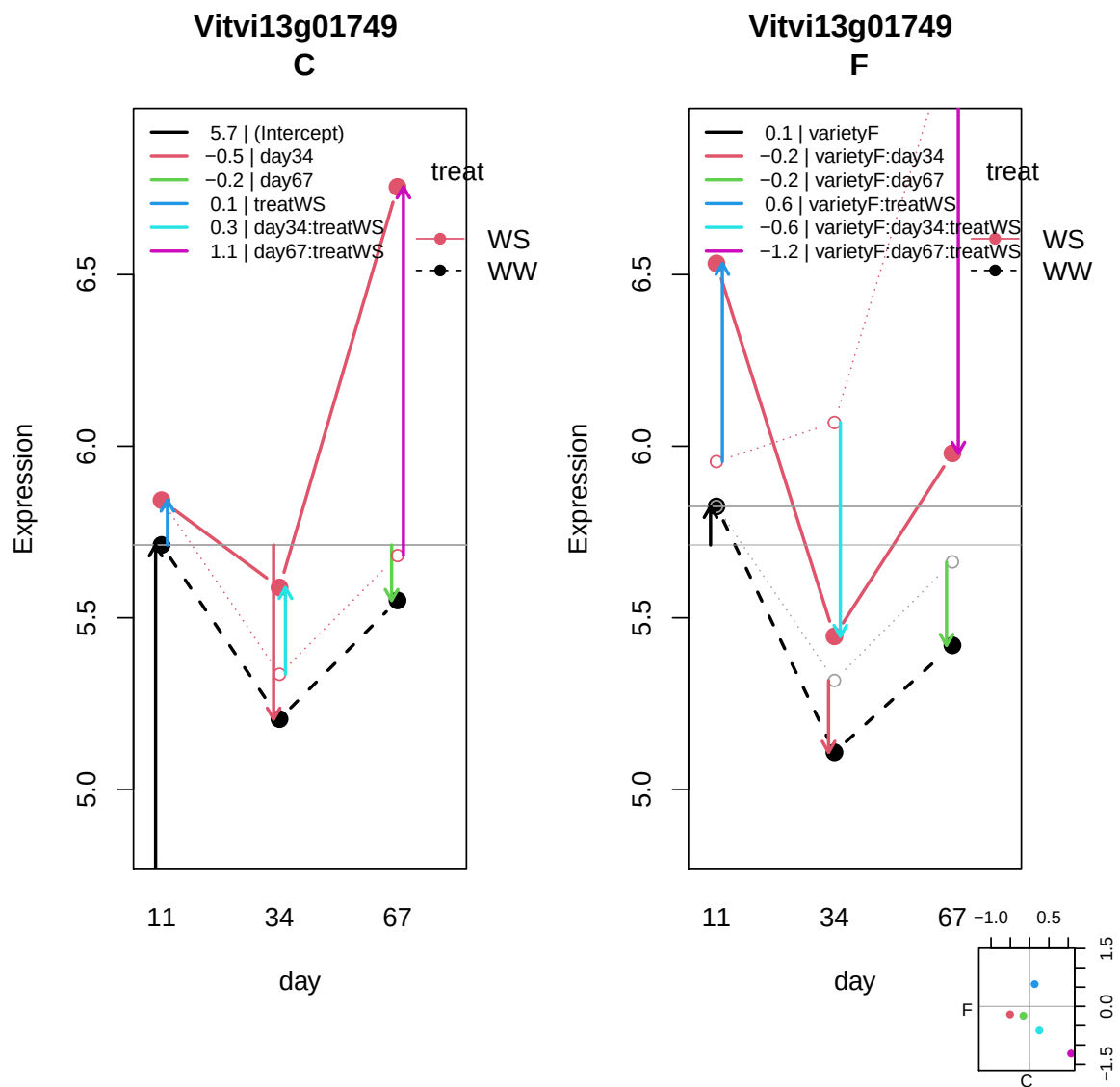
      (Intercept)  varietyF      day34      day67
Vitvi13g01749    5.712168 0.1123397 -0.5073915 -0.1616034
      treatWS varietyF:day34 varietyF:day67
Vitvi13g01749 0.1305655    -0.2090726    -0.2431883
      varietyF:treatWS day34:treatWS day67:treatWS
Vitvi13g01749      0.5774636      0.2528516      1.074394
      varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi13g01749      -0.6229389      -1.222933

```

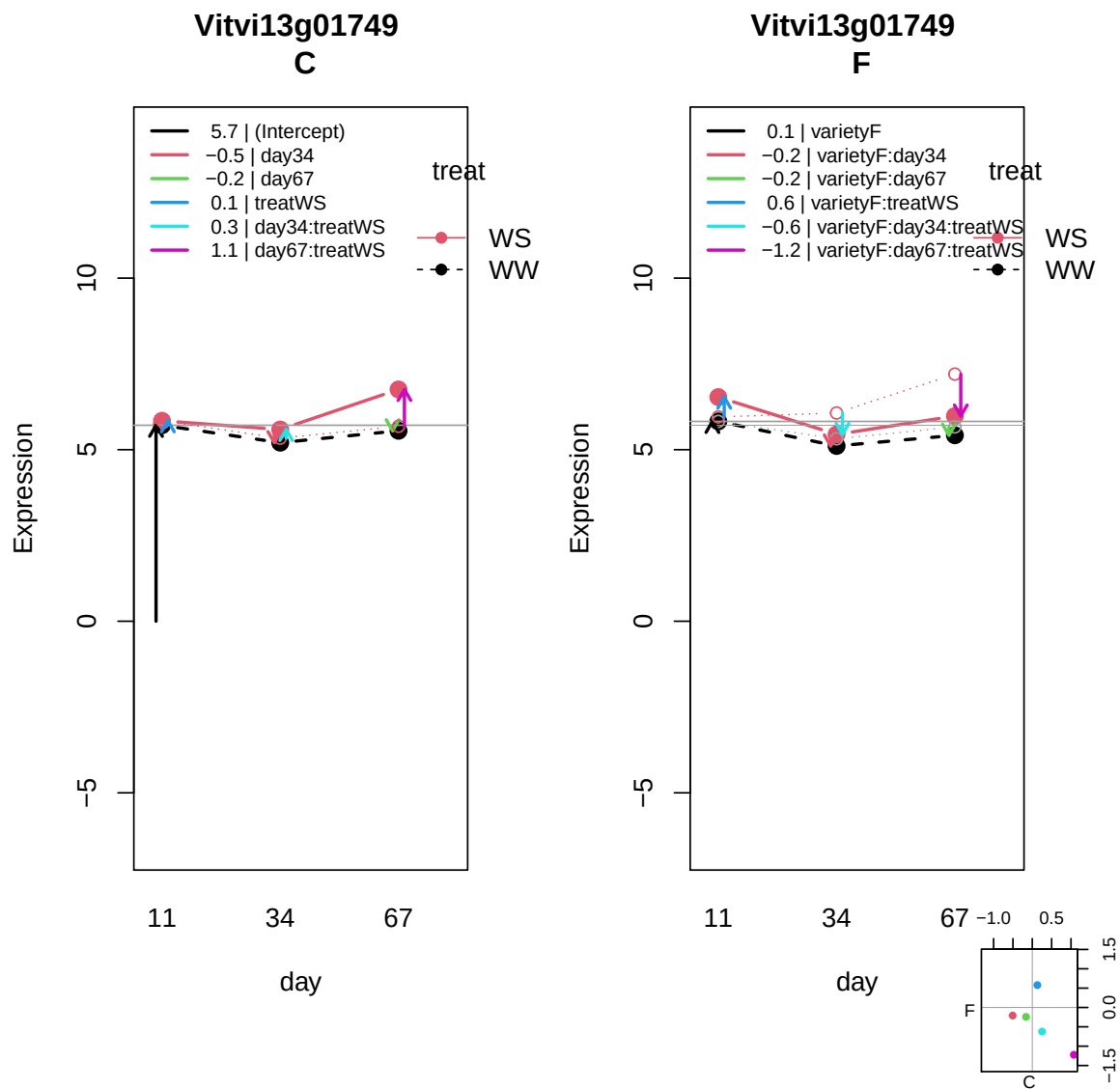
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

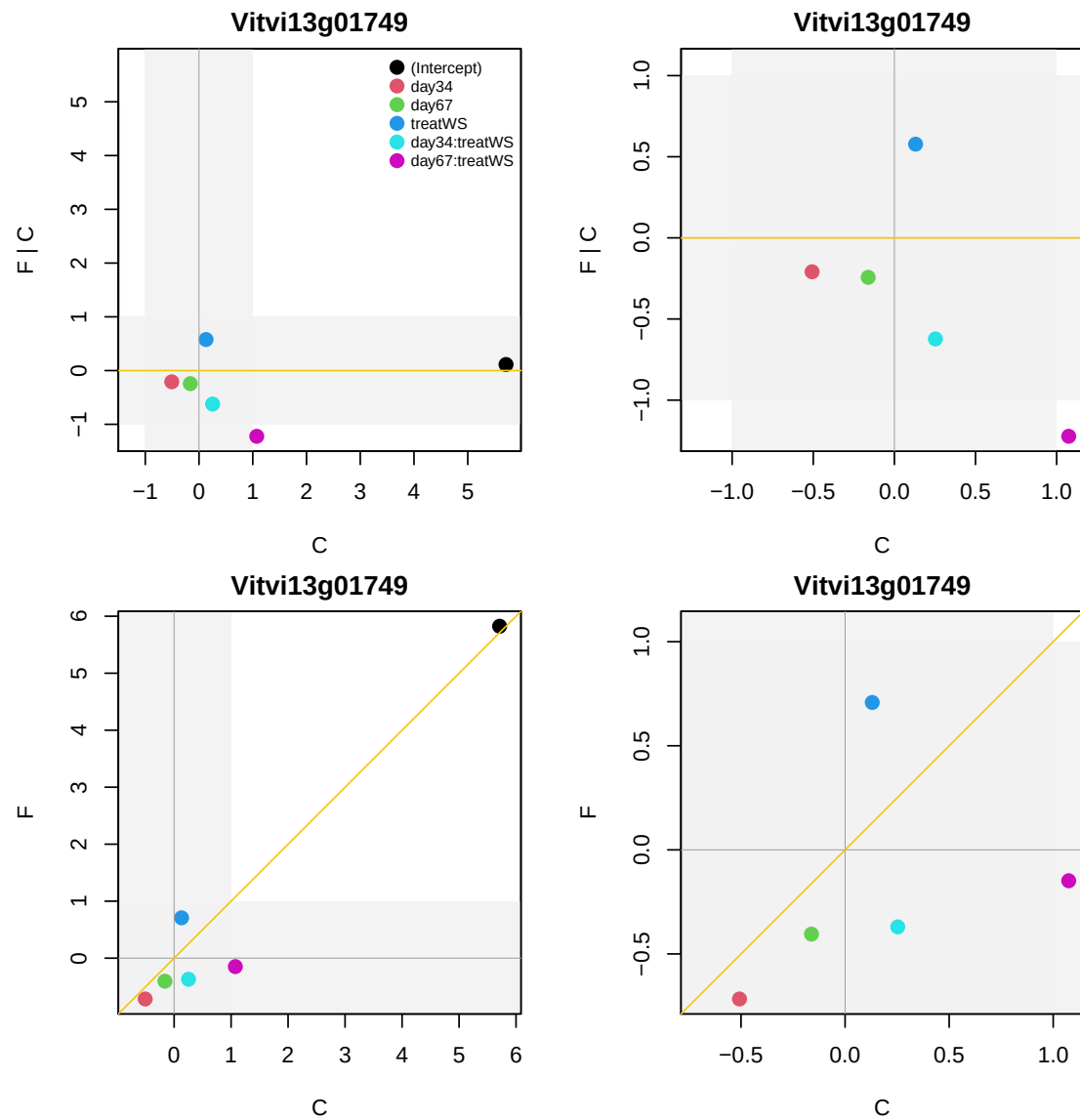


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

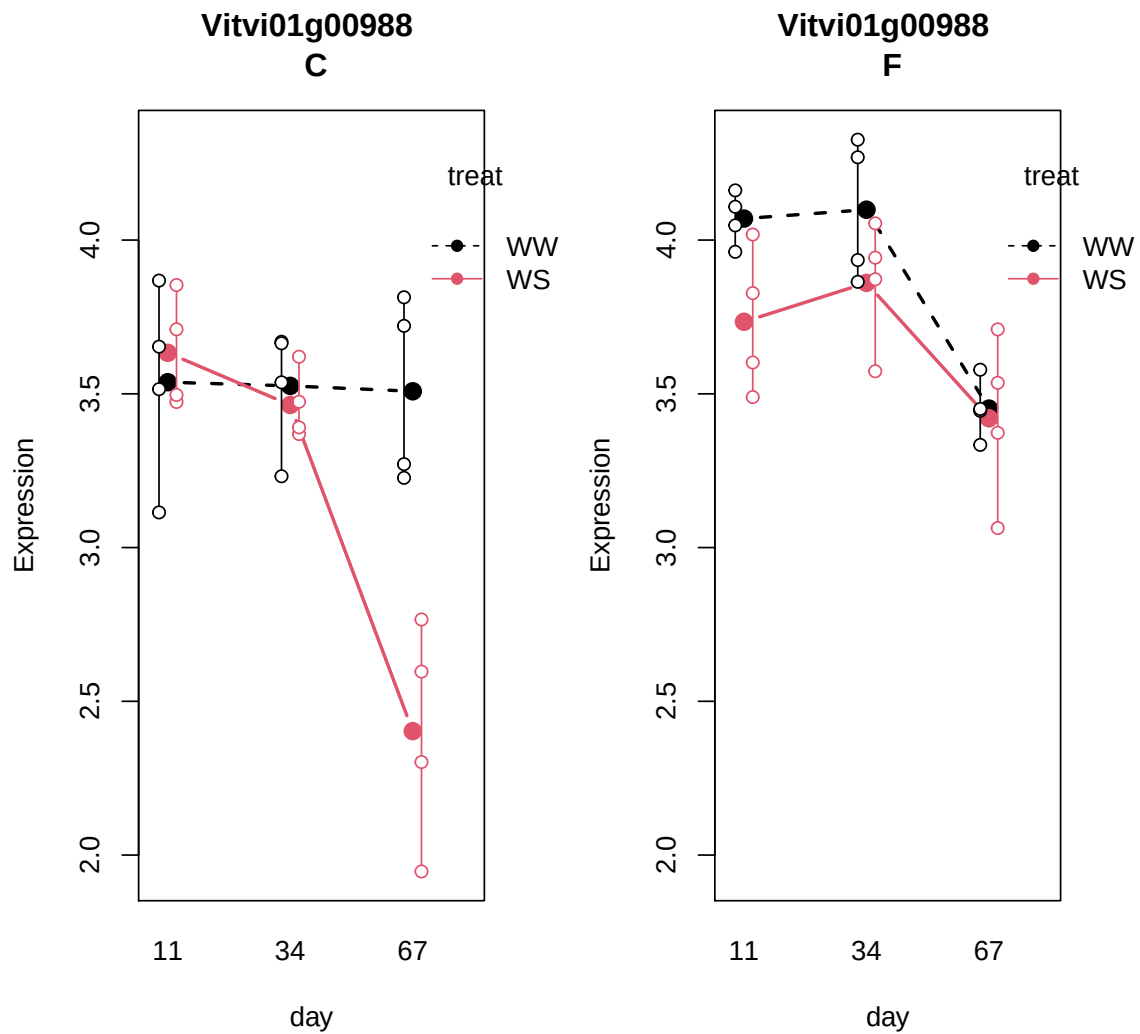


6.12.22 Vitvi01g00988

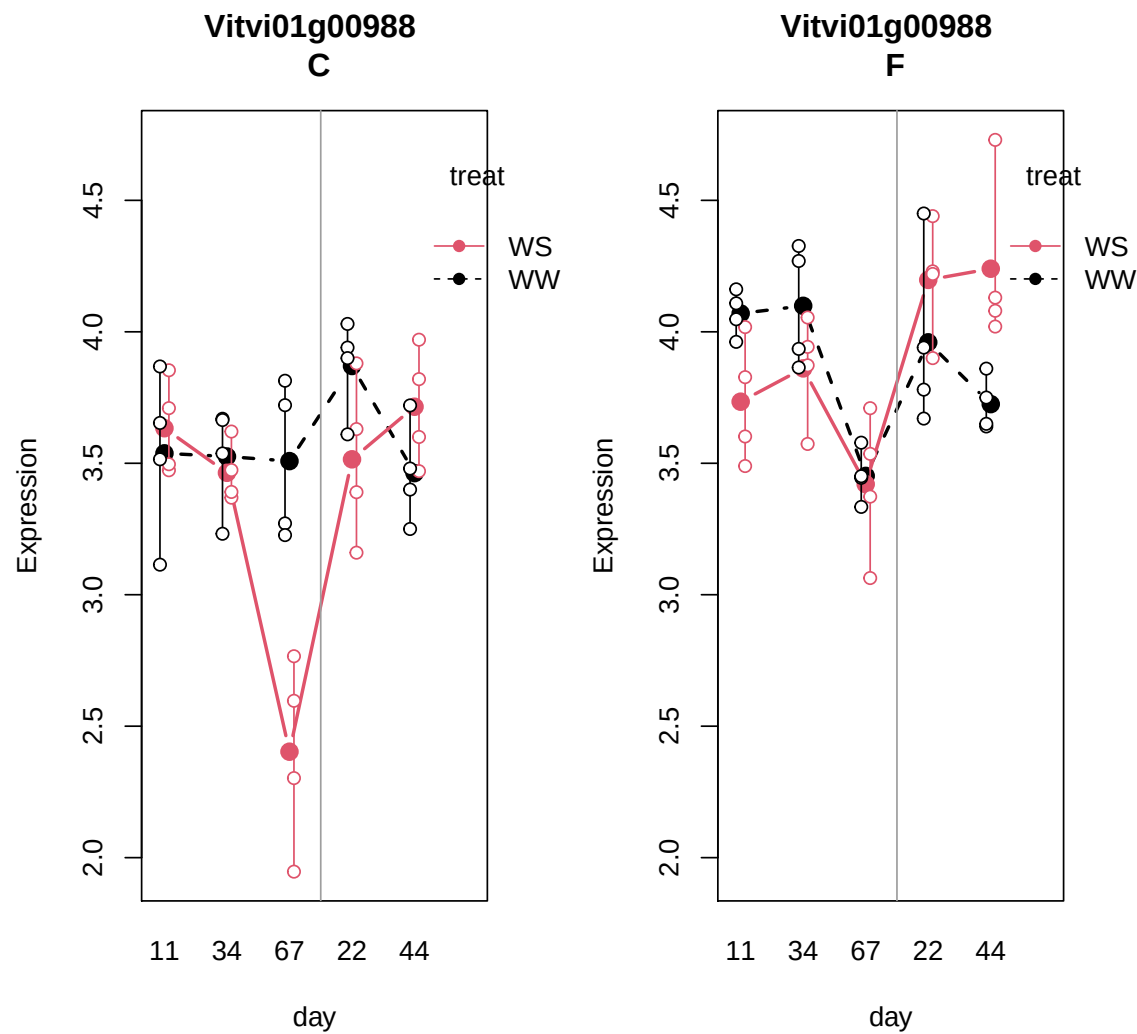
Coefficient varietyF:day67:treatWS for Vitvi01g00988.

```
> tt[varname,]
              logFC  AveExpr          t      P.Value
Vitvi01g00988 1.50504 3.558991 4.606614 4.349185e-05
              adj.P.Val          B
Vitvi01g00988 0.02867414 2.024876

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

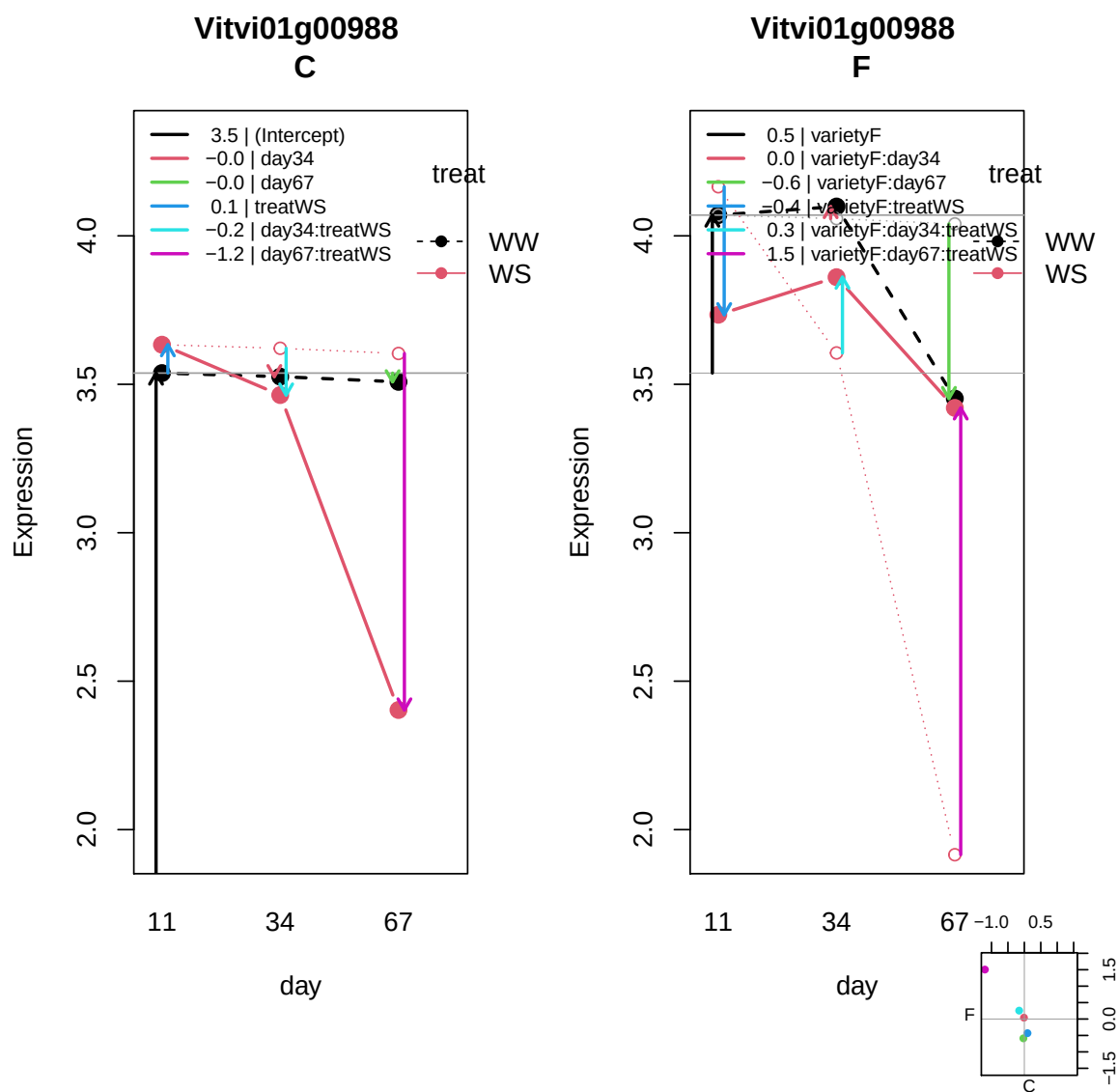
              (Intercept)  varietyF      day34      day67
Vitvi01g00988      3.537782 0.5321128 -0.01203749 -0.02955055
              treatWS varietyF:day34 varietyF:day67
Vitvi01g00988 0.09552513      0.04092227      -0.5884212
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi01g00988      -0.4311987      -0.1575179      -1.200799
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi01g00988              0.2552173              1.50504

```

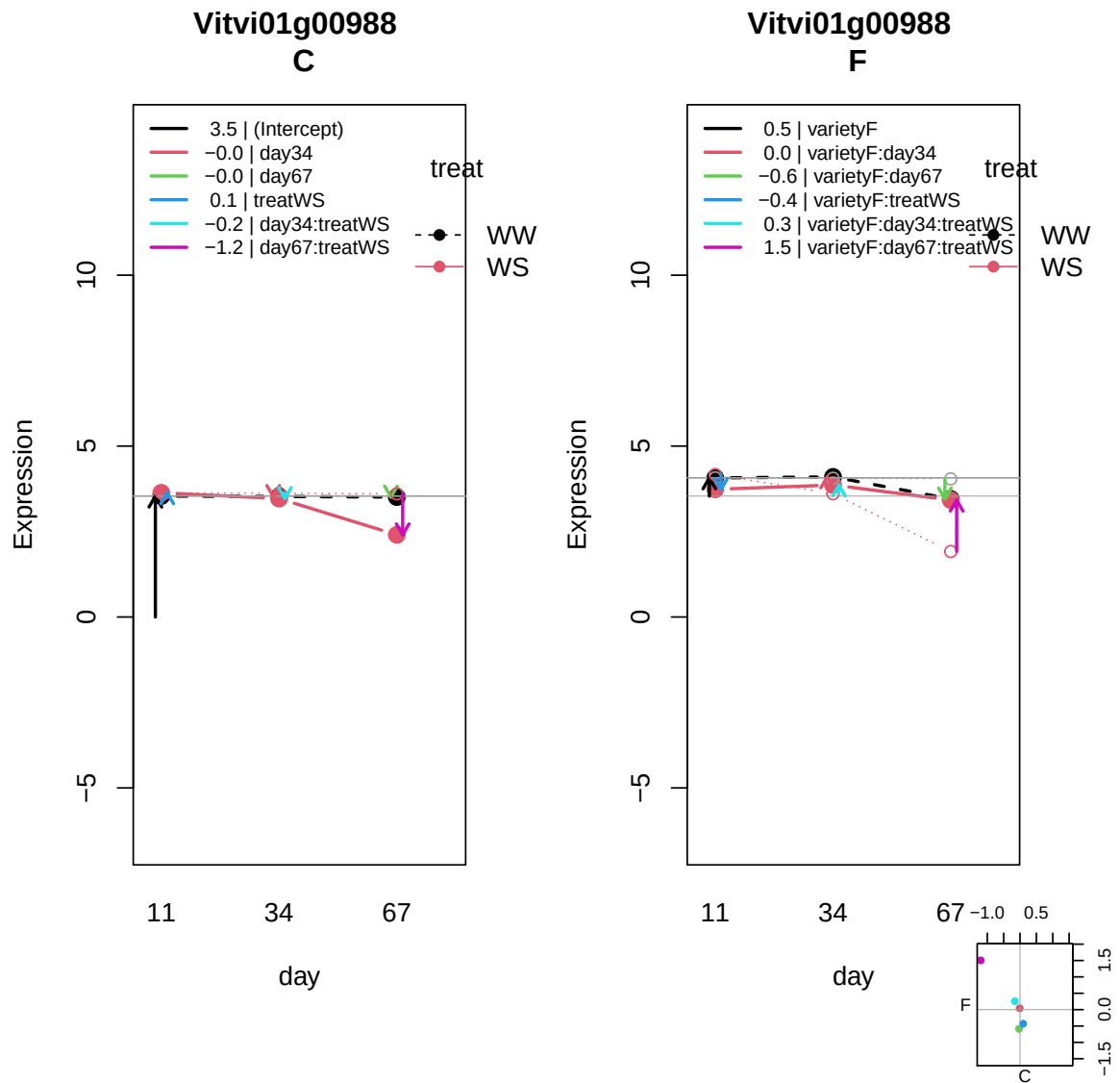
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

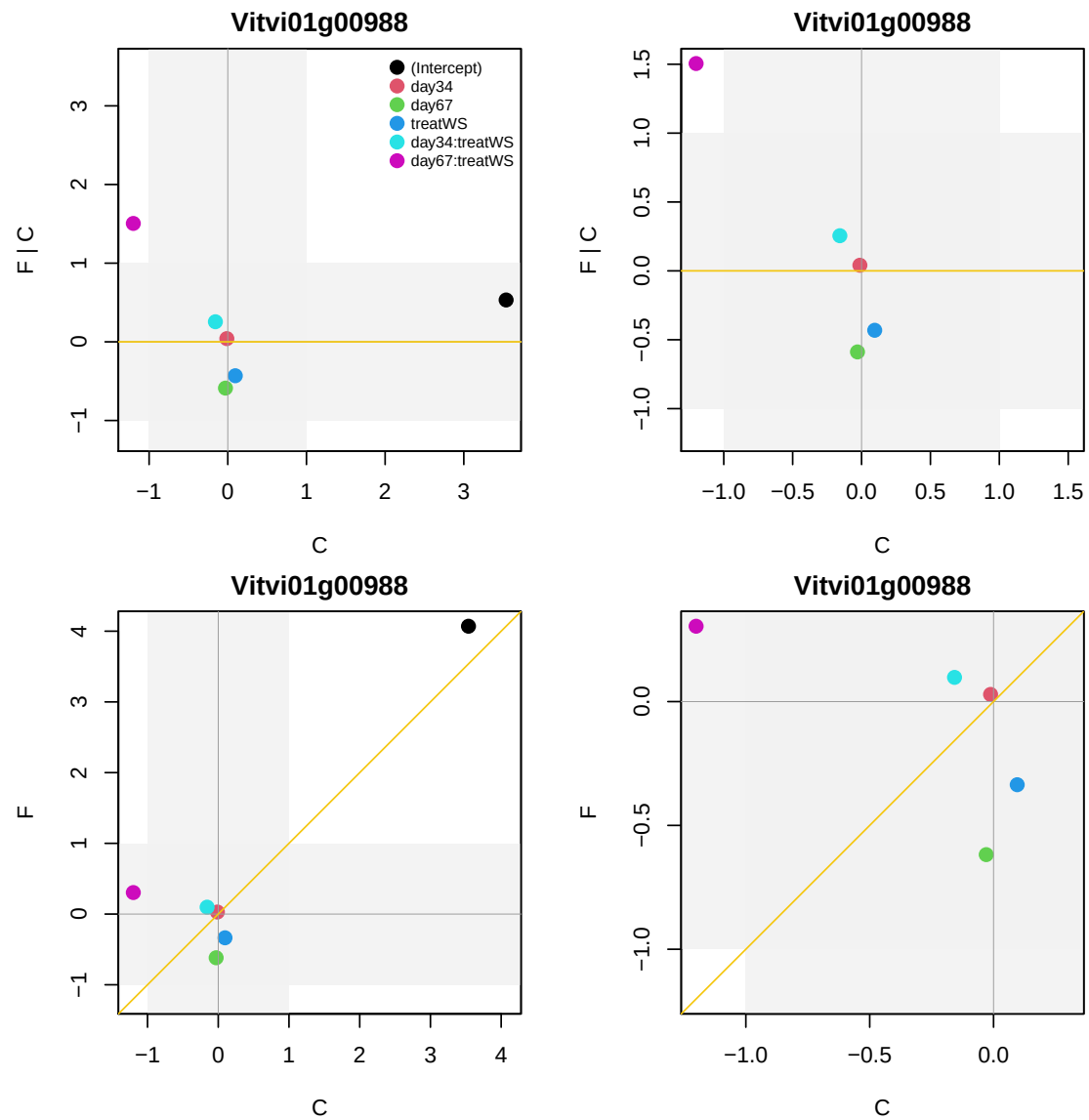


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

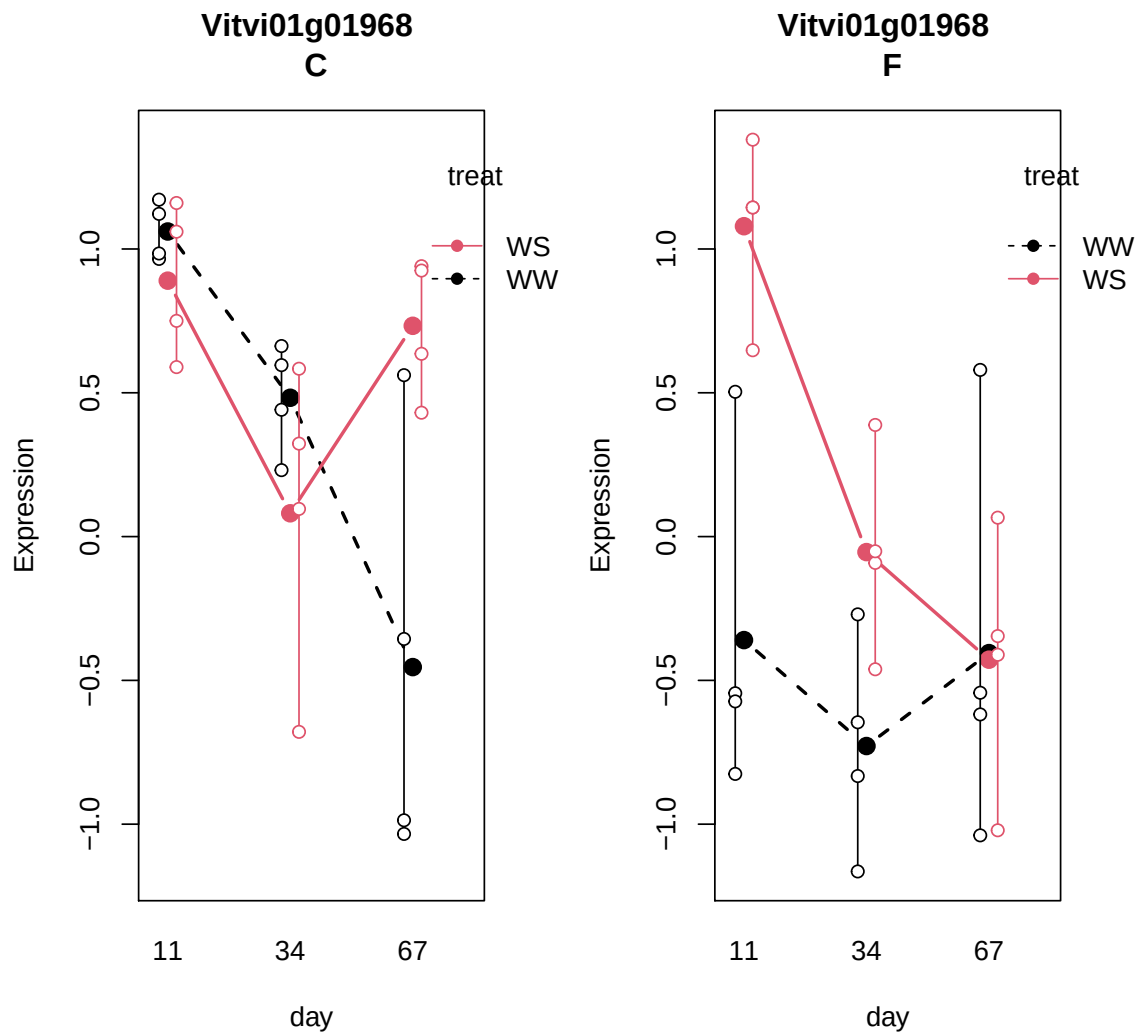


6.12.23 Vitvi01g01968

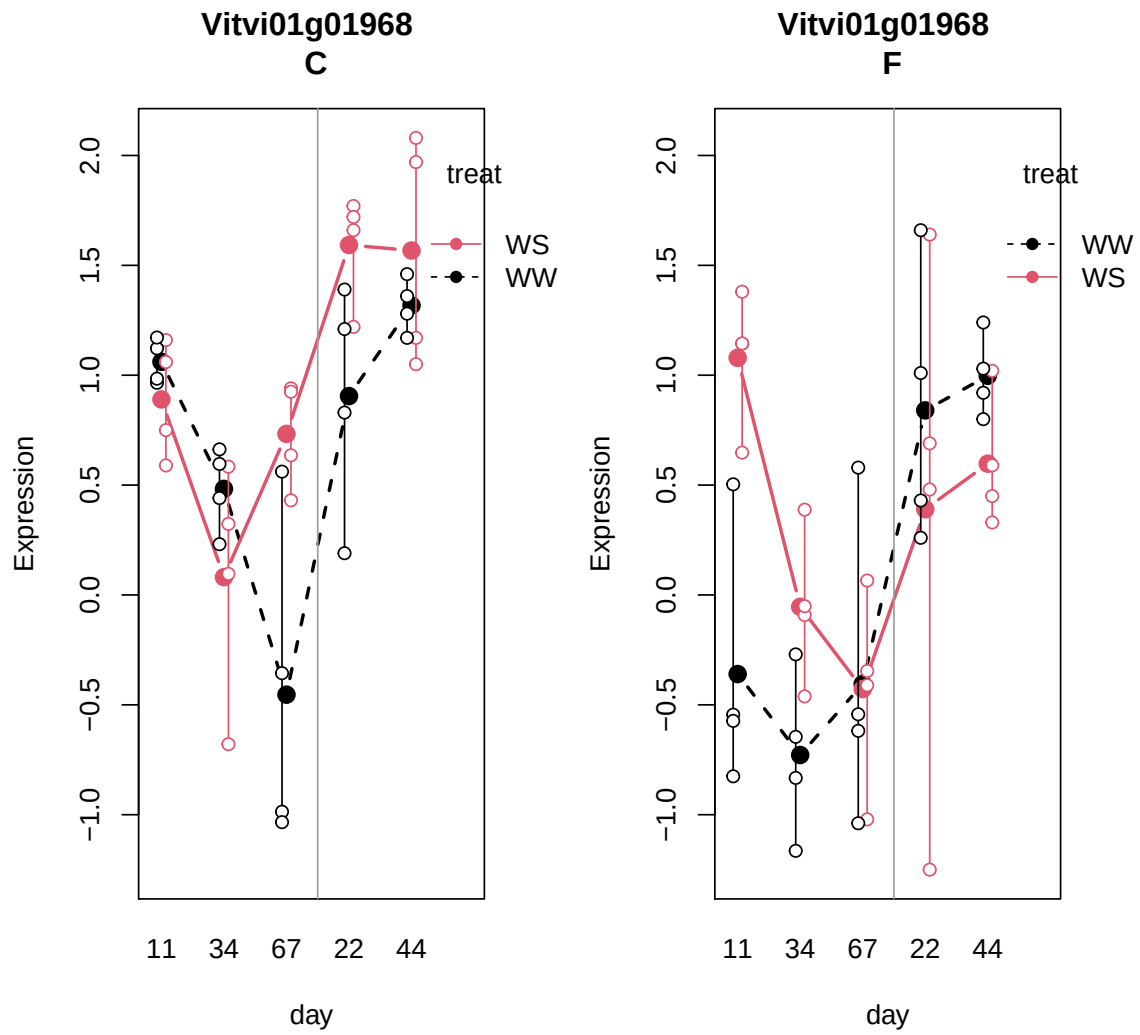
Coefficient varietyF:day67:treatWS for Vitvi01g01968.

```
> tt[varname,]
              logFC  AveExpr          t      P.Value
Vitvi01g01968 -2.819654 0.1581064 -4.582302 4.689436e-05
              adj.P.Val          B
Vitvi01g01968 0.02867414 1.957806

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

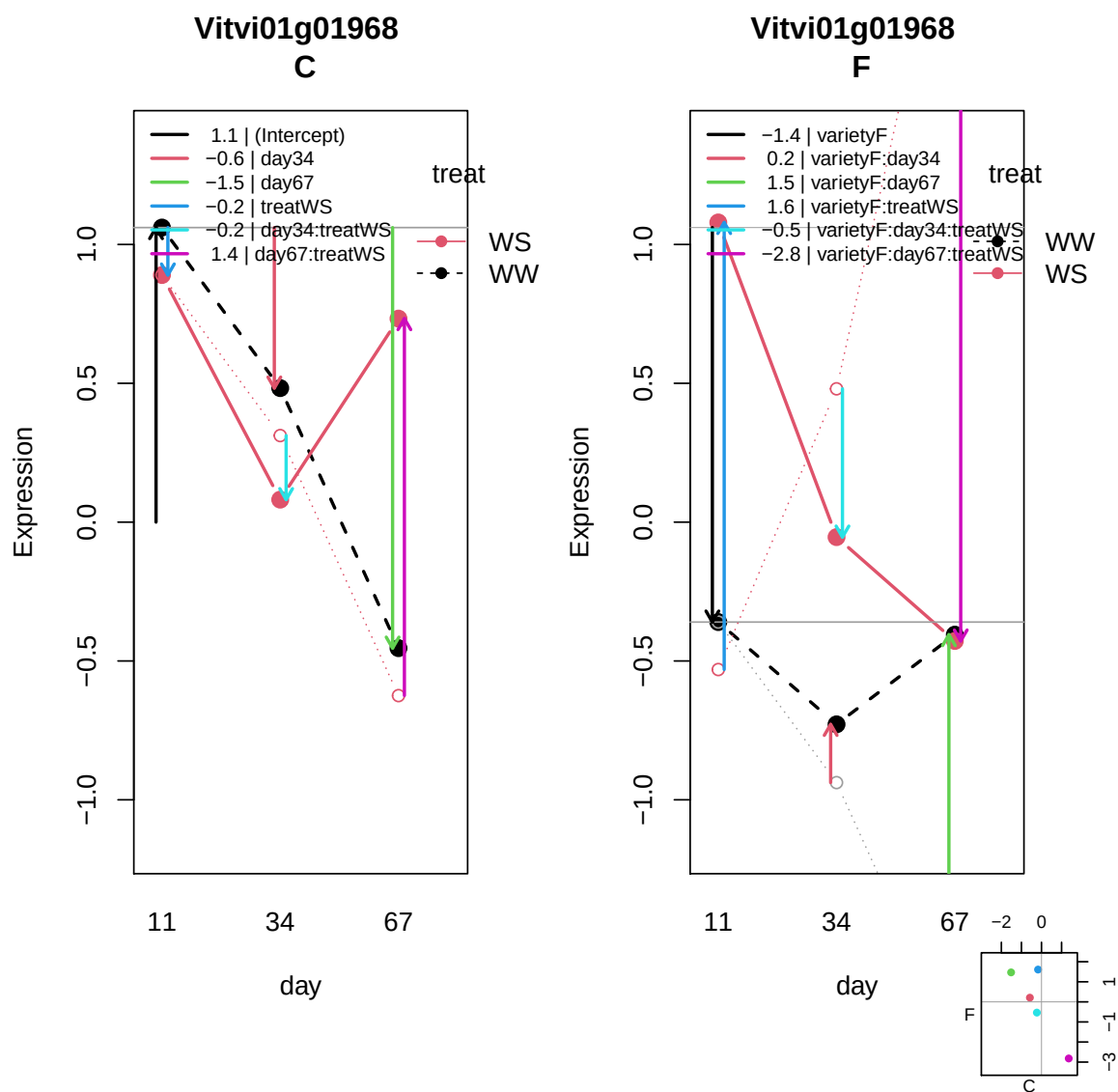
              (Intercept)  varietyF      day34      day67
Vitvi01g01968      1.060853 -1.420755 -0.5781756 -1.514635
              treatWS varietyF:day34 varietyF:day67
Vitvi01g01968    -0.1709795      0.2097799      1.469376
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi01g01968      1.610044      -0.2306788      1.357659
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi01g01968      -0.5340544              -2.819654

```

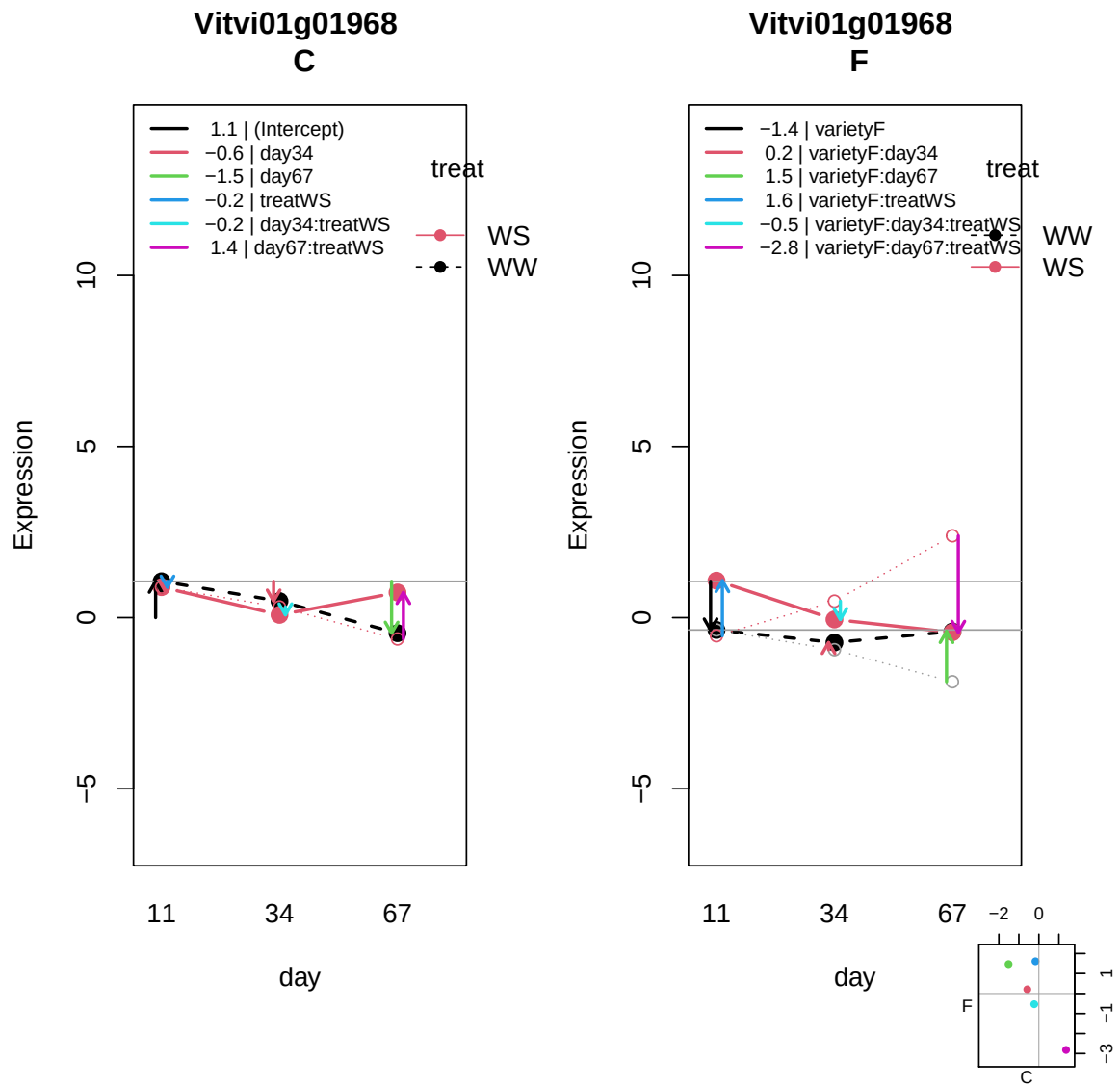
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

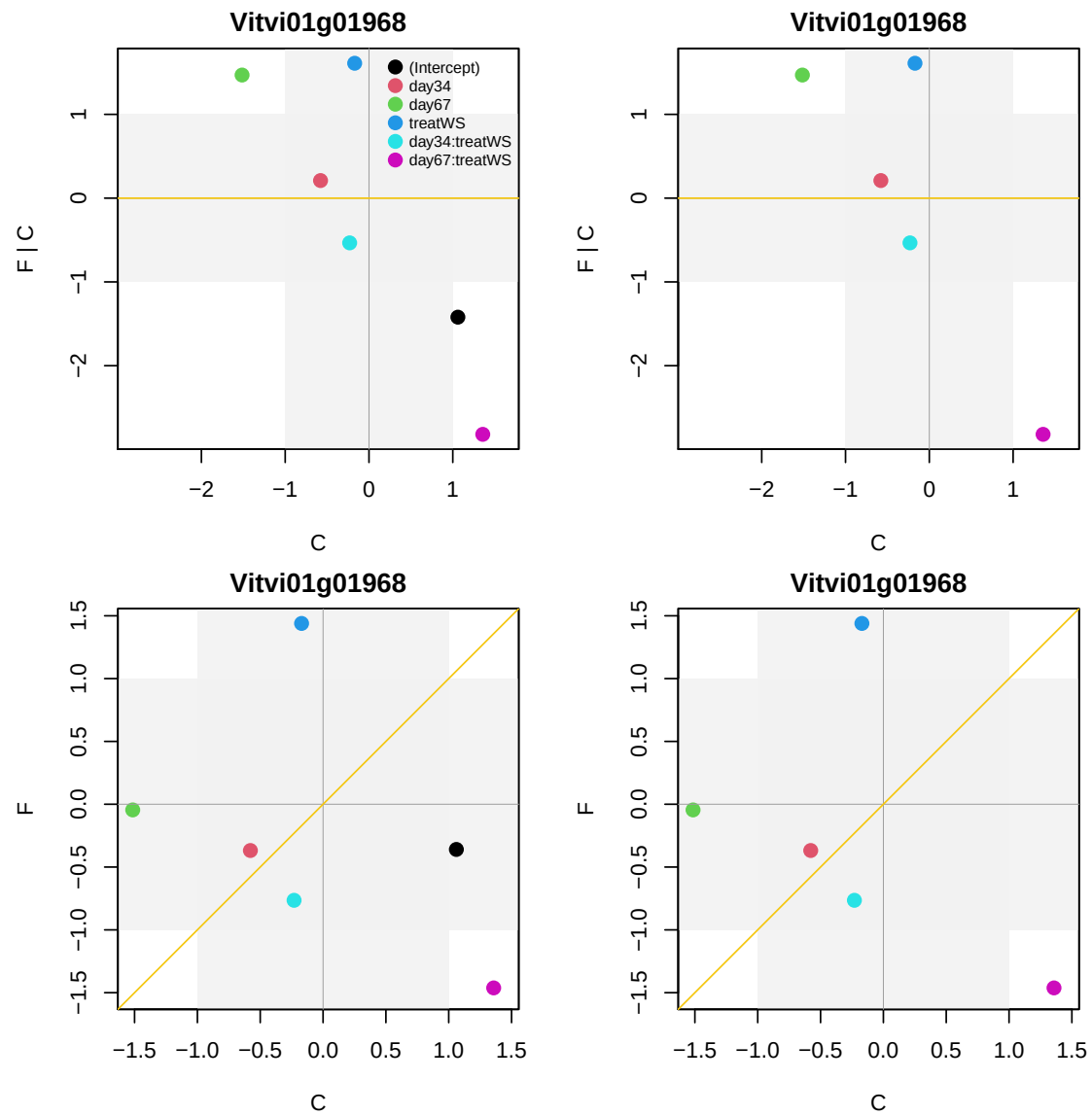


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



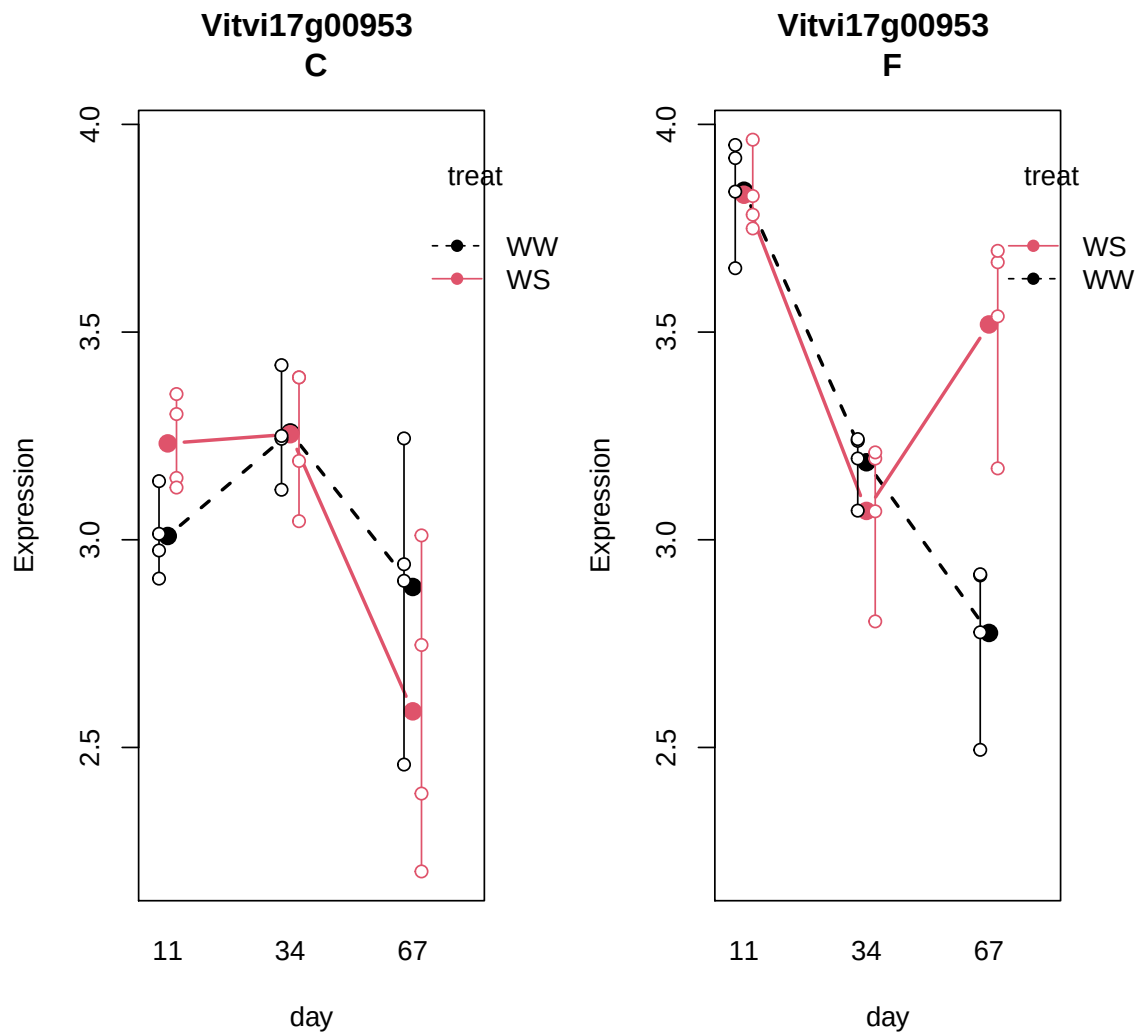
6.12.24 Vitvi17g00953

Coefficient varietyF:day67:treatWS for Vitvi17g00953.

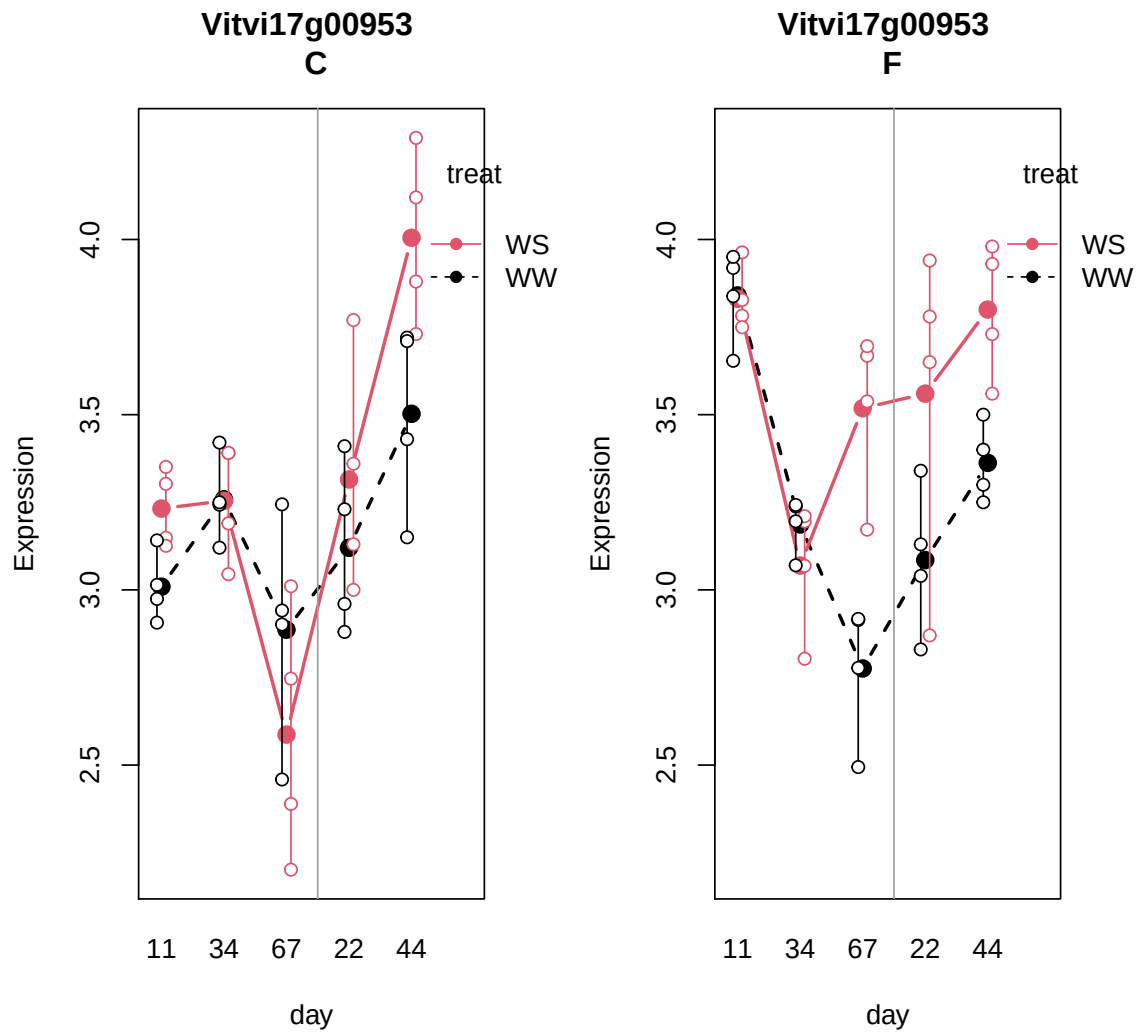
```
> tt[varname,]
```

	logFC	AveExpr	t	P.Value
Vitvi17g00953	1.274693	3.204001	4.570518	4.863653e-05
	adj.P.Val	B		
Vitvi17g00953	0.02867414	1.925327		

```
> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```




```
> fit1[varname,]$coefficients
```

```

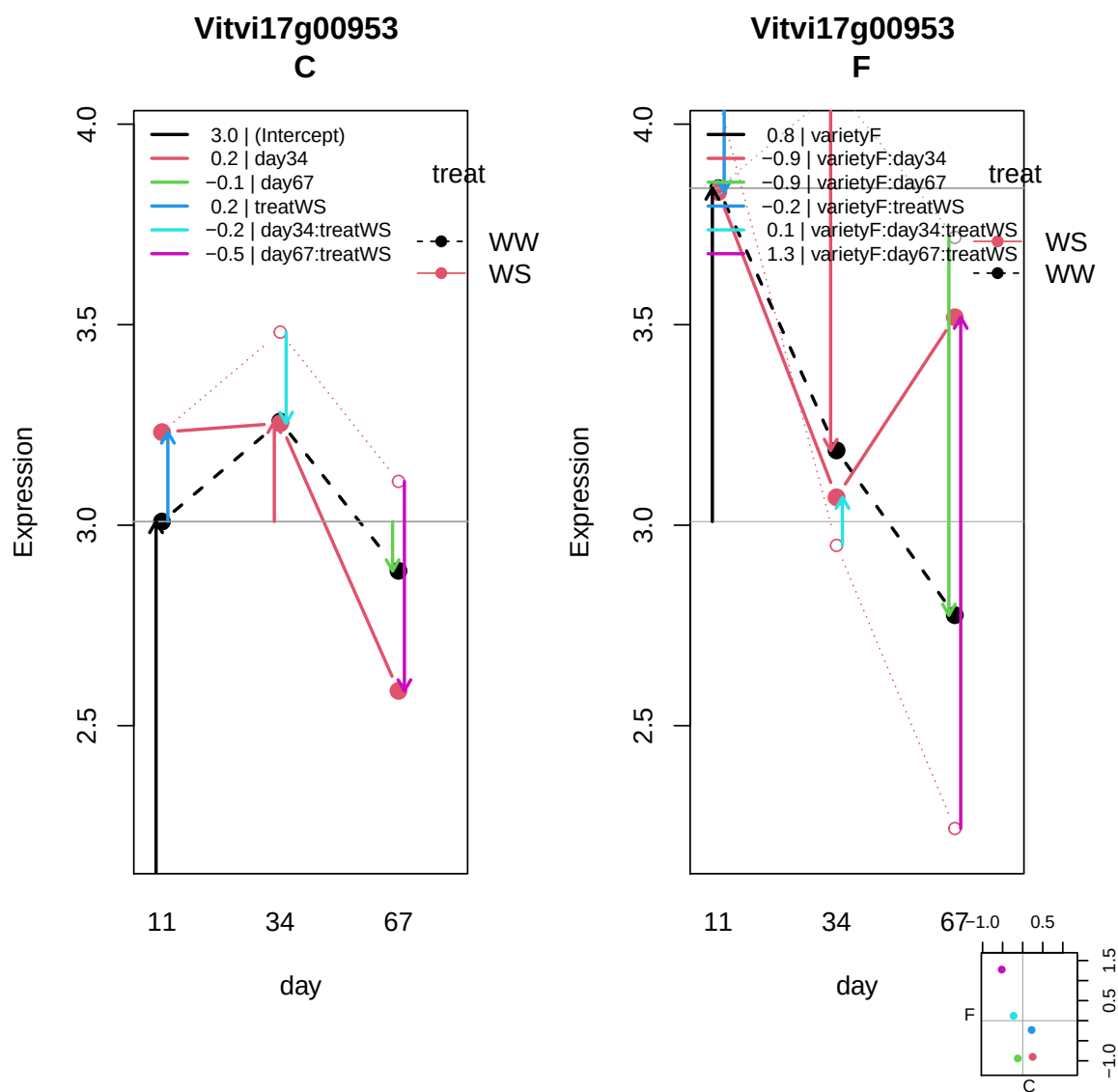
      (Intercept)  varietyF    day34    day67
Vitvi17g00953    3.009056 0.8312827 0.2493903 -0.1227525
      treatWS varietyF:day34 varietyF:day67
Vitvi17g00953 0.2229813    -0.9031563    -0.9419089
      varietyF:treatWS day34:treatWS day67:treatWS
Vitvi17g00953    -0.2326191    -0.2273119    -0.5223497
      varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi17g00953          0.1198286          1.274693

```

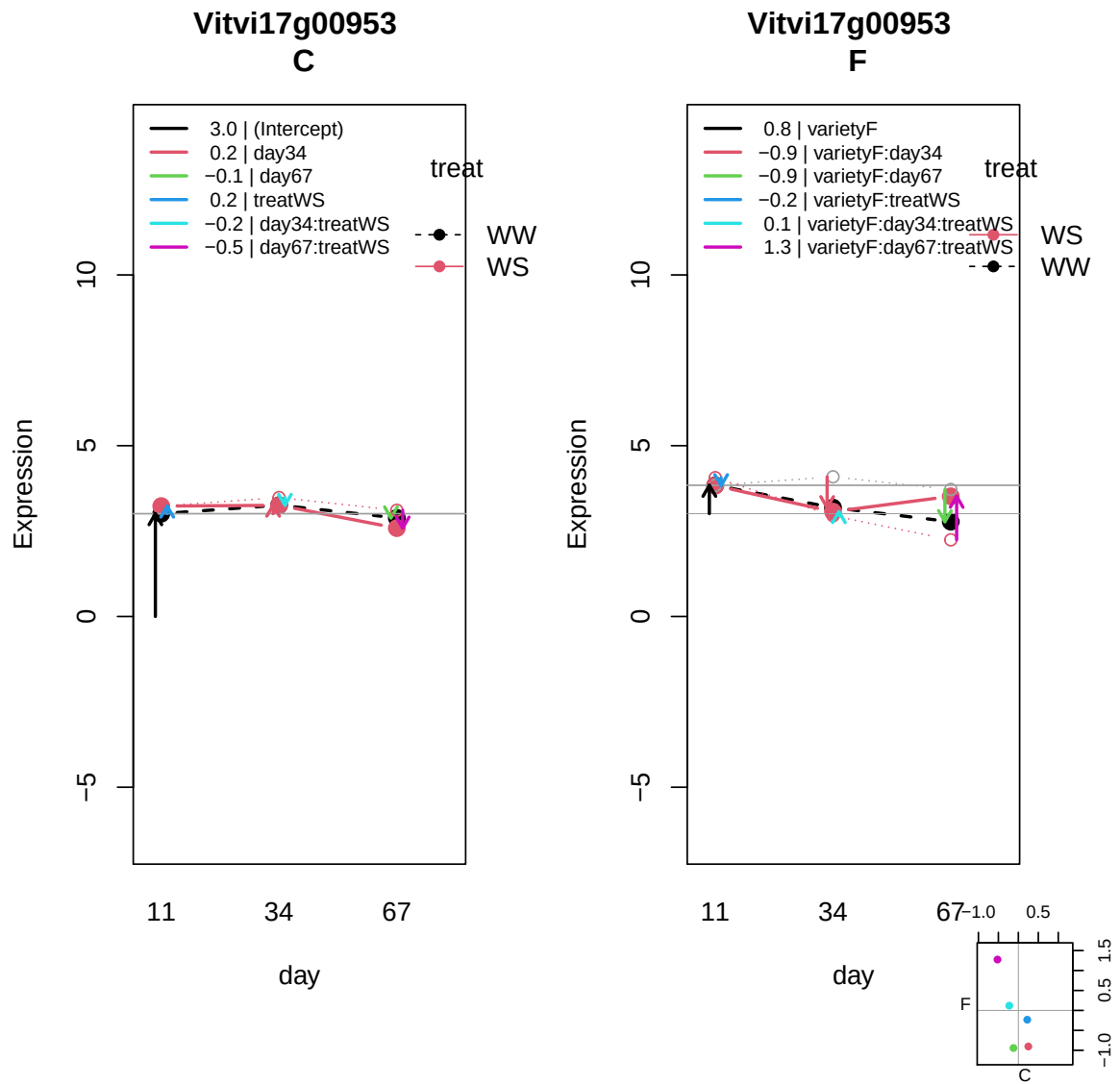
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

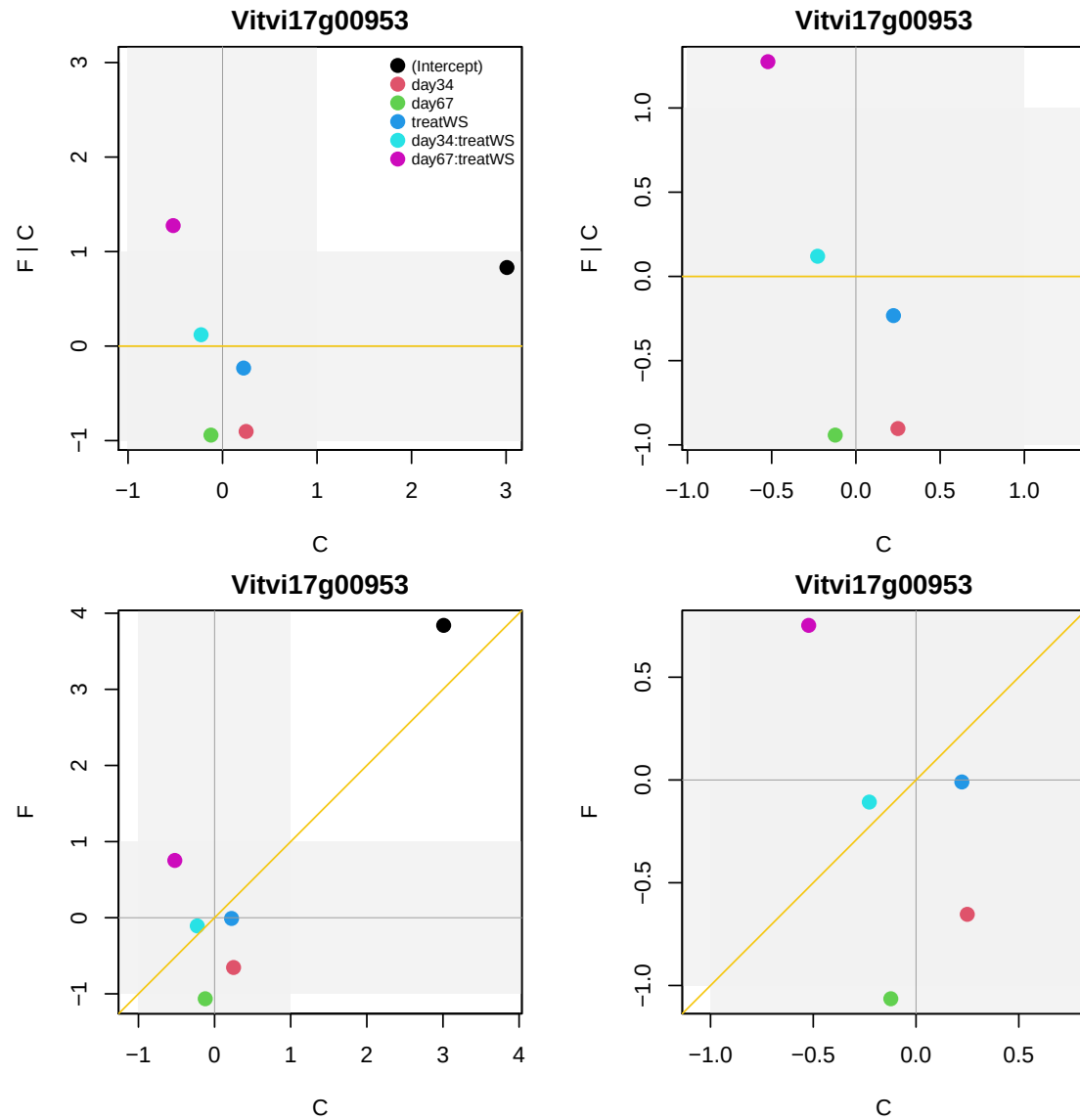


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

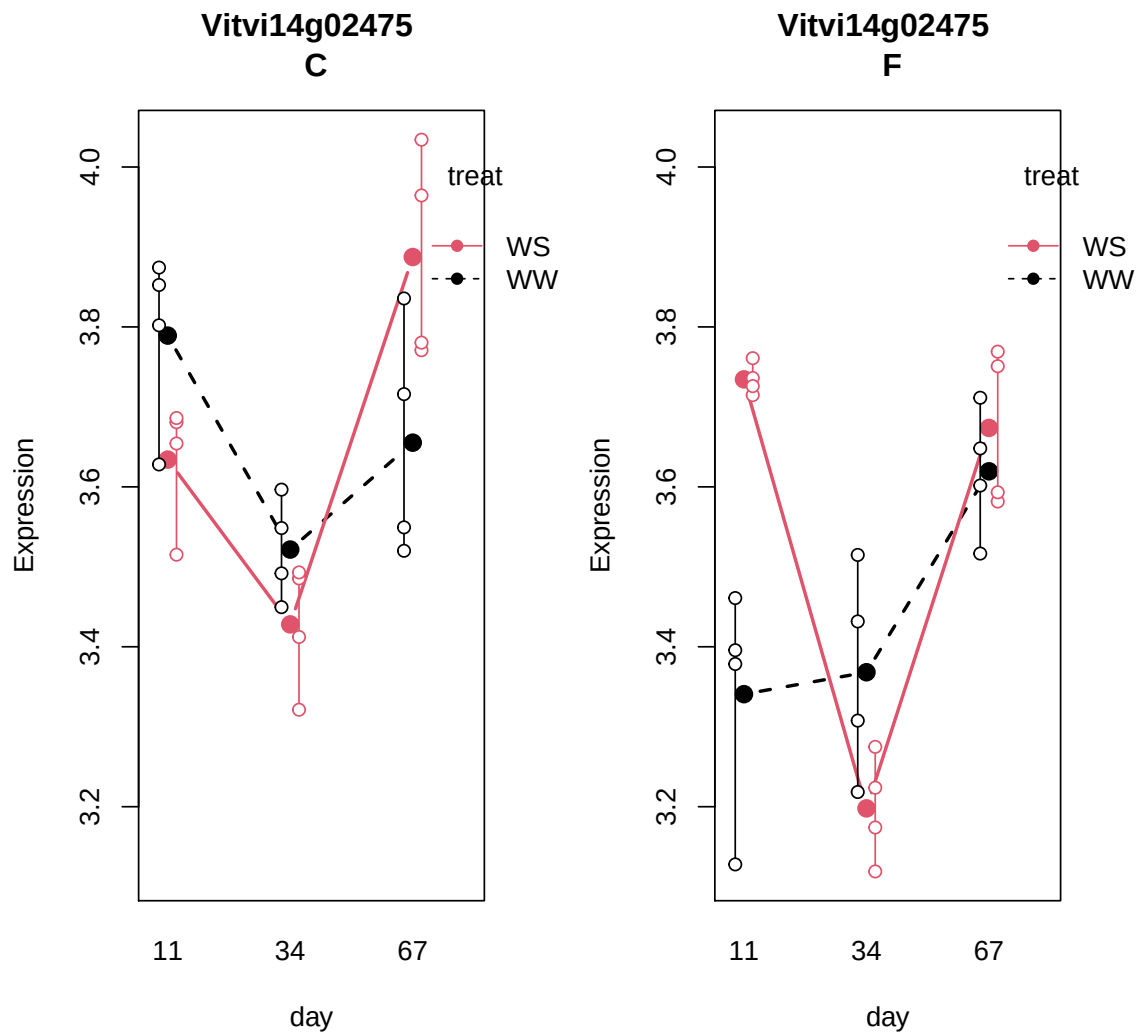


6.12.25 Vitvi14g02475

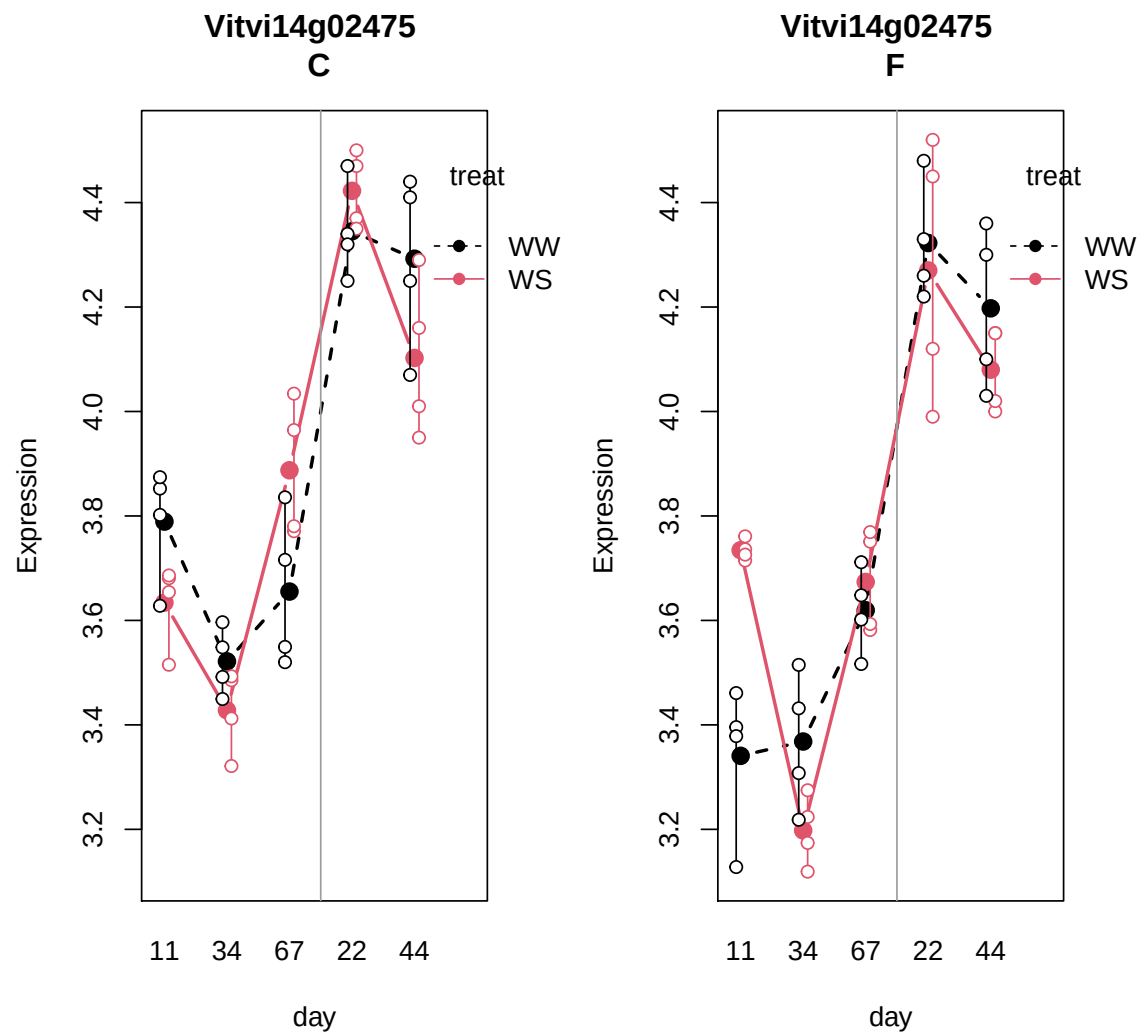
Coefficient varietyF:day67:treatWS for Vitvi14g02475.

```
> tt[varname,]
              logFC AveExpr          t      P.Value
Vitvi14g02475 -0.7267646 3.57082 -4.563049 4.977364e-05
              adj.P.Val      B
Vitvi14g02475 0.02867414 1.90475

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

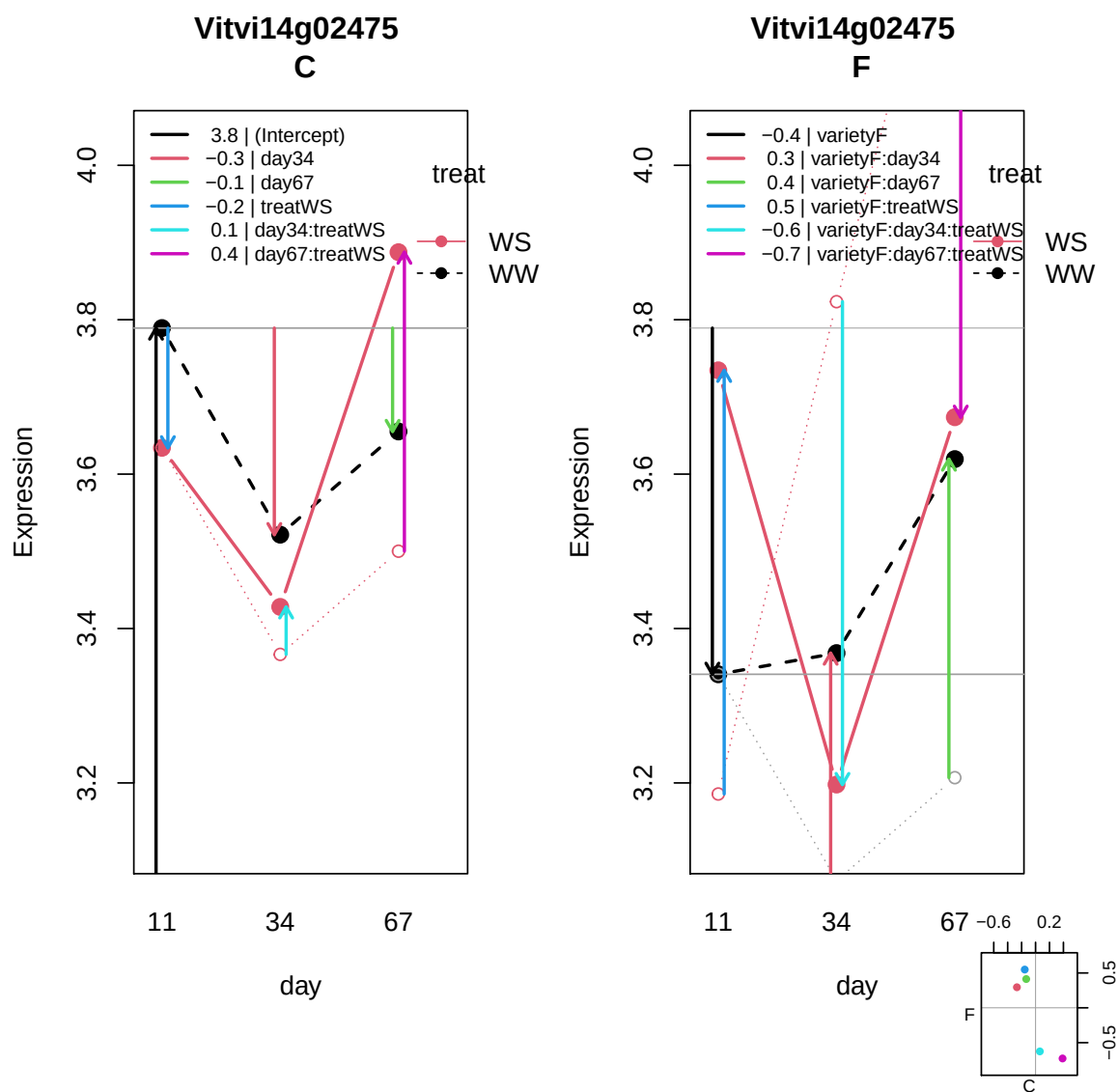
              (Intercept)    varietyF      day34      day67
Vitvi14g02475      3.789174 -0.4484525 -0.2675841 -0.133939
              treatWS varietyF:day34 varietyF:day67
Vitvi14g02475 -0.1551002      0.295002      0.412656
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi14g02475      0.548812      0.06150097      0.3873107
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi14g02475      -0.6254557      -0.7267646

```

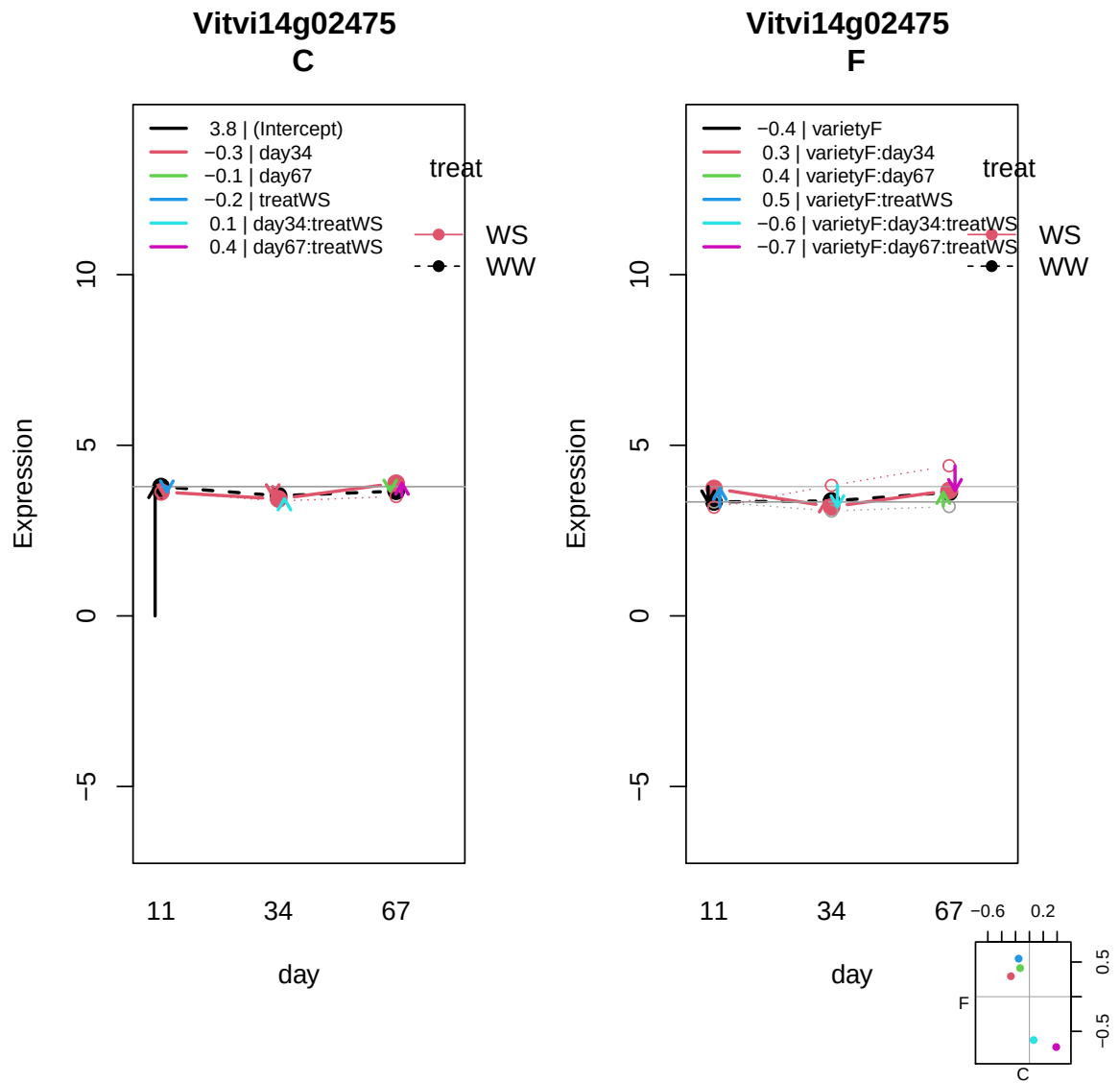
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

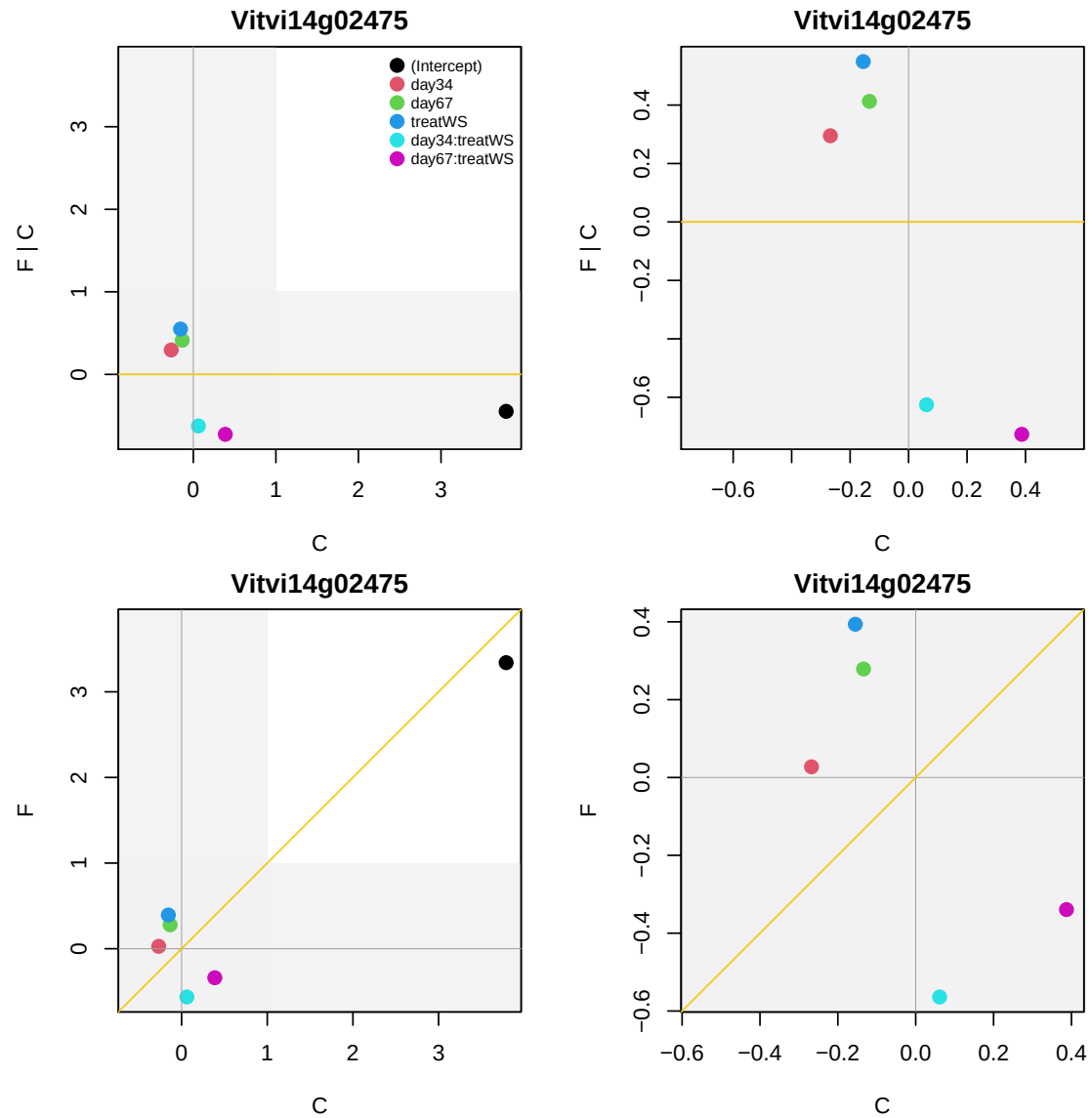


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

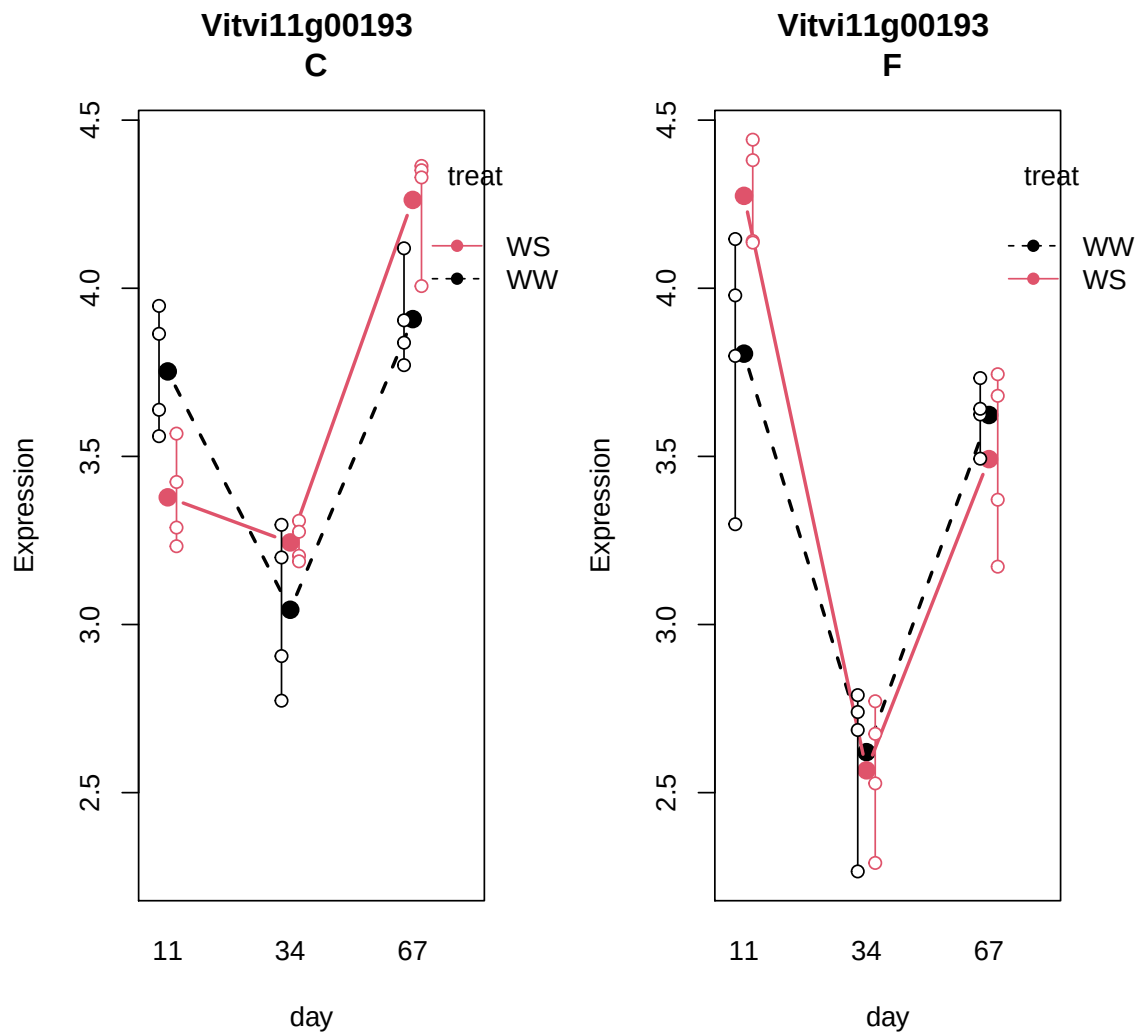
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



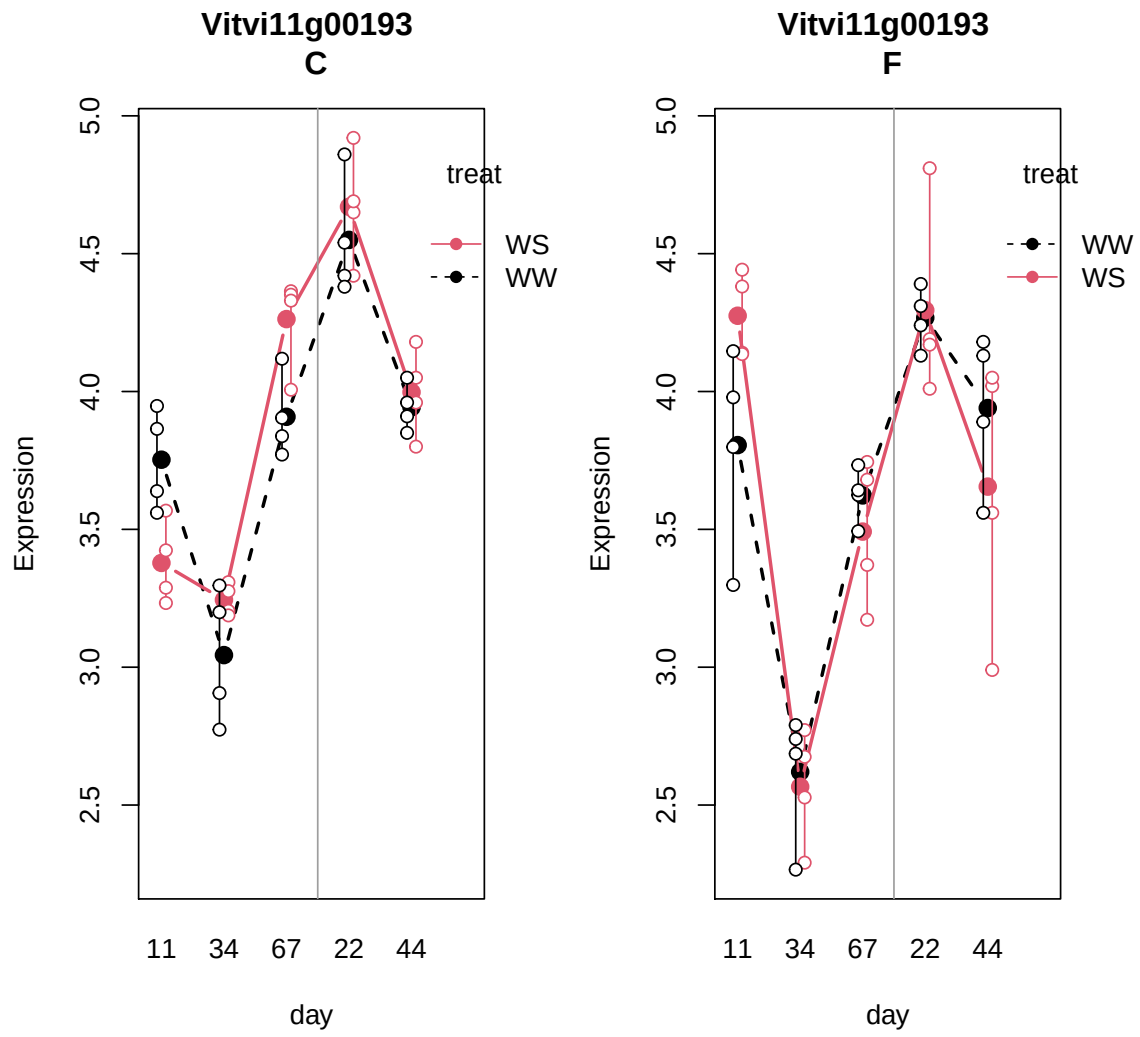
6.12.26 Vitvi11g00193

Coefficient varietyF:day67:treatWS for Vitvi11g00193.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi11g00193 -1.329402 3.497659 -4.557152 5.068981e-05
      adj.P.Val      B
Vitvi11g00193 0.02867414 1.88851
> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

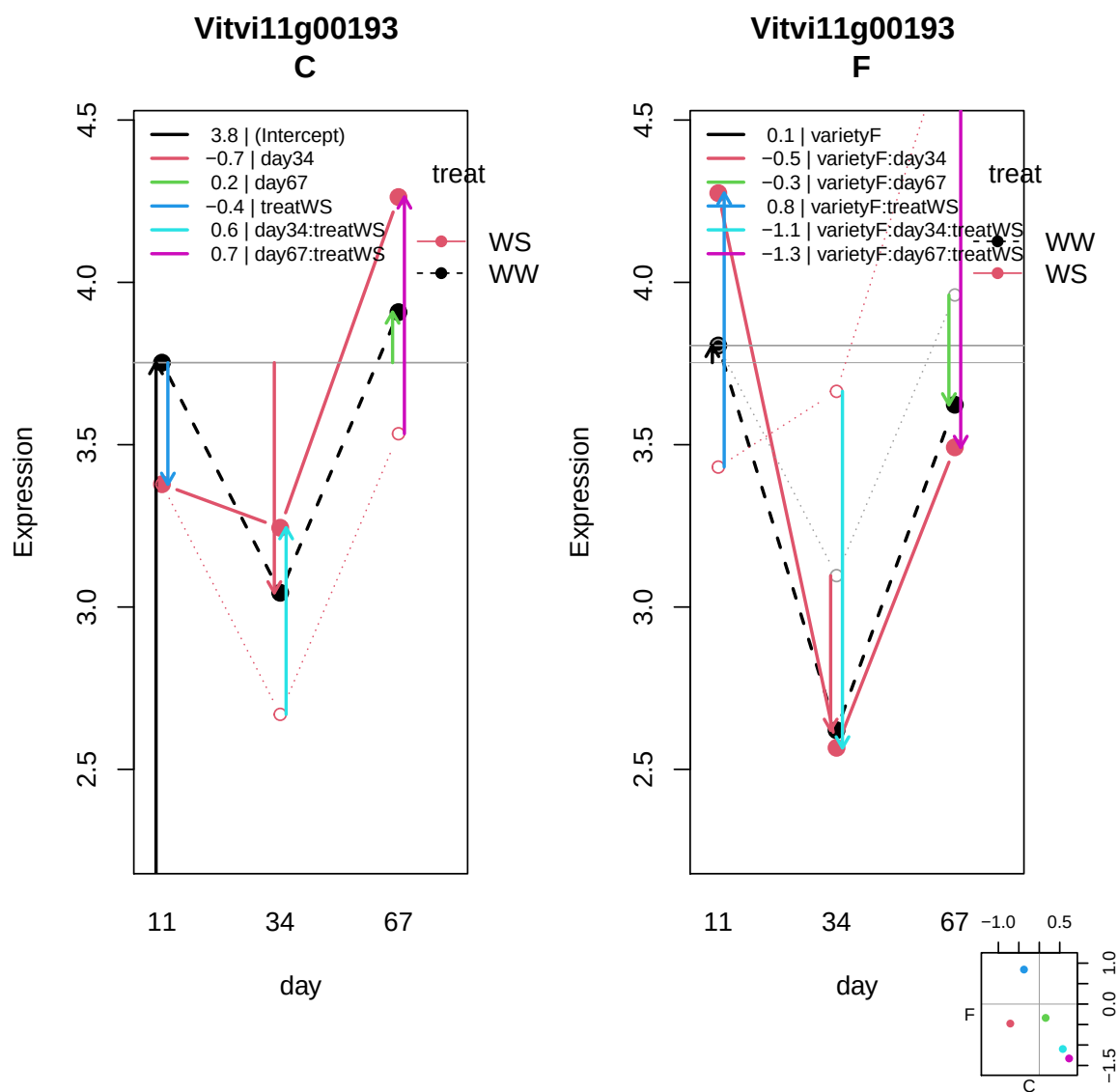
              (Intercept)    varietyF      day34      day67
Vitvi11g00193      3.752668 0.05289634 -0.7087943 0.1555739
              treatWS varietyF:day34 varietyF:day67
Vitvi11g00193 -0.3744595      -0.4763923      -0.3380674
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi11g00193      0.8437373      0.5747207      0.7289545
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi11g00193      -1.098089      -1.329402

```

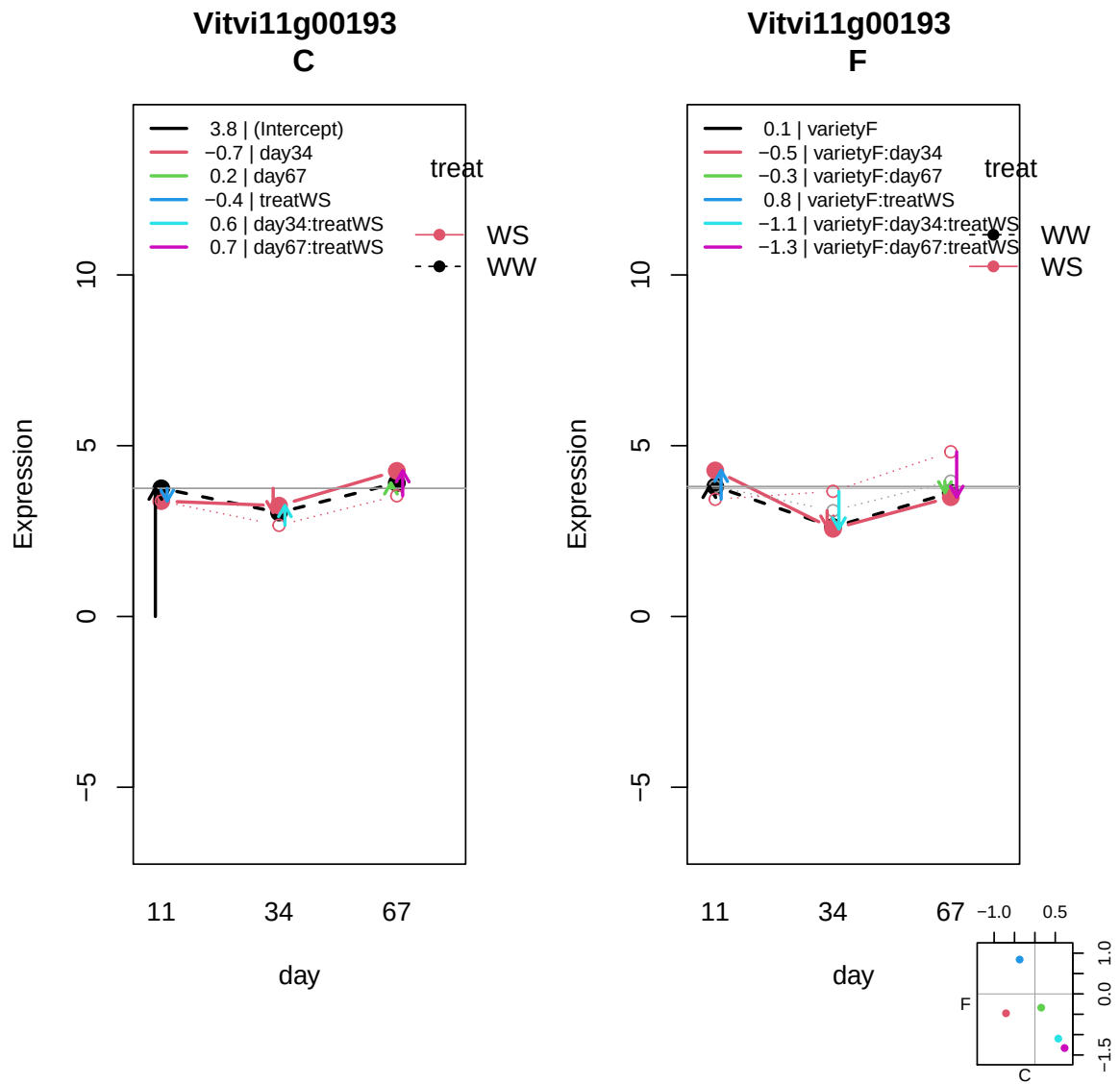
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

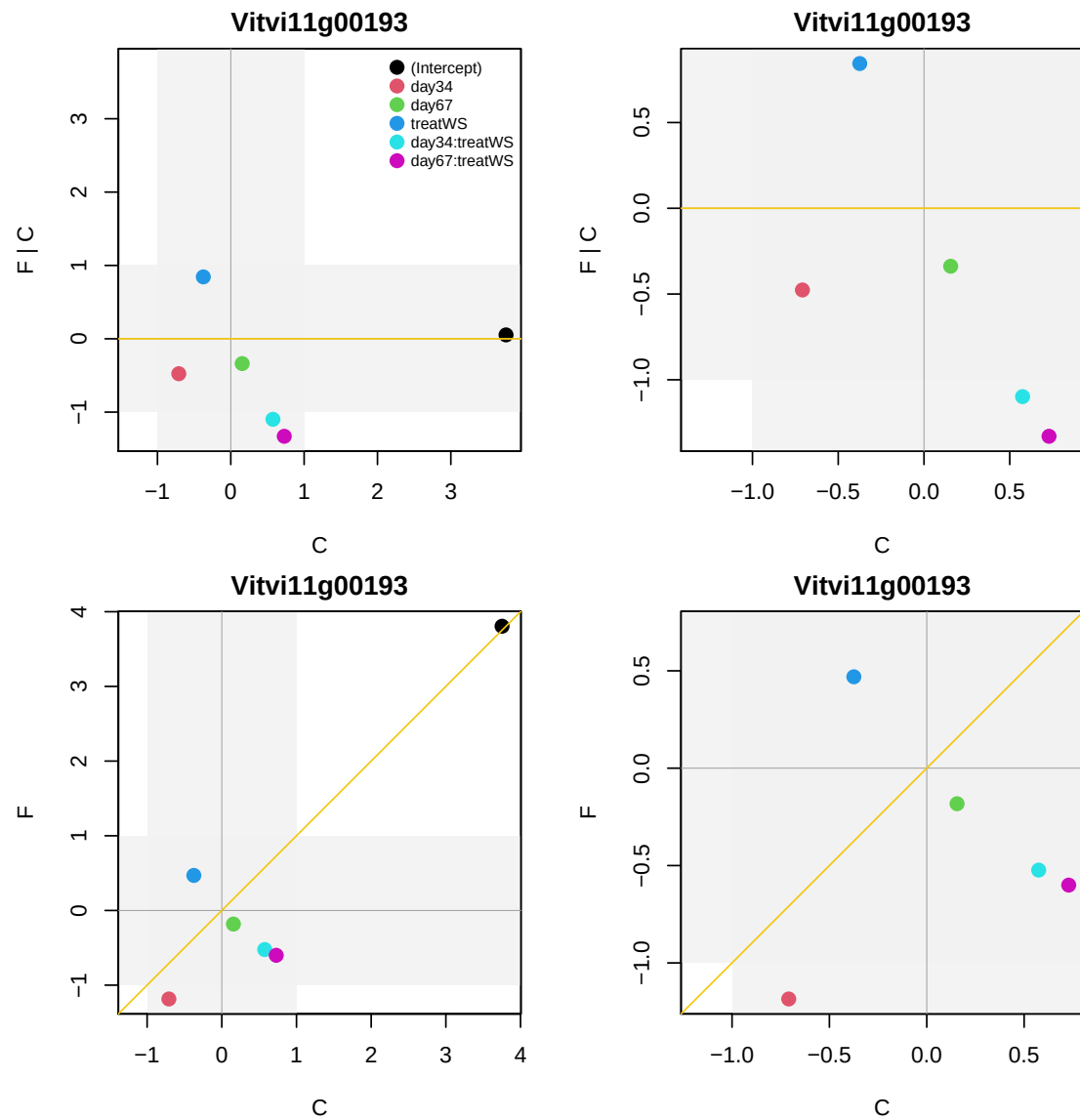


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

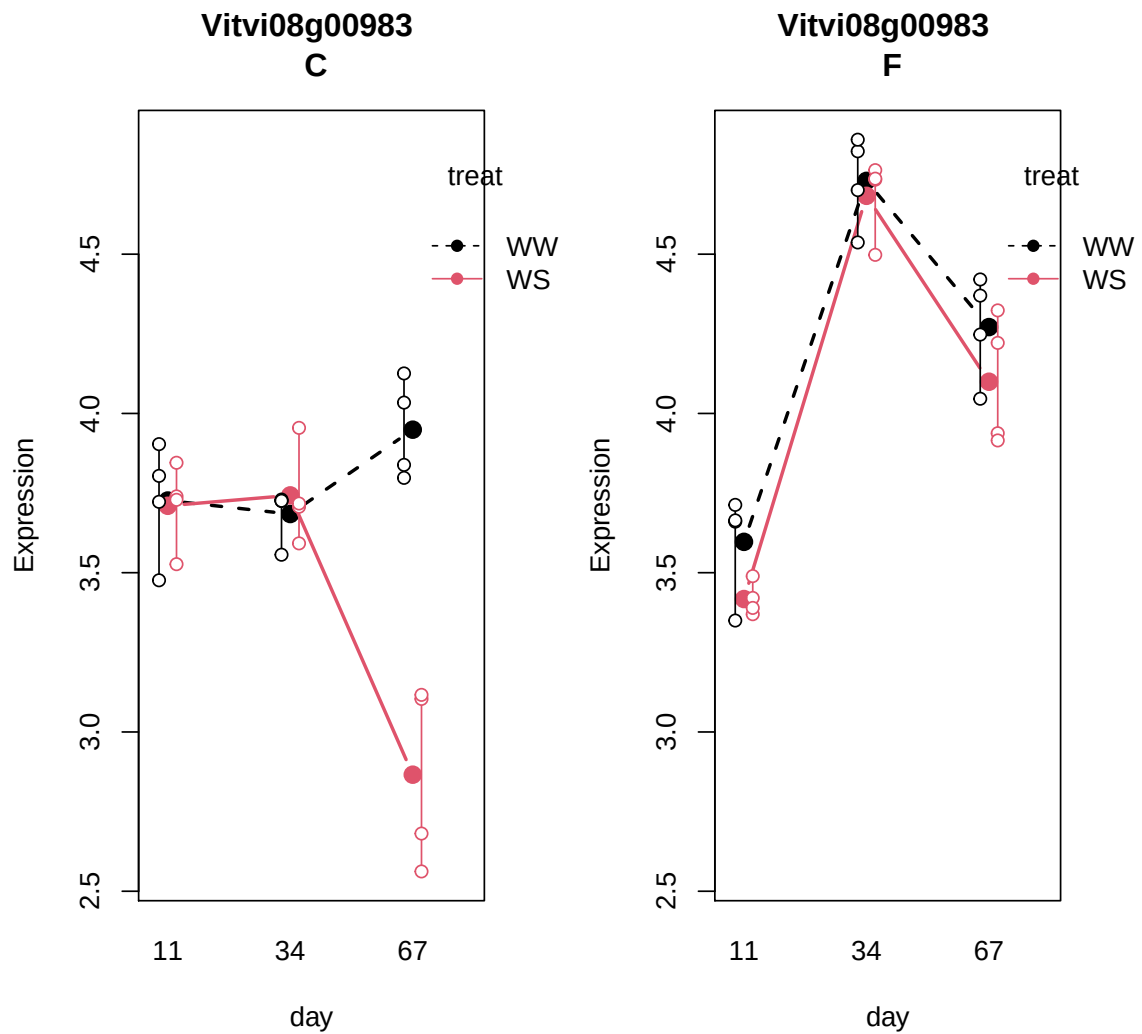


6.12.27 Vitvi08g00983

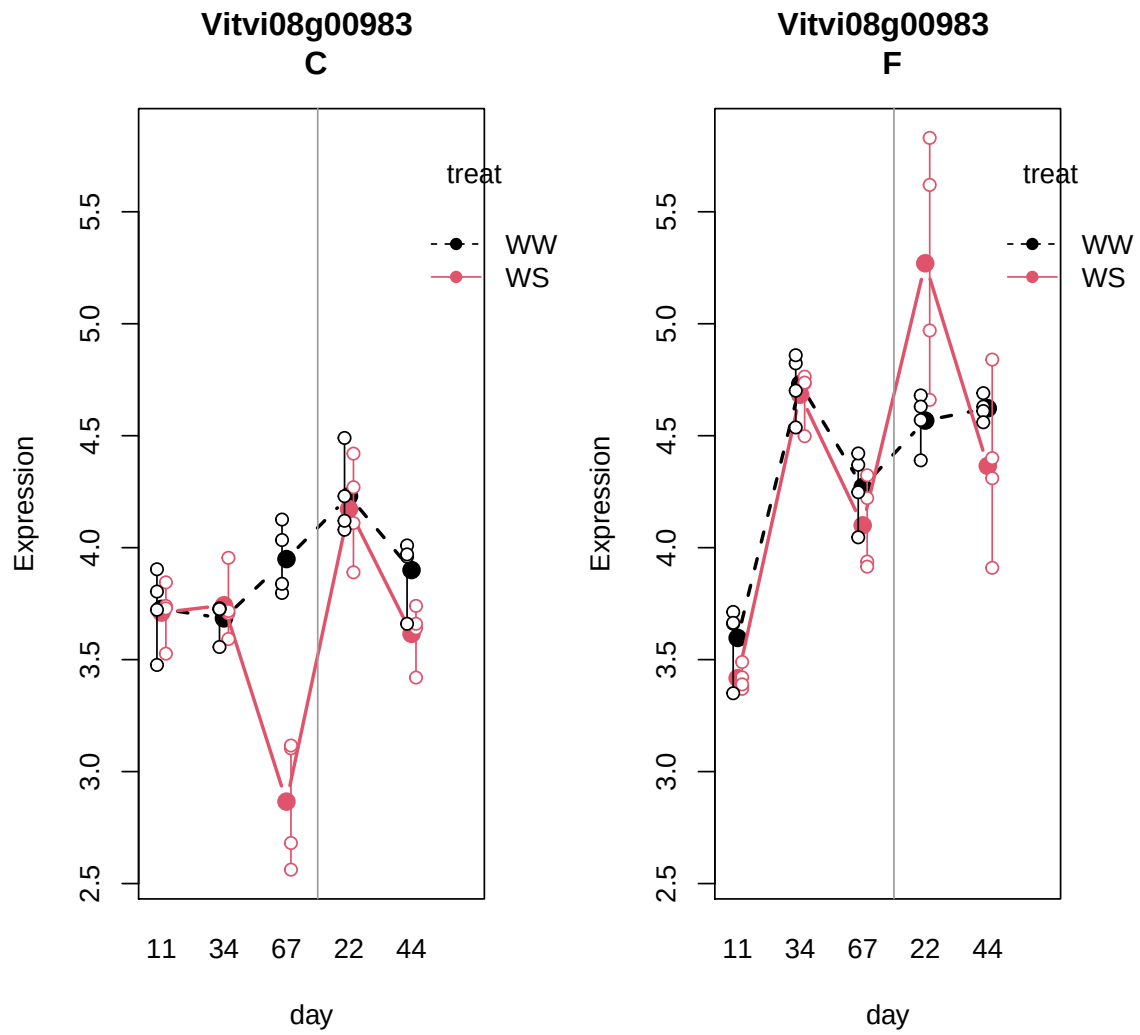
Coefficient varietyF:day67:treatWS for Vitvi08g00983.

```
> tt[varname,]
              logFC  AveExpr      t      P.Value
Vitvi08g00983 1.074595 3.873078 4.555817 5.089951e-05
              adj.P.Val      B
Vitvi08g00983 0.02867414 1.884834

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

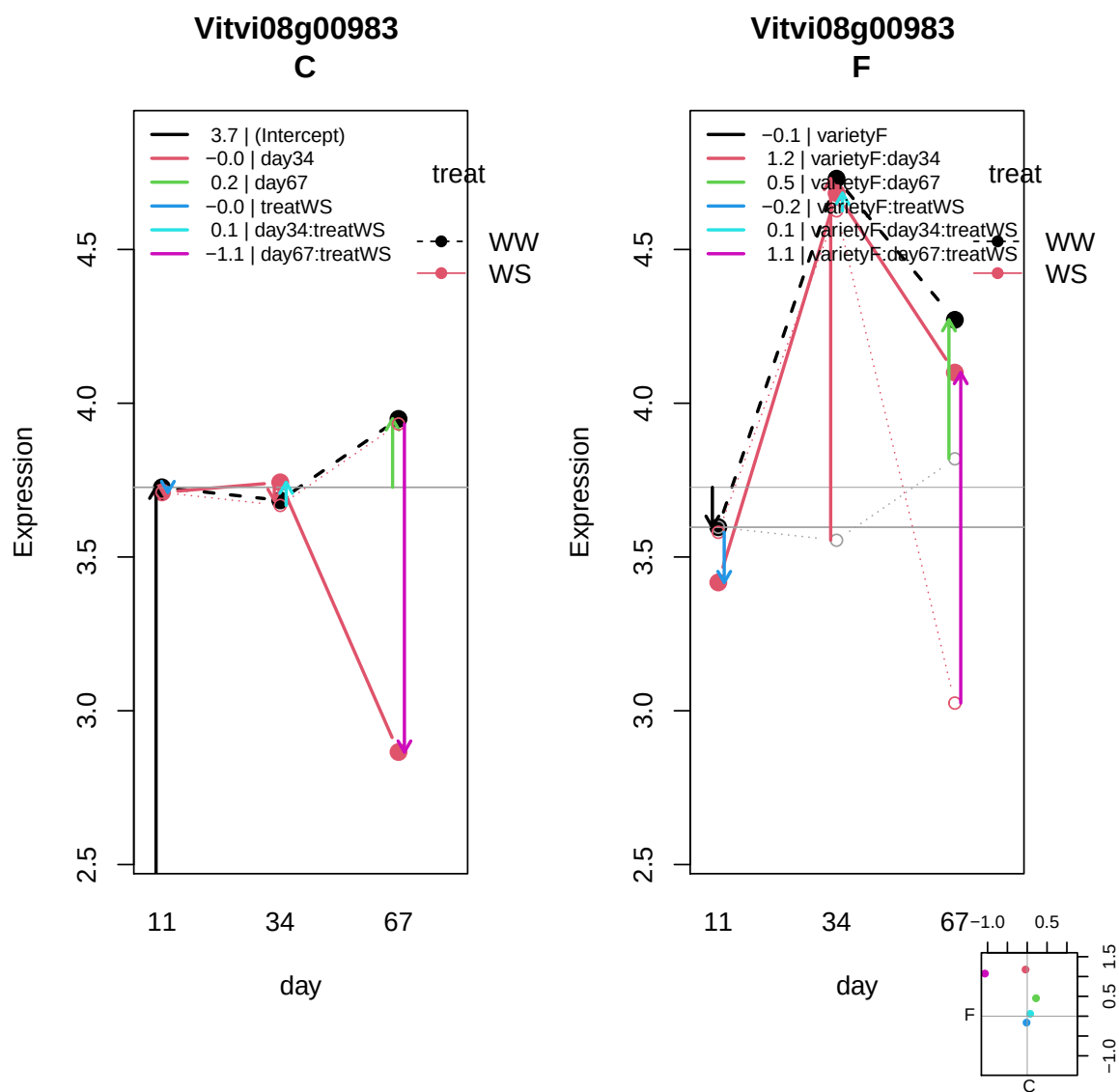
              (Intercept)    varietyF      day34      day67
Vitvi08g00983      3.726617 -0.1297562 -0.04235621 0.222391
              treatWS    varietyF:day34    varietyF:day67
Vitvi08g00983 -0.01650467      1.175648      0.4518797
              varietyF:treatWS    day34:treatWS    day67:treatWS
Vitvi08g00983      -0.1630257      0.0750294      -1.066627
              varietyF:day34:treatWS    varietyF:day67:treatWS
Vitvi08g00983              0.05757768              1.074595

```

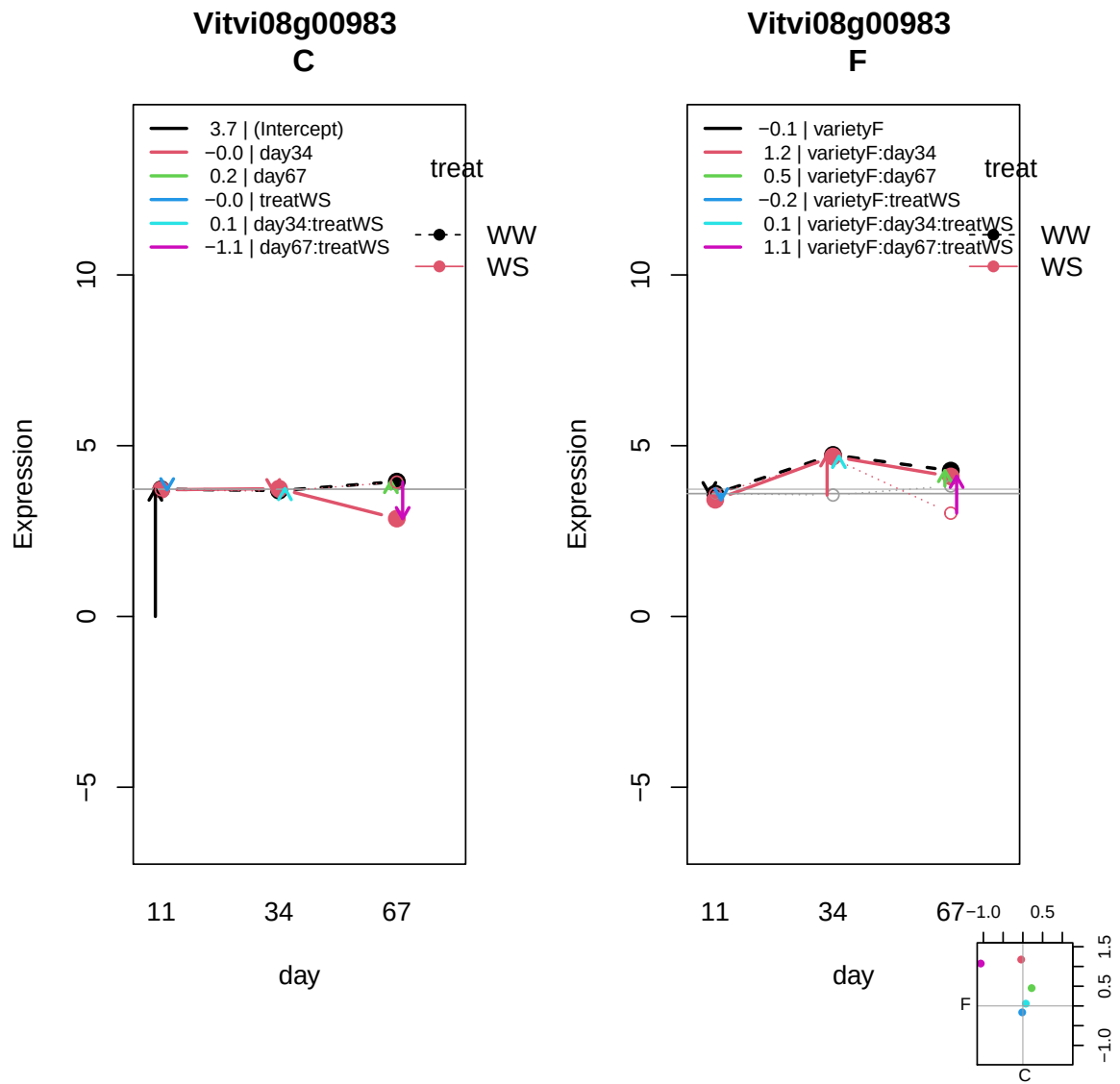
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

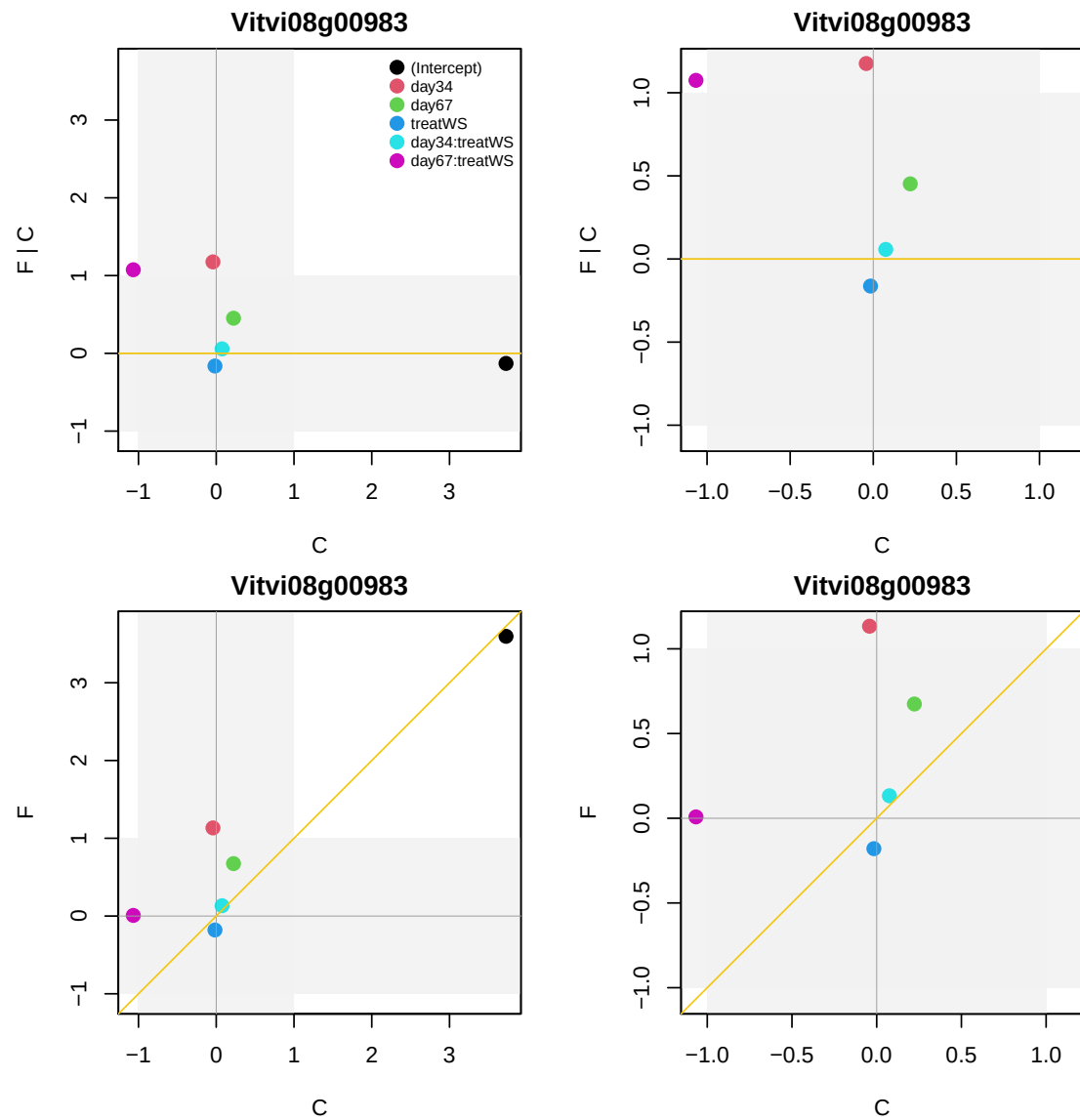



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

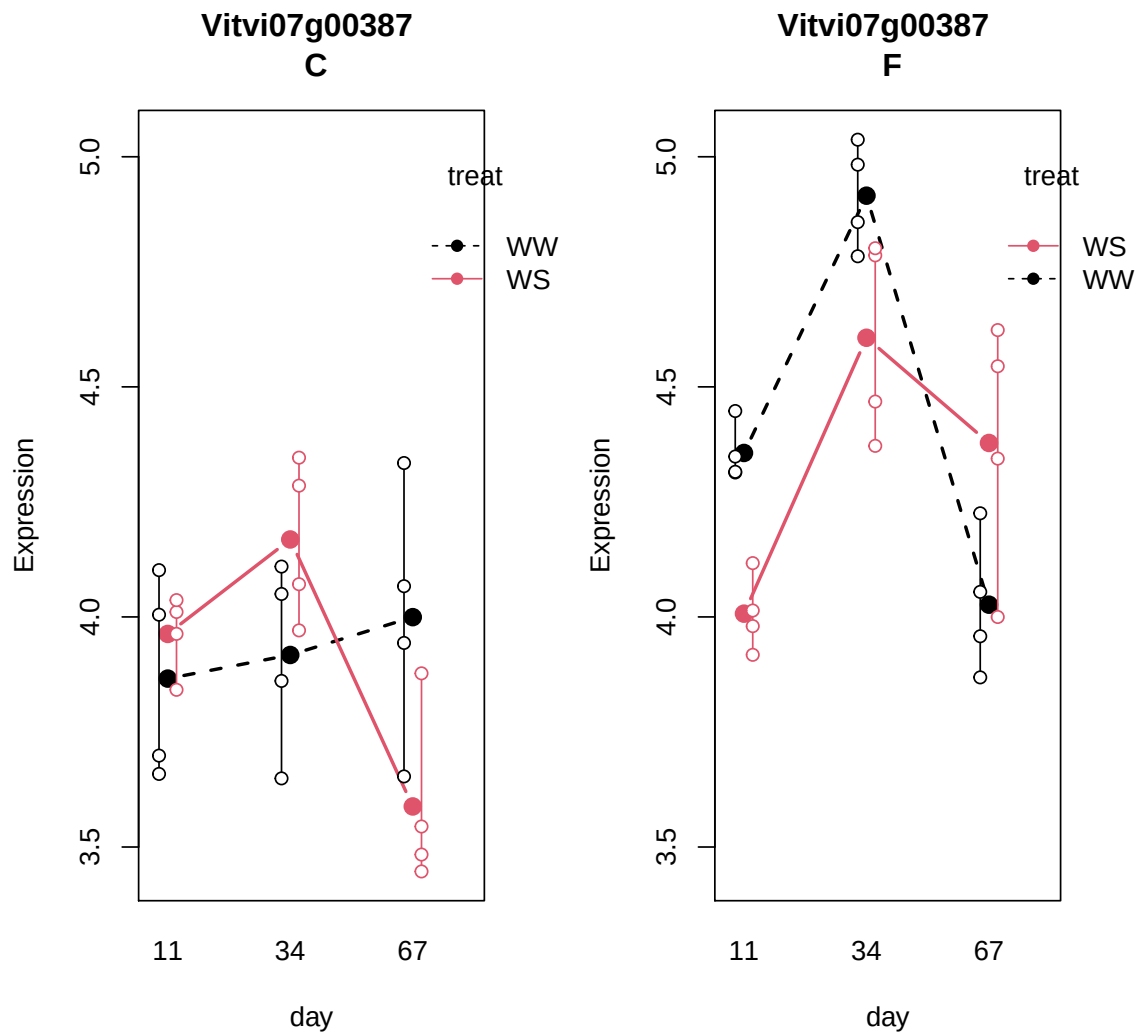
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



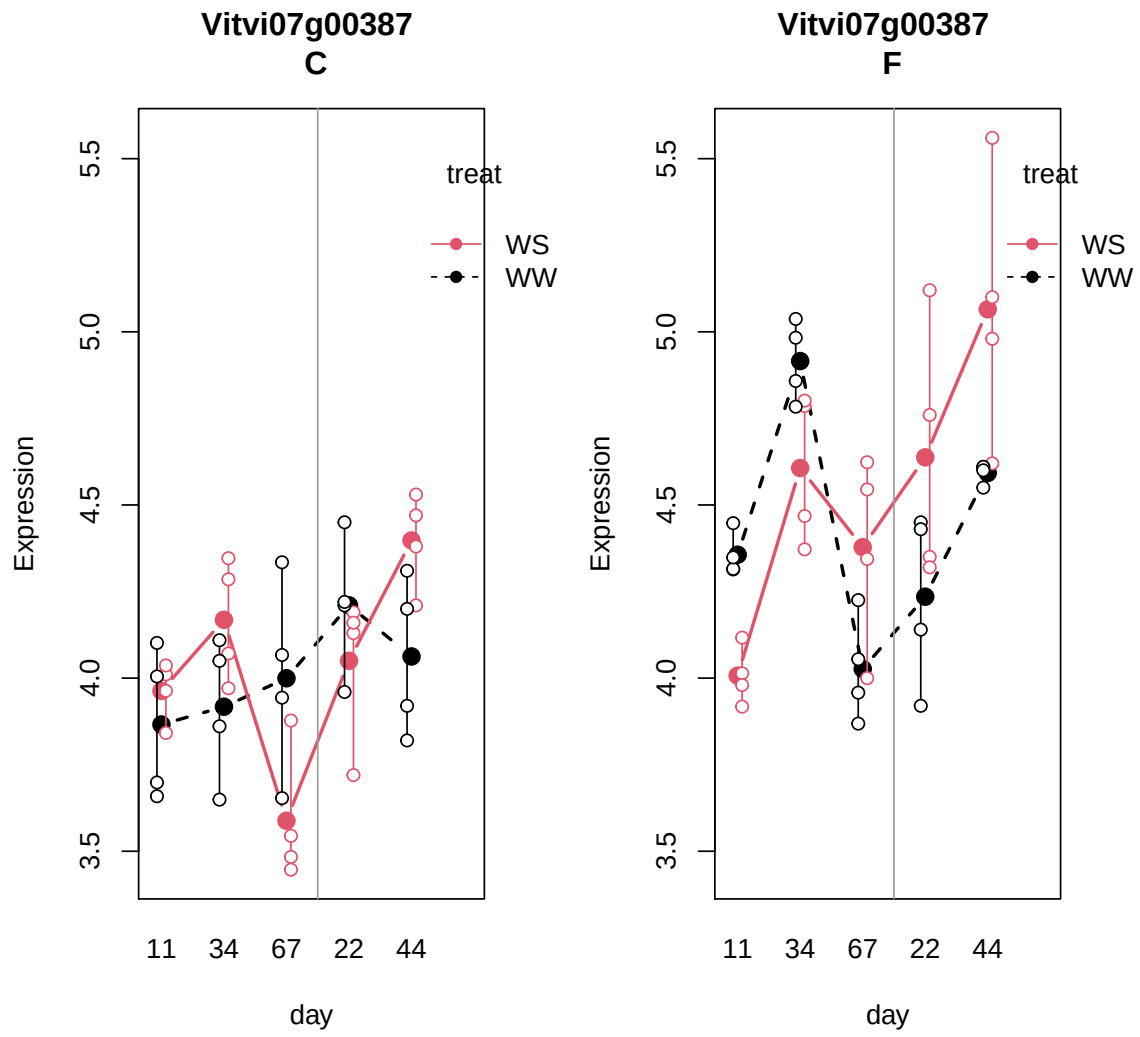
6.12.28 Vitvi07g00387

Coefficient varietyF:day67:treatWS for Vitvi07g00387.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi07g00387 1.209105 4.149386 4.544725 5.267524e-05
      adj.P.Val      B
Vitvi07g00387 0.02867414 1.854302
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

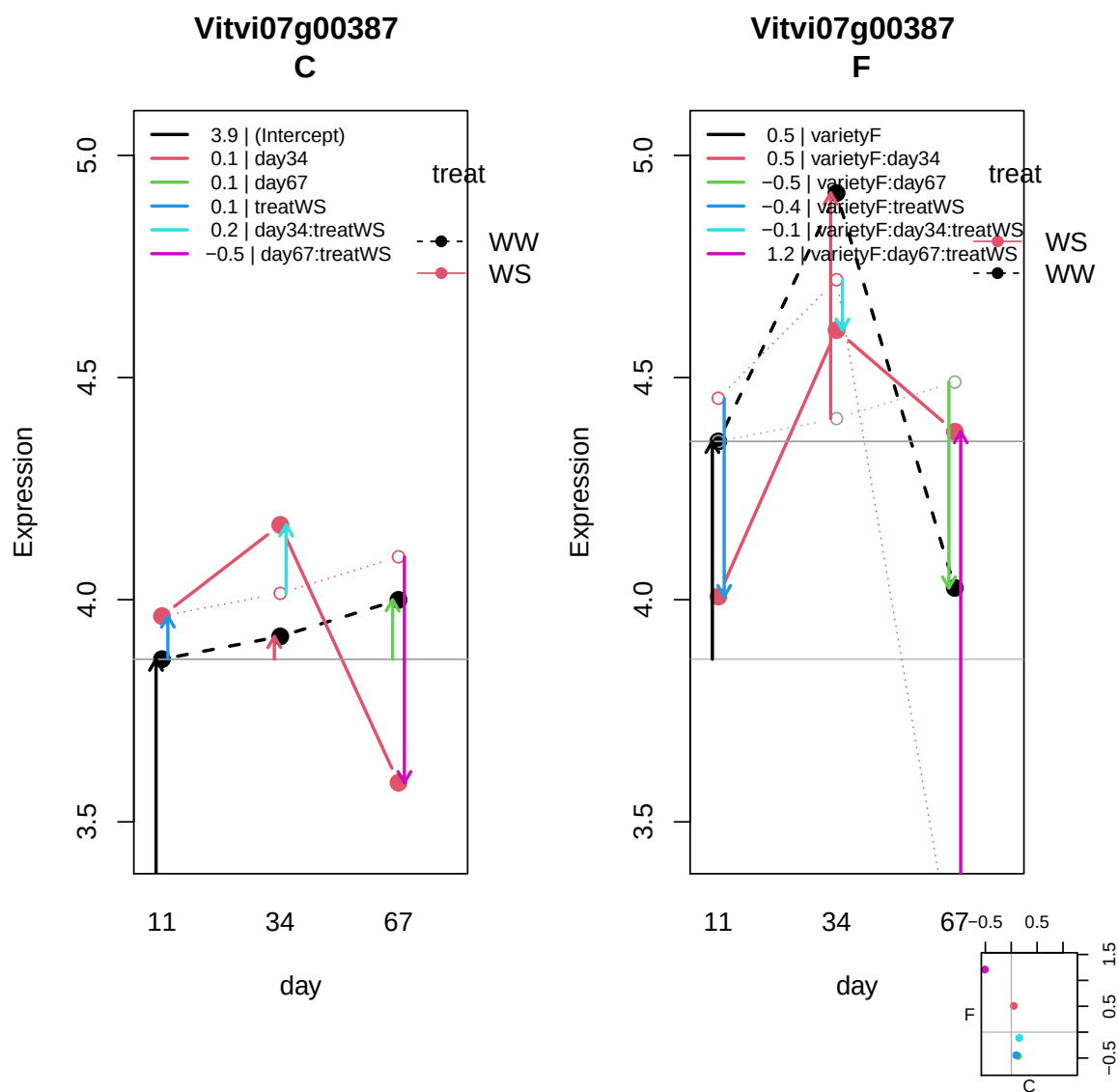
              (Intercept)  varietyF      day34      day67
Vitvi07g00387      3.865984 0.4903548 0.05134857 0.133554
              treatWS varietyF:day34 varietyF:day67
Vitvi07g00387 0.09706428      0.5077599      -0.4633022
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi07g00387      -0.4462587      0.1539314      -0.5084613
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi07g00387      -0.1134801                      1.209105

```

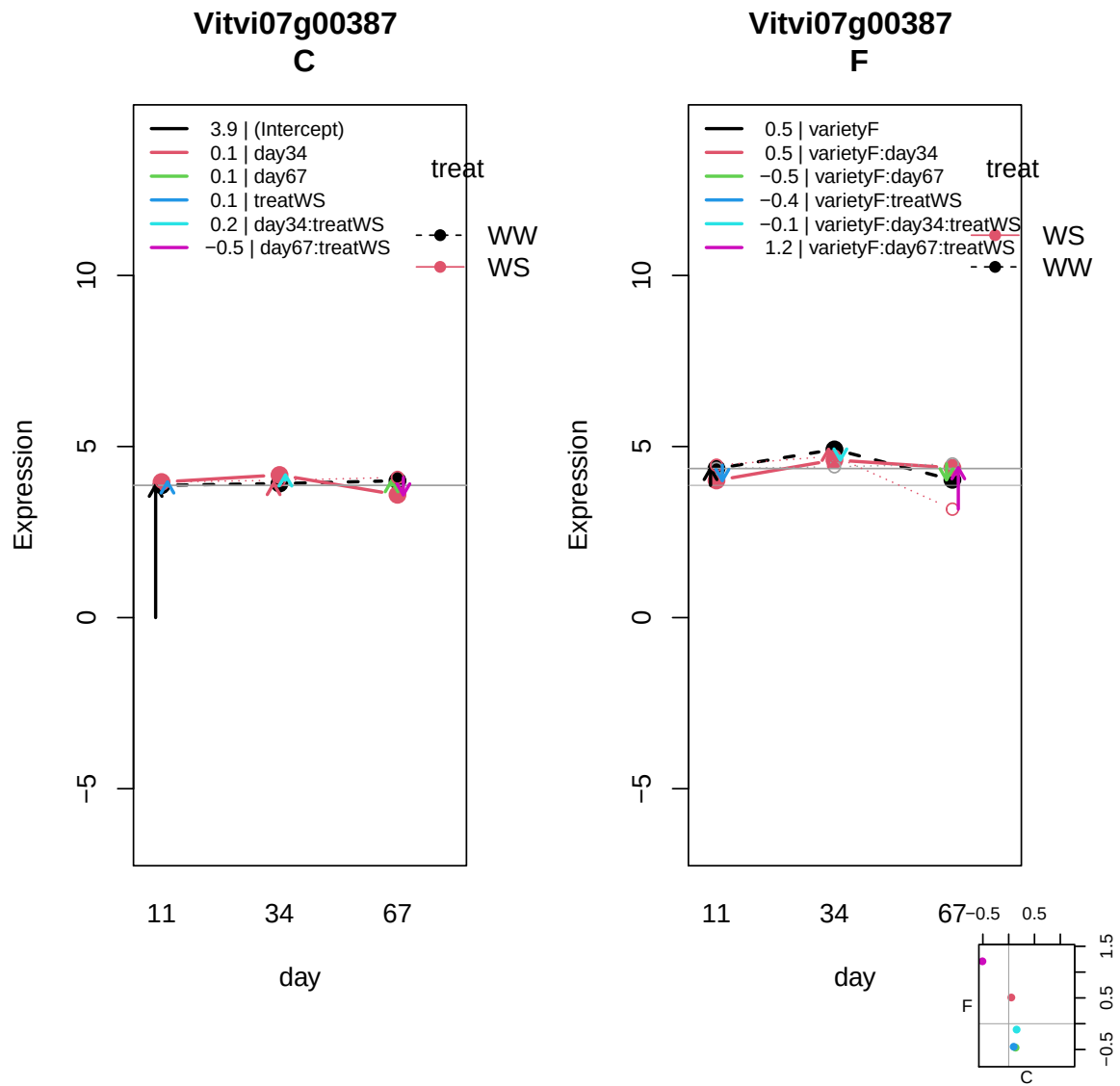
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

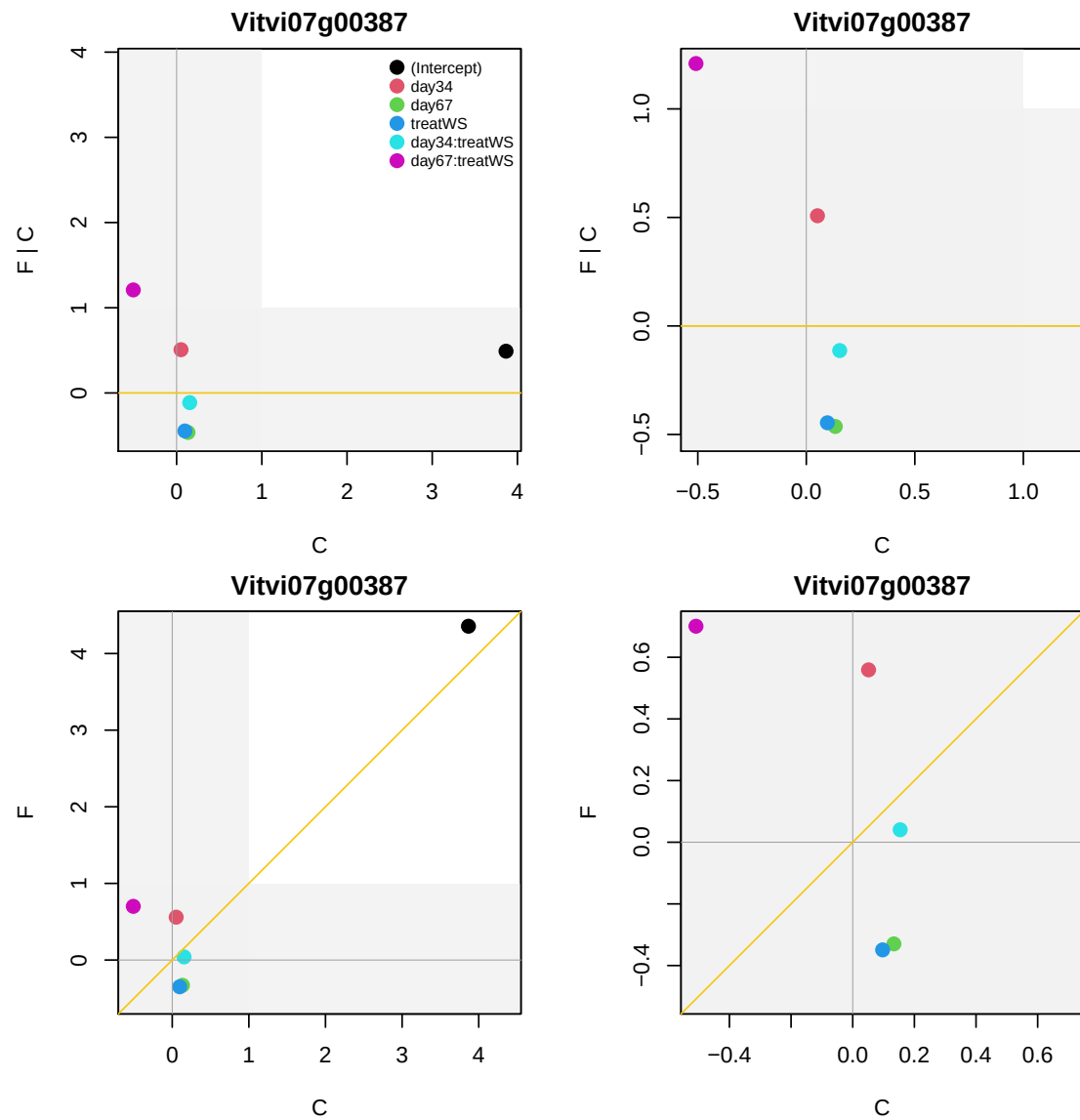


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

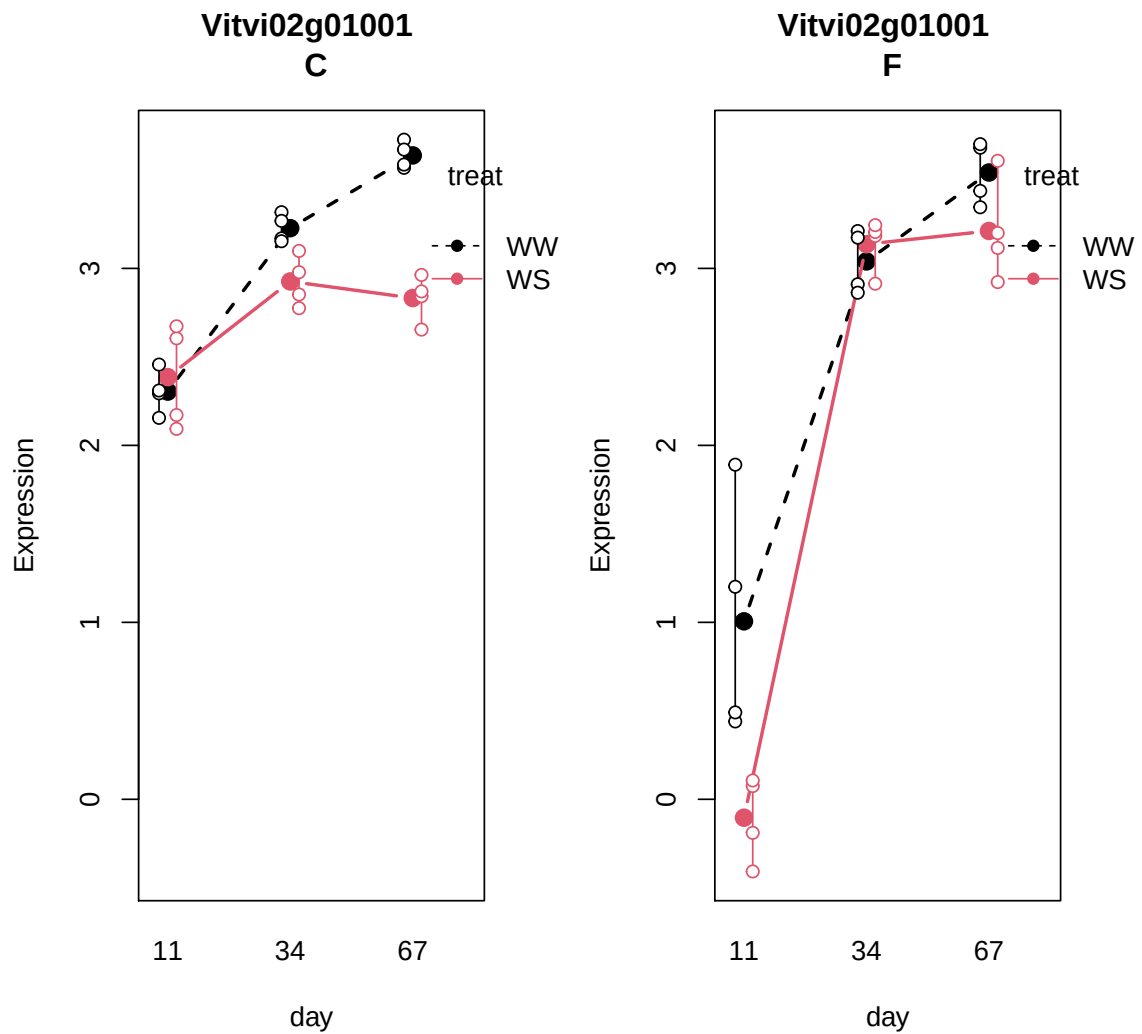
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



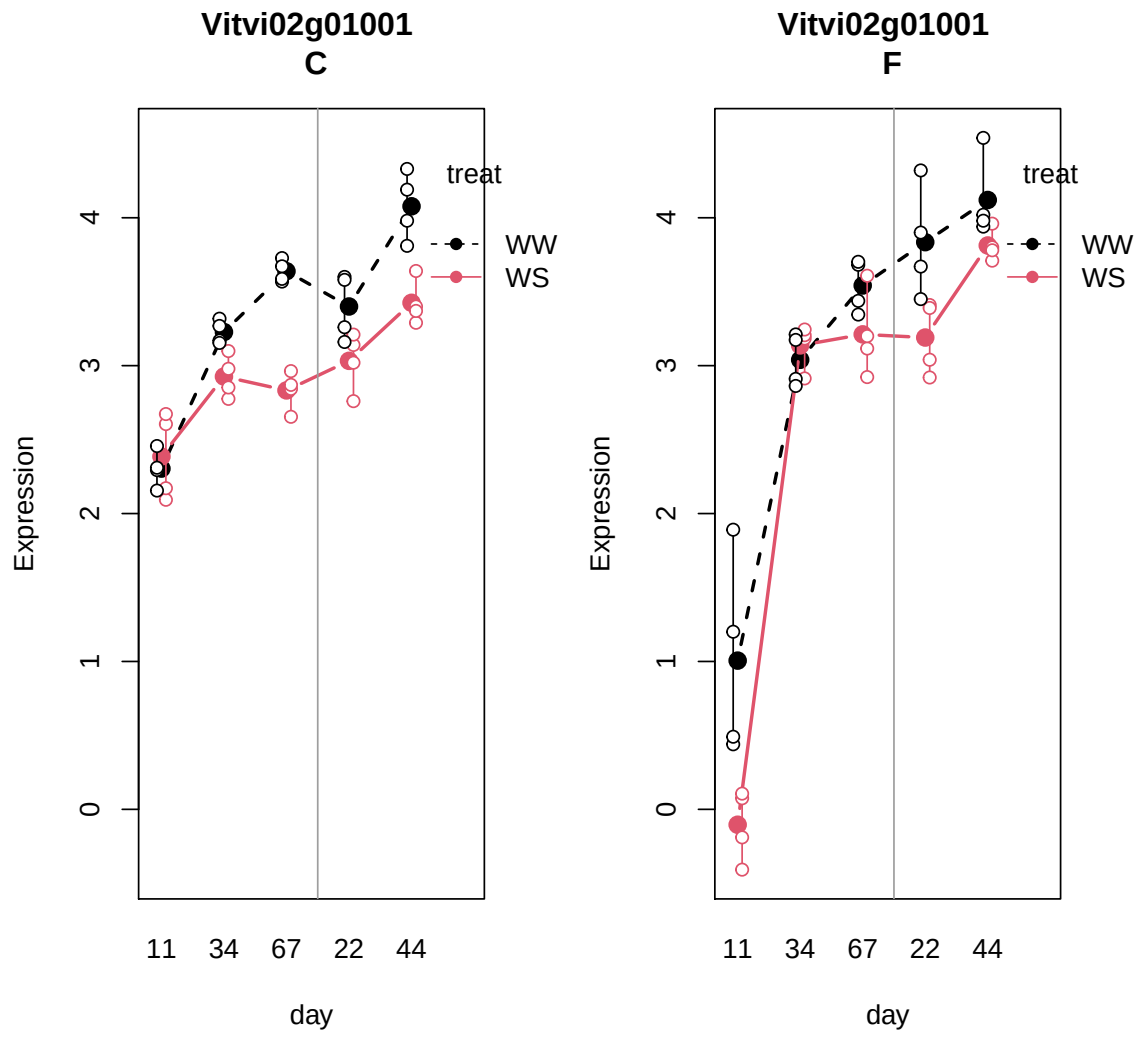
6.12.29 Vitvi02g01001

Coefficient varietyF:day67:treatWS for Vitvi02g01001.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi02g01001 1.66681 2.59549 4.507043 5.917498e-05
      adj.P.Val      B
Vitvi02g01001 0.02970383 1.750714
> plot.interactions(varname, phdata=pd, data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



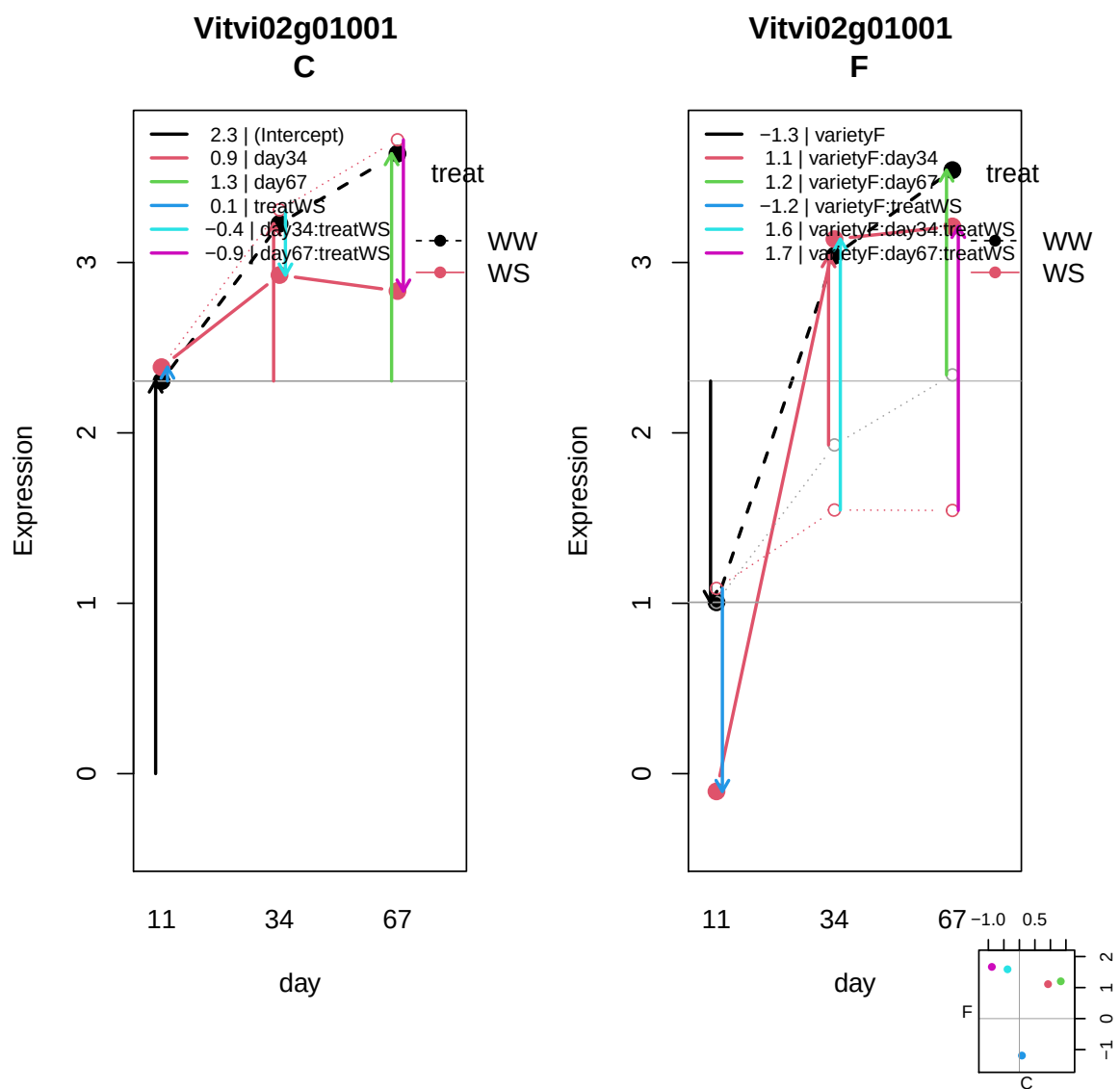
```

> fit1[varname,]$coefficients

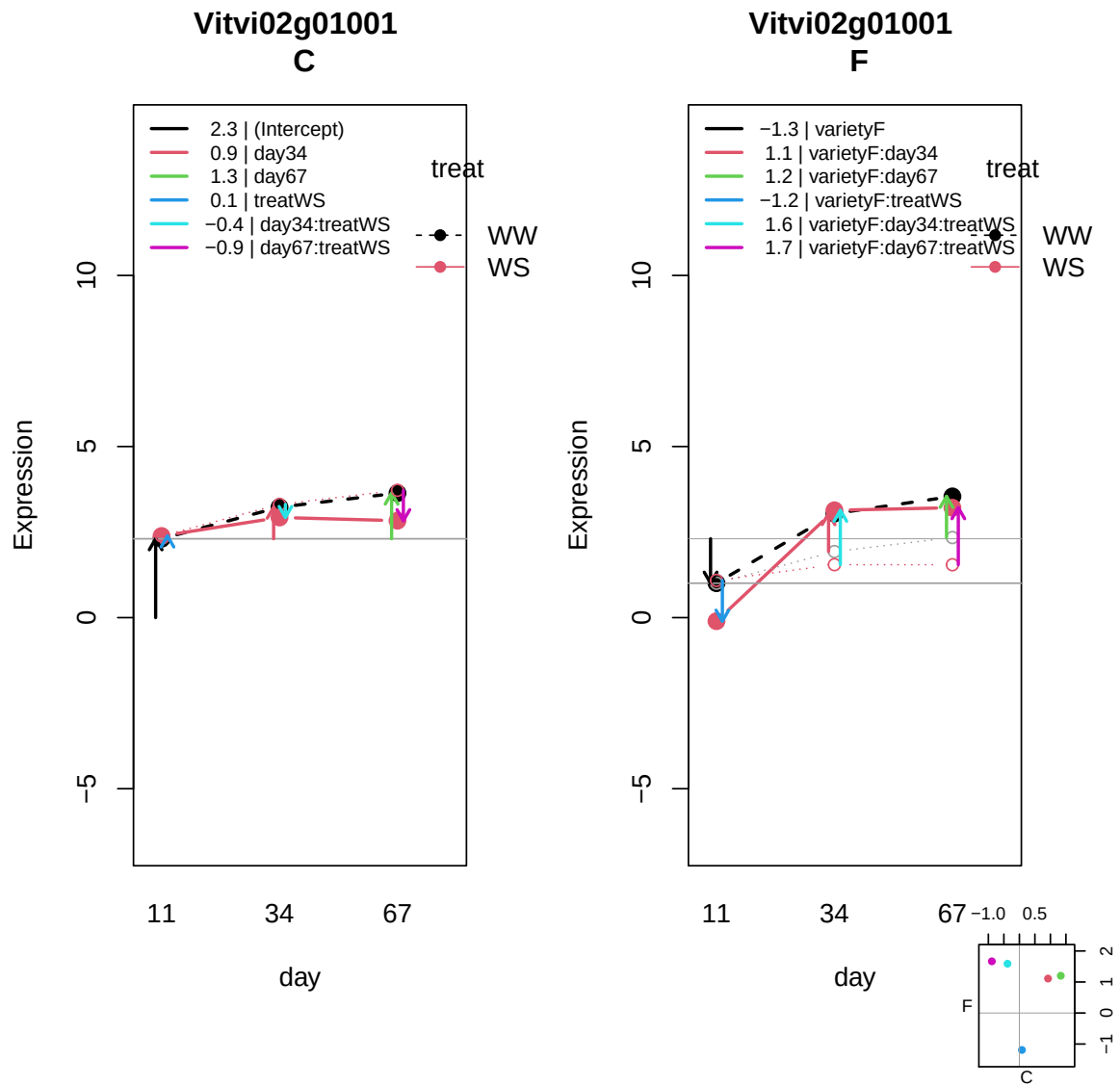
              (Intercept)  varietyF      day34      day67
Vitvi02g01001      2.304011 -1.298337  0.9233581  1.334494
              treatWS varietyF:day34 varietyF:day67
Vitvi02g01001  0.08153365      1.110522      1.201741
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi02g01001      -1.19117      -0.3825765      -0.8875078
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi02g01001              1.589516              1.66681

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

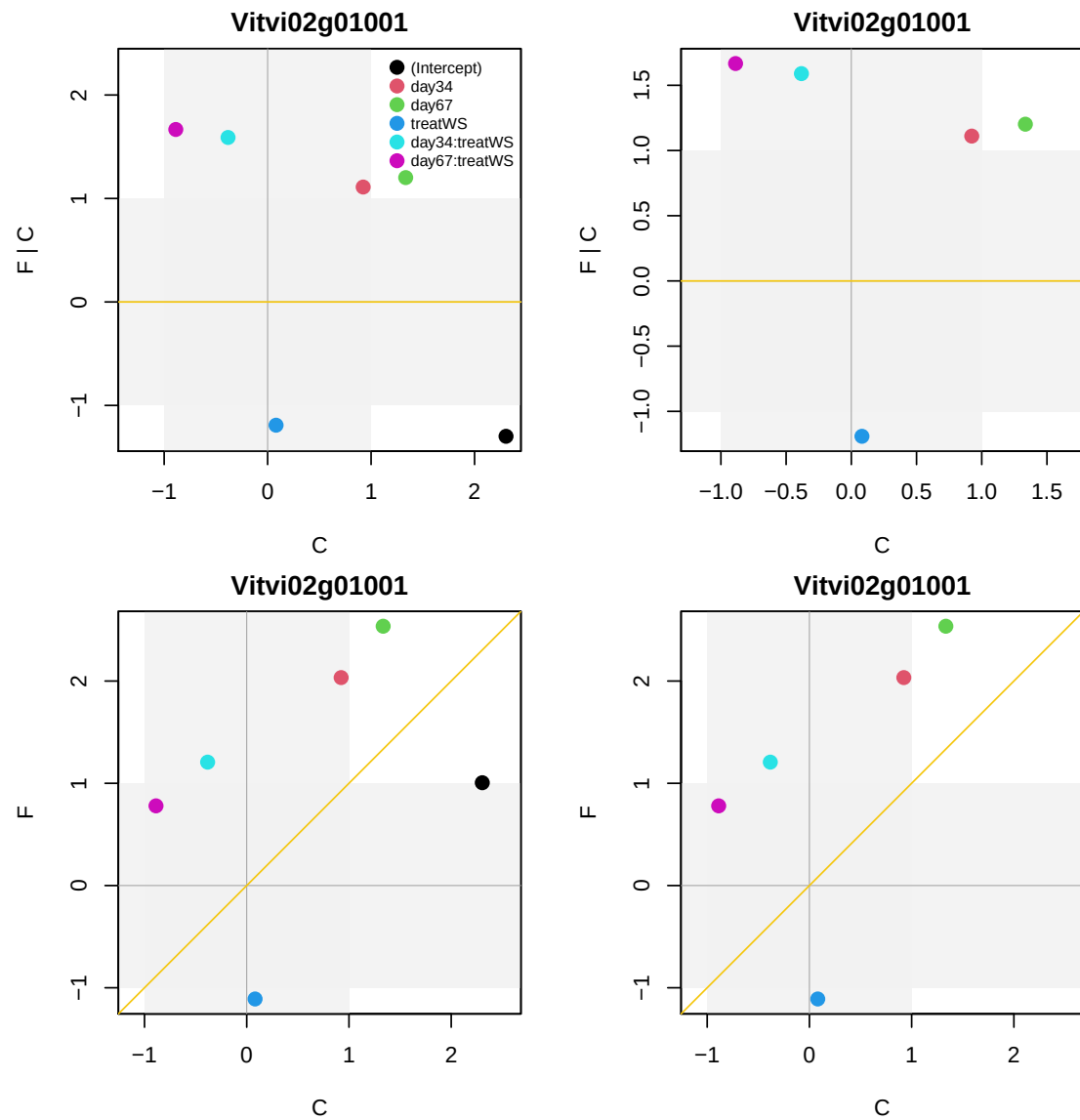


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

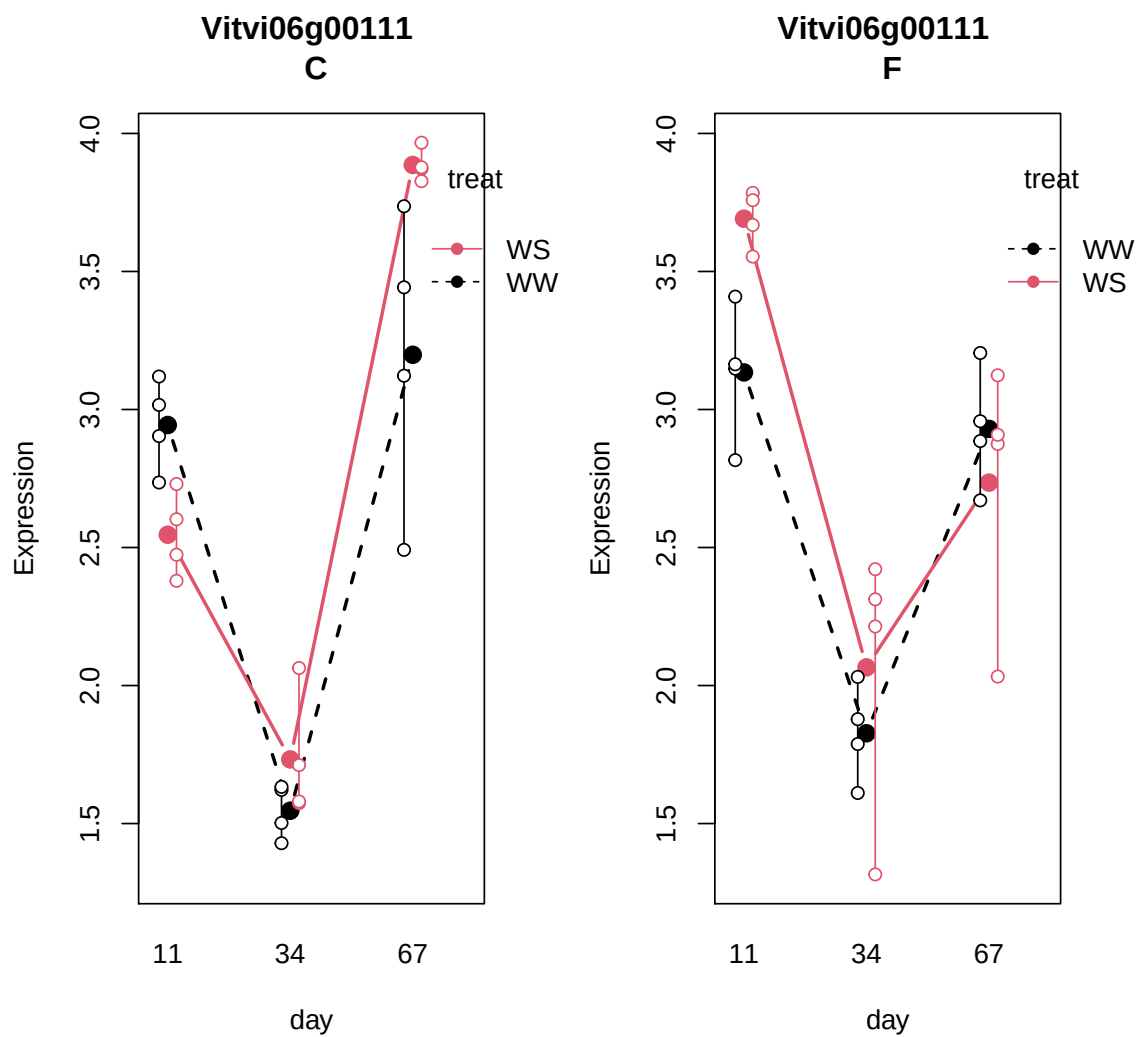


6.12.30 Vitvi06g00111

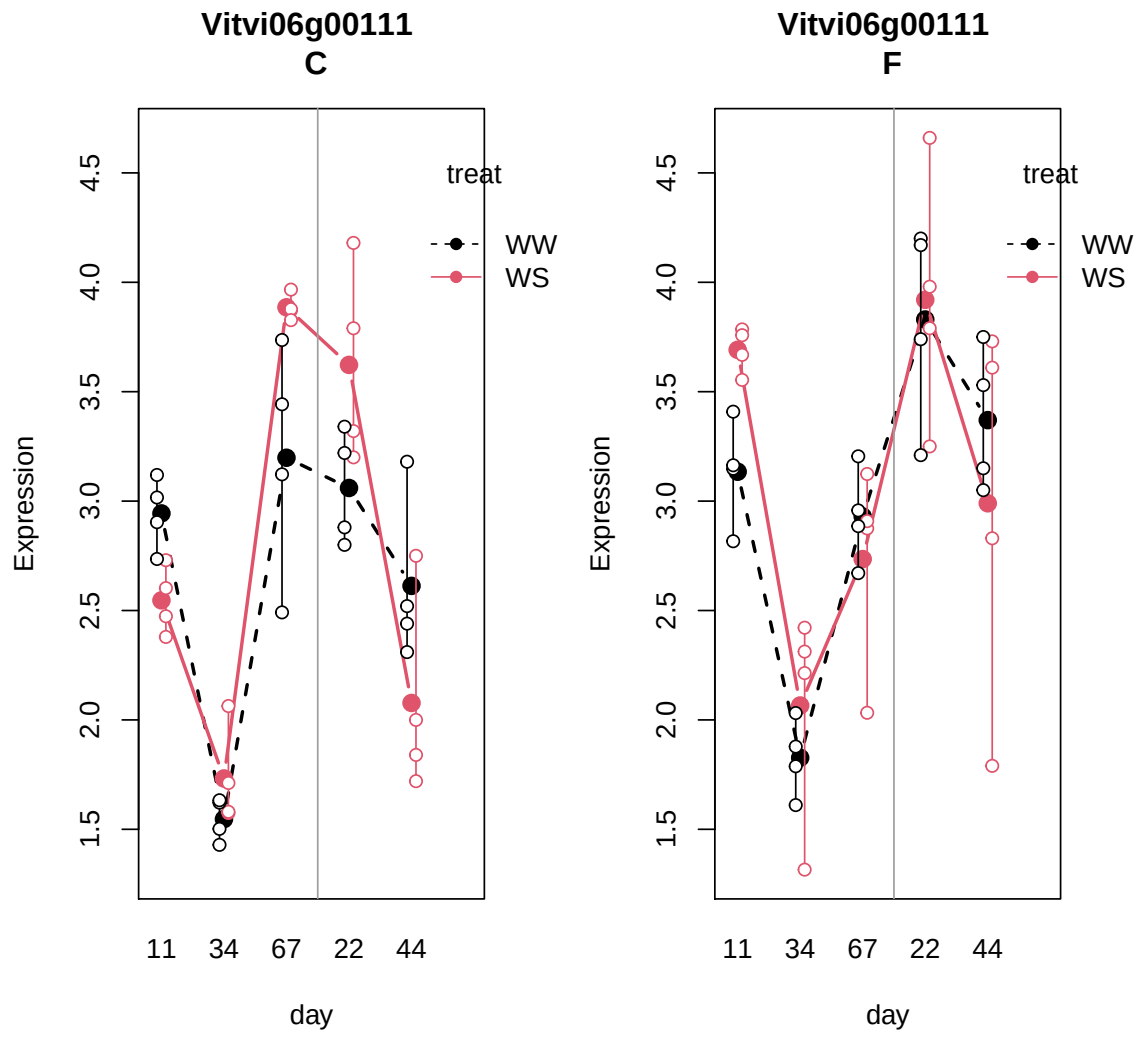
Coefficient varietyF:day67:treatWS for Vitvi06g00111.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi06g00111 -1.836787 2.686334 -4.503741 5.978068e-05
      adj.P.Val      B
Vitvi06g00111 0.02970383 1.741648

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

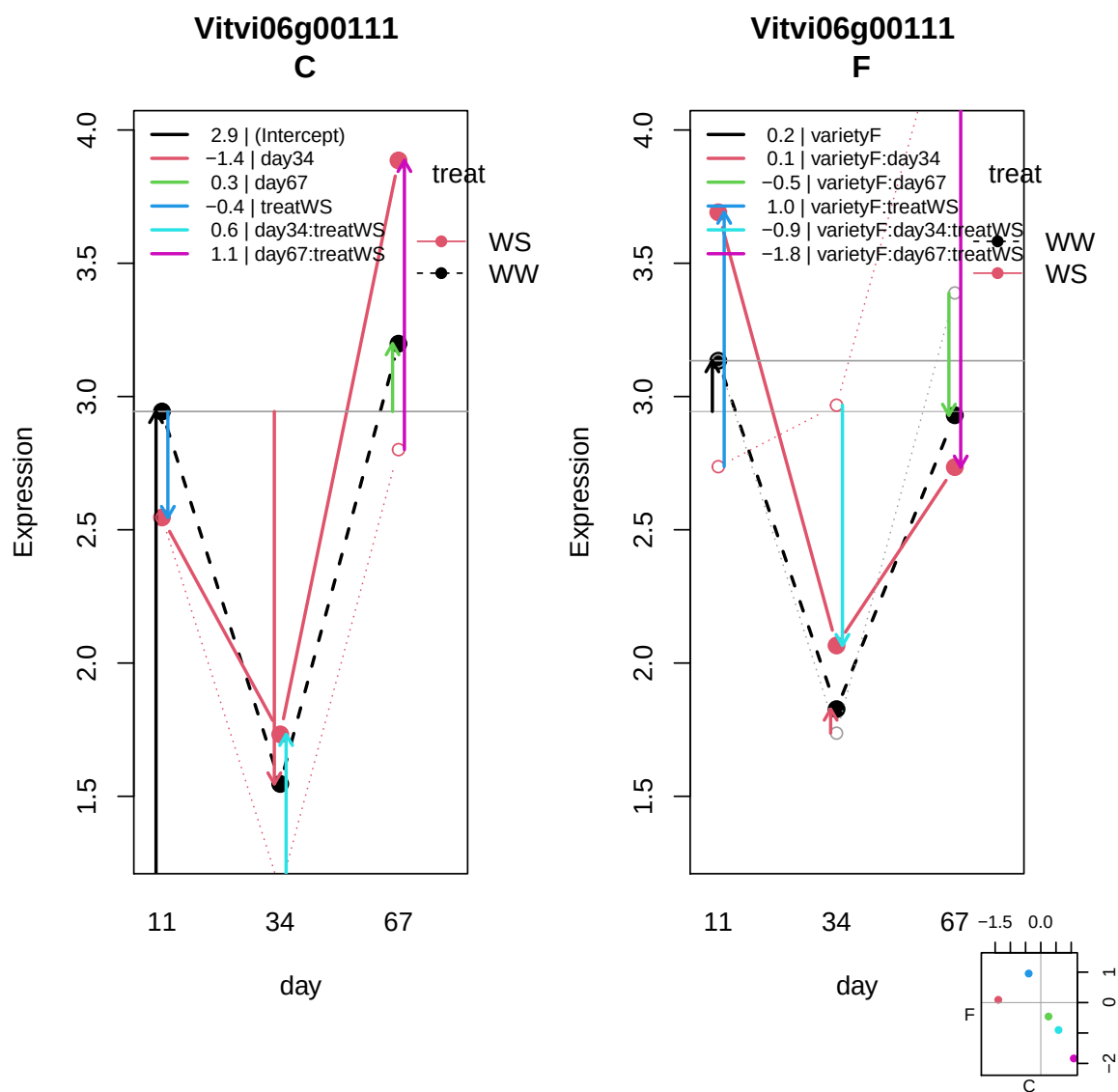
              (Intercept)  varietyF    day34    day67
Vitvi06g00111      2.943773 0.1904604 -1.397311 0.2543656
              treatWS varietyF:day34 varietyF:day67
Vitvi06g00111    -0.3974316    0.09013881    -0.4589187
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi06g00111         0.9544948    0.5833607    1.085068
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi06g00111         -0.9016602         -1.836787

```

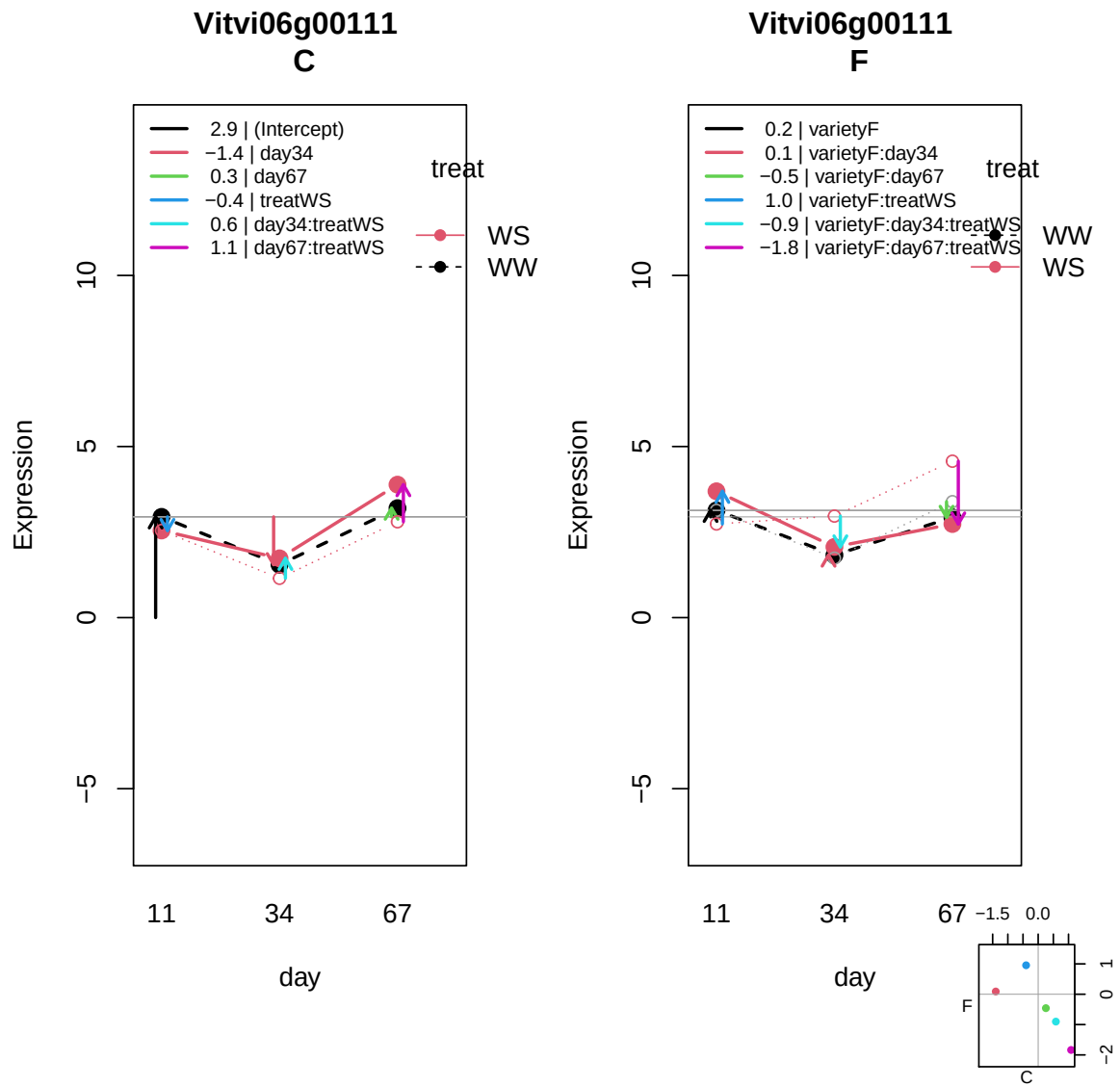
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

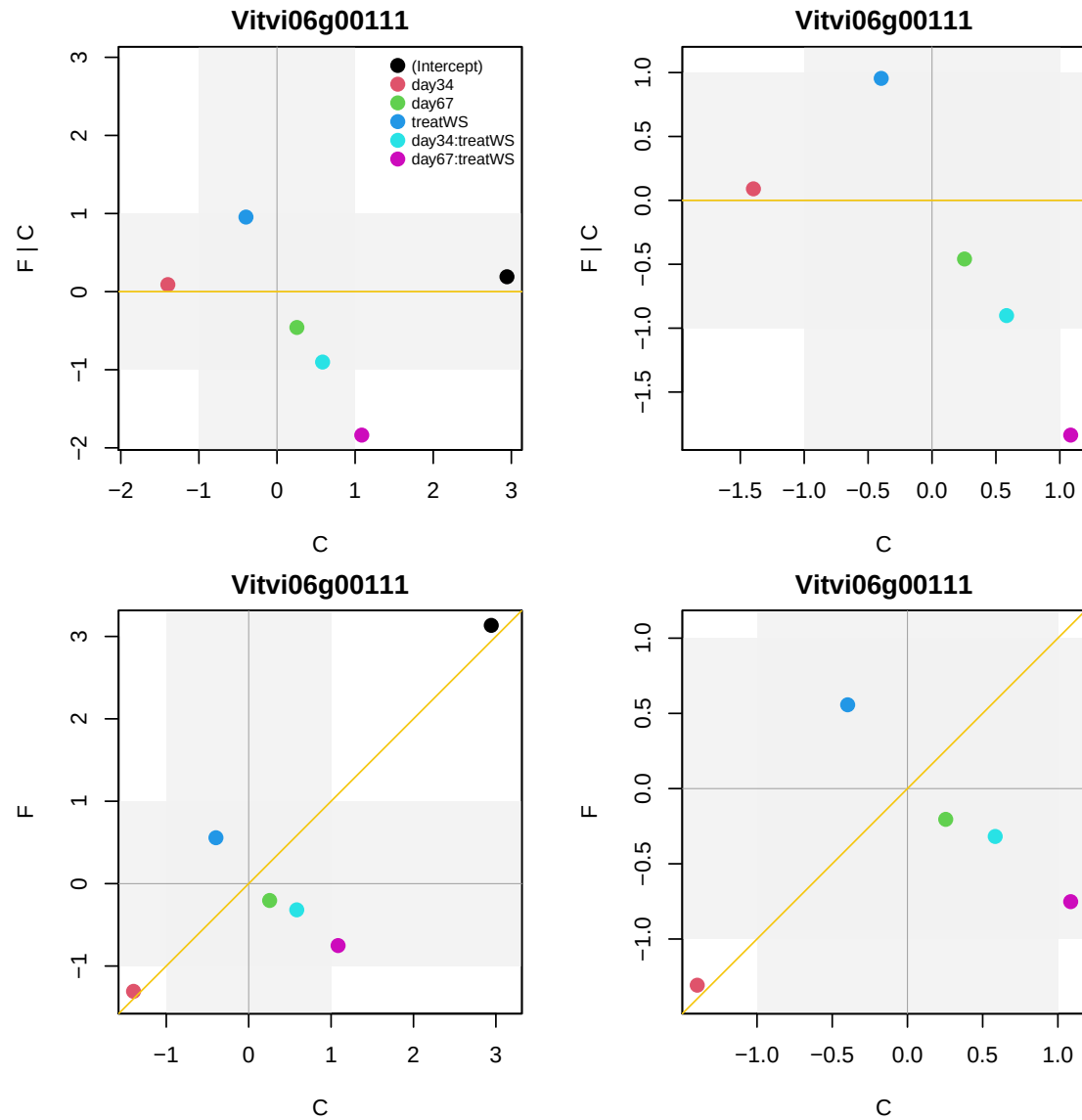


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

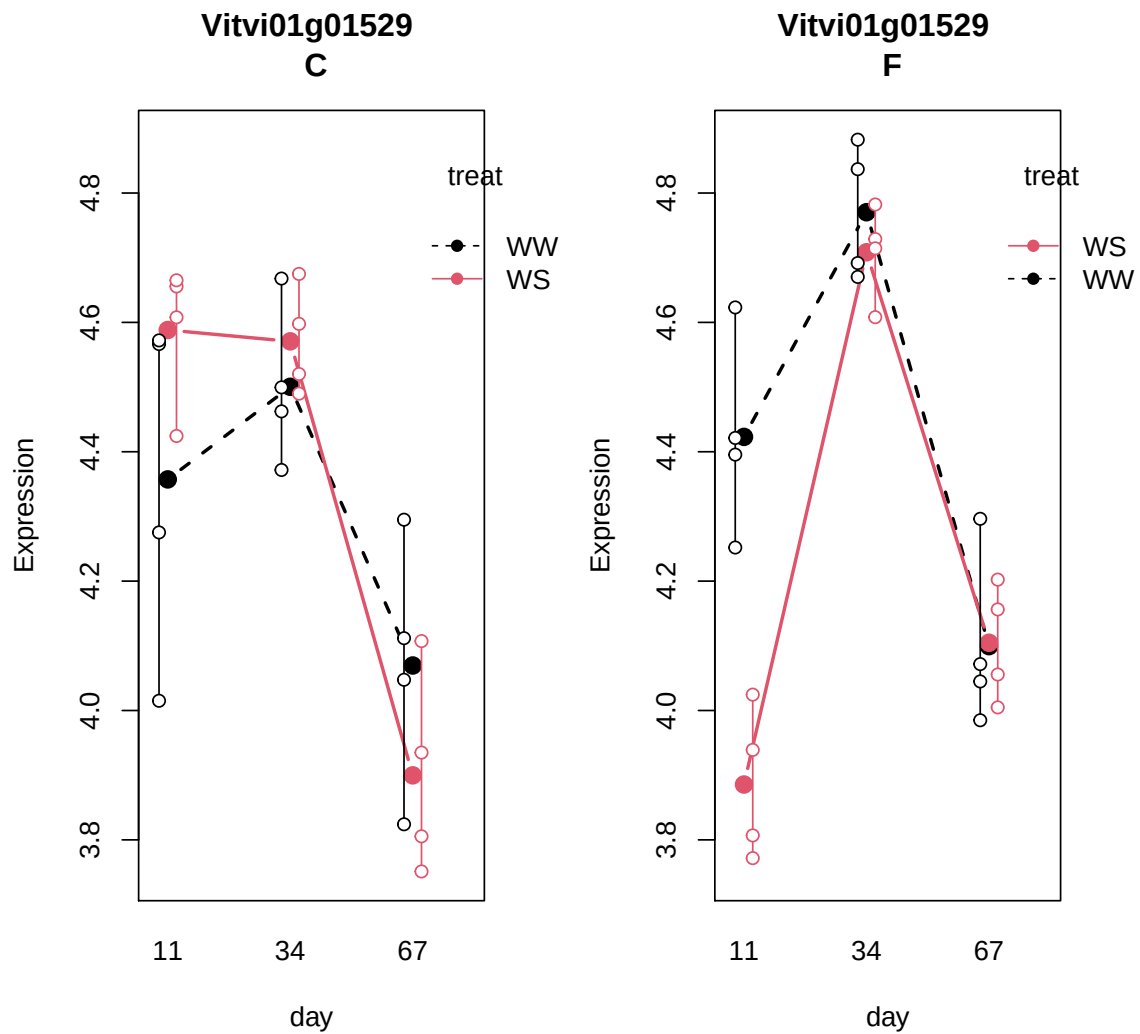


6.12.31 Vitvi01g01529

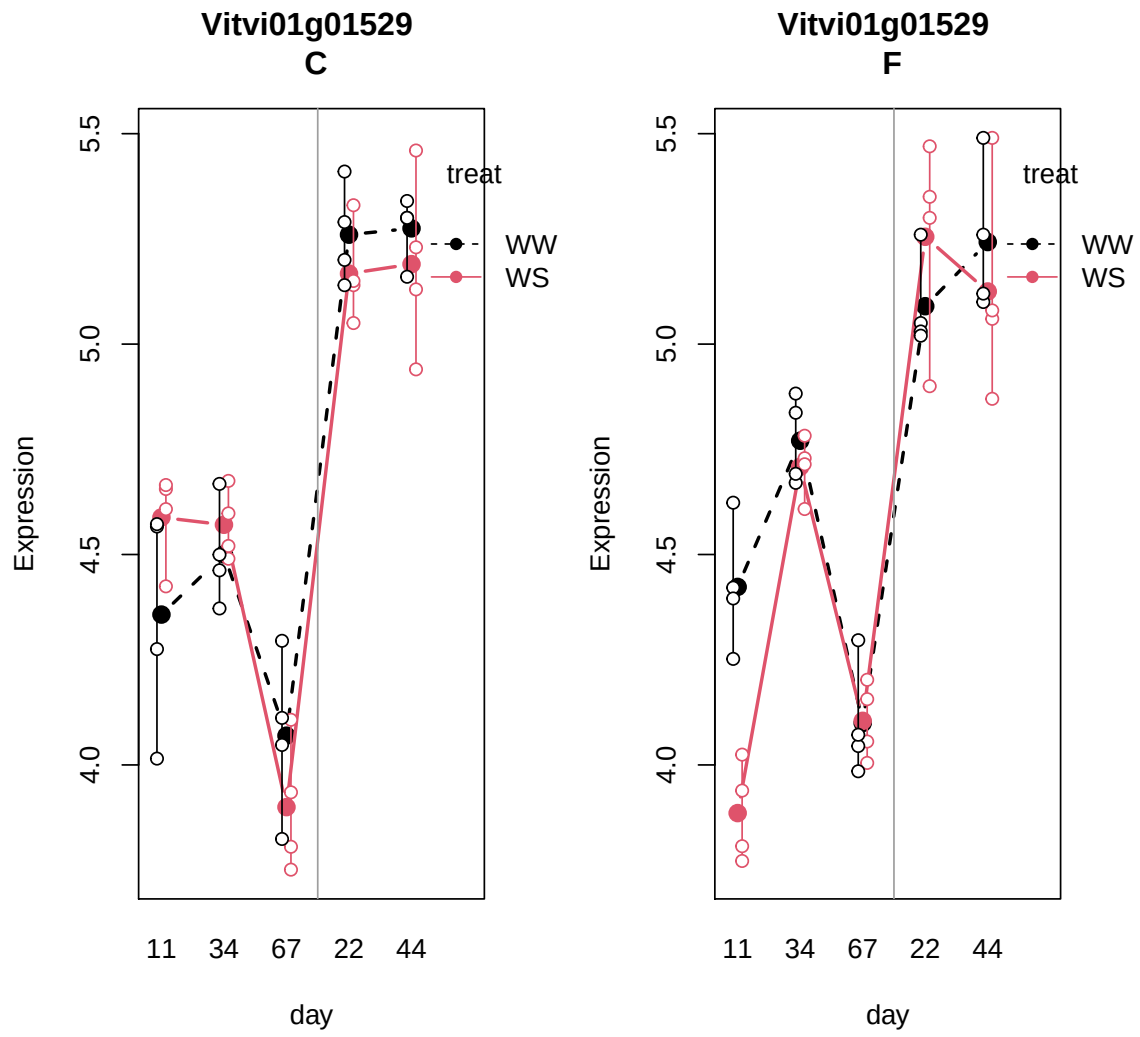
Coefficient varietyF:day67:treatWS for Vitvi01g01529.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi01g01529 0.9435128 4.331444 4.499522 6.056356e-05
      adj.P.Val      B
Vitvi01g01529 0.02970383 1.730065

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

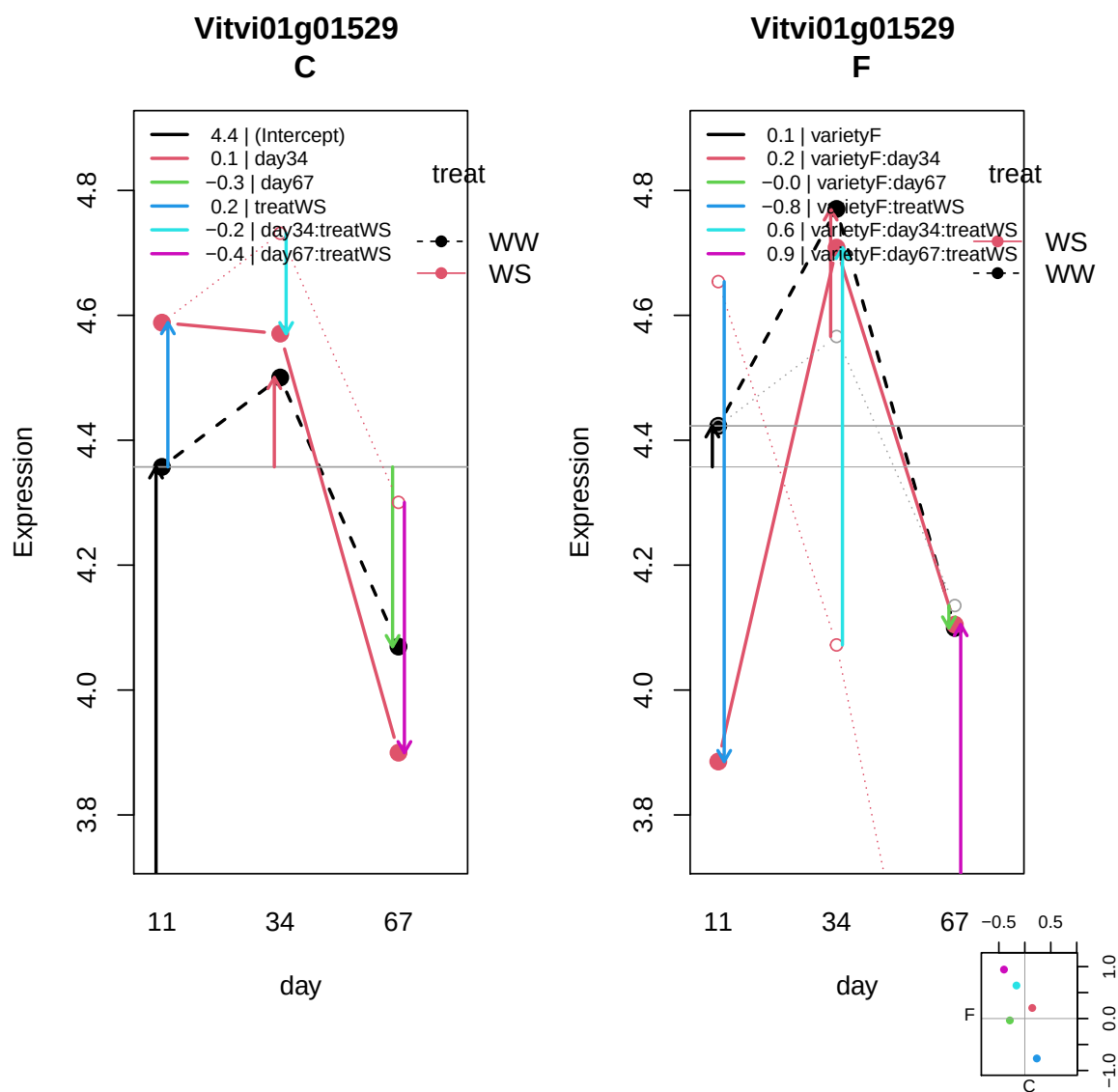
      (Intercept)  varietyF    day34    day67
Vitvi01g01529    4.357251 0.0657386 0.1431541 -0.2876996
      treatWS varietyF:day34 varietyF:day67
Vitvi01g01529 0.2309744    0.2041907    -0.03581222
      varietyF:treatWS day34:treatWS day67:treatWS
Vitvi01g01529    -0.768415    -0.1606998    -0.4008029
      varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi01g01529    0.6361925    0.9435128

```

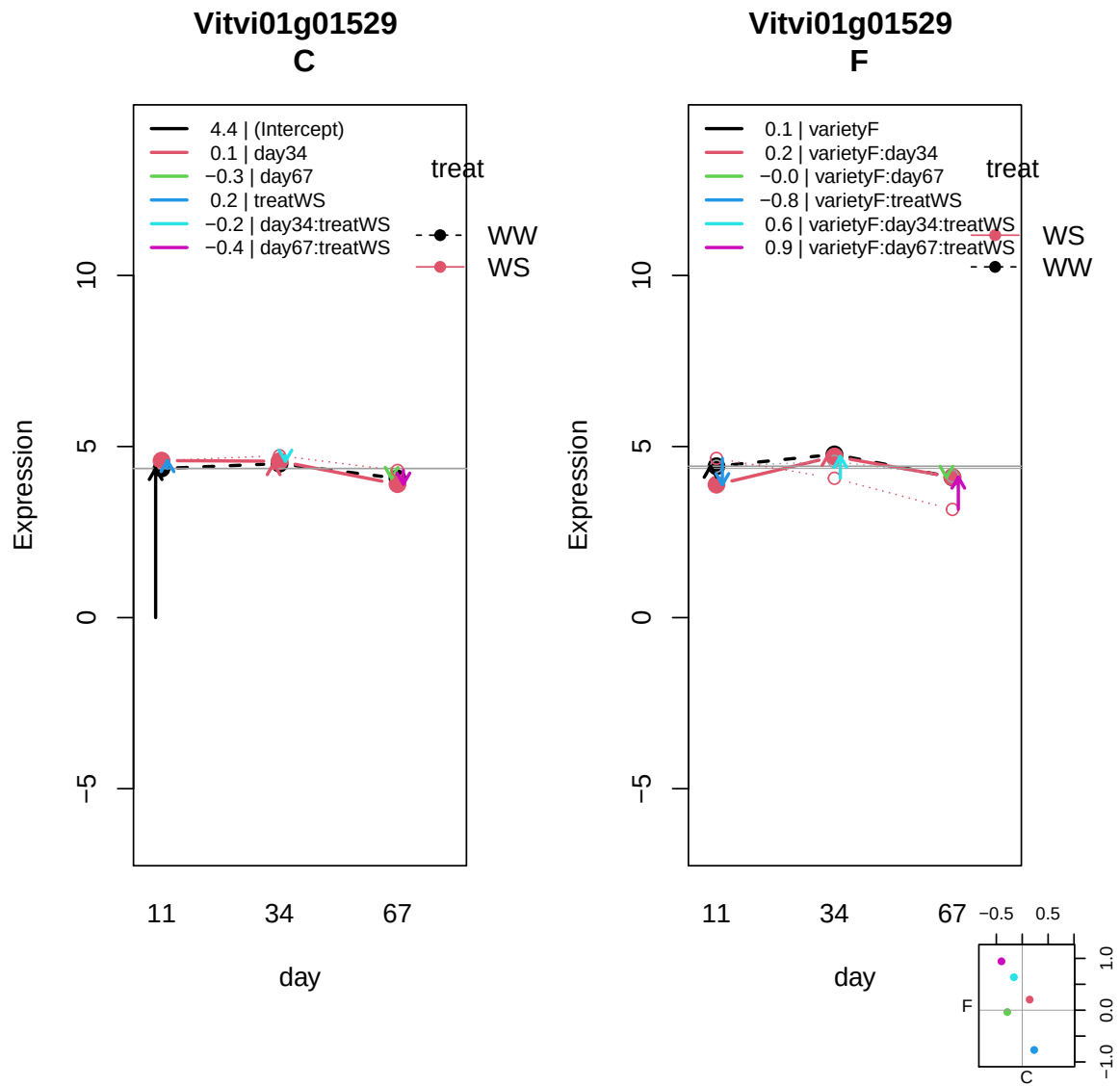
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

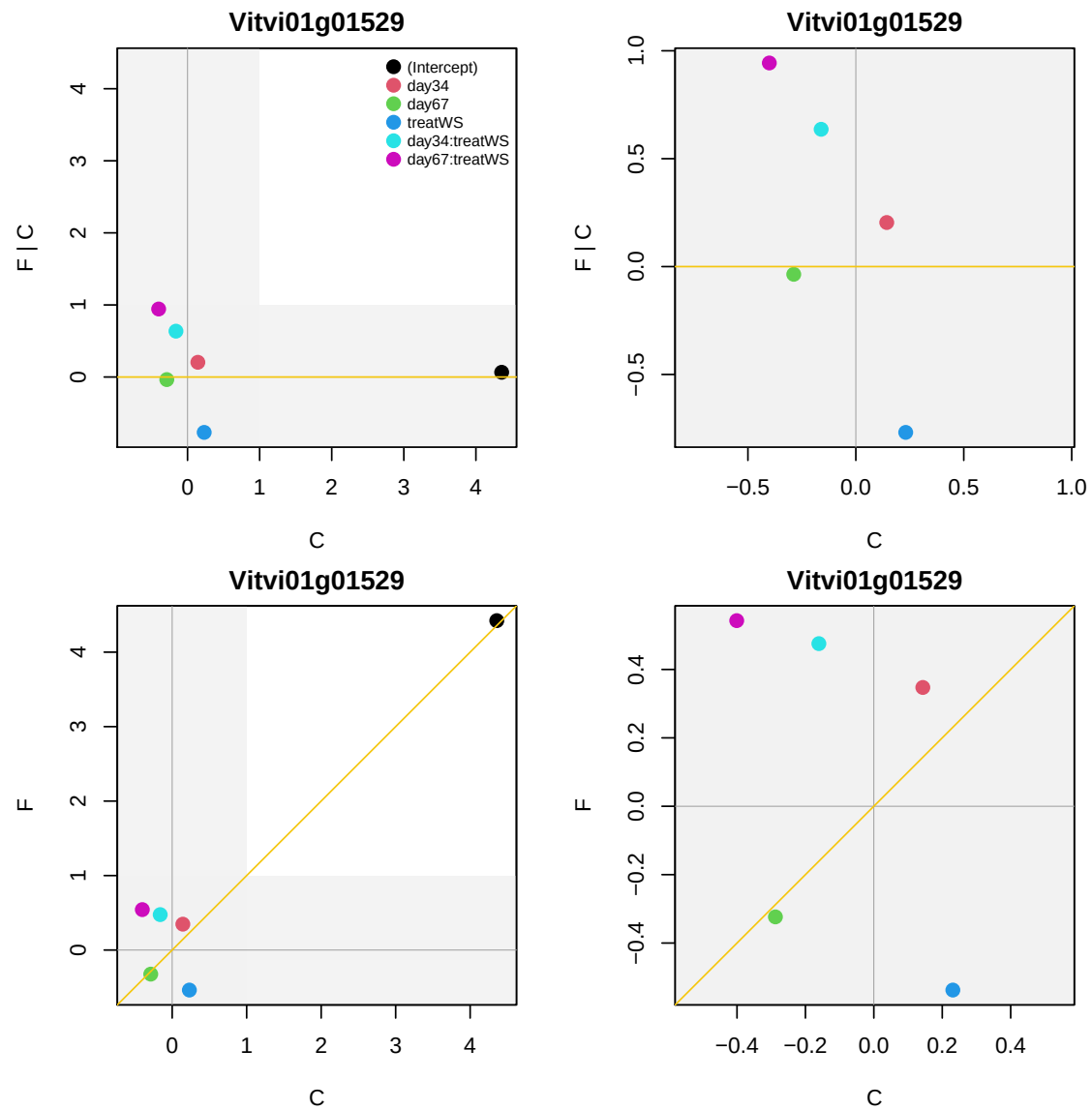


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

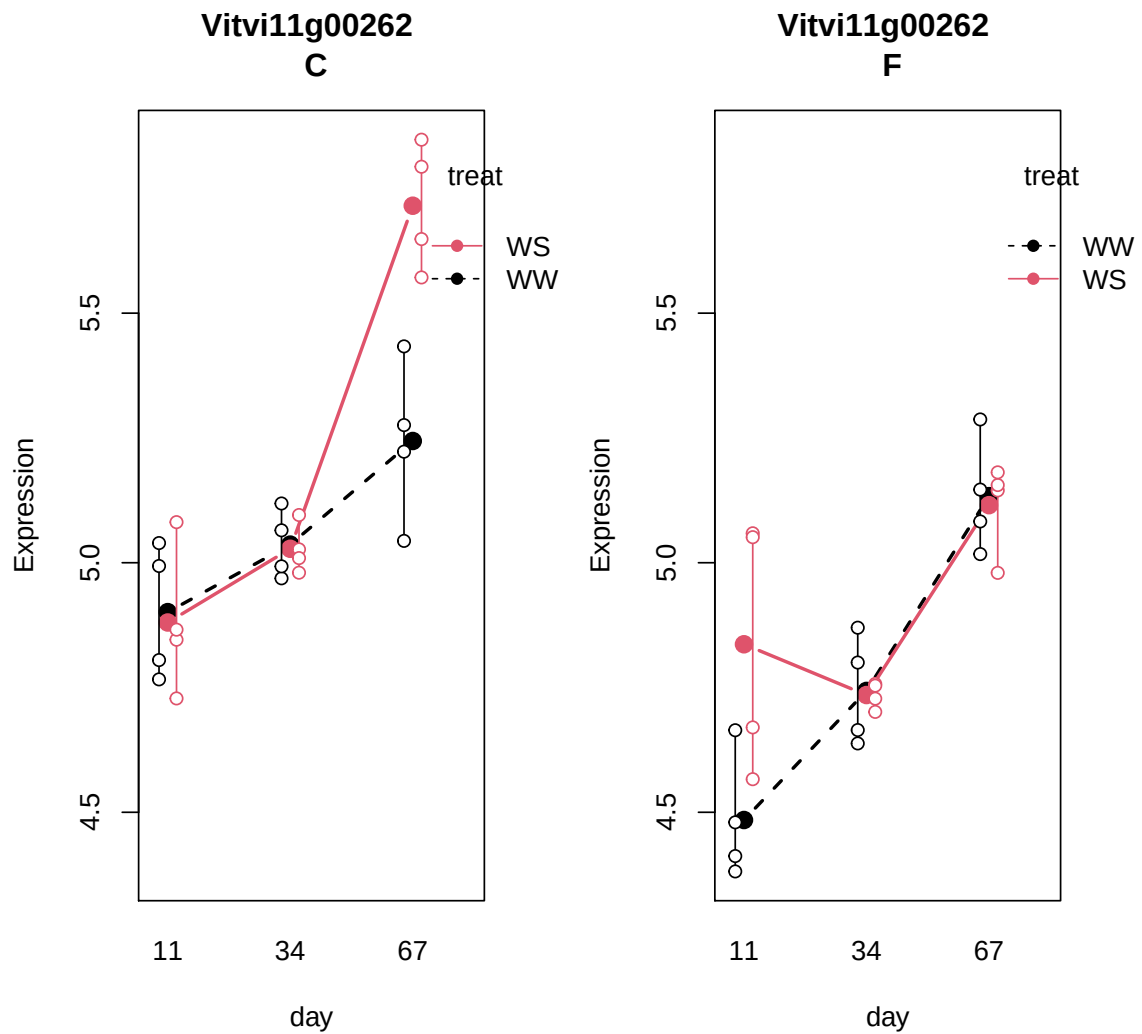
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



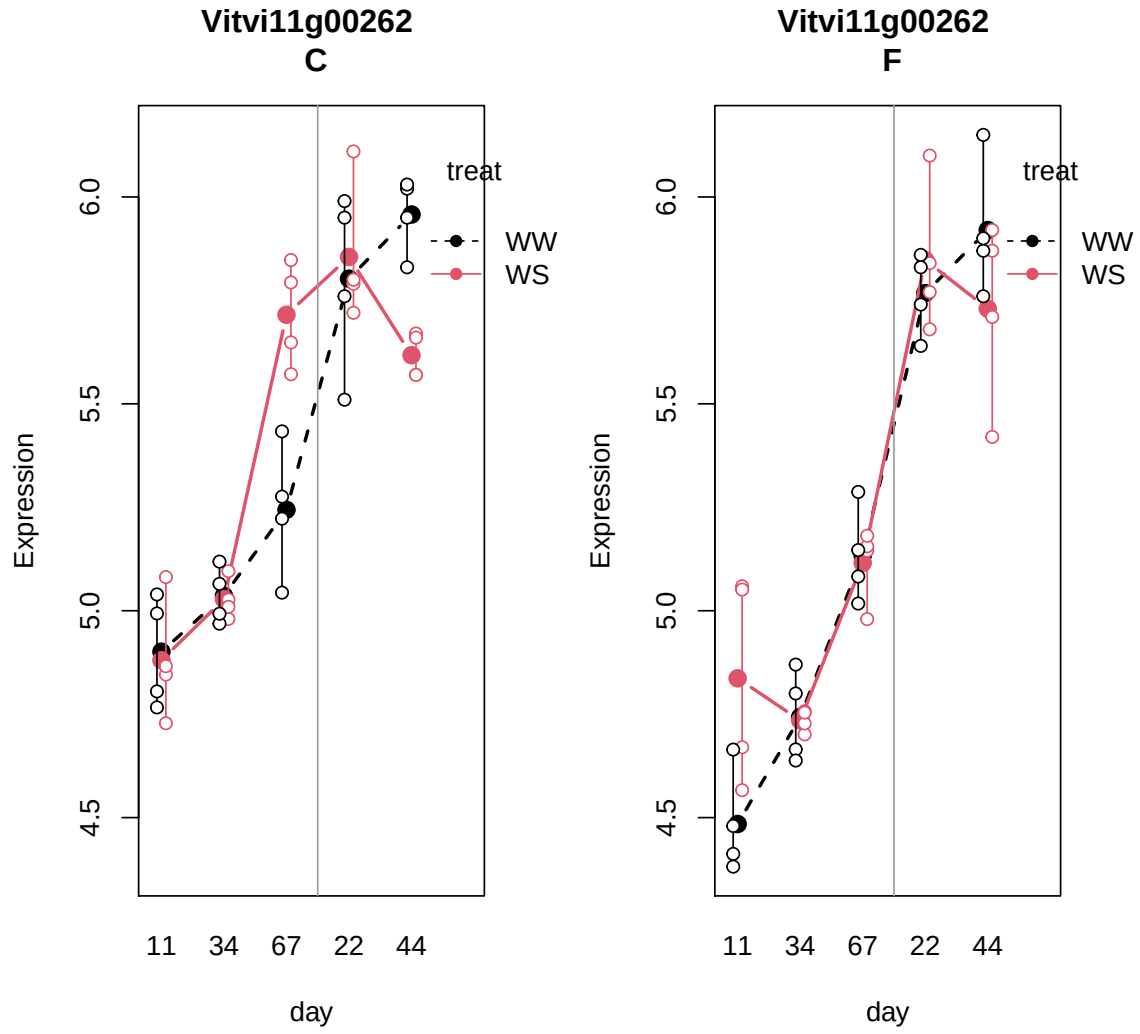
6.12.32 Vitvi11g00262

Coefficient varietyF:day67:treatWS for Vitvi11g00262.

```
> tt[varname,]
              logFC AveExpr      t      P.Value
Vitvi11g00262 -0.8623687 4.987715 -4.473623 6.559518e-05
              adj.P.Val      B
Vitvi11g00262 0.02970383 1.65902
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```




```
> fit1[varname,]$coefficients
```

```

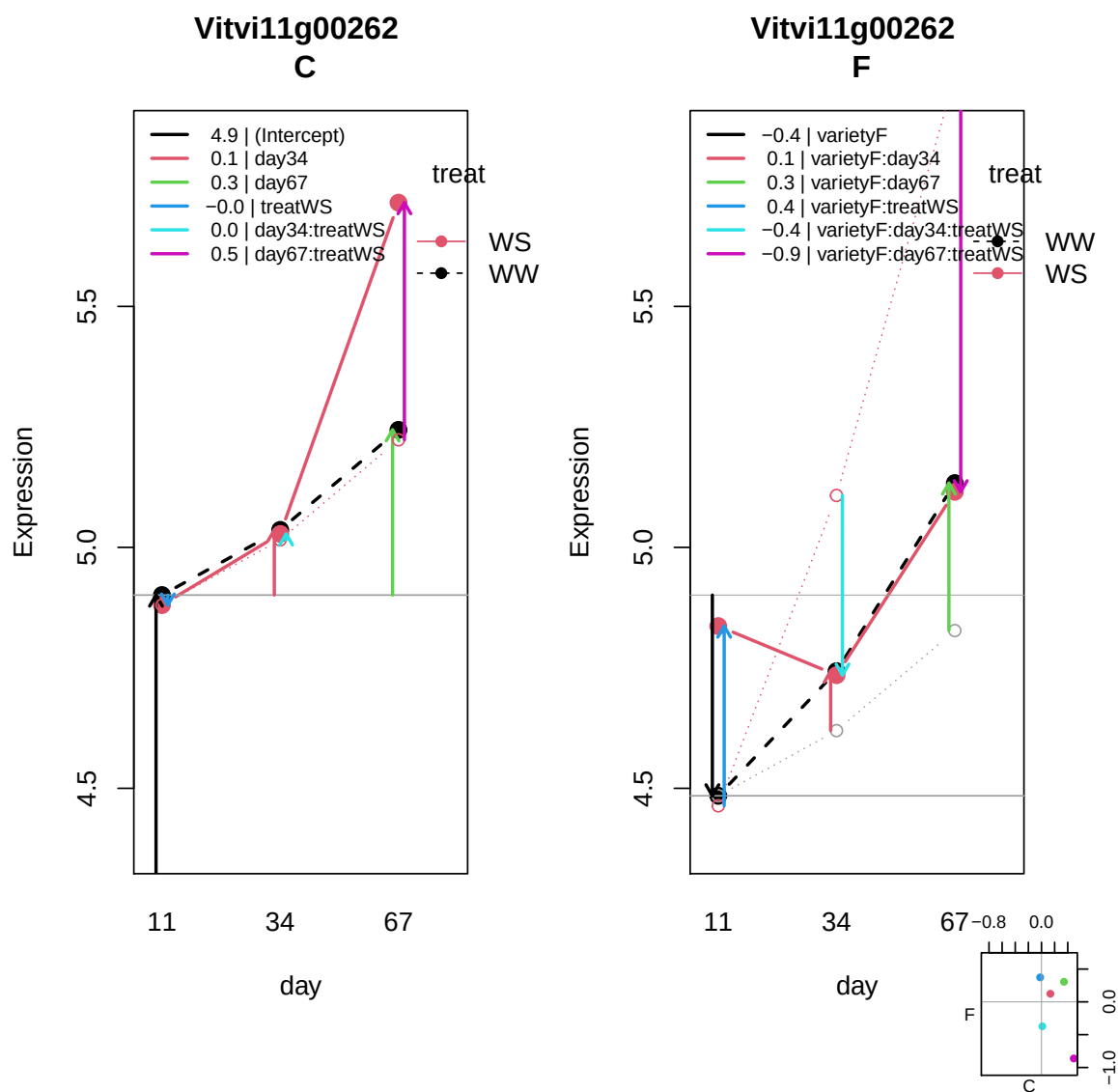
              (Intercept)    varietyF      day34      day67
Vitvi11g00262      4.90103 -0.4165109 0.1352538 0.3428179
              treatWS    varietyF:day34    varietyF:day67
Vitvi11g00262 -0.02077245      0.123388      0.3060744
              varietyF:treatWS    day34:treatWS    day67:treatWS
Vitvi11g00262      0.3728881      0.0124309      0.4921637
              varietyF:day34:treatWS    varietyF:day67:treatWS
Vitvi11g00262      -0.3727776      -0.8623687

```

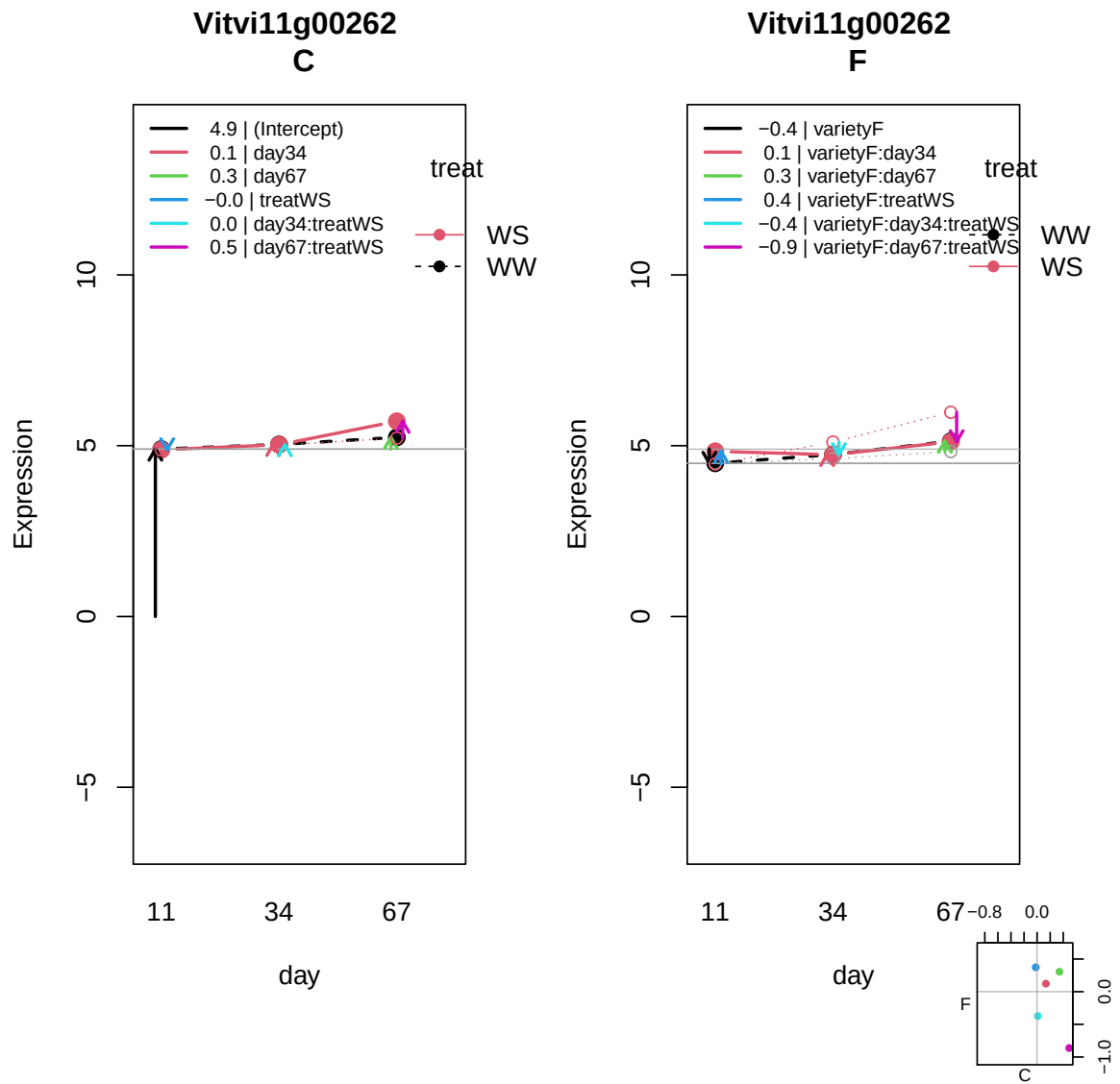
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

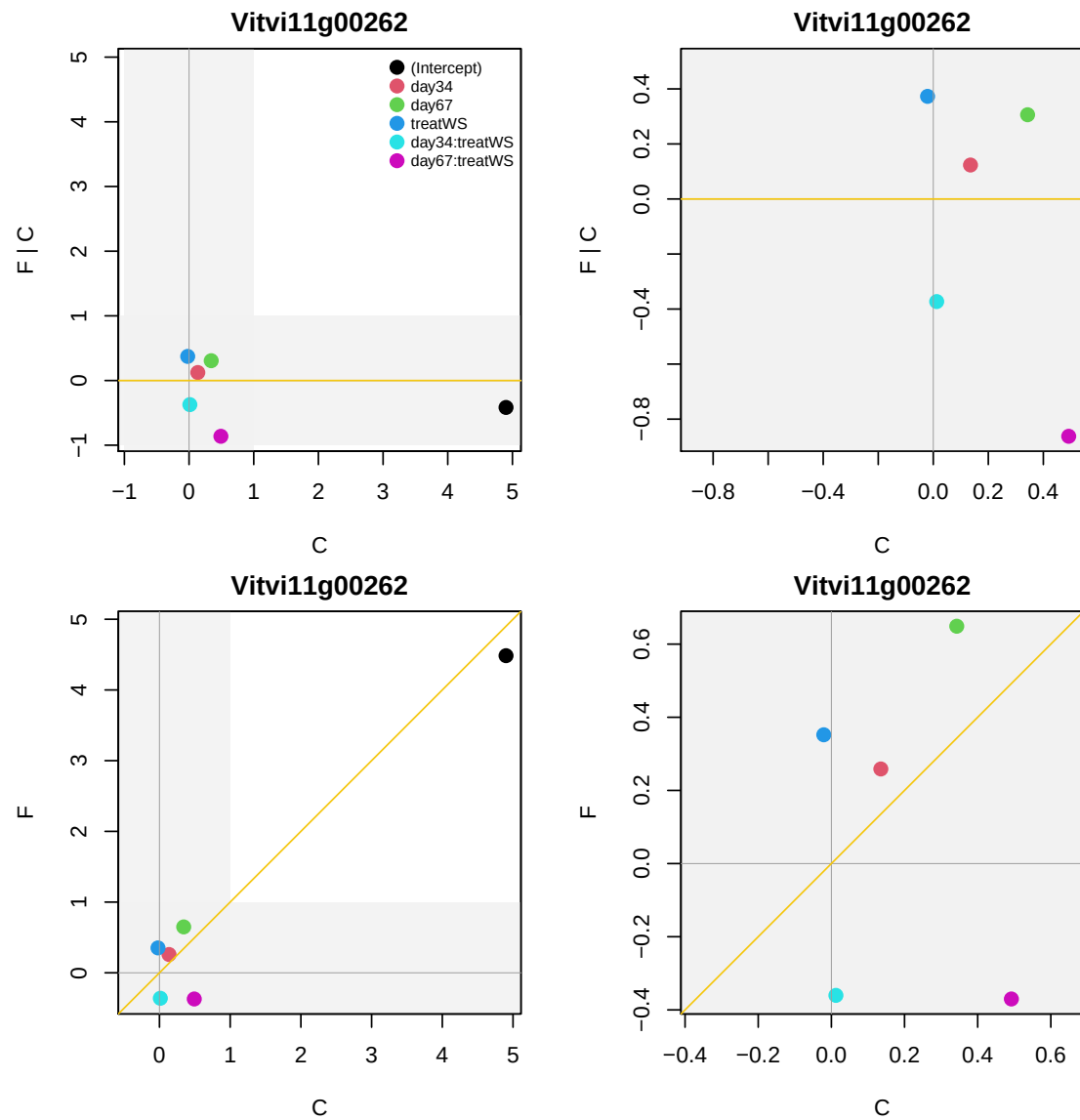


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

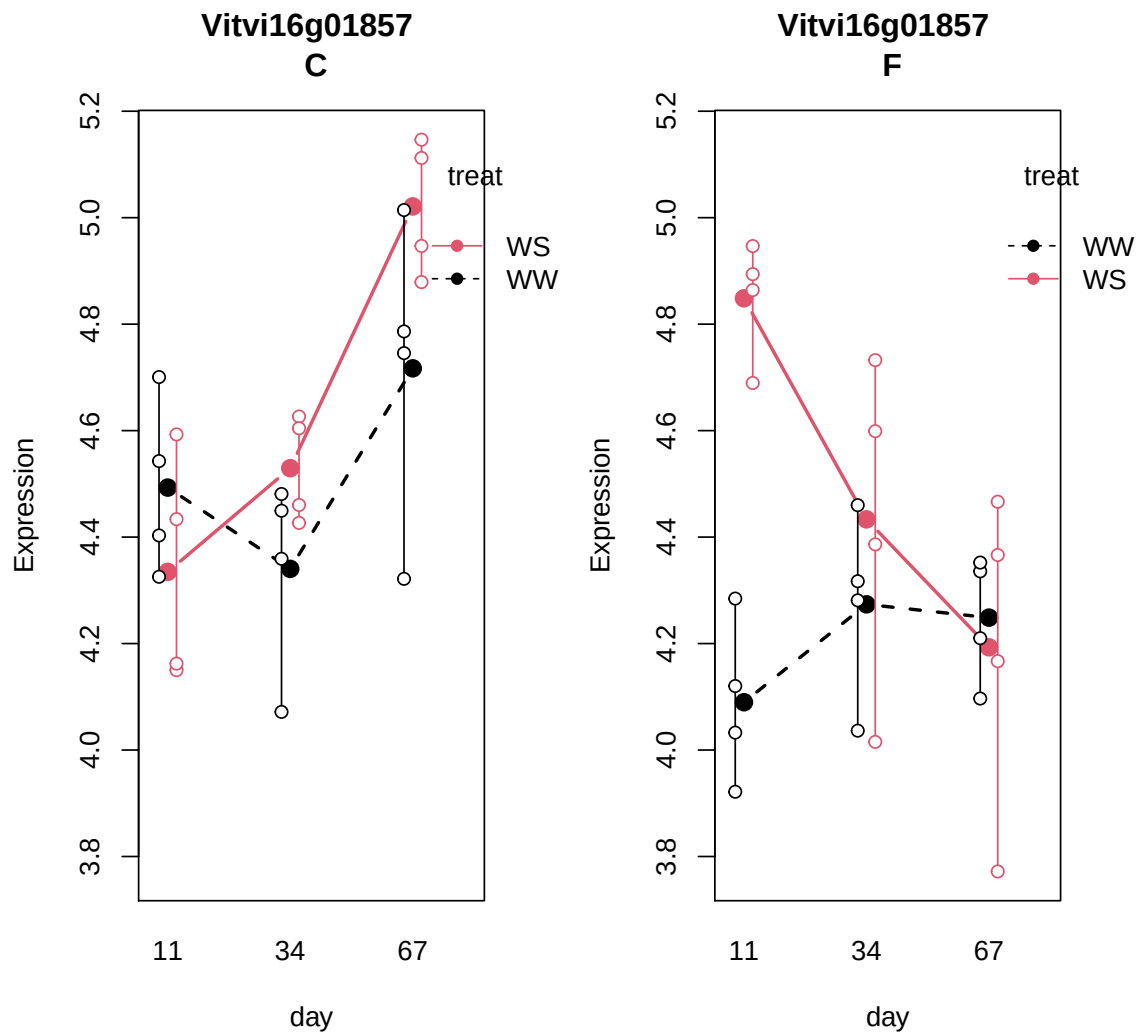


6.12.33 Vitvi16g01857

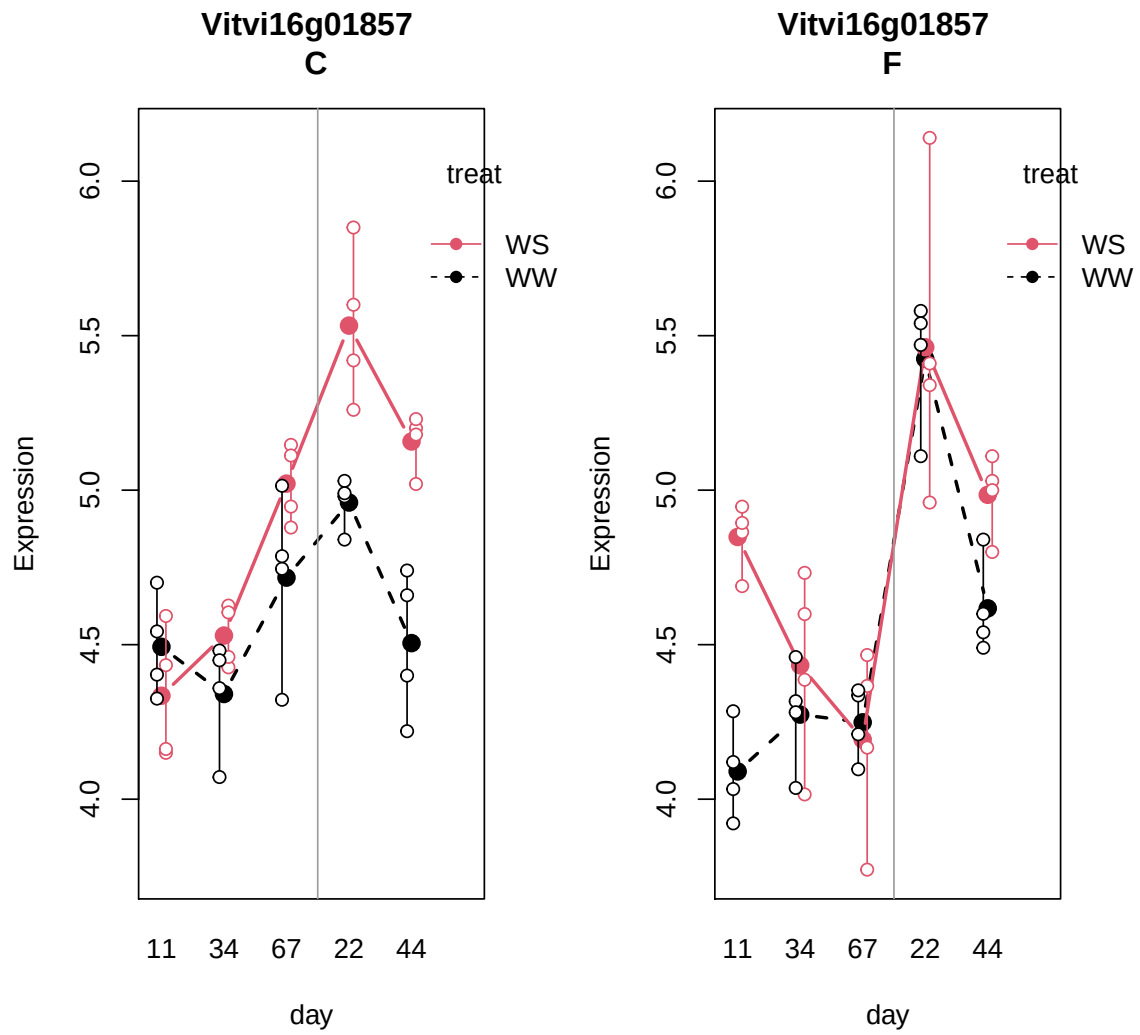
Coefficient varietyF:day67:treatWS for Vitvi16g01857.

```
> tt[varname,]
      logFC AveExpr      t    P.Value
Vitvi16g01857 -1.276912 4.460222 -4.46945 6.644343e-05
      adj.P.Val      B
Vitvi16g01857 0.02970383 1.647582

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

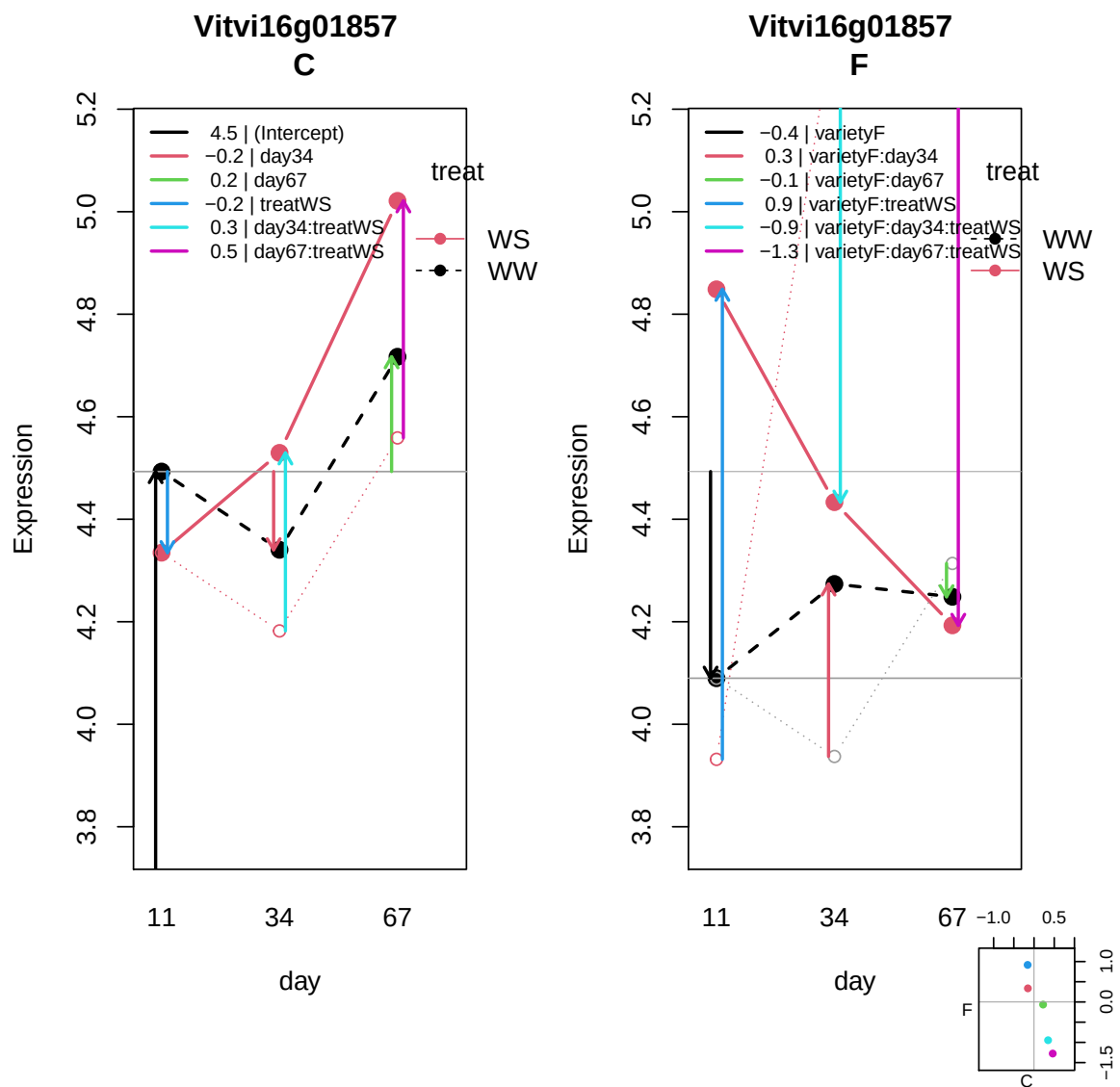
              (Intercept)    varietyF      day34      day67
Vitvi16g01857      4.493011 -0.4032065 -0.1526437 0.2239633
              treatWS    varietyF:day34    varietyF:day67
Vitvi16g01857 -0.1582725      0.3365121      -0.06509338
              varietyF:treatWS    day34:treatWS    day67:treatWS
Vitvi16g01857      0.9170003      0.3473942      0.4624624
              varietyF:day34:treatWS    varietyF:day67:treatWS
Vitvi16g01857      -0.9465044      -1.276912

```

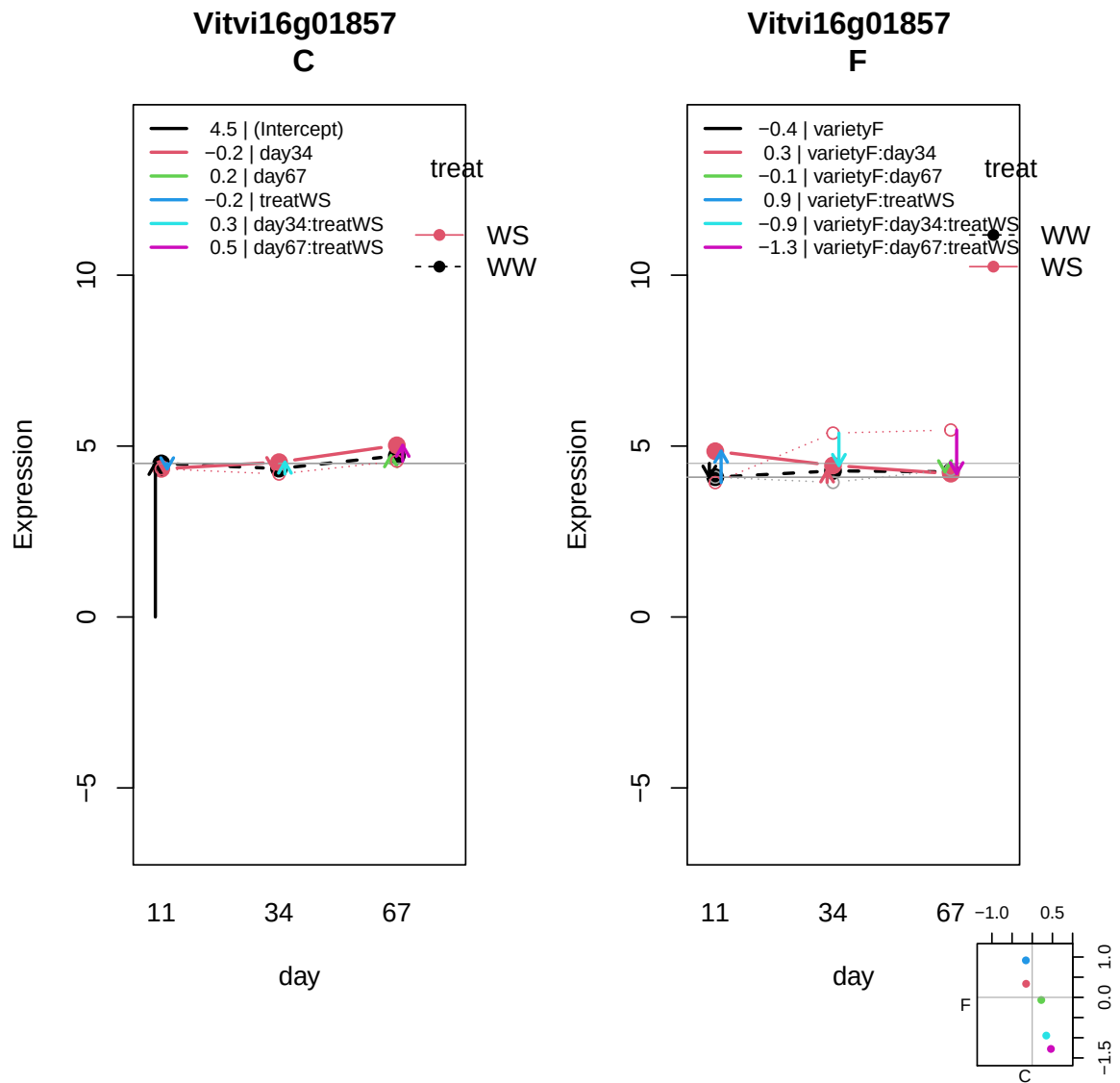
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

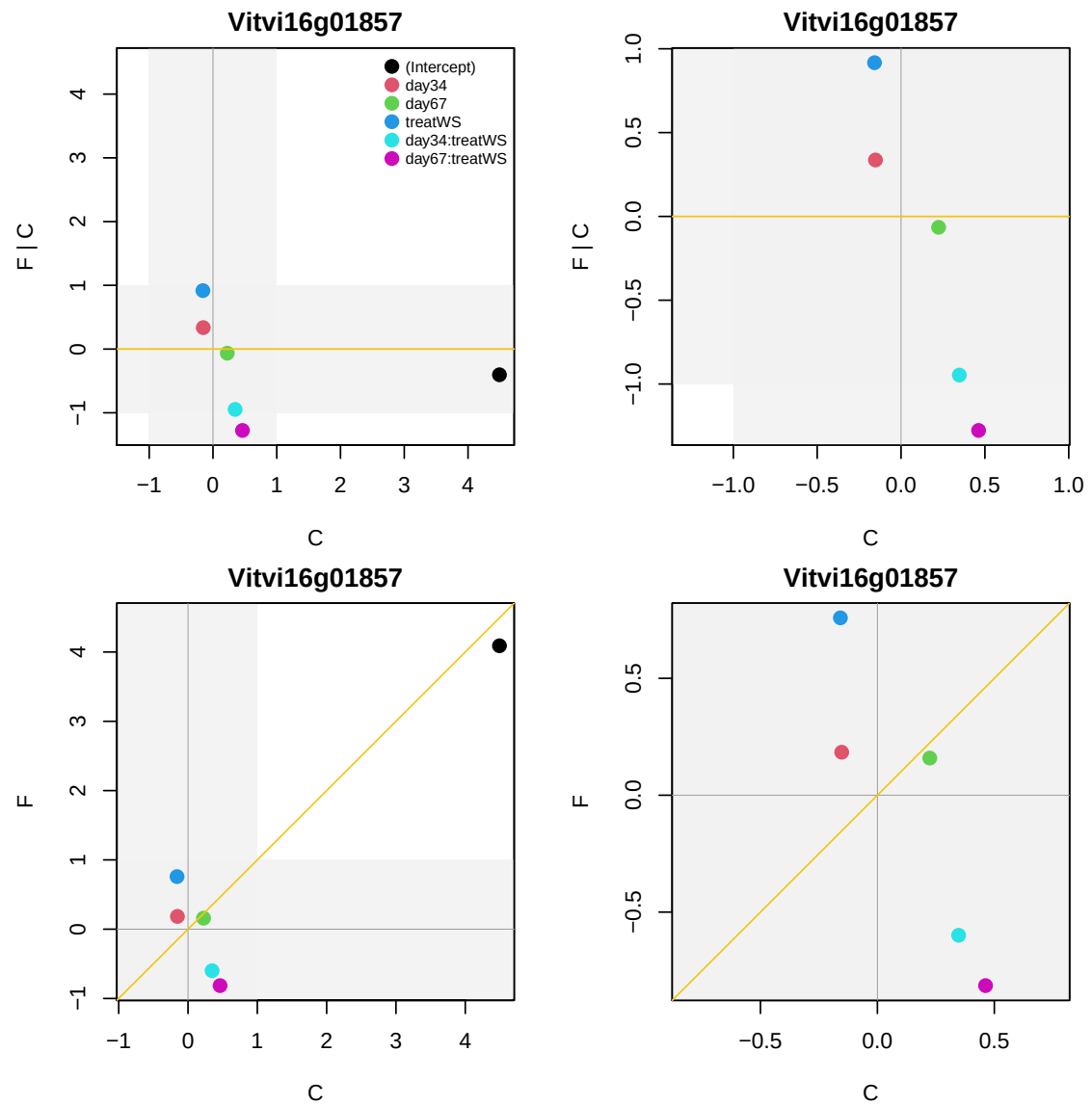


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

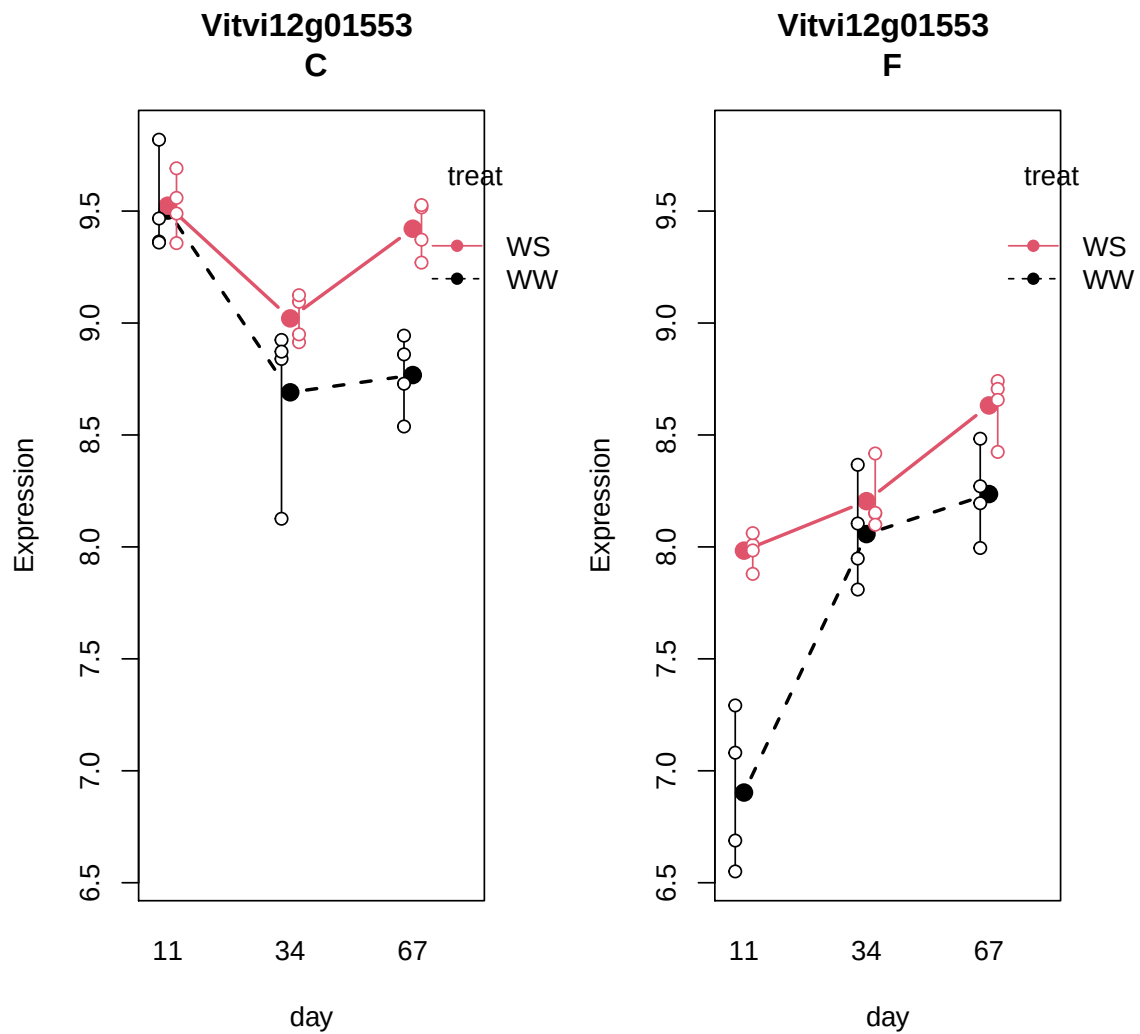


6.12.34 Vitvi12g01553

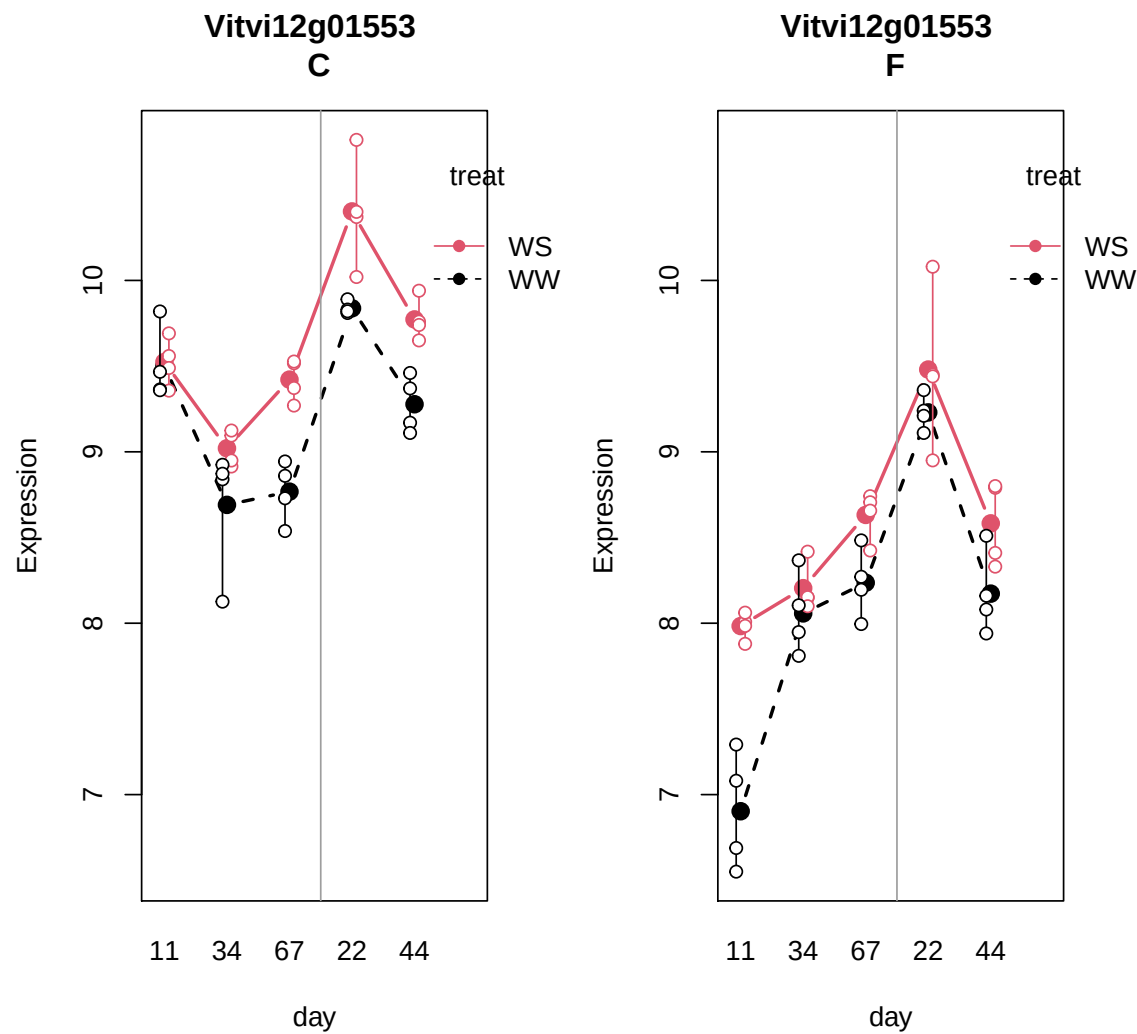
Coefficient varietyF:day67:treatWS for Vitvi12g01553.

```
> tt[varname,]
              logFC  AveExpr      t      P.Value
Vitvi12g01553 -1.31676  8.578498 -4.45543  6.937286e-05
              adj.P.Val      B
Vitvi12g01553  0.02970383  1.609178

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

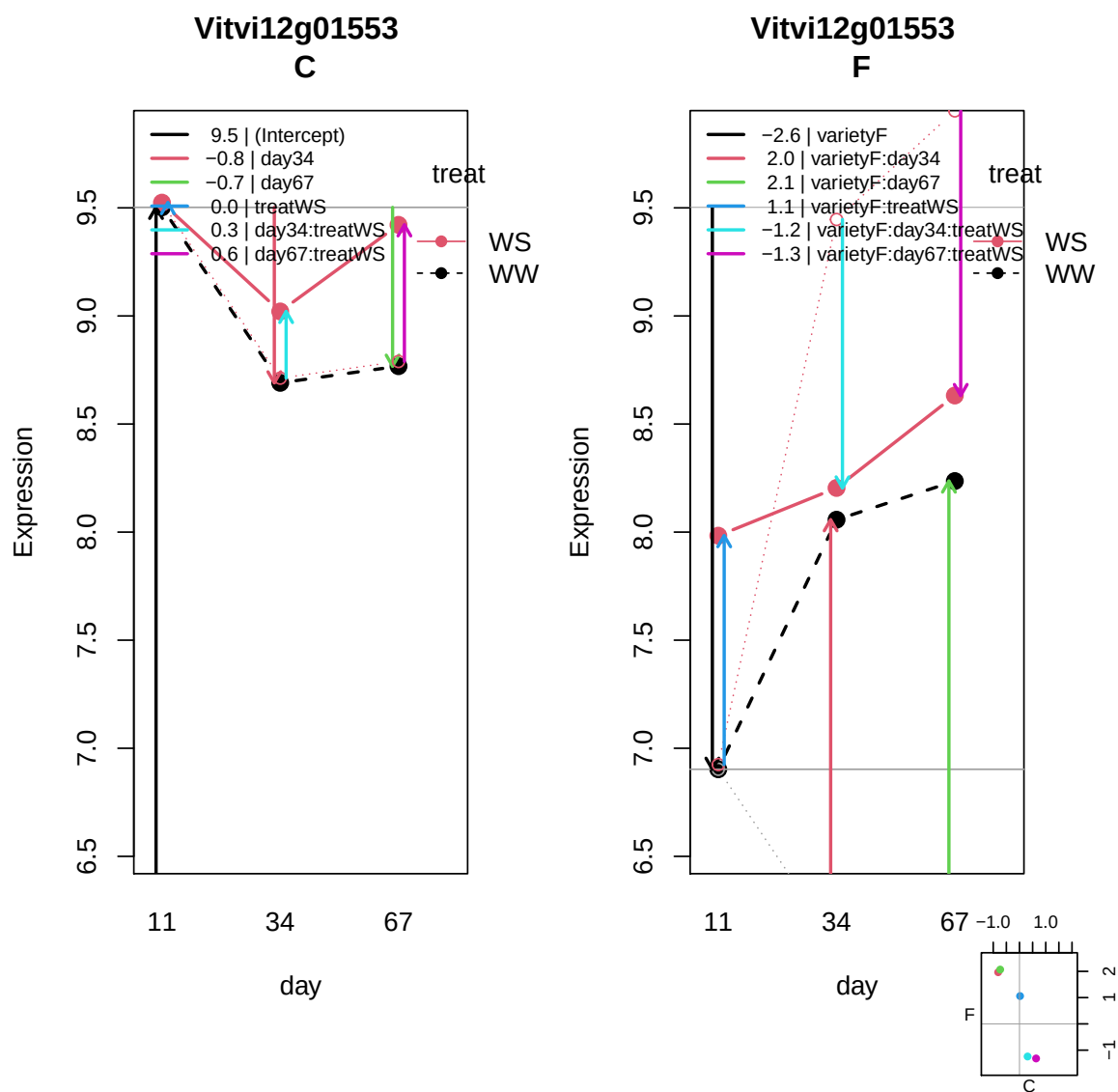
              (Intercept)  varietyF      day34      day67
Vitvi12g01553    9.502287 -2.599437 -0.8118201 -0.7347504
              treatWS varietyF:day34 varietyF:day67
Vitvi12g01553  0.02172823    1.966194    2.067972
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi12g01553    1.058777    0.3085093    0.6320472
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi12g01553    -1.241945    -1.31676

```

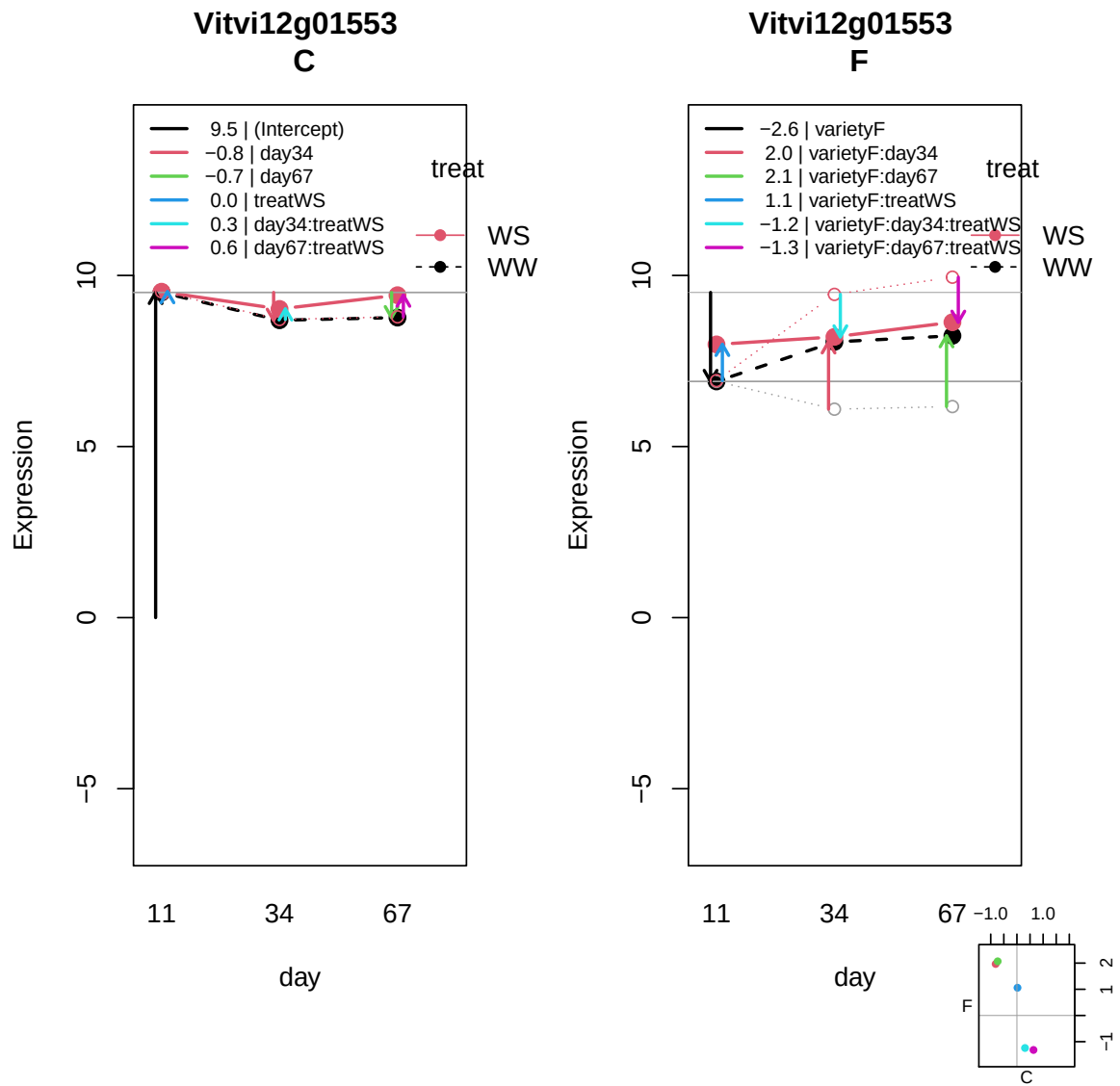
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

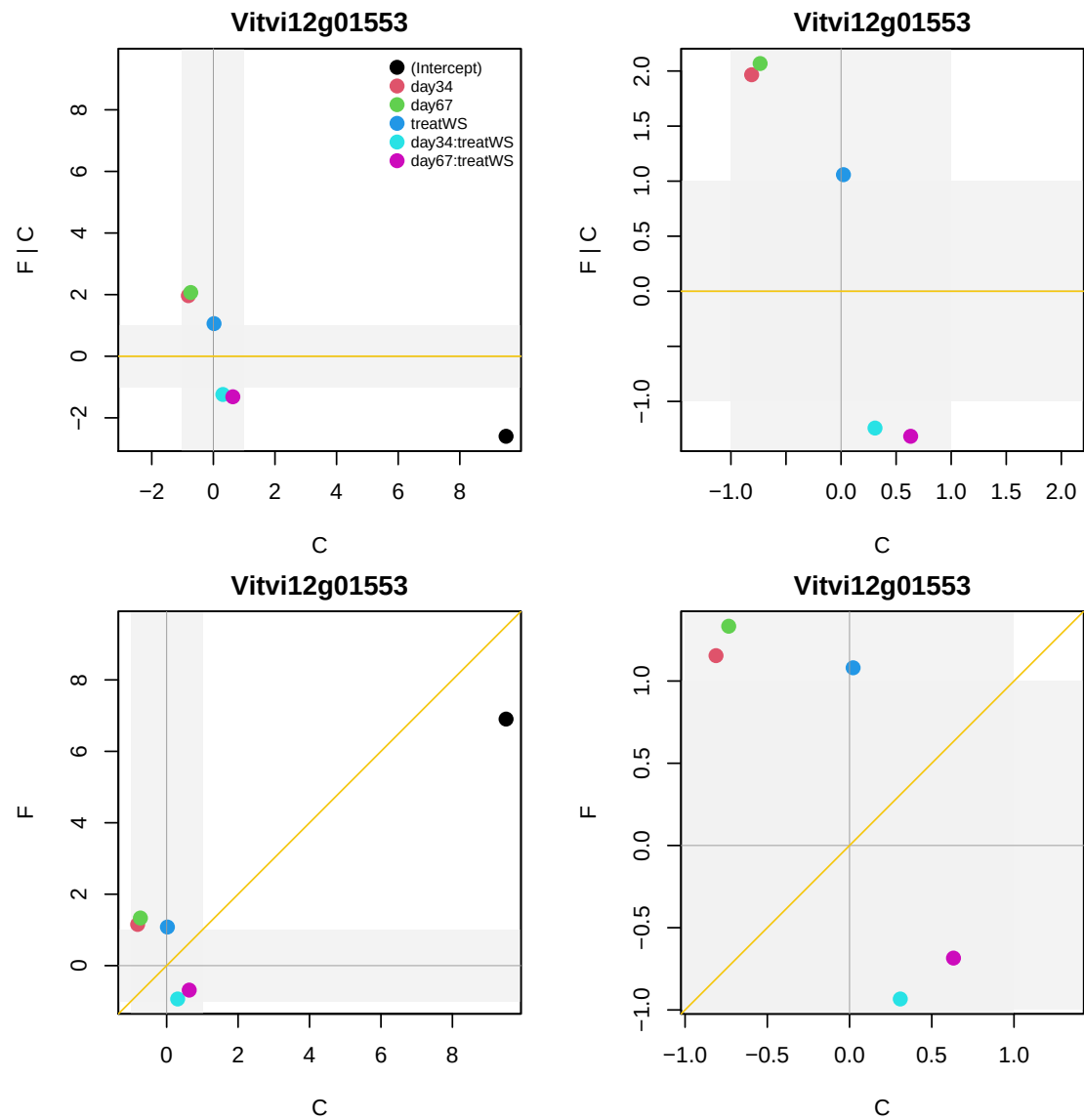


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

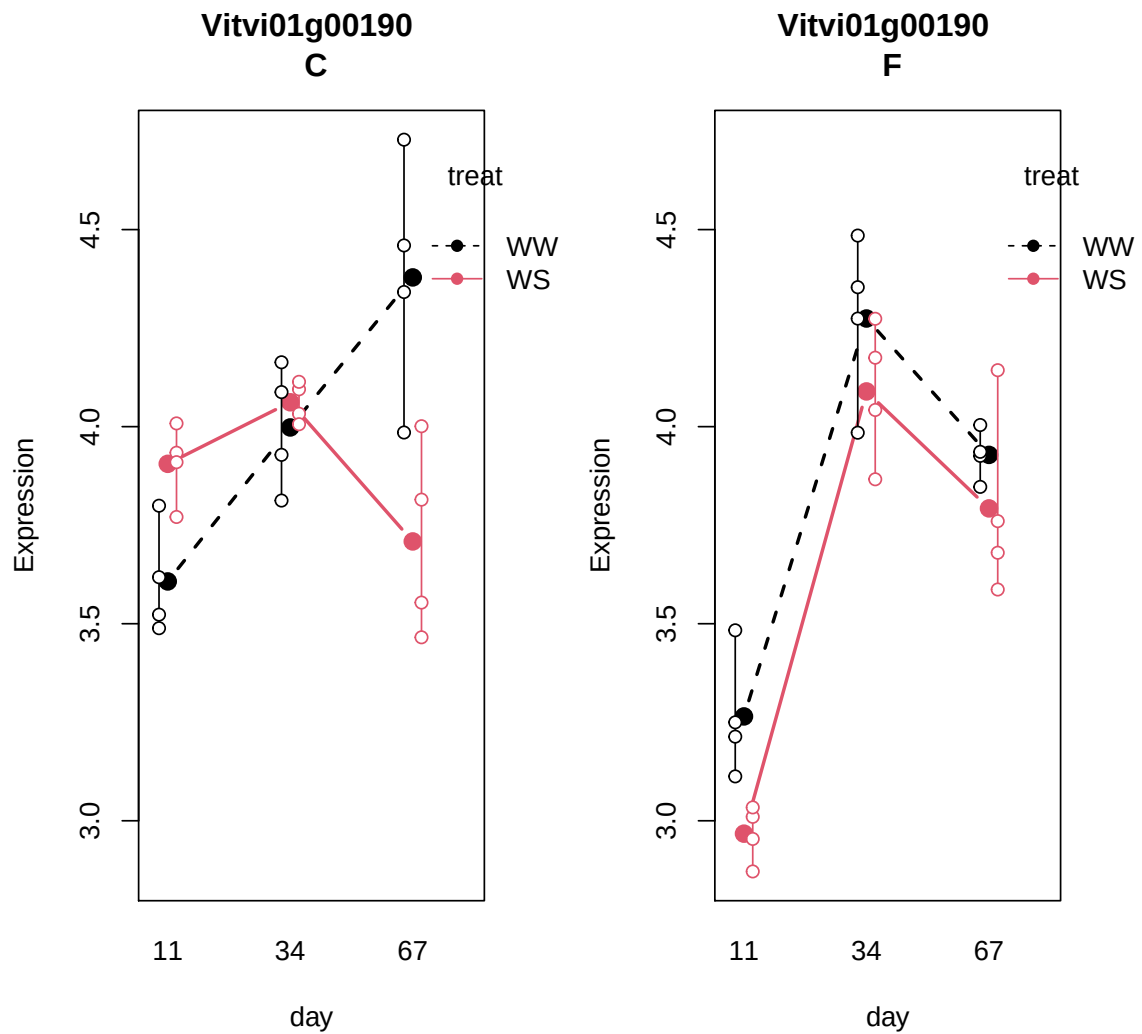


6.12.35 Vitvi01g00190

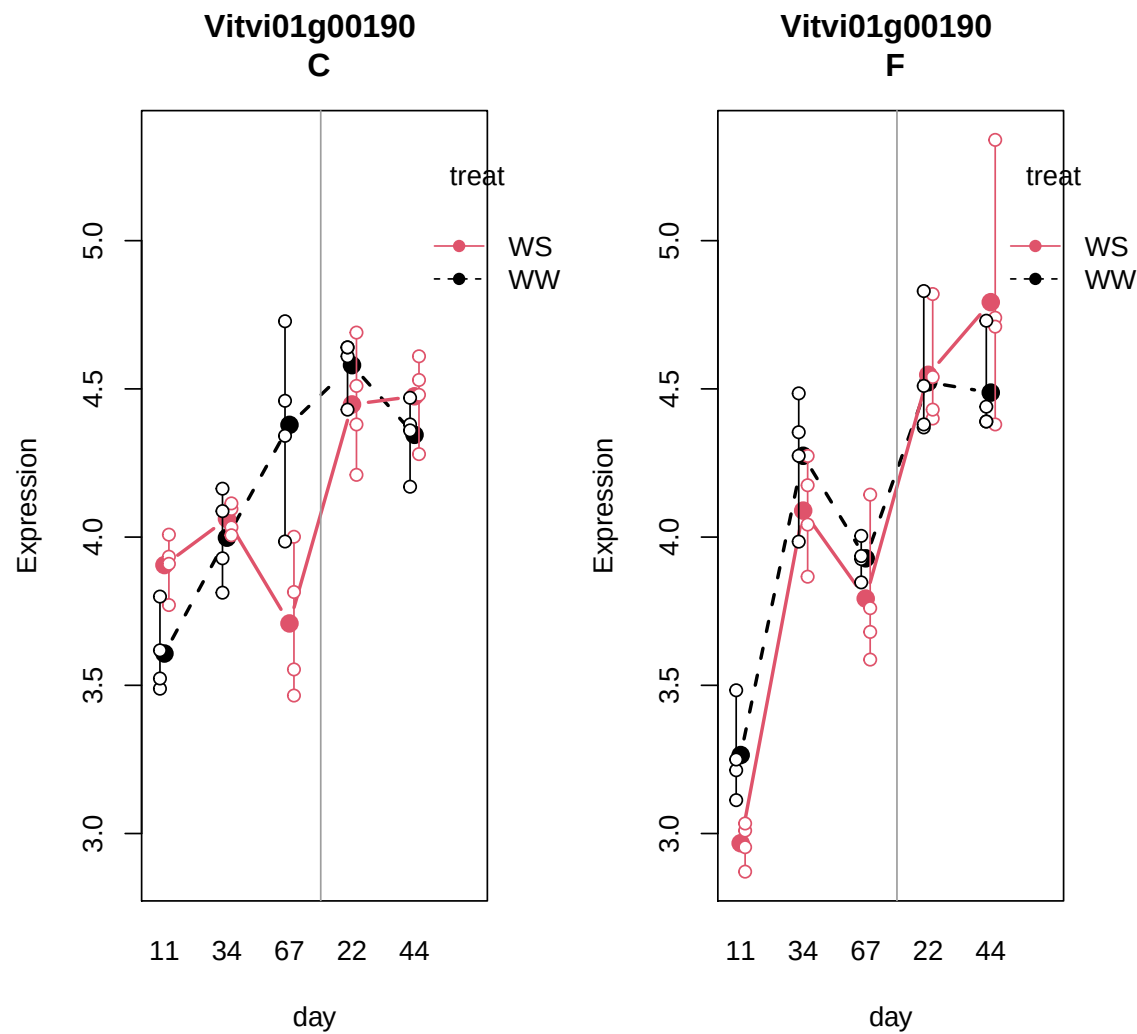
Coefficient varietyF:day67:treatWS for Vitvi01g00190.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi01g00190 1.130106 3.831419 4.452524 6.999579e-05
      adj.P.Val      B
Vitvi01g00190 0.02970383 1.601221

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

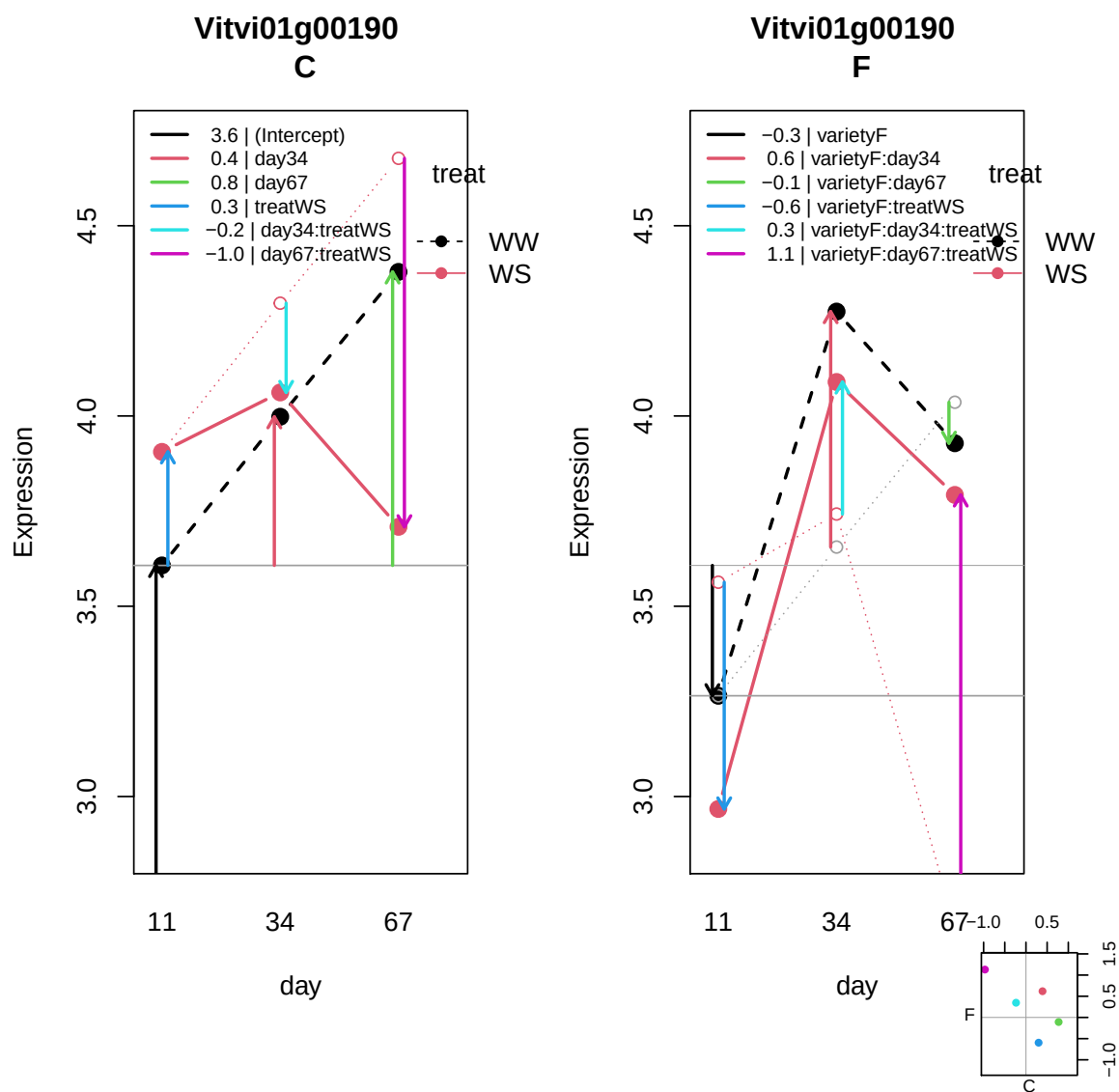
              (Intercept)  varietyF    day34    day67
Vitvi01g00190      3.60725 -0.3424752 0.390748 0.7714179
              treatWS  varietyF:day34  varietyF:day67
Vitvi01g00190 0.2984492      0.6188589      -0.1078425
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi01g00190      -0.5959367      -0.2345548      -0.968359
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi01g00190      0.3470188      1.130106

```

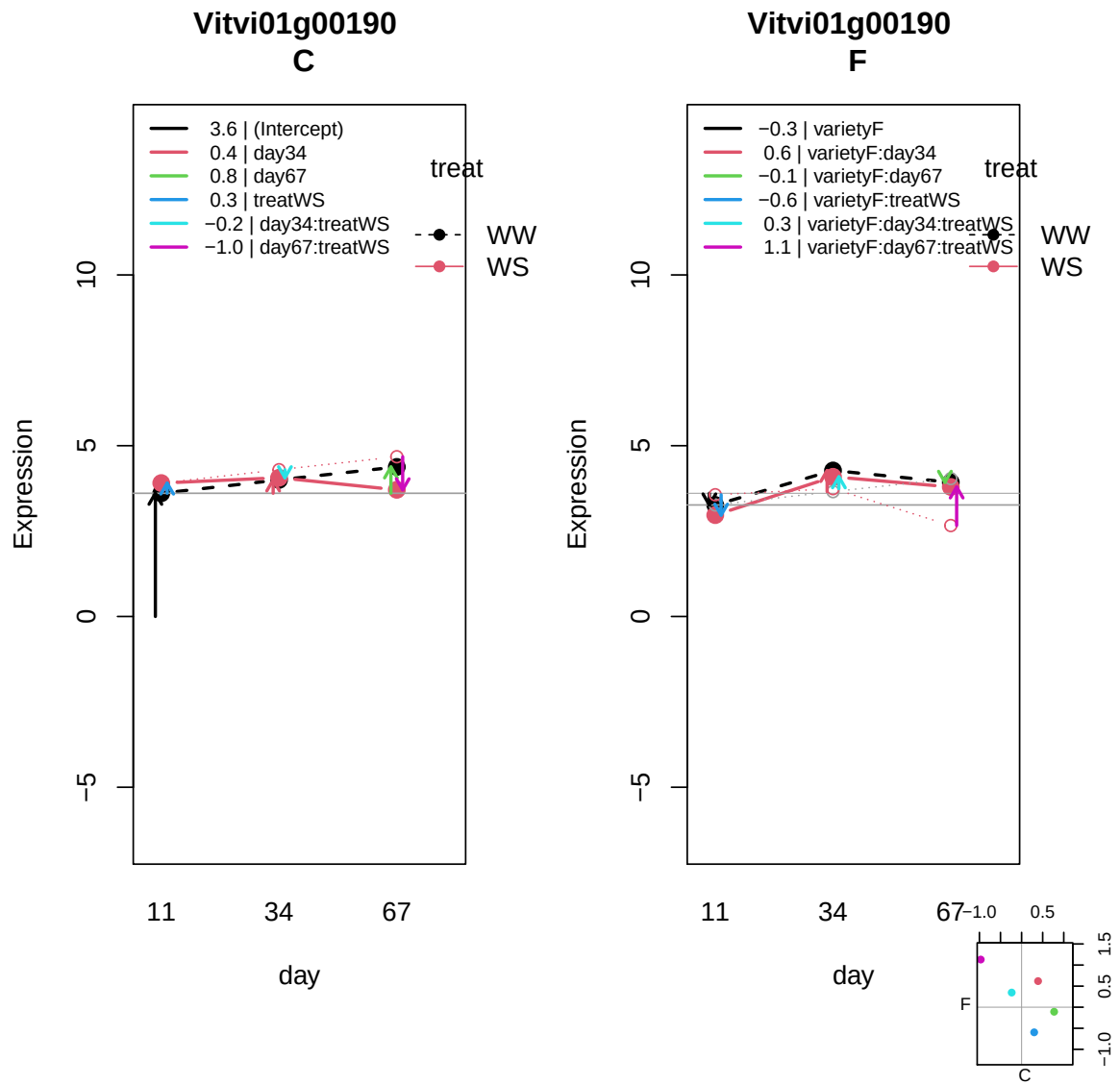
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

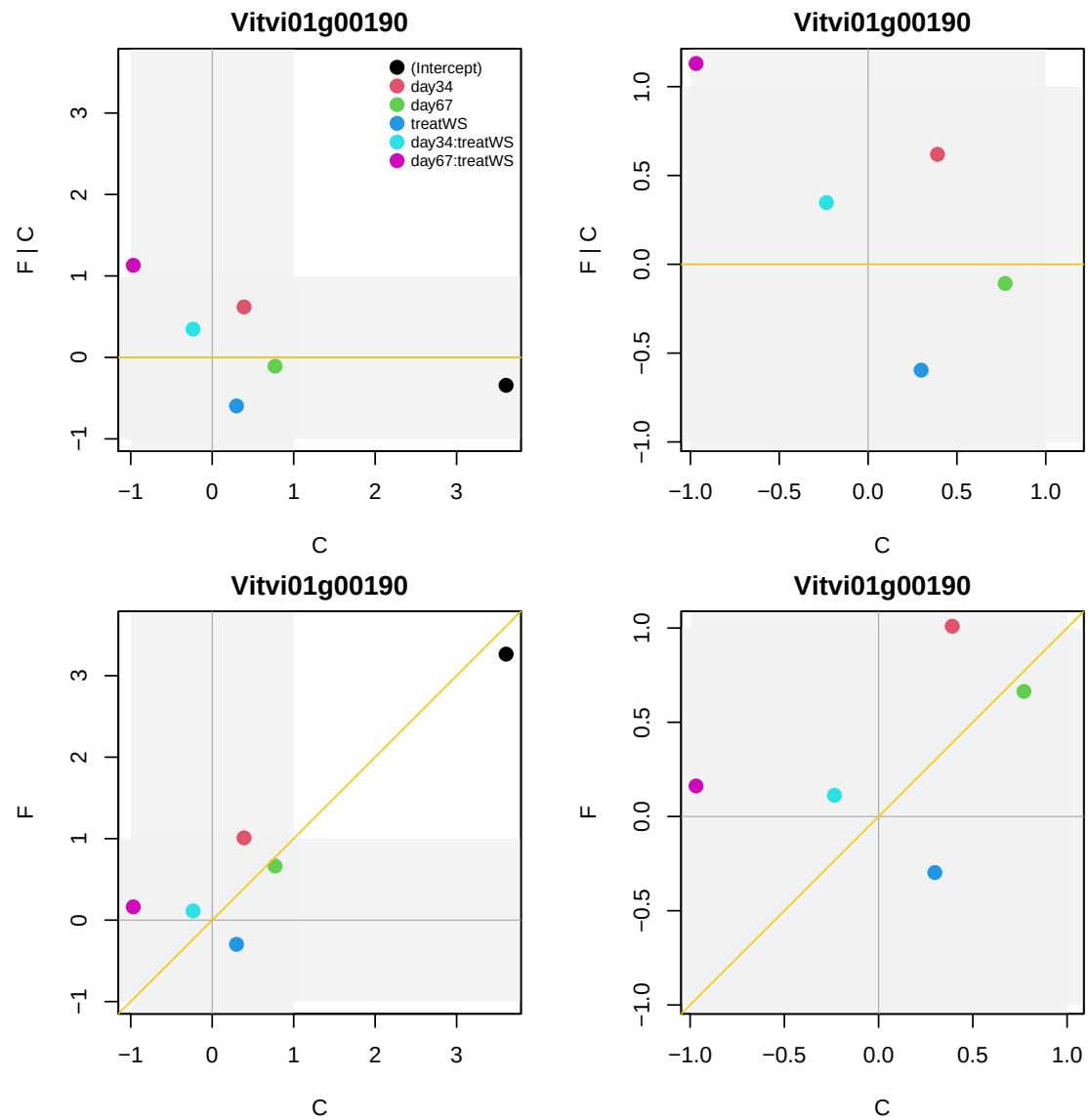



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

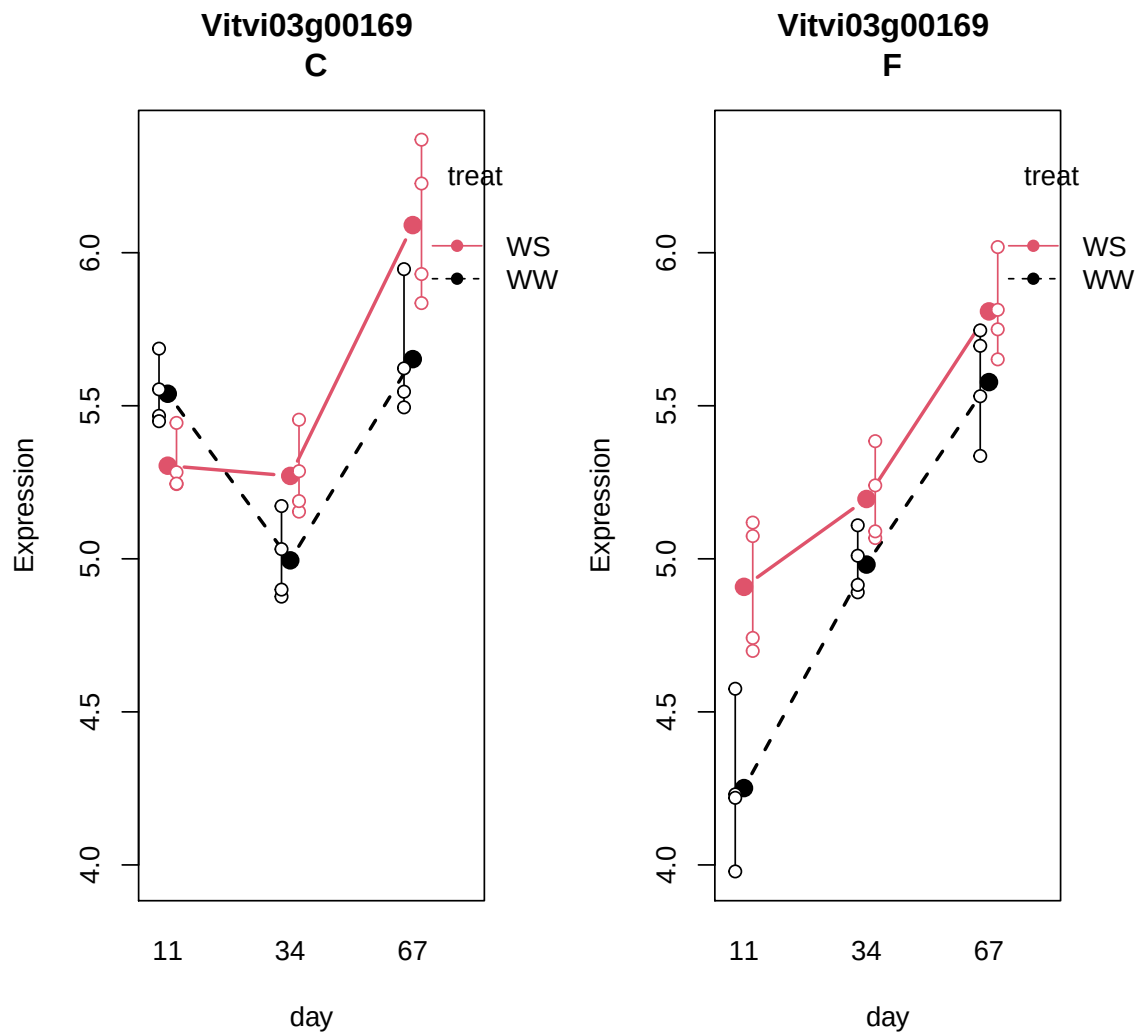
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



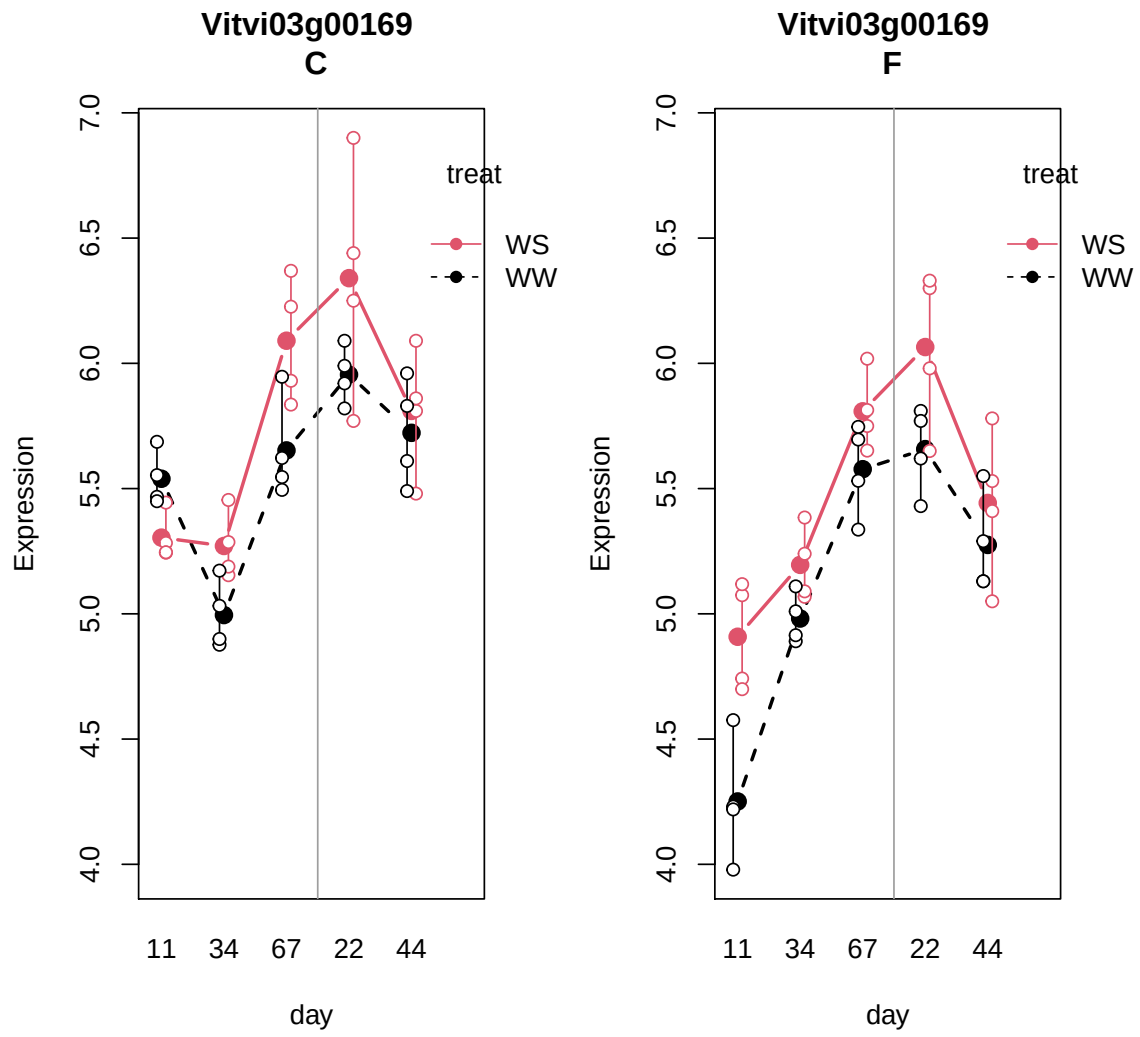
6.12.36 Vitvi03g00169

Coefficient varietyF:day67:treatWS for Vitvi03g00169.

```
> tt[varname,]
      logFC AveExpr      t    P.Value
Vitvi03g00169 -1.09945 5.297785 -4.451775 7.015731e-05
      adj.P.Val      B
Vitvi03g00169 0.02970383 1.59917
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



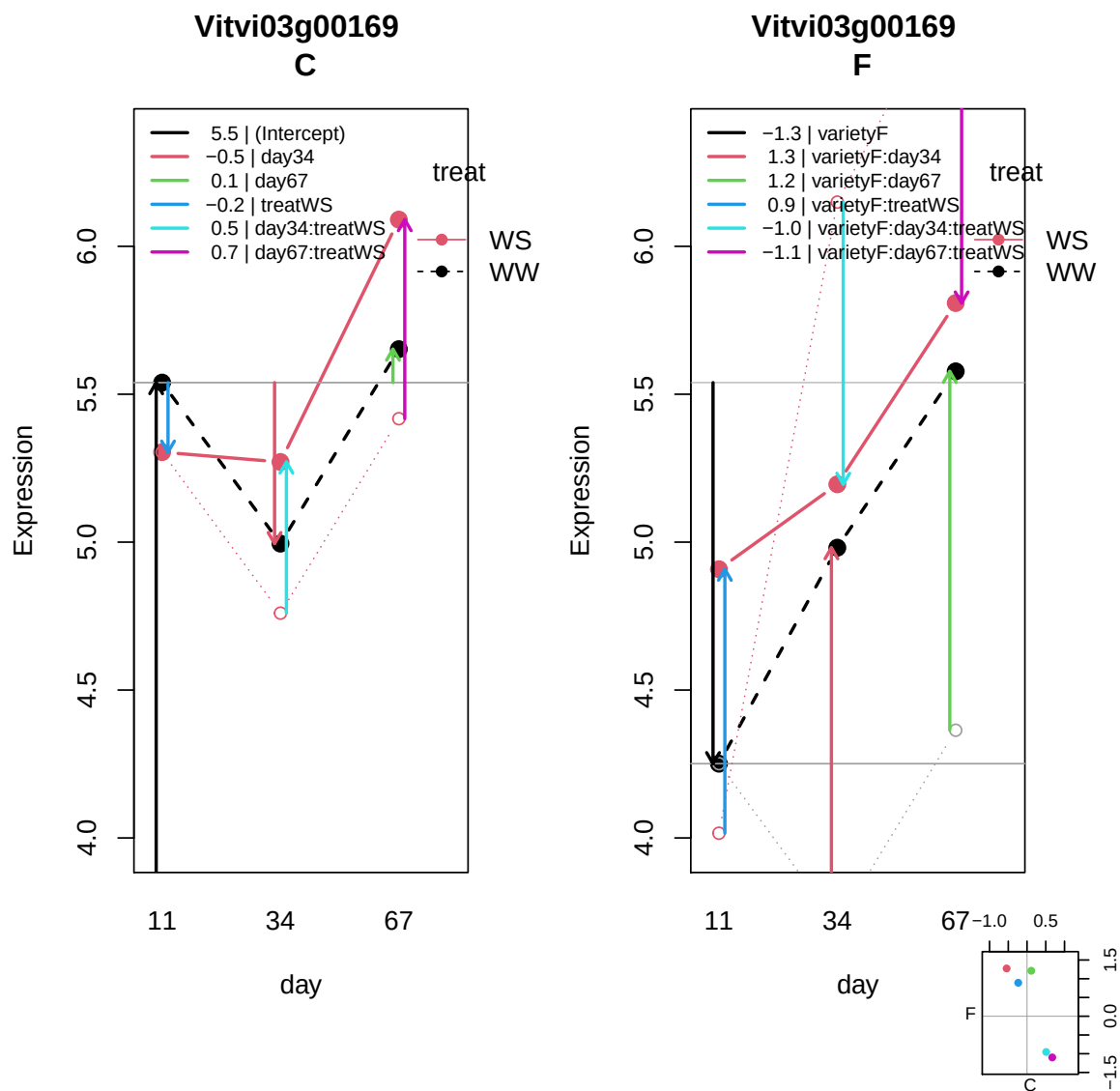
```

> fit1[varname,]$coefficients

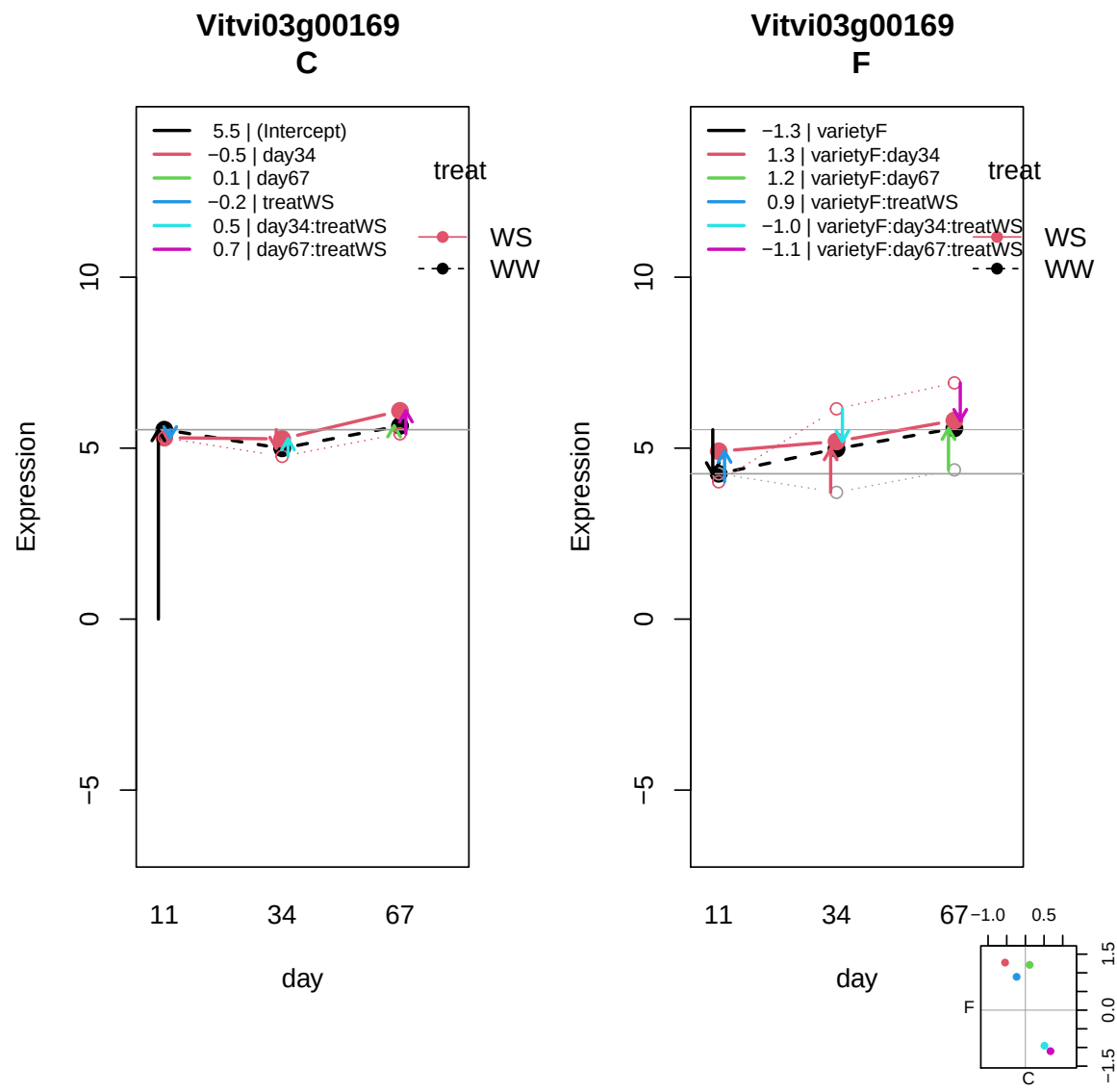
              (Intercept)  varietyF      day34      day67
Vitvi03g00169      5.539248 -1.28828 -0.5442423 0.1130438
              treatWS  varietyF:day34  varietyF:day67
Vitvi03g00169 -0.2350697      1.274439      1.213319
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi03g00169      0.8924674      0.5109255      0.6730303
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi03g00169      -0.9540444      -1.09945

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

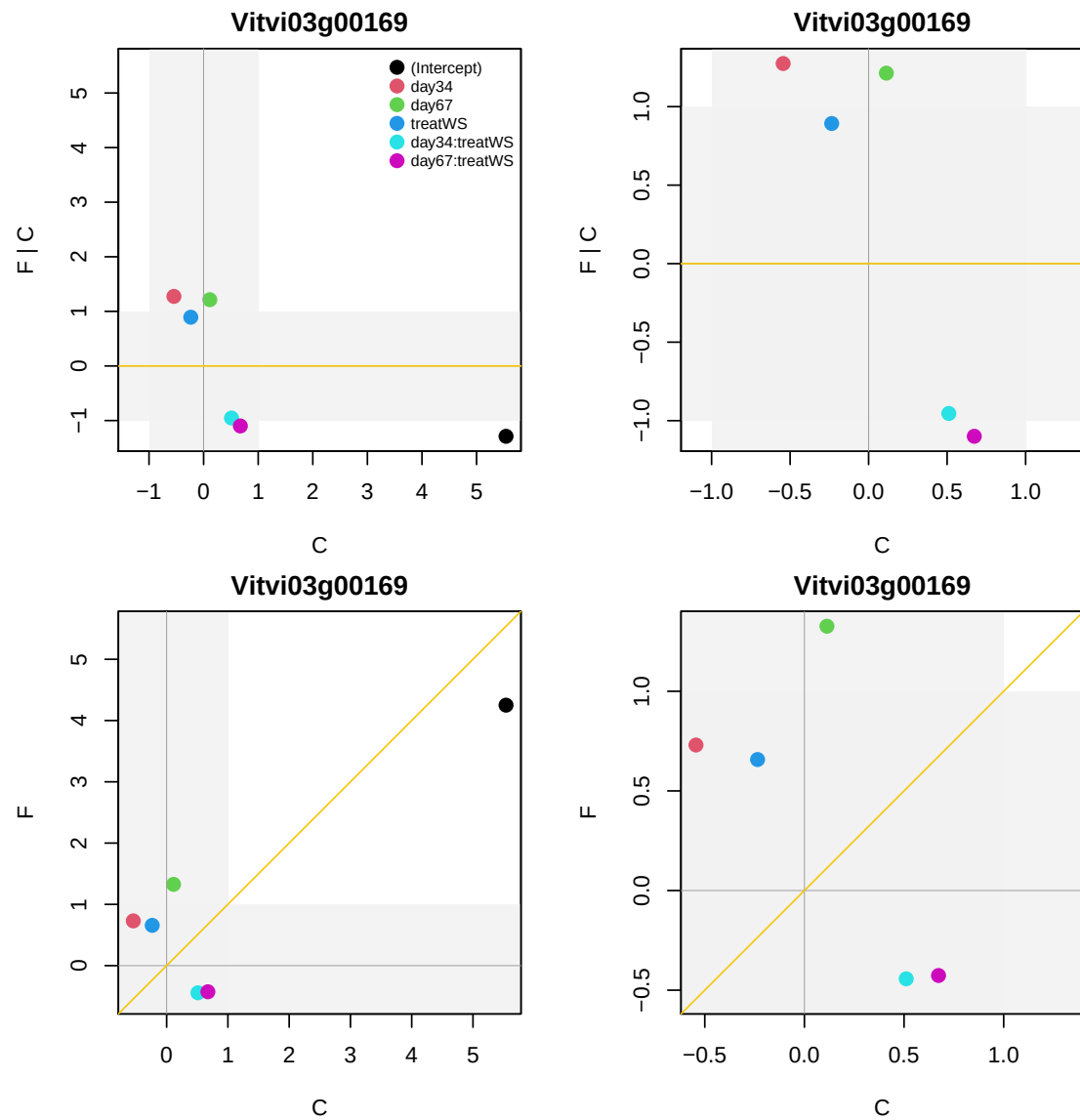


```
> coefs <- plot.interactions(varname,  
+ coef=fit1[varname,]$coefficients,  
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

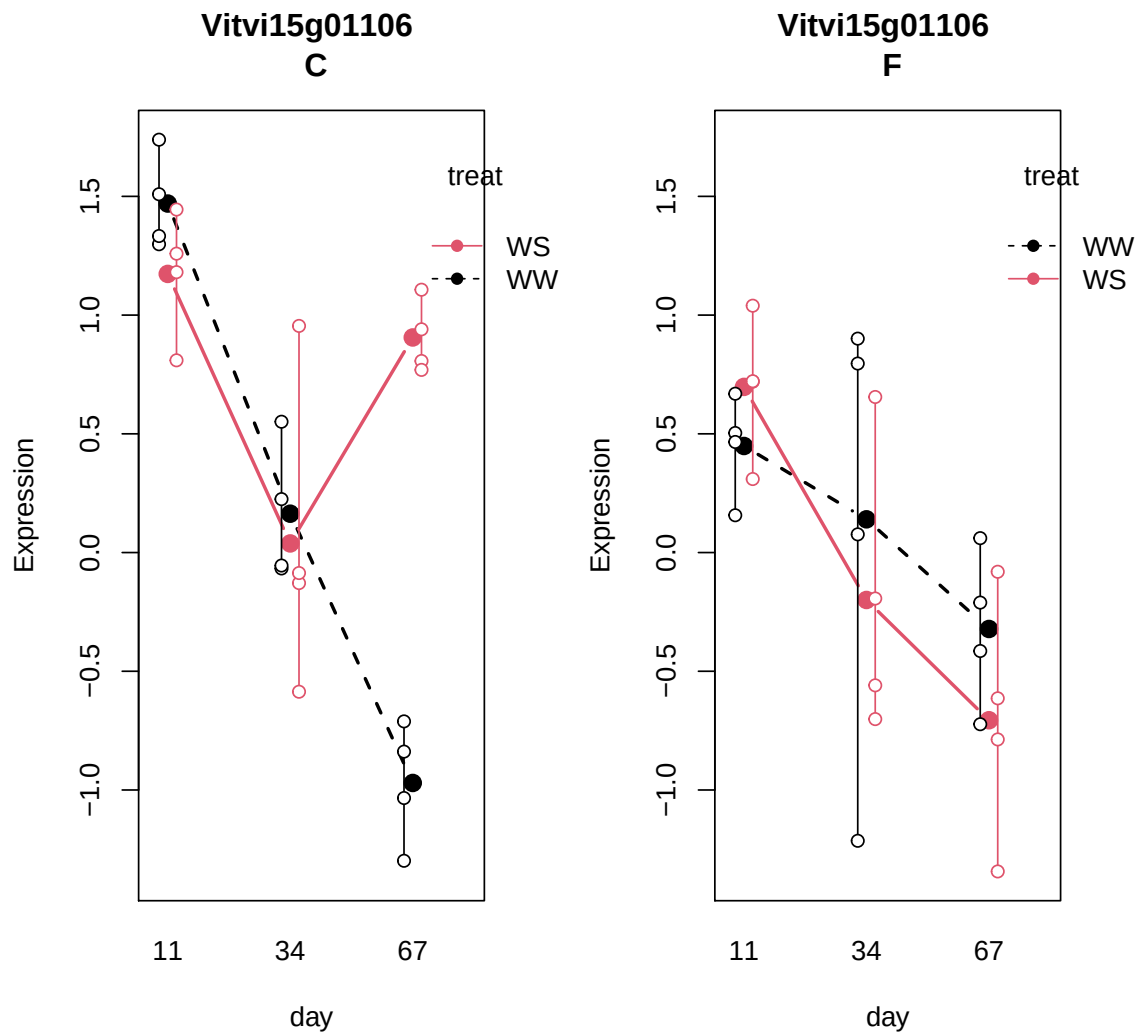


6.12.37 Vitvi15g01106

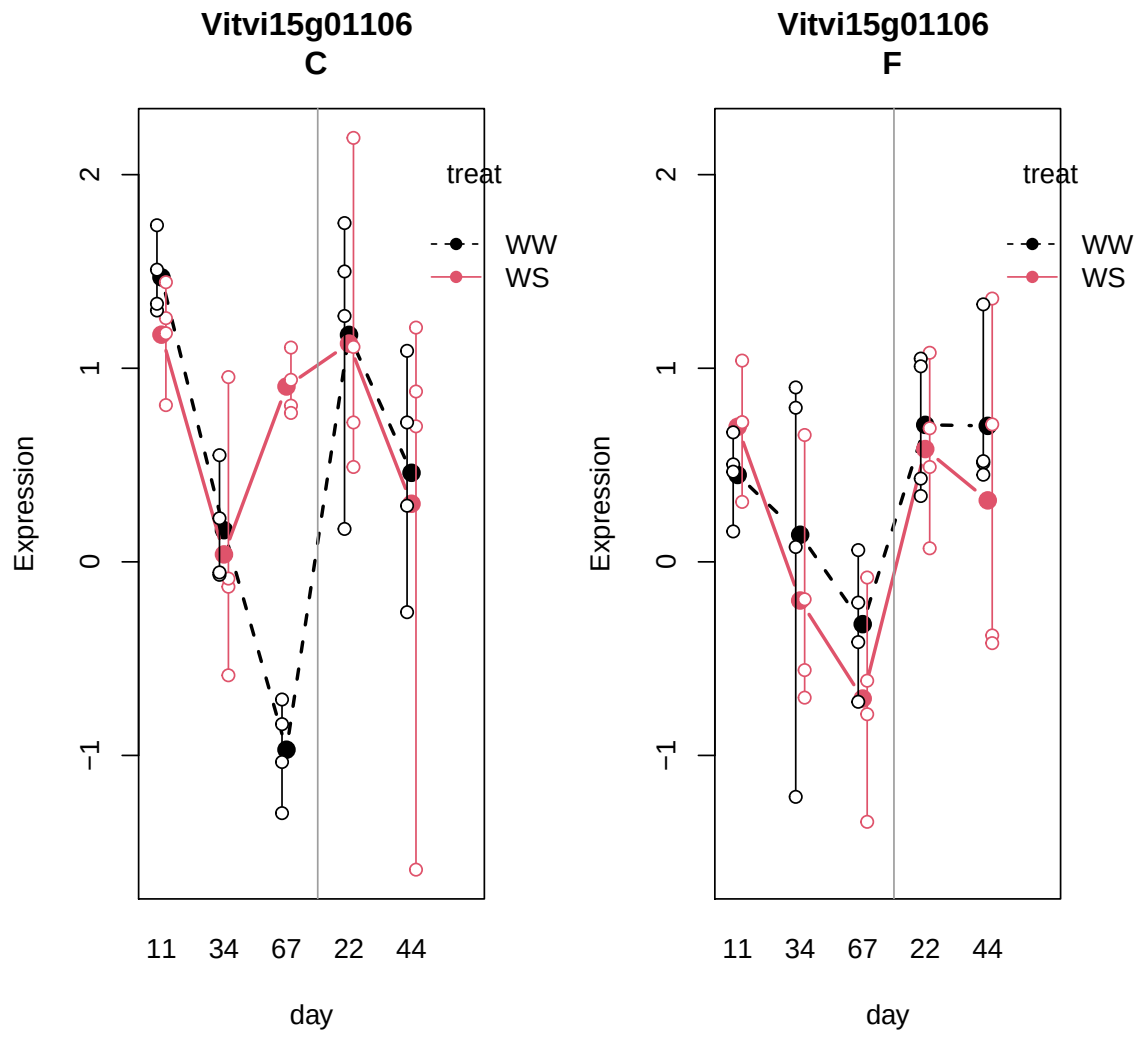
Coefficient varietyF:day67:treatWS for Vitvi15g01106.

```
> tt[varname,]
      logFC  AveExpr      t    P.Value
Vitvi15g01106 -2.805691 0.2365772 -4.438983 7.29715e-05
      adj.P.Val      B
Vitvi15g01106 0.02981939 1.564164

> plot.interactions(varname,phdata=pd,data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

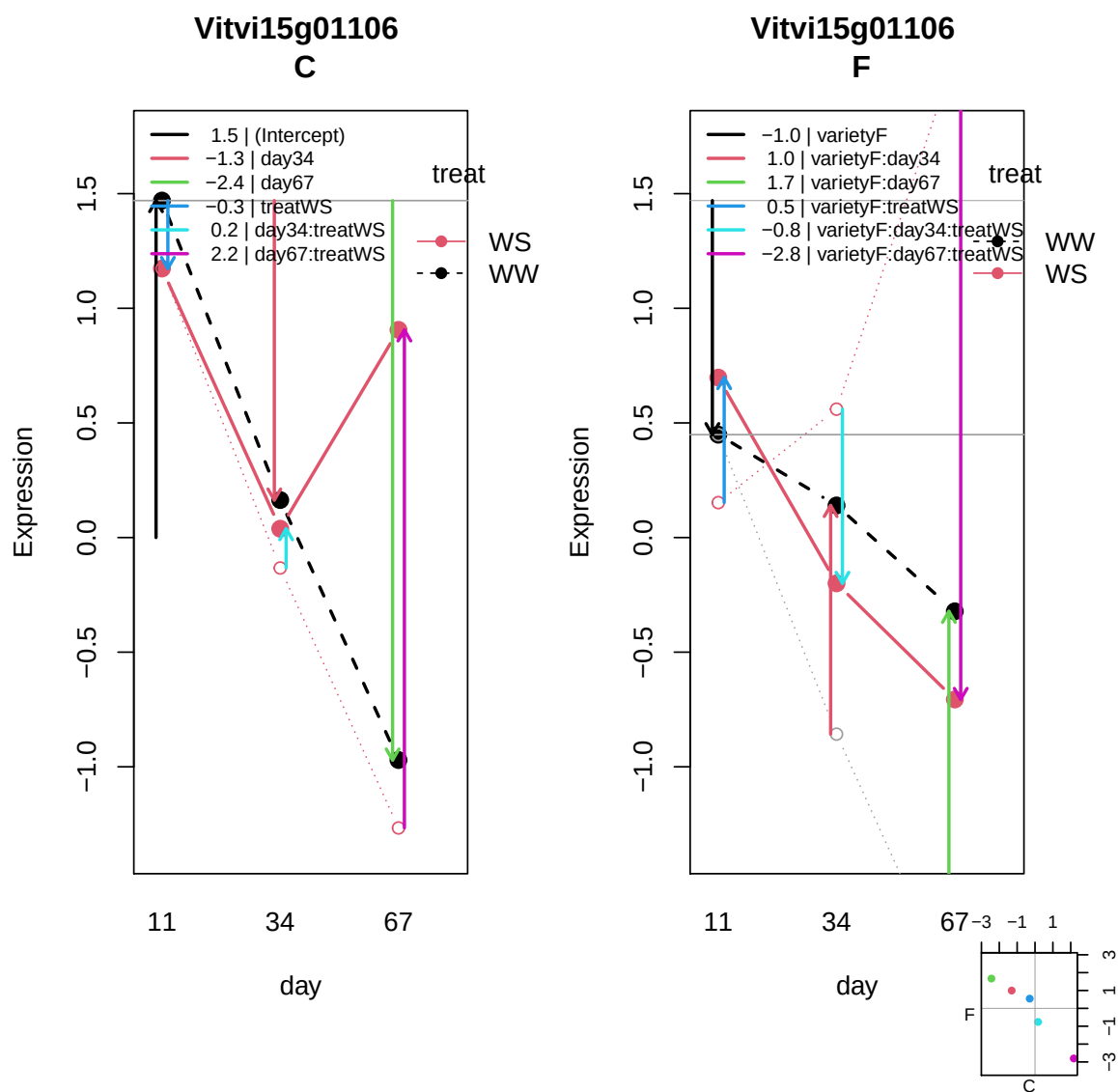
              (Intercept)  varietyF      day34      day67
Vitvi15g01106      1.46985 -1.021075 -1.306291 -2.440232
              treatWS varietyF:day34 varietyF:day67
Vitvi15g01106 -0.2964026      0.997402      1.669533
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi15g01106      0.5452027      0.1712023      2.172574
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi15g01106      -0.7596587      -2.805691

```

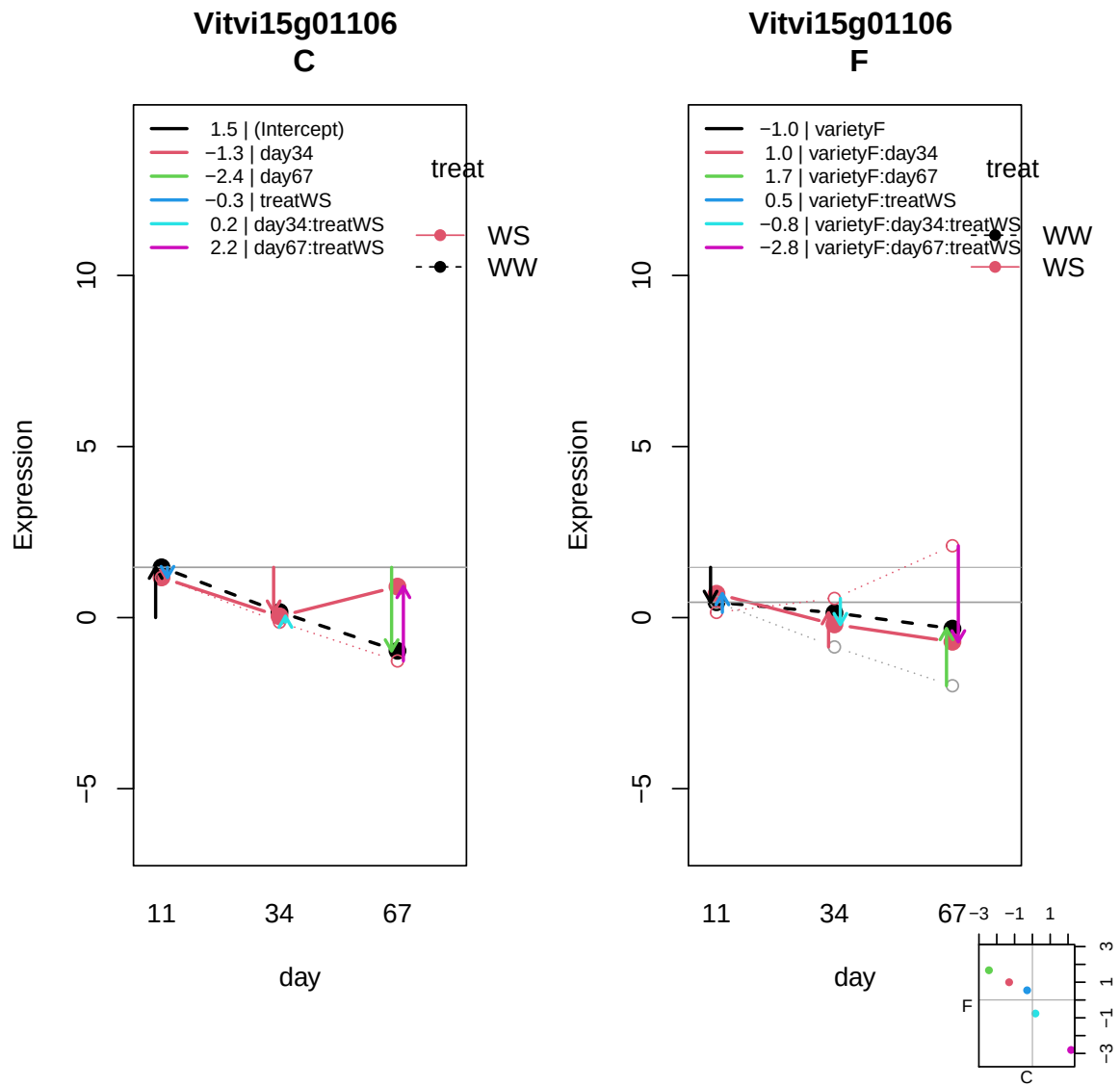
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

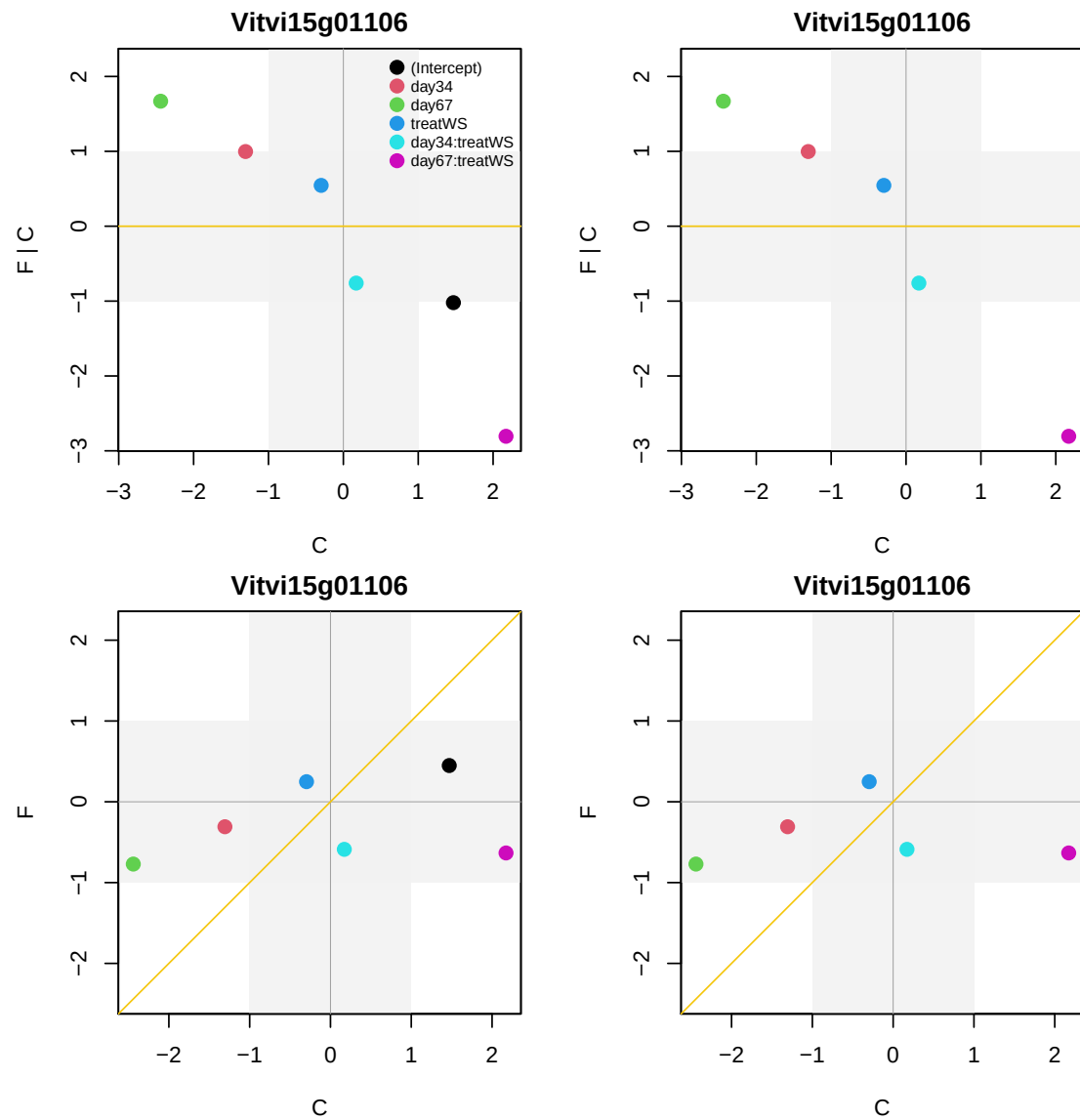


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

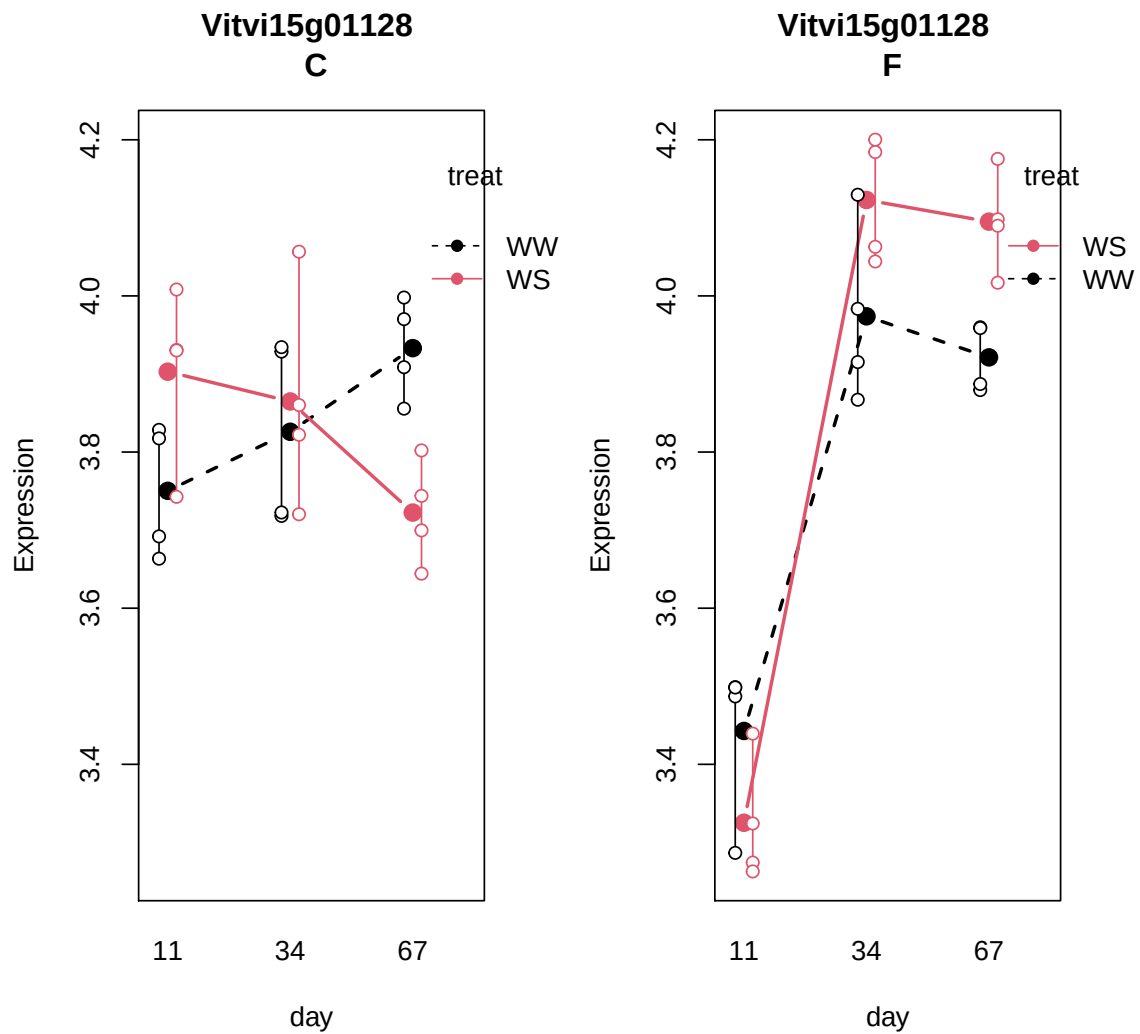


6.12.38 Vitvi15g01128

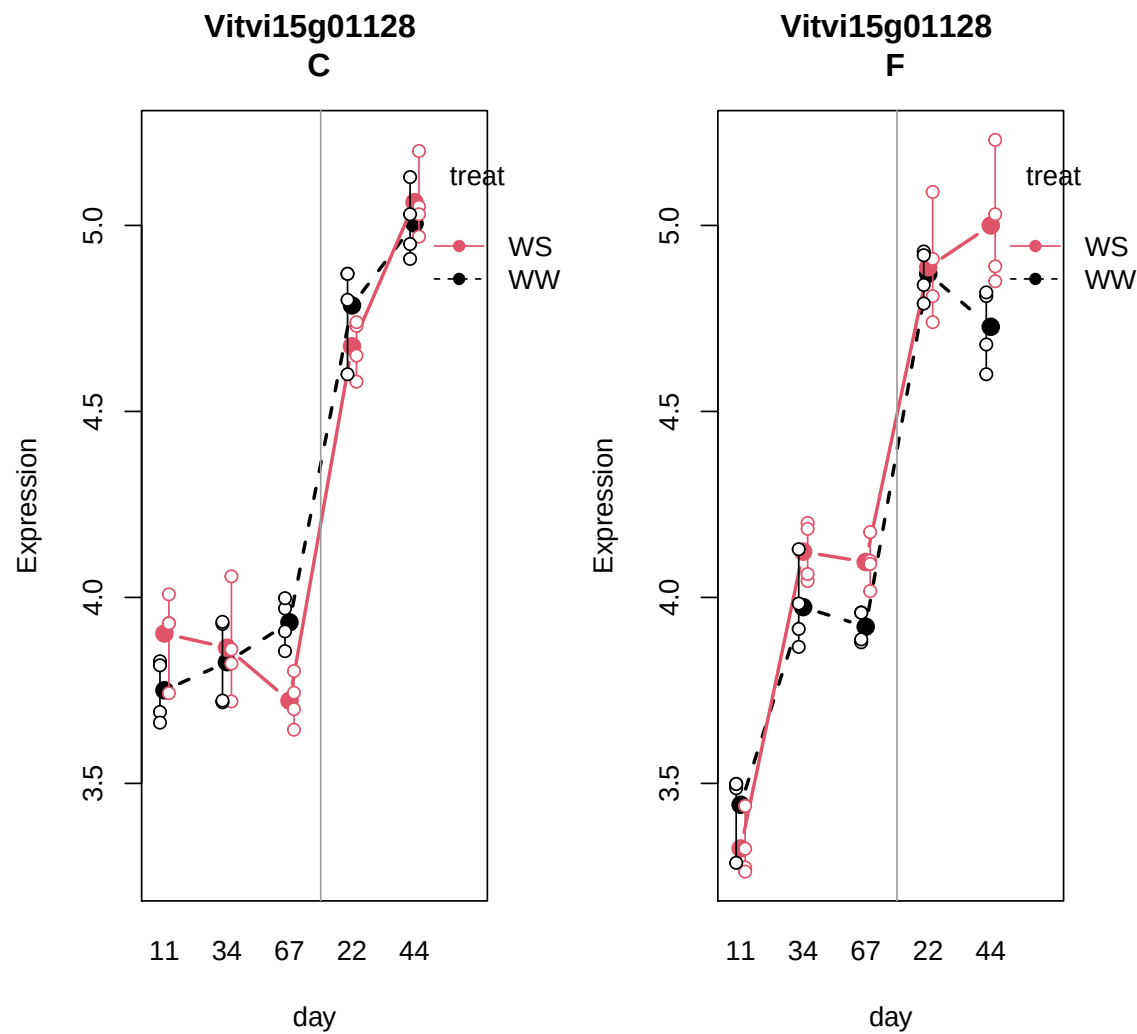
Coefficient varietyF:day67:treatWS for Vitvi15g01128.

```
> tt[varname,]
      logFC AveExpr      t    P.Value
Vitvi15g01128 0.6546363 3.823385 4.430087 7.499382e-05
      adj.P.Val      B
Vitvi15g01128 0.02981939 1.539833

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

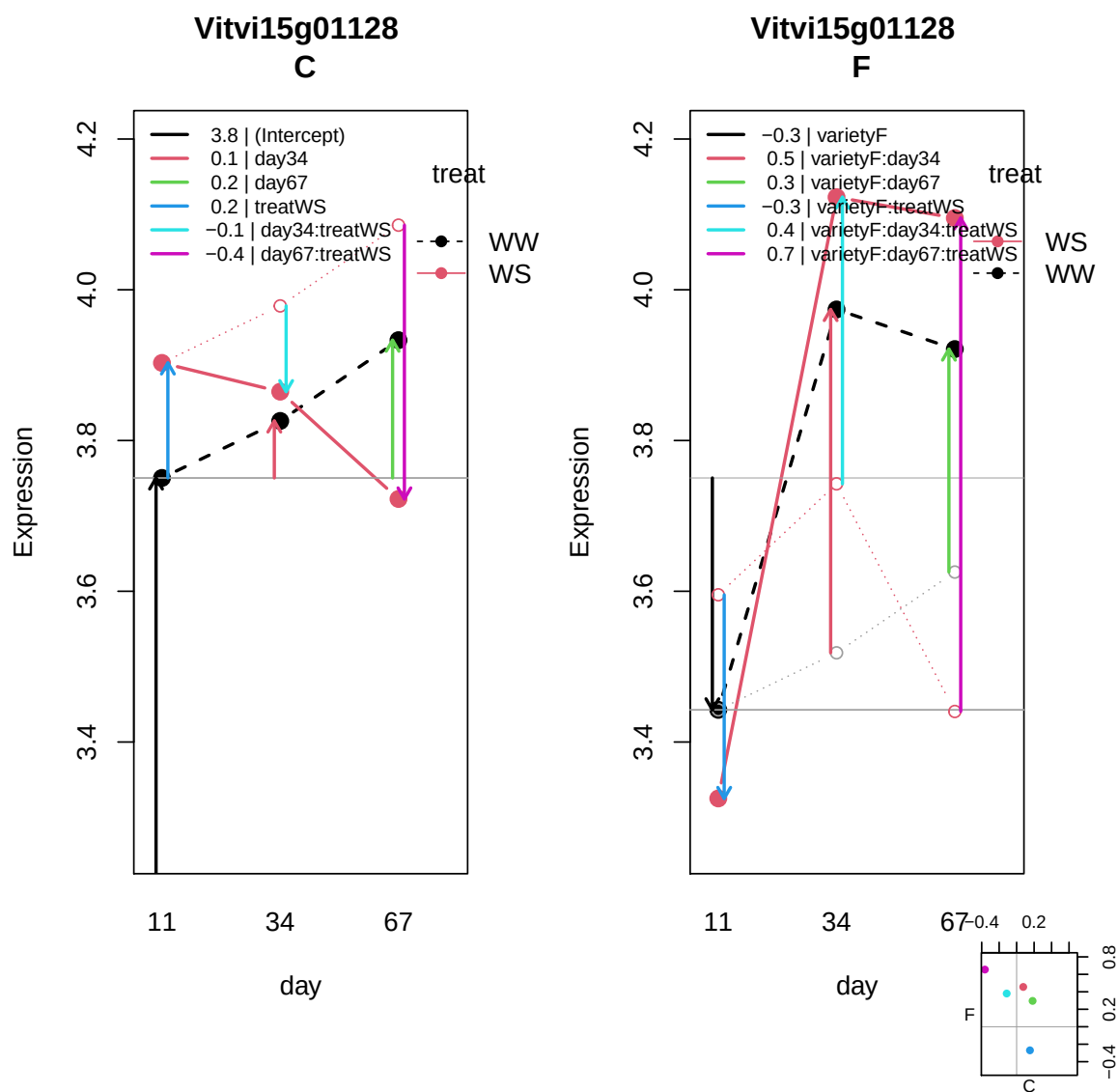
      (Intercept)  varietyF      day34      day67
Vitvi15g01128    3.750327 -0.3076245 0.07563558 0.1827809
      treatWS varietyF:day34 varietyF:day67
Vitvi15g01128  0.1526059      0.4555084      0.29582
      varietyF:treatWS day34:treatWS day67:treatWS
Vitvi15g01128    -0.2701725    -0.1137555    -0.3632362
      varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi15g01128          0.3803412          0.6546363

```

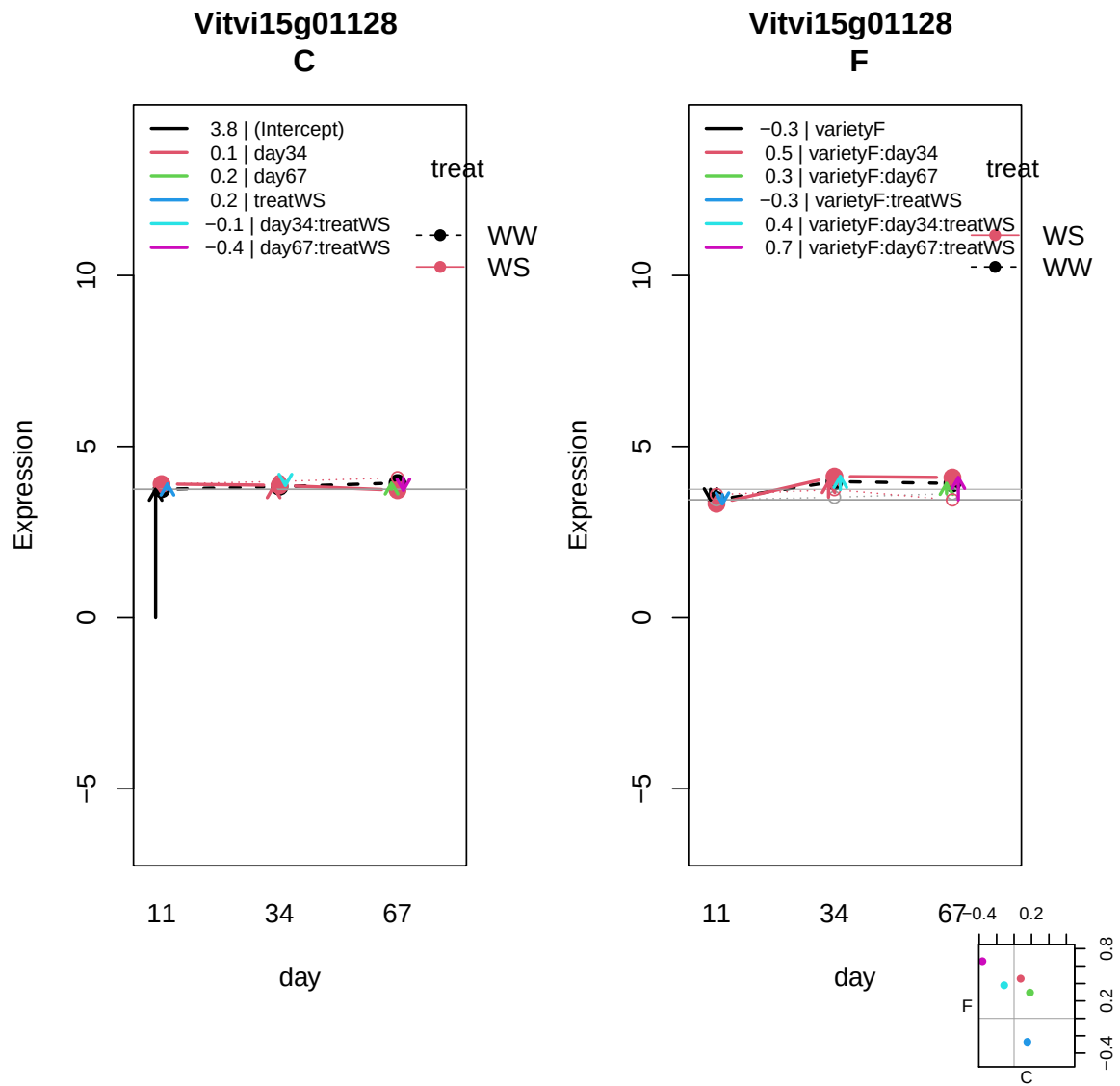
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

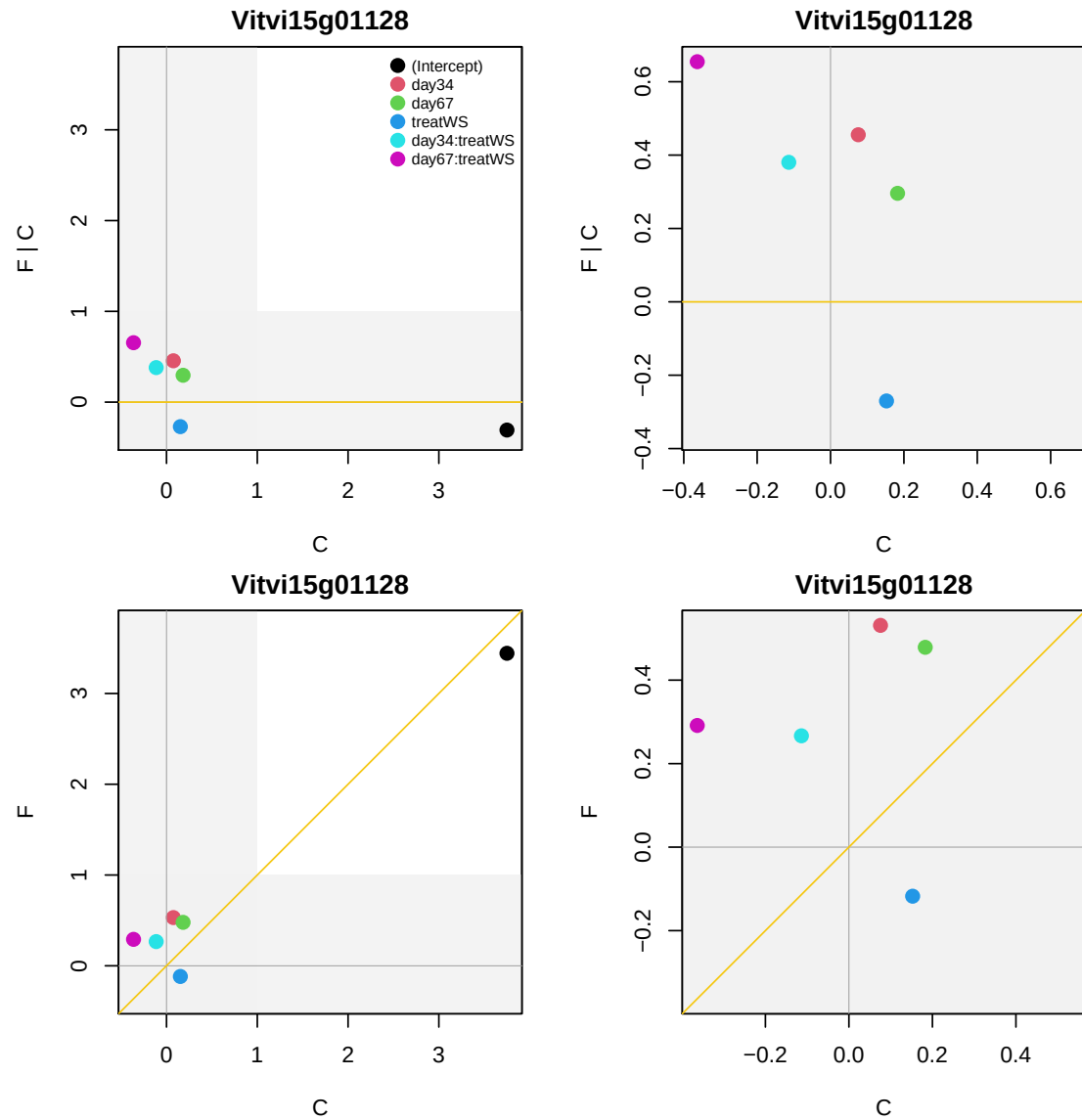


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

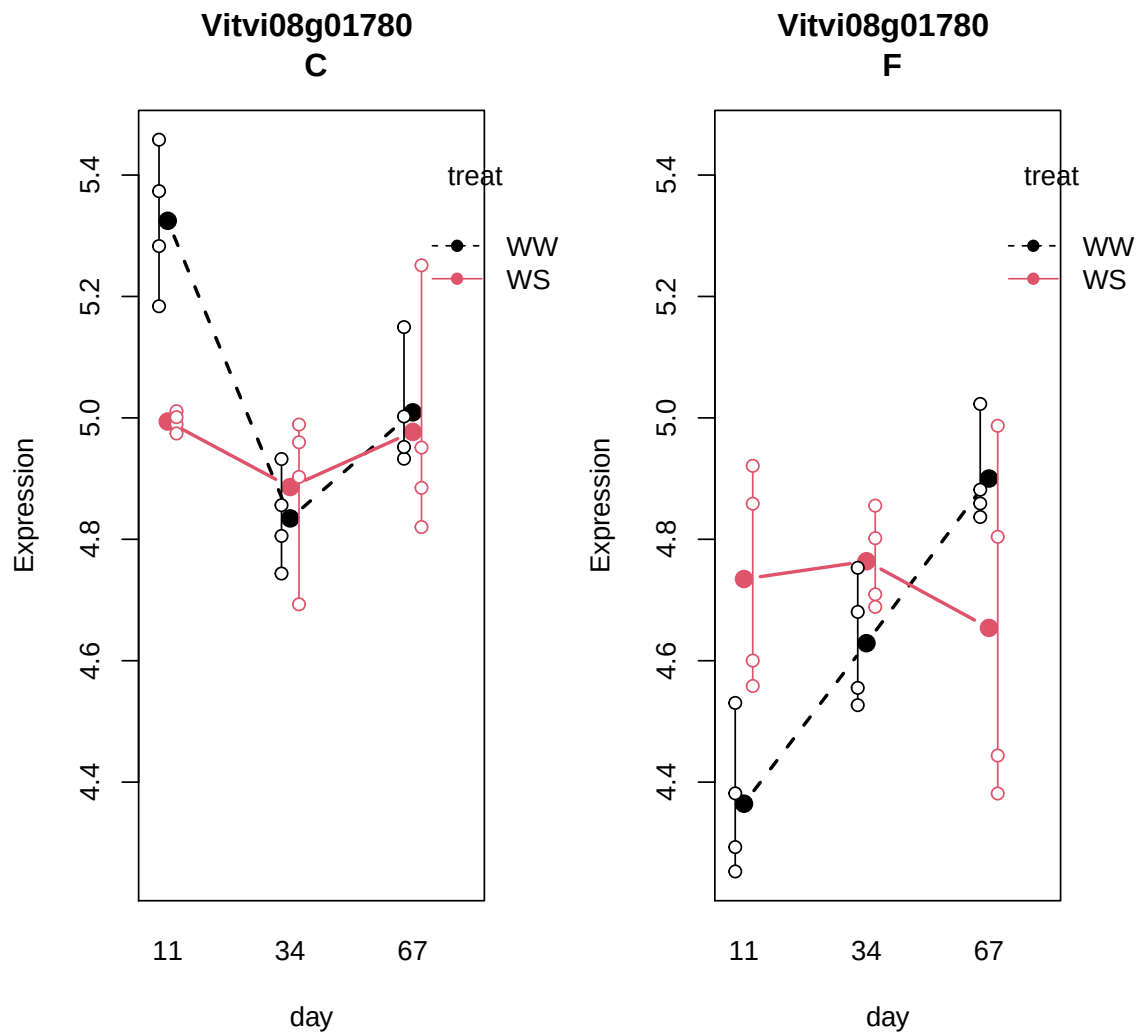


6.12.39 Vitvi08g01780

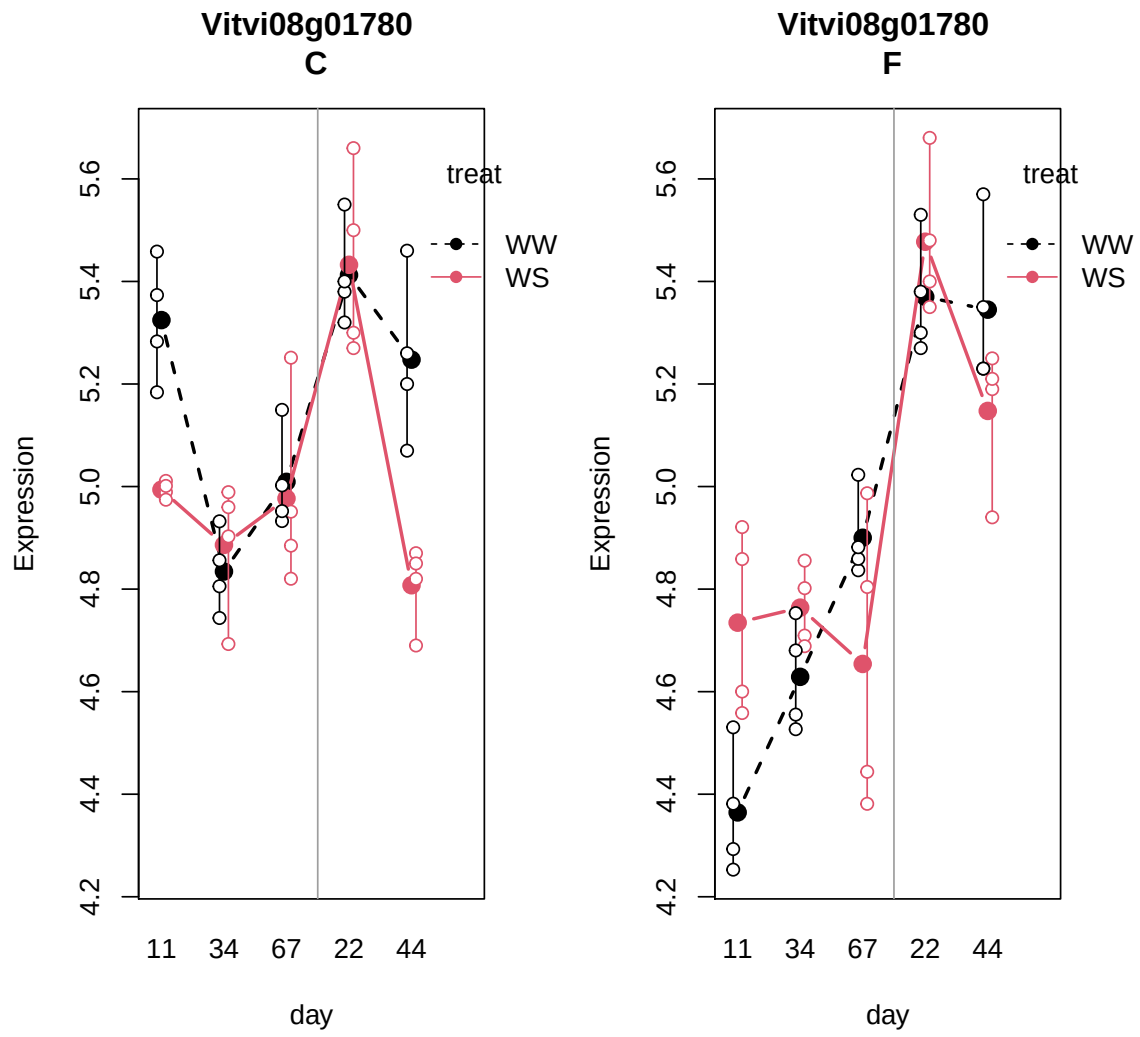
Coefficient varietyF:day67:treatWS for Vitvi08g01780.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi08g01780 -0.914487 4.839255 -4.424467 7.629944e-05
      adj.P.Val      B
Vitvi08g01780 0.02981939 1.524472

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

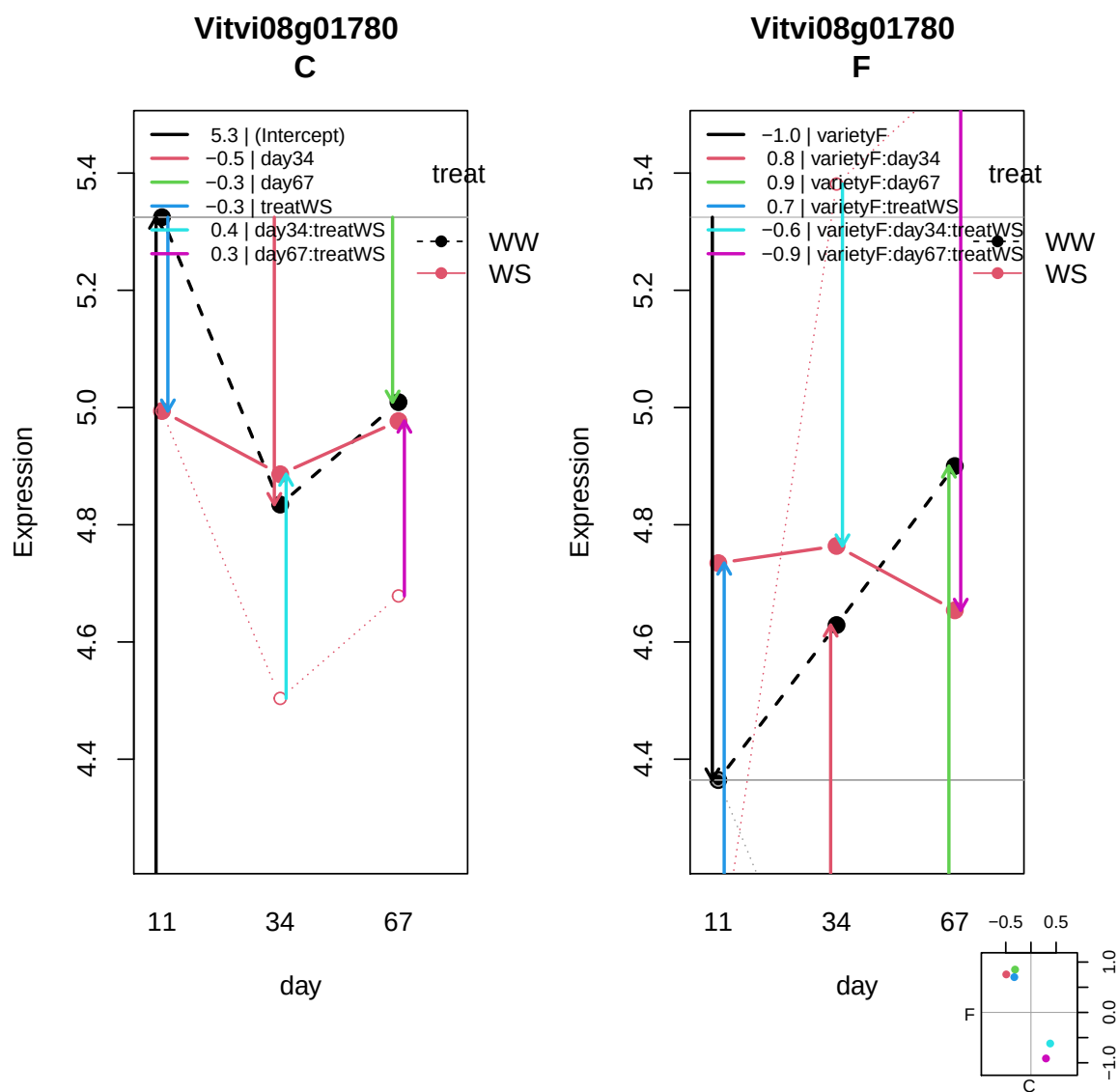
              (Intercept)    varietyF      day34      day67
Vitvi08g01780      5.324658 -0.9601993 -0.4902586 -0.31549
              treatWS varietyF:day34 varietyF:day67
Vitvi08g01780 -0.3306475      0.7546725      0.85115
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi08g01780      0.7007278      0.382374      0.2983178
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi08g01780      -0.6174806      -0.914487

```

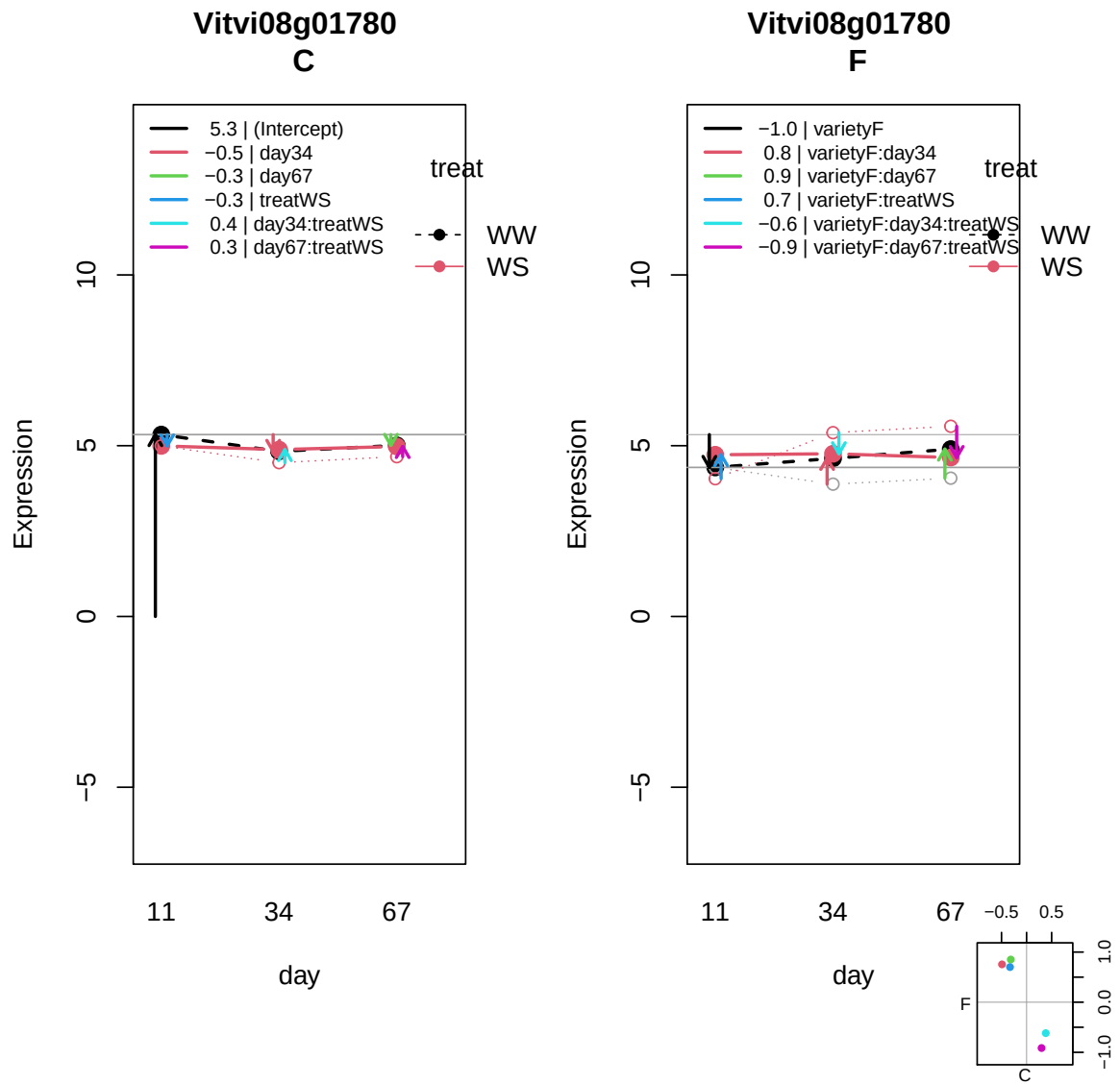
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

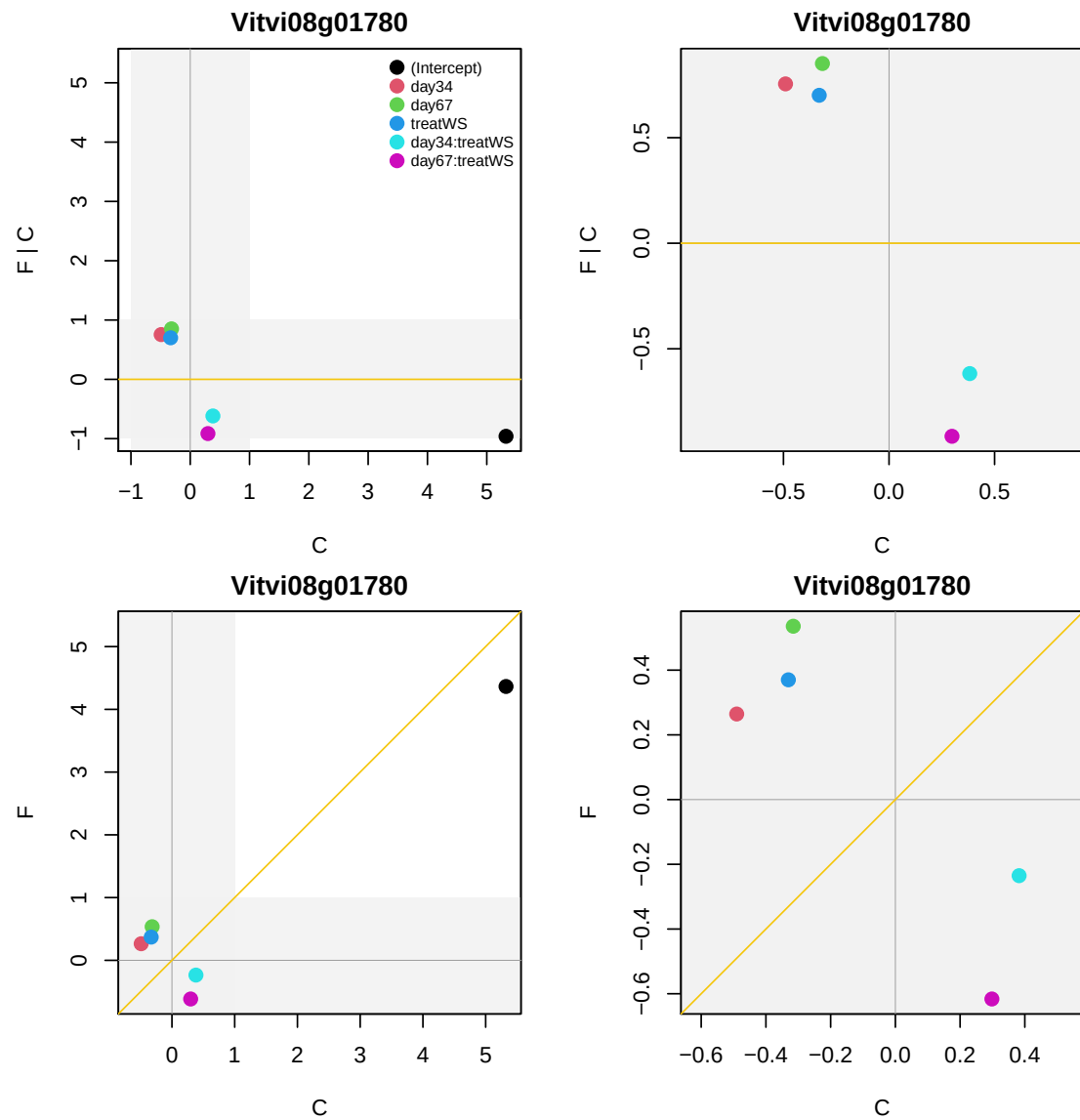


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

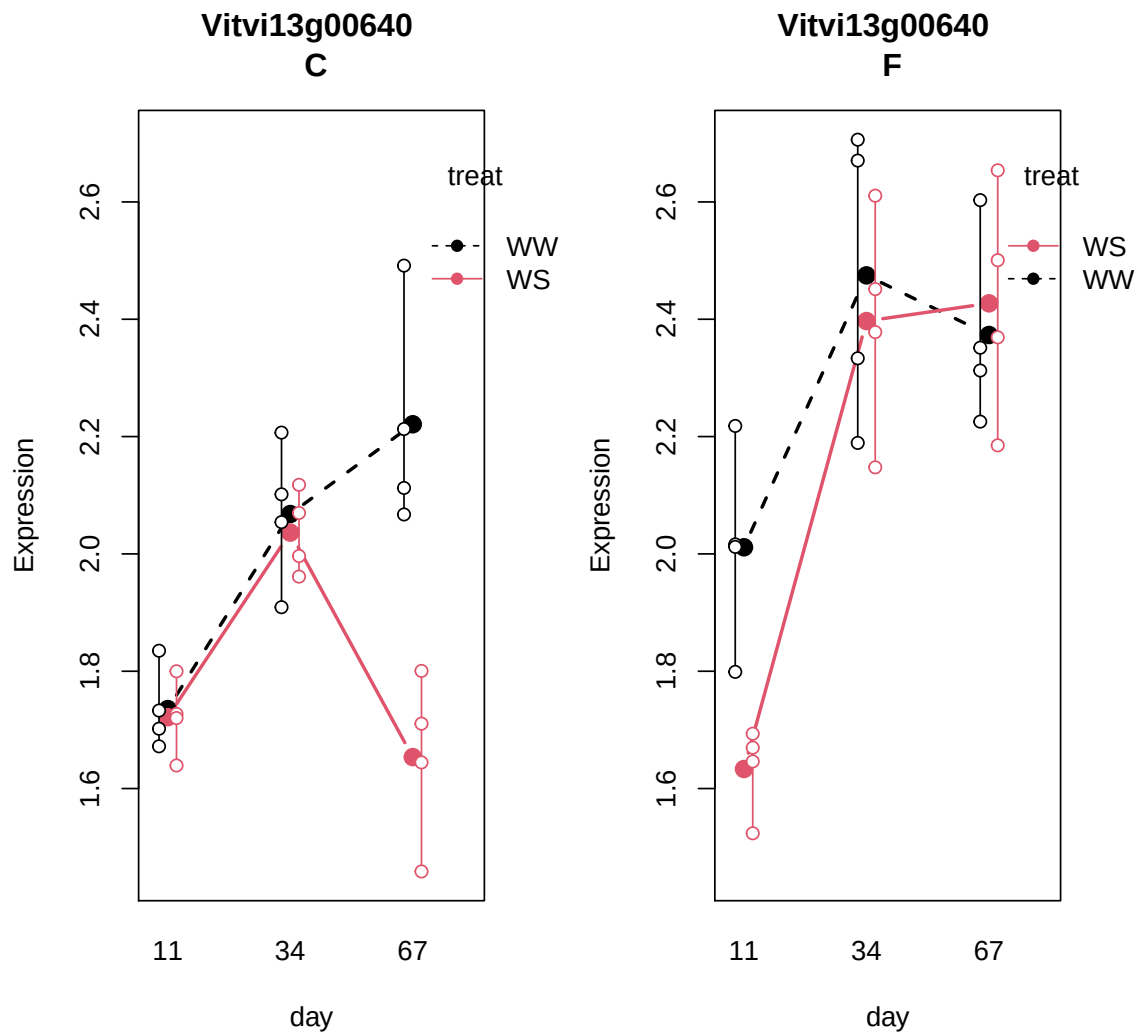


6.12.40 Vitvi13g00640

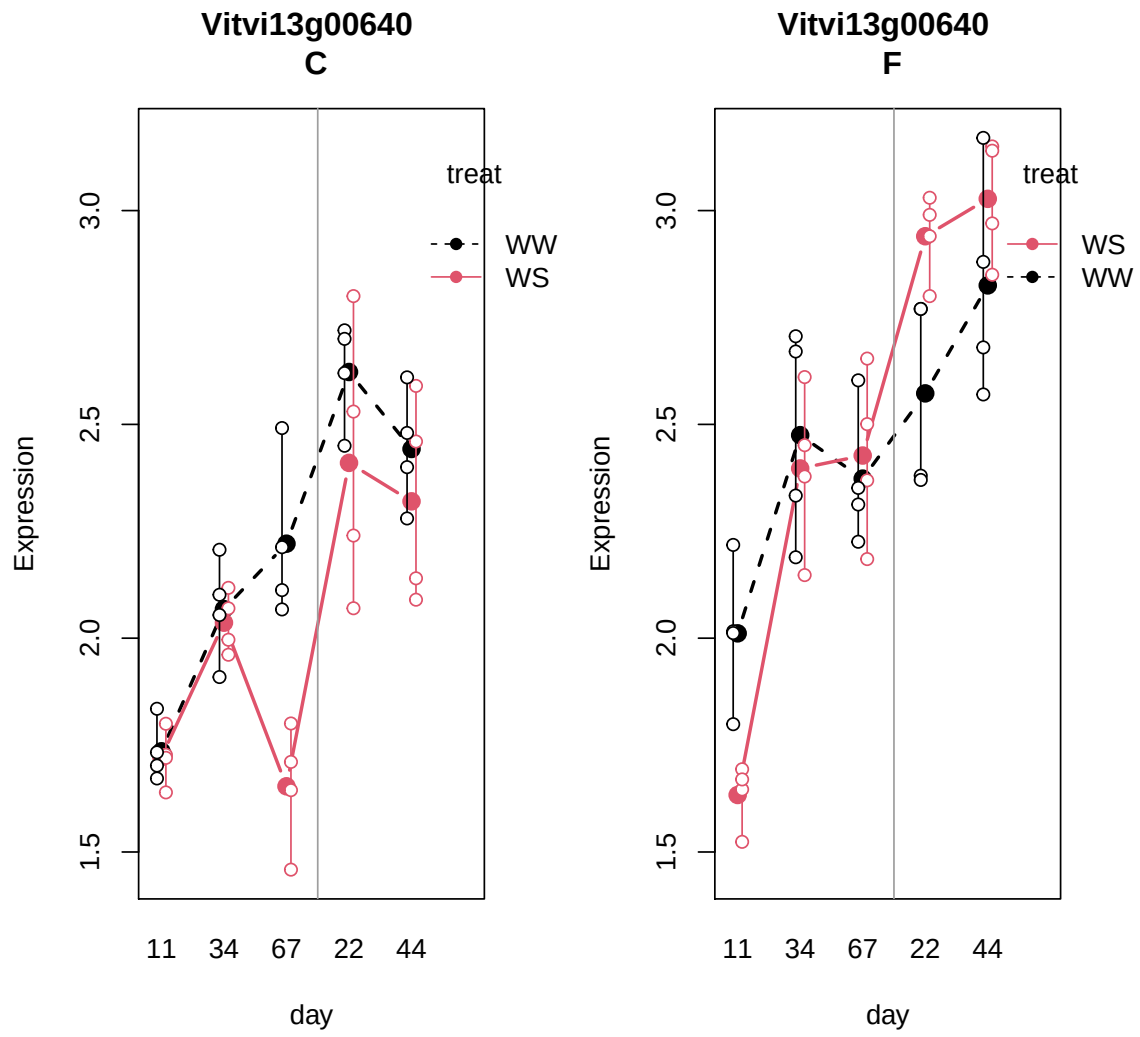
Coefficient varietyF:day67:treatWS for Vitvi13g00640.

```
> tt[varname,]
      logFC AveExpr      t    P.Value
Vitvi13g00640 0.9855097 2.062712 4.400187 8.220189e-05
      adj.P.Val      B
Vitvi13g00640 0.03059648 1.458159

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```




```
> fit1[varname,]$coefficients
```

```

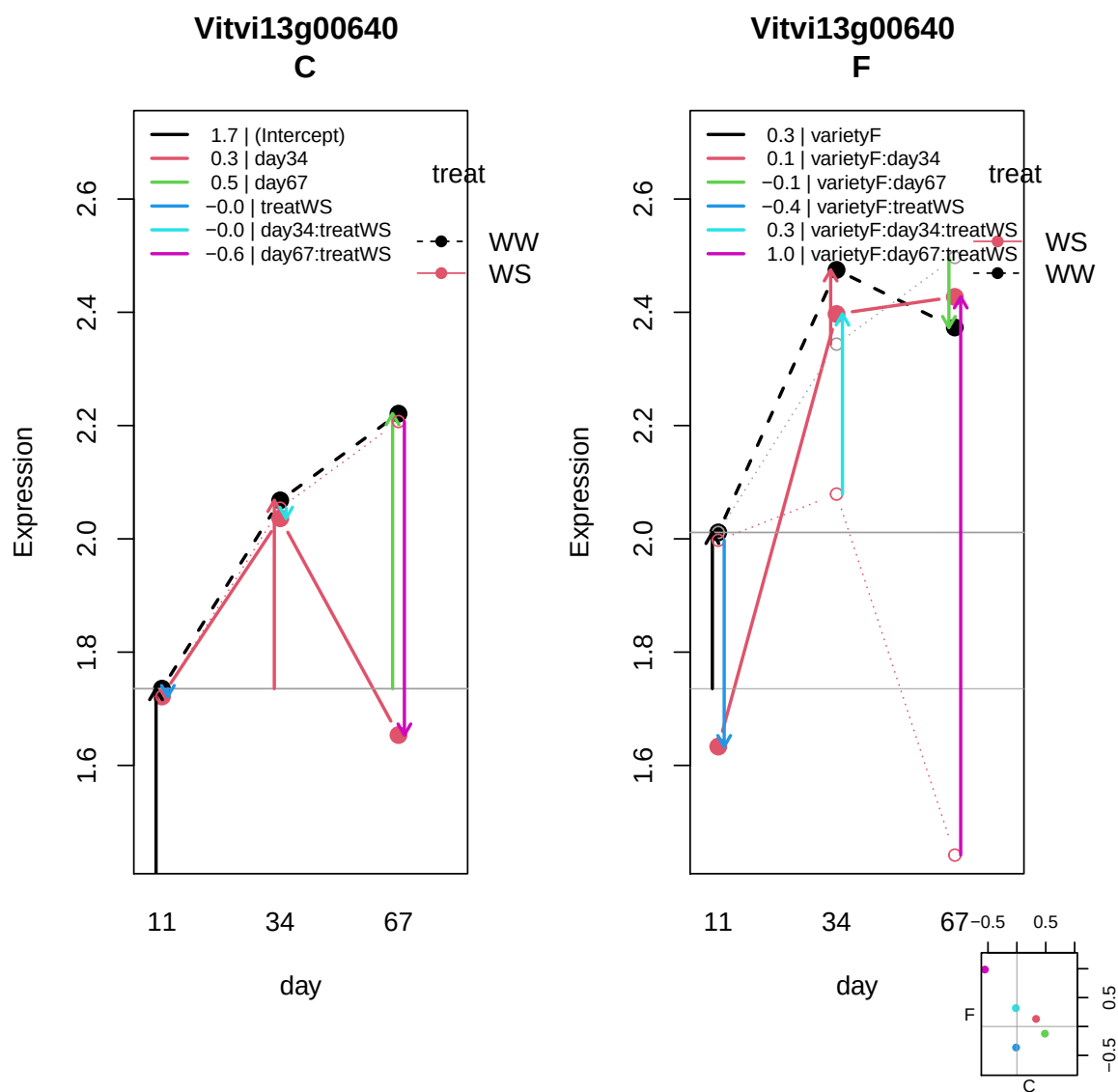
              (Intercept)  varietyF      day34      day67
Vitvi13g00640      1.735485 0.2758152 0.3324384 0.4854848
              treatWS  varietyF:day34  varietyF:day67
Vitvi13g00640 -0.01384545      0.1310581      -0.1236356
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi13g00640      -0.3641498      -0.01779106      -0.5535055
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi13g00640              0.3178989              0.9855097

```

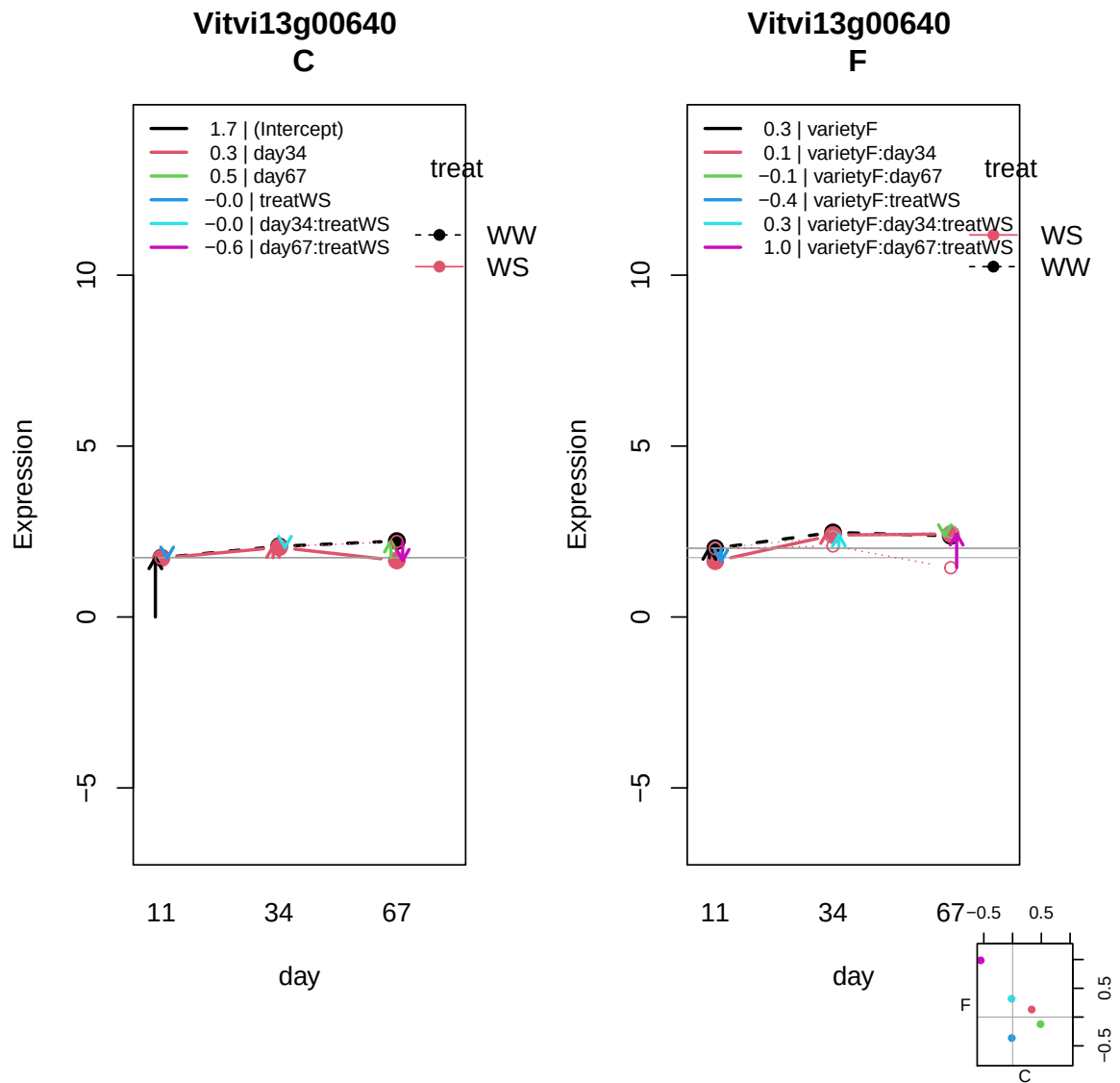
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

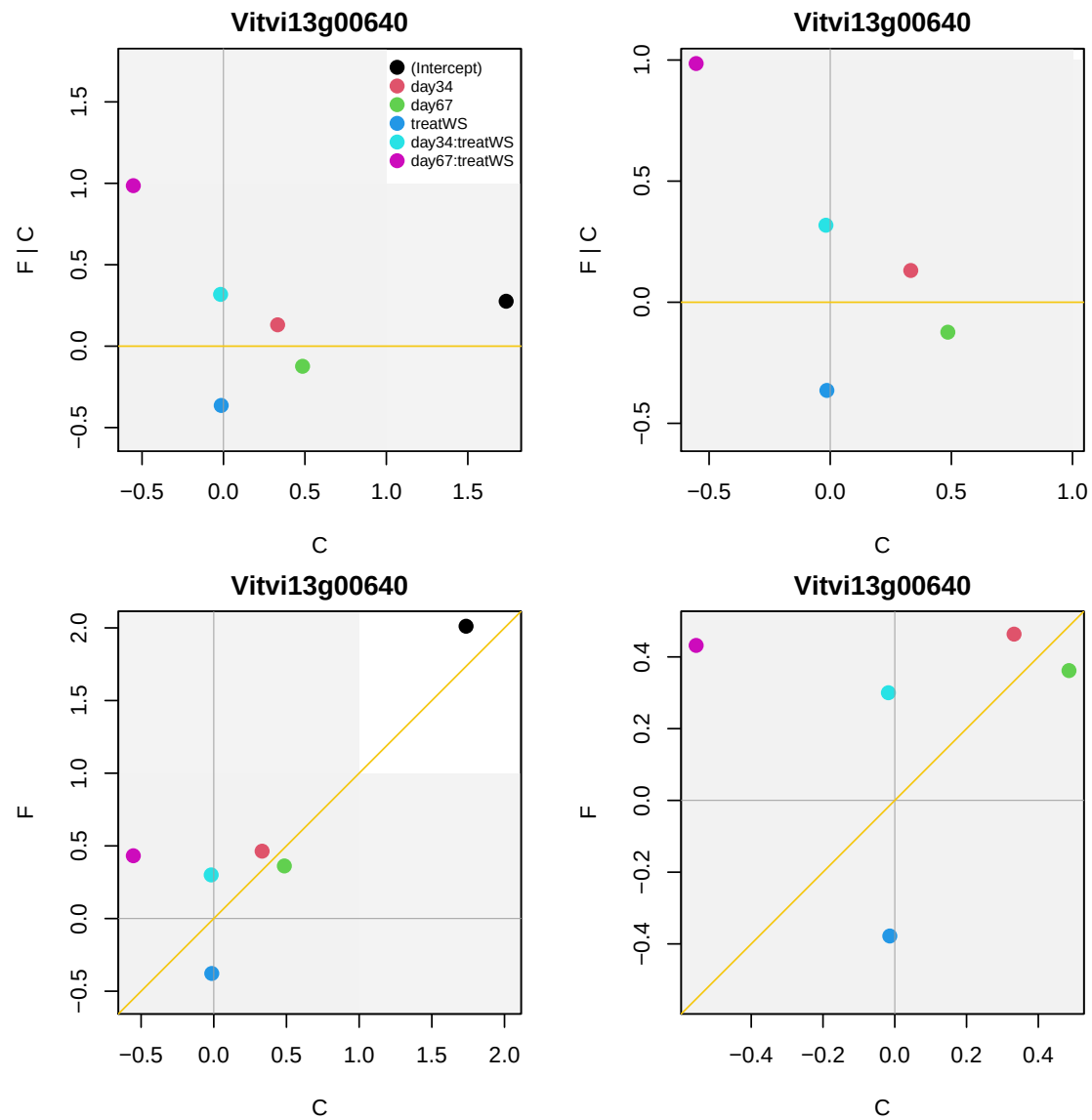


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

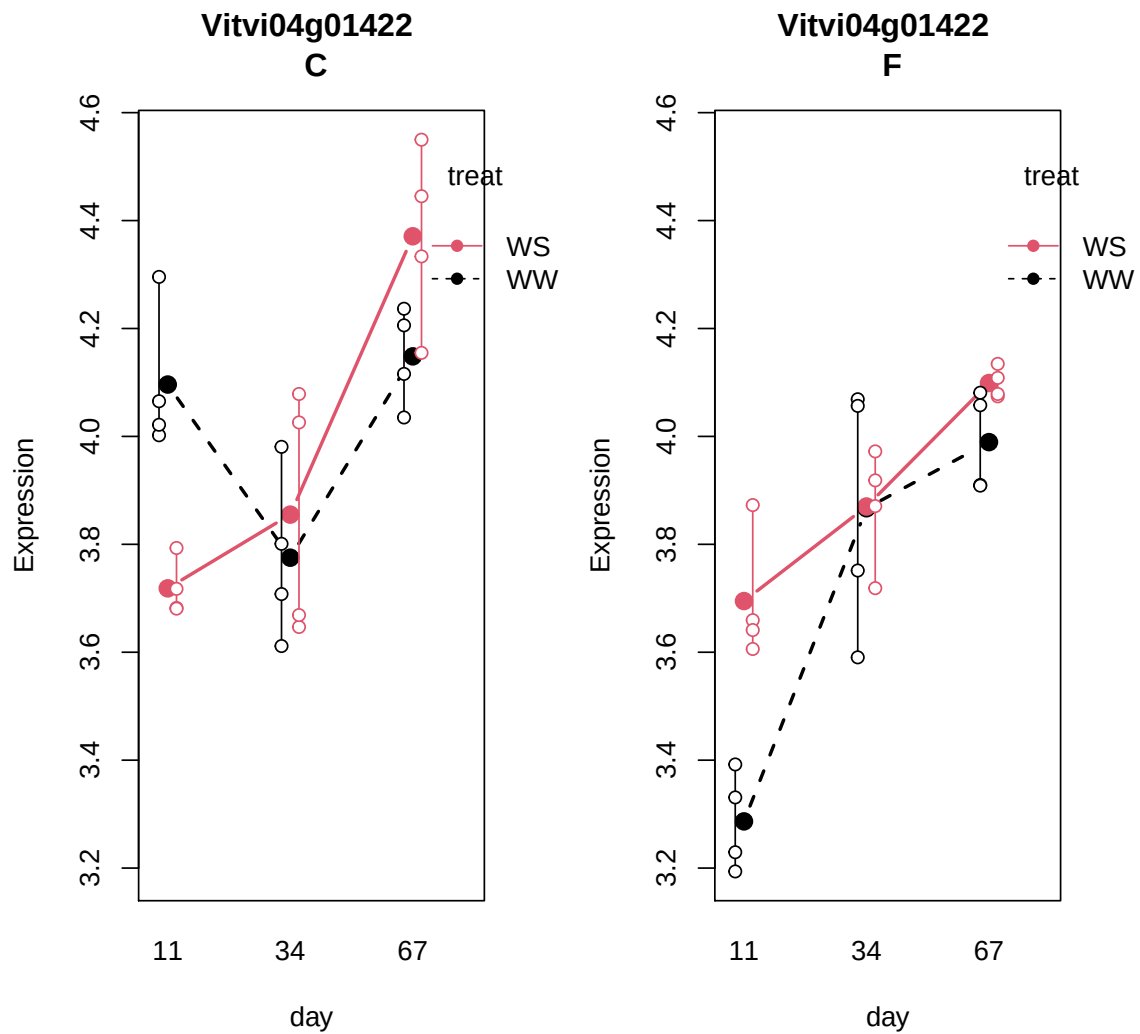


6.12.41 Vitvi04g01422

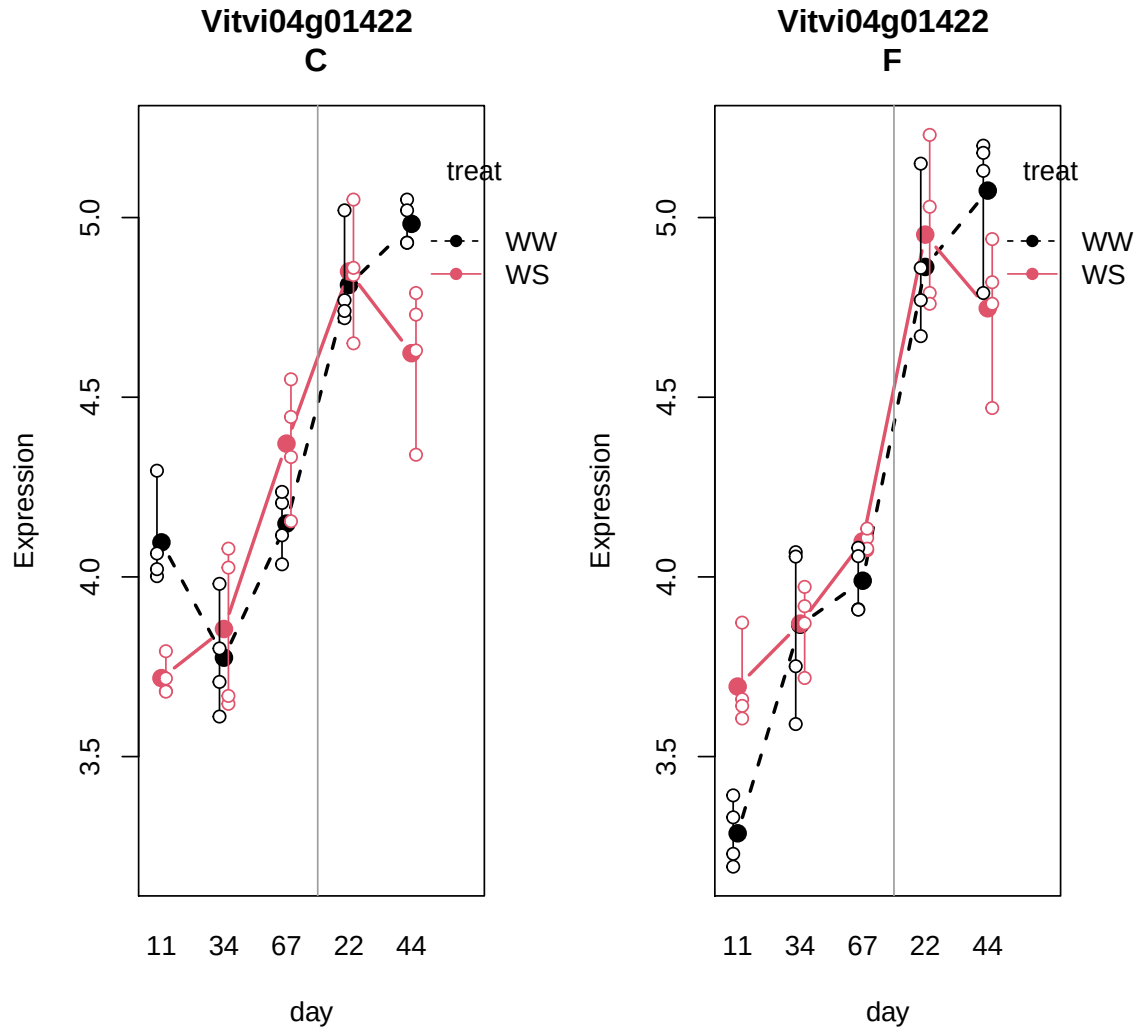
Coefficient varietyF:day67:treatWS for Vitvi04g01422.

```
> tt[varname,]
              logFC AveExpr      t      P.Value
Vitvi04g01422 -0.8990158 3.897556 -4.399788 8.230257e-05
              adj.P.Val      B
Vitvi04g01422 0.03059648 1.45707

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

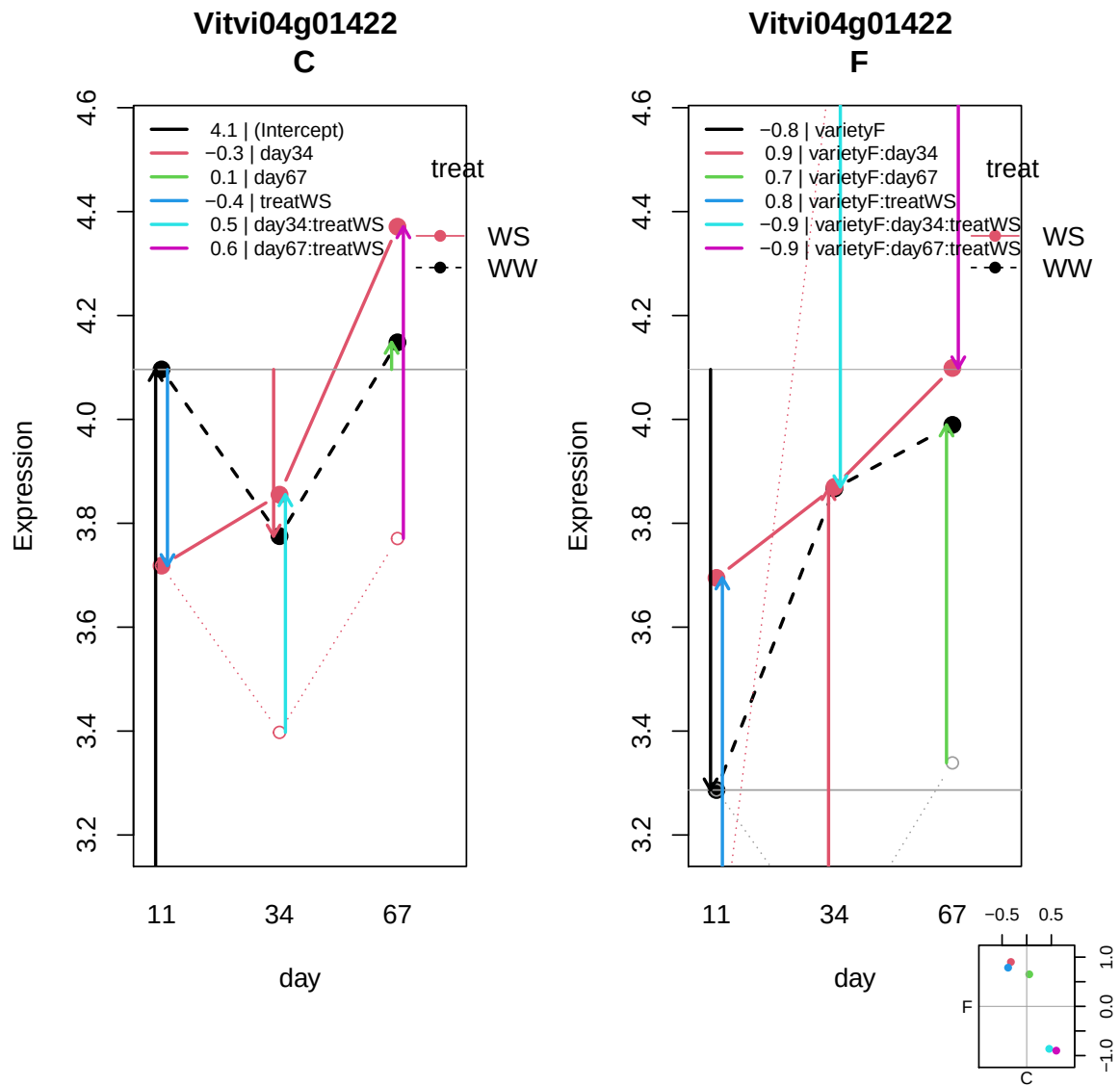
              (Intercept)    varietyF      day34      day67
Vitvi04g01422    4.096118 -0.8095876 -0.3208867 0.05221641
              treatWS varietyF:day34 varietyF:day67
Vitvi04g01422 -0.3777061    0.9012055    0.6506348
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi04g01422    0.7860192    0.4575397    0.6002623
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi04g01422    -0.8626226    -0.8990158

```

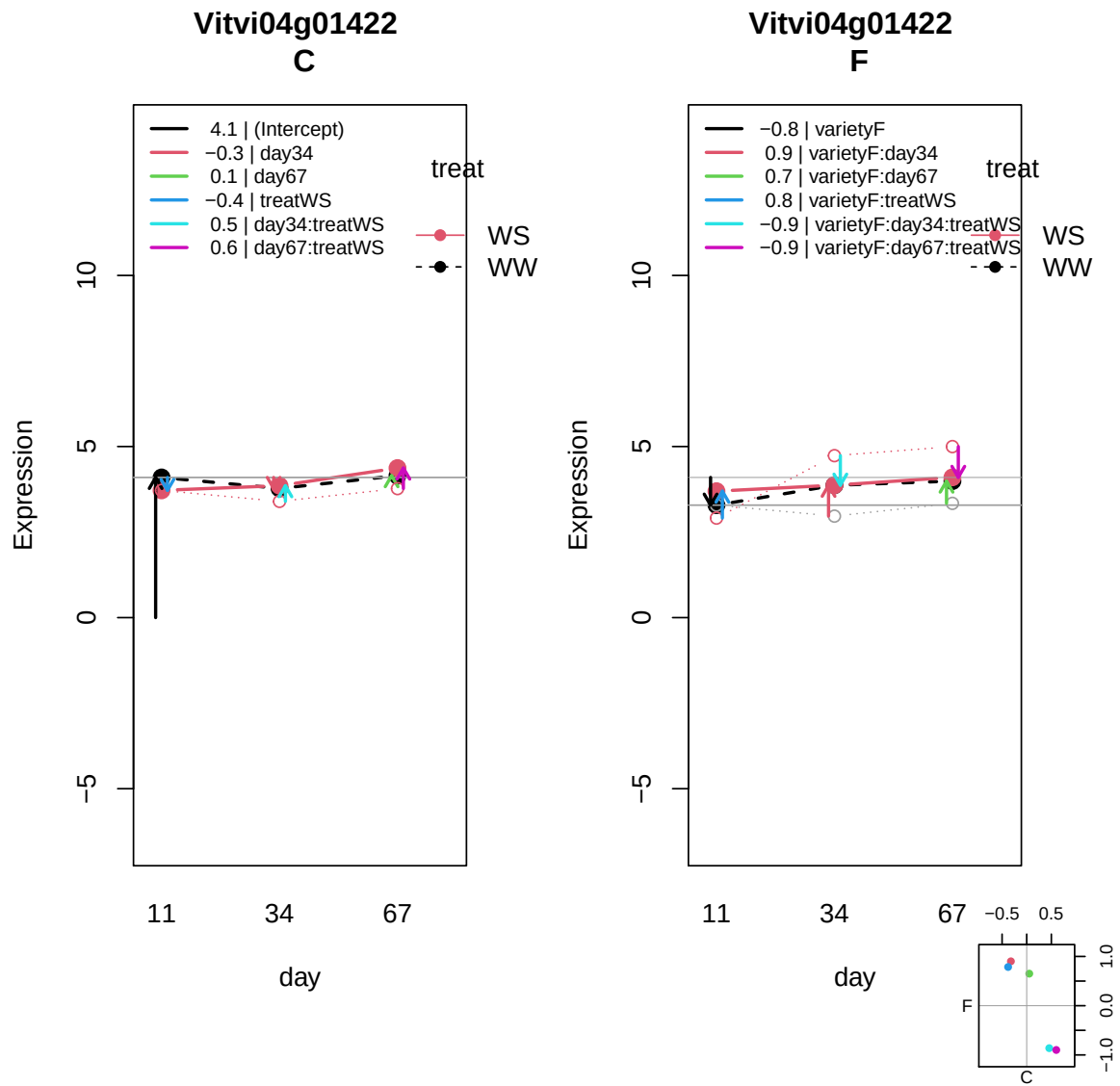
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

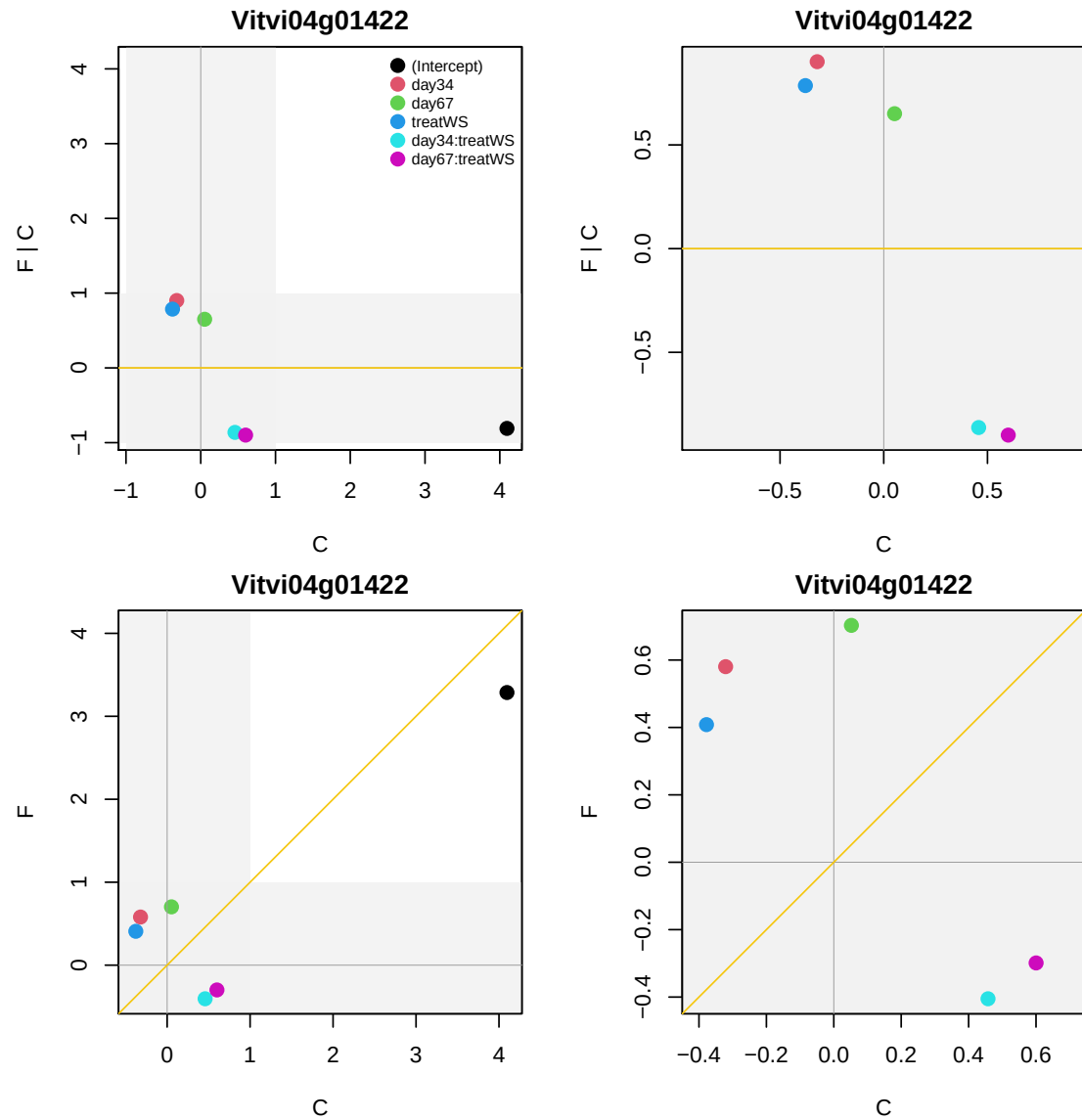


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

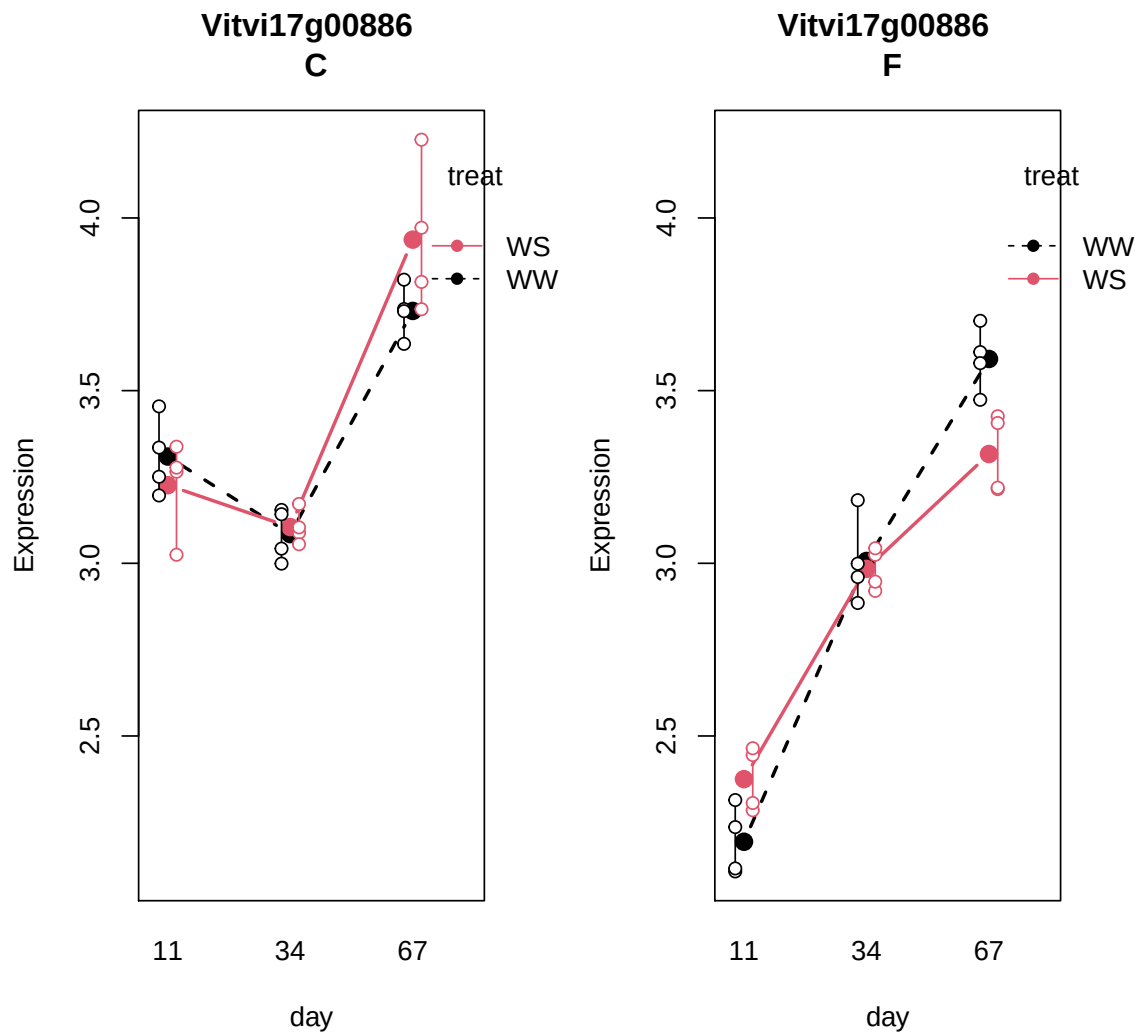
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



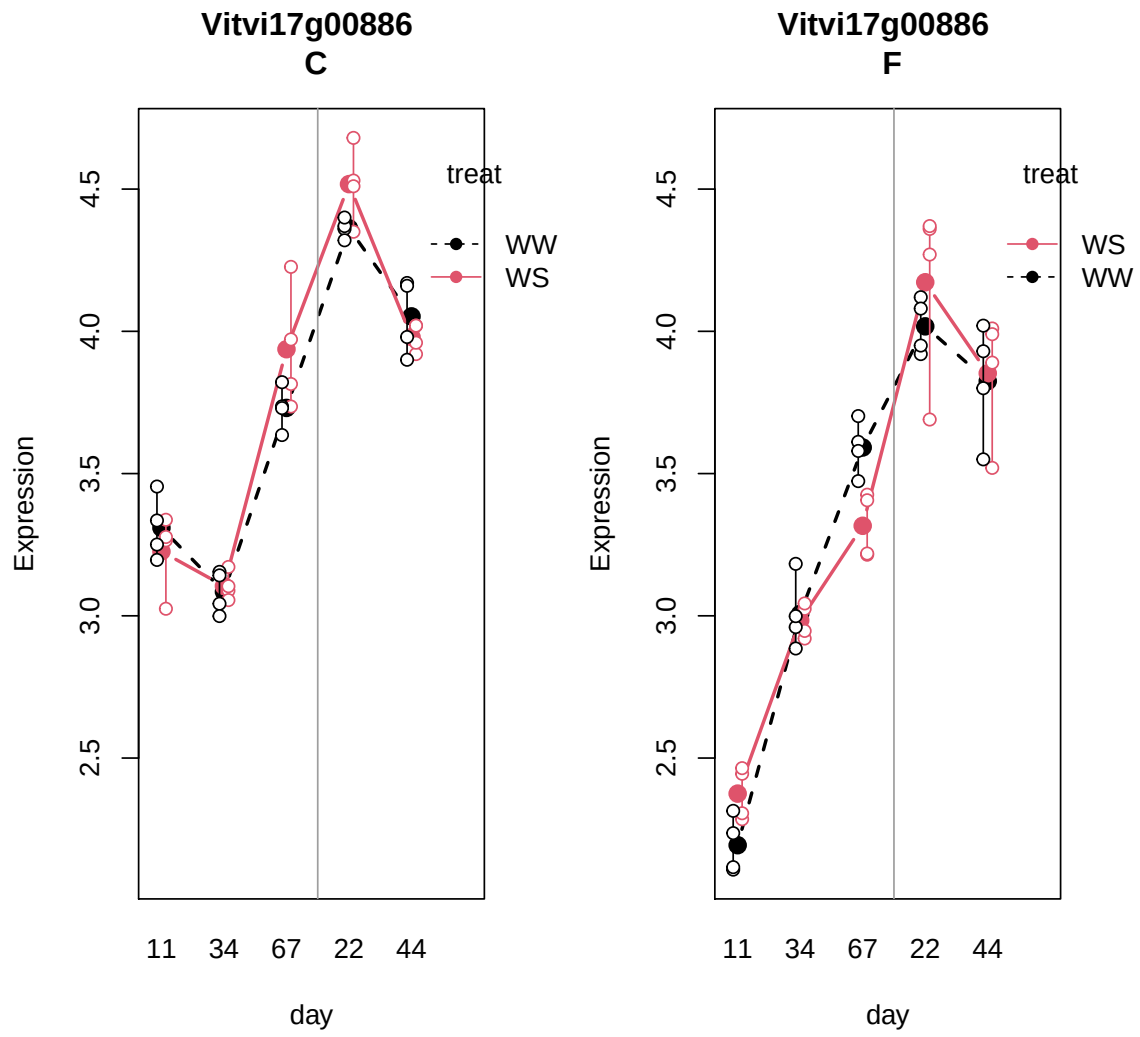
6.12.42 Vitvi17g00886

Coefficient varietyF:day67:treatWS for Vitvi17g00886.

```
> tt[varname,]
              logFC AveExpr      t      P.Value
Vitvi17g00886 -0.7460184 3.154982 -4.379036 8.770742e-05
              adj.P.Val      B
Vitvi17g00886 0.03152286 1.40047
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

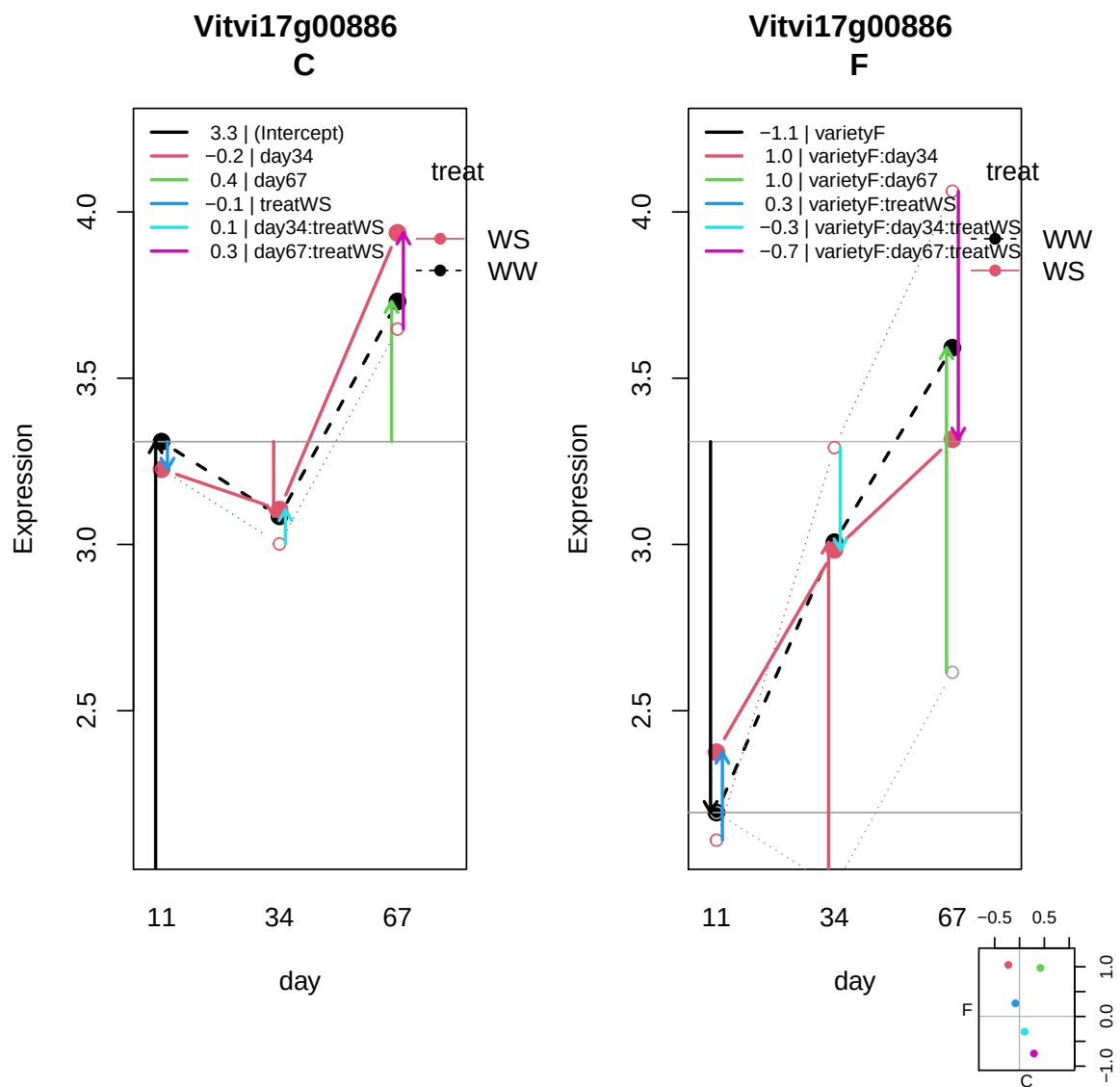
              (Intercept)  varietyF      day34      day67
Vitvi17g00886      3.309154 -1.115495 -0.2246085 0.4215715
              treatWS  varietyF:day34  varietyF:day67
Vitvi17g00886 -0.08299188      1.037678      0.9764283
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi17g00886      0.2643292      0.1032551      0.289451
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi17g00886      -0.3075811      -0.7460184

```

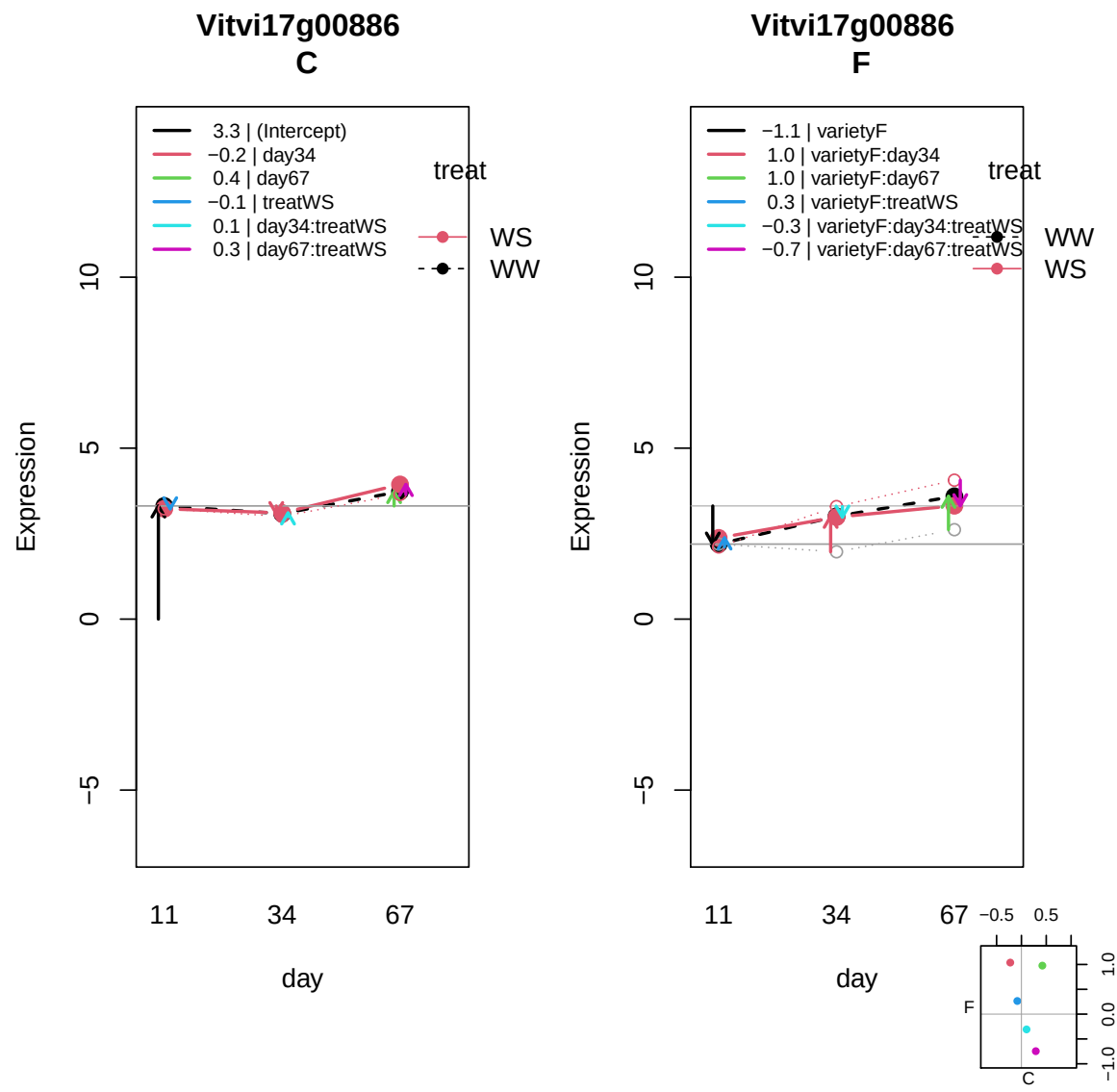
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

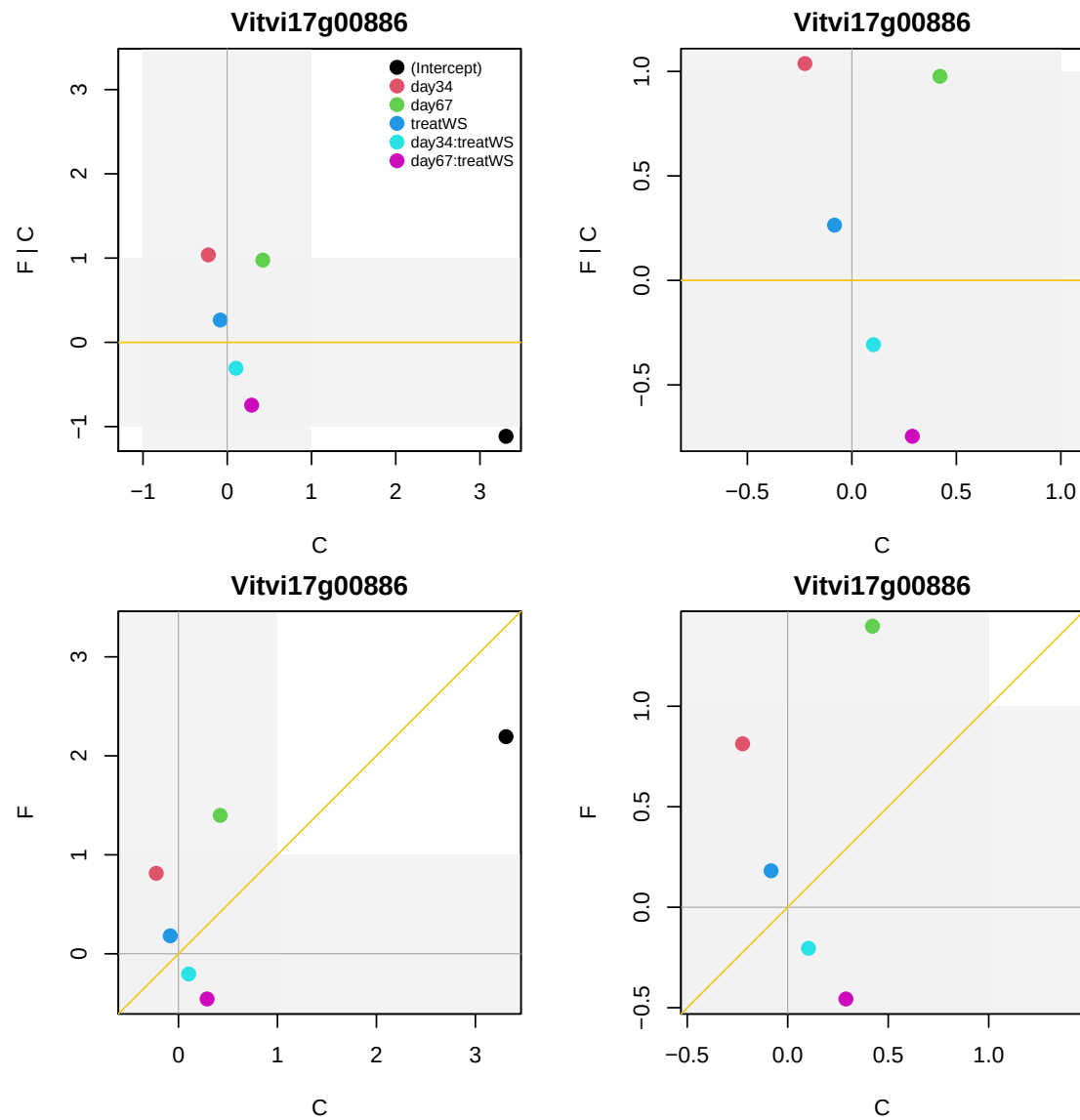


```
> coefs <- plot.interactions(varname,  
+ coef=fit1[varname,]$coefficients,  
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

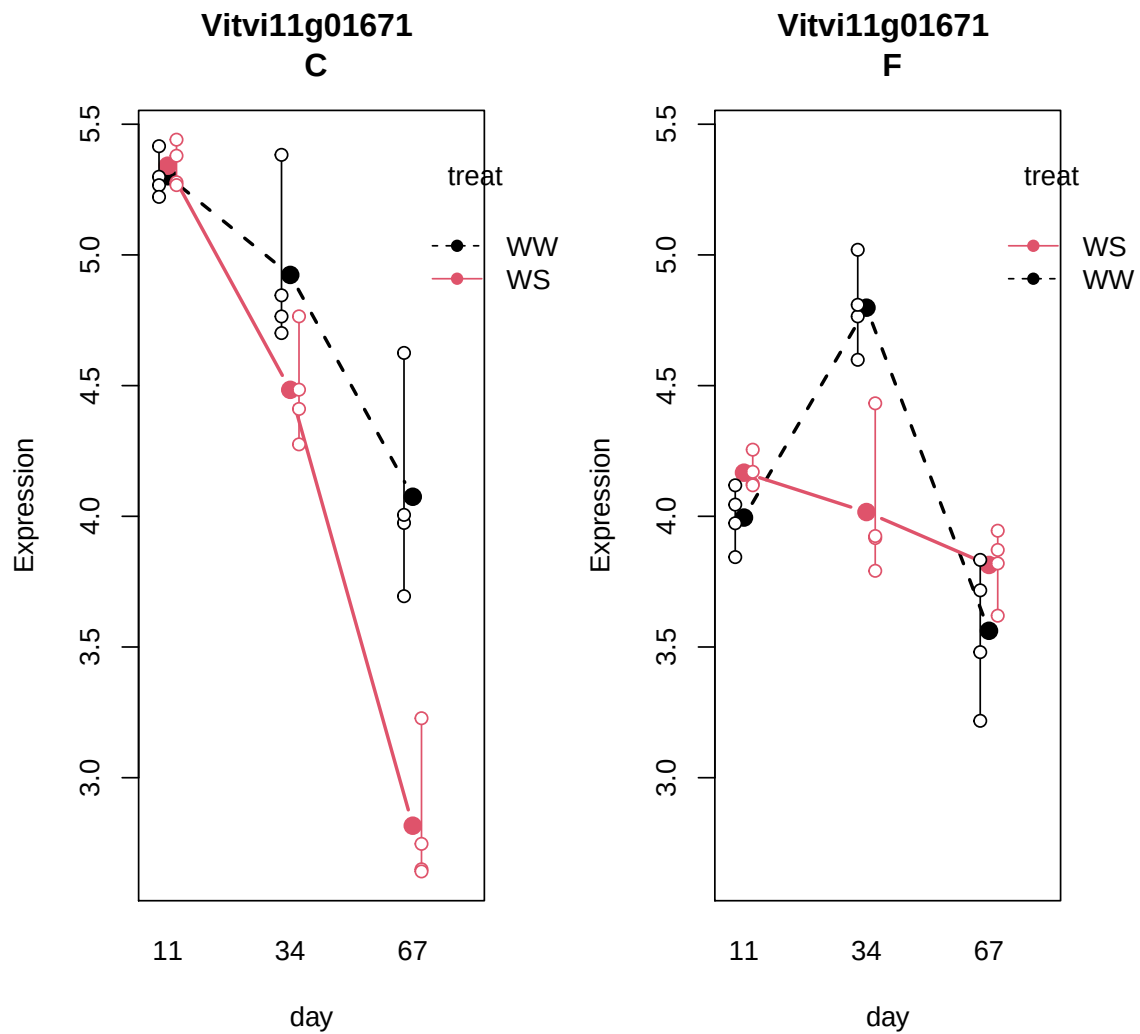


6.12.43 Vitvi11g01671

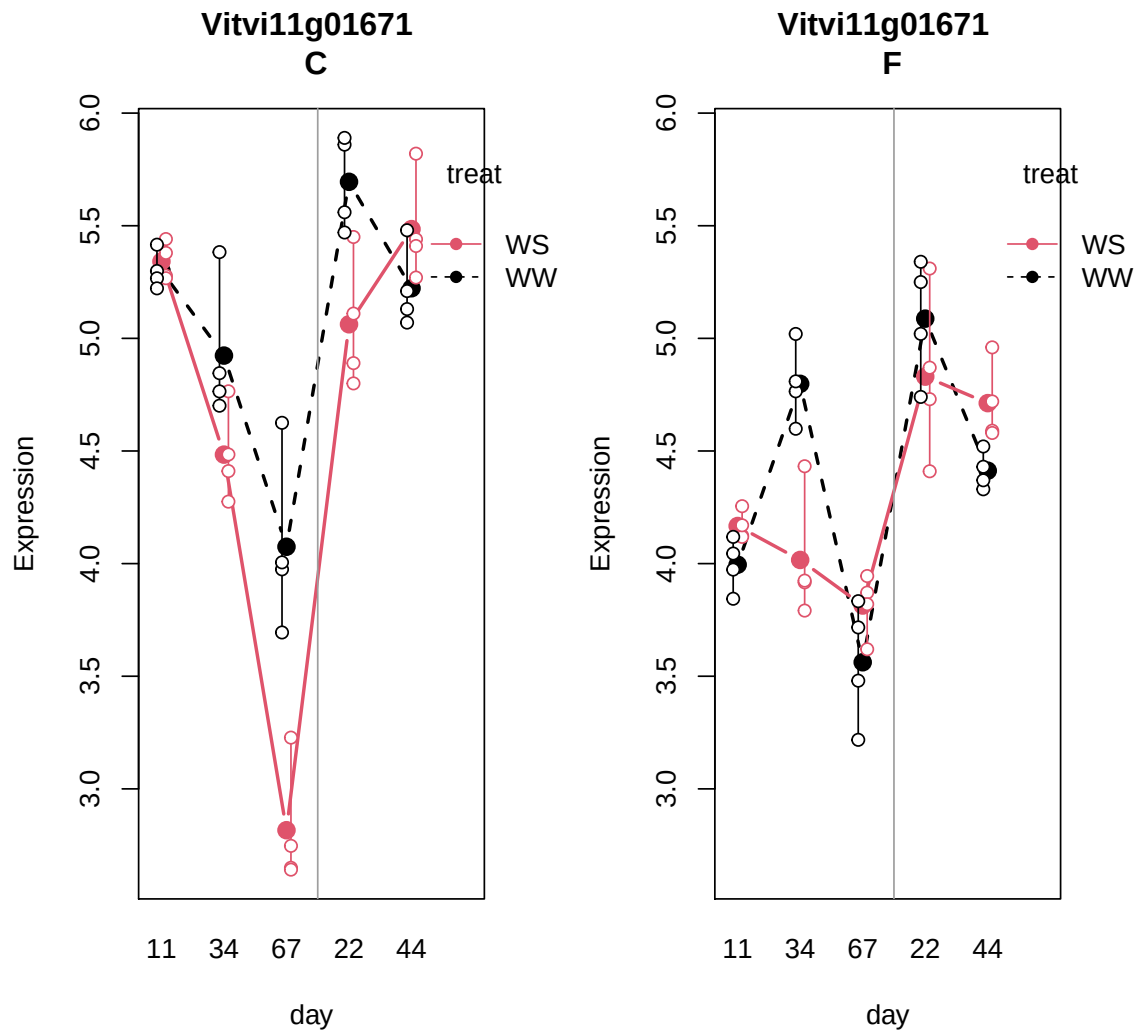
Coefficient varietyF:day67:treatWS for Vitvi11g01671.

```
> tt[varname,]
               logFC  AveExpr      t      P.Value
Vitvi11g01671 1.379111  4.274443  4.373345  8.924933e-05
               adj.P.Val      B
Vitvi11g01671 0.03152286  1.384963

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

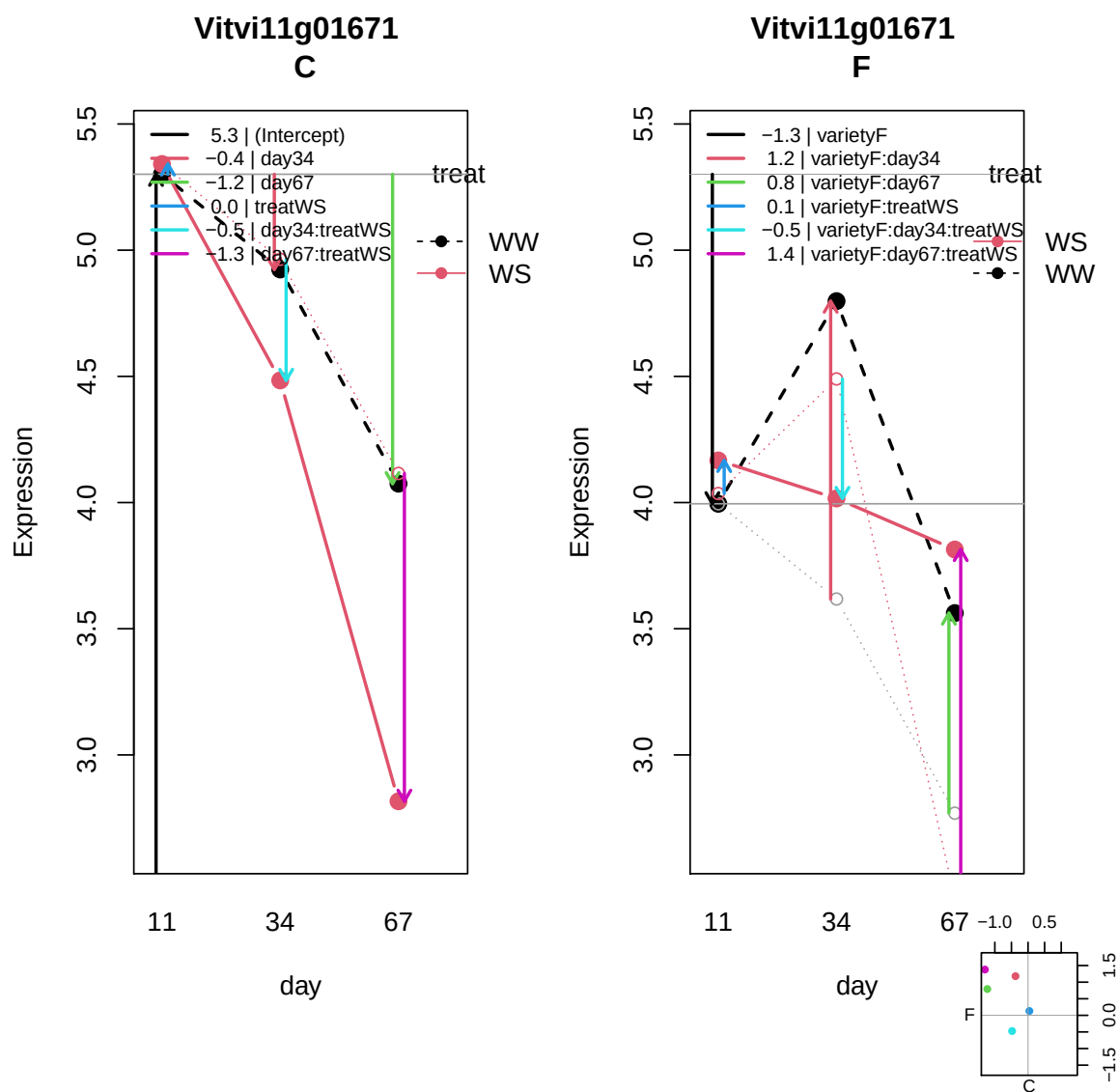
              (Intercept)  varietyF      day34      day67
Vitvi11g01671    5.300898 -1.305673 -0.3774078 -1.226059
              treatWS varietyF:day34 varietyF:day67
Vitvi11g01671    0.04044098      1.180254      0.7928626
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi11g01671          0.1312907      -0.4800826      -1.298906
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi11g01671          -0.4734385                  1.379111

```

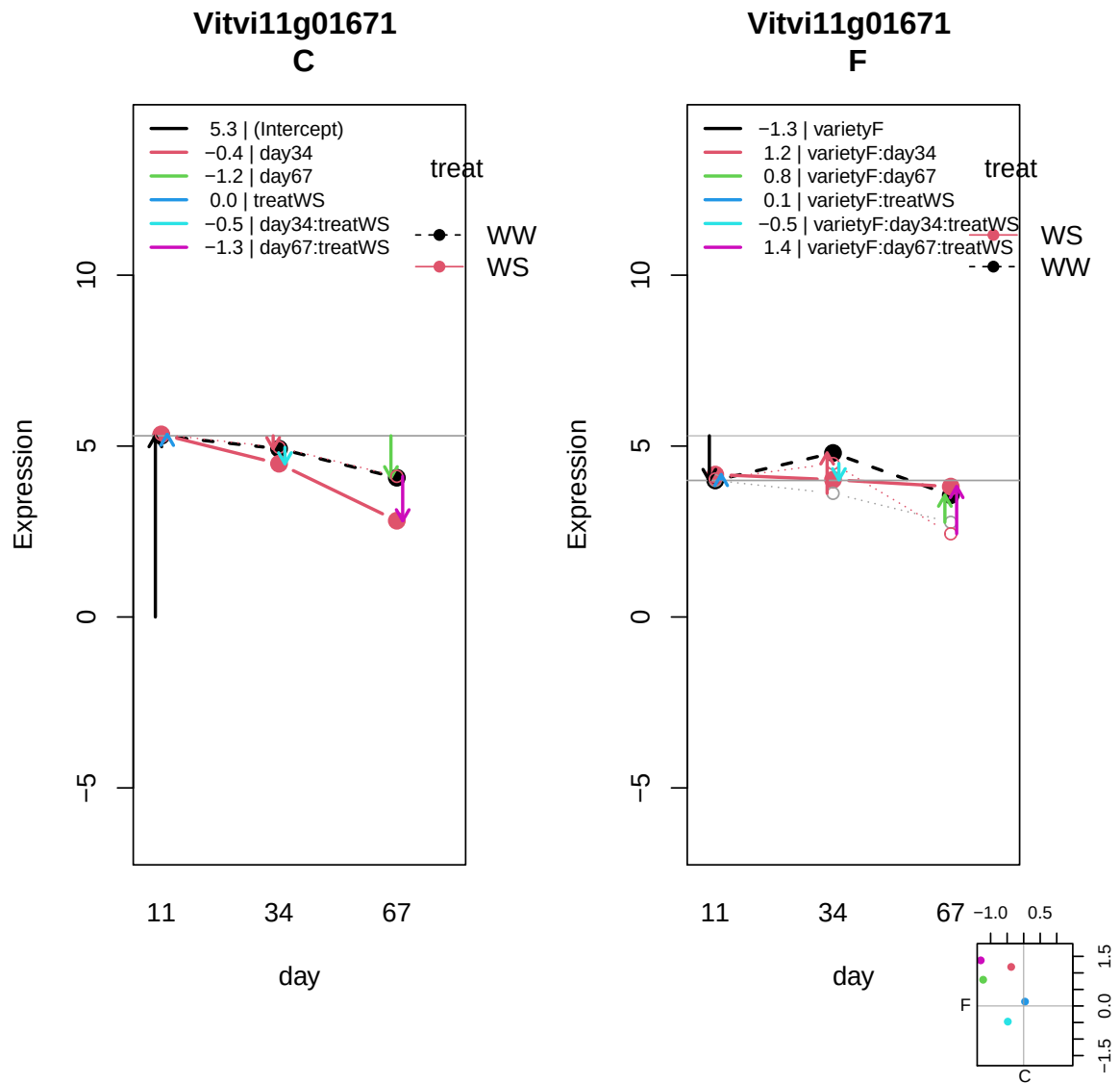
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

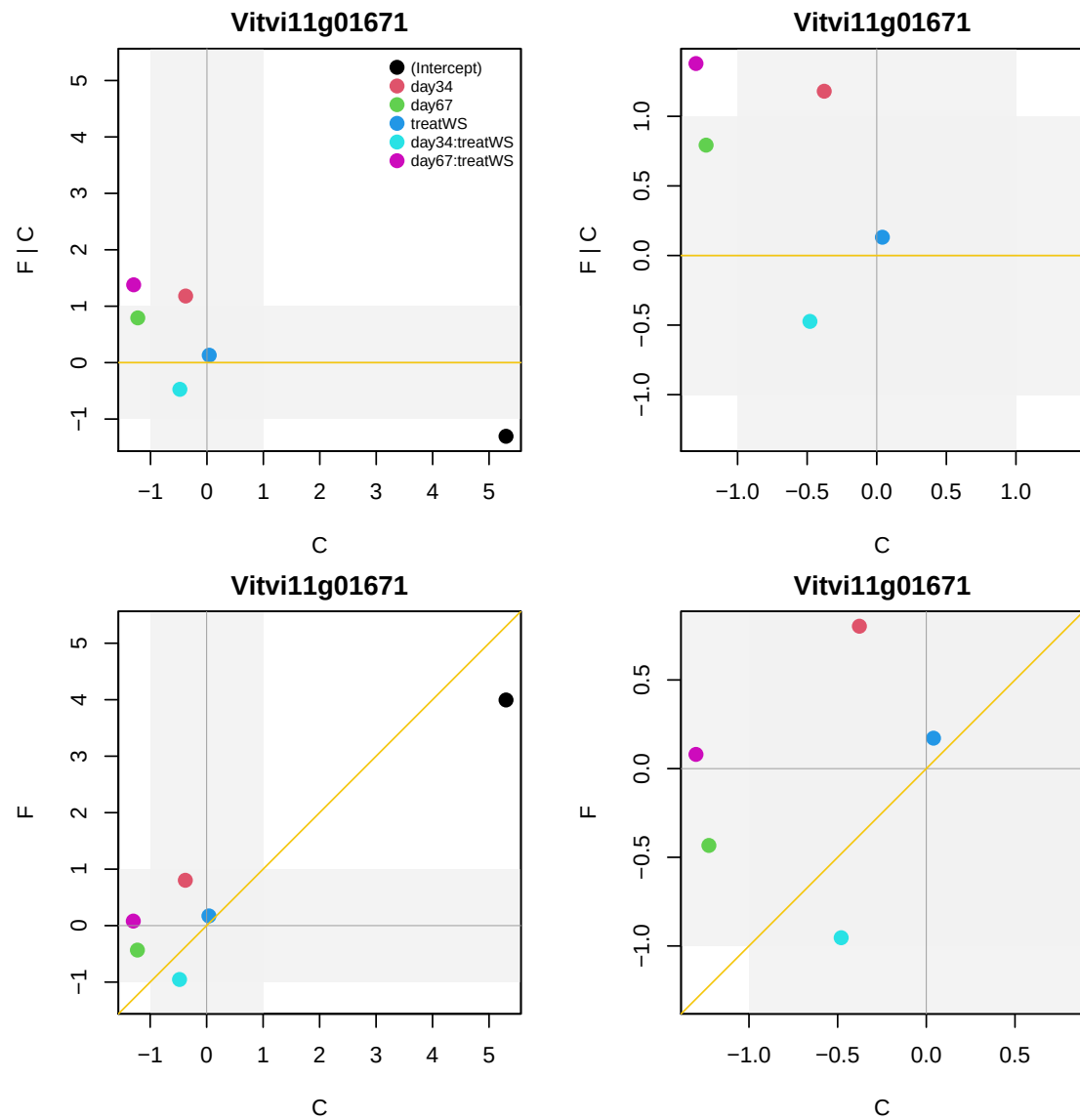



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

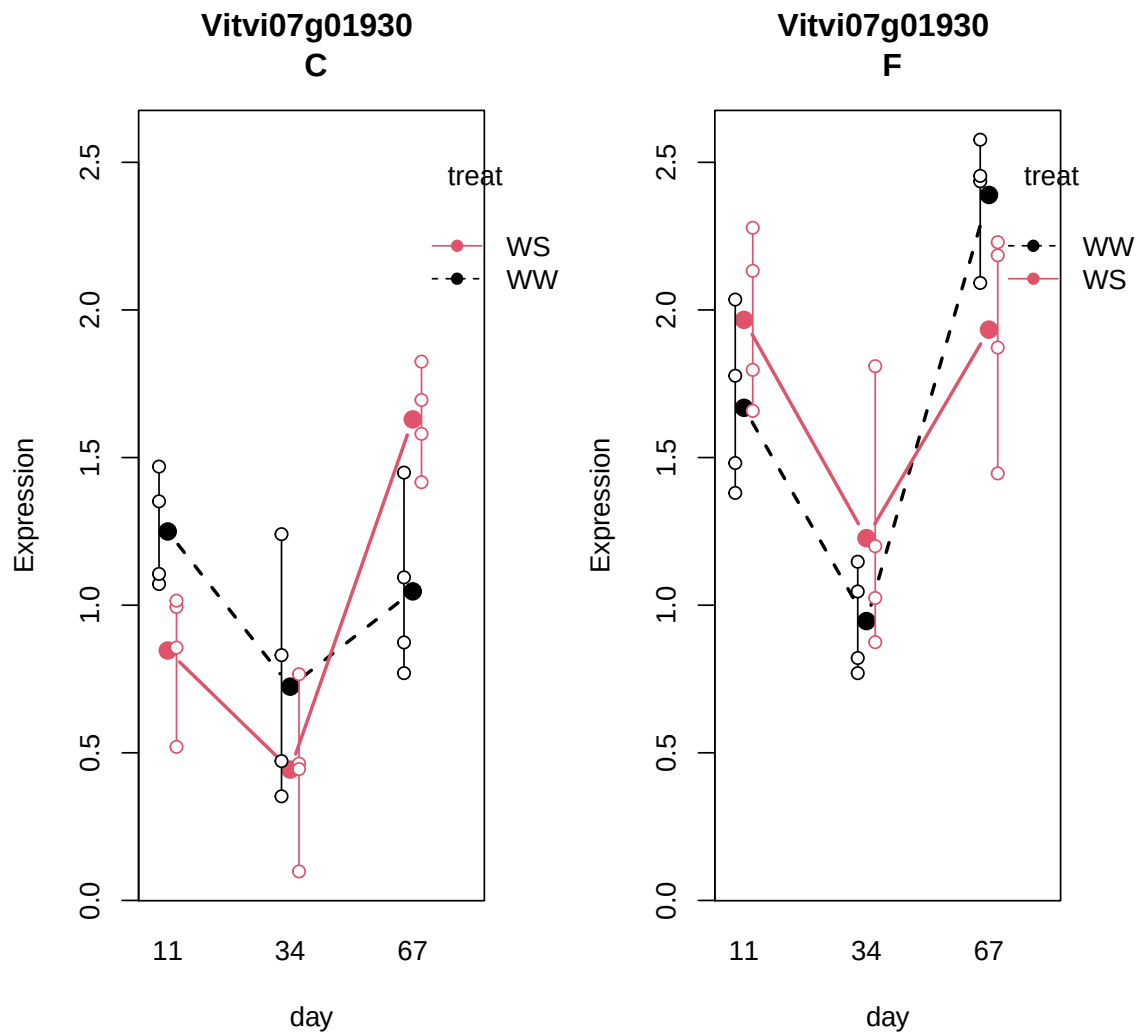


6.12.44 Vitvi07g01930

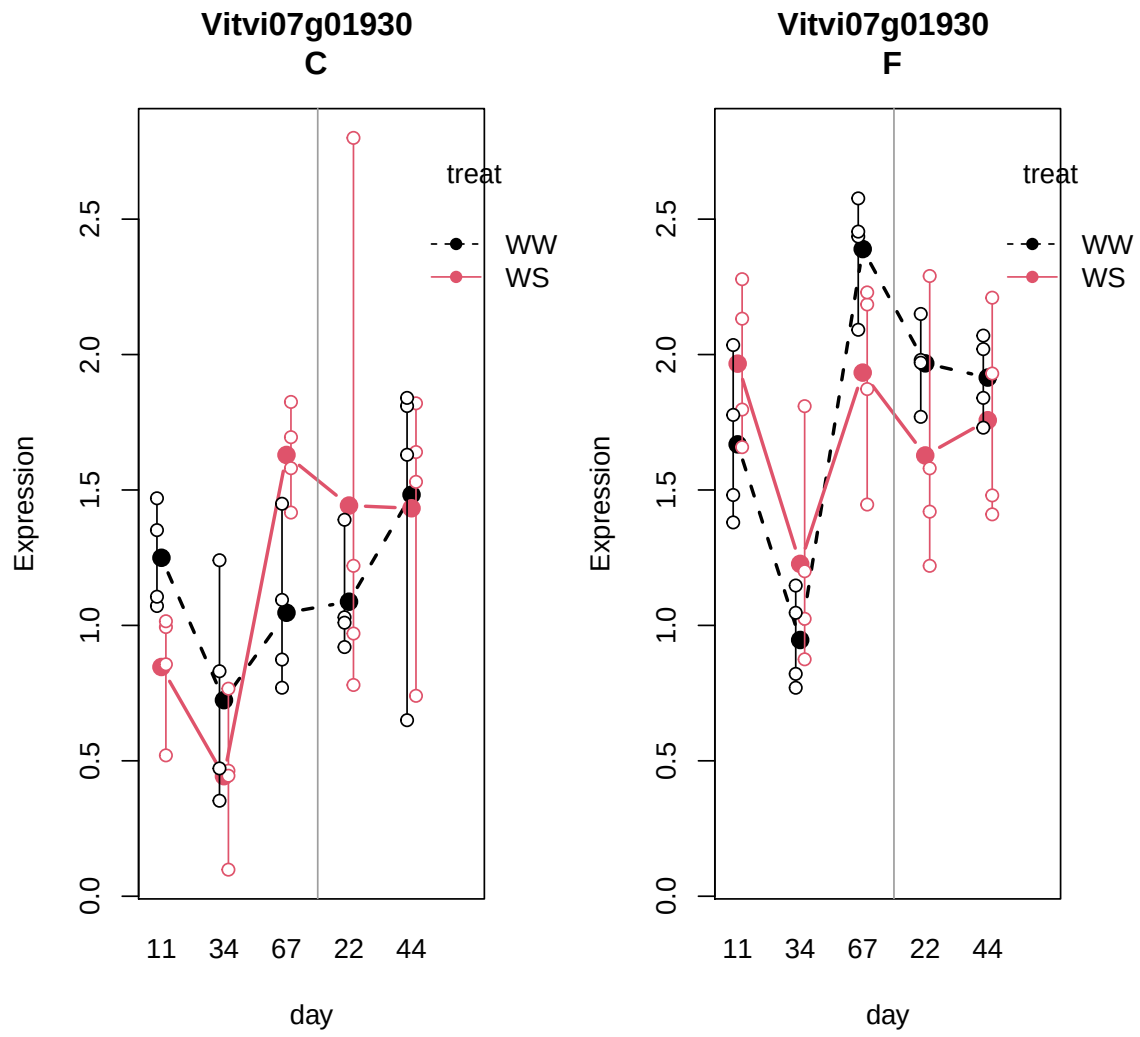
Coefficient varietyF:day67:treatWS for Vitvi07g01930.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi07g01930 -1.739898 1.339209 -4.367004 9.099893e-05
      adj.P.Val      B
Vitvi07g01930 0.03152286 1.367689

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

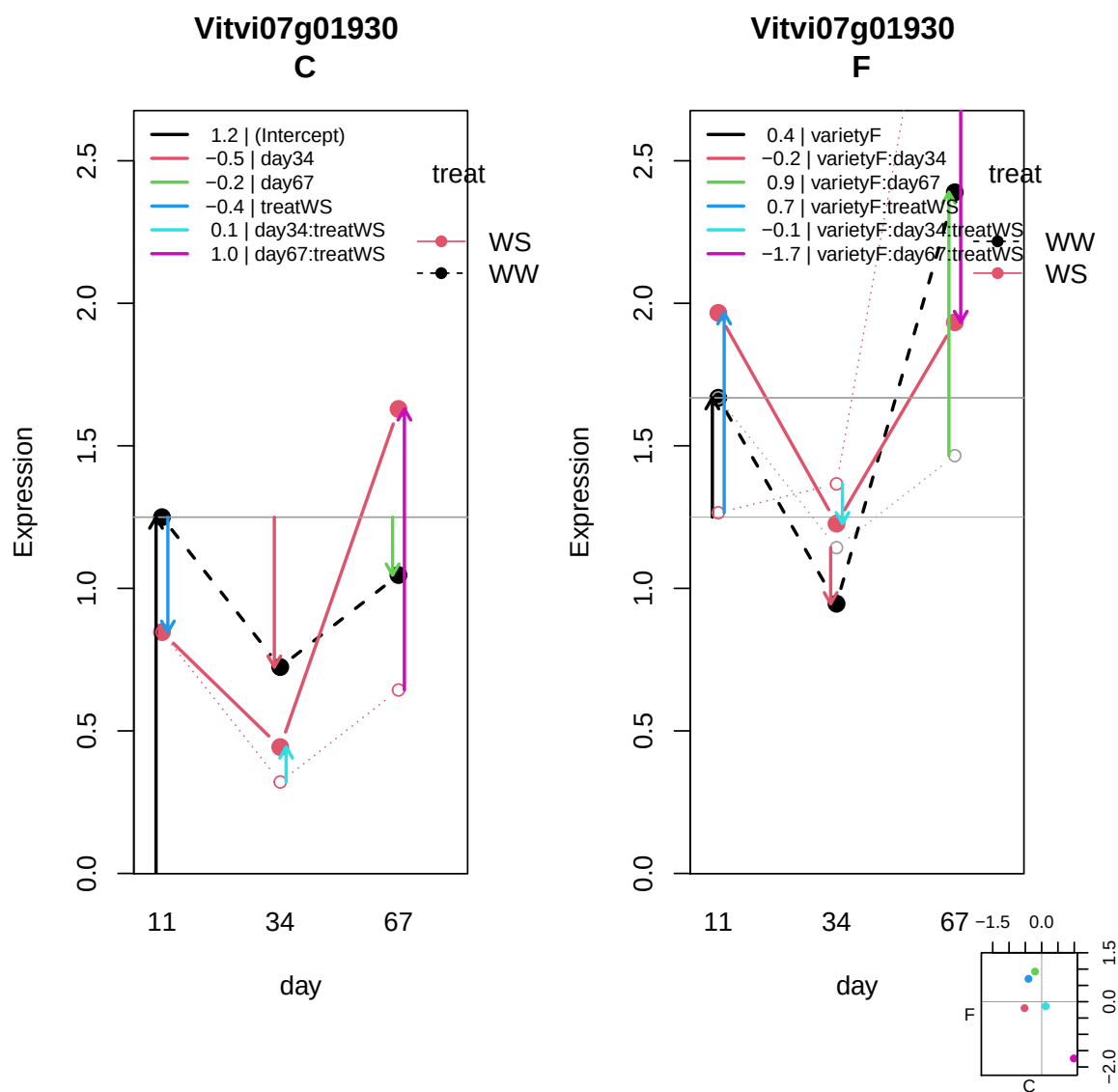
              (Intercept)  varietyF      day34      day67
Vitvi07g01930      1.24968  0.41882 -0.5256725 -0.2029287
              treatWS  varietyF:day34  varietyF:day67
Vitvi07g01930 -0.4032231      -0.196691      0.9239231
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi07g01930      0.7011659      0.1224594      0.9857812
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi07g01930      -0.1393765      -1.739898

```

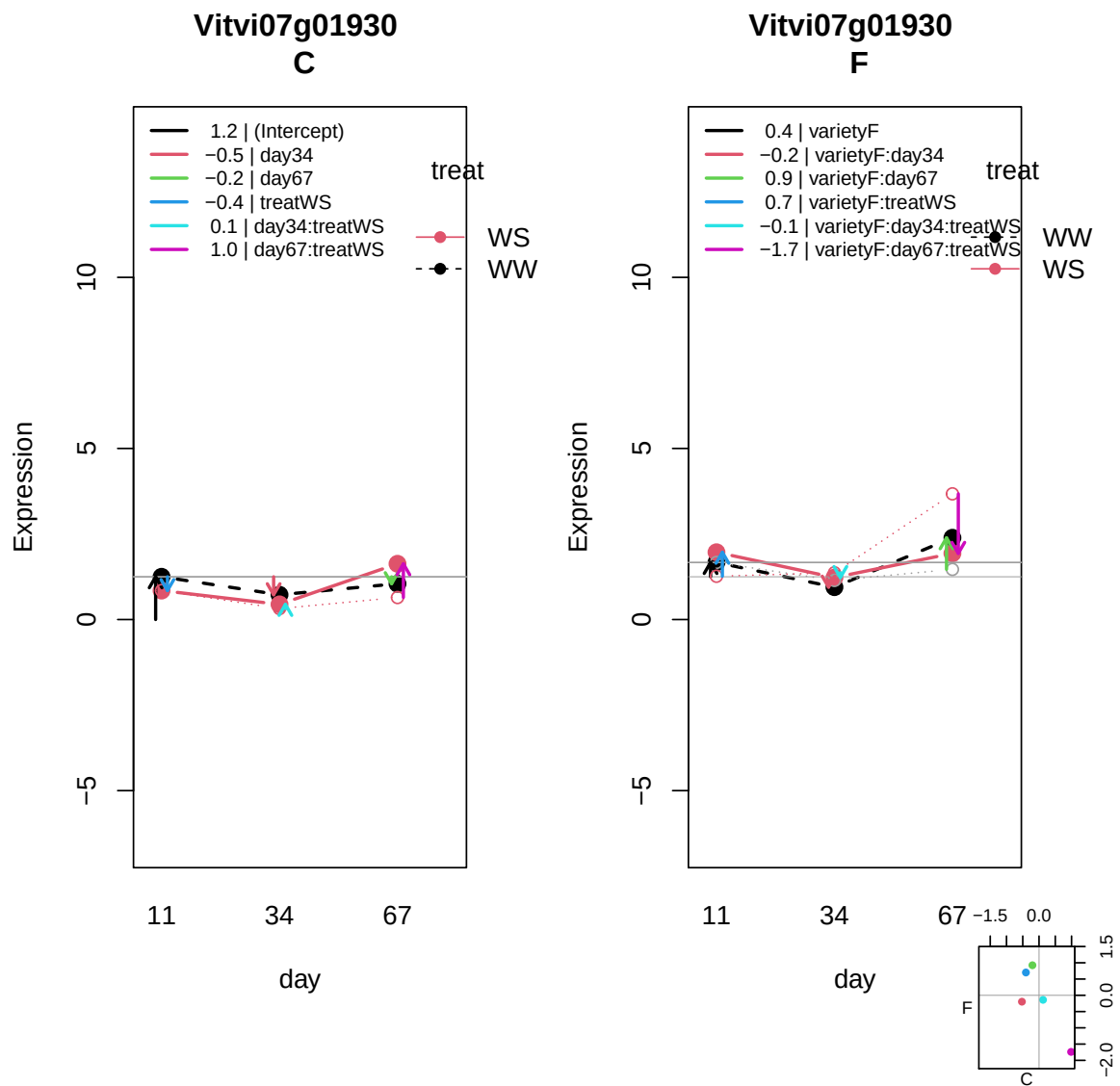
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

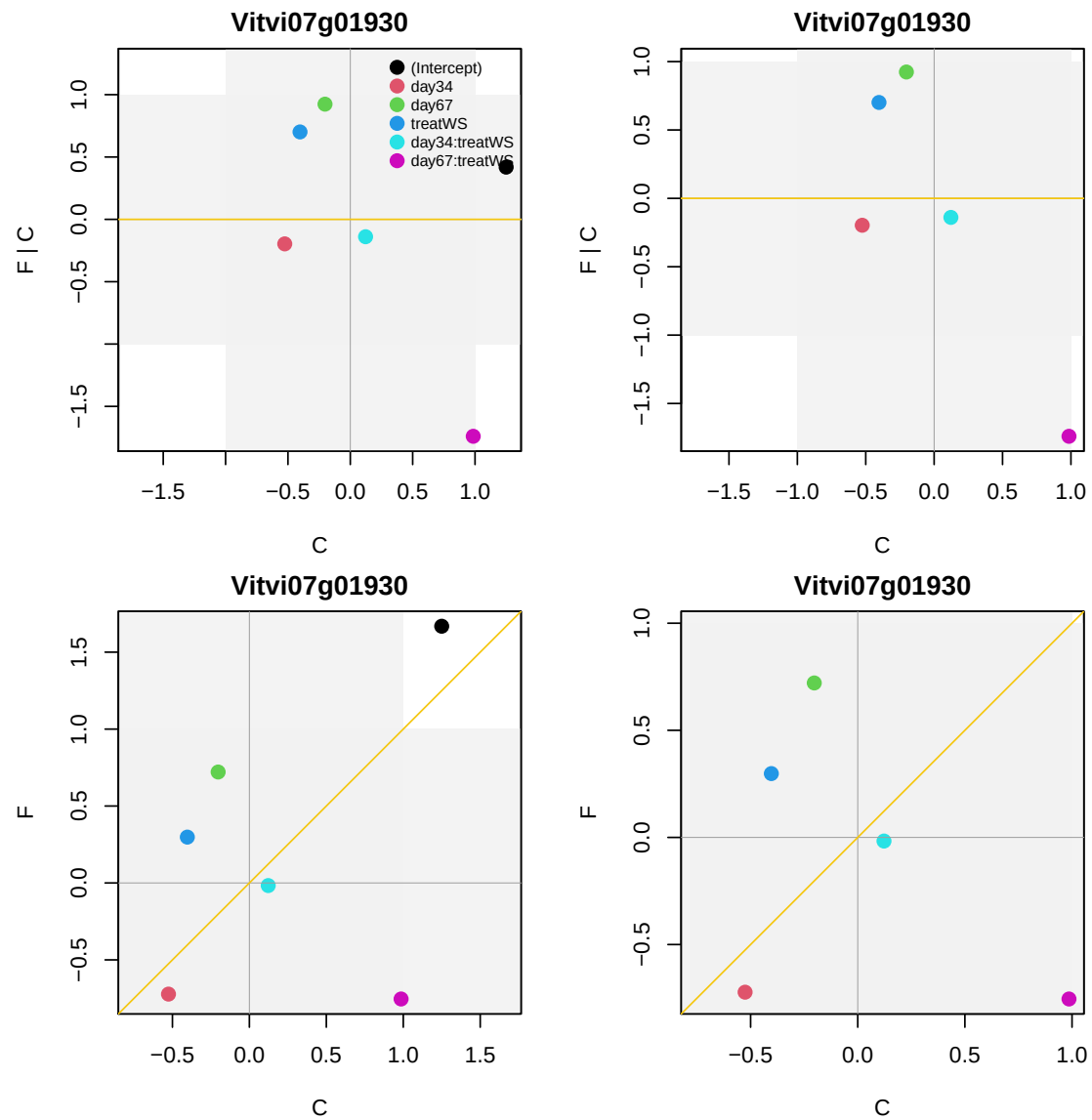


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

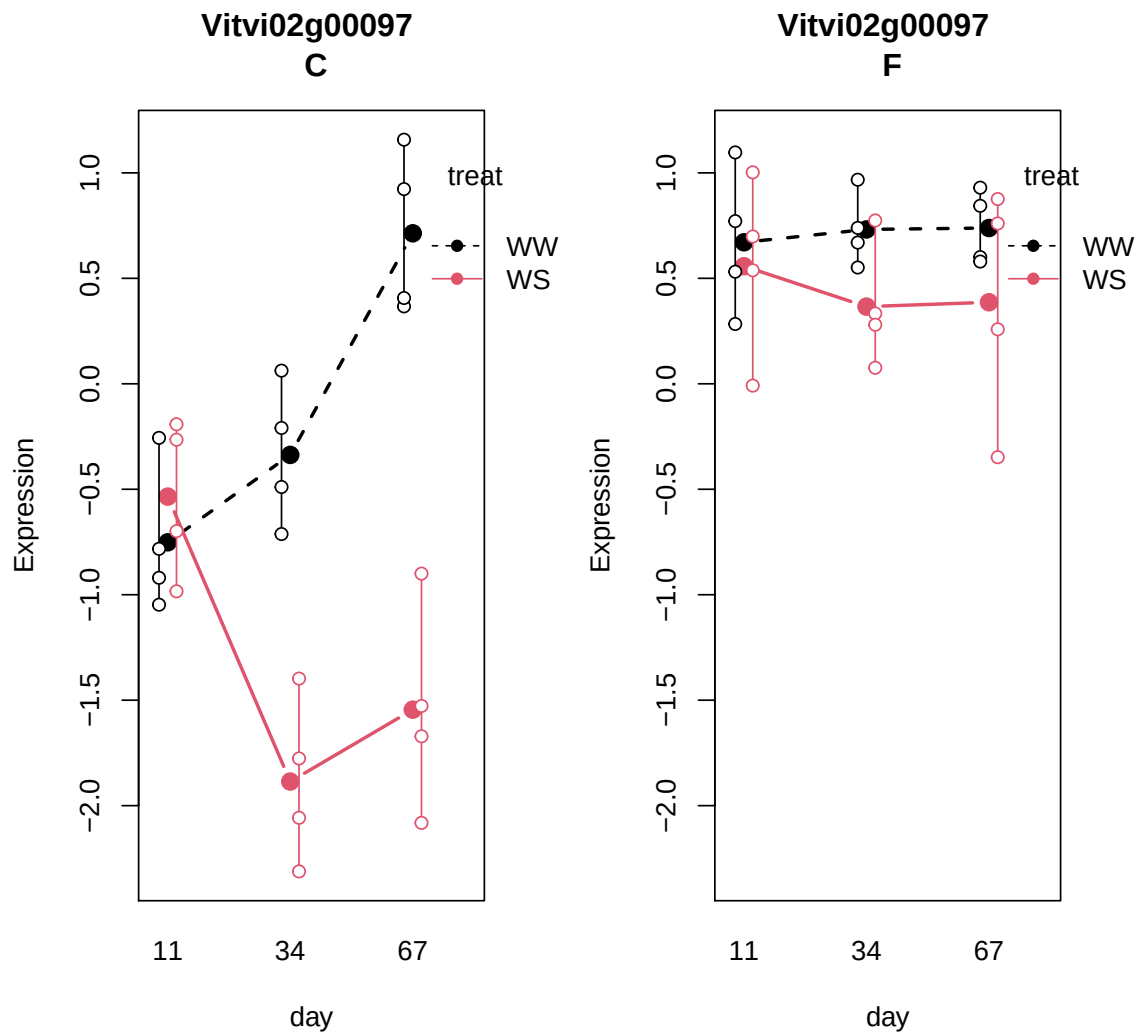
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



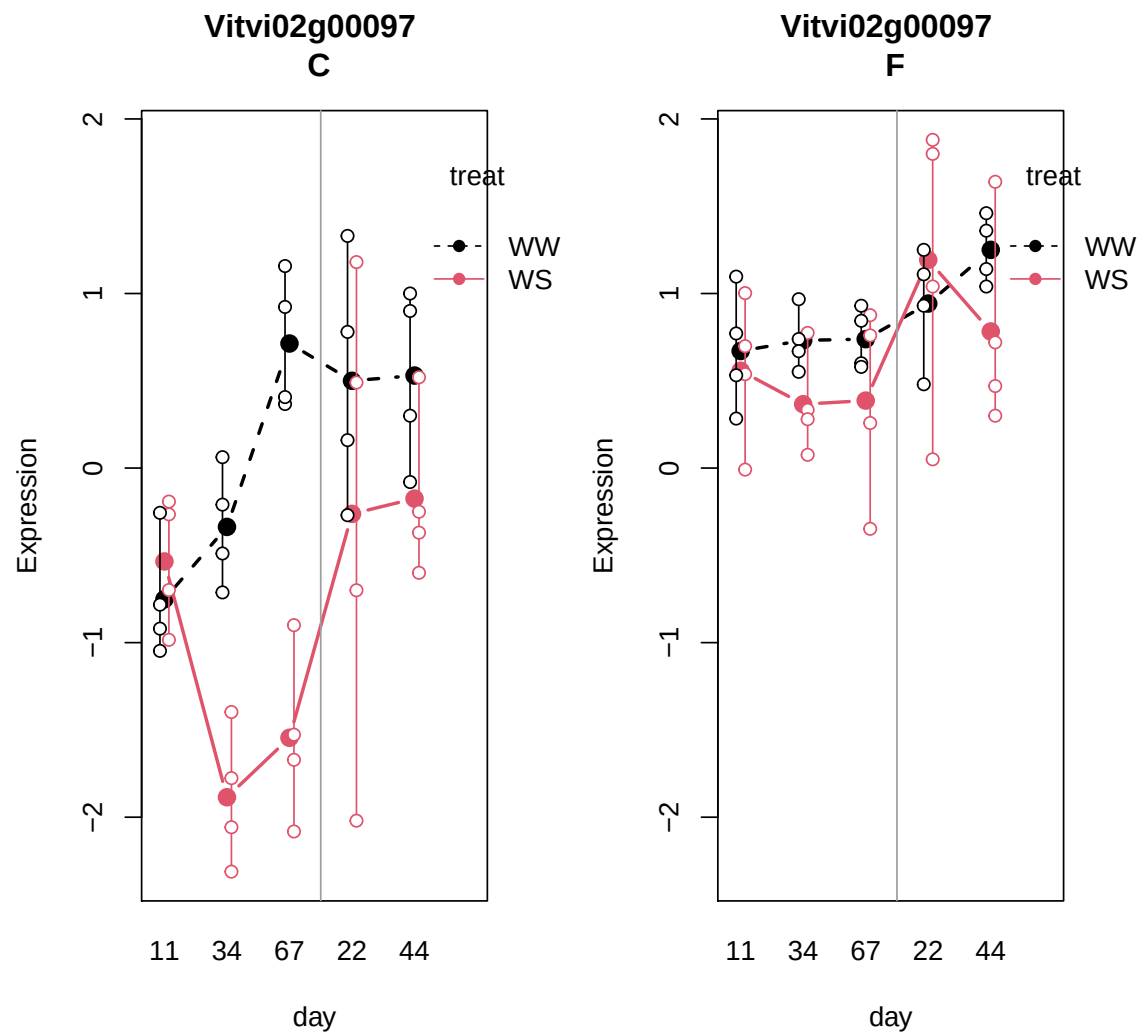
6.12.45 Vitvi02g00097

Coefficient varietyF:day67:treatWS for Vitvi02g00097.

```
> tt[varname,]
      logFC  AveExpr      t    P.Value
Vitvi02g00097 2.236468 -0.07419447 4.341326 9.843373e-05
      adj.P.Val      B
Vitvi02g00097 0.03201513 1.297813
> plot.interactions(varname,phdata=pd,data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



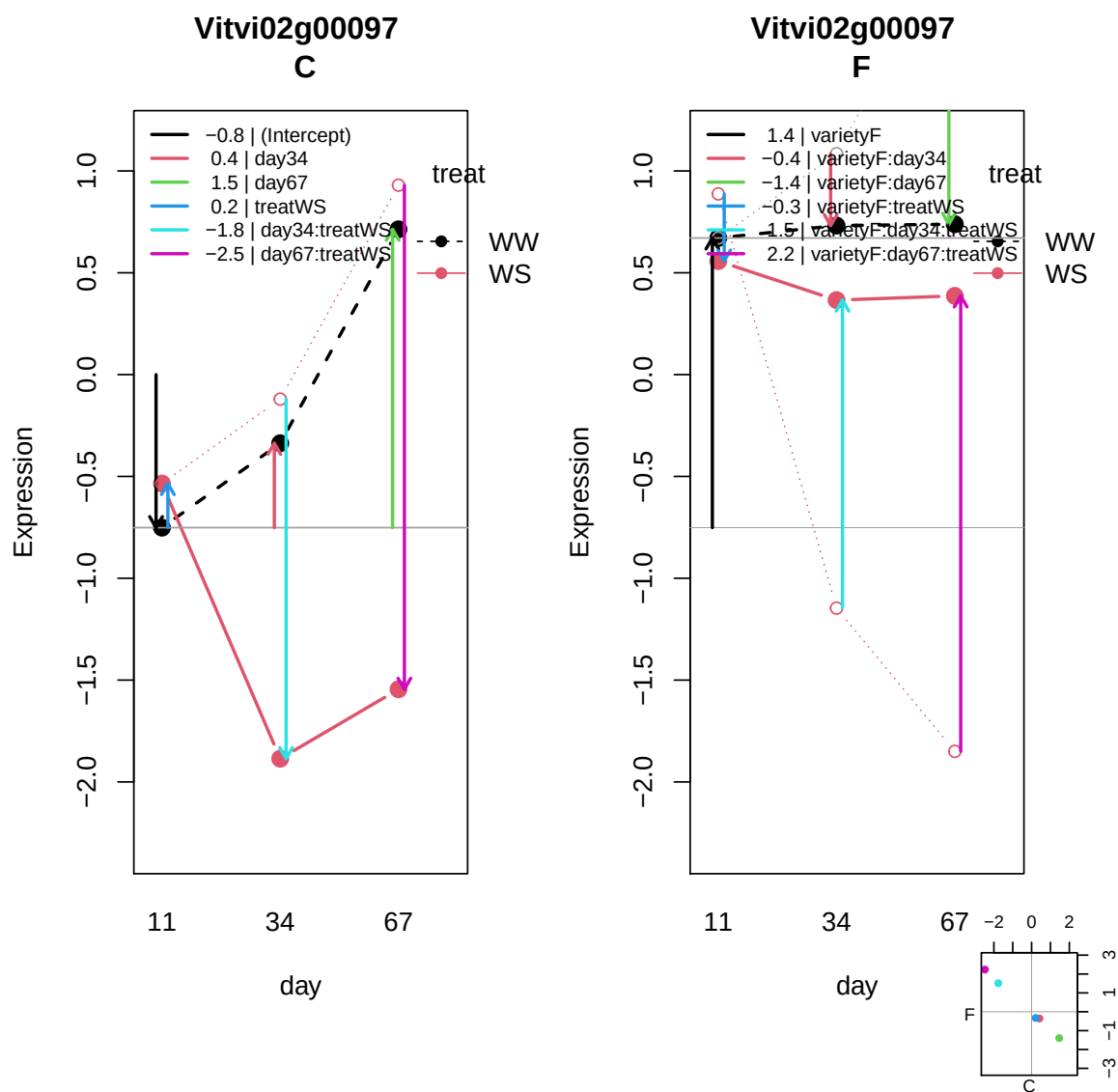
```

> fit1[varname,]$coefficients

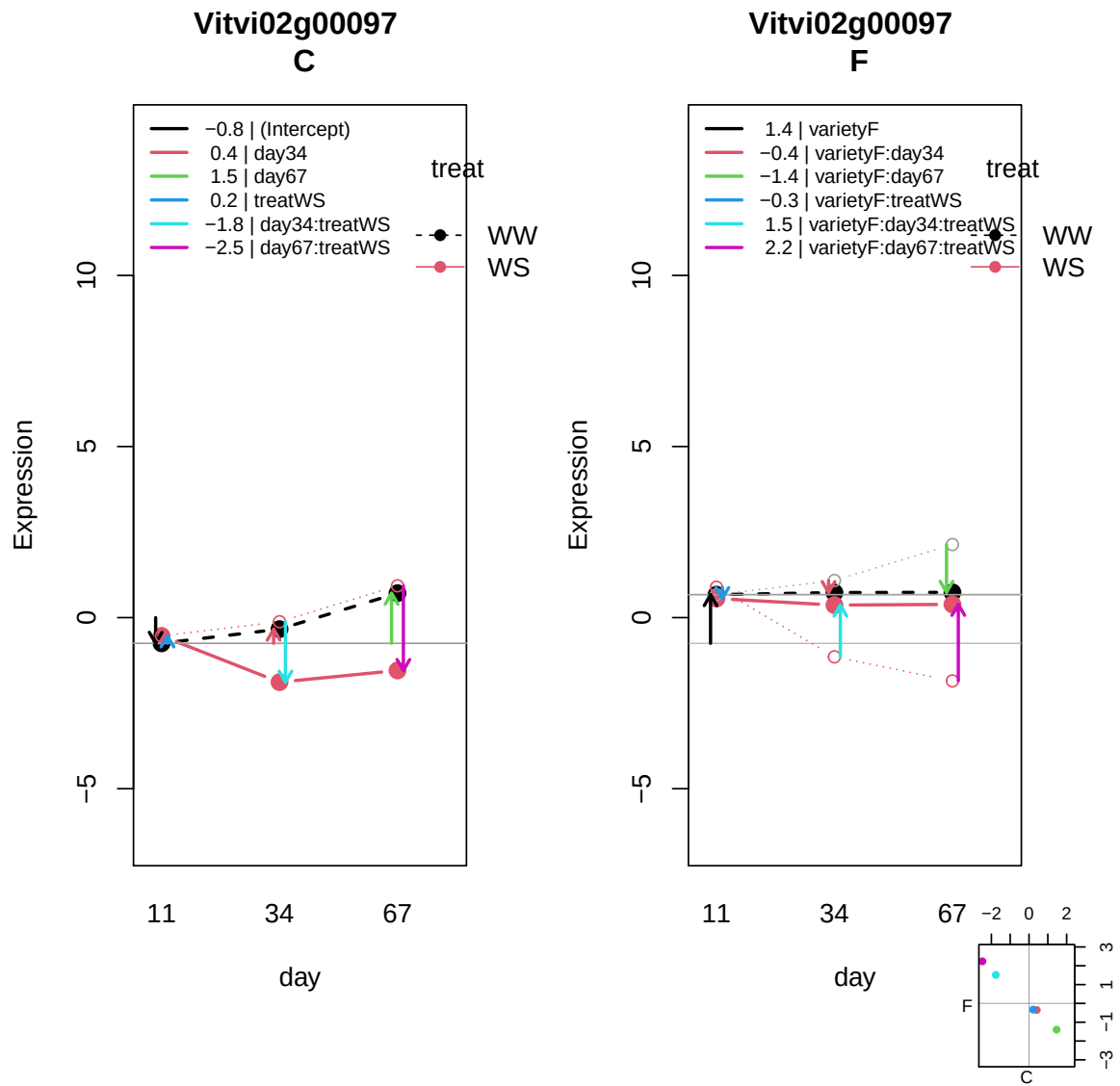
              (Intercept)  varietyF      day34      day67
Vitvi02g00097 -0.7515241   1.42221 0.4143203 1.465005
              treatWS  varietyF:day34  varietyF:day67
Vitvi02g00097 0.2166107    -0.3532285    -1.397242
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi02g00097    -0.3298226    -1.765223    -2.475188
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi02g00097                1.512492                2.236468

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

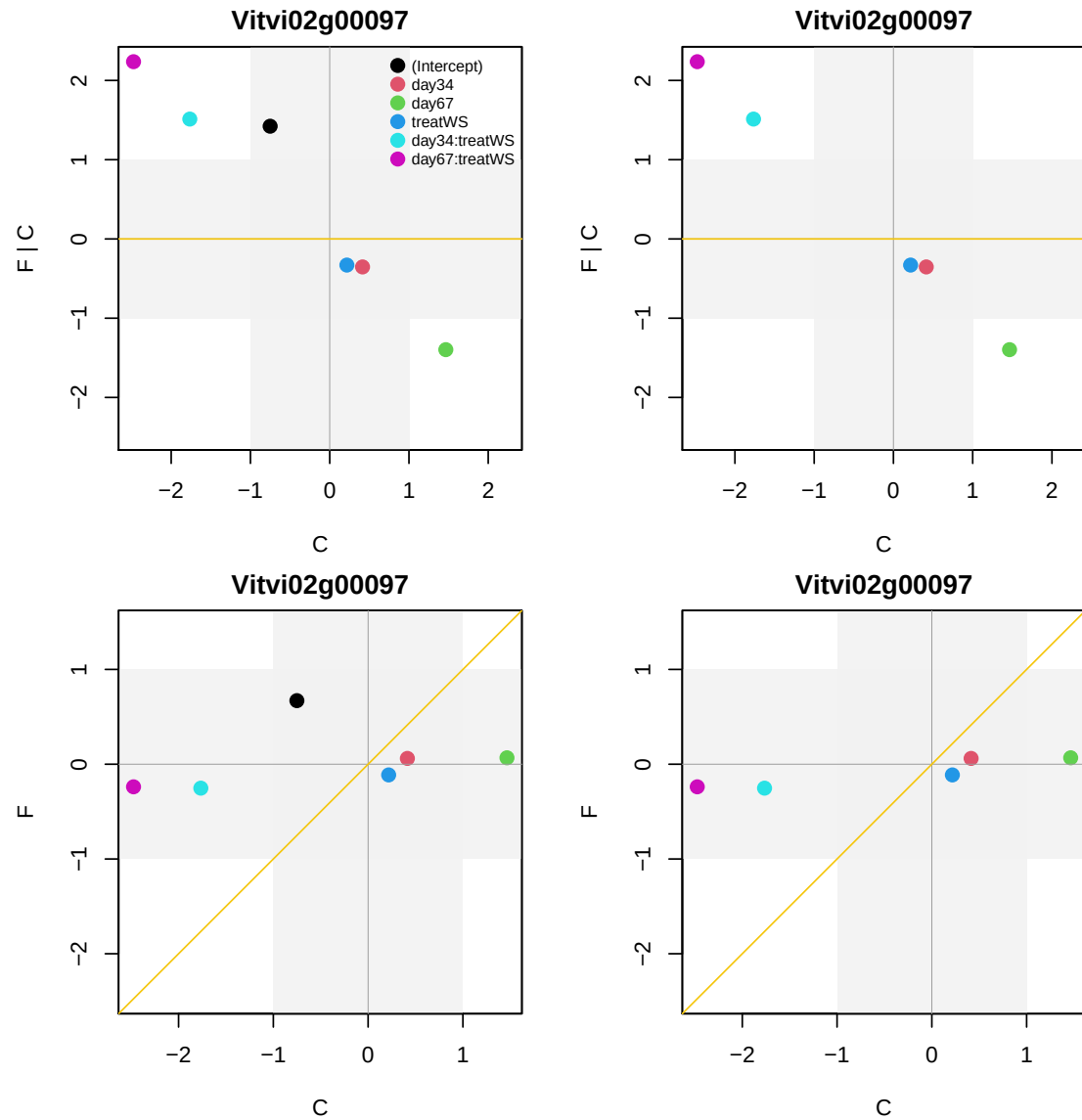


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



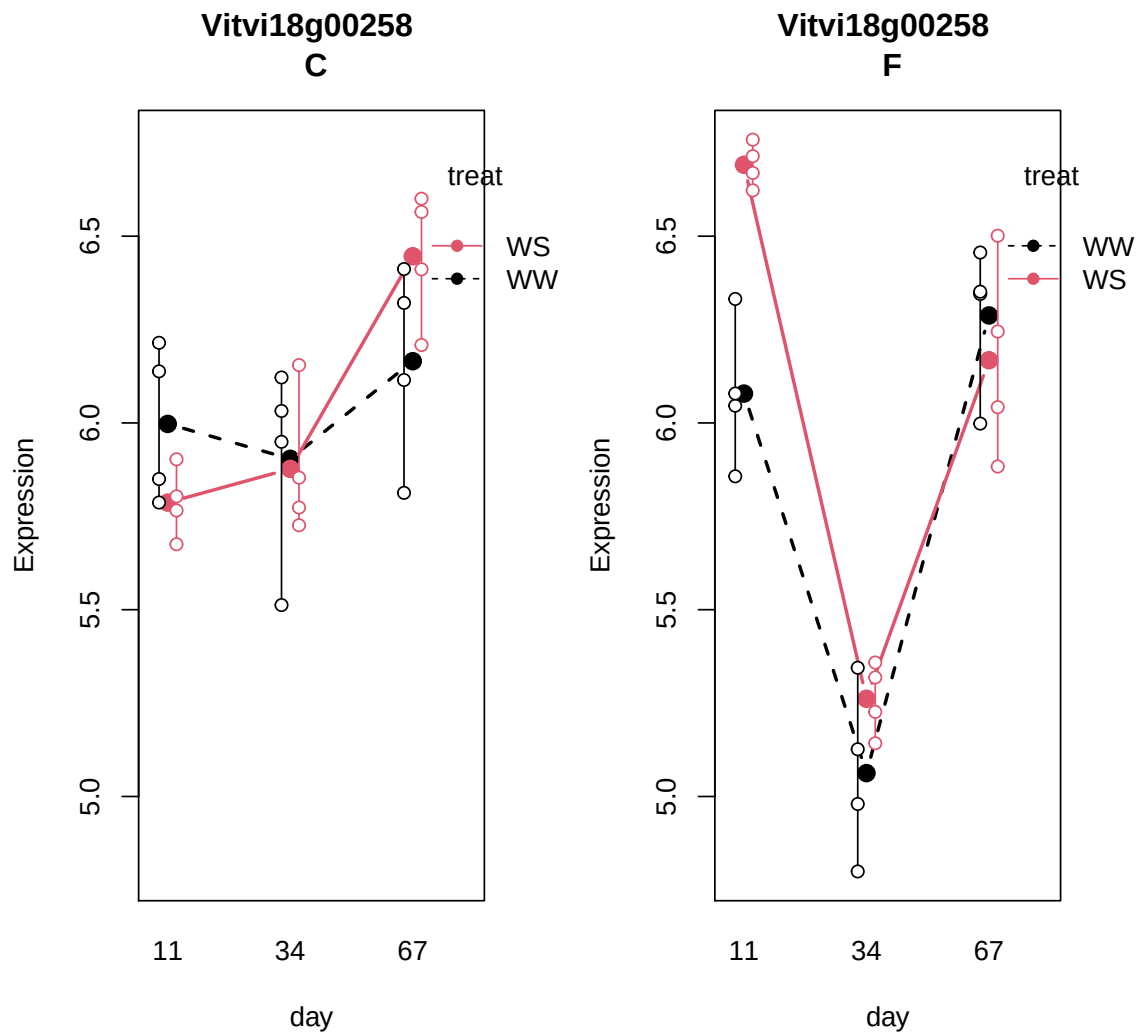
6.12.46 Vitvi18g00258

Coefficient varietyF:day67:treatWS for Vitvi18g00258.

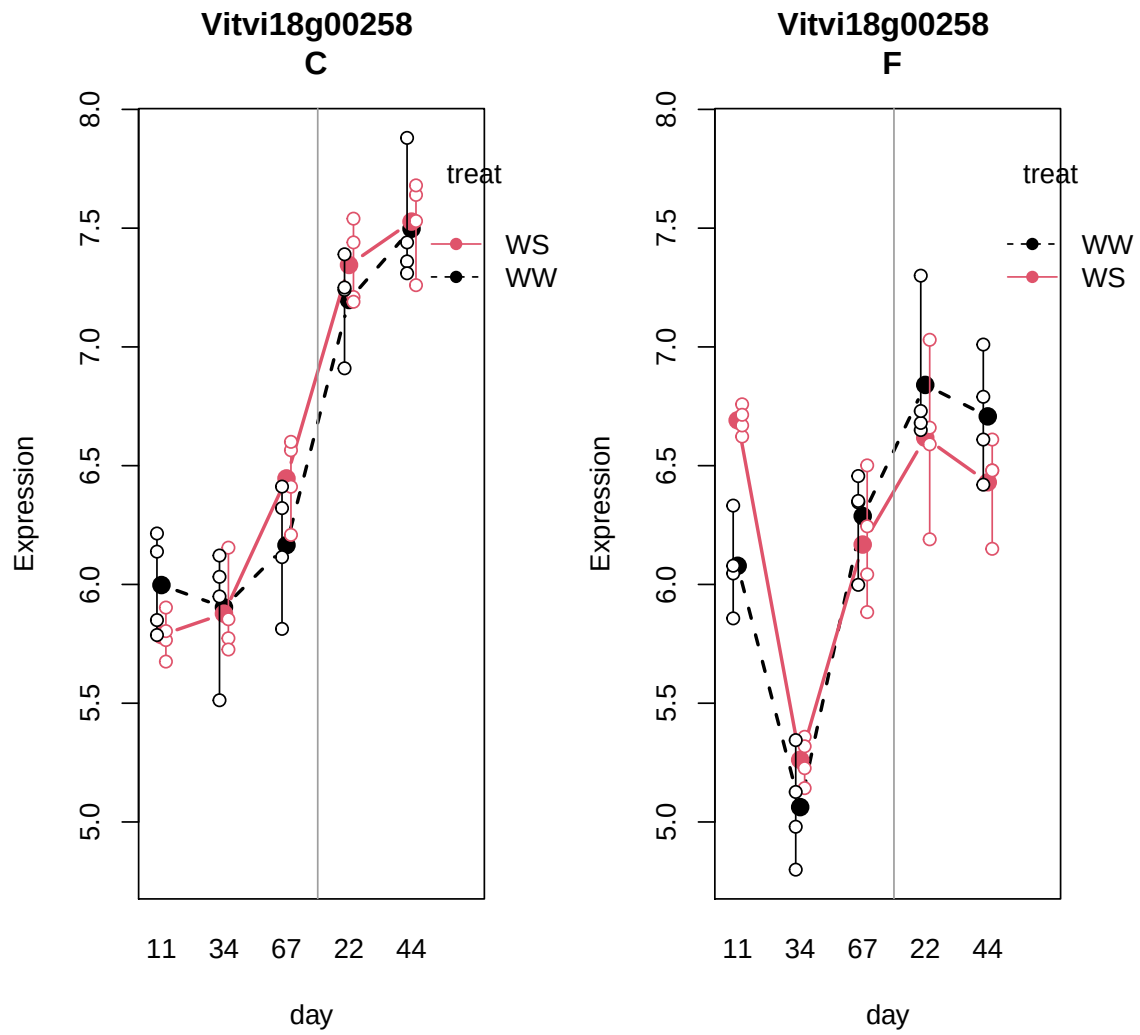
```
> tt[varname,]
```

	logFC	AveExpr	t	P.Value
Vitvi18g00258	-1.224227	5.977192	-4.331281	0.0001015015
	adj.P.Val	B		
Vitvi18g00258	0.03201513	1.27051		

```
> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

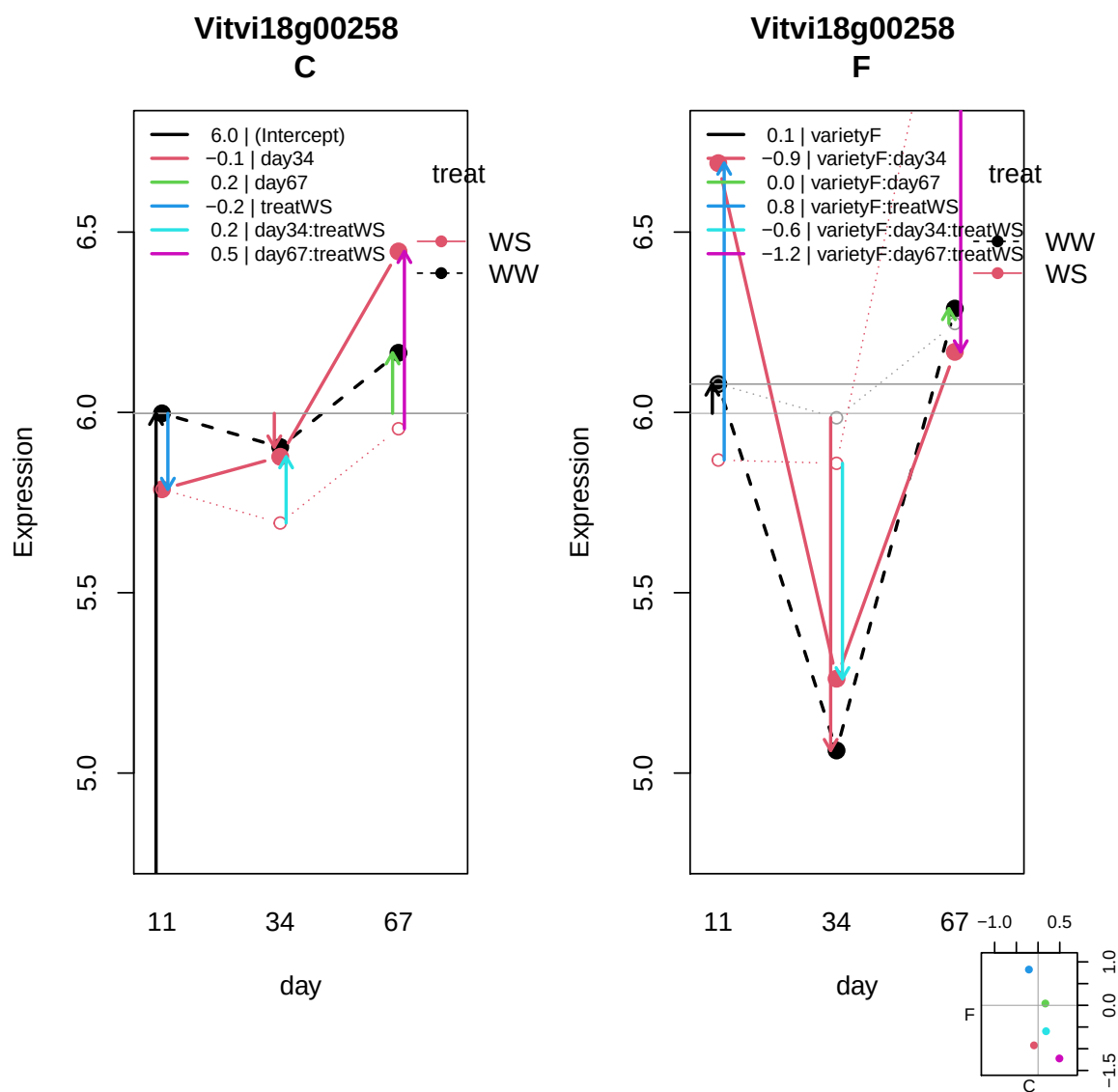
              (Intercept)    varietyF      day34      day67
Vitvi18g00258      5.997403 0.08113541 -0.0934518 0.1678692
              treatWS varietyF:day34 varietyF:day67
Vitvi18g00258 -0.2106198      -0.922547      0.04143702
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi18g00258      0.8232358      0.1836847      0.4916855
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi18g00258      -0.5972993      -1.224227

```

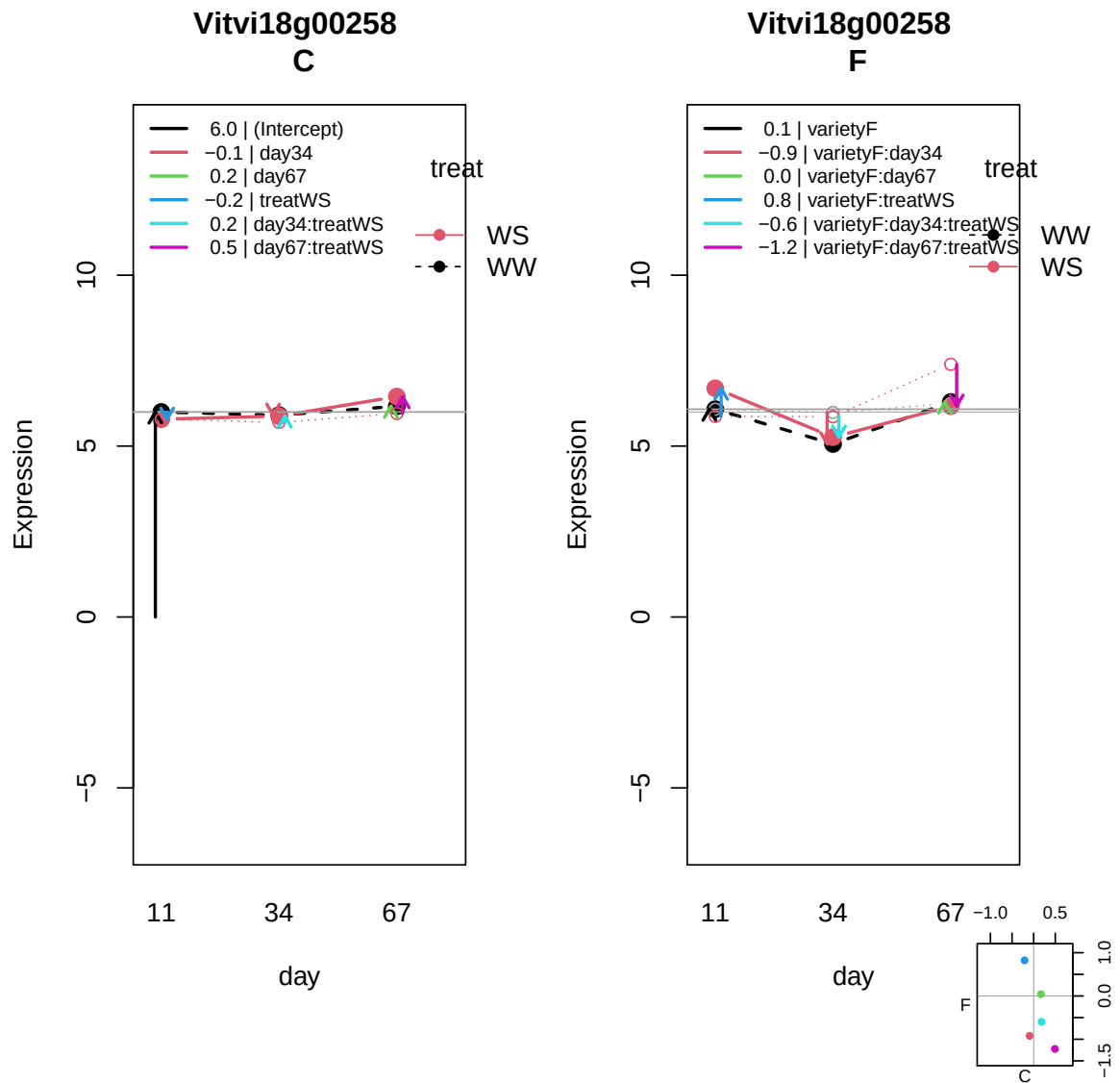
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

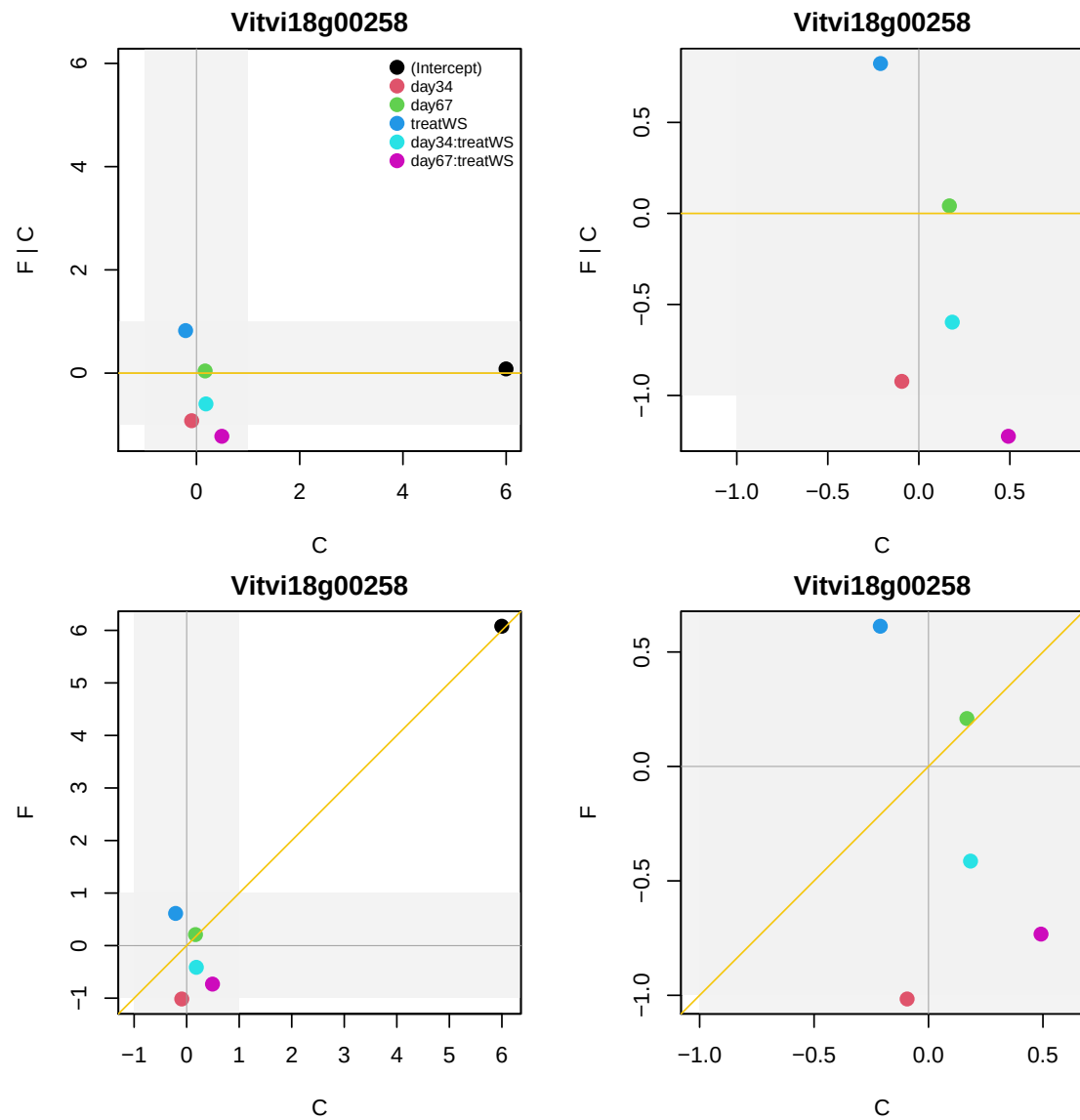


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

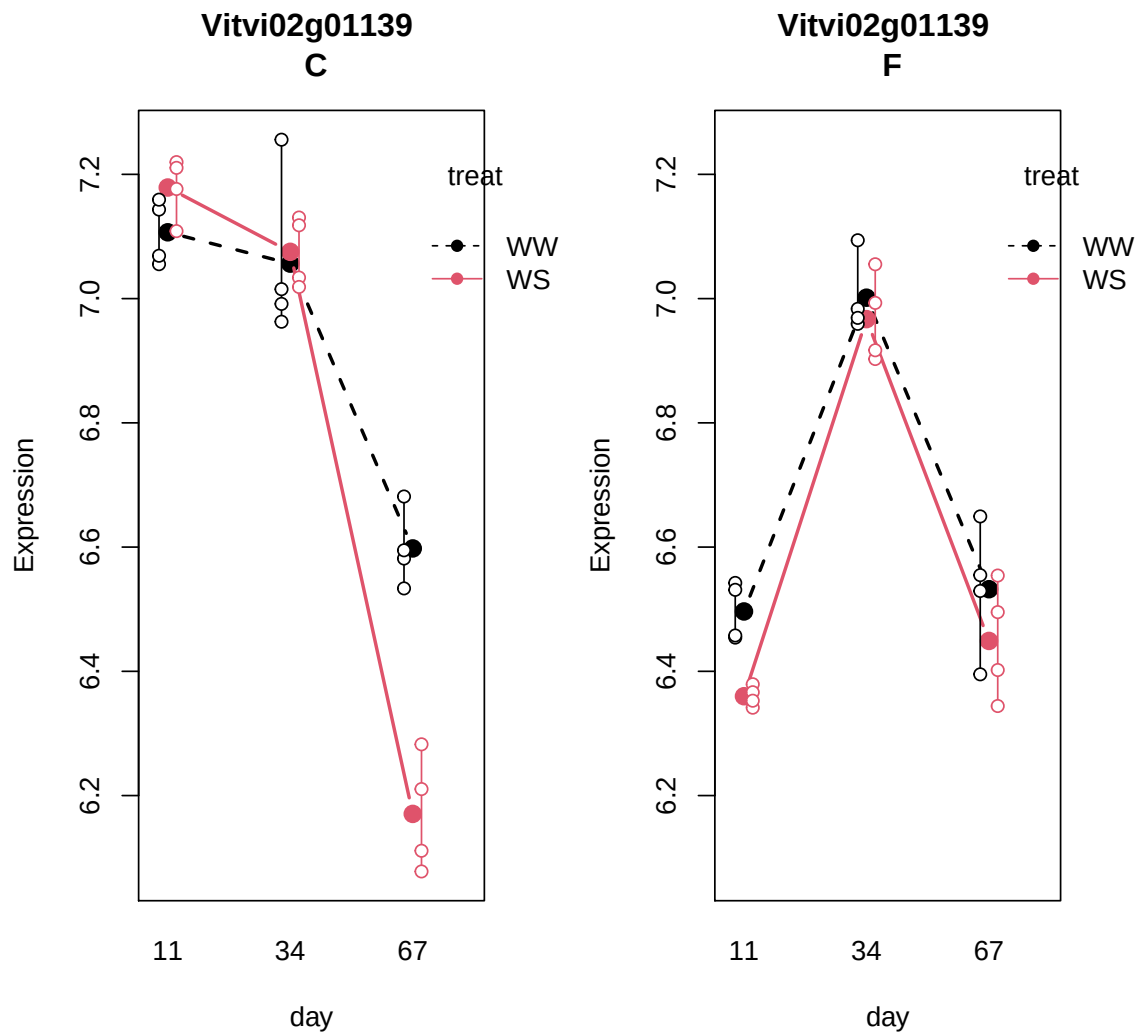


6.12.47 Vitvi02g01139

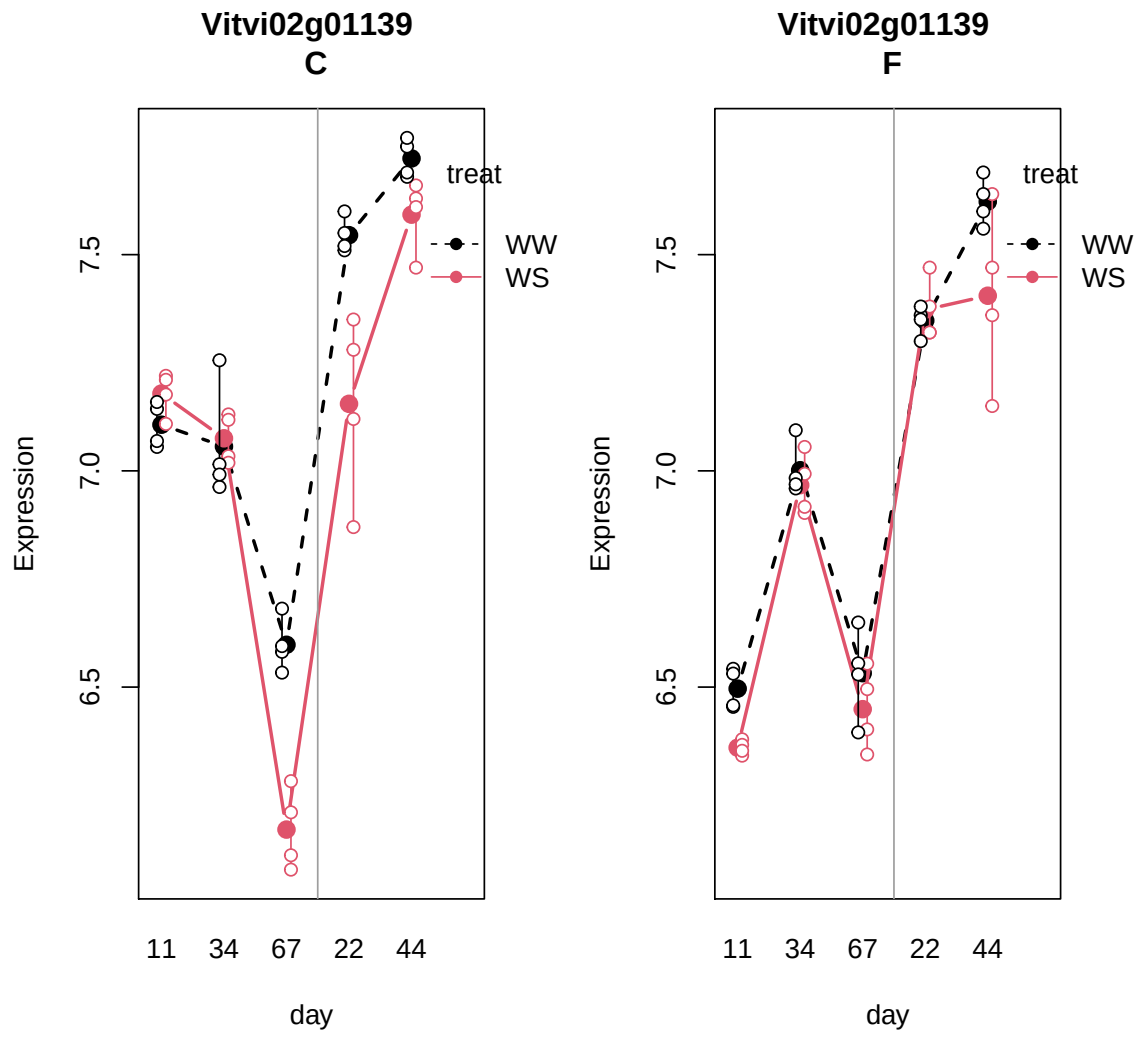
Coefficient varietyF:day67:treatWS for Vitvi02g01139.

```
> tt[varname,]
              logFC  AveExpr      t      P.Value
Vitvi02g01139 0.552592 6.749275 4.330695 0.0001016835
              adj.P.Val      B
Vitvi02g01139 0.03201513 1.268916

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

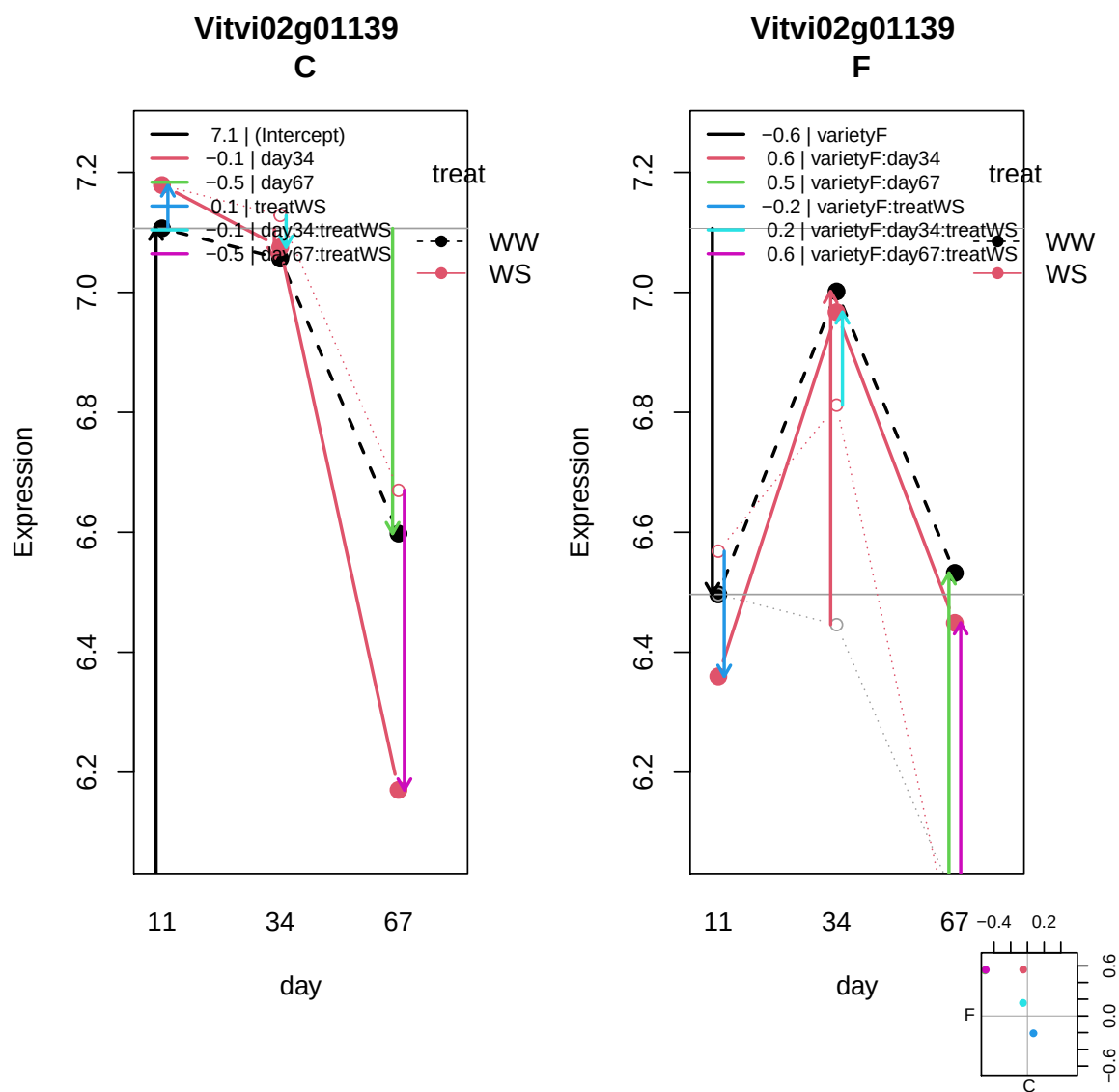
              (Intercept)    varietyF      day34      day67
Vitvi02g01139    7.106741 -0.6103706 -0.05042462 -0.5089275
              treatWS varietyF:day34 varietyF:day67
Vitvi02g01139  0.07206761    0.5554961    0.5447409
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi02g01139    -0.2085154   -0.05308712   -0.4993944
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi02g01139          0.1550734          0.552592

```

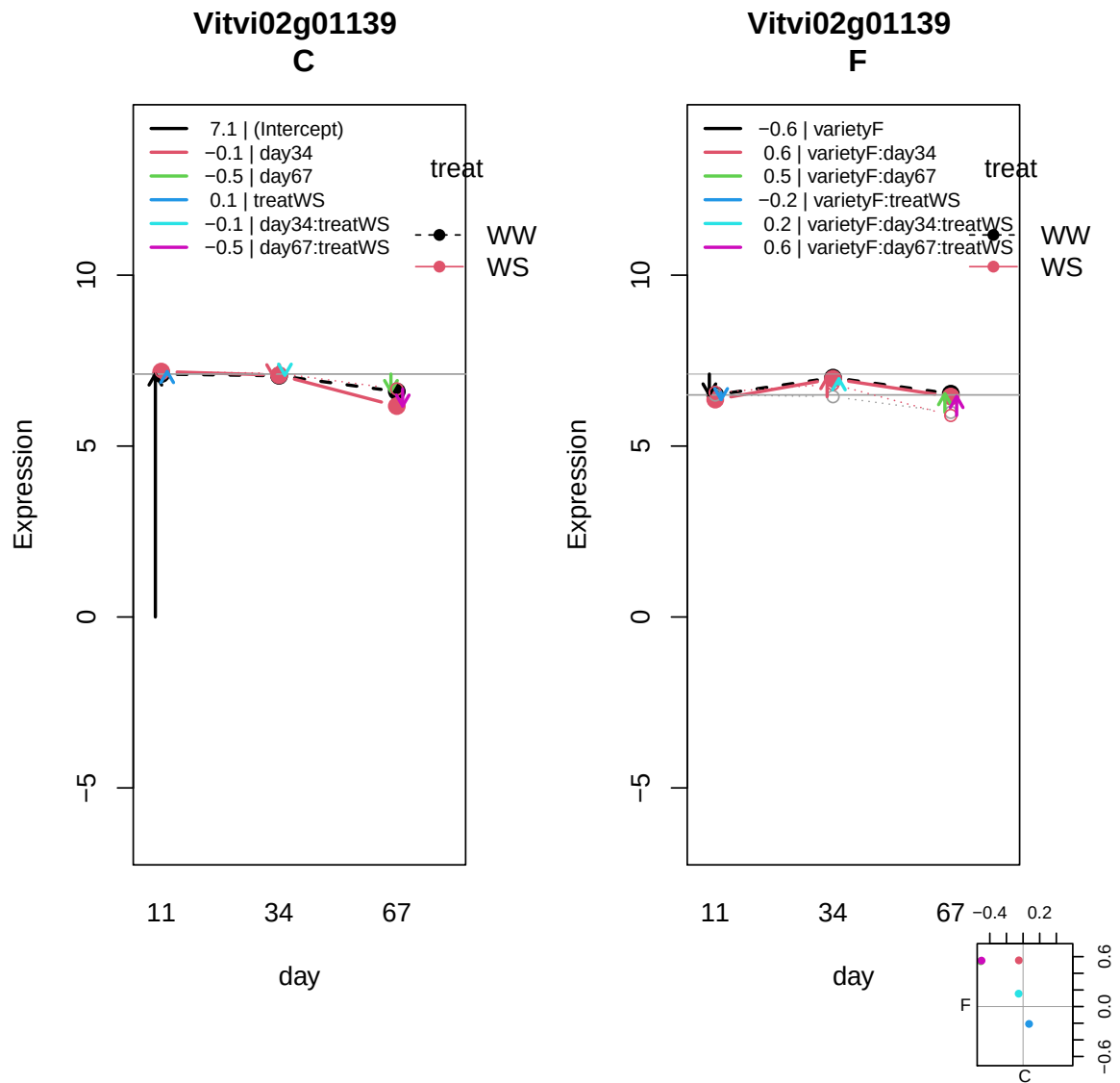
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

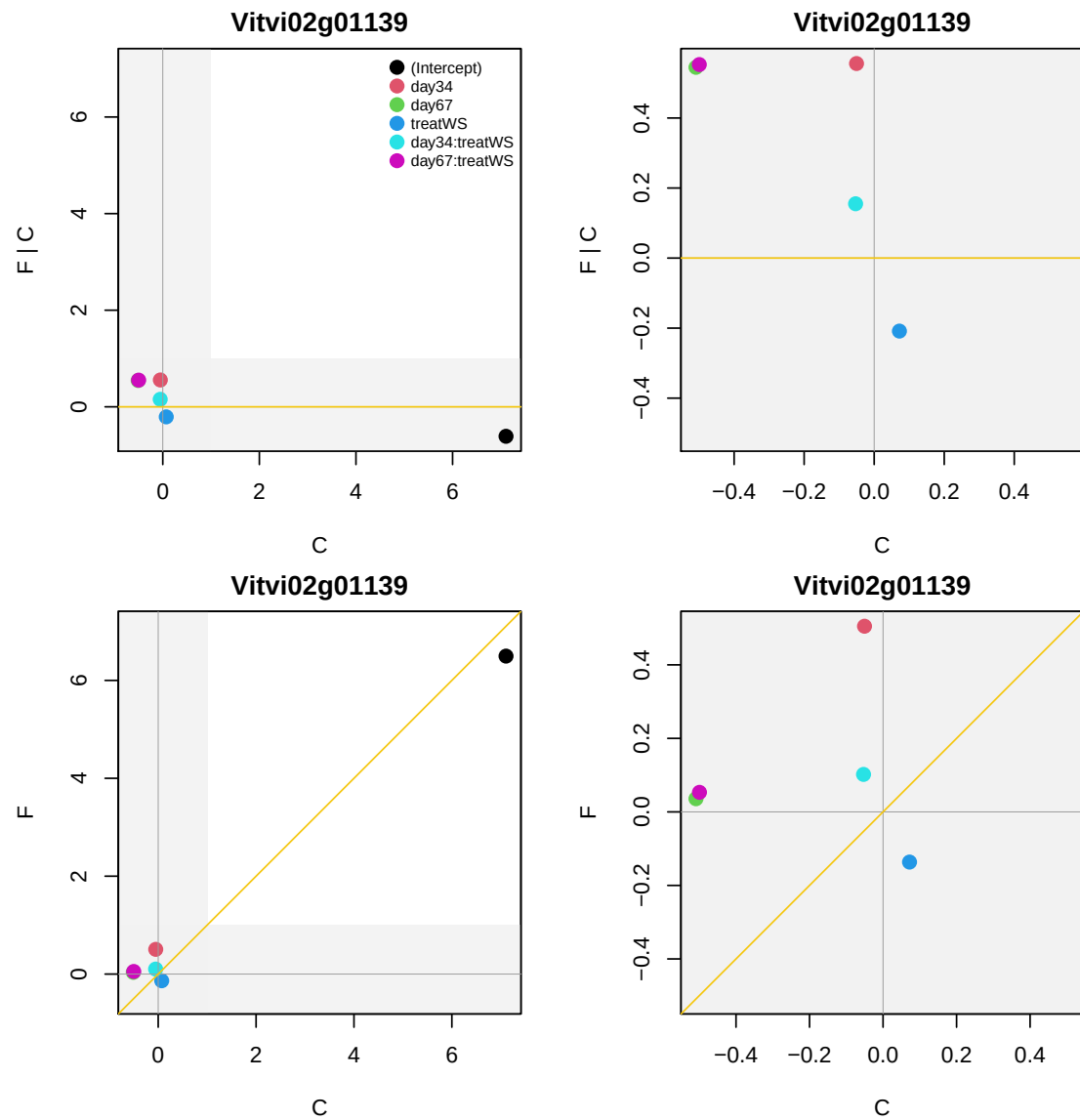


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

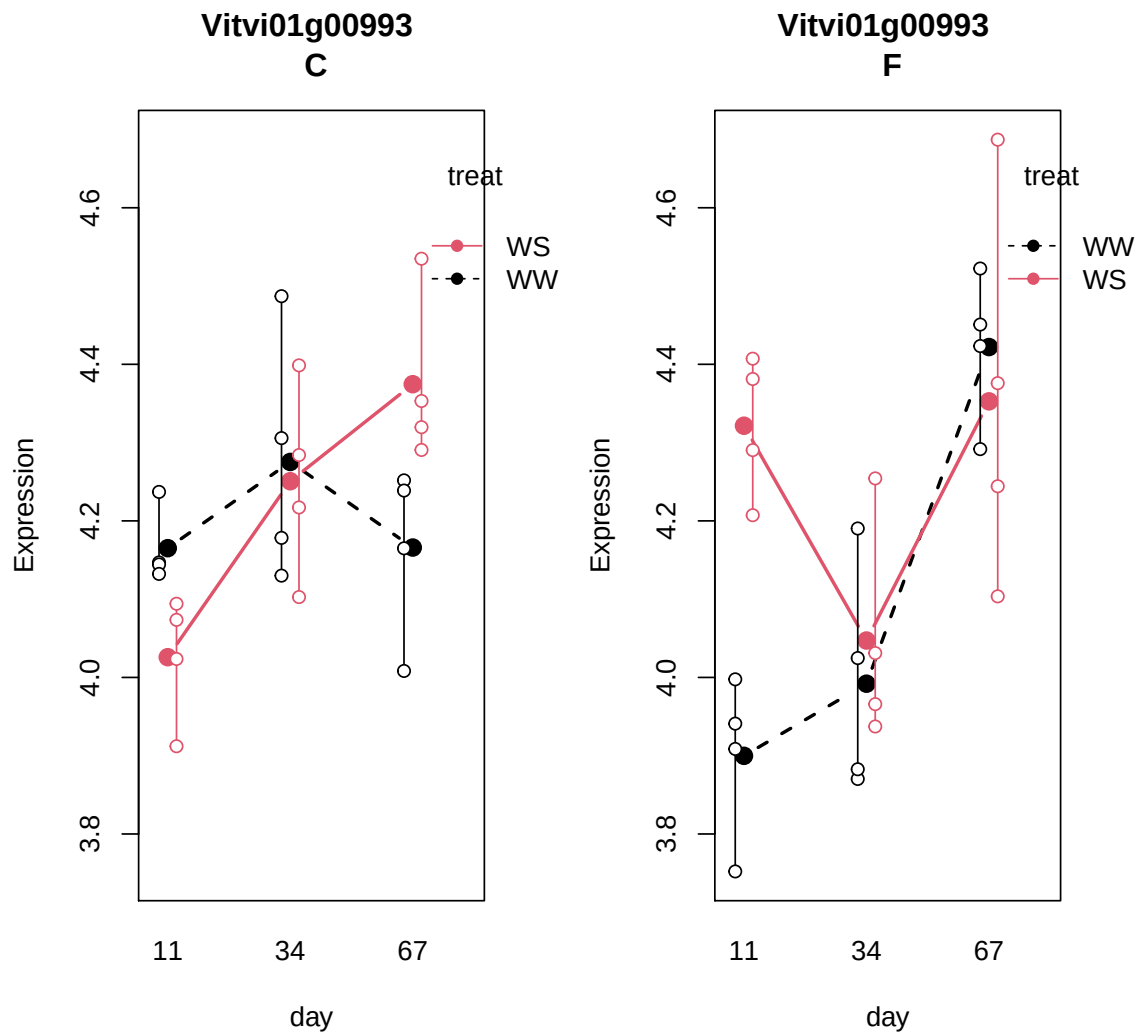


6.12.48 Vitvi01g00993

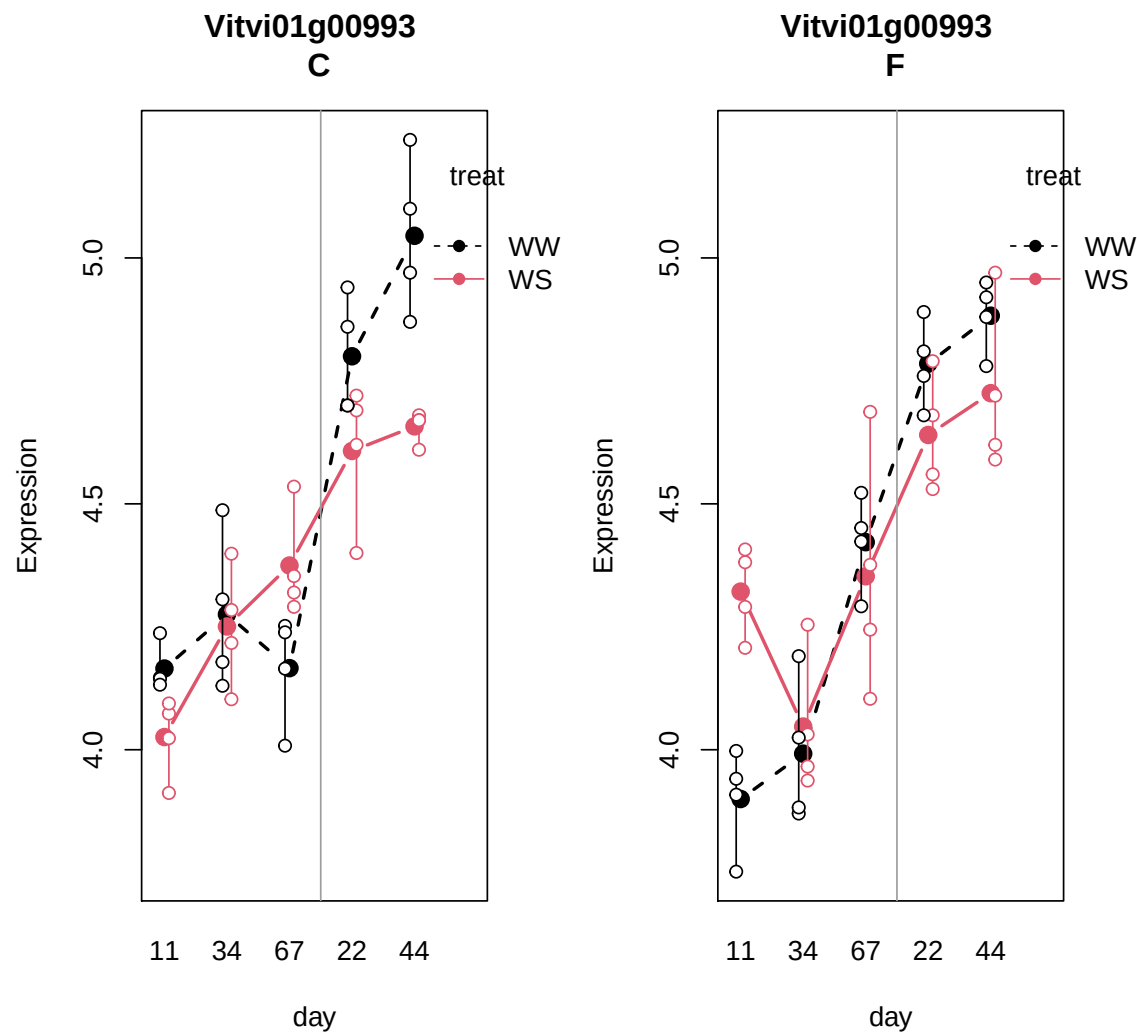
Coefficient varietyF:day67:treatWS for Vitvi01g00993.

```
> tt[varname,]
              logFC AveExpr          t      P.Value
Vitvi01g00993 -0.8390196 4.19105 -4.327316 0.0001027382
              adj.P.Val          B
Vitvi01g00993 0.03201513 1.259737

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```




```
> fit1[varname,]$coefficients
```

```

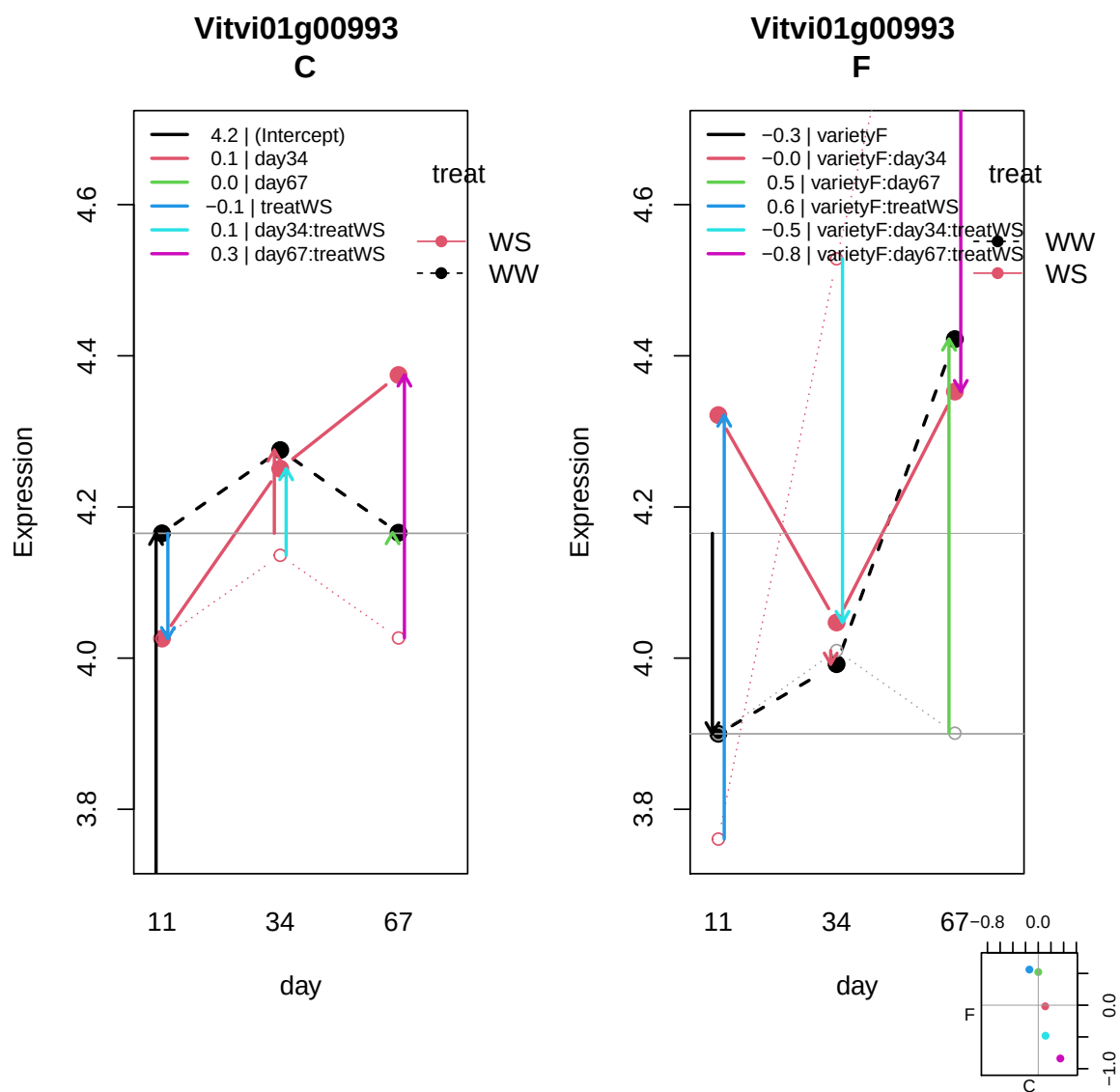
              (Intercept)    varietyF      day34      day67
Vitvi01g00993      4.16511 -0.2652724  0.1101697  0.0008012092
              treatWS varietyF:day34 varietyF:day67
Vitvi01g00993 -0.1392764    -0.01800618    0.5214206
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi01g00993      0.5609671    0.1146302    0.3479496
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi01g00993      -0.4811811              -0.8390196

```

```

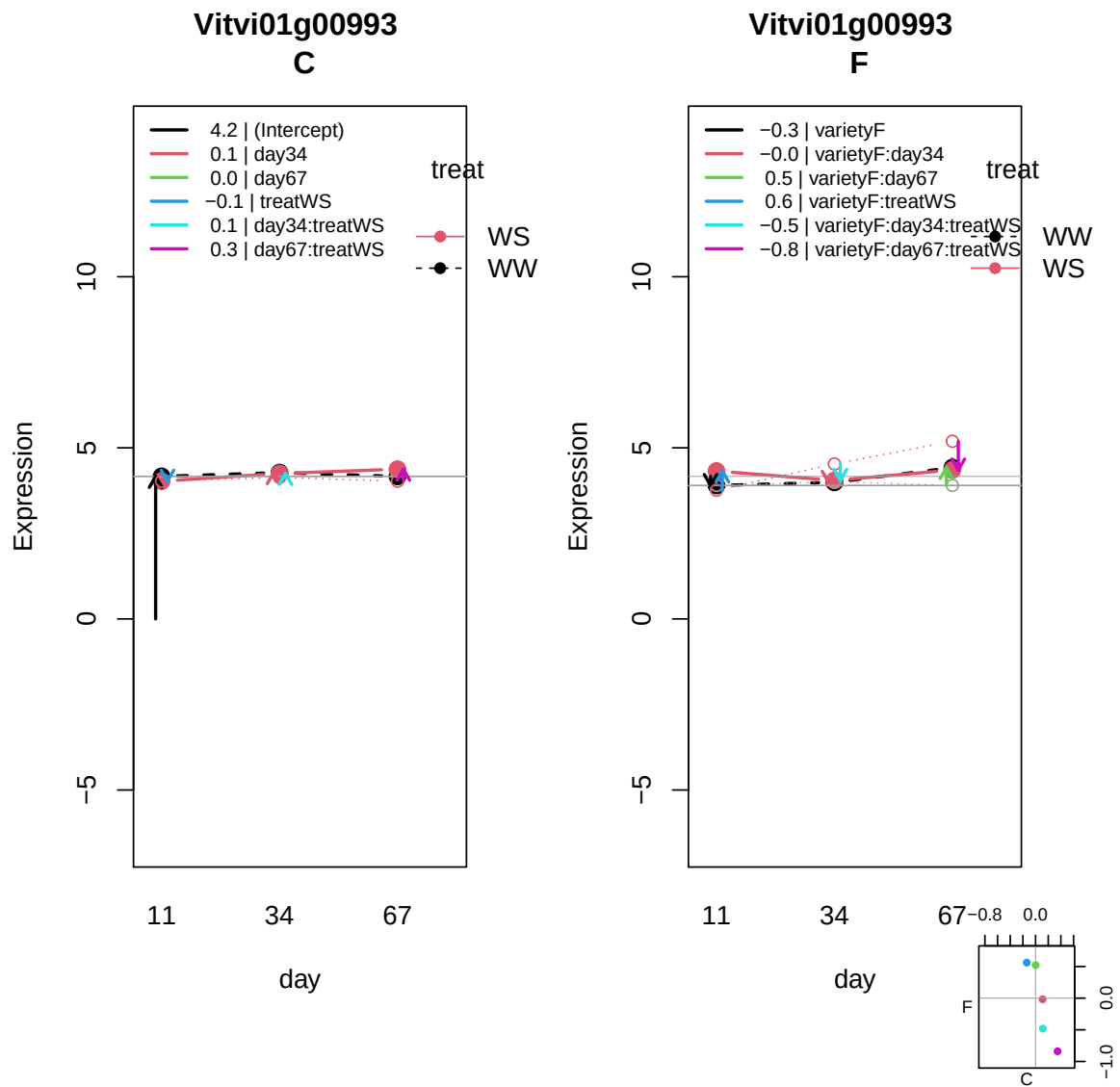
> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



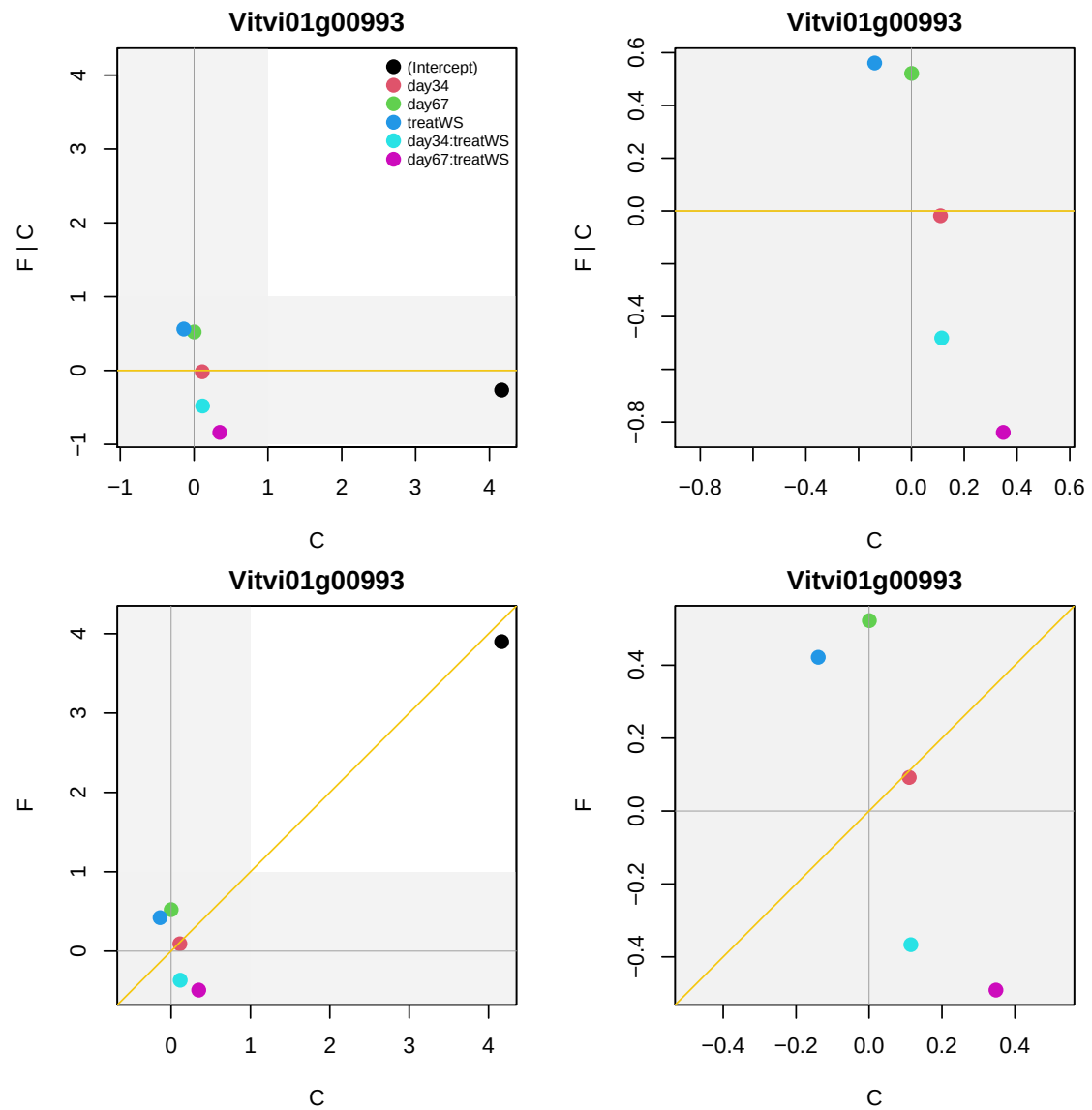
```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```

Warning in arrows(1:ndays - d, es, 1:ndays - d, esF, col = cl + 1:ndays, : zero



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

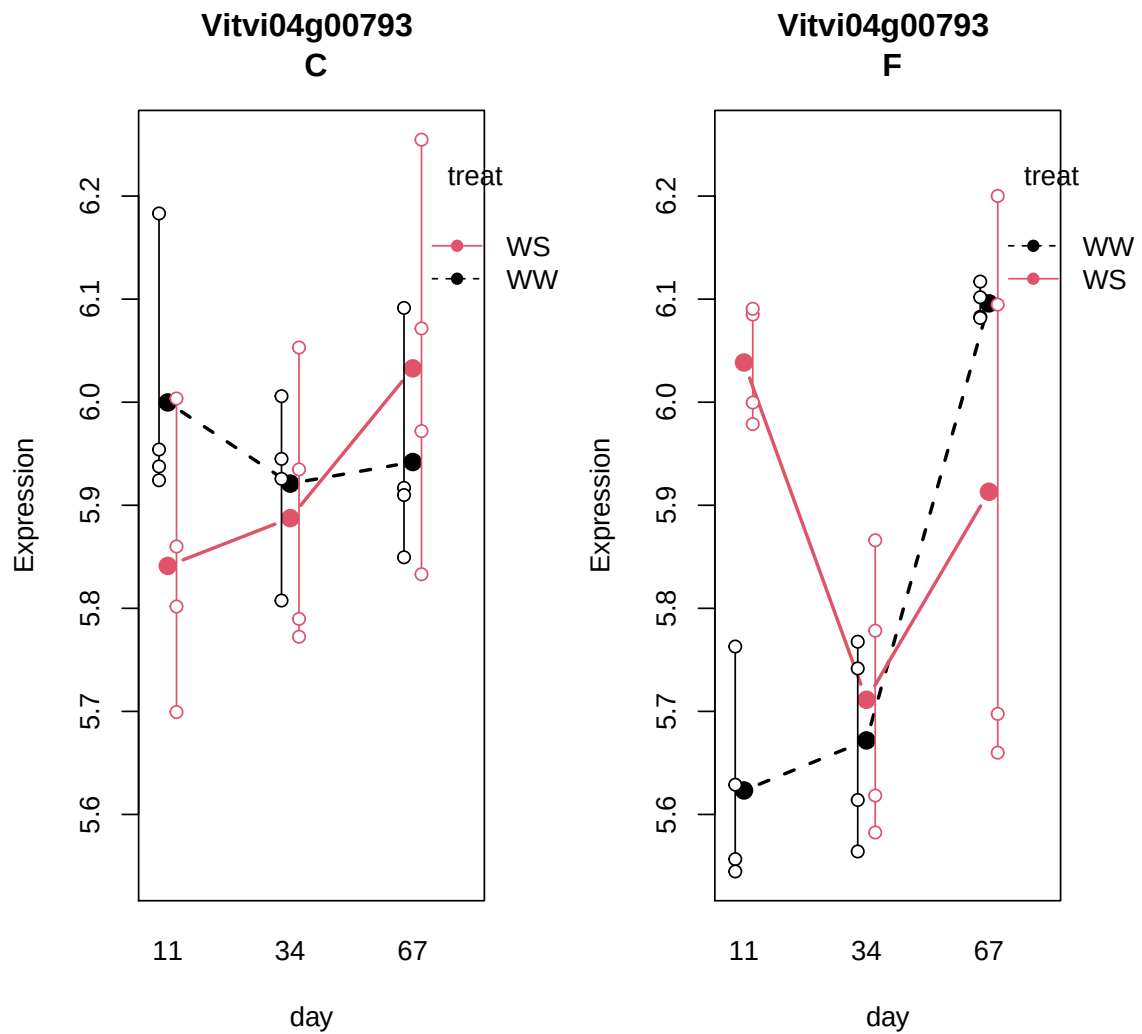


6.12.49 Vitvi04g00793

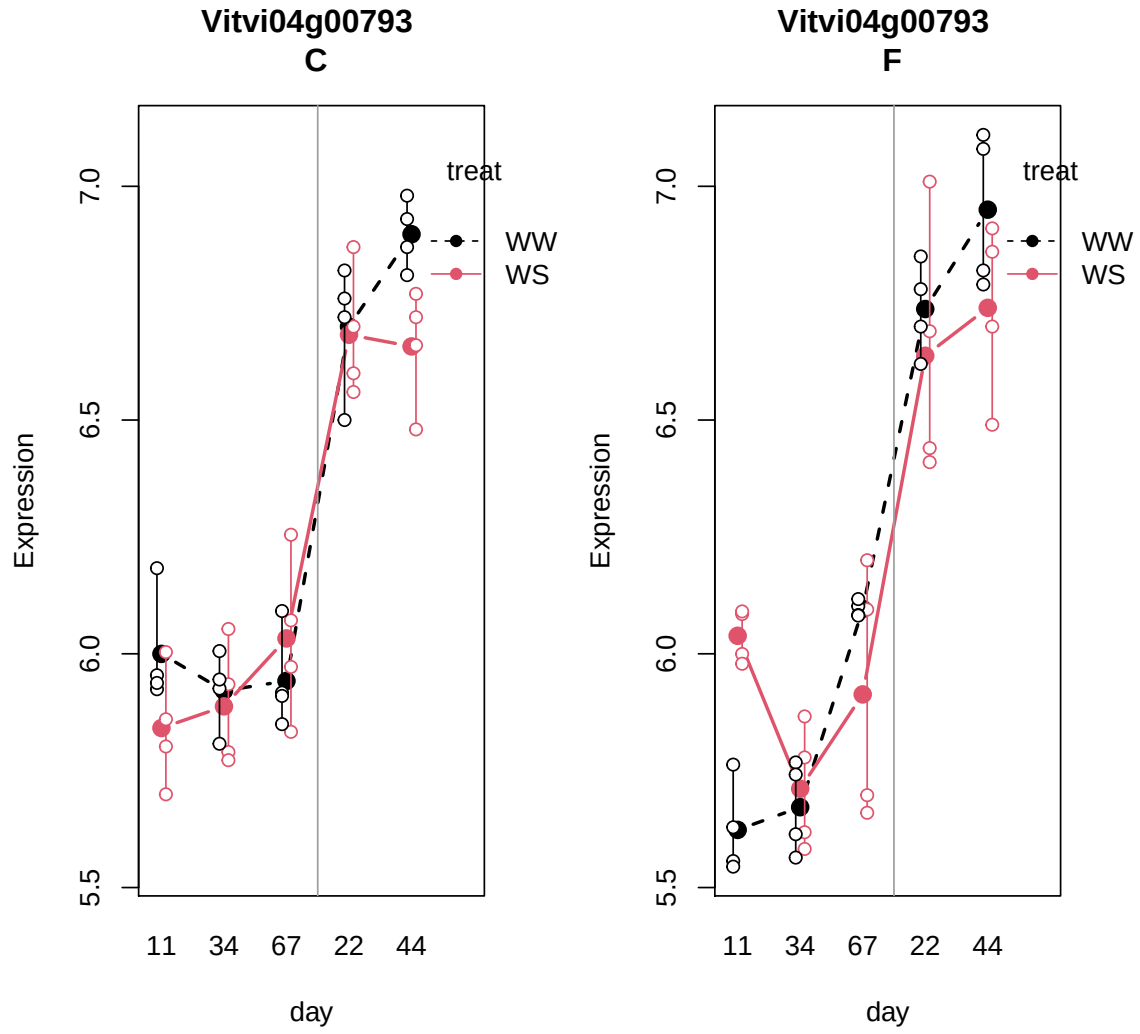
Coefficient varietyF:day67:treatWS for Vitvi04g00793.

```
> tt[varname,]
              logFC AveExpr      t      P.Value
Vitvi04g00793 -0.8475113  5.889851 -4.31451 0.0001068336
              adj.P.Val      B
Vitvi04g00793 0.03201513  1.224965

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

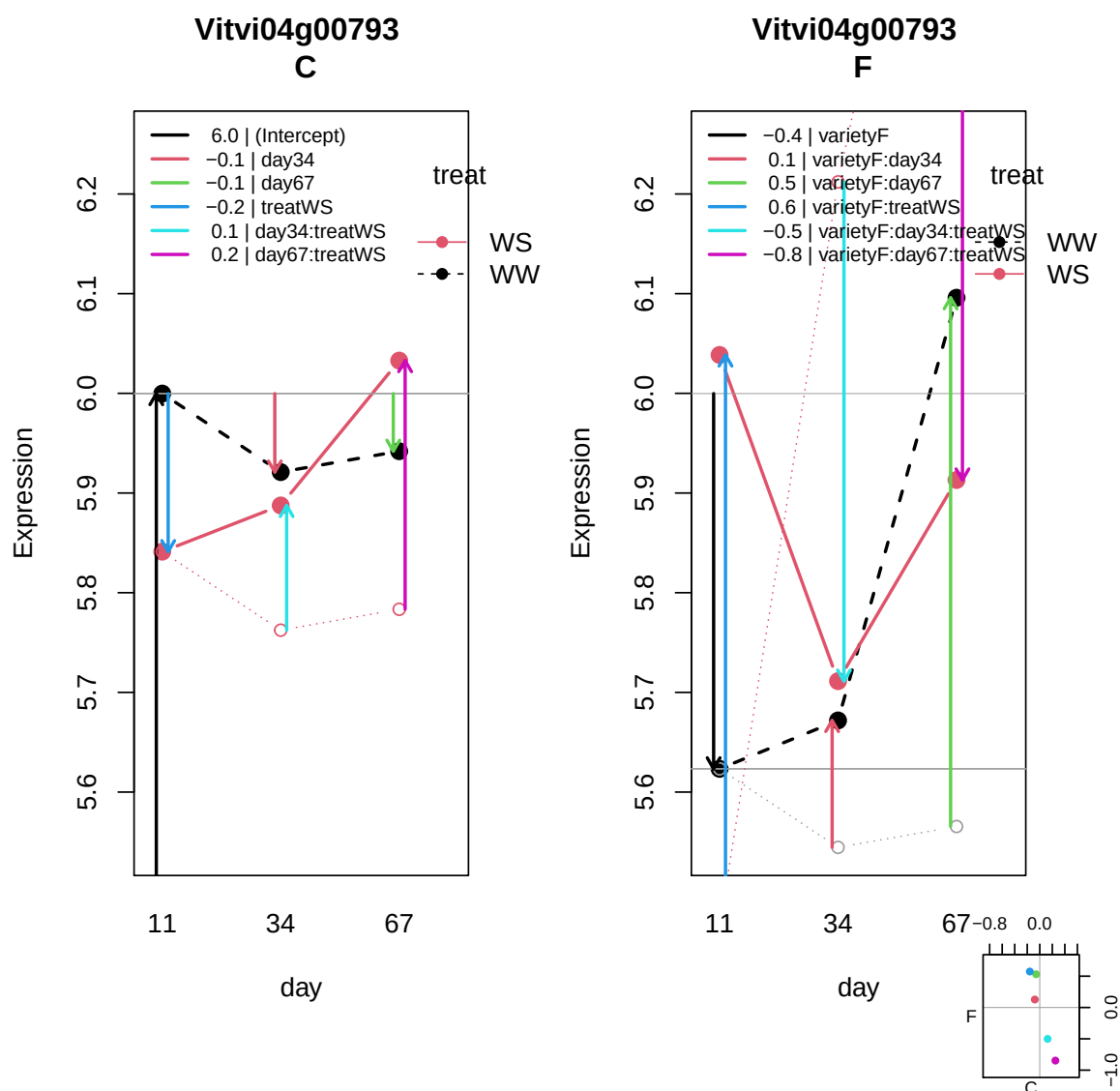
              (Intercept)      varietyF      day34
Vitvi04g00793      5.999782 -0.3764865 -0.07877052
              day67      treatWS varietyF:day34
Vitvi04g00793 -0.05782994 -0.158598      0.127311
              varietyF:day67 varietyF:treatWS day34:treatWS
Vitvi04g00793      0.5304466      0.5738151      0.1250813
              day67:treatWS varietyF:day34:treatWS
Vitvi04g00793      0.249482      -0.5008464
              varietyF:day67:treatWS
Vitvi04g00793      -0.8475113

```

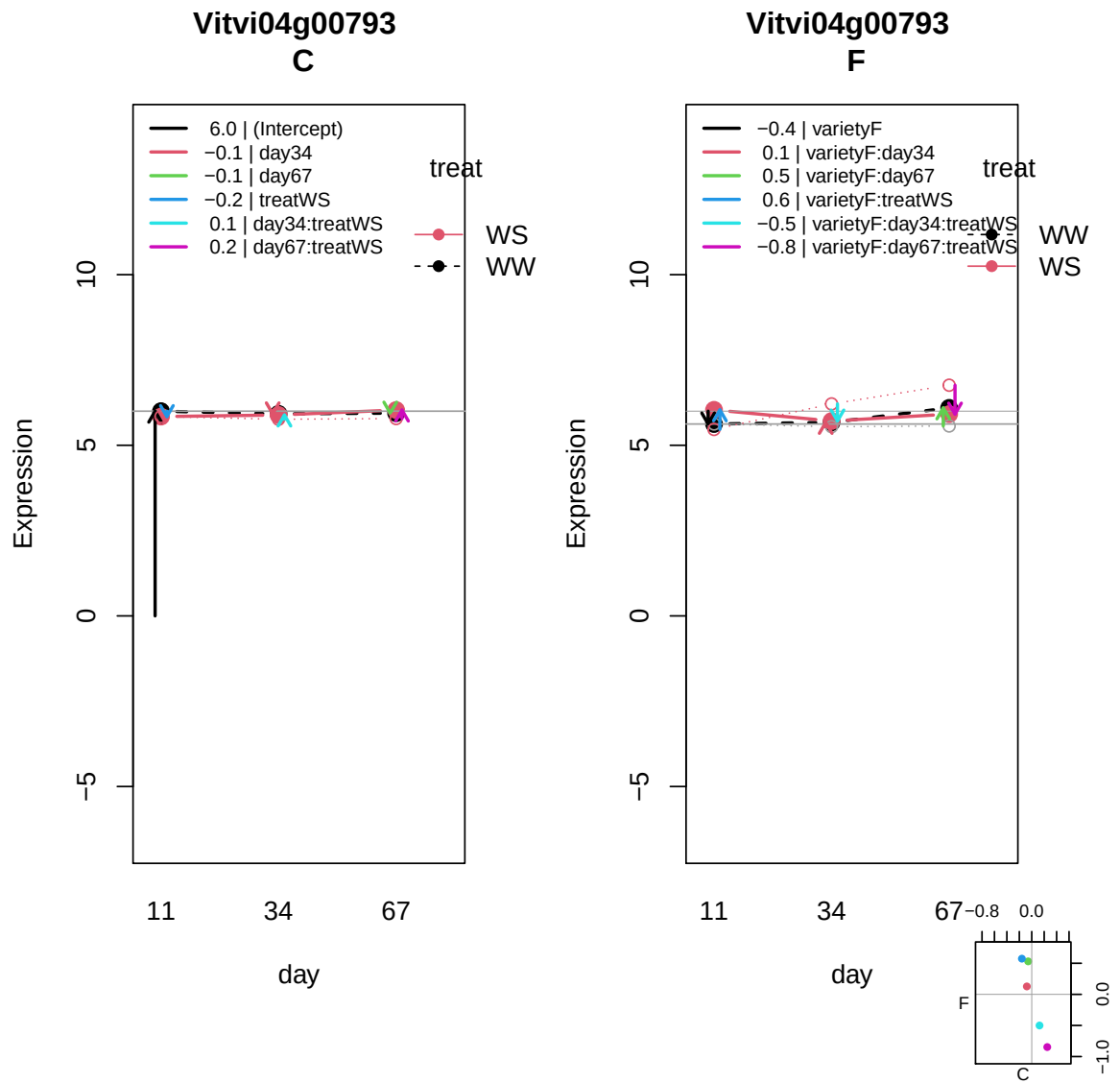
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

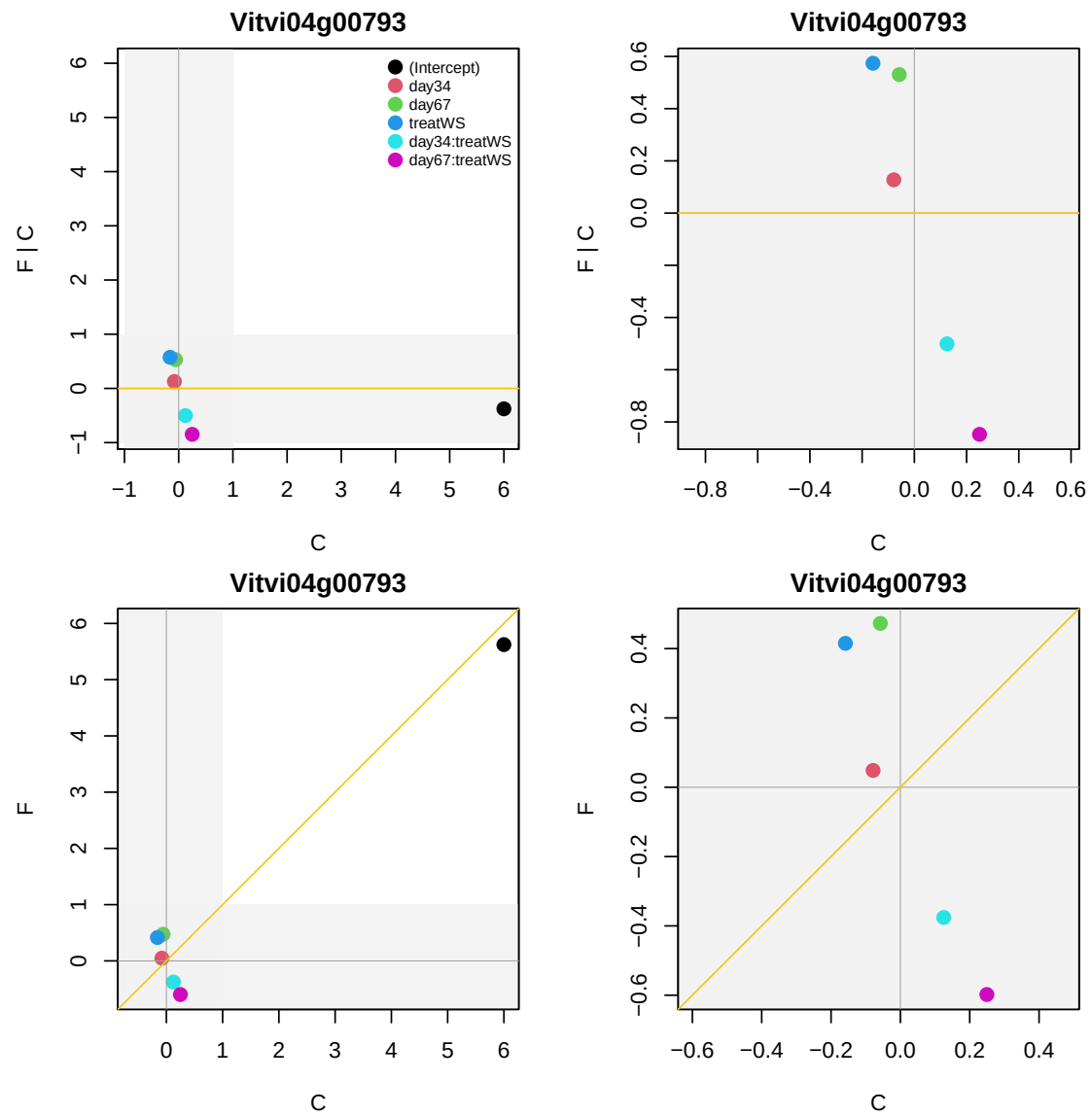


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

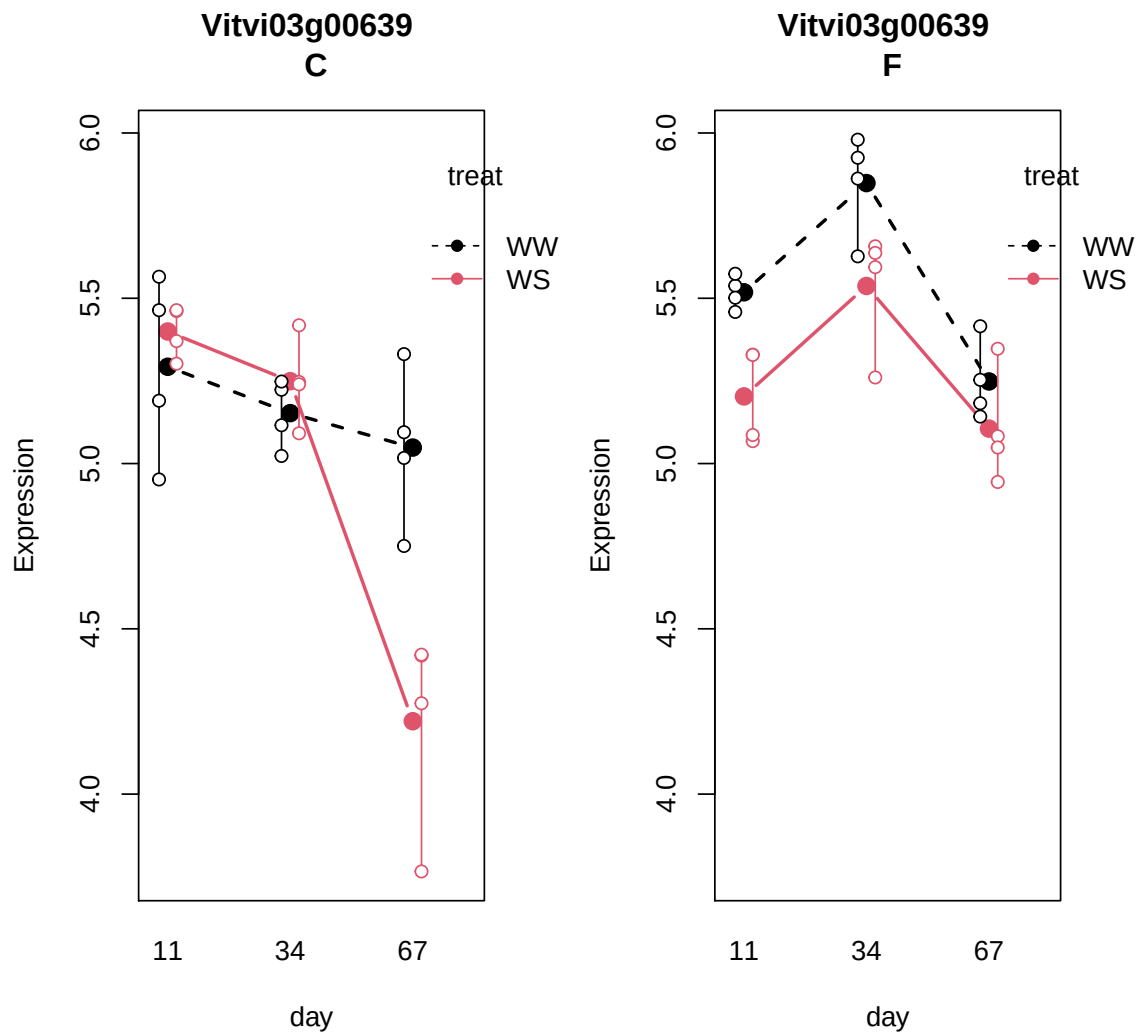
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



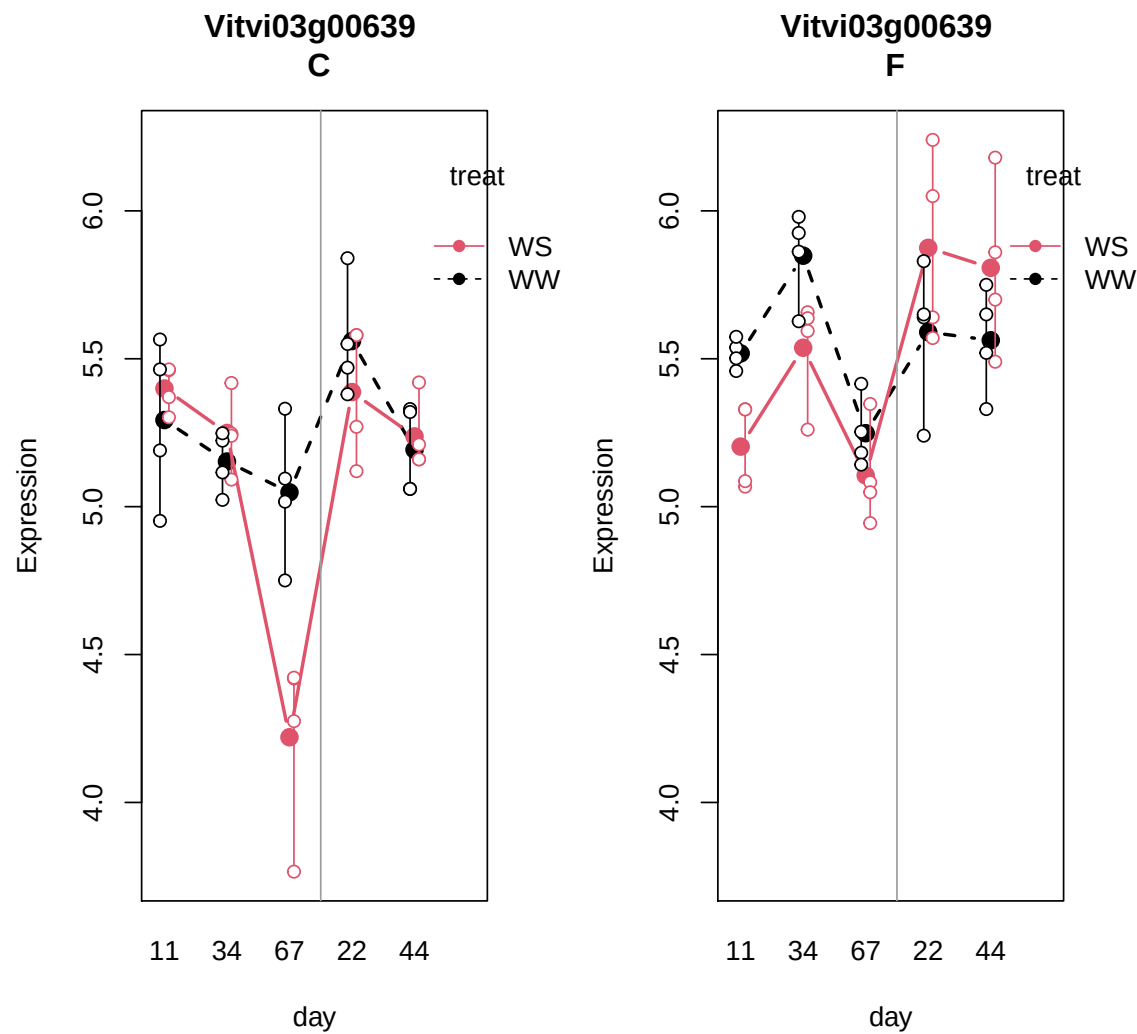
6.12.50 Vitvi03g00639

Coefficient varietyF:day67:treatWS for Vitvi03g00639.

```
> tt[varname,]
              logFC  AveExpr      t      P.Value
Vitvi03g00639 1.107056  5.235287  4.307989  0.0001089801
              adj.P.Val      B
Vitvi03g00639 0.03201513  1.20727
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

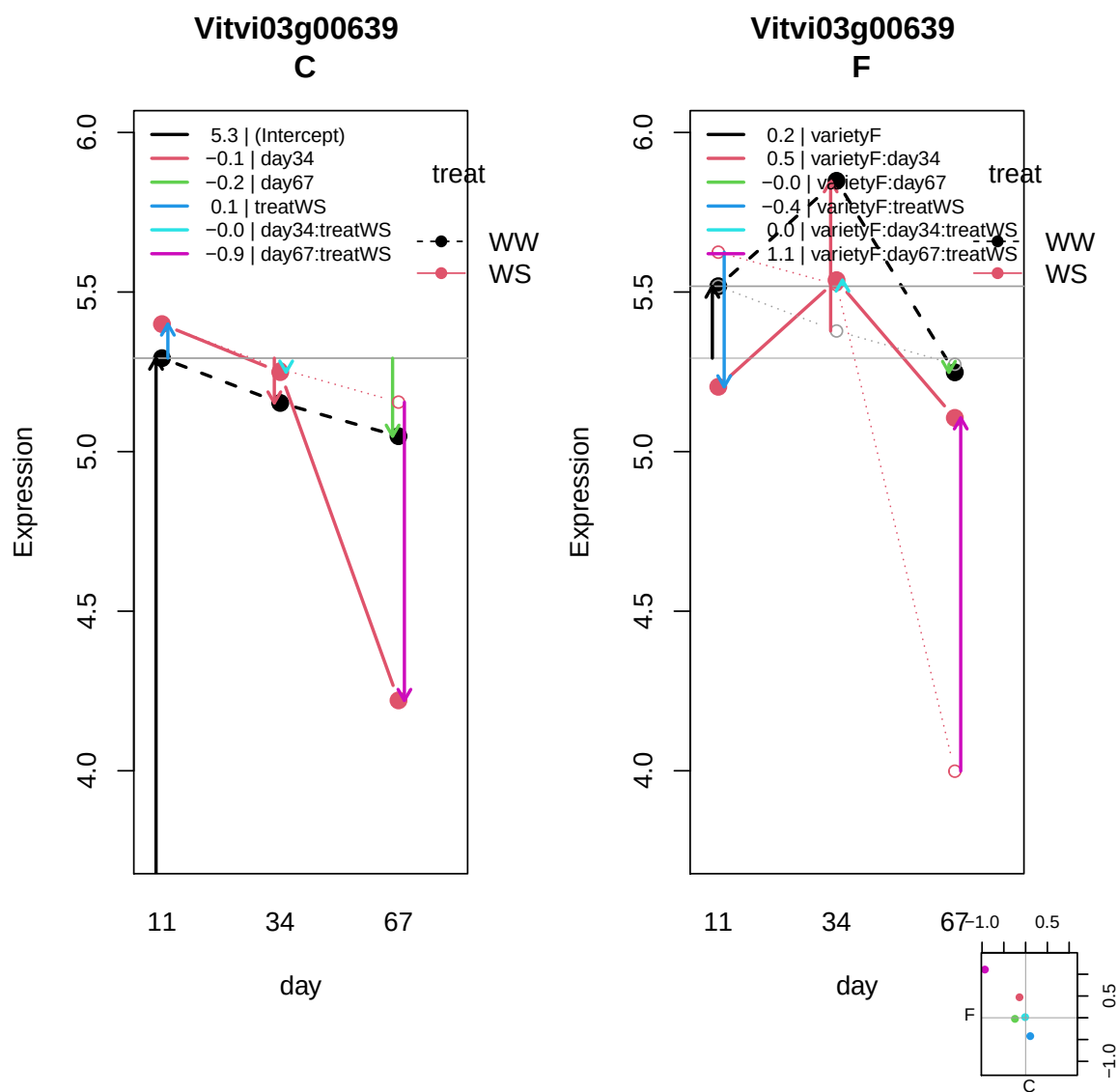
              (Intercept)  varietyF      day34      day67
Vitvi03g00639      5.292758 0.2253642 -0.1402289 -0.2444371
              treatWS varietyF:day34 varietyF:day67
Vitvi03g00639 0.10672      0.4705675      -0.02538064
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi03g00639      -0.4217875      -0.01018377      -0.9345973
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi03g00639              0.0140059              1.107056

```

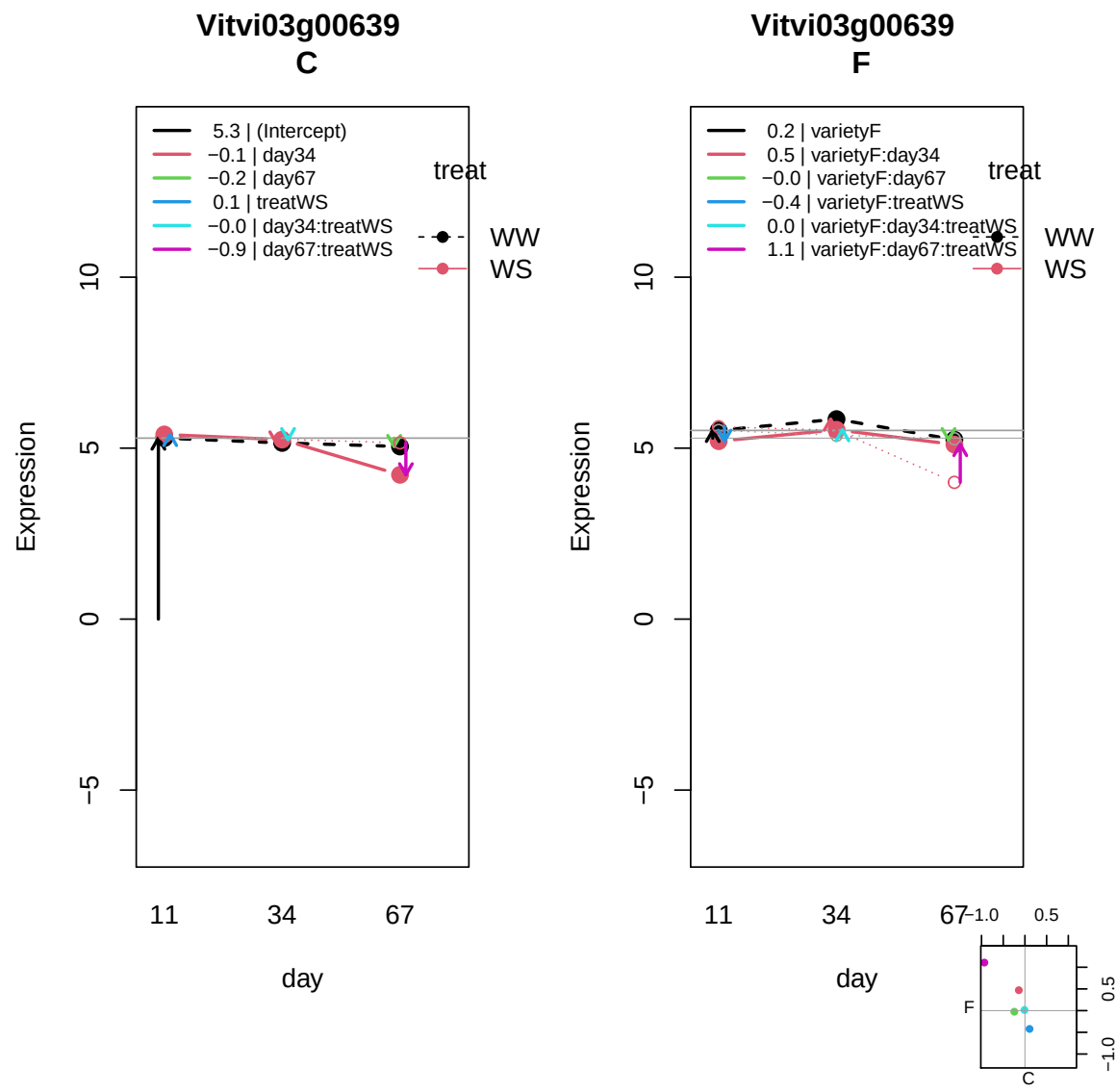
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

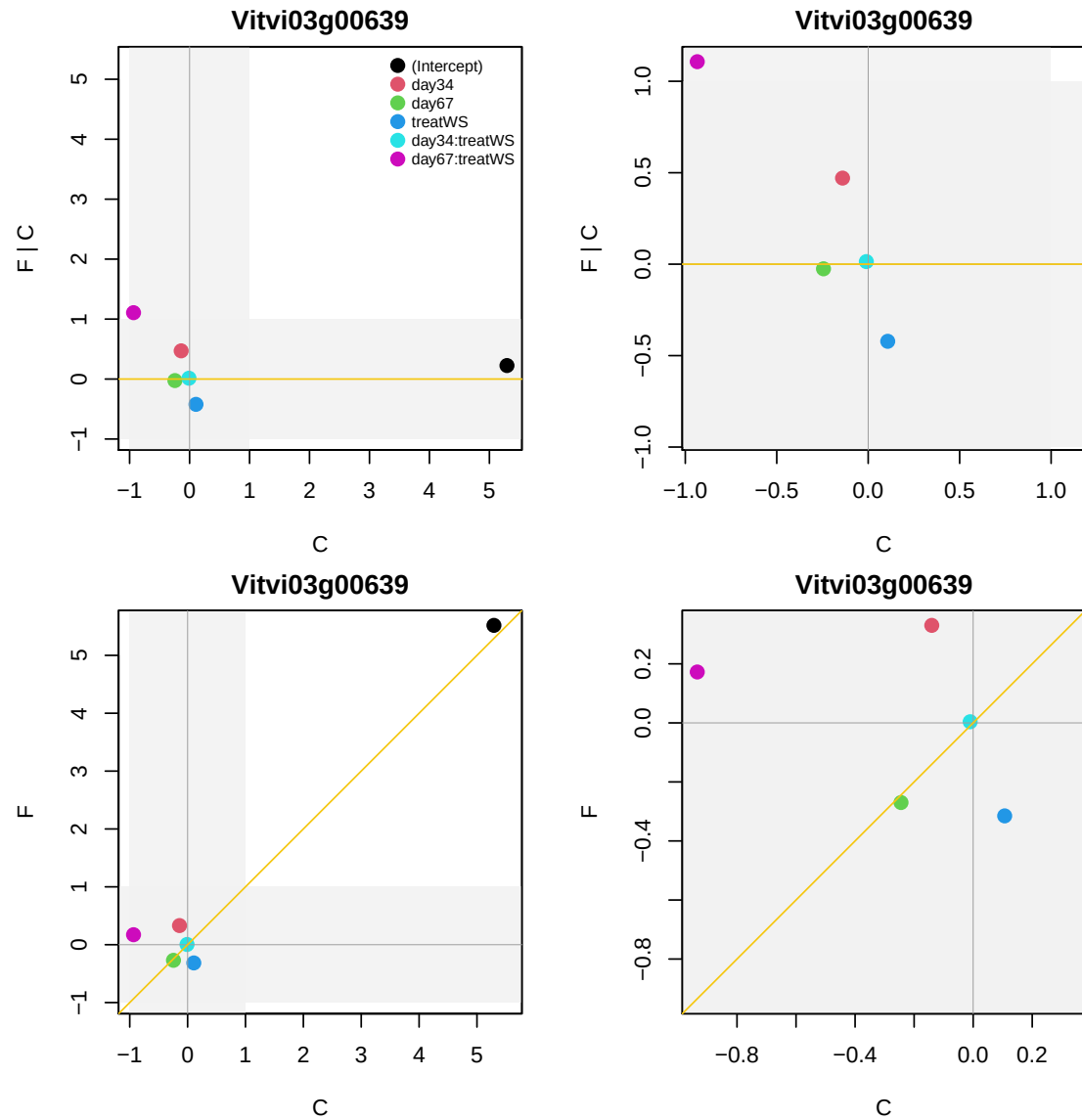


```
> coefs <- plot.interactions(varname,  
+ coef=fit1[varname,]$coefficients,  
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

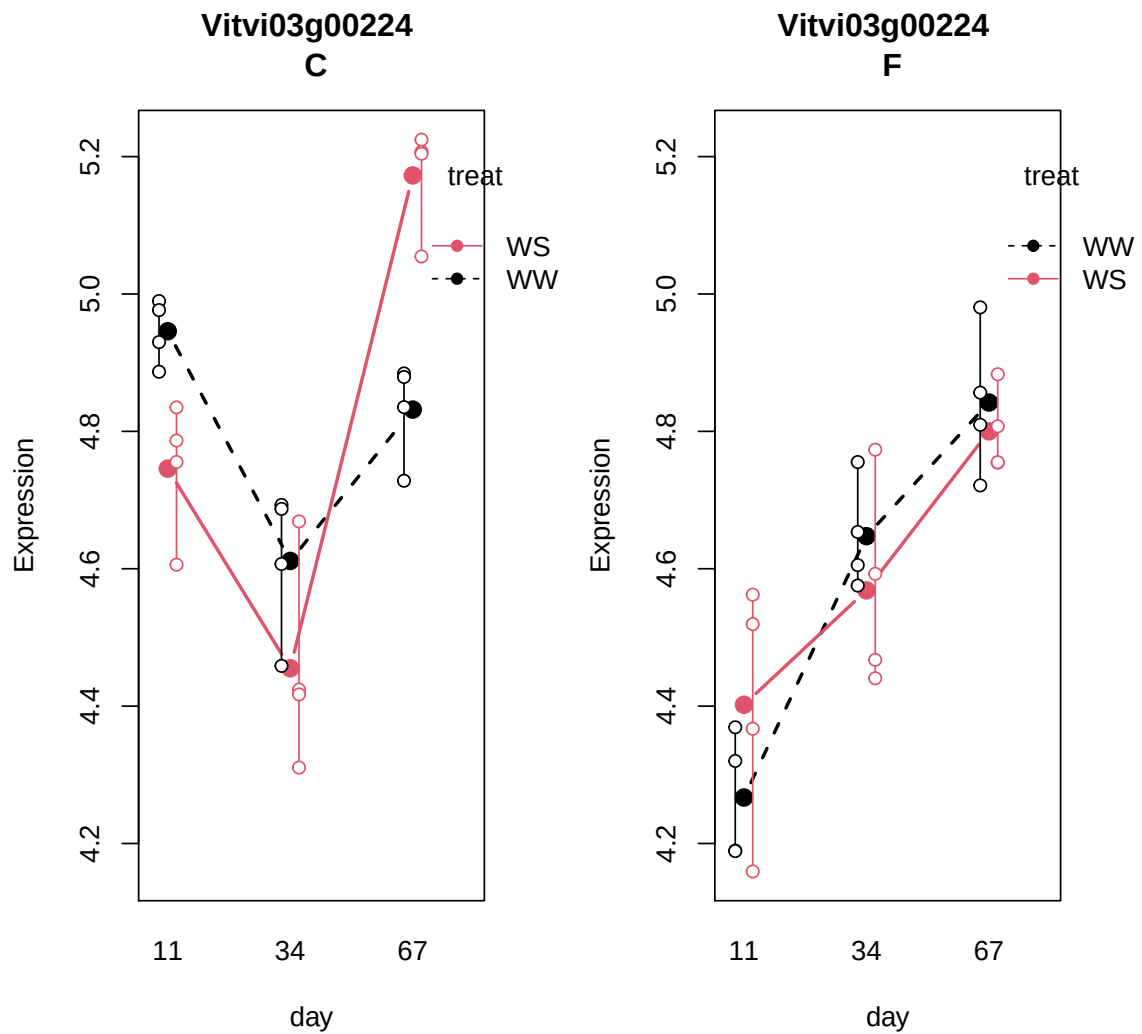


6.12.51 Vitvi03g00224

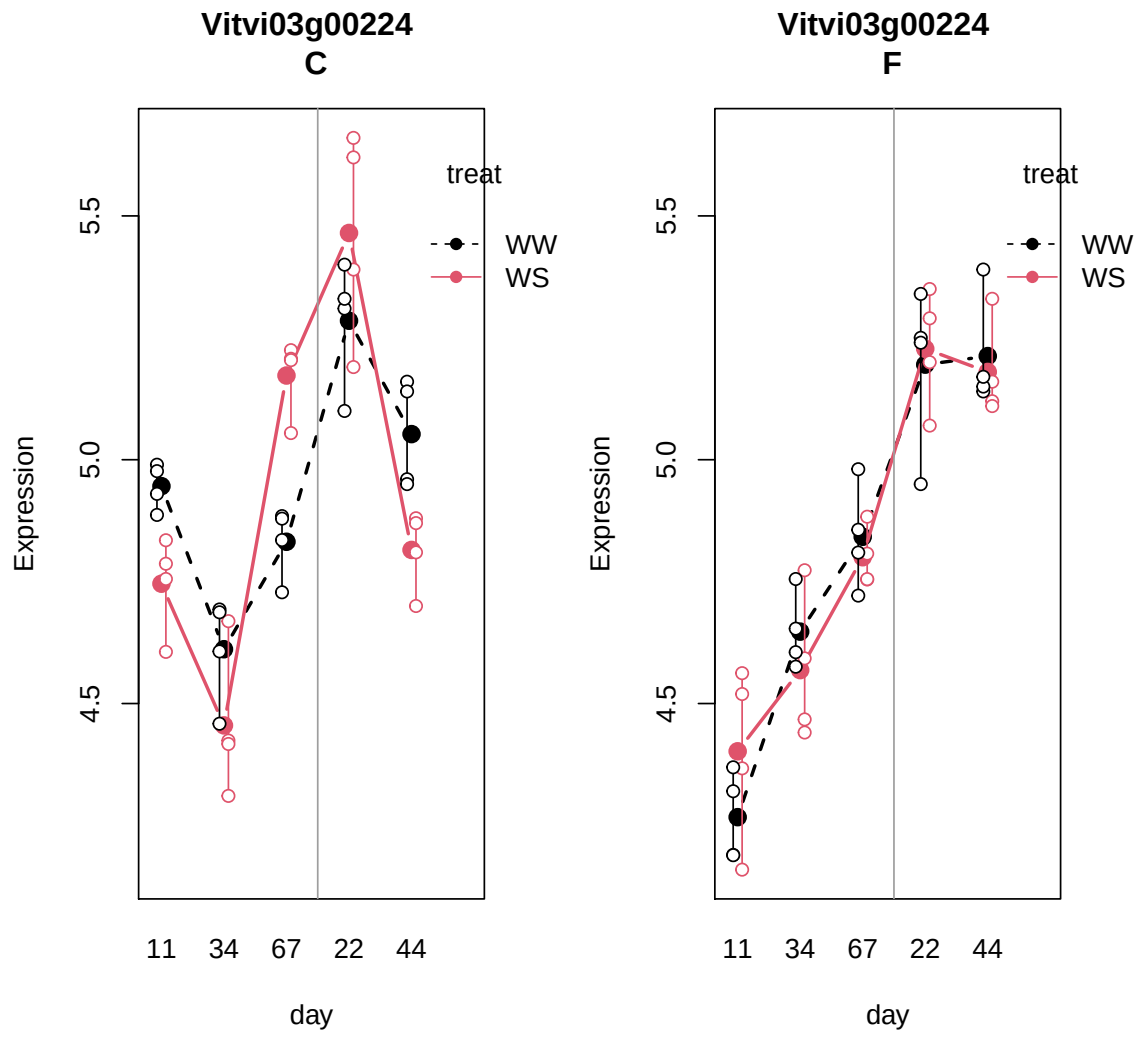
Coefficient varietyF:day67:treatWS for Vitvi03g00224.

```
> tt[varname,]
              logFC AveExpr      t      P.Value
Vitvi03g00224 -0.7179896 4.690771 -4.307827 0.0001090339
              adj.P.Val      B
Vitvi03g00224 0.03201513 1.206831

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

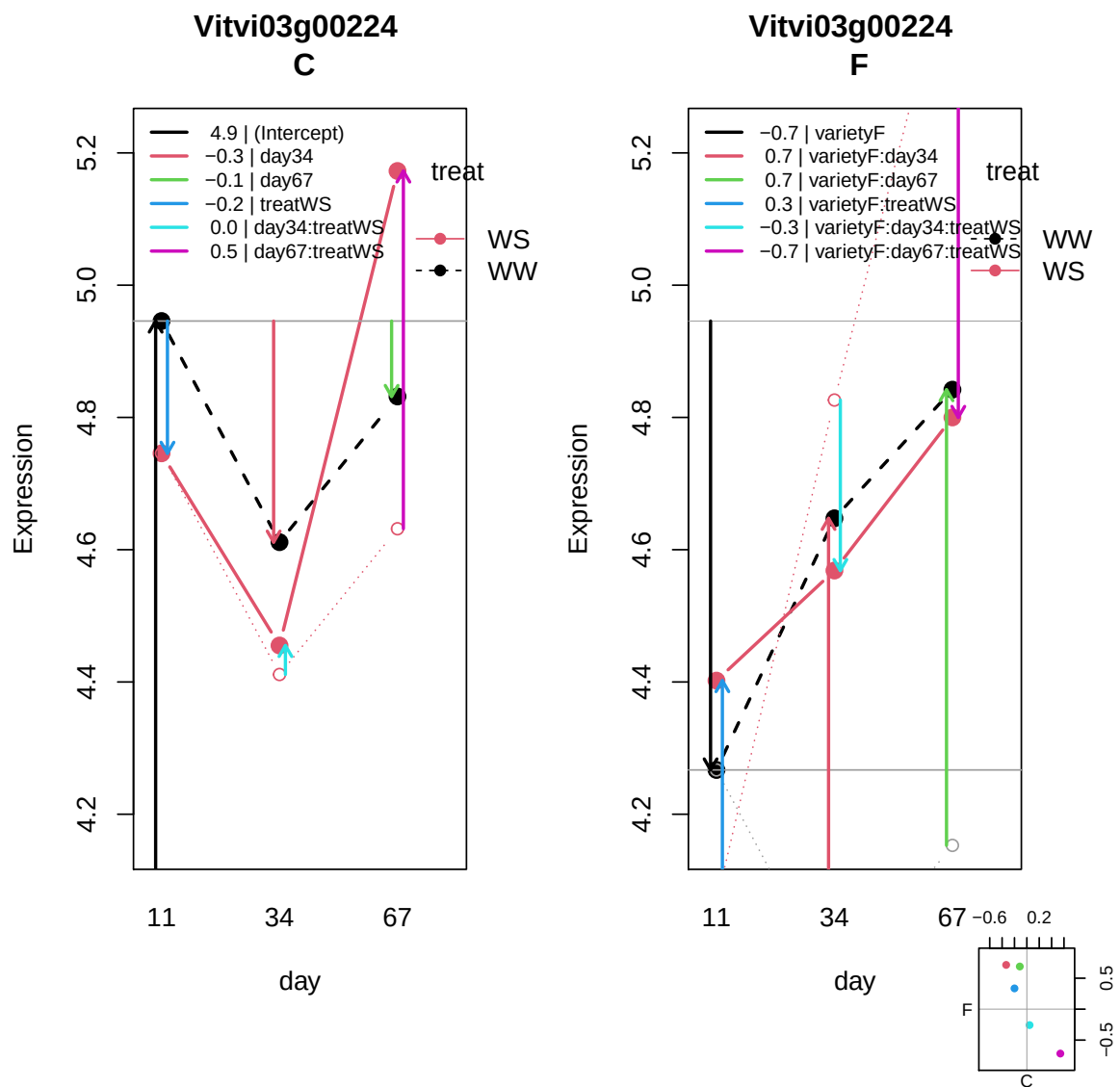
              (Intercept)    varietyF      day34      day67
Vitvi03g00224    4.945769 -0.6787979 -0.3343922 -0.1140545
              treatWS varietyF:day34 varietyF:day67
Vitvi03g00224 -0.2000571    0.7148498    0.689059
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi03g00224    0.335112    0.0438109    0.5409851
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi03g00224    -0.2578136    -0.7179896

```

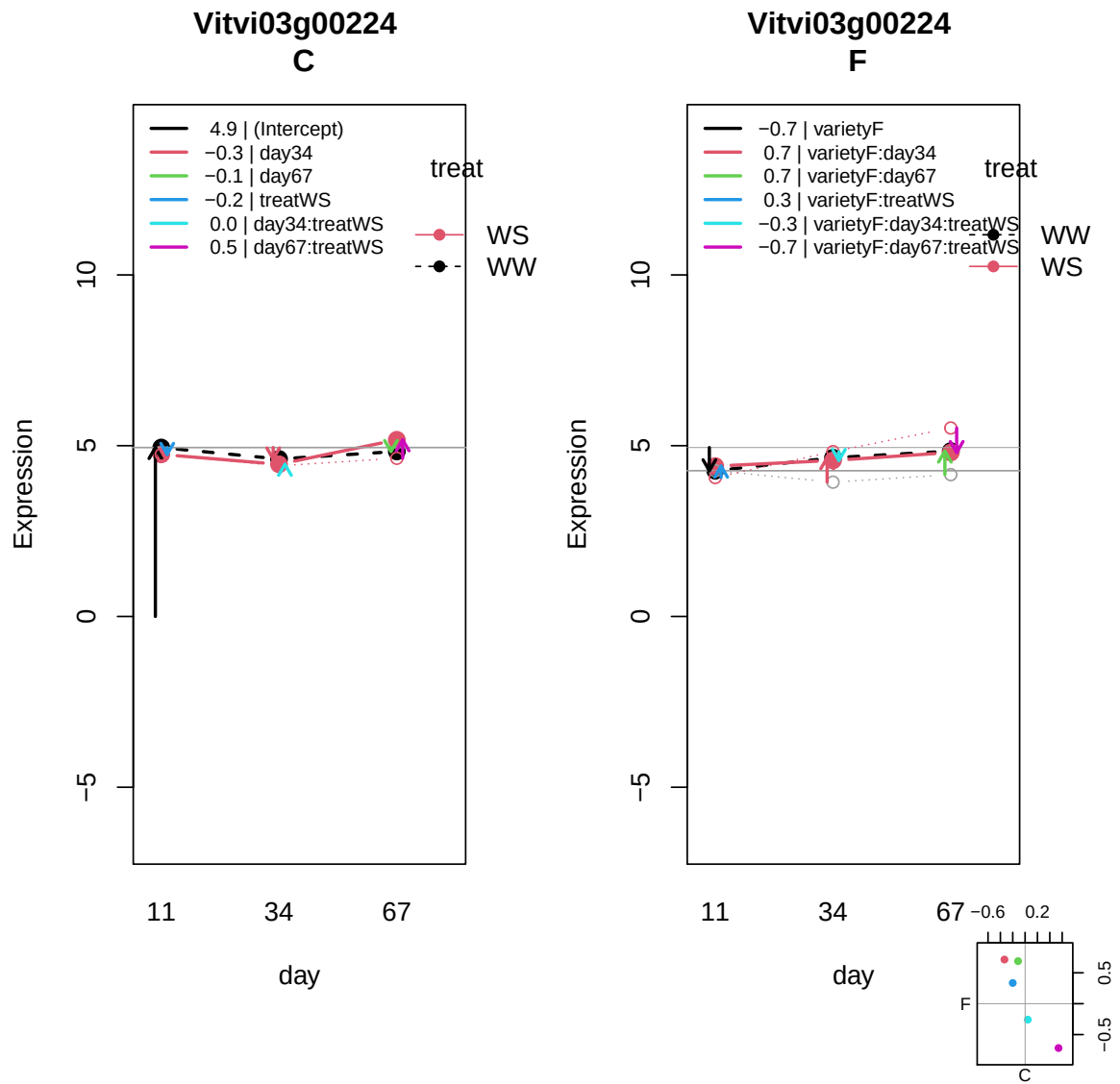
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

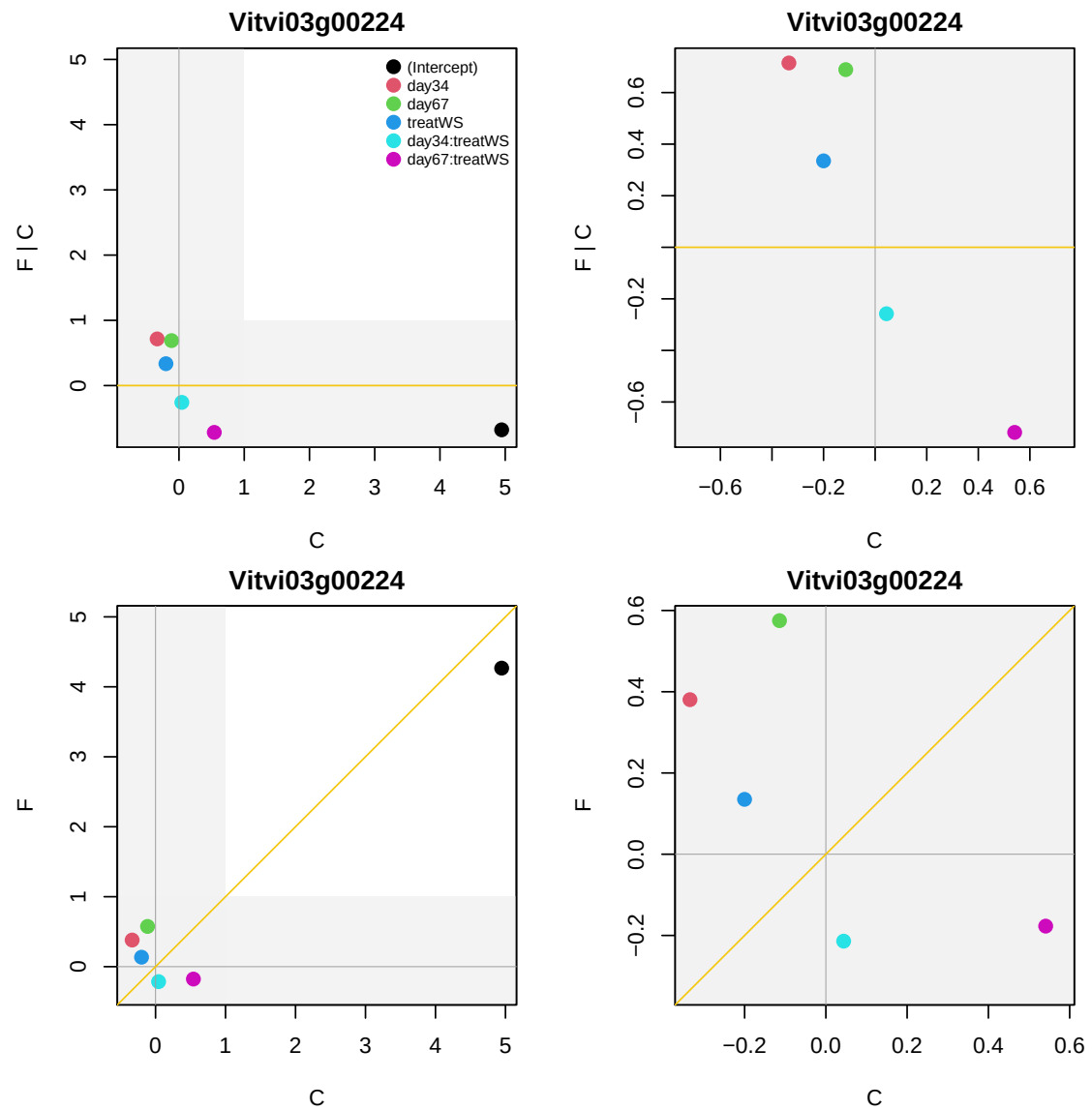



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

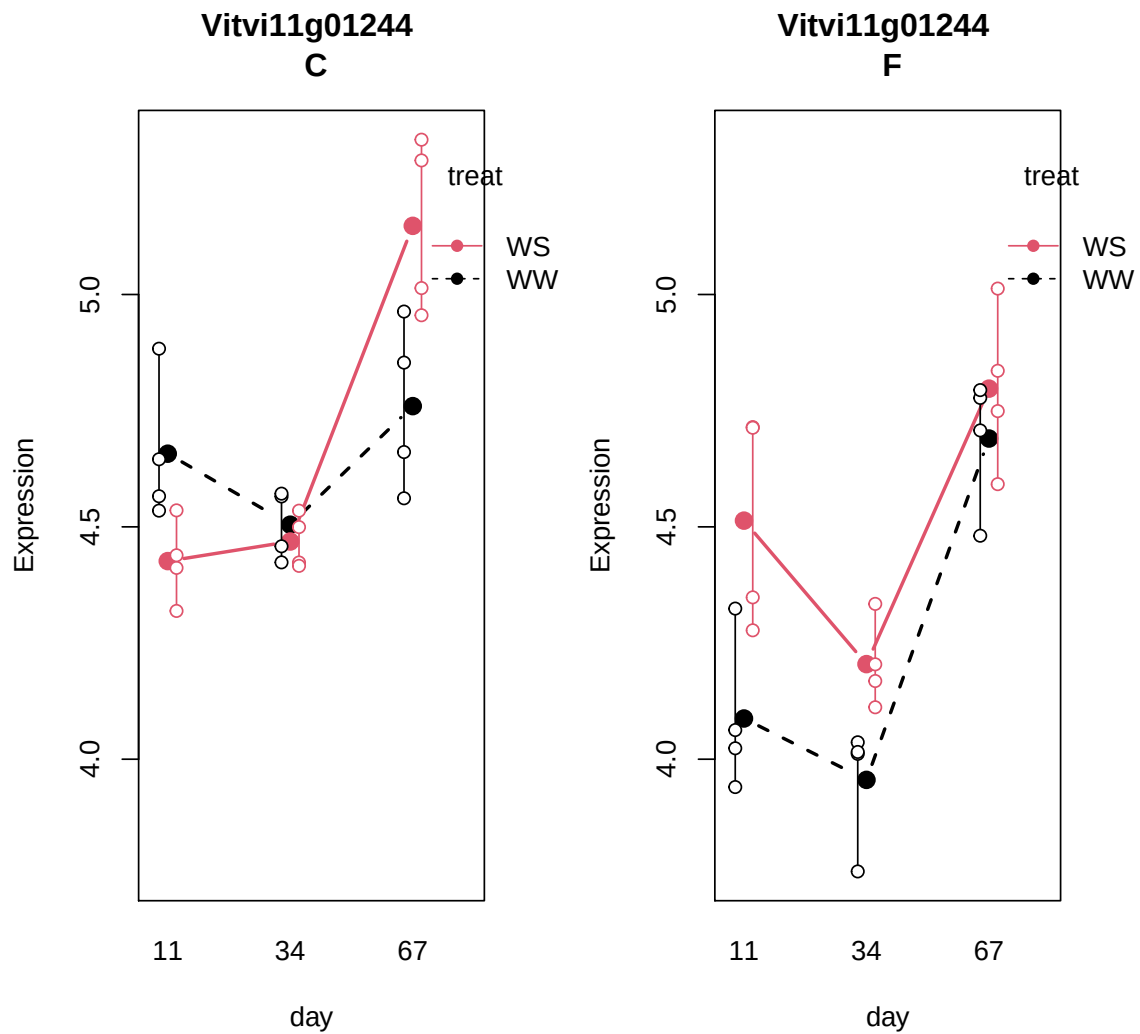


6.12.52 Vitvi11g01244

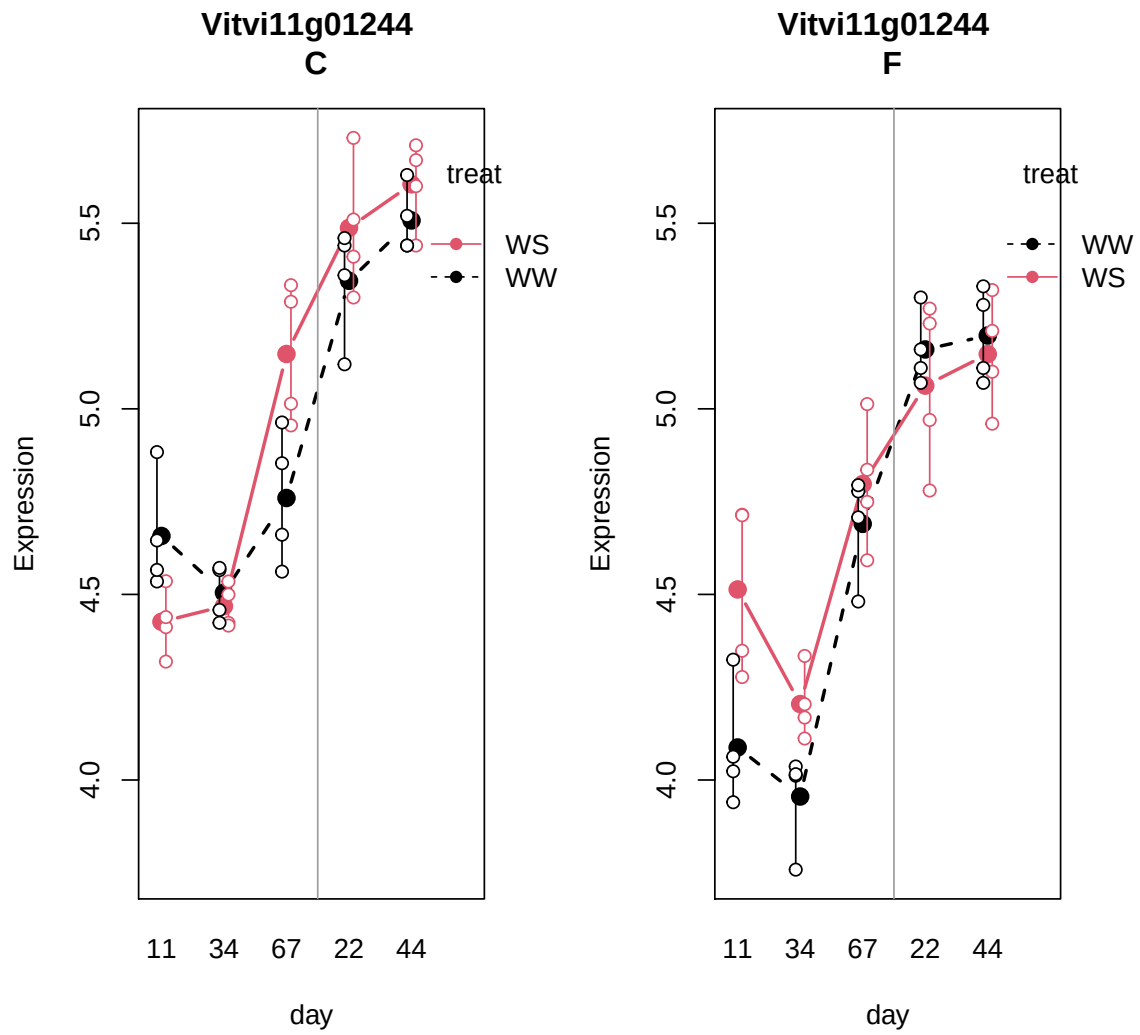
Coefficient varietyF:day67:treatWS for Vitvi11g01244.

```
> tt[varname,]
              logFC AveExpr      t      P.Value
Vitvi11g01244 -0.9375703 4.517739 -4.307257 0.0001092237
              adj.P.Val      B
Vitvi11g01244 0.03201513 1.205284

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

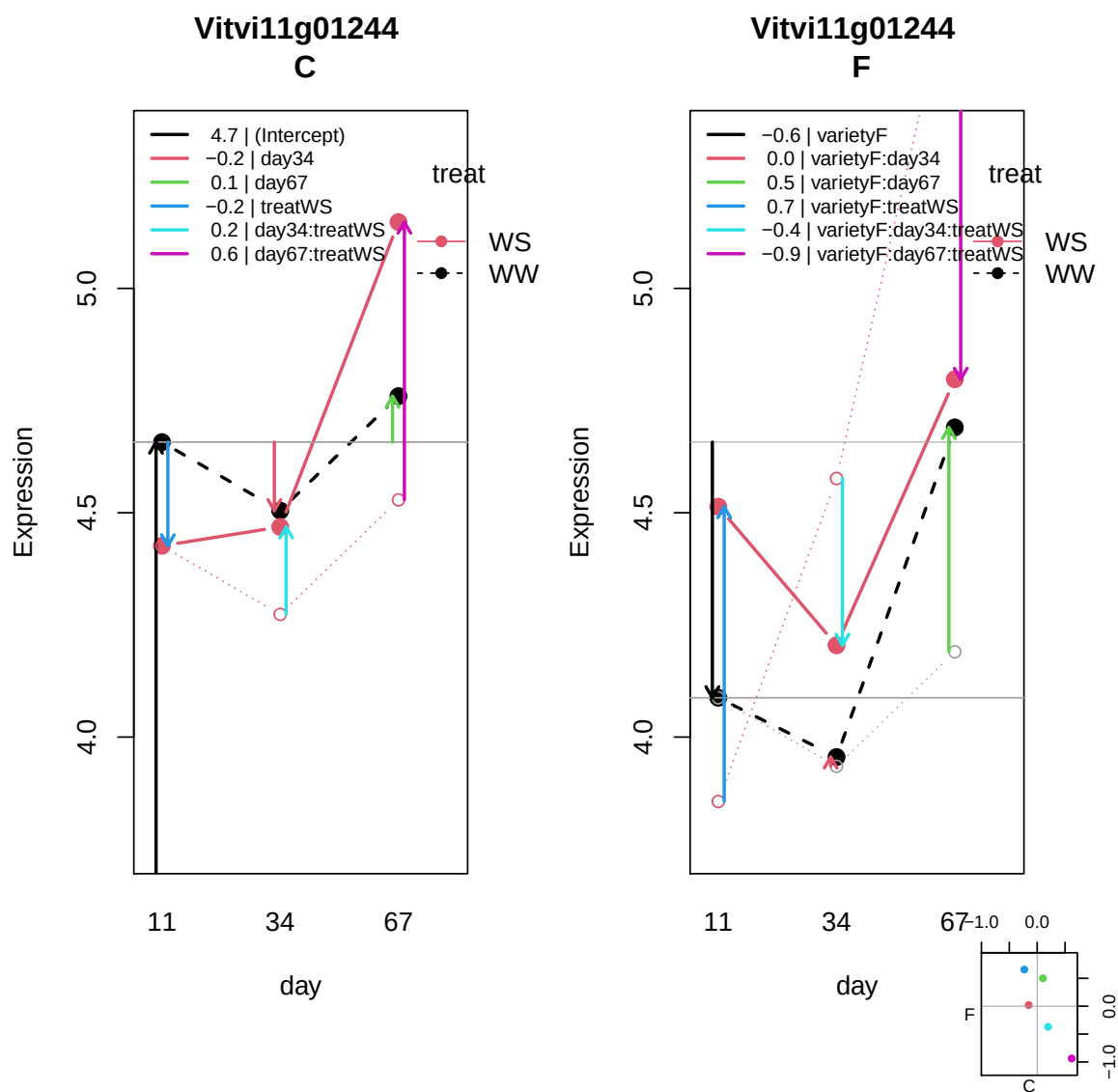
              (Intercept)    varietyF      day34      day67
Vitvi11g01244    4.657426 -0.5698314 -0.1527723 0.1023647
              treatWS varietyF:day34 varietyF:day67
Vitvi11g01244 -0.2311504    0.02067125    0.5001071
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi11g01244    0.6569548    0.1949135    0.619101
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi11g01244    -0.371603      -0.9375703

```

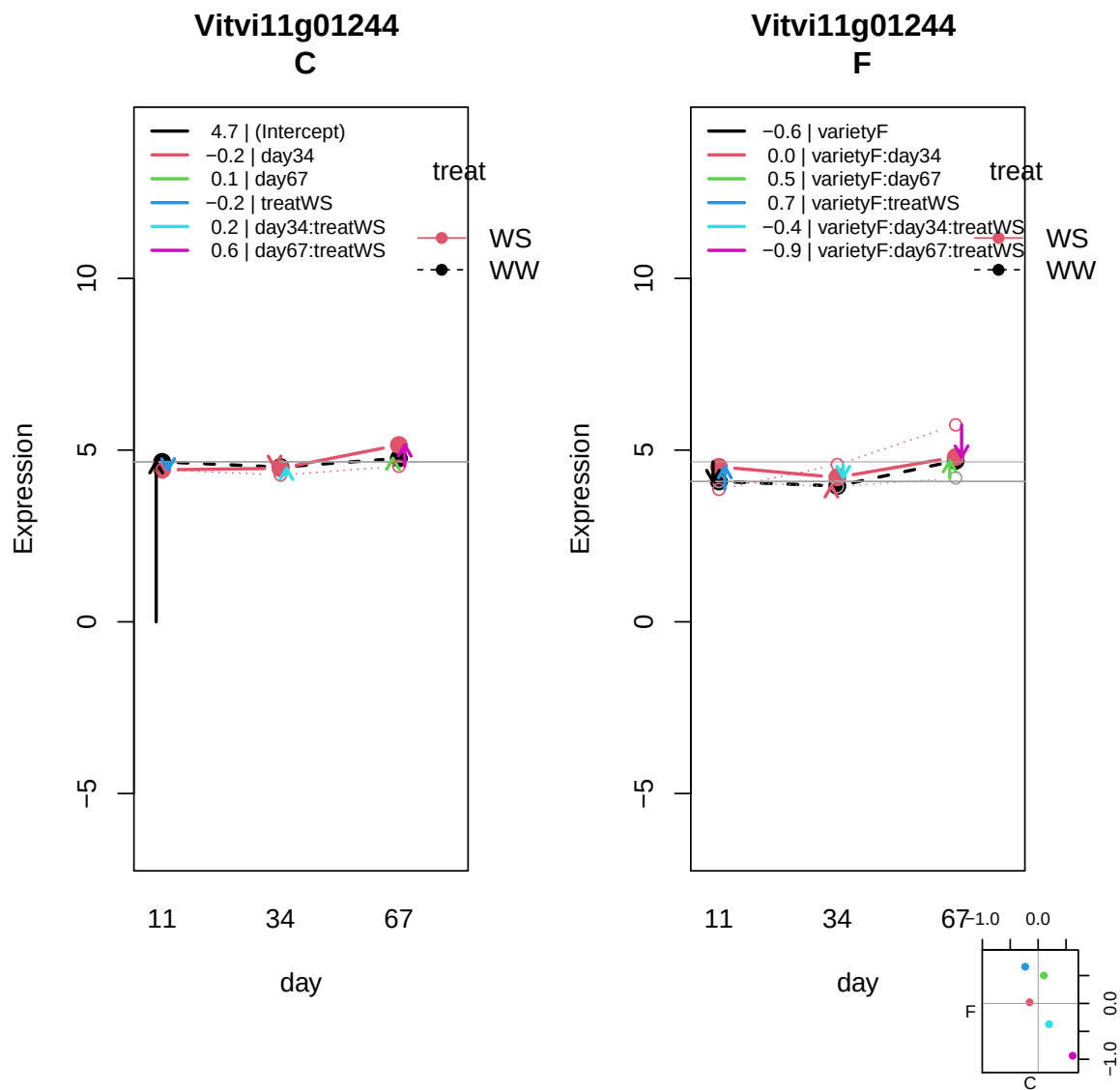
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

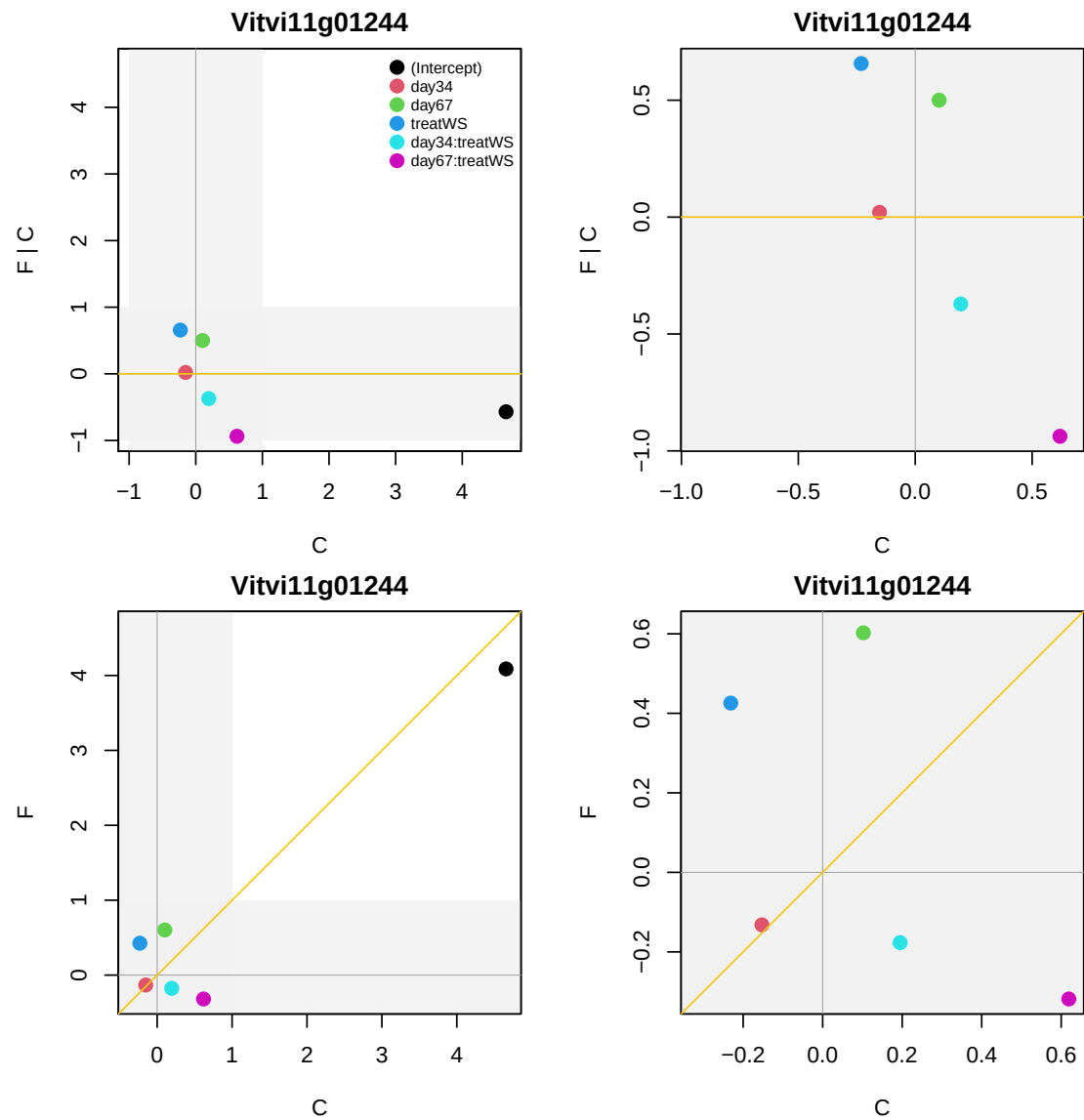


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

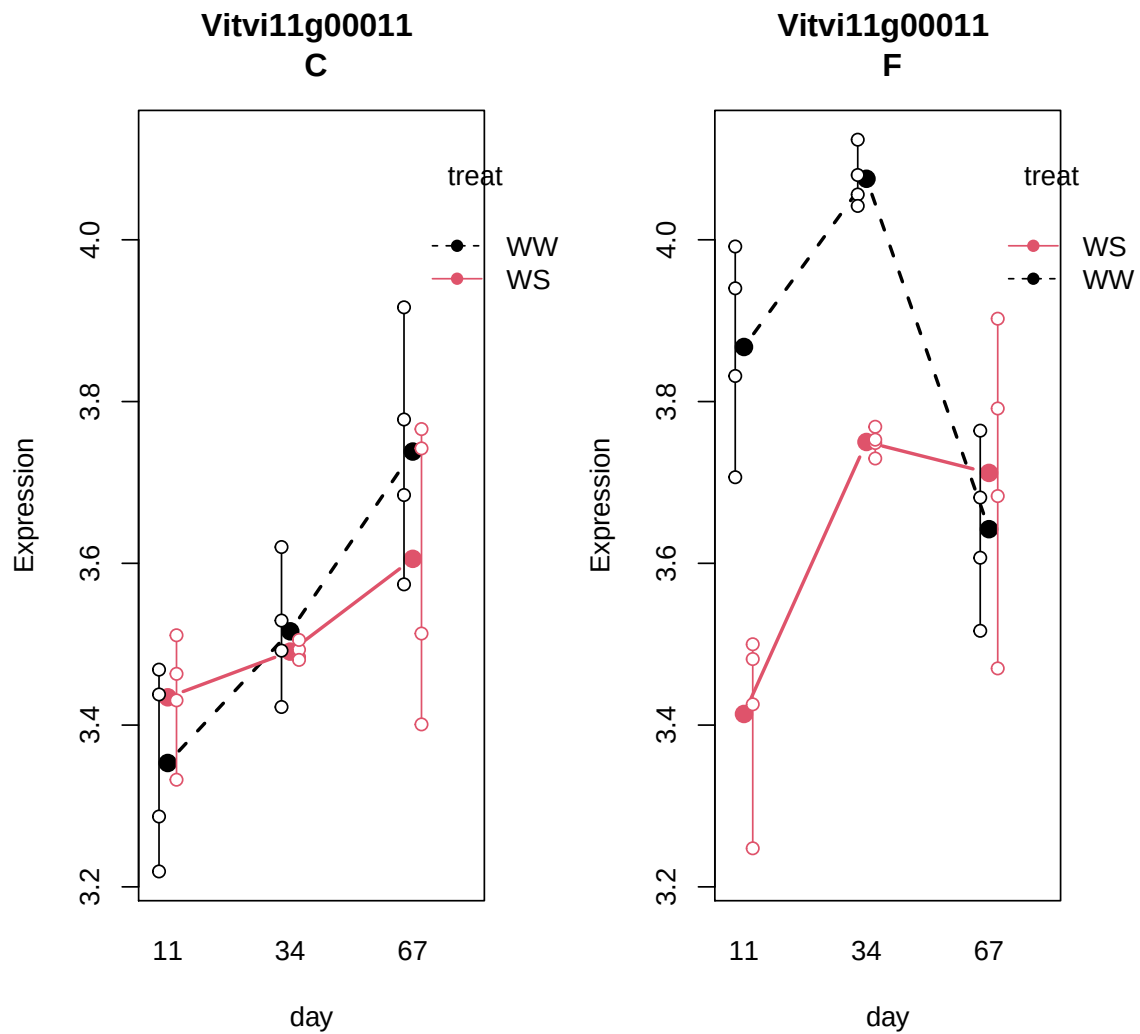


6.12.53 Vitvi11g00011

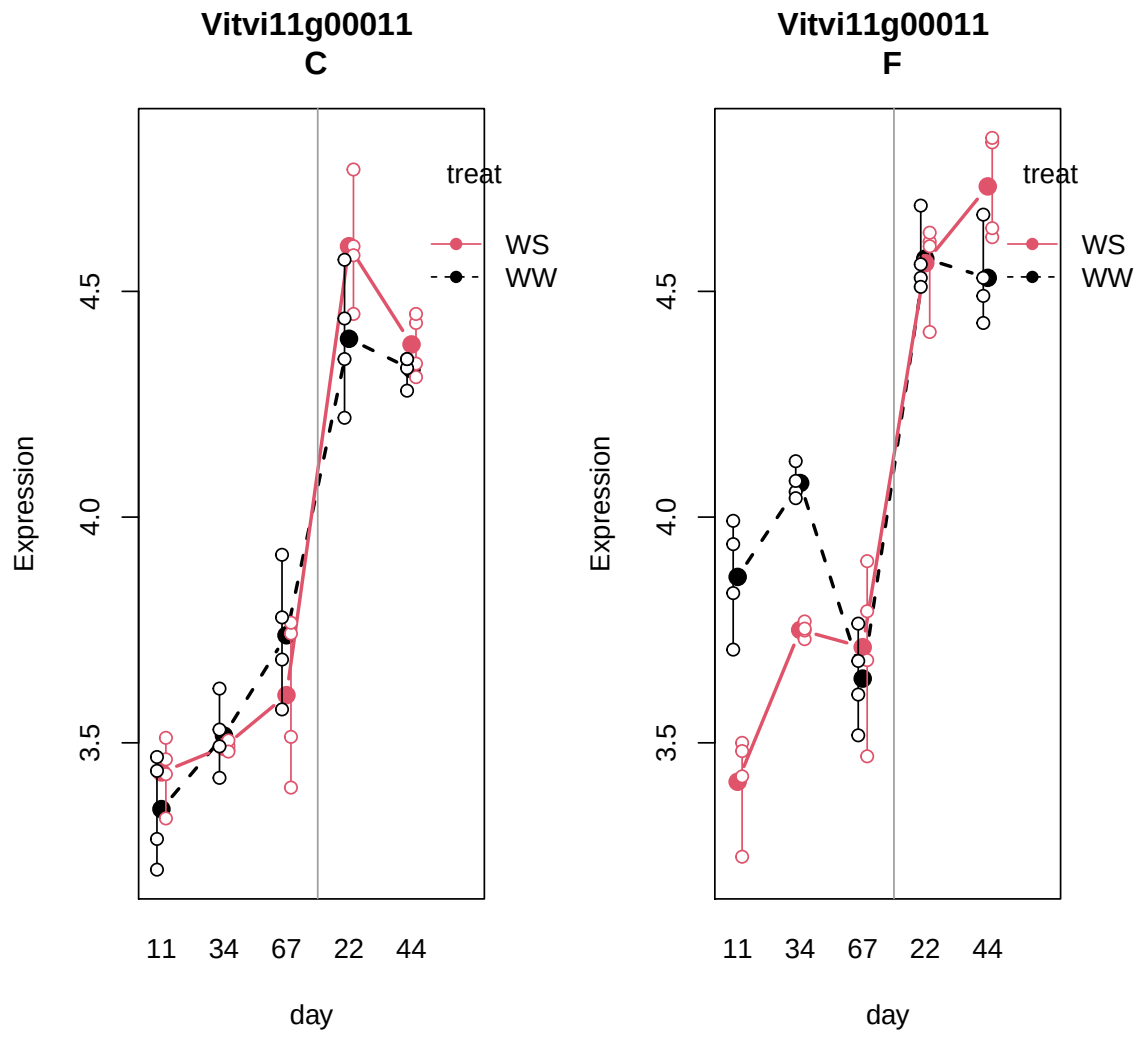
Coefficient varietyF:day67:treatWS for Vitvi11g00011.

```
> tt[varname,]
              logFC AveExpr      t      P.Value
Vitvi11g00011 0.737197 3.633227 4.295407 0.0001132417
              adj.P.Val      B
Vitvi11g00011 0.03212937 1.17315

> plot.interactions(varname,phdata=pd,data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

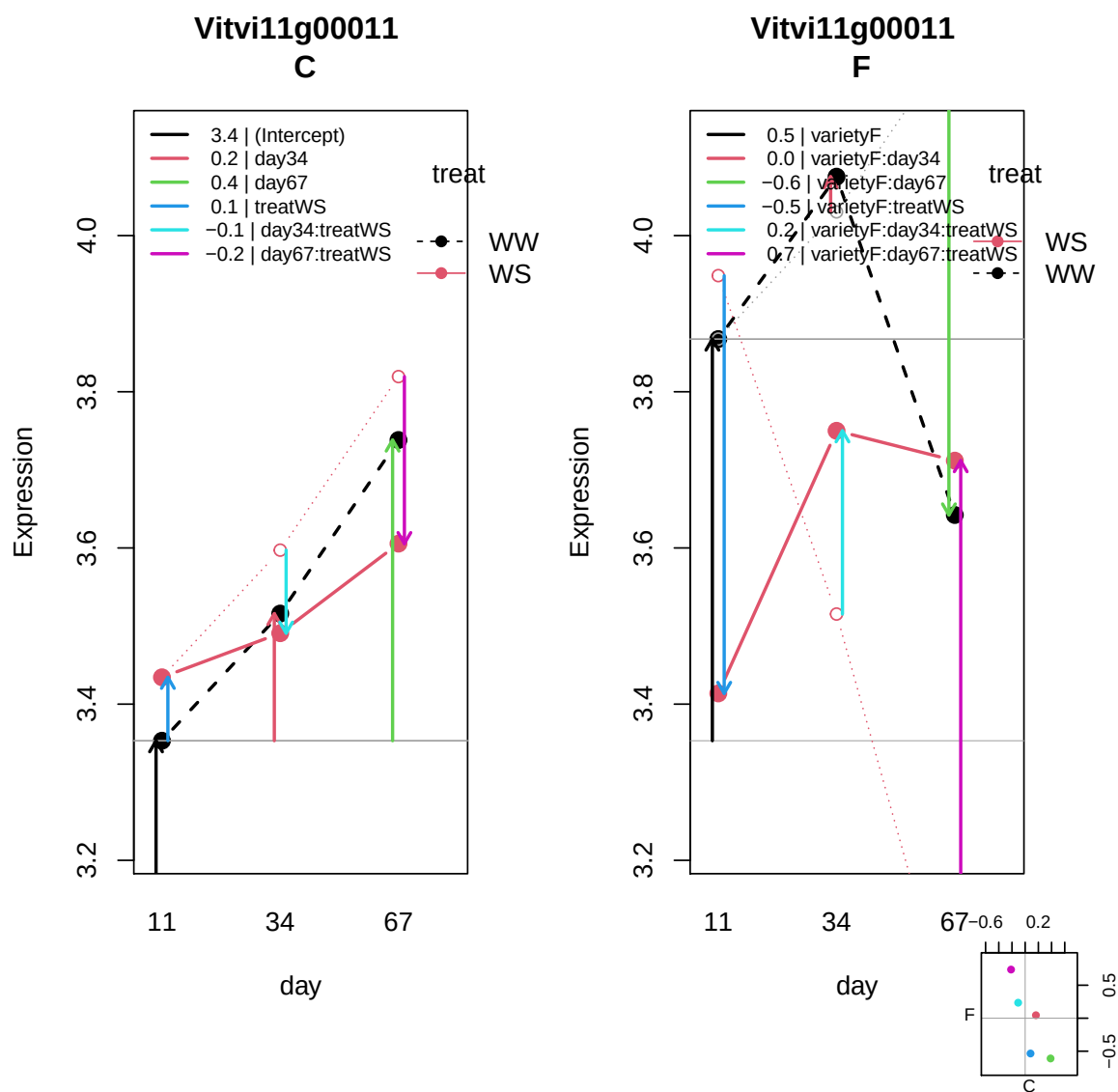
              (Intercept)  varietyF      day34      day67
Vitvi11g00011      3.353124 0.5143416 0.1628376 0.3850658
              treatWS  varietyF:day34  varietyF:day67
Vitvi11g00011 0.08124523      0.04514413      -0.6103109
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi11g00011      -0.5349752      -0.1063593      -0.2138944
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi11g00011      0.2346753      0.737197

```

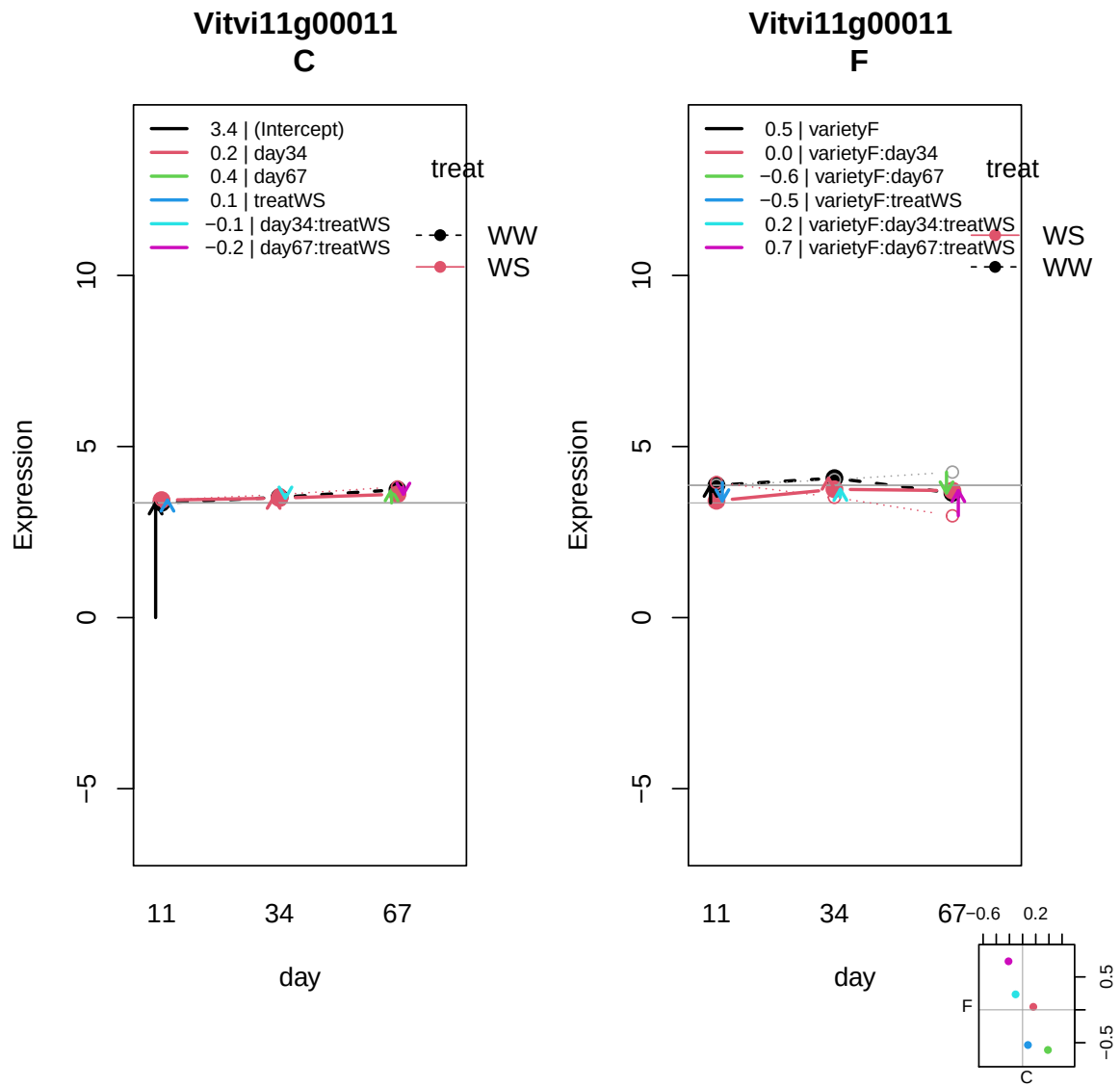
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

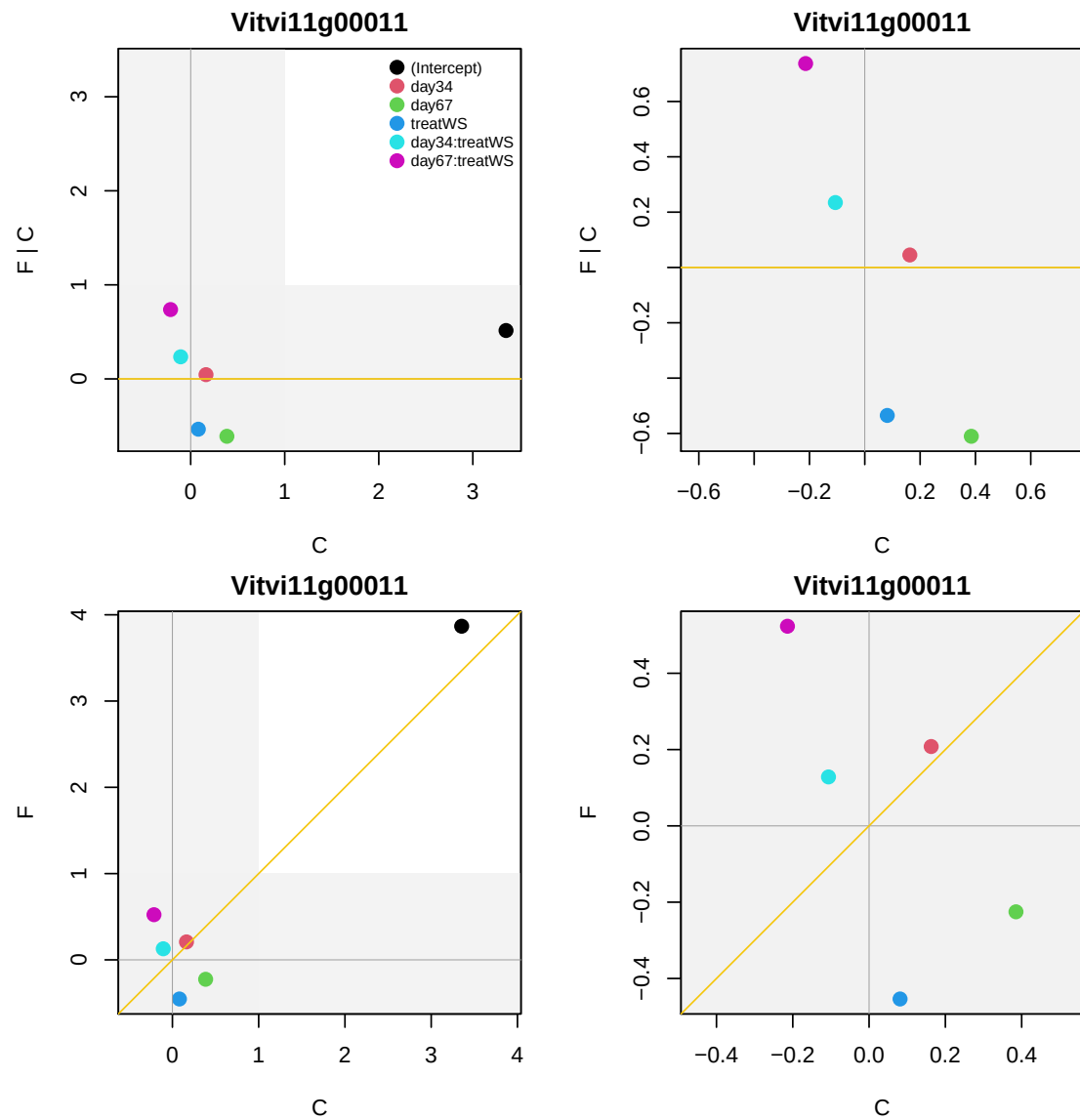


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

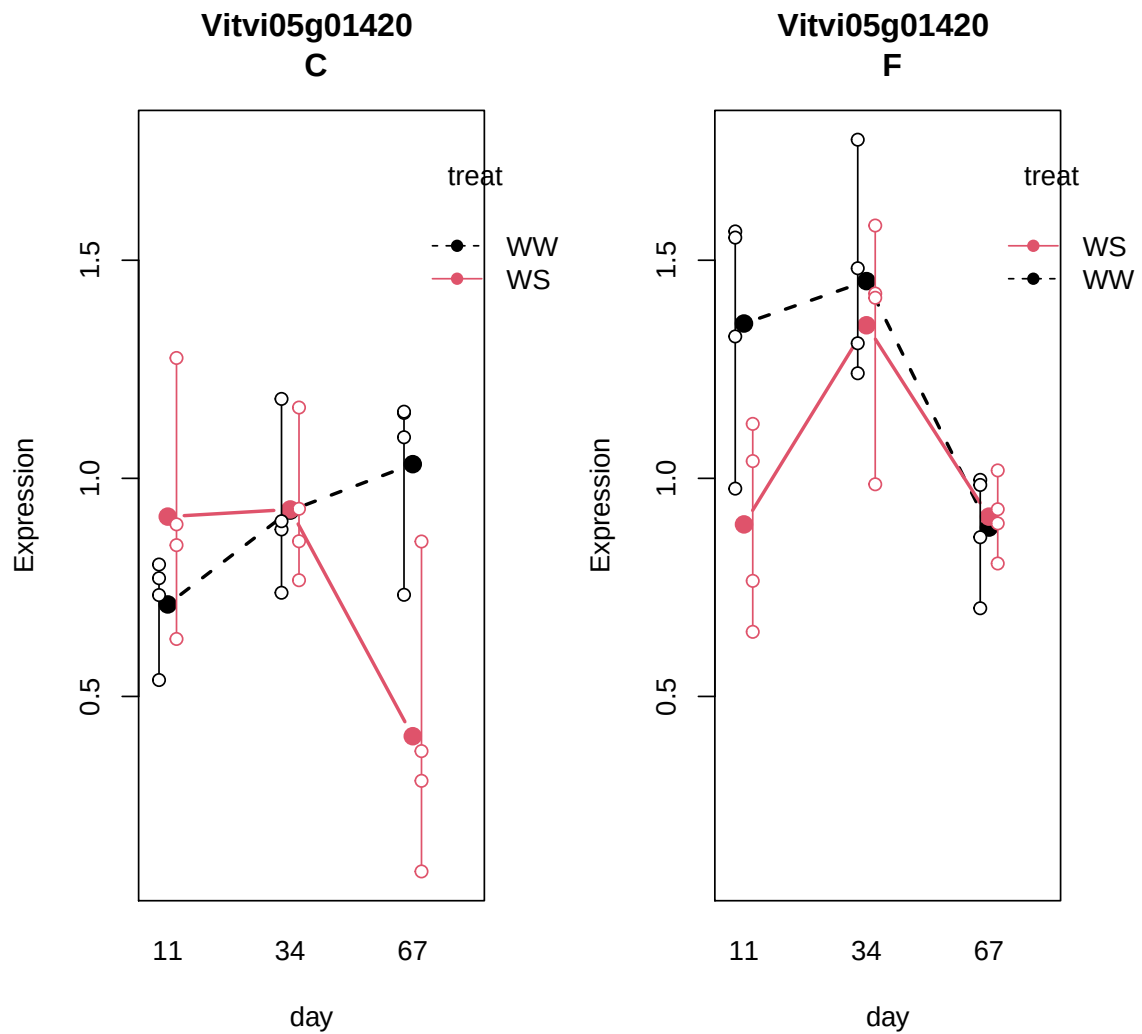


6.12.54 Vitvi05g01420

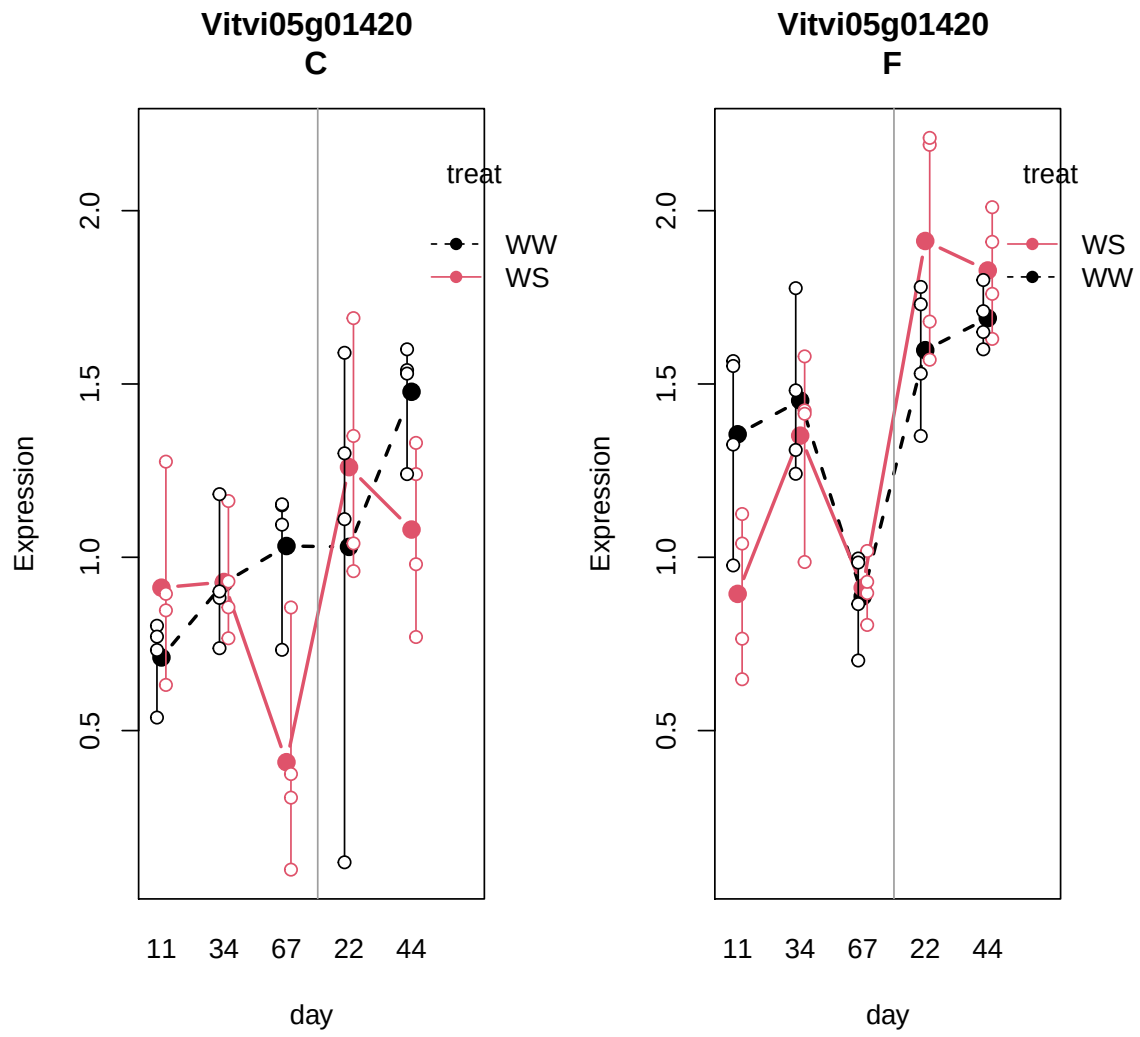
Coefficient varietyF:day67:treatWS for Vitvi05g01420.

```
> tt[varname,]
      logFC  AveExpr      t    P.Value
Vitvi05g01420 1.310693 0.9809144 4.293708 0.0001138293
      adj.P.Val      B
Vitvi05g01420 0.03212937 1.168547

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

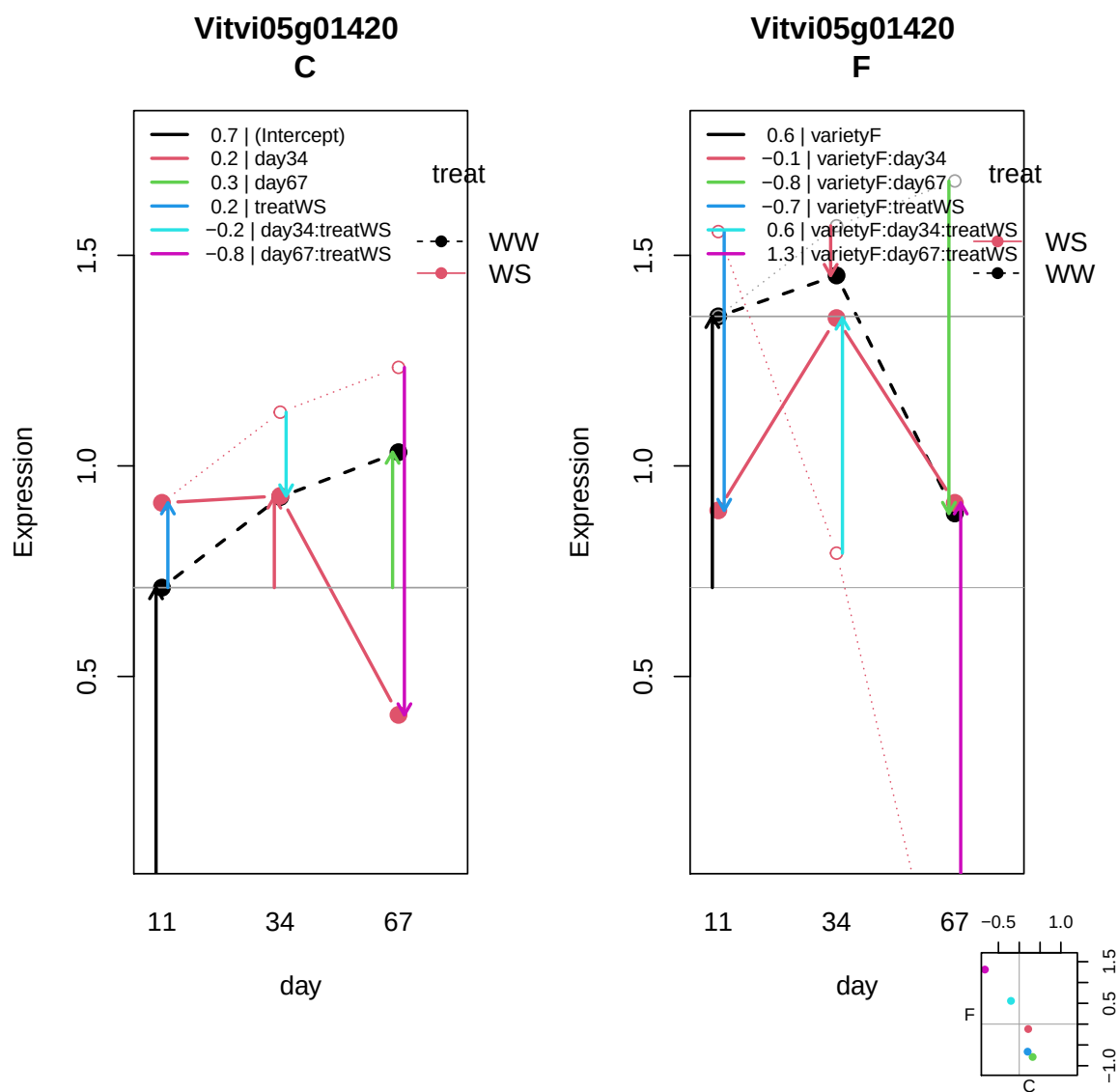
      (Intercept)  varietyF    day34    day67
Vitvi05g01420    0.710896 0.6440305 0.2151911 0.3216037
      treatWS varietyF:day34 varietyF:day67
Vitvi05g01420 0.201378    -0.1179733    -0.7893973
      varietyF:treatWS day34:treatWS day67:treatWS
Vitvi05g01420    -0.6619157    -0.1987963    -0.8250684
      varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi05g01420          0.5581154          1.310693

```

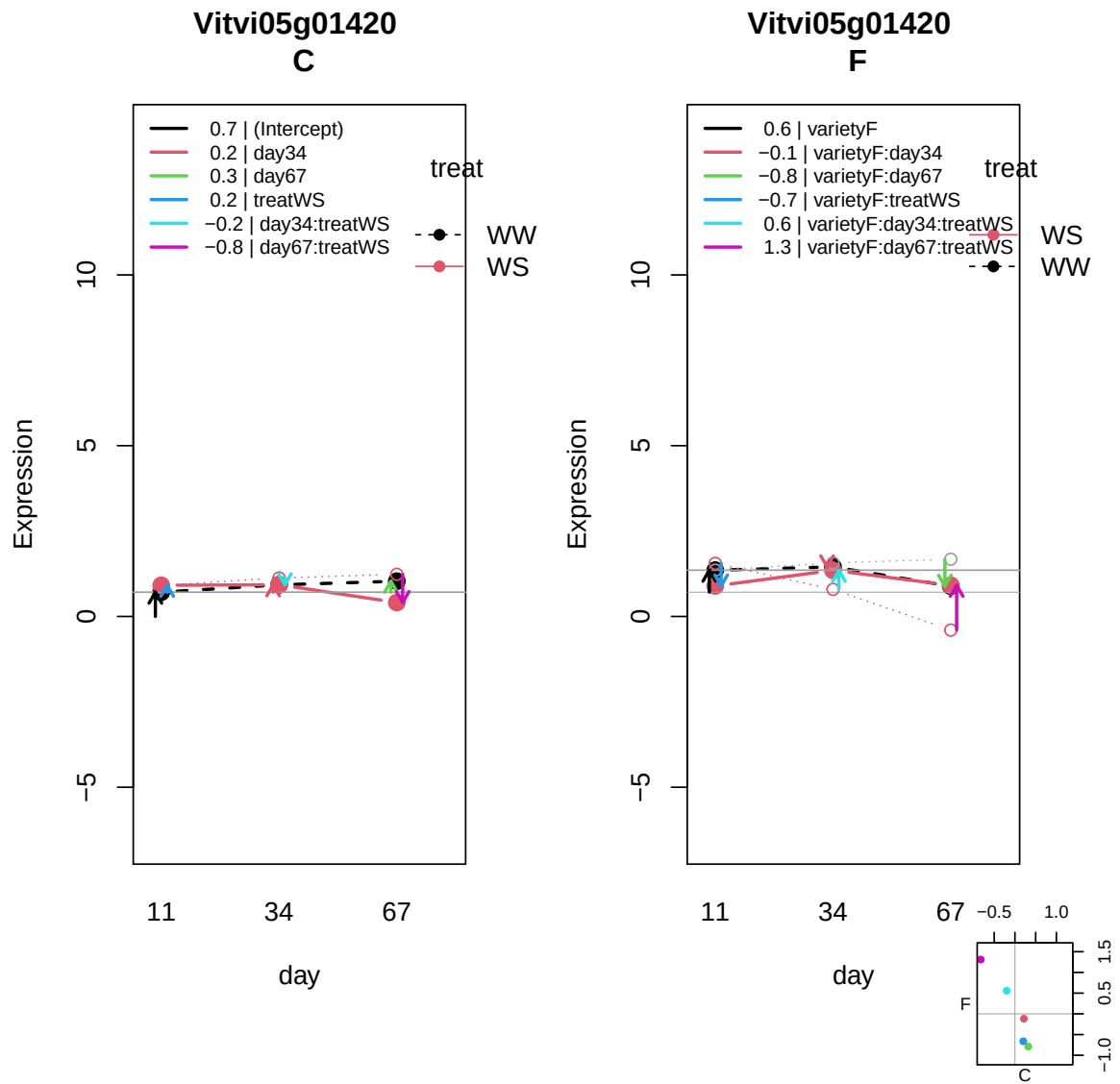
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

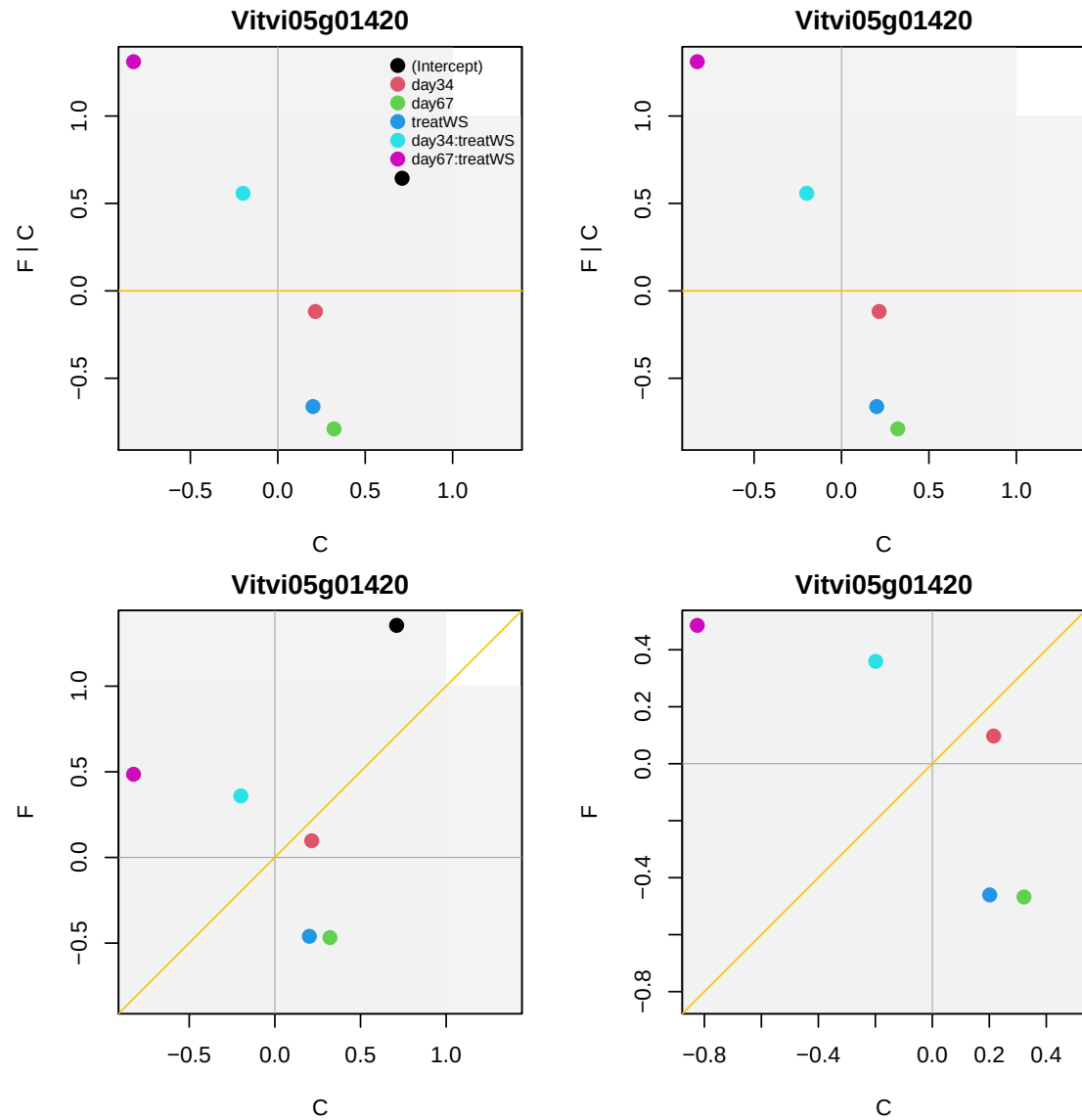


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

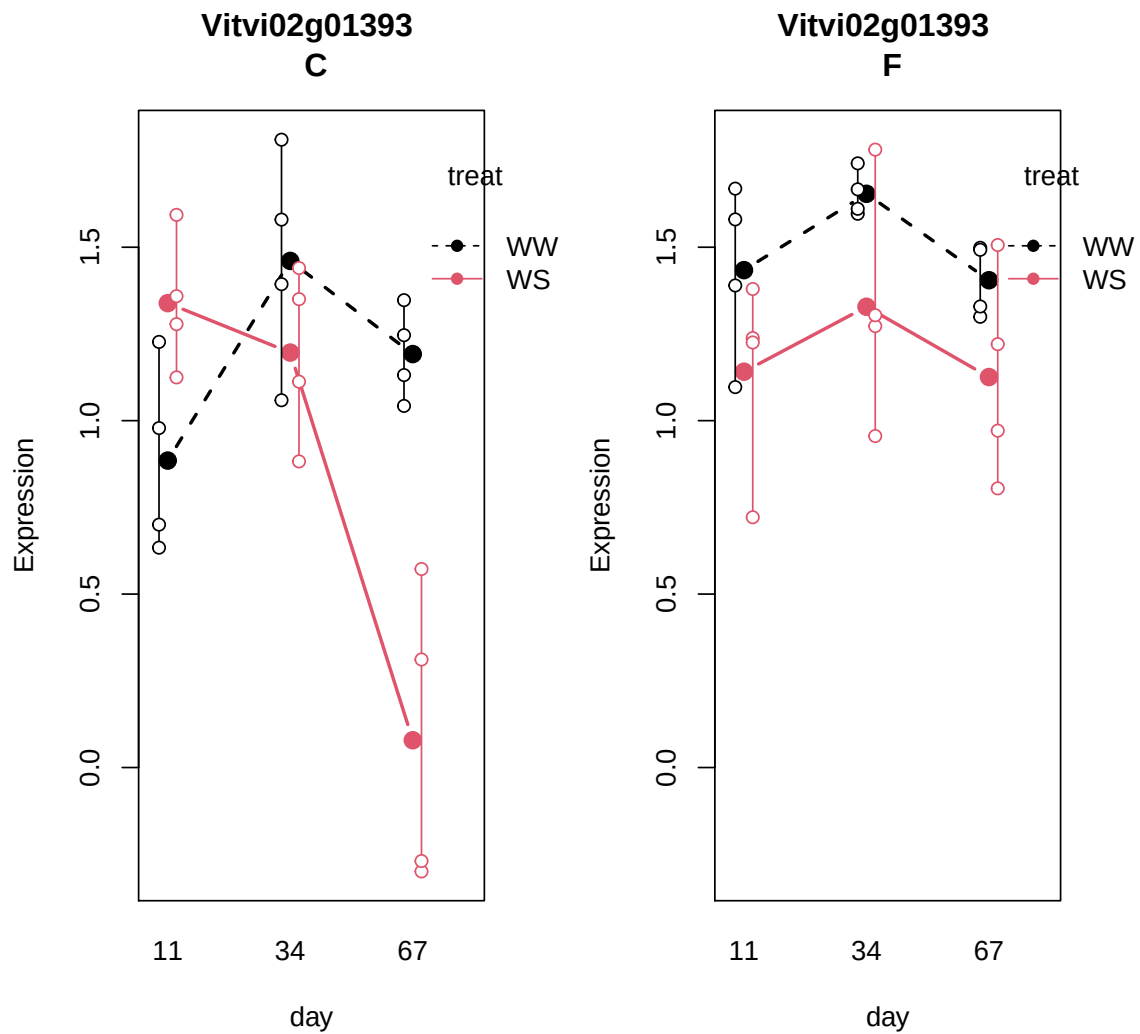


6.12.55 Vitvi02g01393

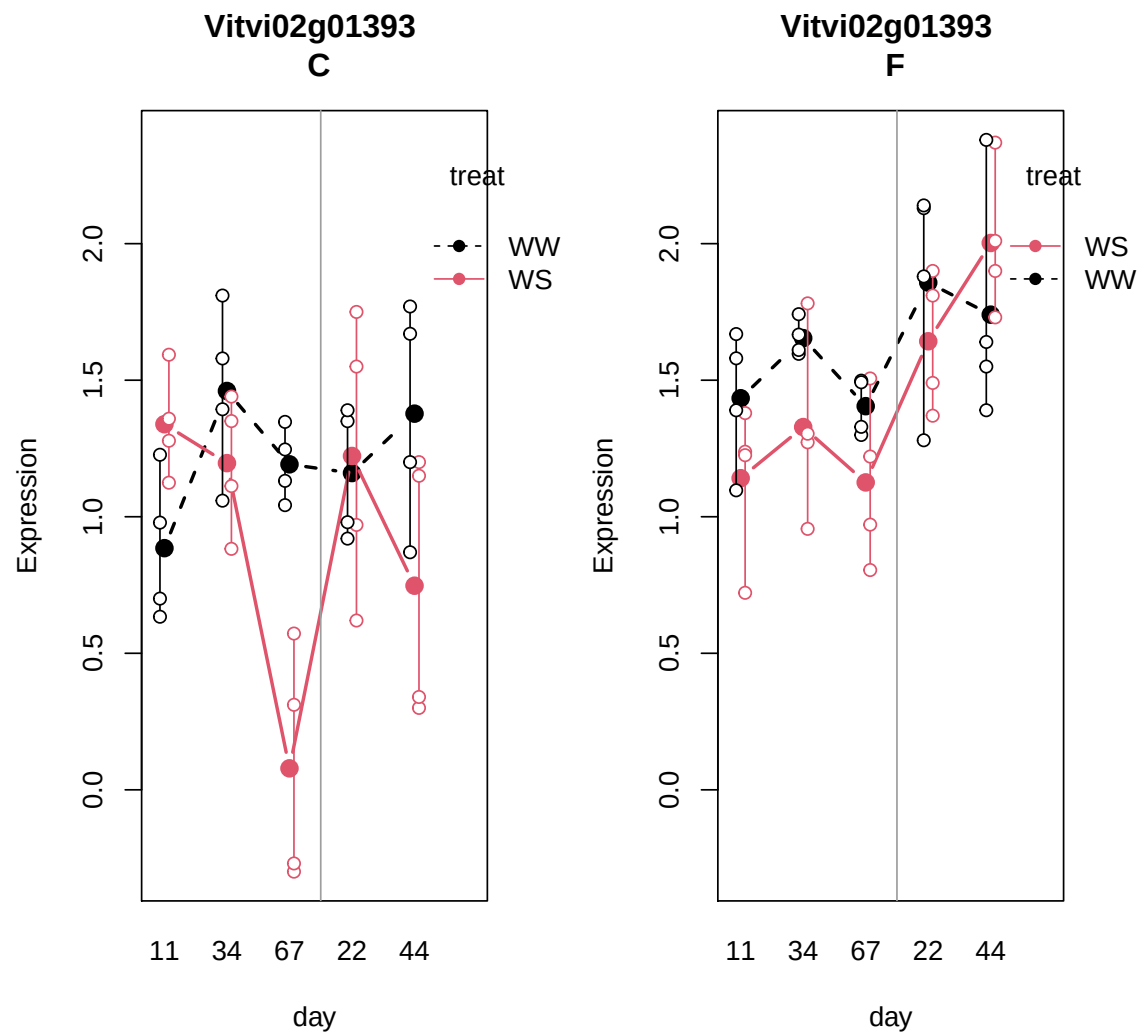
Coefficient varietyF:day67:treatWS for Vitvi02g01393.

```
> tt[varname,]
               logFC AveExpr      t      P.Value
Vitvi02g01393 1.580772 1.18659 4.261827 0.0001254303
               adj.P.Val      B
Vitvi02g01393 0.03476015 1.082235

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



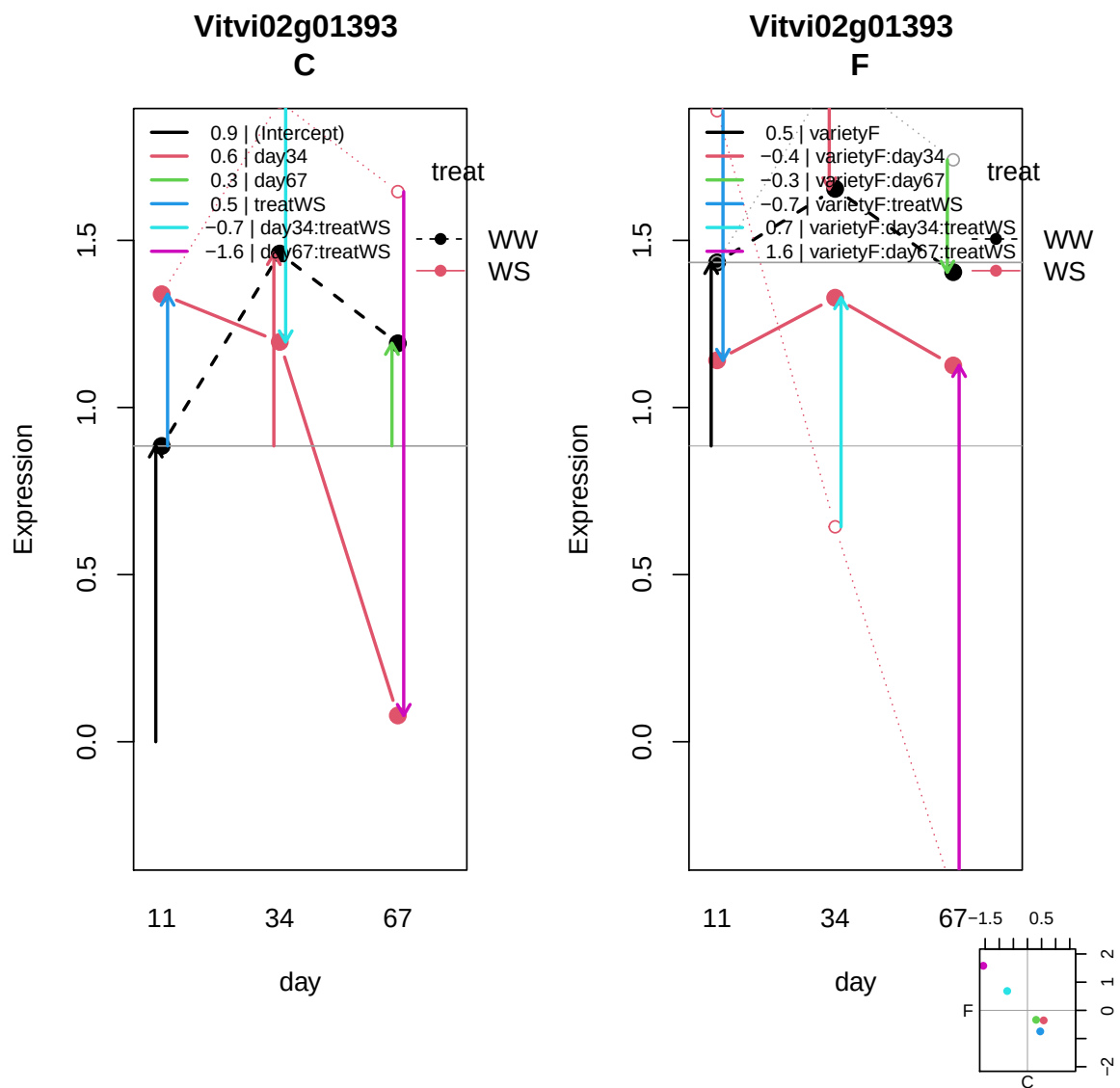
```

> fit1[varname,]$coefficients

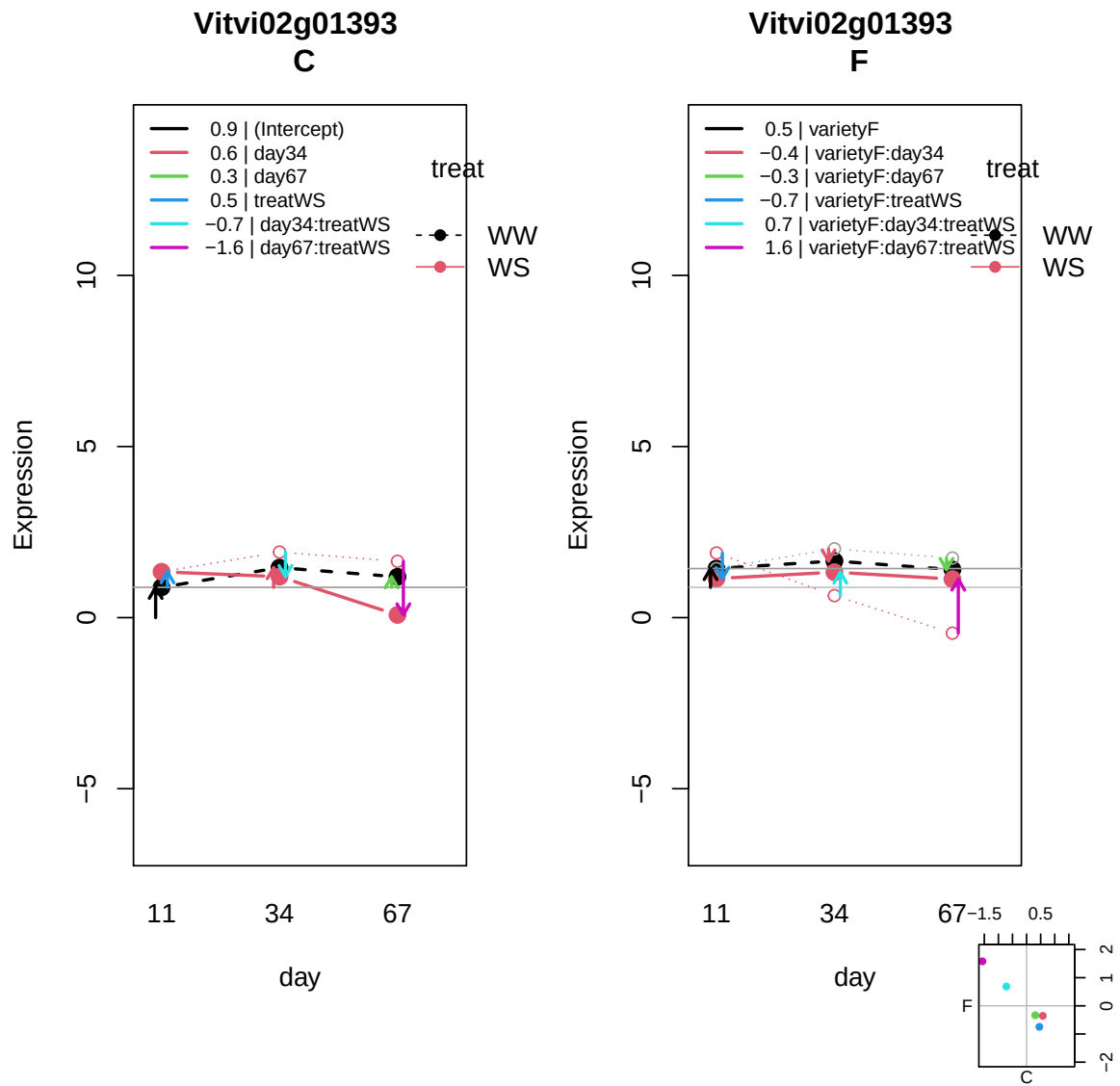
              (Intercept)  varietyF      day34      day67
Vitvi02g01393    0.8849312 0.5489869 0.5755947 0.3069703
              treatWS  varietyF:day34  varietyF:day67
Vitvi02g01393  0.4538683    -0.3555381    -0.3360157
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi02g01393    -0.7466536    -0.7181087    -1.567137
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi02g01393              0.6853087              1.580772

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

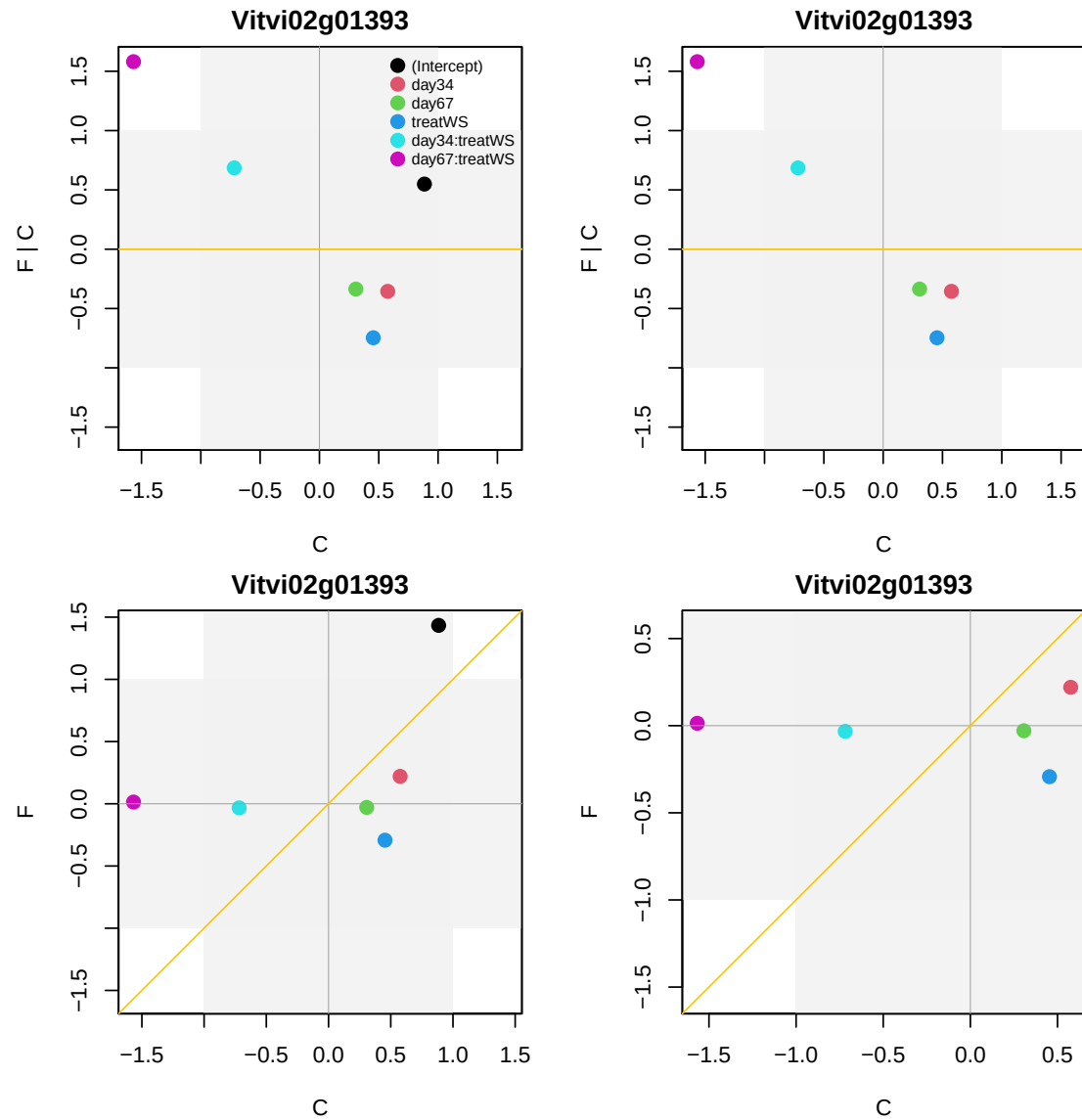


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

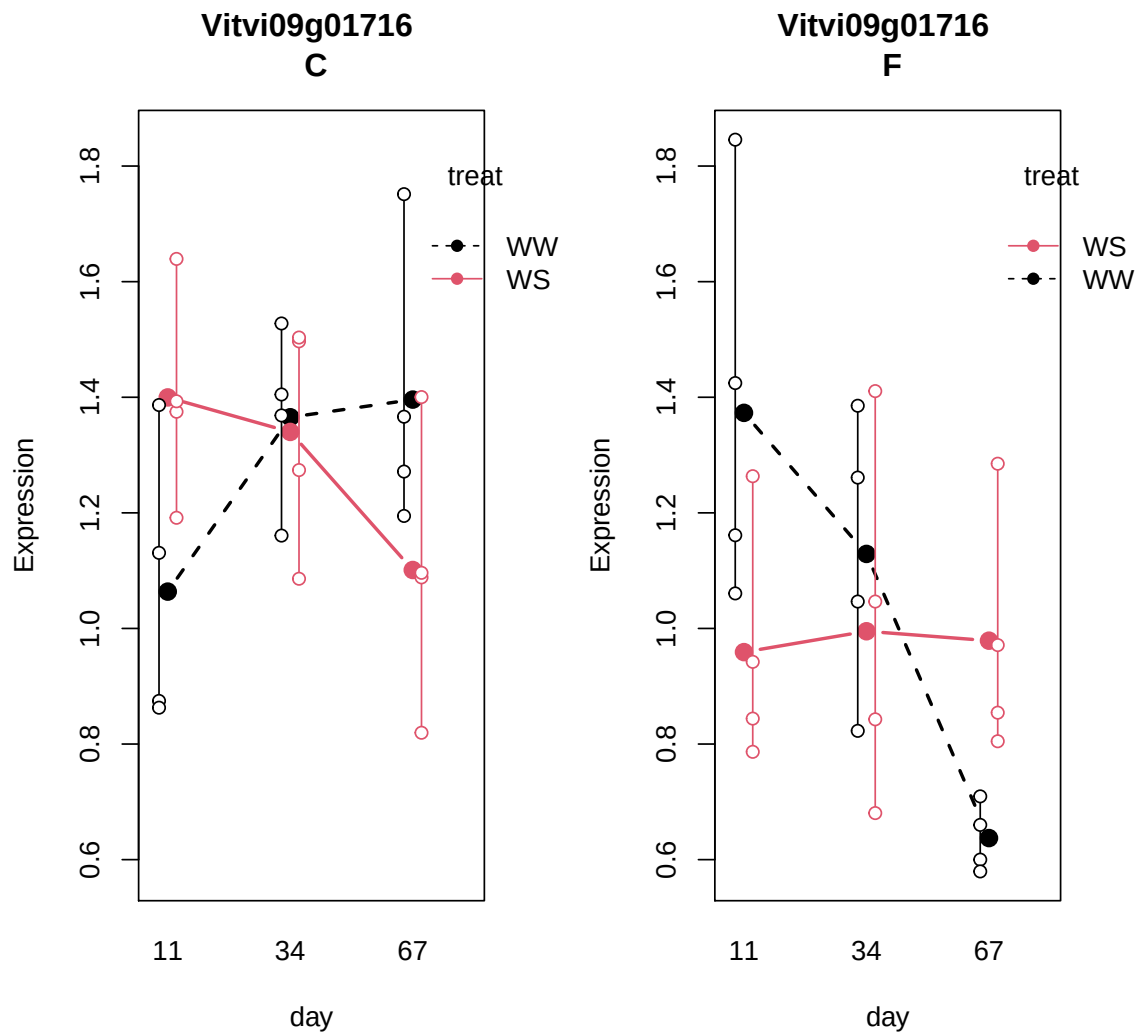


6.12.56 Vitvi09g01716

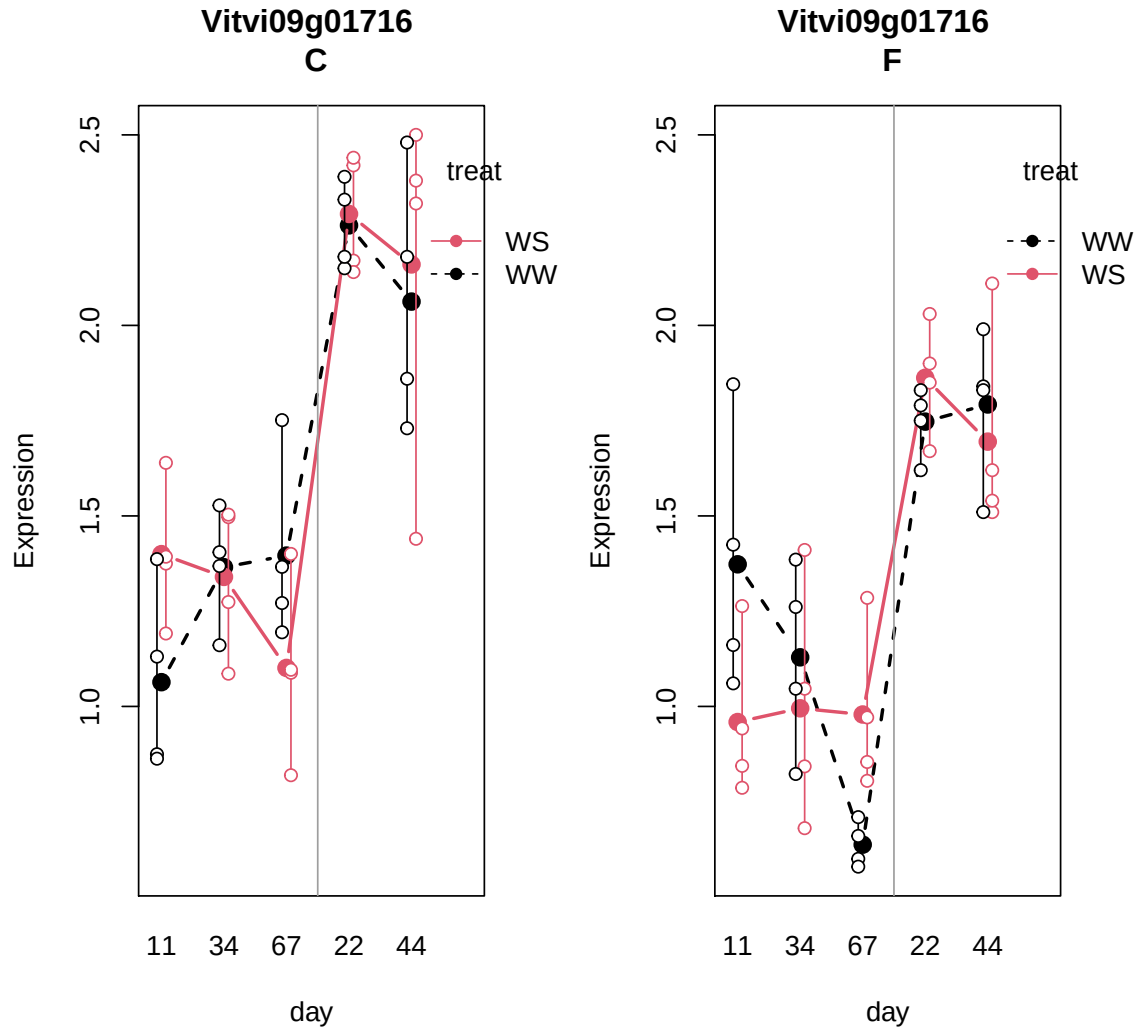
Coefficient varietyF:day67:treatWS for Vitvi09g01716.

```
> tt[varname,]
              logFC  AveExpr      t      P.Value
Vitvi09g01716 1.386325 1.144836 4.242278 0.0001331079
              adj.P.Val      B
Vitvi09g01716 0.03622911 1.029407

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



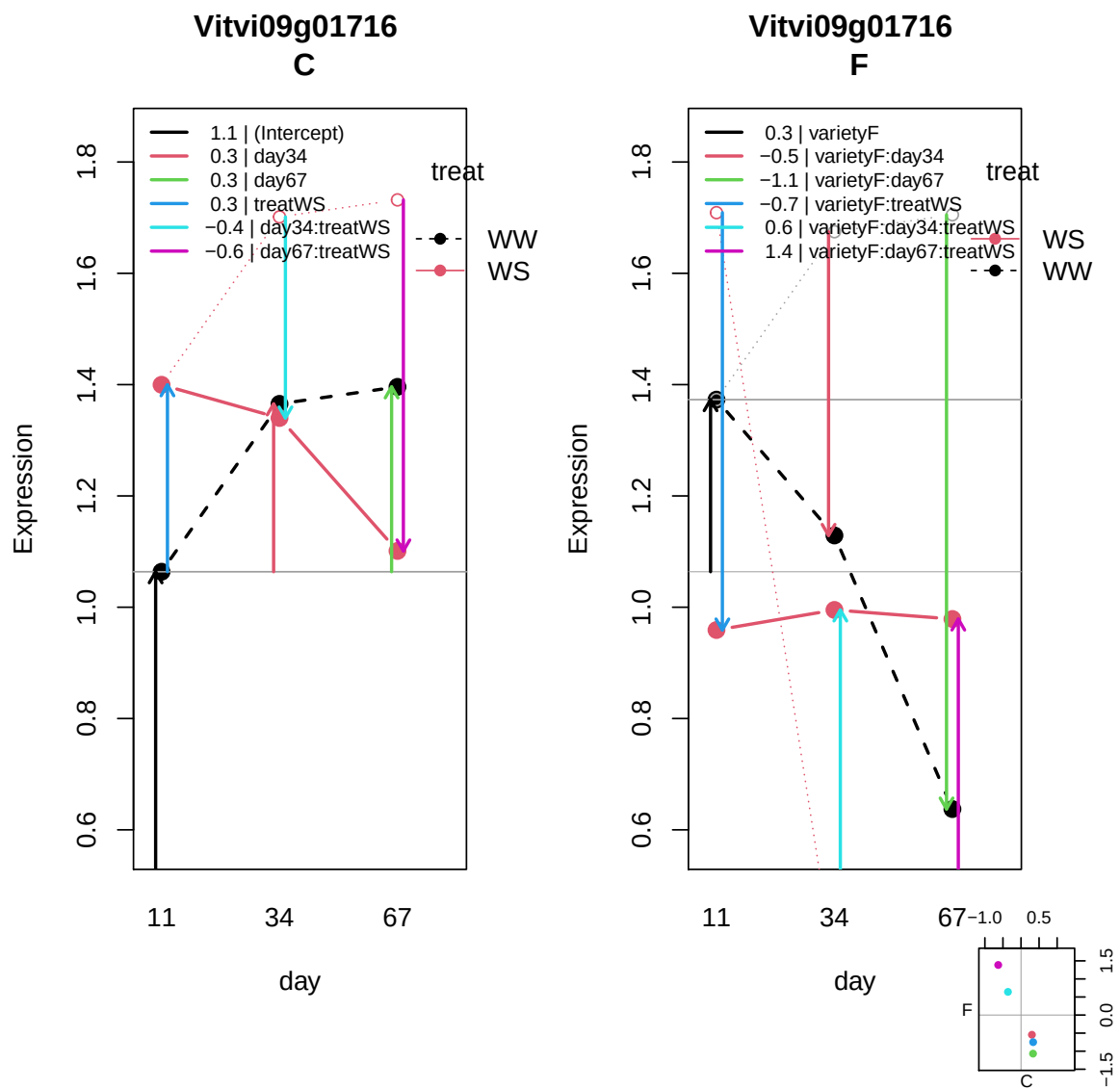

```

> fit1[varname,]$coefficients

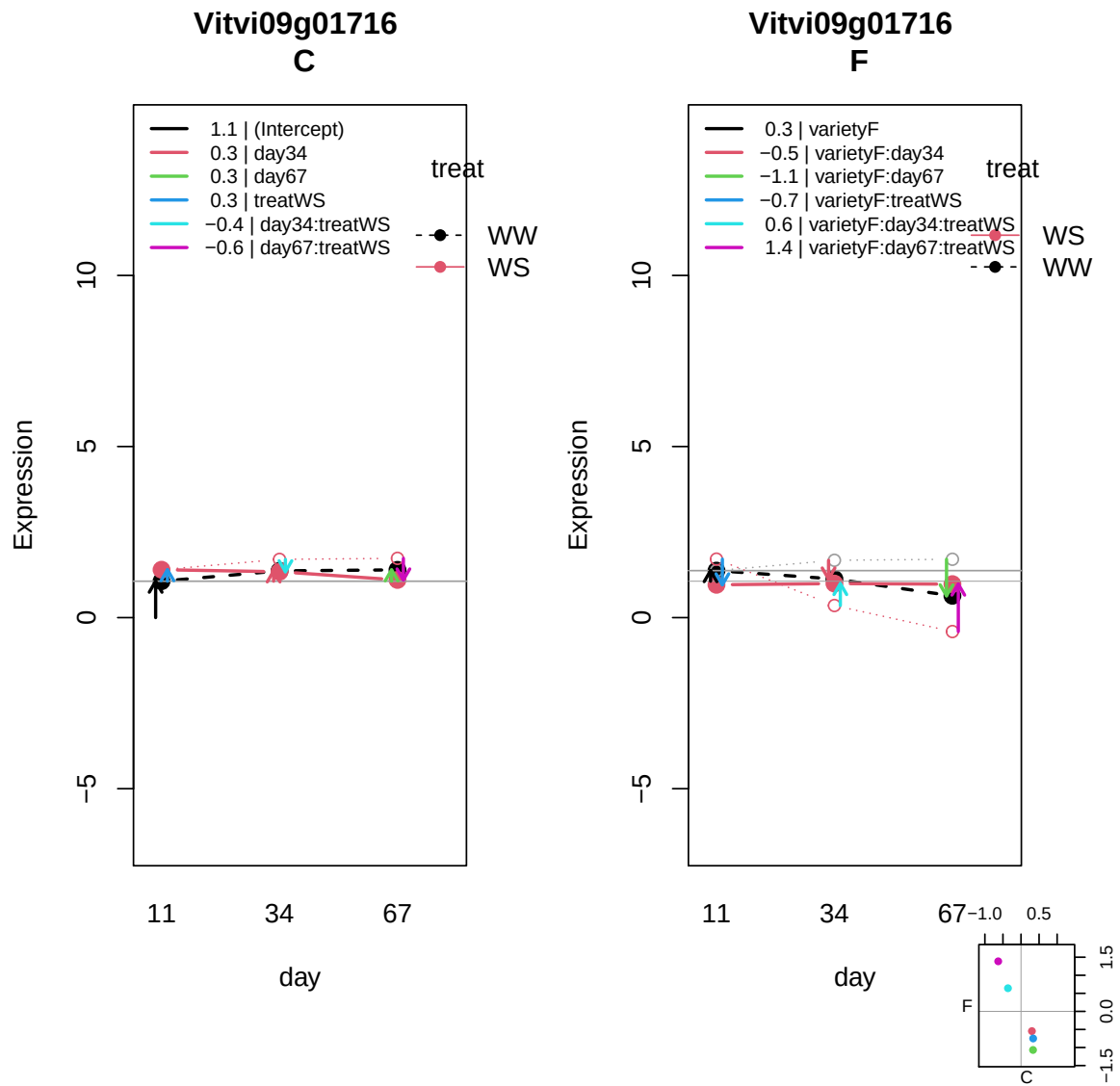
              (Intercept)  varietyF      day34      day67
Vitvi09g01716      1.063703 0.309291 0.3017066 0.3322354
              treatWS  varietyF:day34  varietyF:day67
Vitvi09g01716 0.3359868      -0.5457761      -1.067942
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi09g01716      -0.7499378      -0.3613851      -0.6308365
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi09g01716              0.6415234              1.386325

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

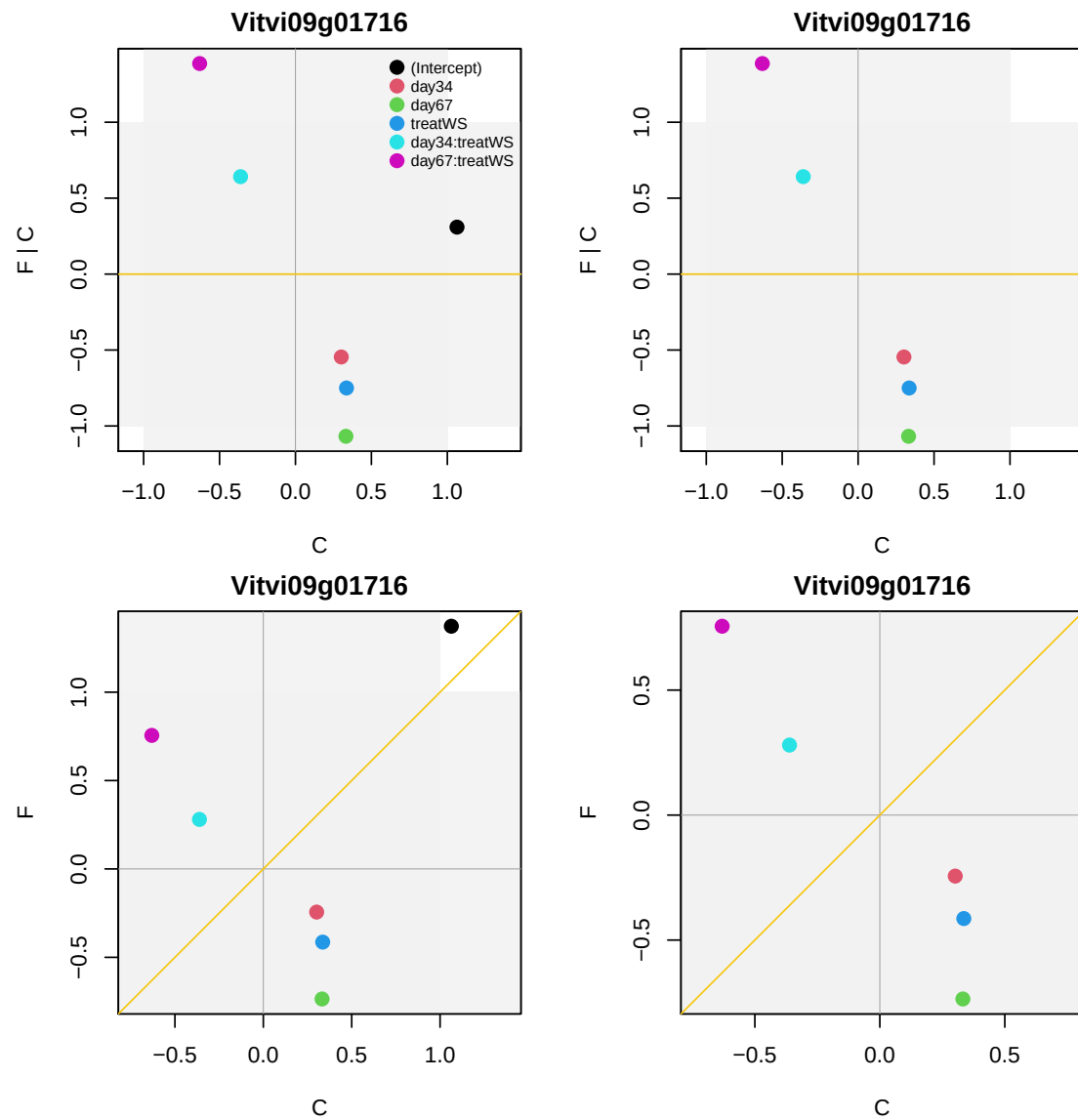


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

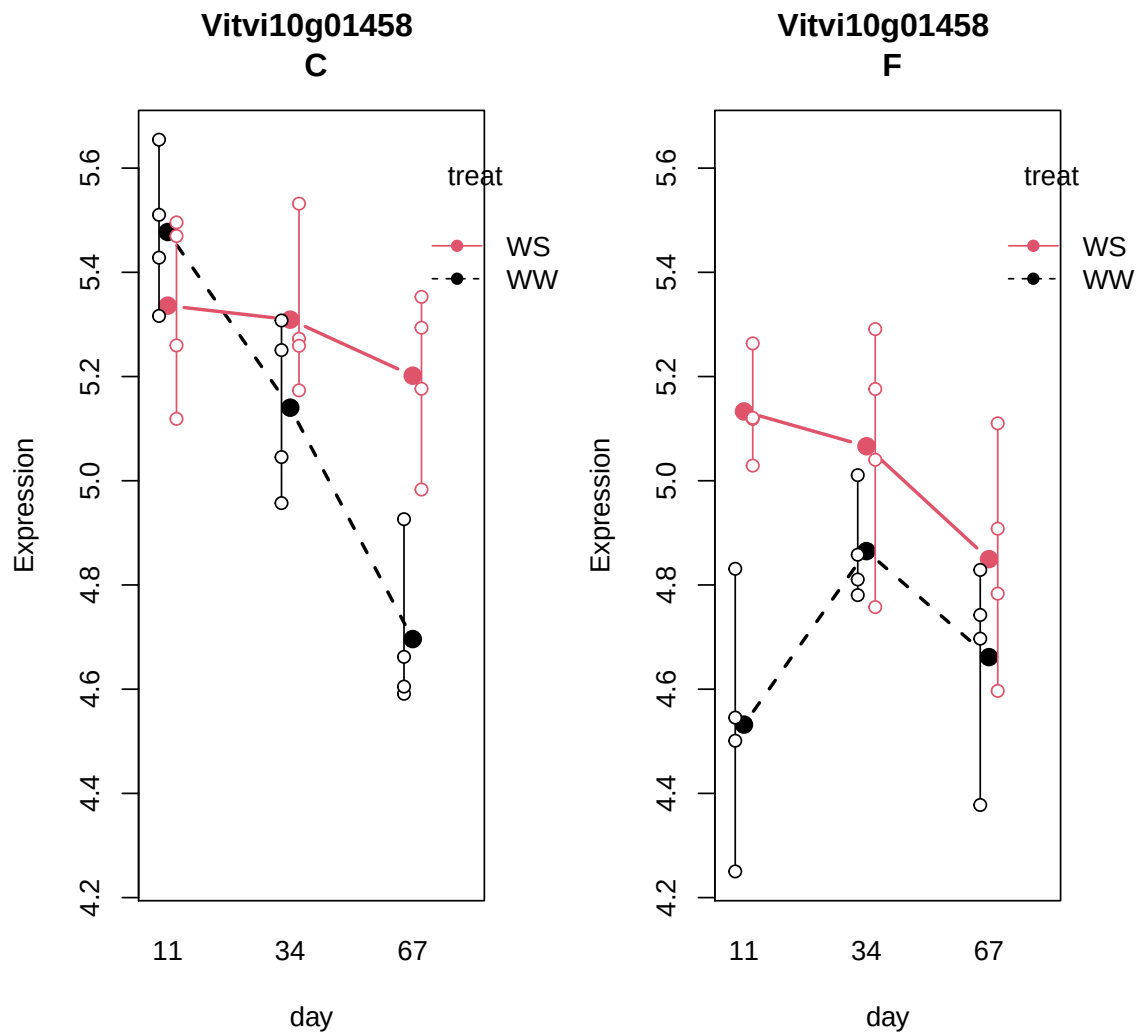


6.12.57 Vitvi10g01458

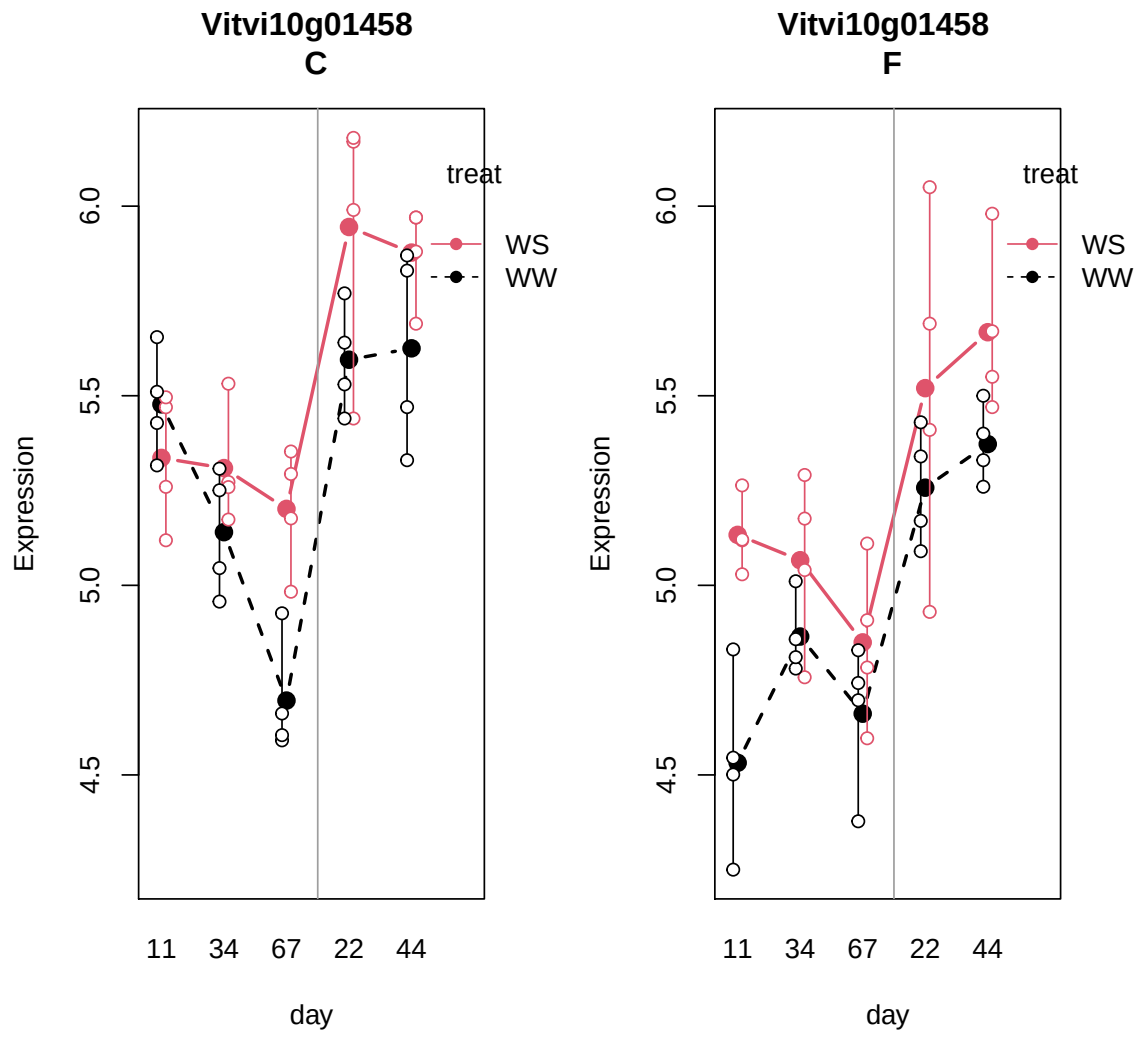
Coefficient varietyF:day67:treatWS for Vitvi10g01458.

```
> tt[varname,]
               logFC AveExpr      t      P.Value
Vitvi10g01458 -1.059832  5.0223 -4.234644 0.0001362296
               adj.P.Val      B
Vitvi10g01458 0.03642827 1.008796

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

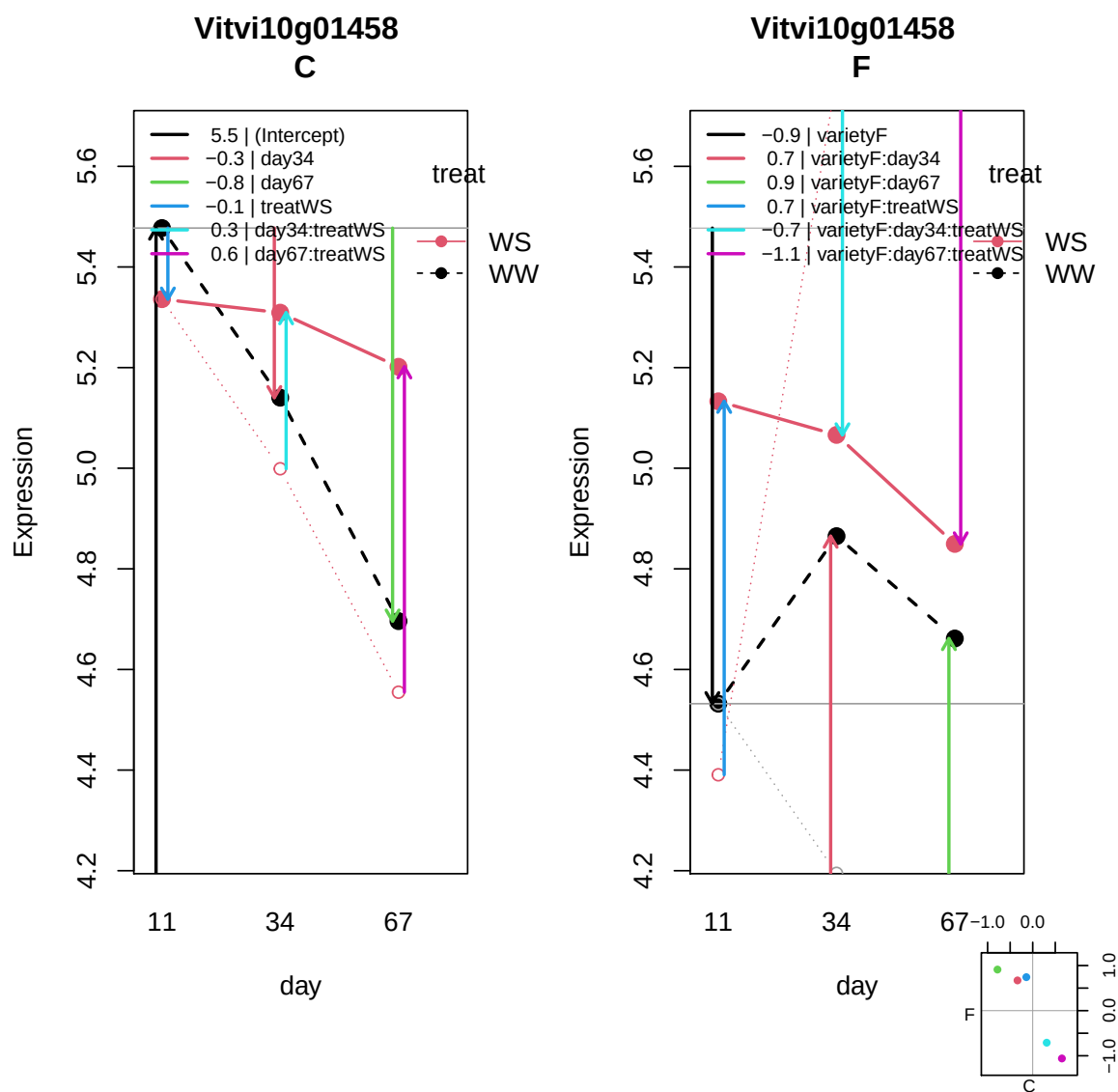
              (Intercept)    varietyF      day34      day67
Vitvi10g01458    5.477337 -0.9453912 -0.3371232 -0.7812403
              treatWS varietyF:day34 varietyF:day67
Vitvi10g01458 -0.1413087    0.6701276    0.9107907
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi10g01458    0.7423965    0.3102563    0.6467905
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi10g01458    -0.7100739    -1.059832

```

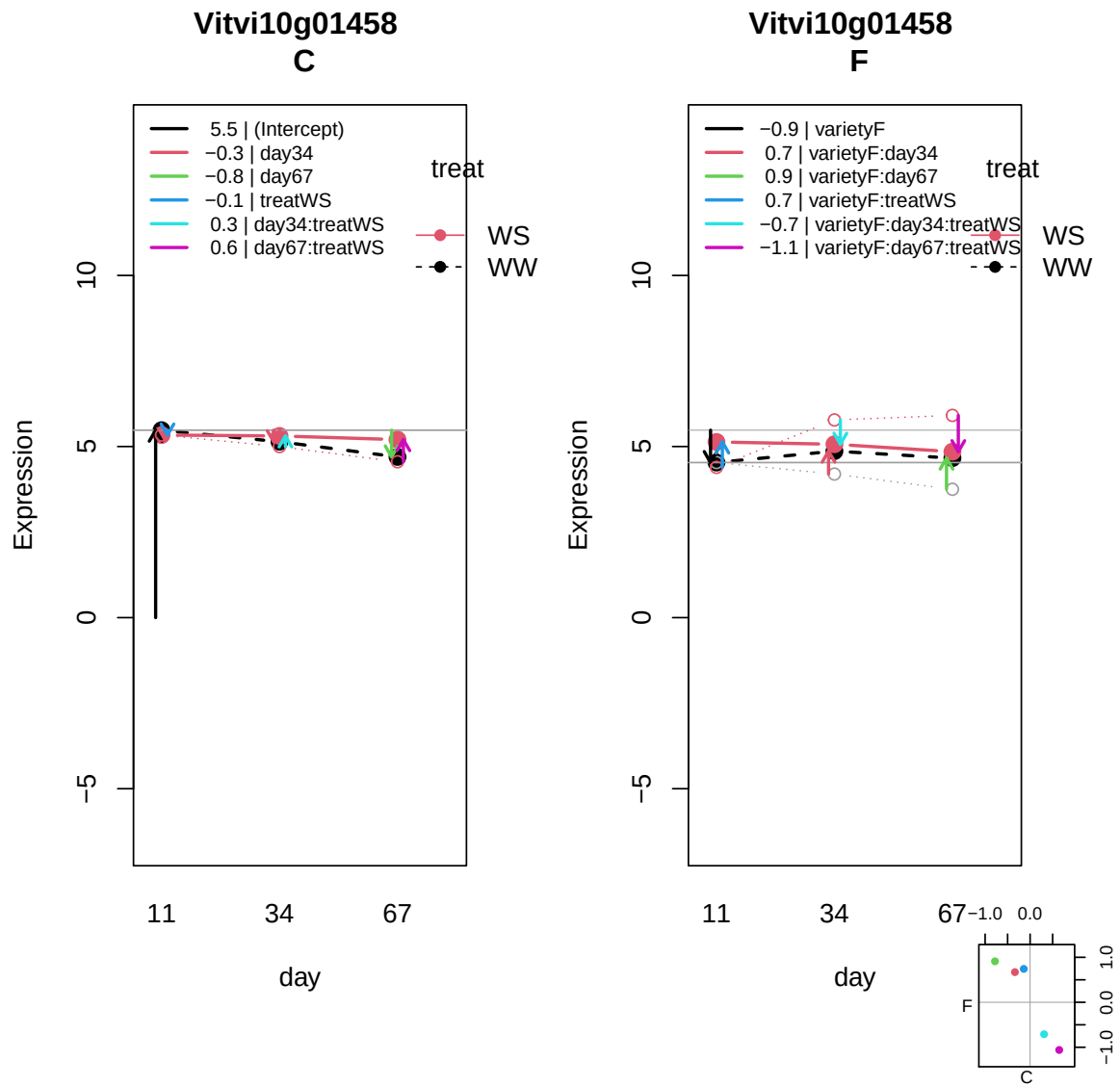
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

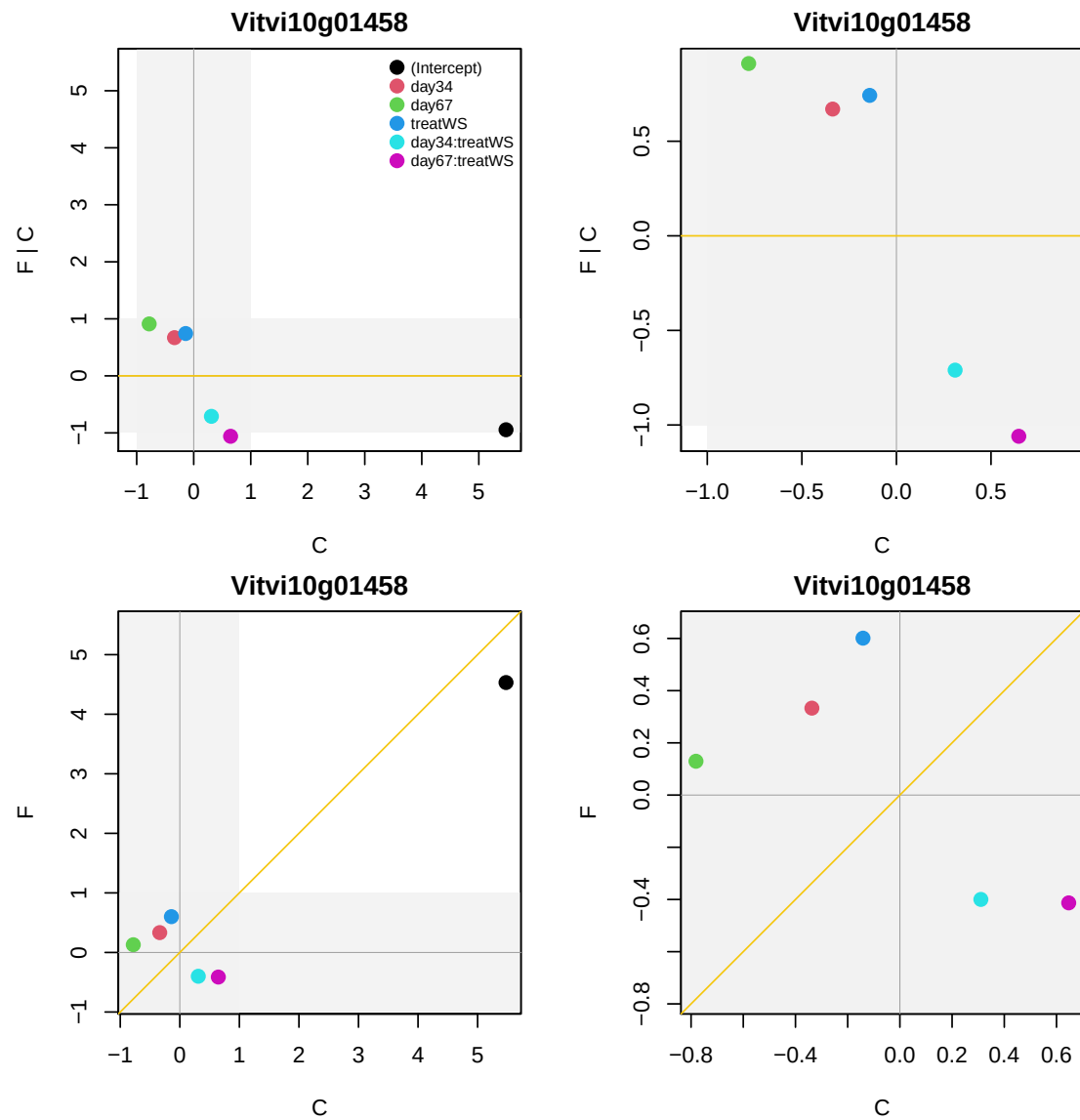


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

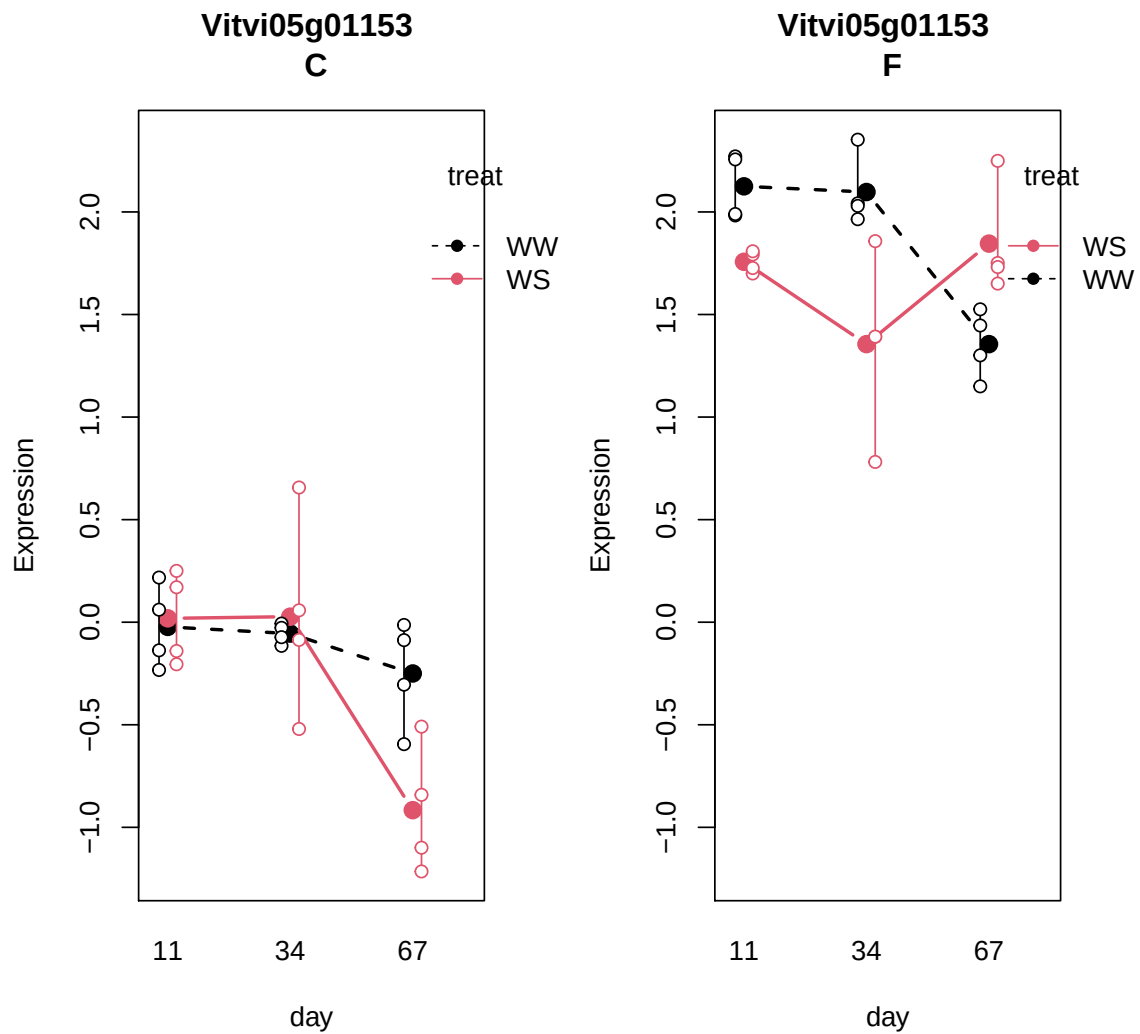


6.12.58 Vitvi05g01153

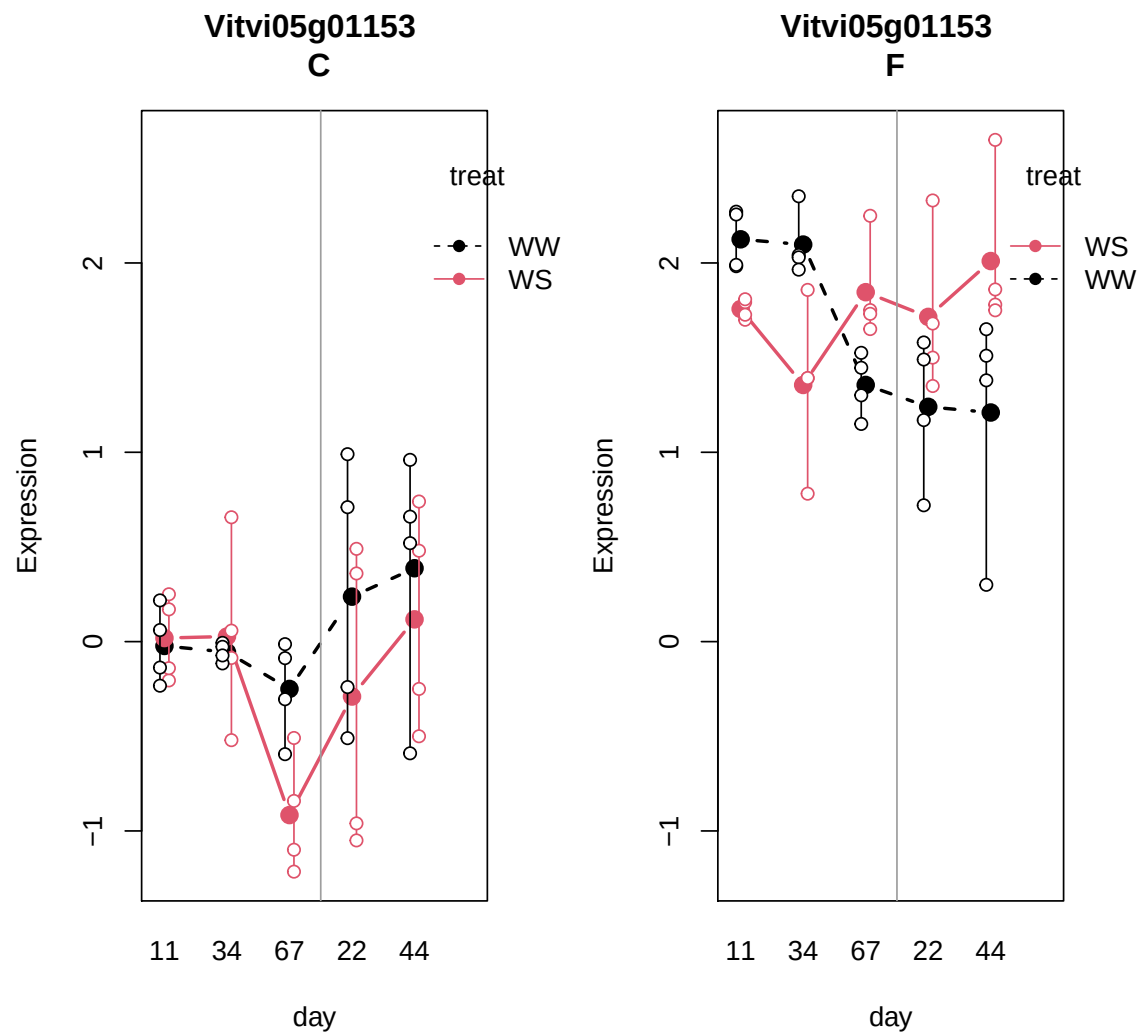
Coefficient varietyF:day67:treatWS for Vitvi05g01153.

```
> tt[varname,]
      logFC  AveExpr      t    P.Value
Vitvi05g01153 1.565853 0.7780562 4.226327 0.0001397114
      adj.P.Val      B
Vitvi05g01153 0.03643236 0.9863578

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



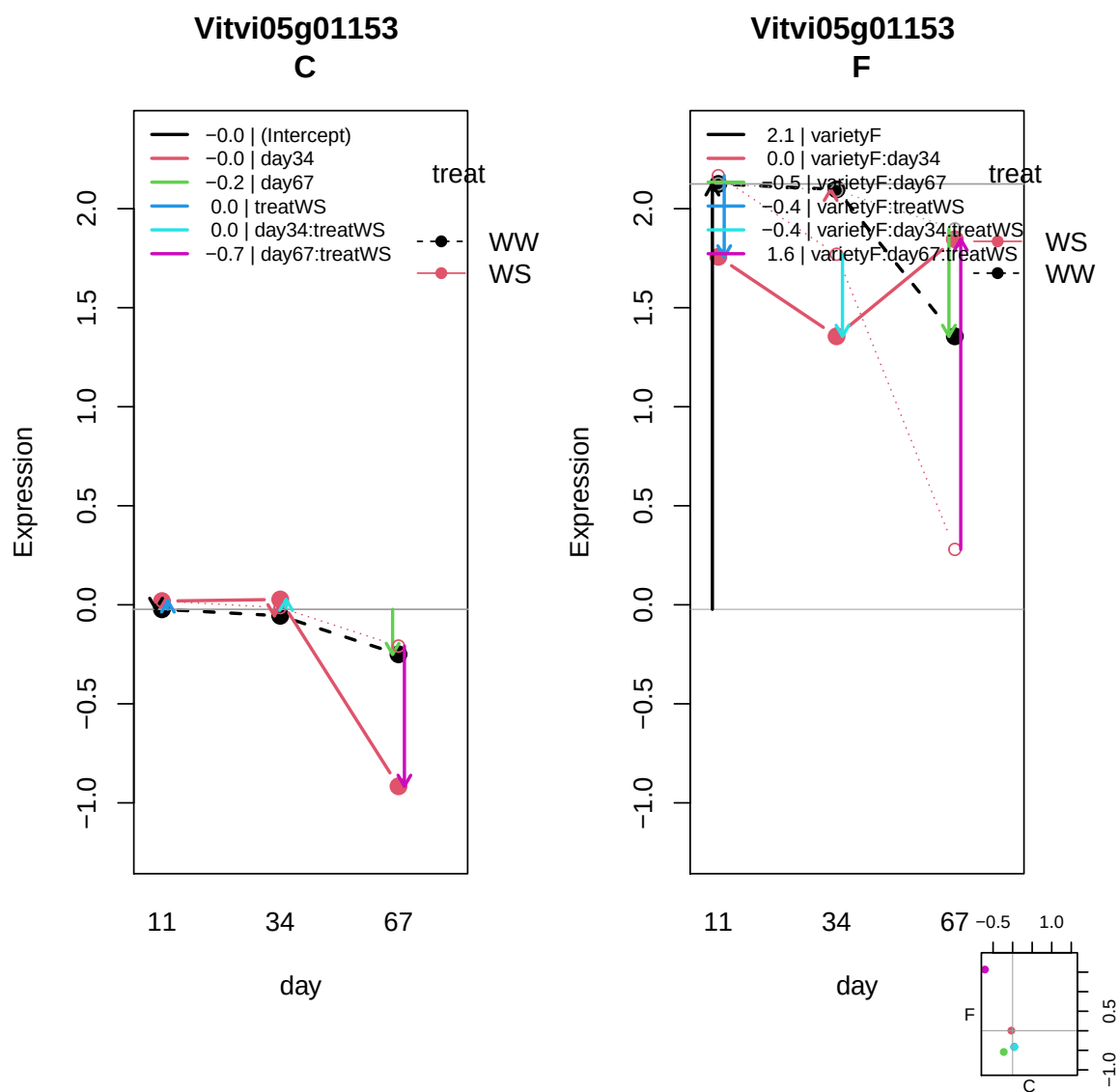
```

> fit1[varname,]$coefficients

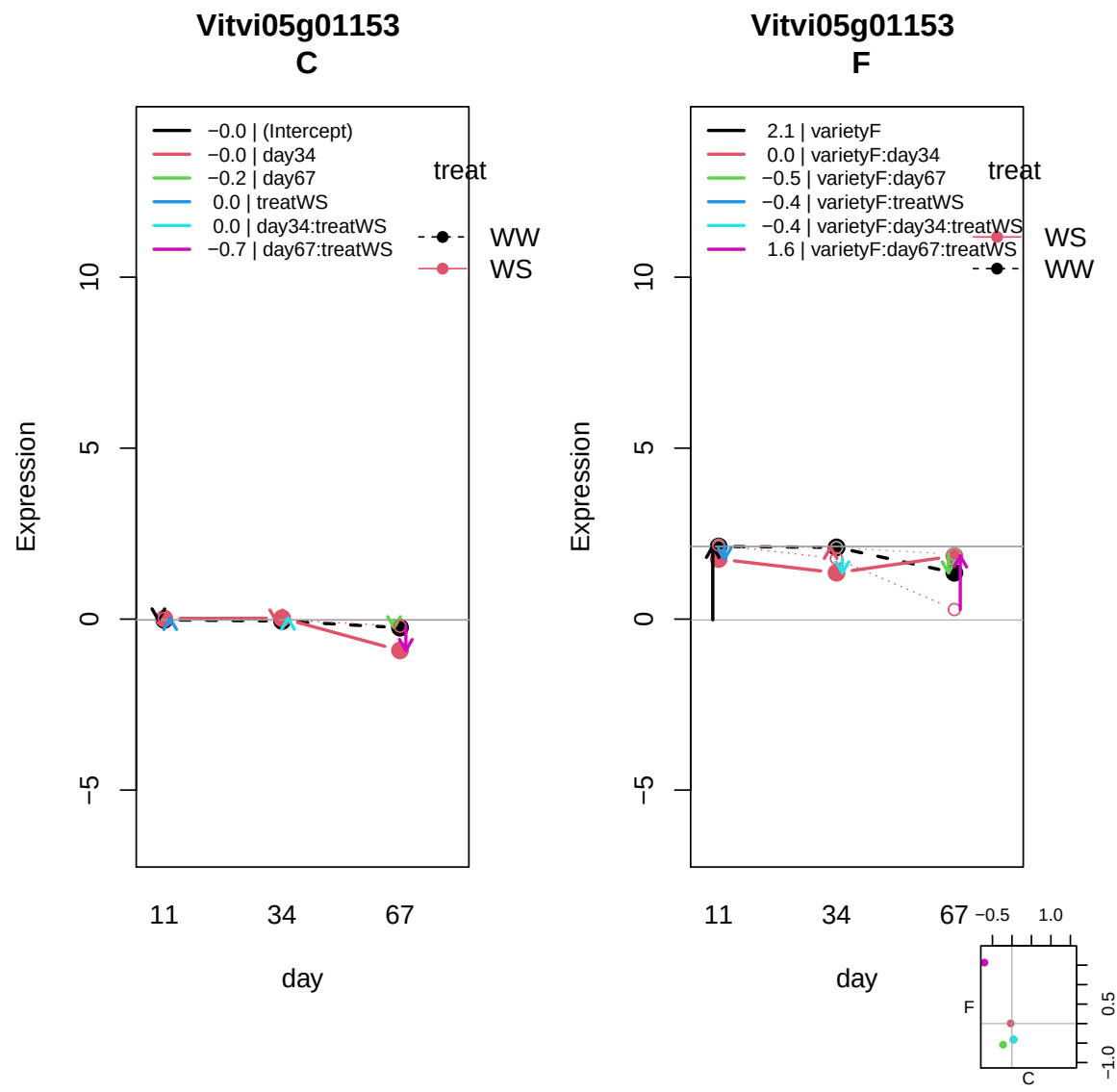
              (Intercept)  varietyF      day34      day67
Vitvi05g01153 -0.02283281  2.147676 -0.03271854 -0.227132
              treatWS  varietyF:day34  varietyF:day67
Vitvi05g01153  0.04160788    0.00490287    -0.54214
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi05g01153    -0.4096143    0.0408906    -0.7078429
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi05g01153    -0.414266    1.565853

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

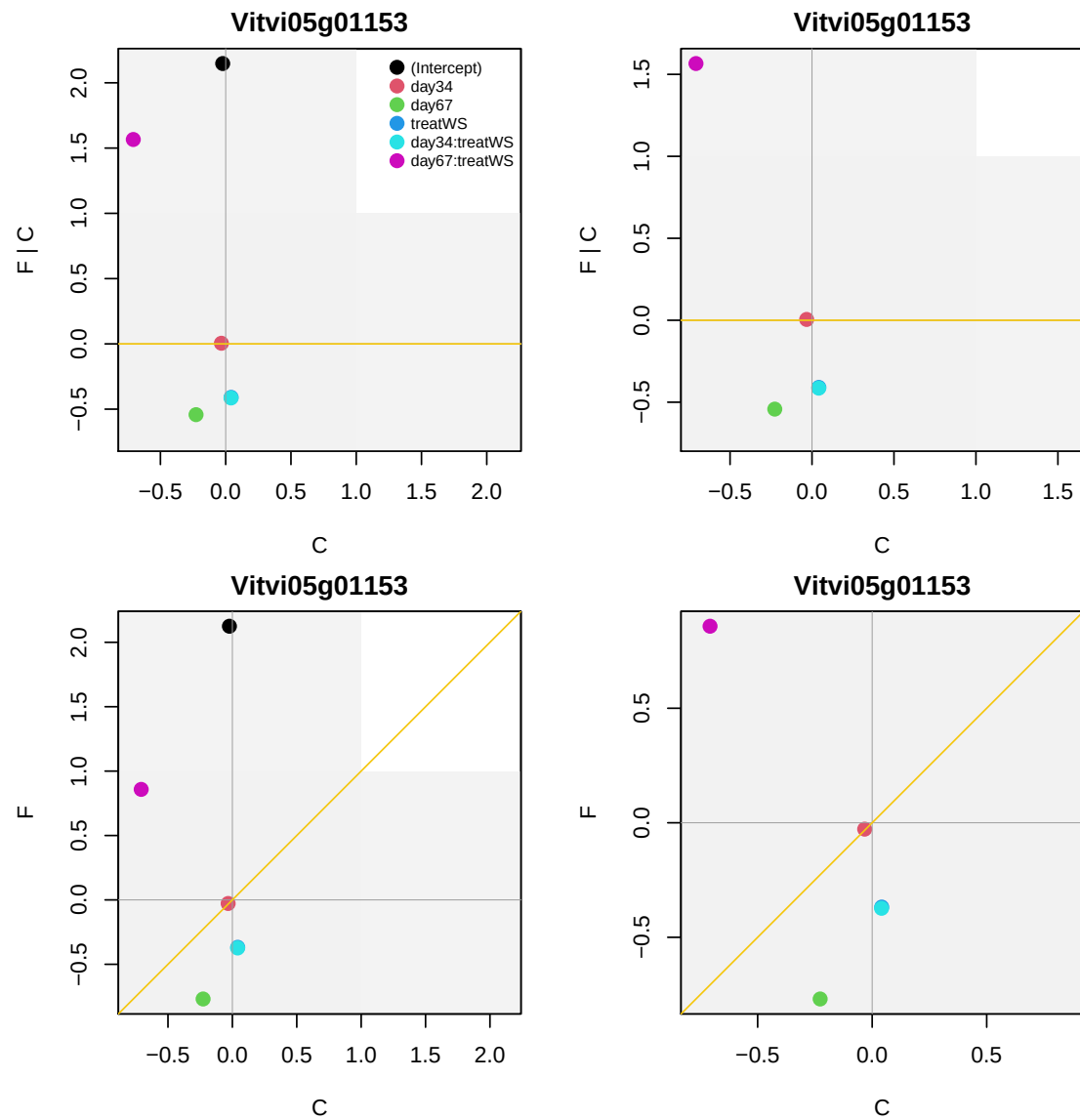


```
> coefs <- plot.interactions(varname,  
+ coef=fit1[varname,]$coefficients,  
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

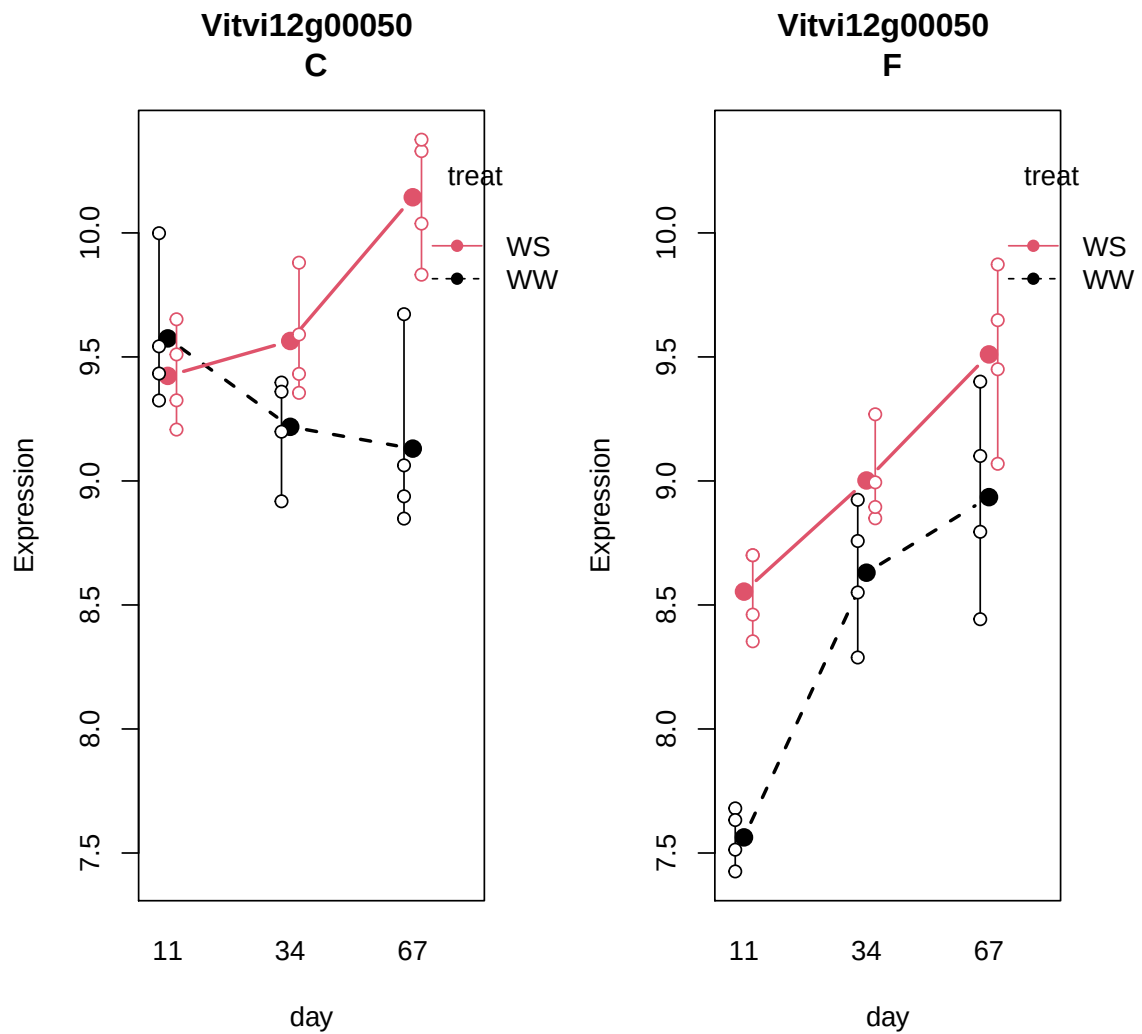


6.12.59 Vitvi12g00050

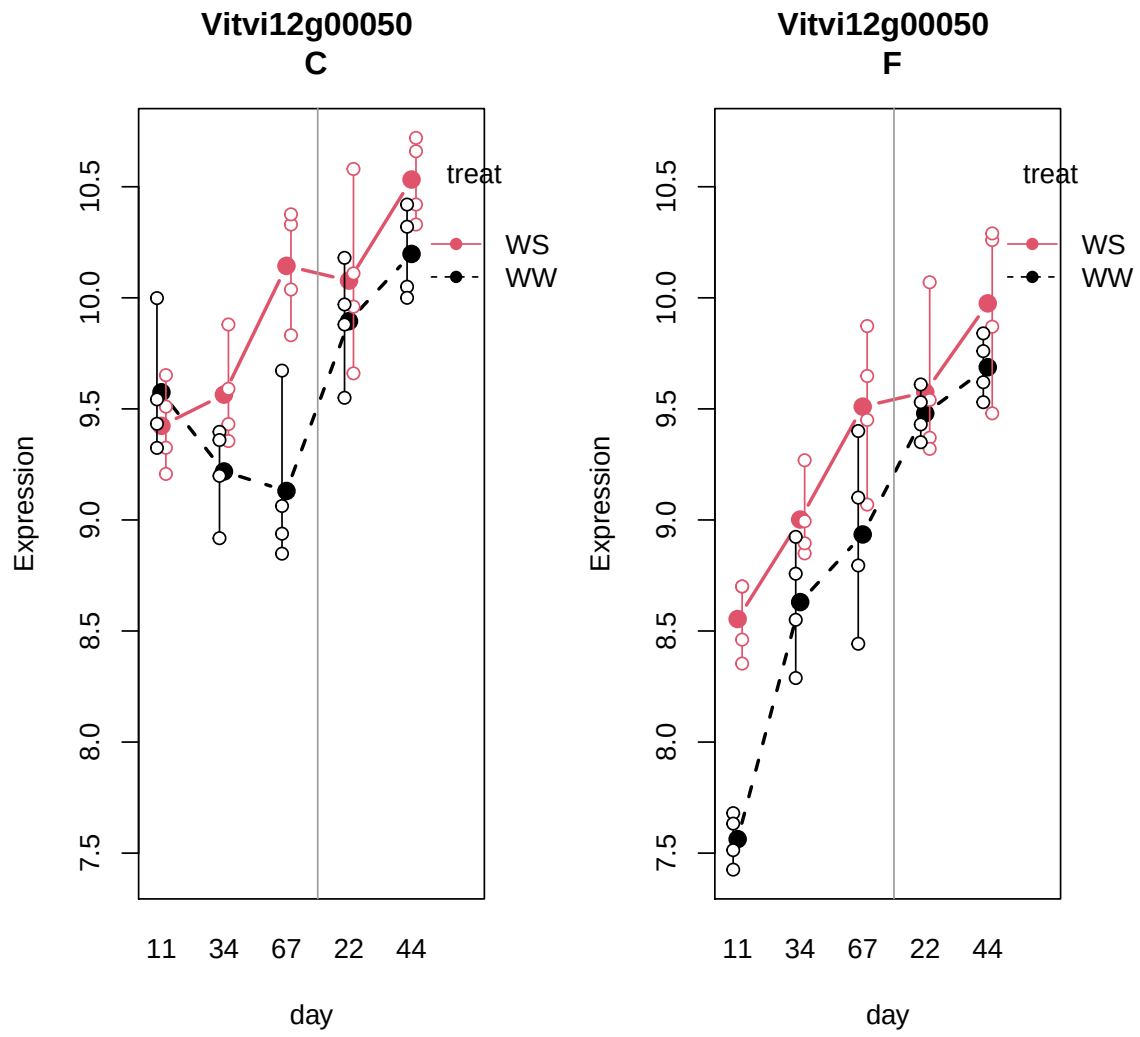
Coefficient varietyF:day67:treatWS for Vitvi12g00050.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi12g00050 -1.579974 9.104026 -4.217224 0.0001436229
      adj.P.Val      B
Vitvi12g00050 0.03643236 0.9618101

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

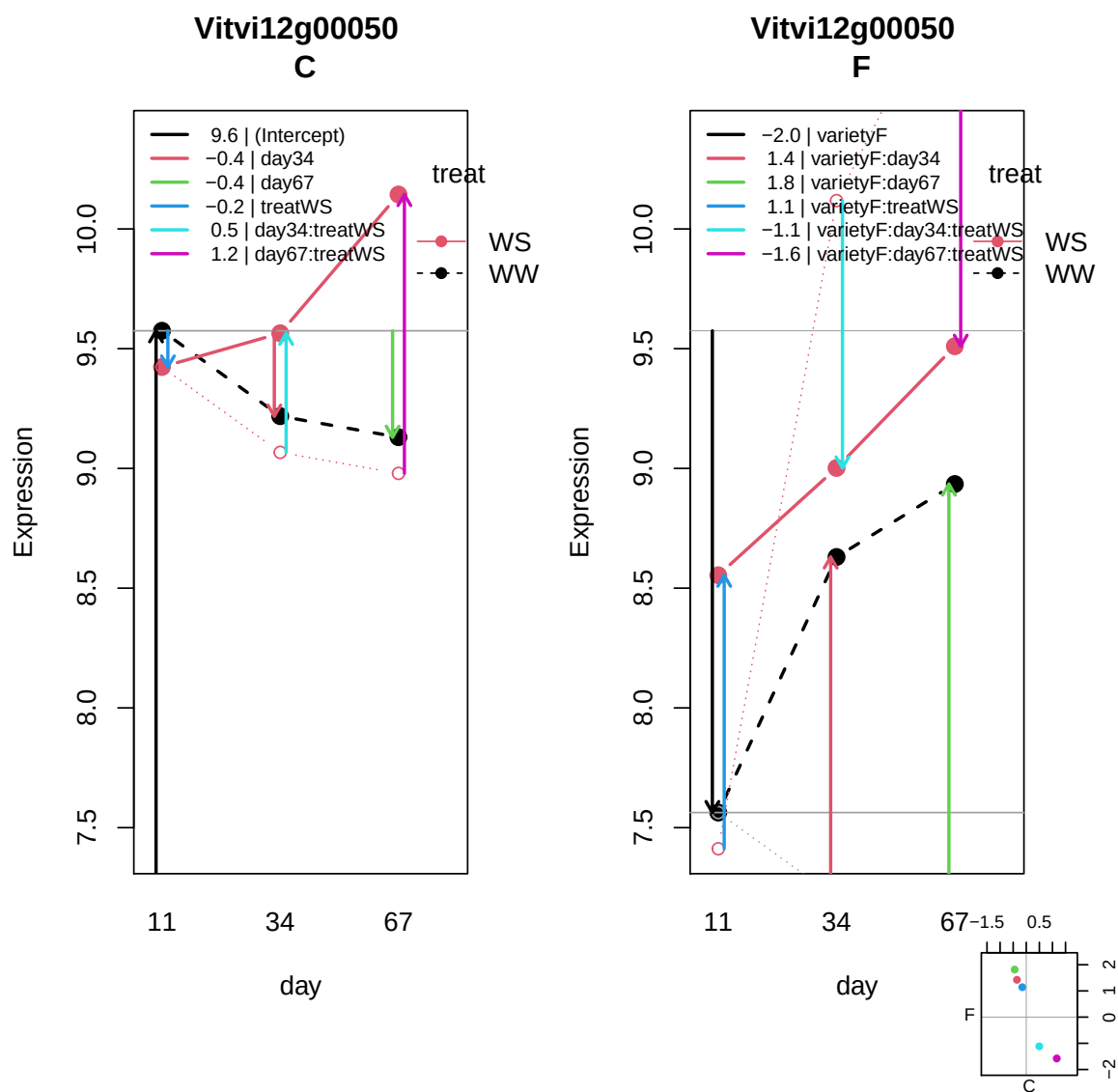
              (Intercept)  varietyF      day34      day67
Vitvi12g00050      9.574716 -2.011744 -0.3565281 -0.4443772
              treatWS varietyF:day34 varietyF:day67
Vitvi12g00050 -0.1511715      1.423674      1.81606
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi12g00050      1.142083      0.4972344      1.164517
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi12g00050      -1.116412      -1.579974

```

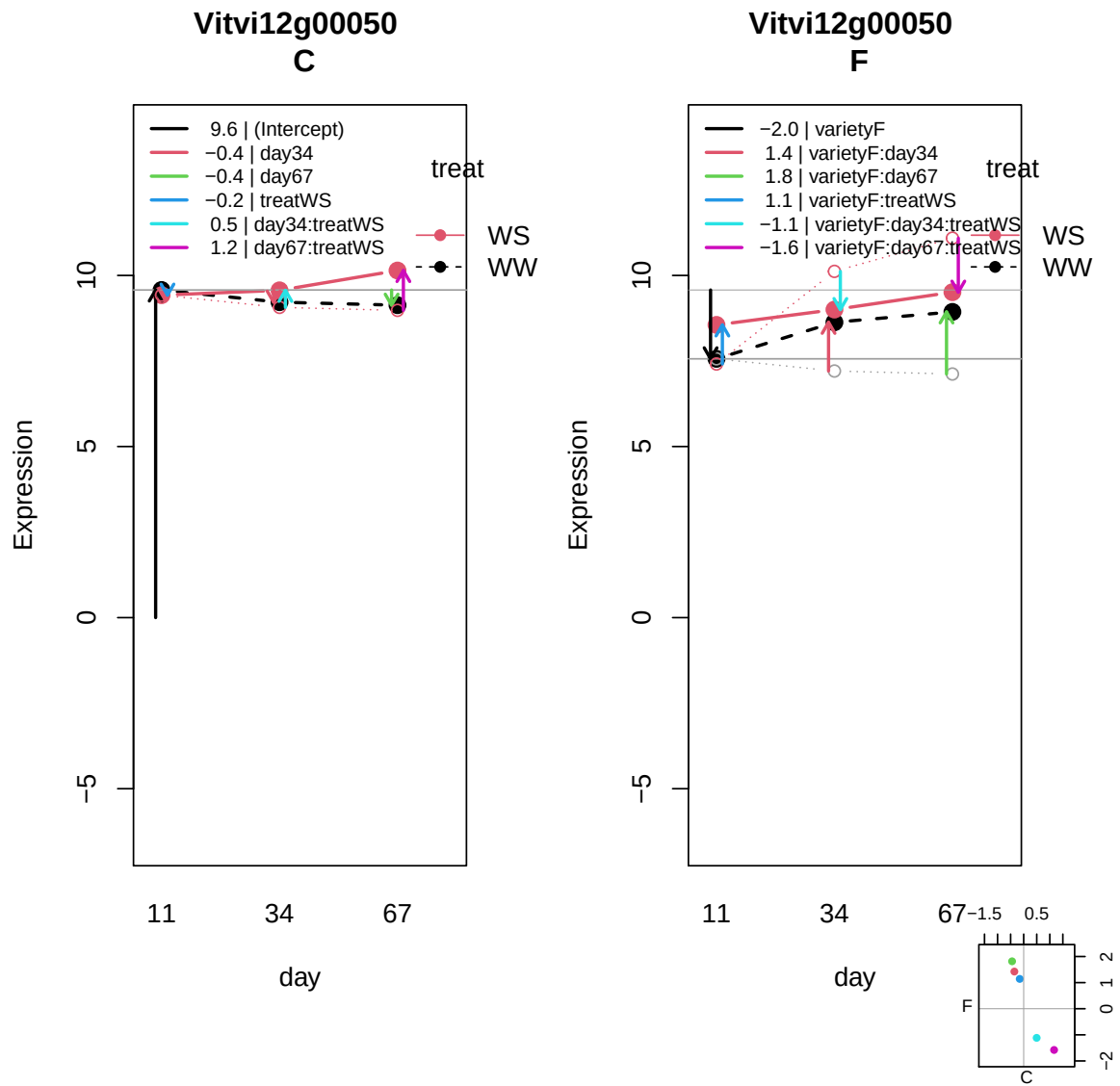
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

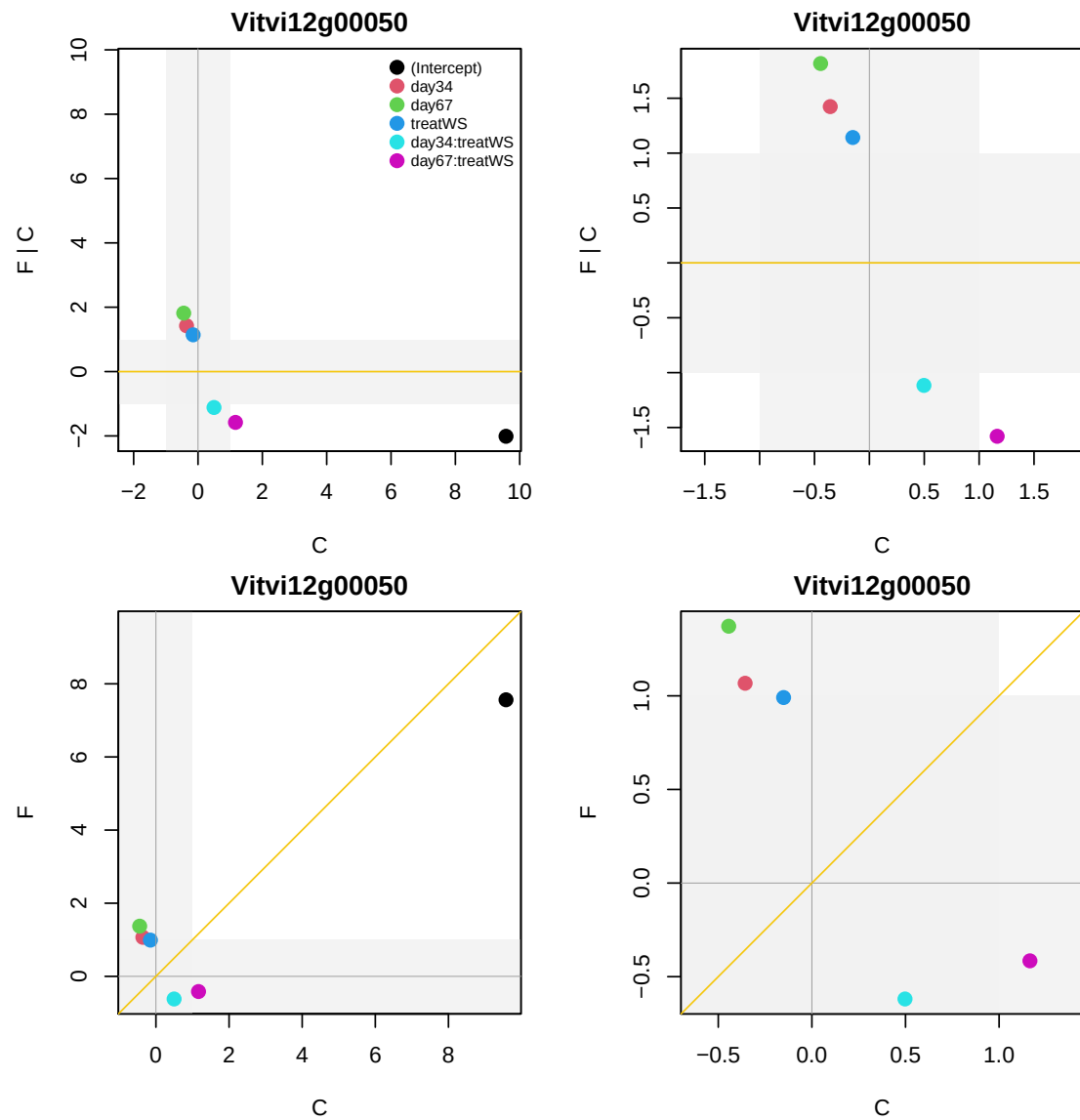



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

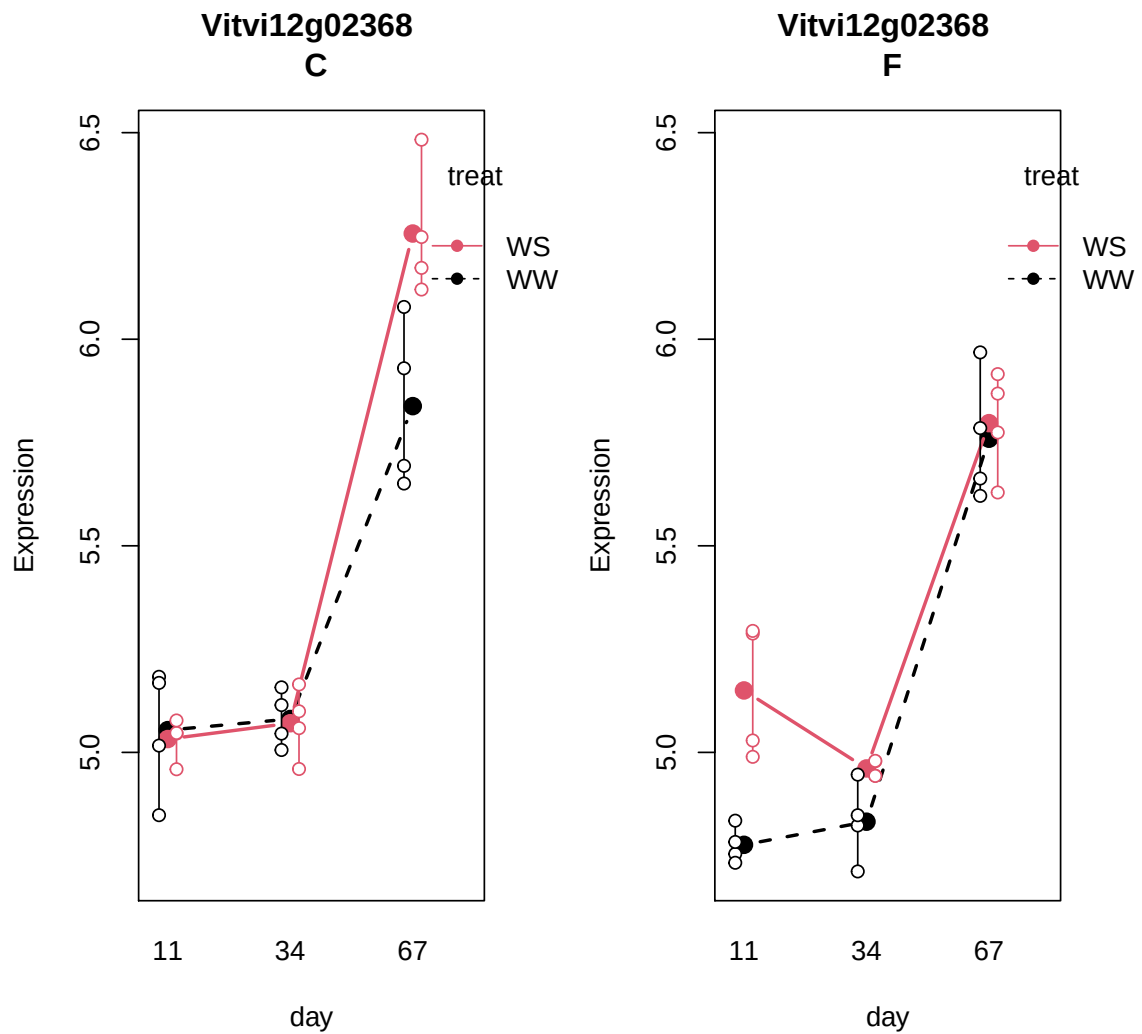


6.12.60 Vitvi12g02368

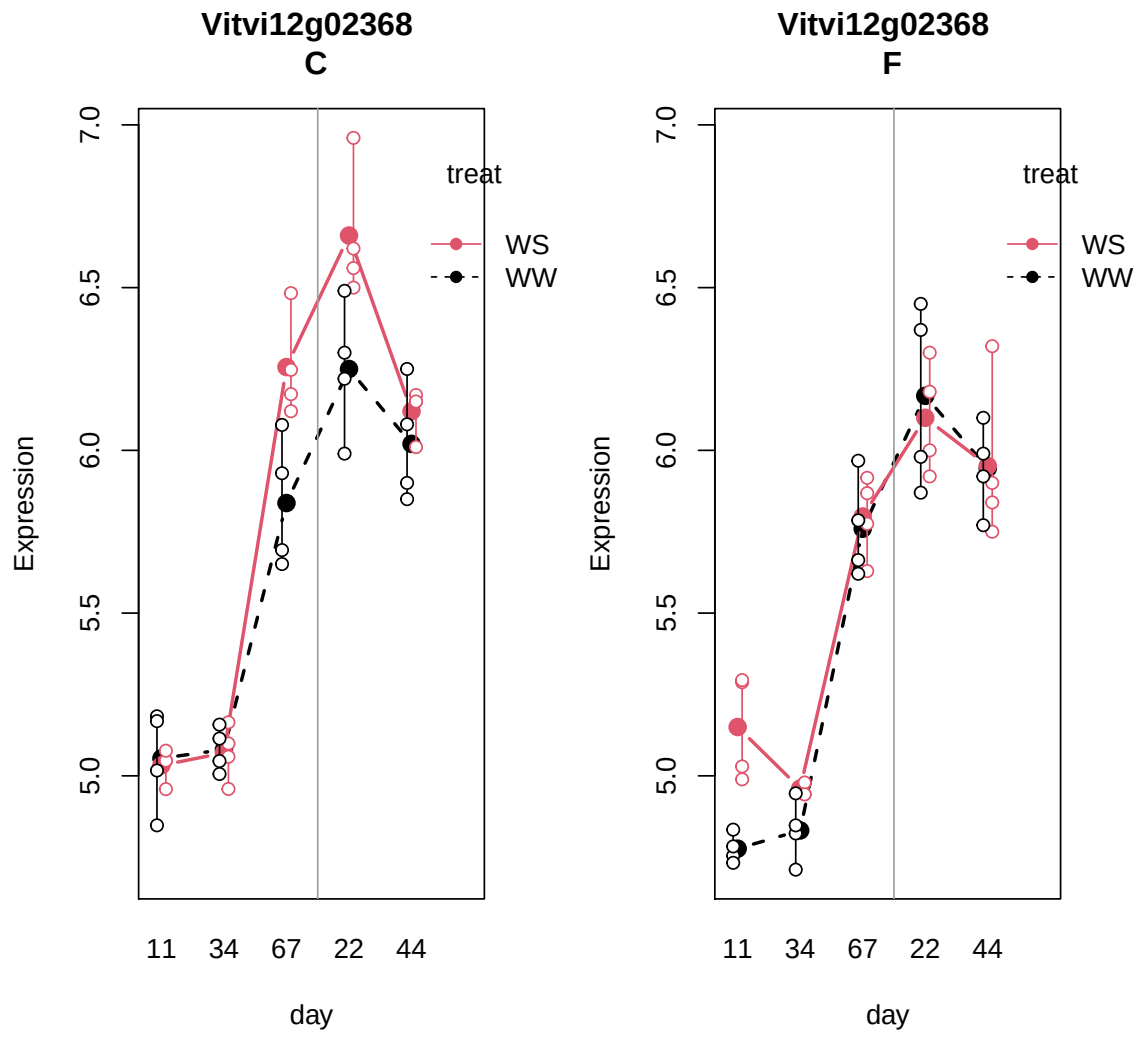
Coefficient varietyF:day67:treatWS for Vitvi12g02368.

```
> tt[varname,]
              logFC AveExpr      t      P.Value
Vitvi12g02368 -0.7754277 5.300579 -4.213434 0.0001452825
              adj.P.Val      B
Vitvi12g02368 0.03643236 0.9515962

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

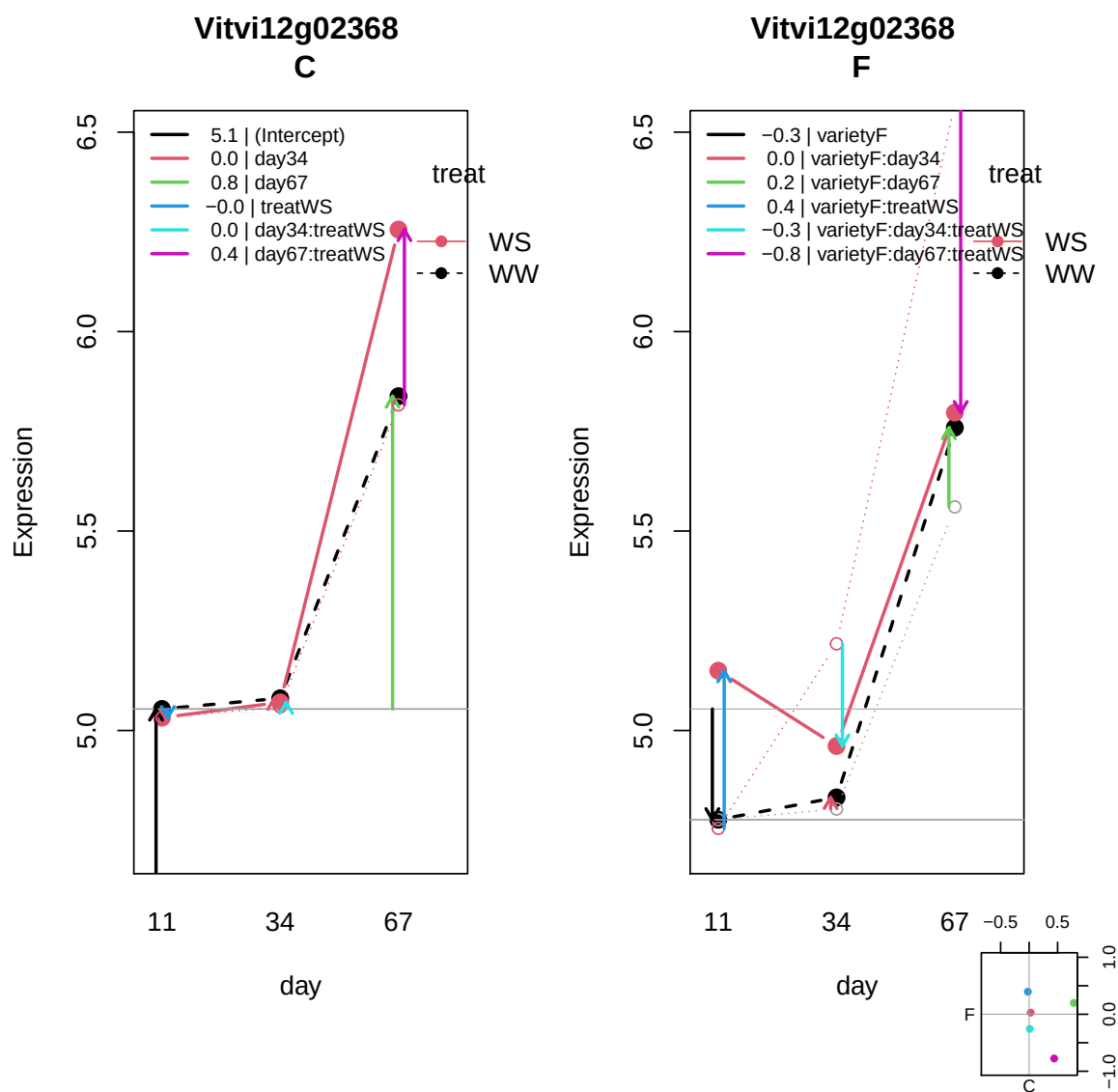
              (Intercept)    varietyF      day34      day67
Vitvi12g02368    5.053879 -0.2776001 0.02689145 0.7841787
              treatWS  varietyF:day34  varietyF:day67
Vitvi12g02368 -0.02166097    0.02906265    0.1987361
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi12g02368    0.3953002    0.01146015    0.439456
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi12g02368    -0.2562187    -0.7754277

```

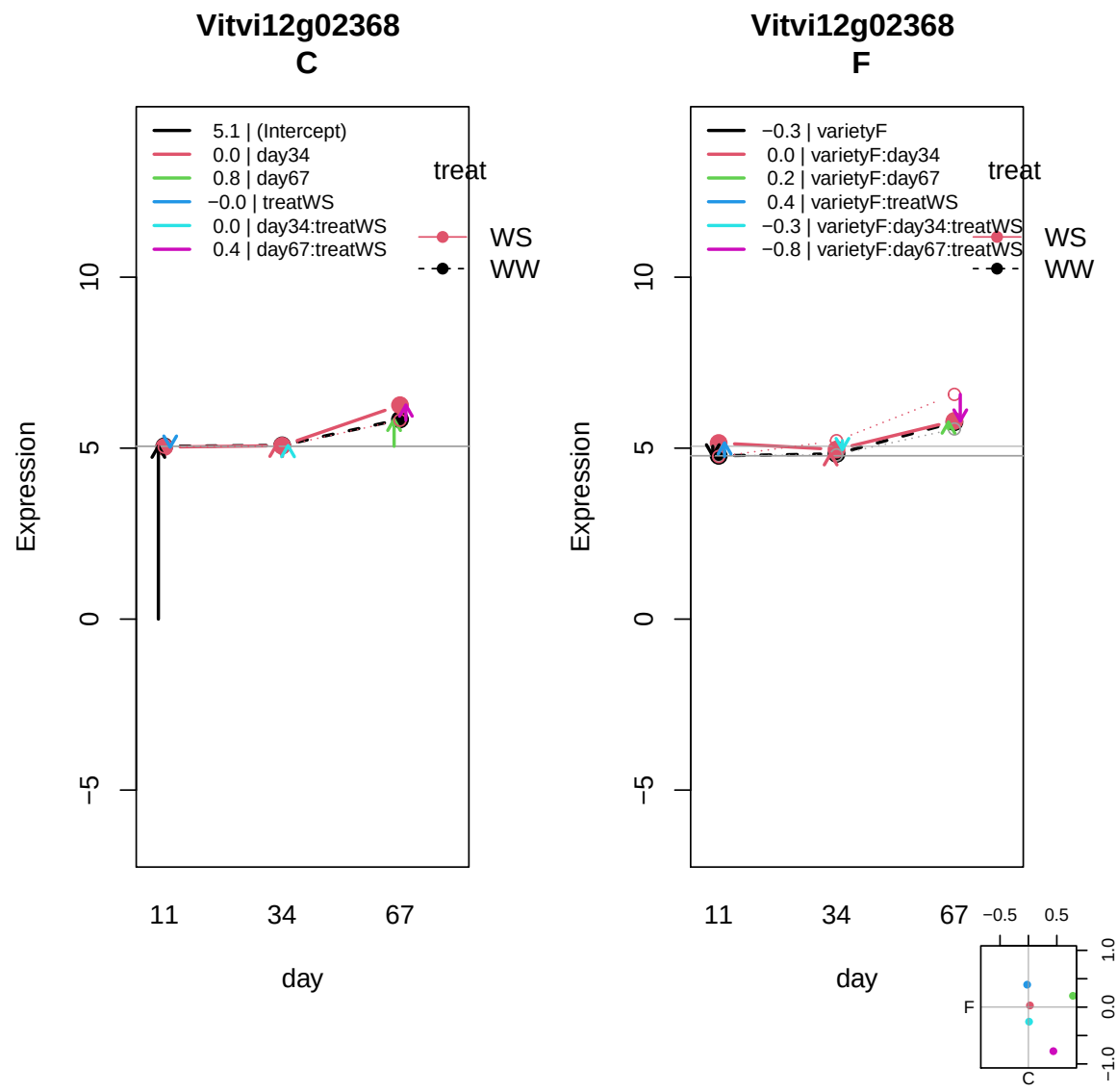
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

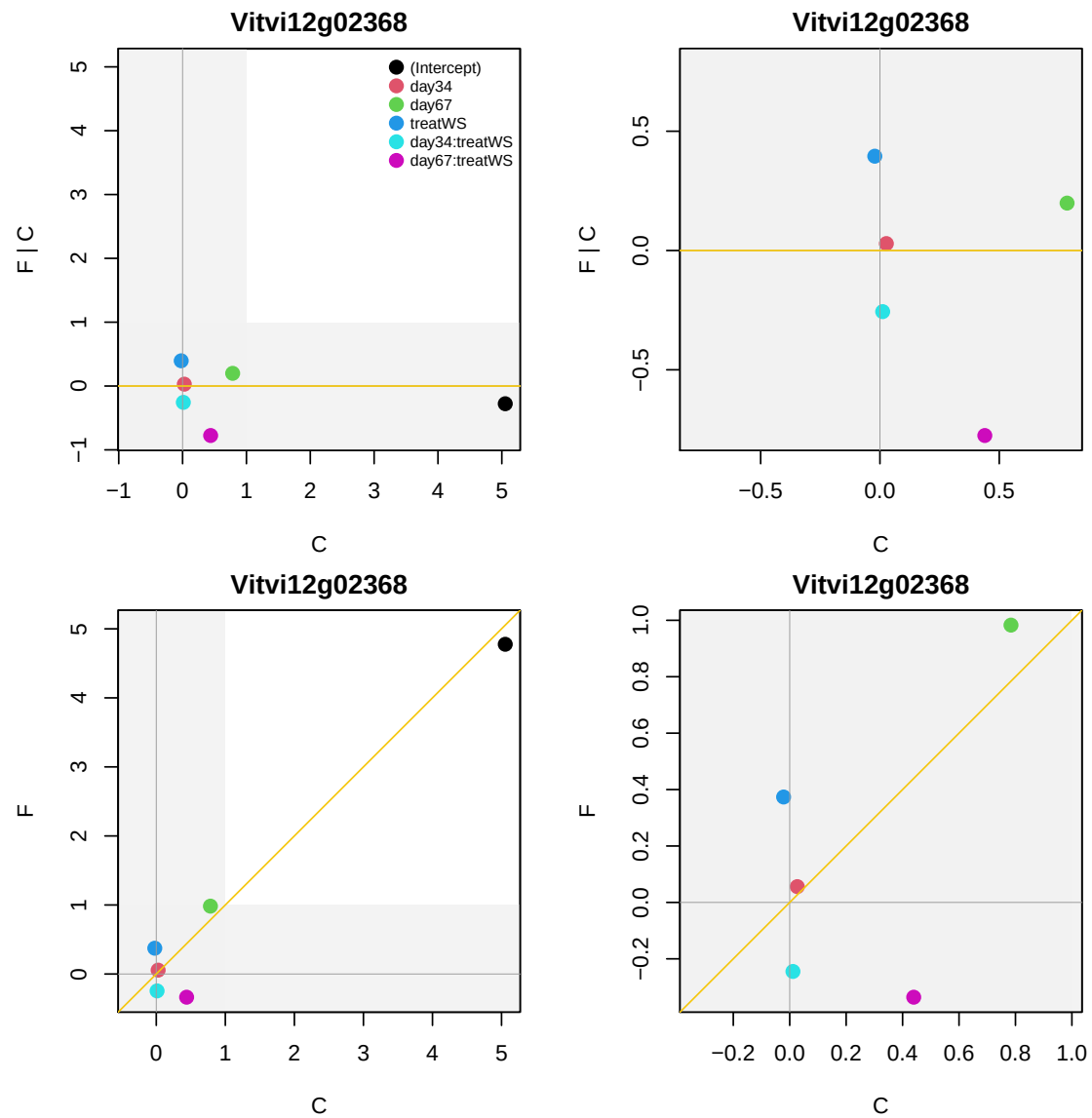


```
> coefs <- plot.interactions(varname,  
+ coef=fit1[varname,]$coefficients,  
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

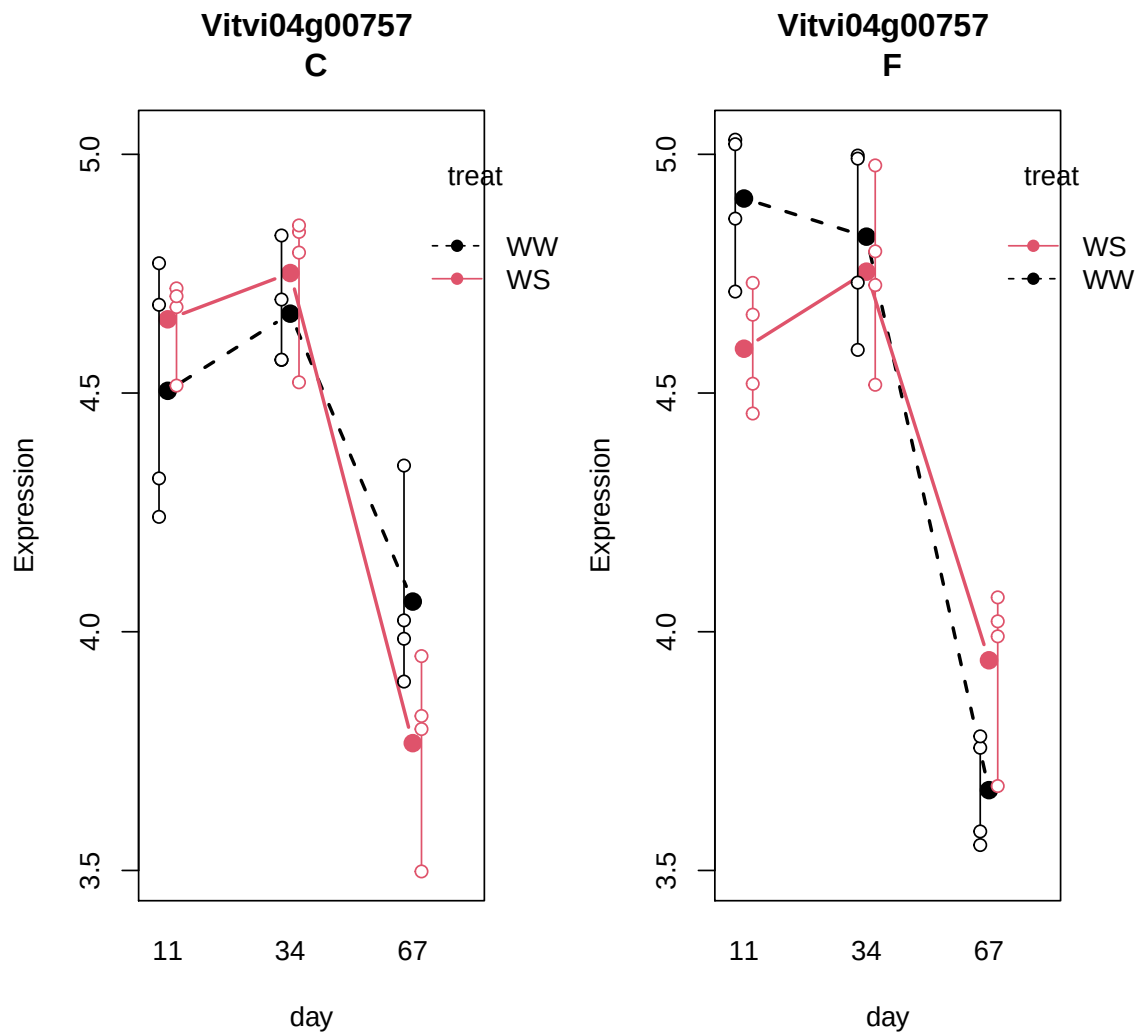


6.12.61 Vitvi04g00757

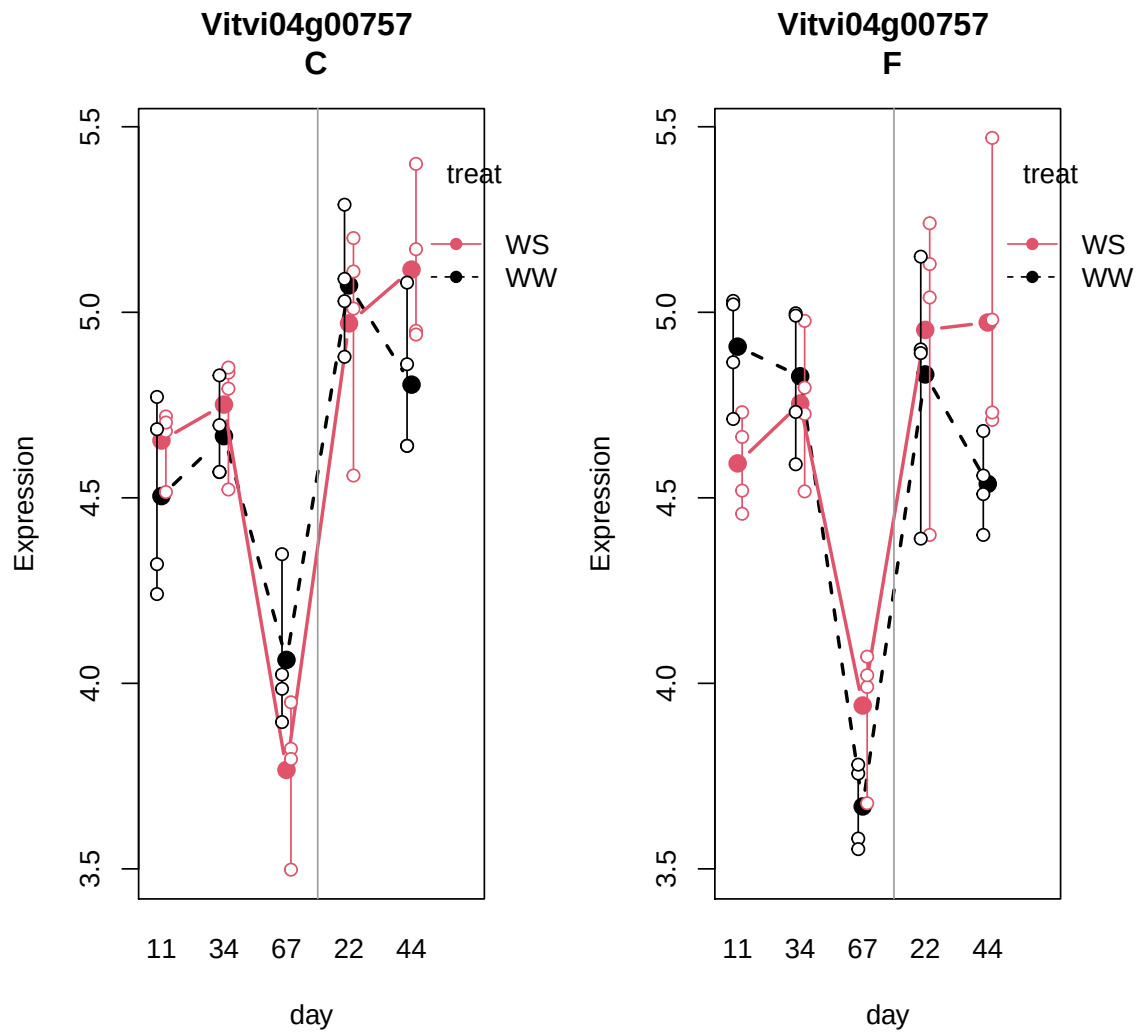
Coefficient varietyF:day67:treatWS for Vitvi04g00757.

```
> tt[varname,]
              logFC  AveExpr      t      P.Value
Vitvi04g00757 1.032912  4.424729  4.212247  0.0001458059
              adj.P.Val      B
Vitvi04g00757 0.03643236  0.9483993

> plot.interactions(varname, phdata=pd, data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

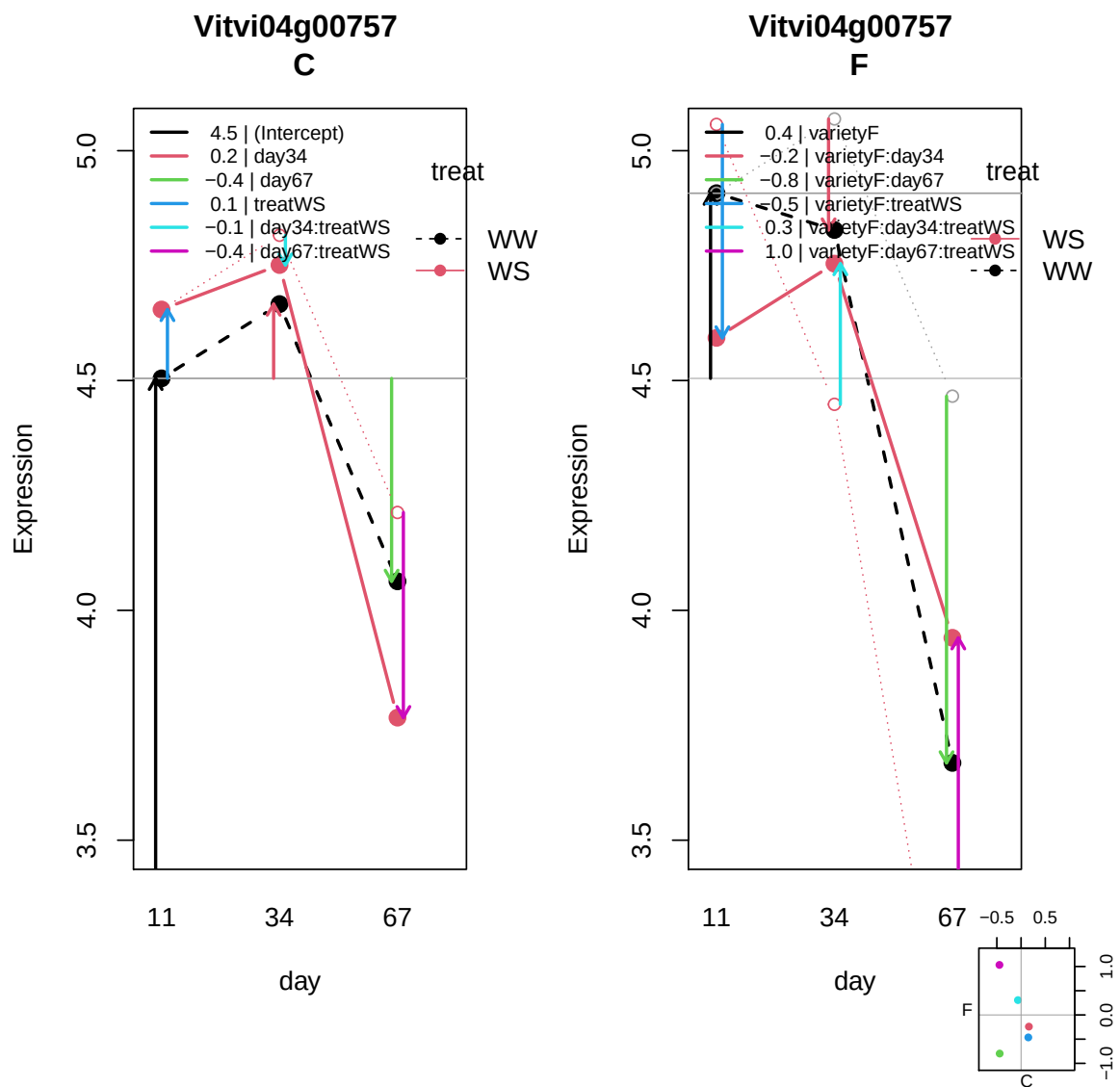
      (Intercept)  varietyF    day34    day67
Vitvi04g00757    4.504623 0.4027795 0.1615957 -0.4414349
      treatWS varietyF:day34 varietyF:day67
Vitvi04g00757 0.149782    -0.2414813    -0.7977666
      varietyF:treatWS day34:treatWS day67:treatWS
Vitvi04g00757    -0.4643549    -0.06471292    -0.4463228
      varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi04g00757          0.3059894          1.032912

```

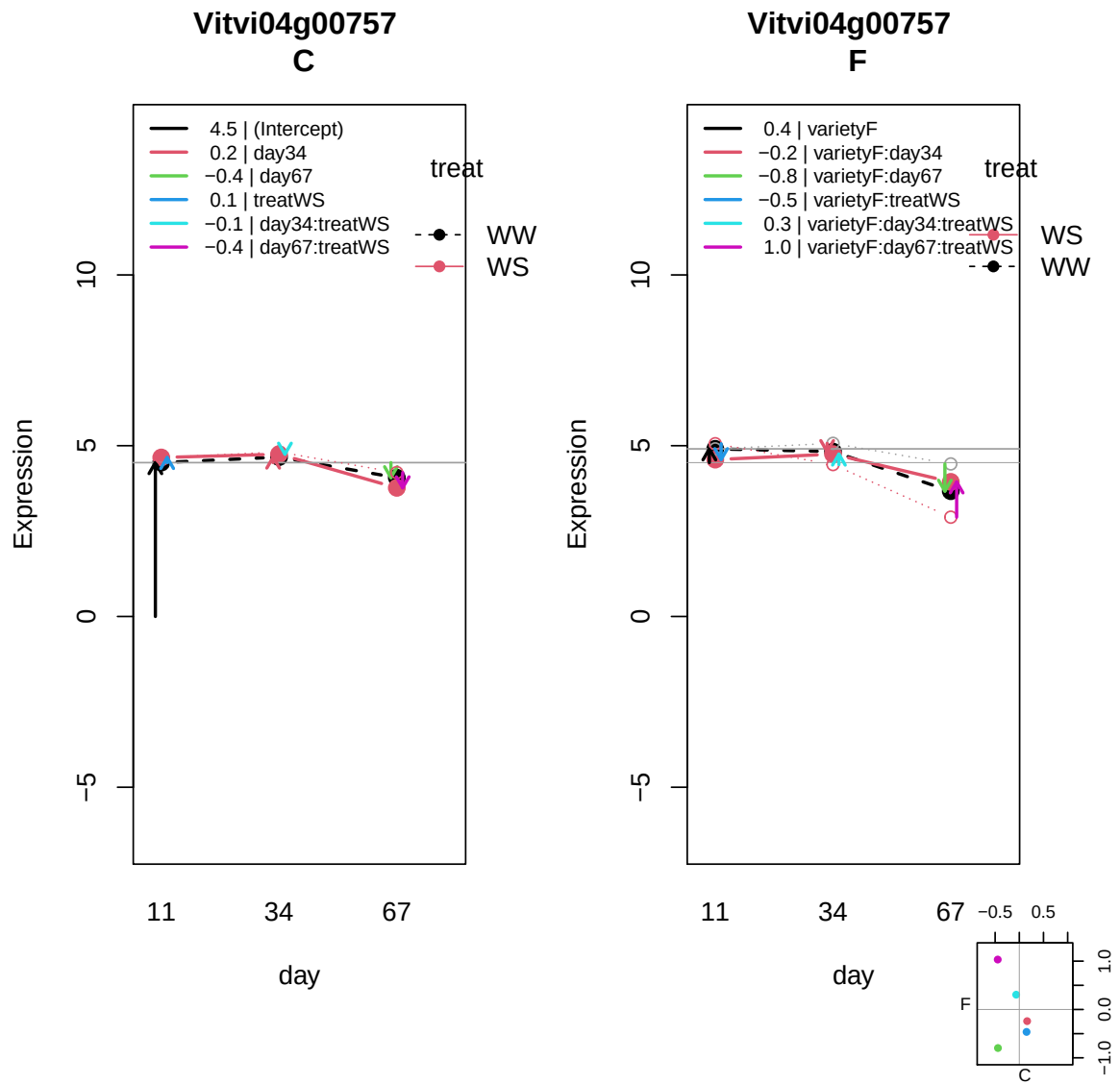
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

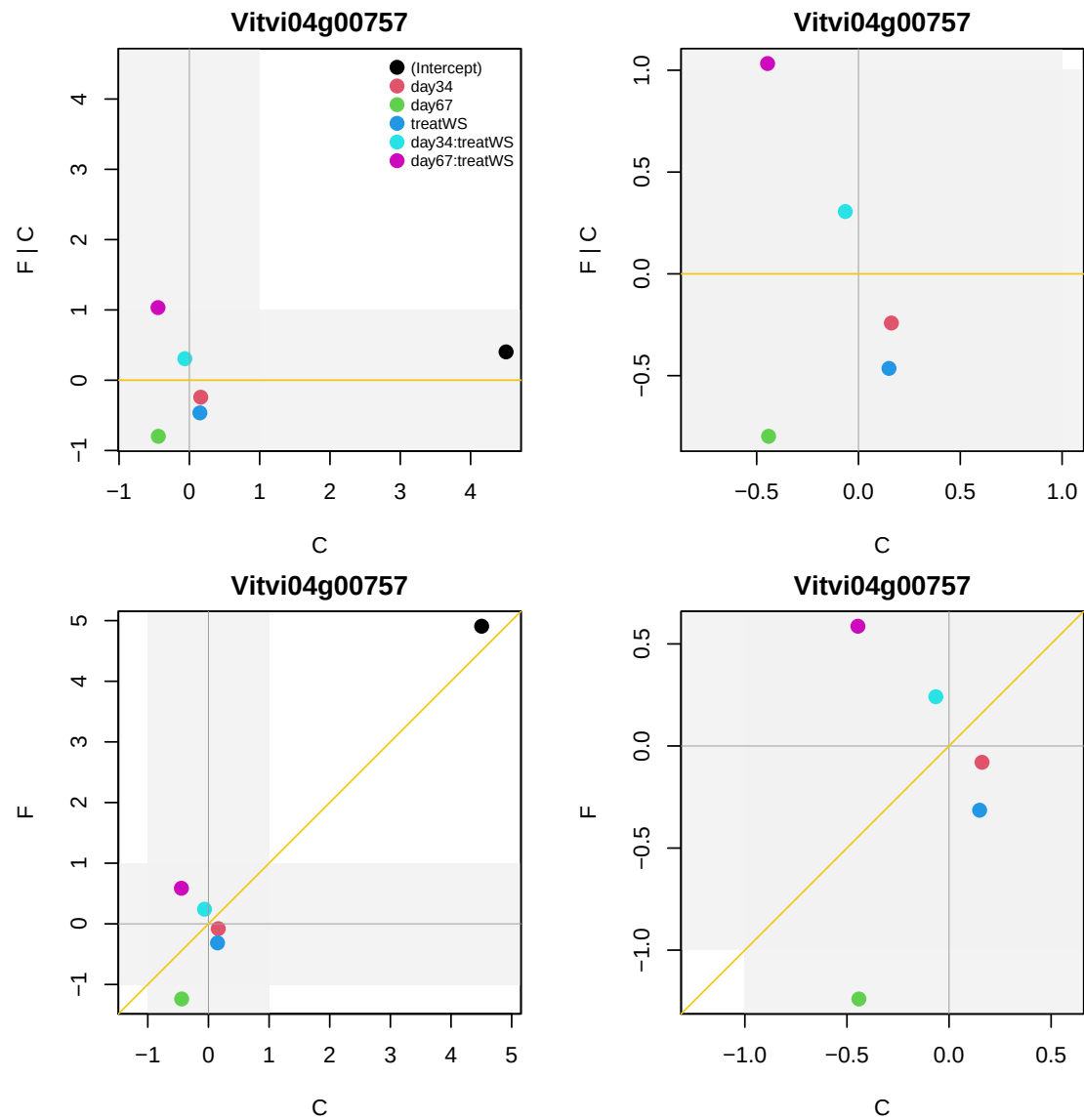


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

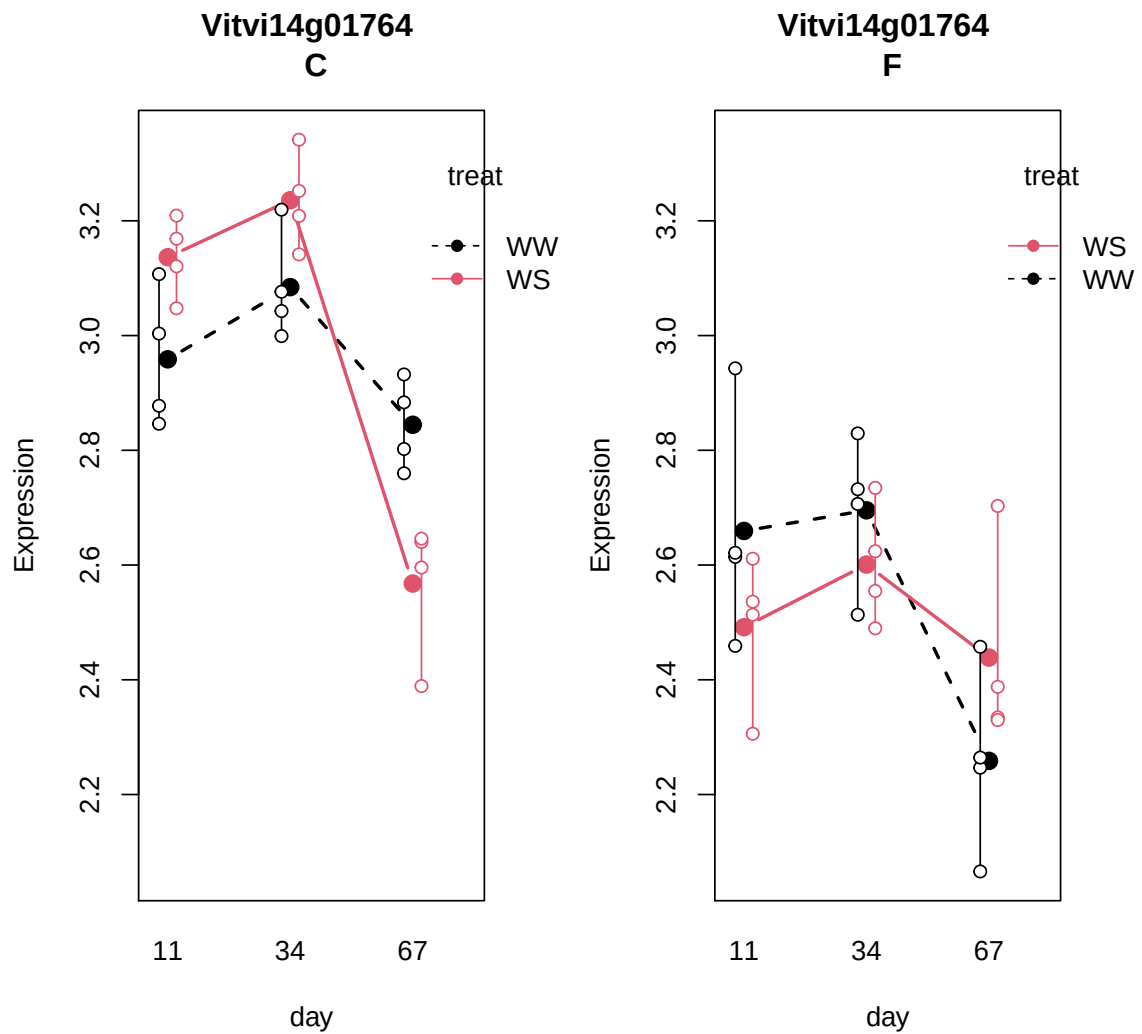
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



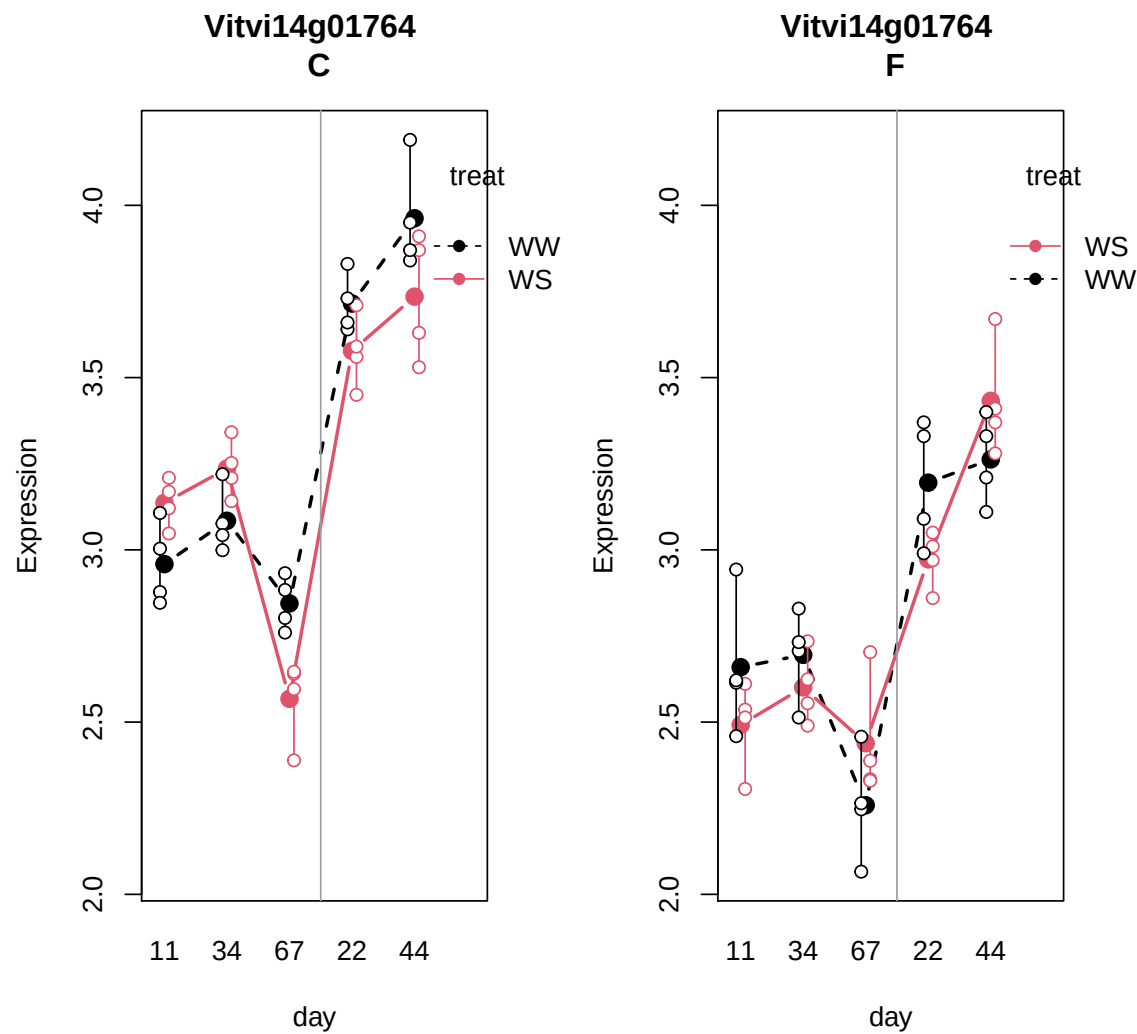
6.12.62 Vitvi14g01764

Coefficient varietyF:day67:treatWS for Vitvi14g01764.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi14g01764 0.8024727 2.747677 4.205576 0.0001487836
      adj.P.Val      B
Vitvi14g01764 0.03657676 0.9304281
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



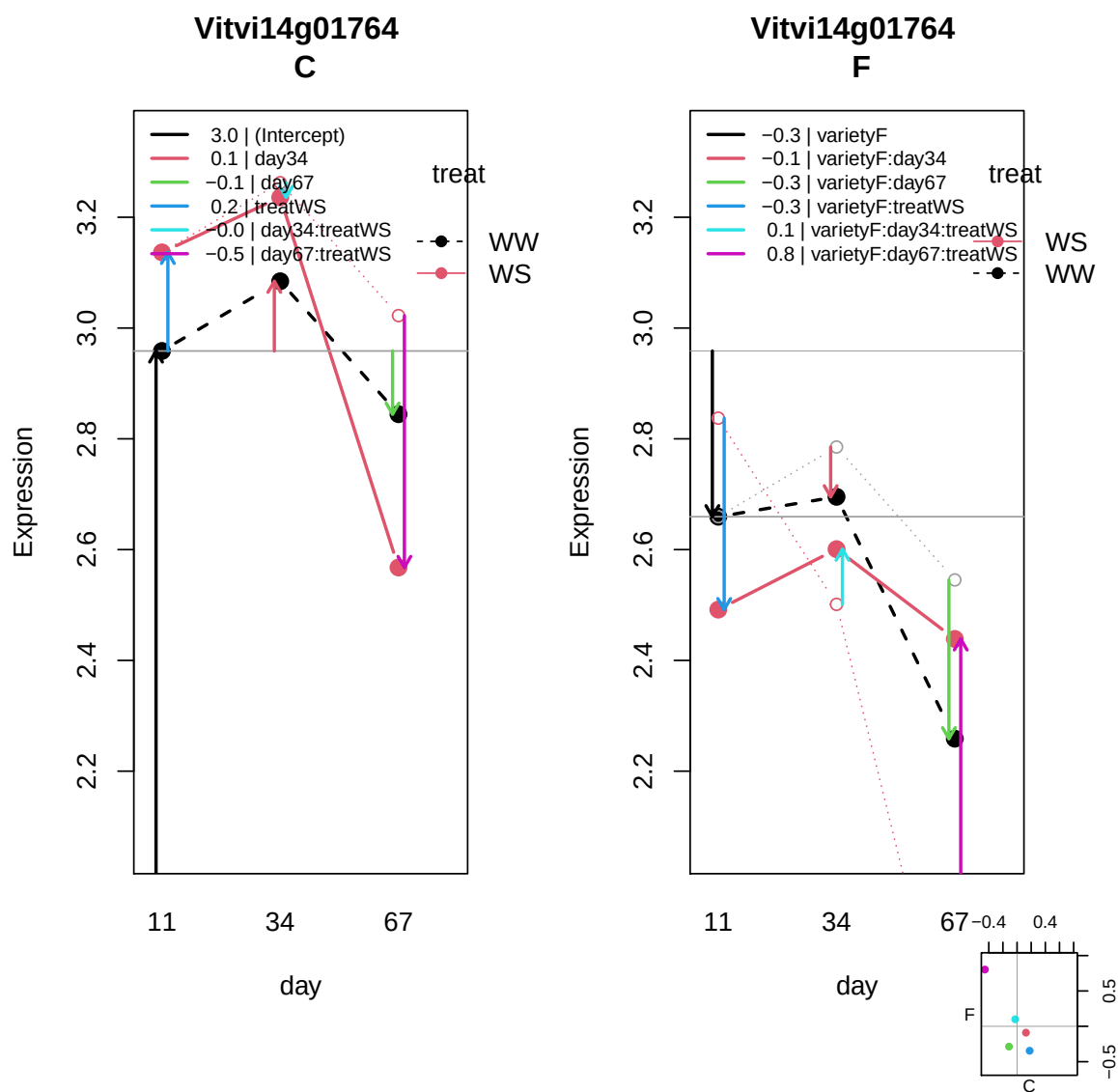
```

> fit1[varname,]$coefficients

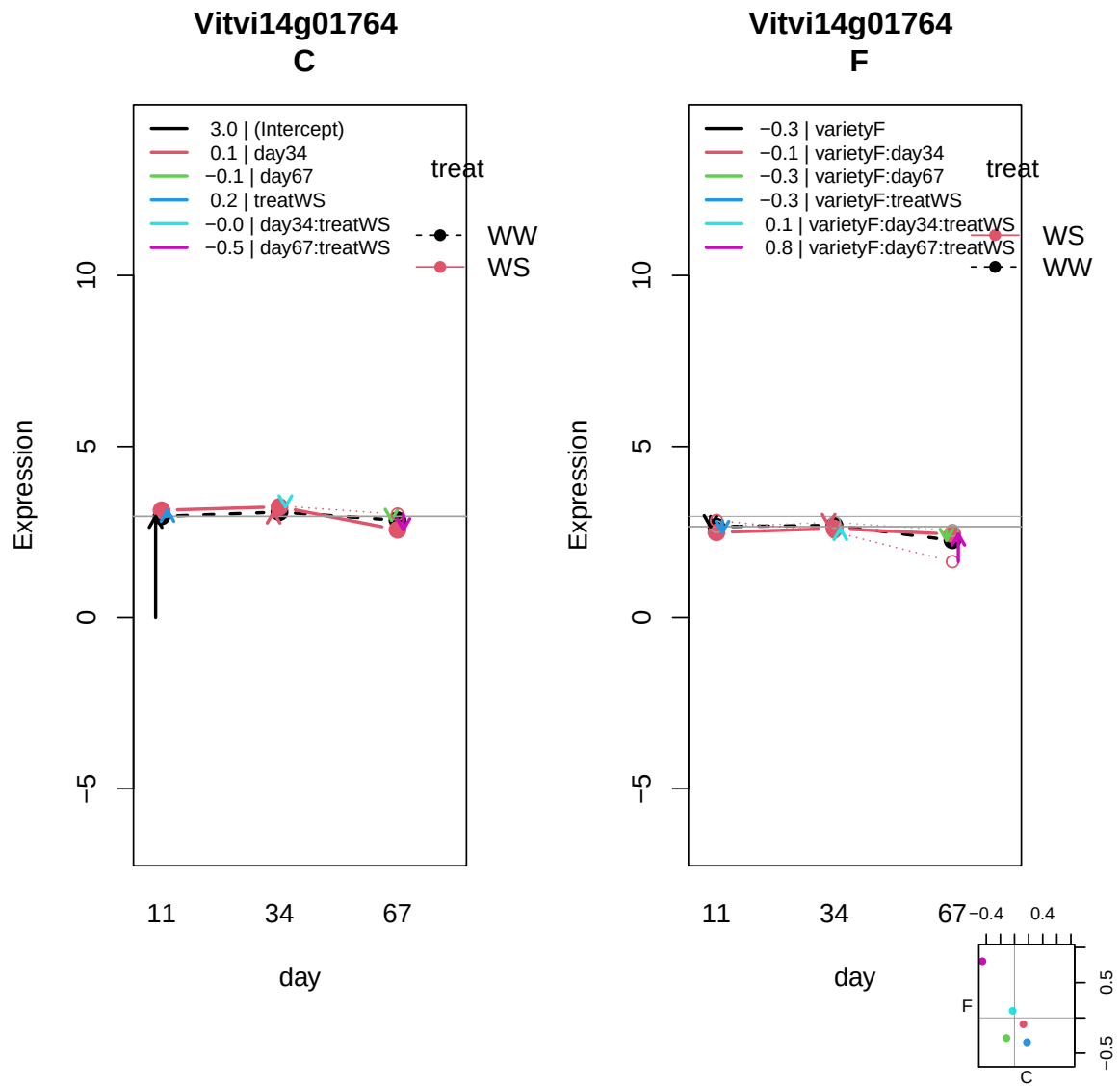
              (Intercept)  varietyF    day34      day67
Vitvi14g01764      2.958572 -0.2991897 0.125843 -0.1140964
              treatWS varietyF:day34 varietyF:day67
Vitvi14g01764 0.177948      -0.089884      -0.2866465
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi14g01764      -0.3456856  -0.02645833  -0.4546757
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi14g01764              0.09963971              0.8024727

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

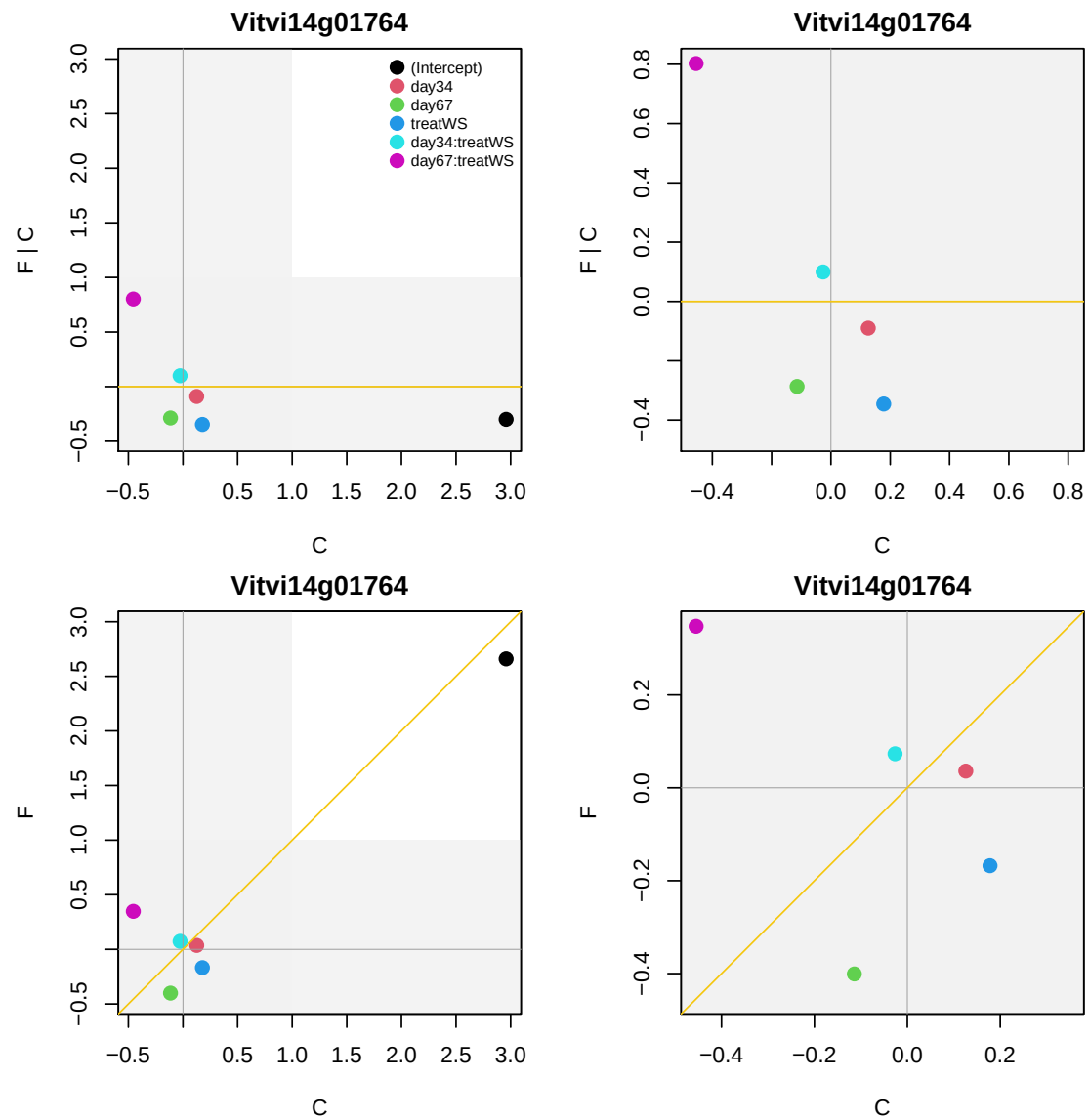


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

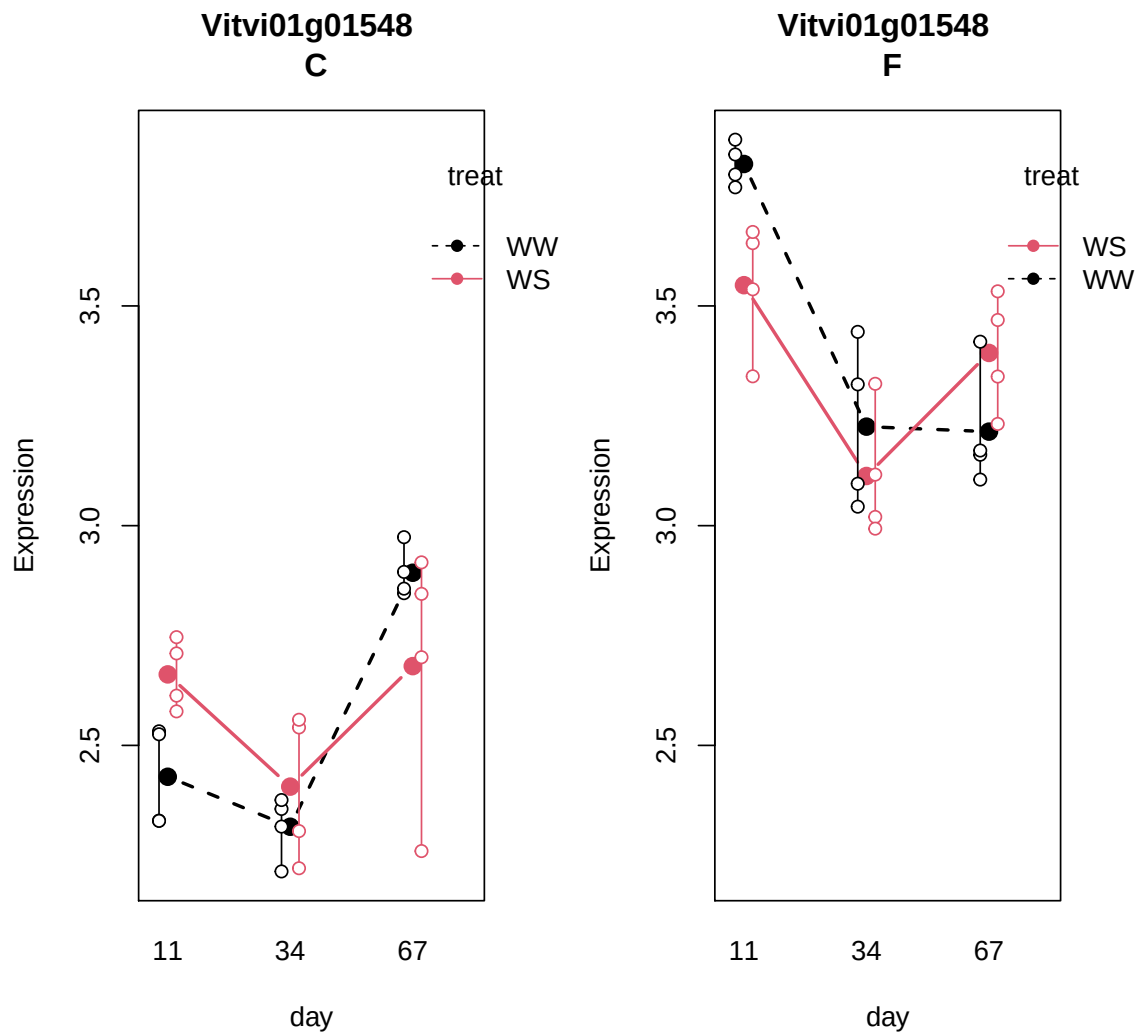


6.12.63 Vitvi01g01548

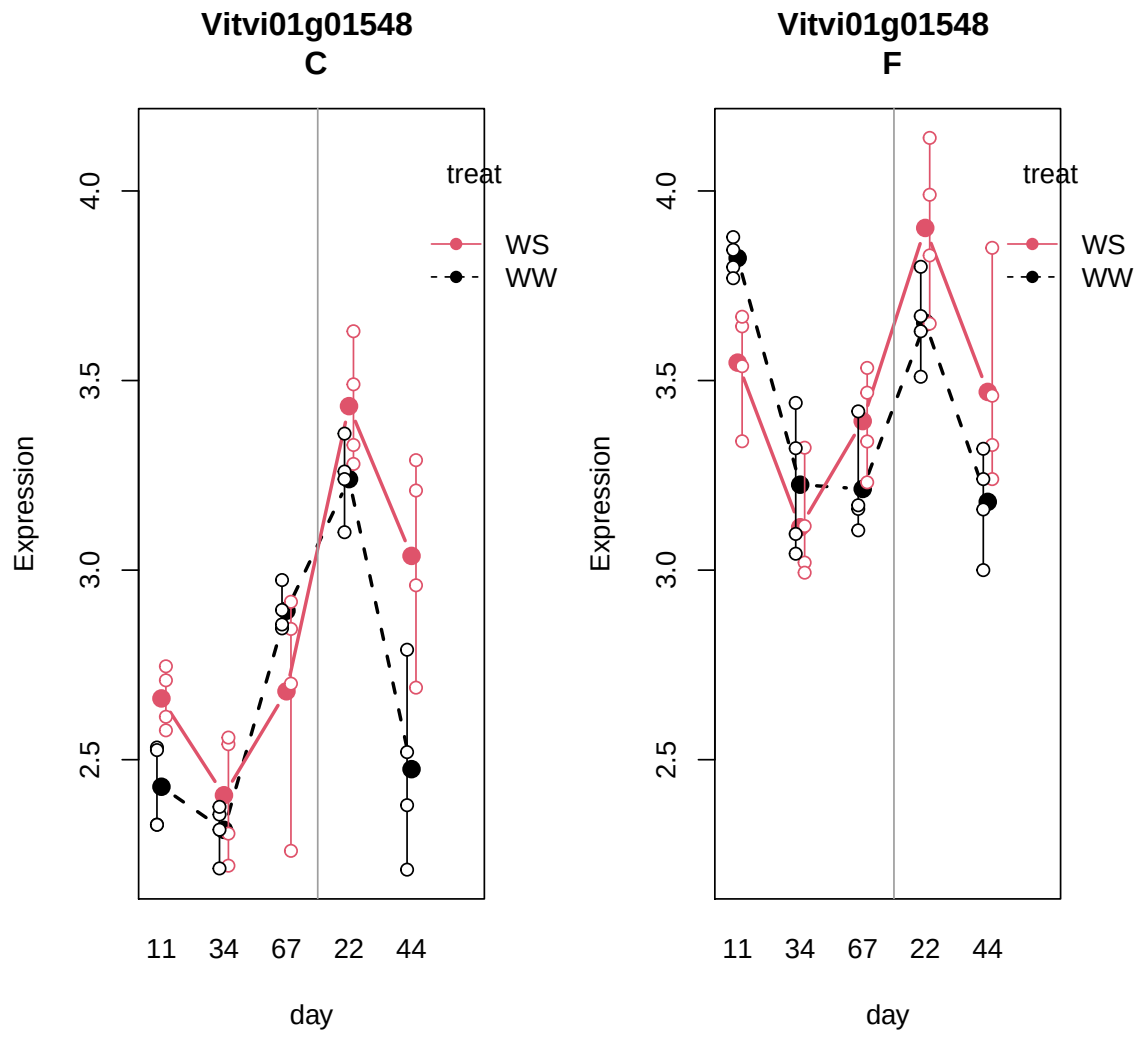
Coefficient varietyF:day67:treatWS for Vitvi01g01548.

```
> tt[varname,]
              logFC AveExpr      t      P.Value
Vitvi01g01548 0.9003005 2.975012 4.189408 0.0001562488
              adj.P.Val      B
Vitvi01g01548 0.03678652 0.8869116

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

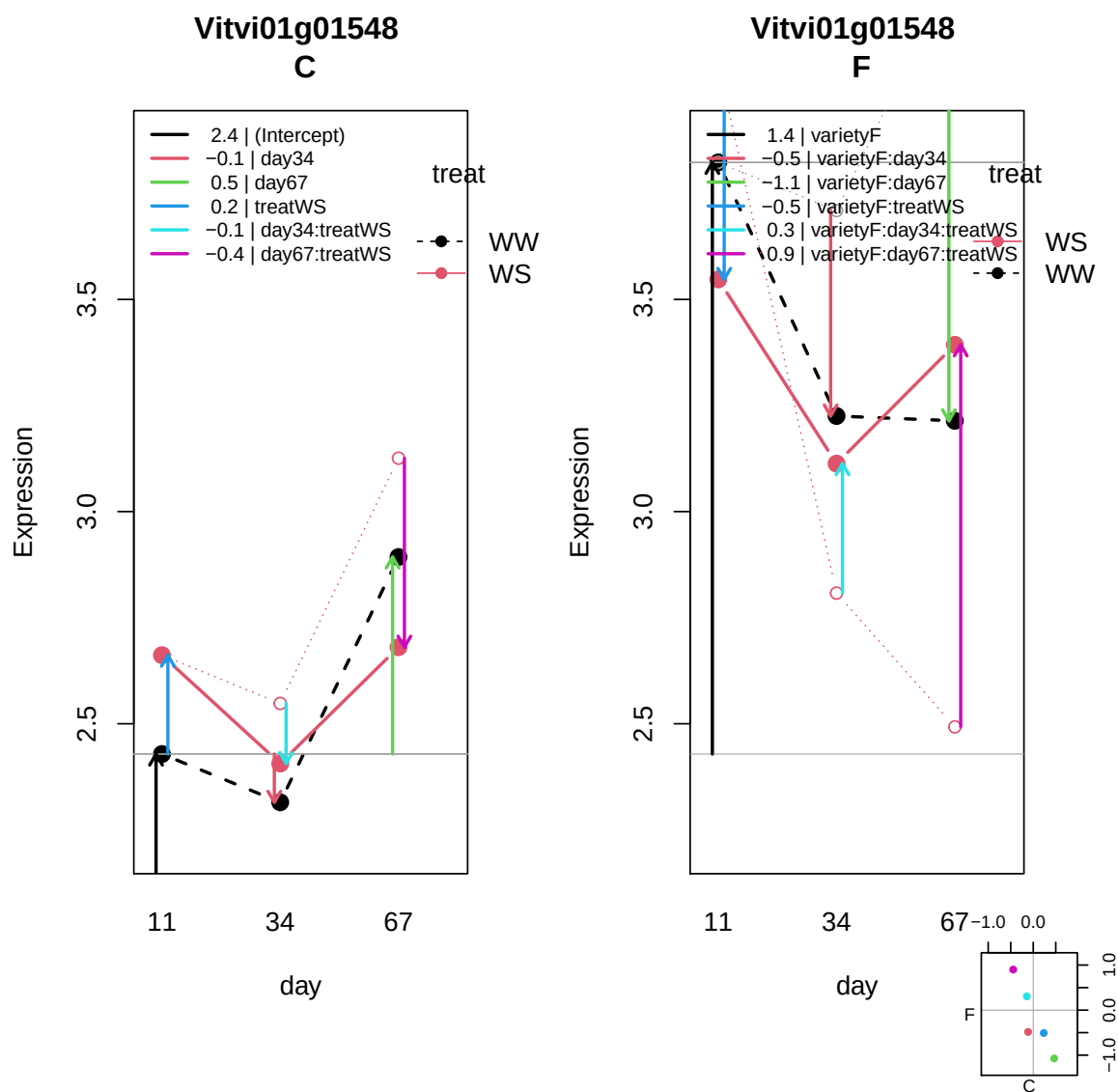
              (Intercept)  varietyF      day34      day67
Vitvi01g01548      2.428606    1.3944 -0.1137325  0.4642887
              treatWS  varietyF:day34  varietyF:day67
Vitvi01g01548  0.2329656    -0.4839671    -1.073299
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi01g01548      -0.5087327    -0.1416584    -0.4454804
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi01g01548              0.3051565              0.9003005

```

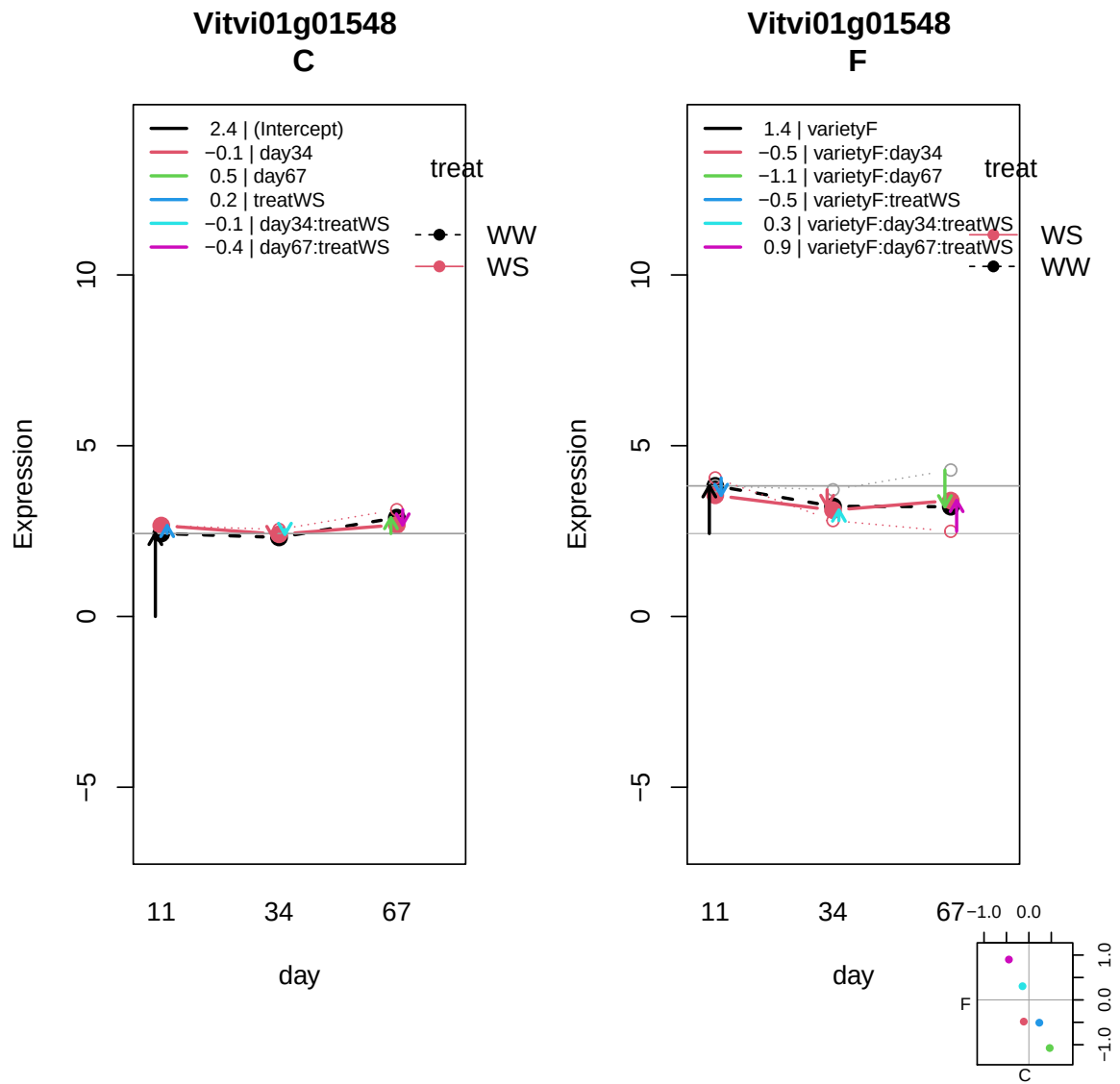
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

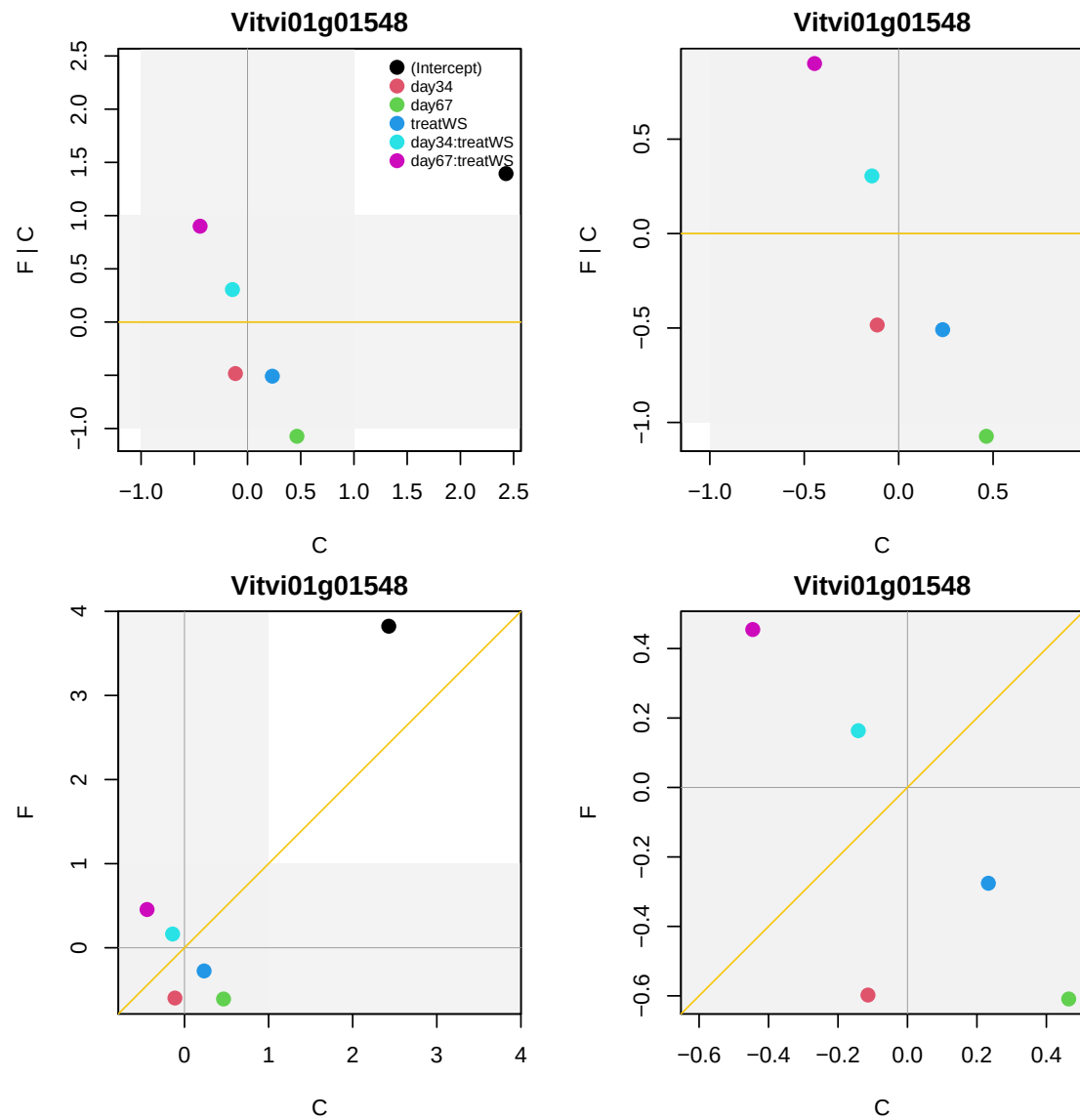


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

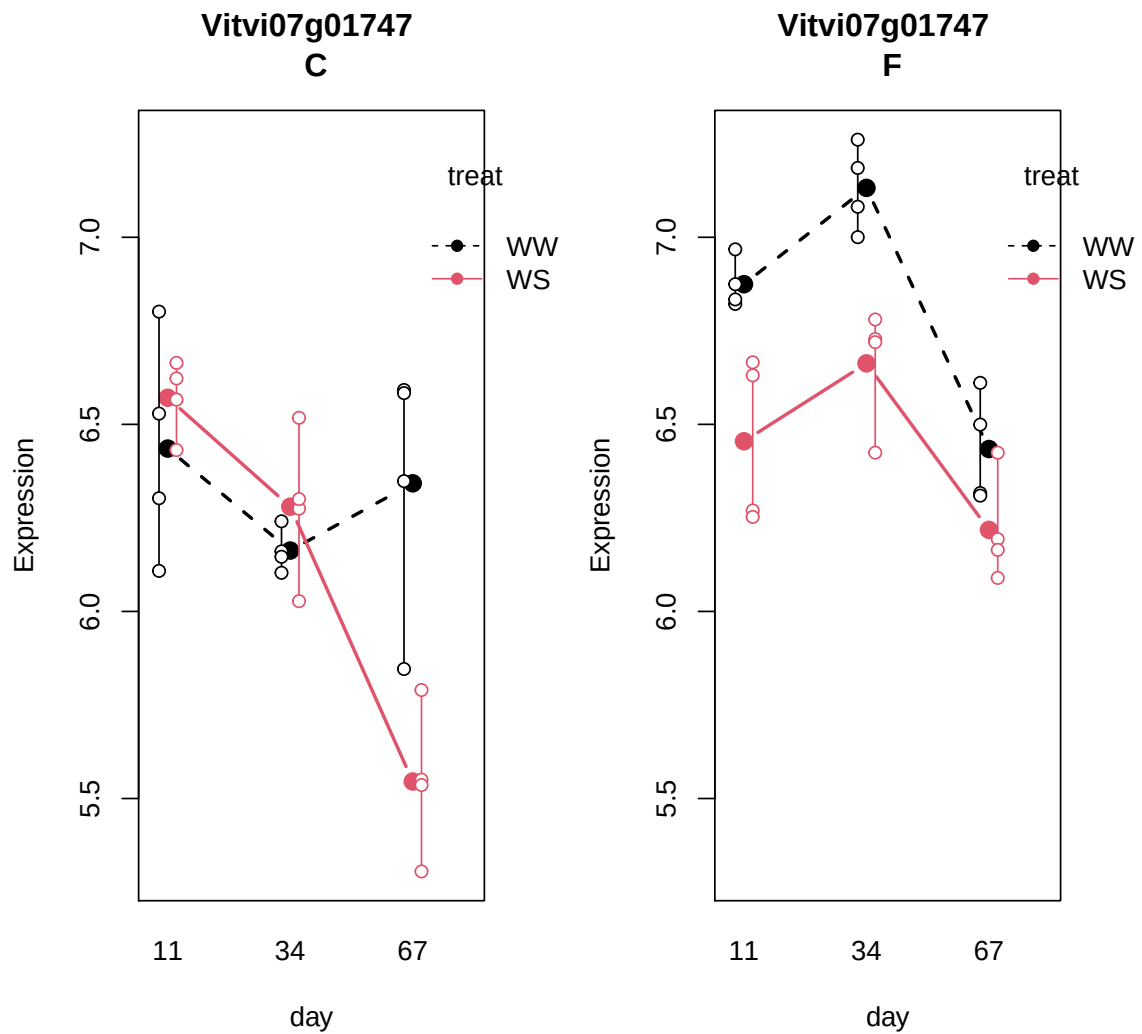


6.12.64 Vitvi07g01747

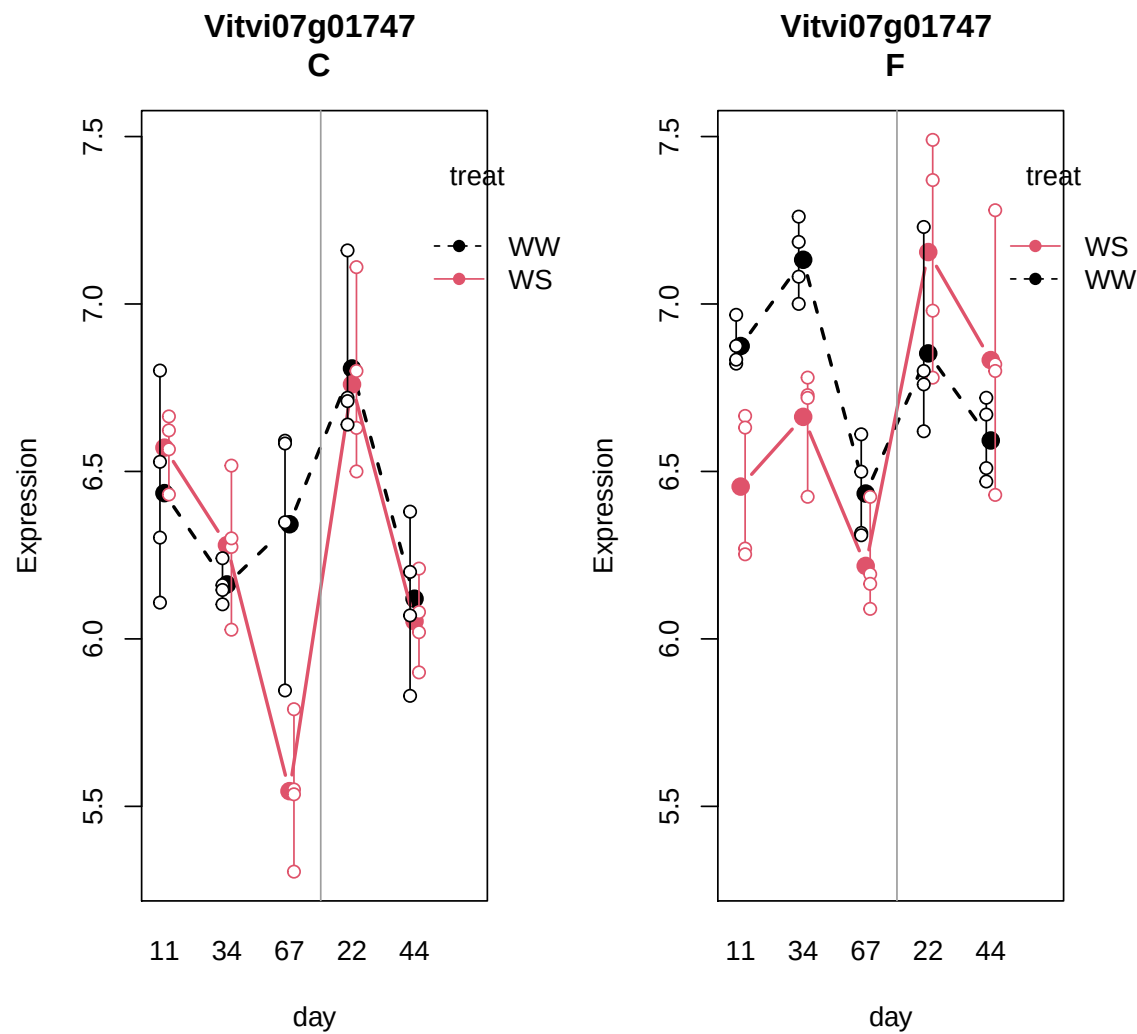
Coefficient varietyF:day67:treatWS for Vitvi07g01747.

```
> tt[varname,]
              logFC  AveExpr      t      P.Value
Vitvi07g01747 1.136464  6.426079 4.188571 0.0001566449
              adj.P.Val      B
Vitvi07g01747 0.03678652 0.8846611

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```




```
> fit1[varname,]$coefficients
```

```

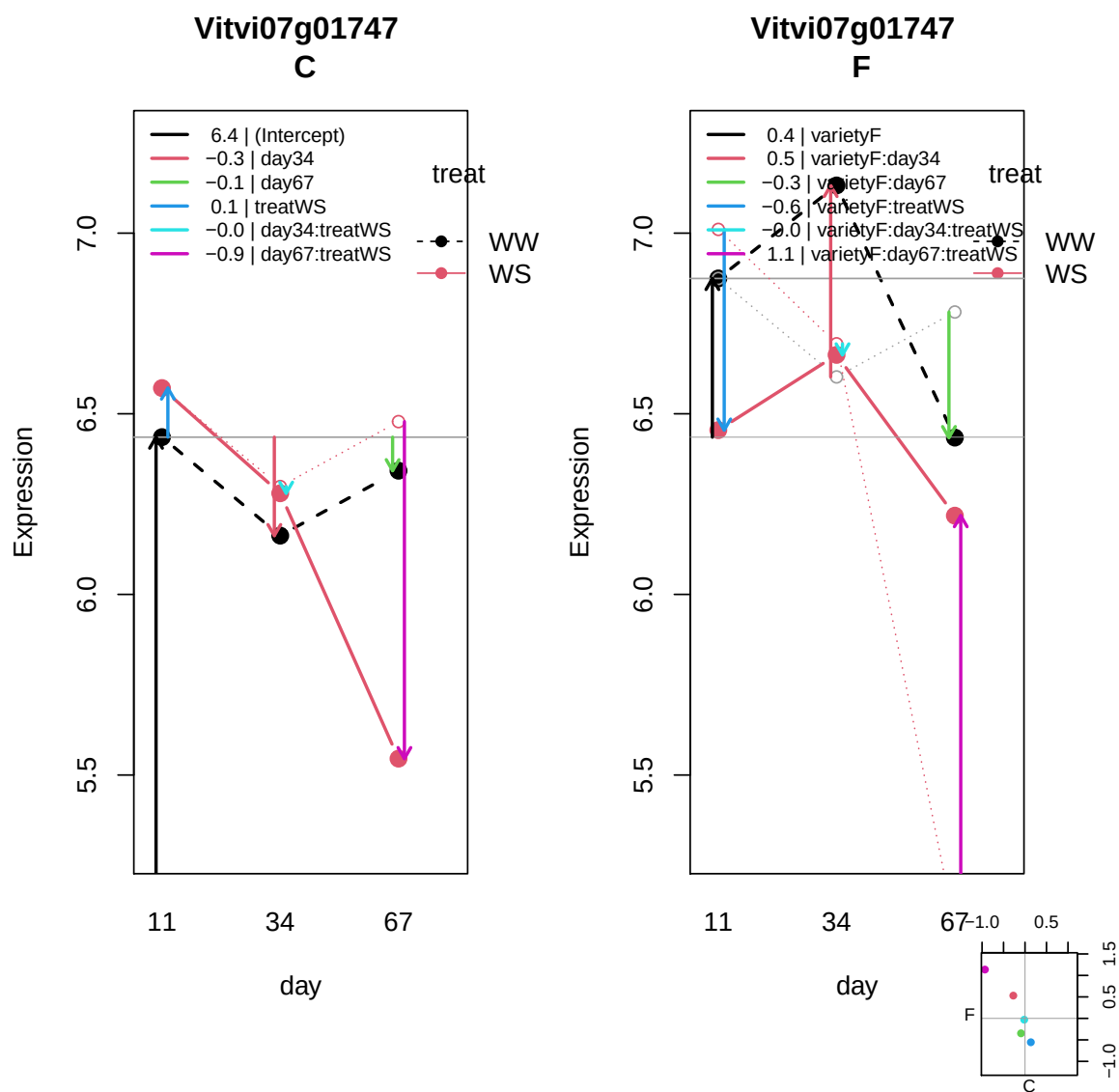
              (Intercept)  varietyF      day34      day67
Vitvi07g01747      6.435224 0.4392651 -0.2725353 -0.09282512
              treatWS varietyF:day34 varietyF:day67
Vitvi07g01747 0.1358701      0.5300411      -0.3476263
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi07g01747      -0.5555665      -0.01862165      -0.9328881
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi07g01747      -0.03067403      1.136464

```

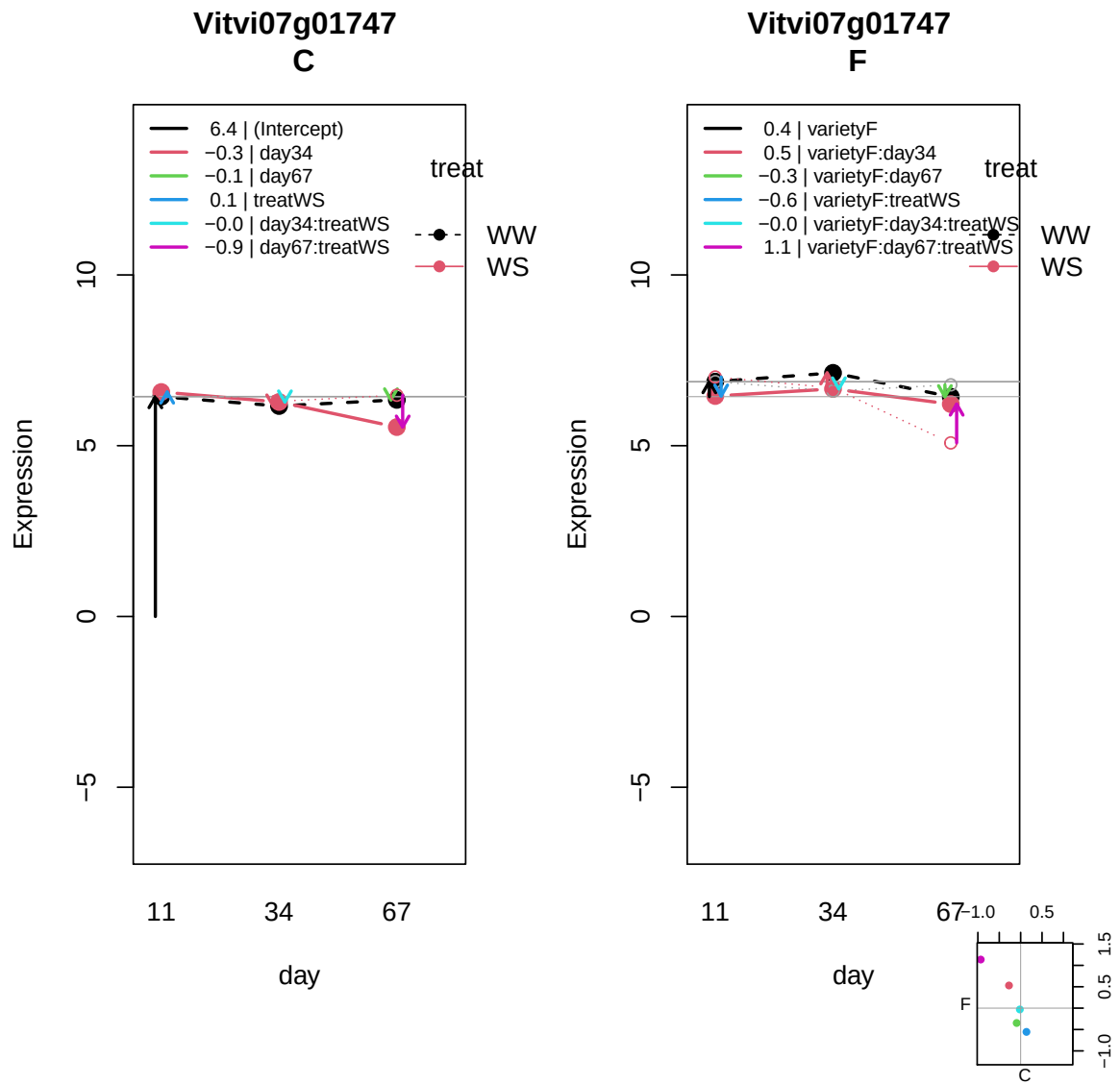
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

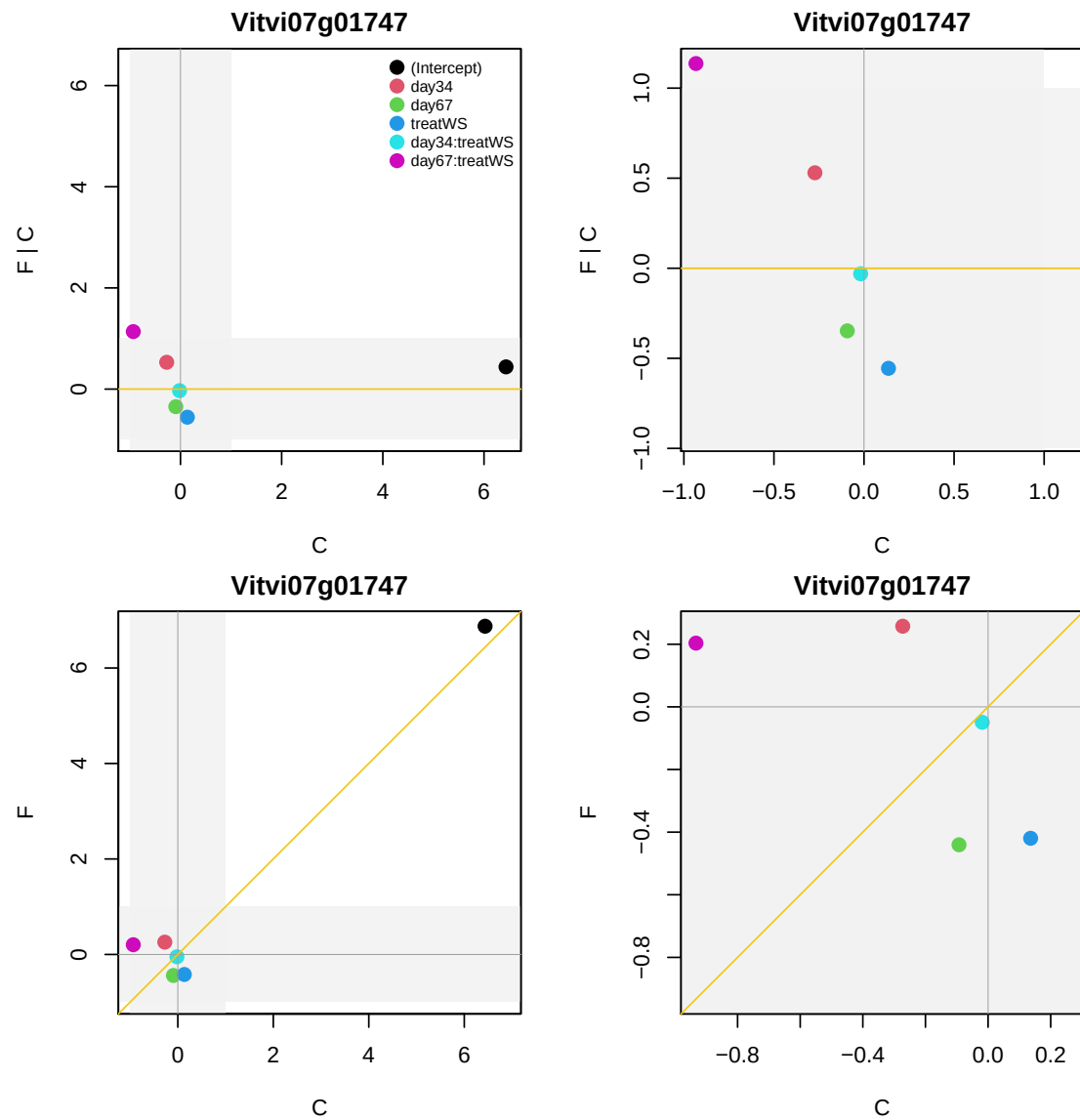


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

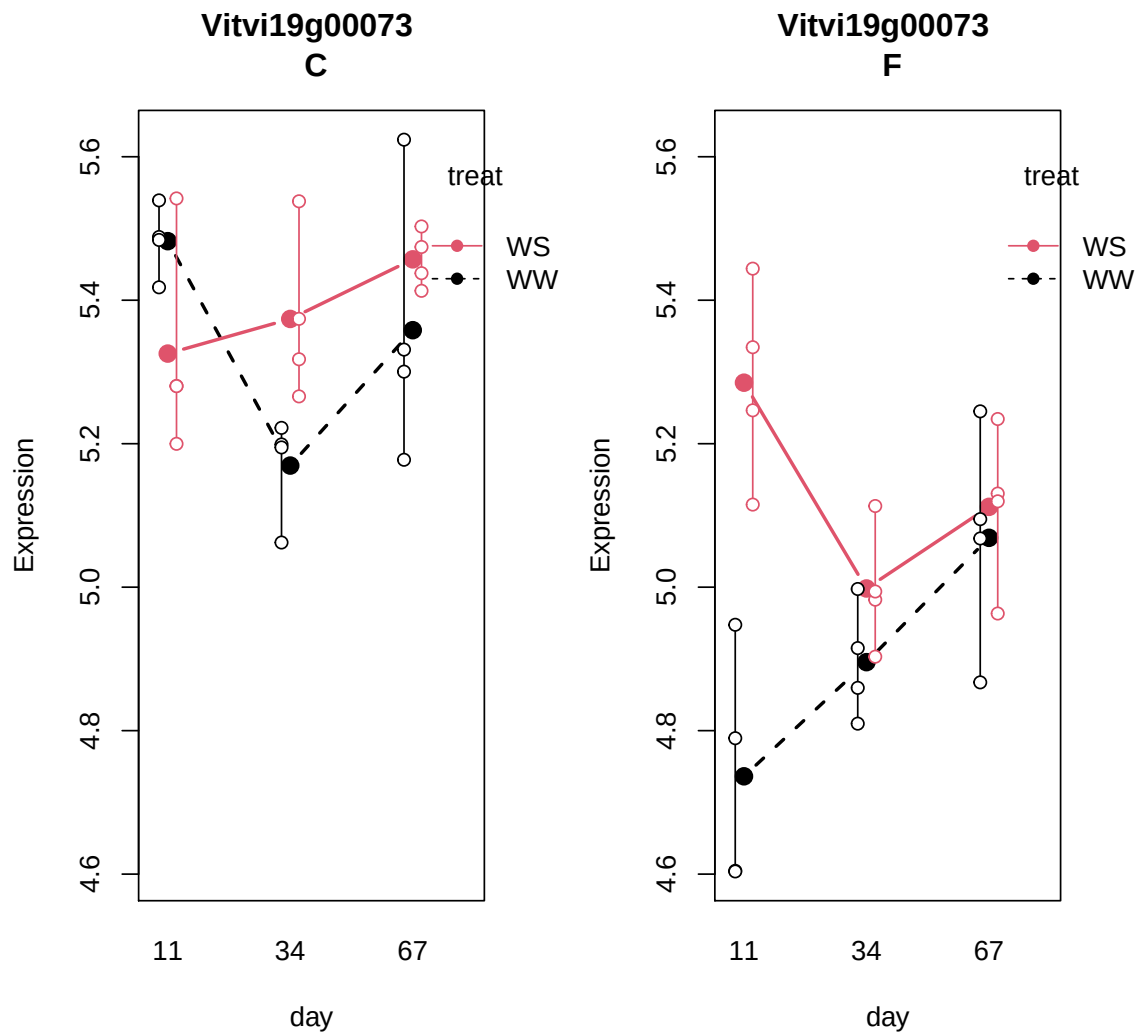
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



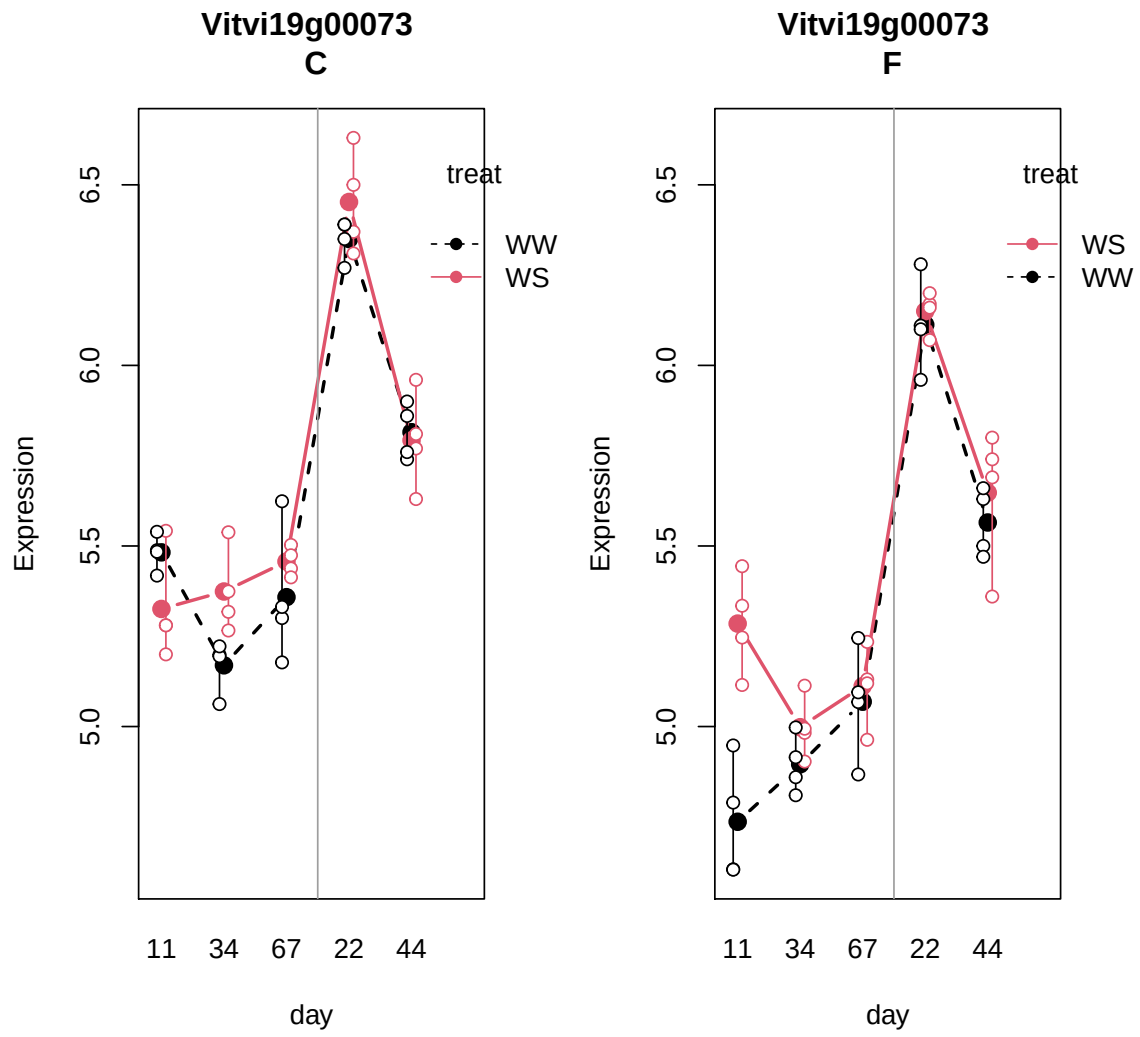
6.12.65 Vitvi19g00073

Coefficient varietyF:day67:treatWS for Vitvi19g00073.

```
> tt[varname,]
              logFC AveExpr          t      P.Value
Vitvi19g00073 -0.7609424  5.18853 -4.186503 0.0001576285
              adj.P.Val          B
Vitvi19g00073 0.03678652 0.8790976
> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

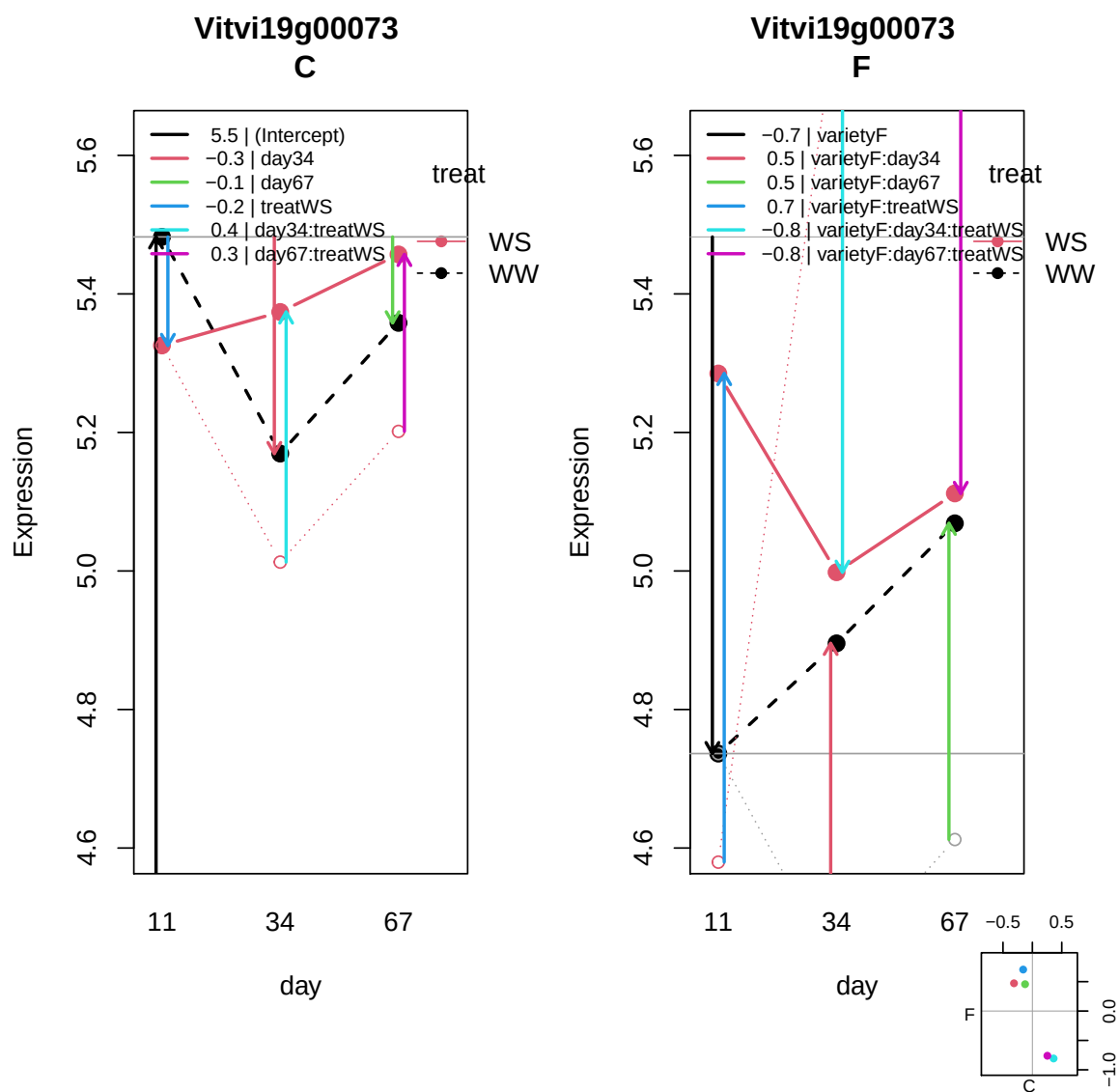
              (Intercept)    varietyF      day34      day67
Vitvi19g00073      5.482322 -0.7459792 -0.3128034 -0.1240839
              treatWS  varietyF:day34  varietyF:day67
Vitvi19g00073 -0.156708      0.4719468      0.4565168
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi19g00073      0.705409      0.3610926      0.2554344
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi19g00073      -0.8070925      -0.7609424

```

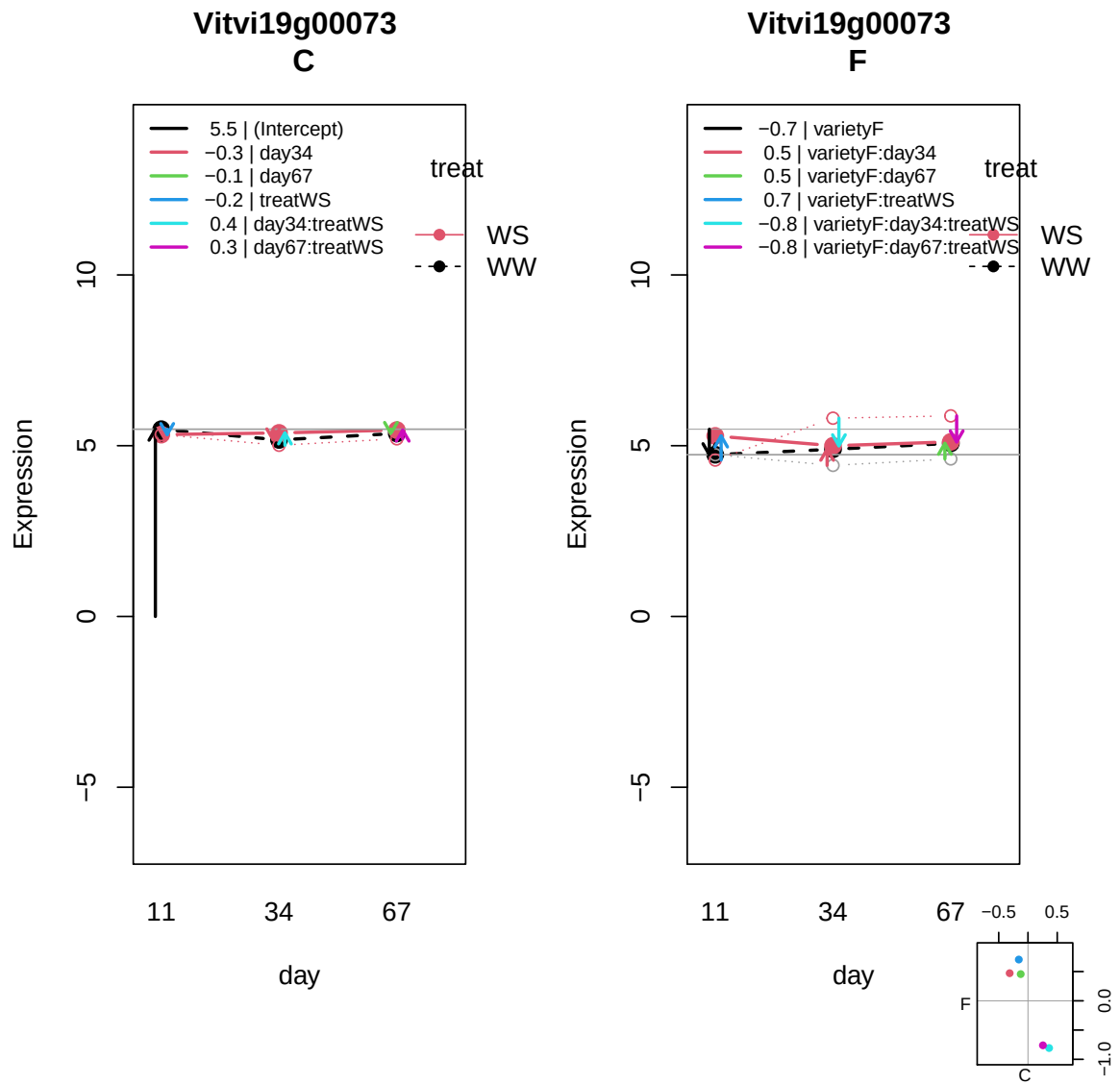
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

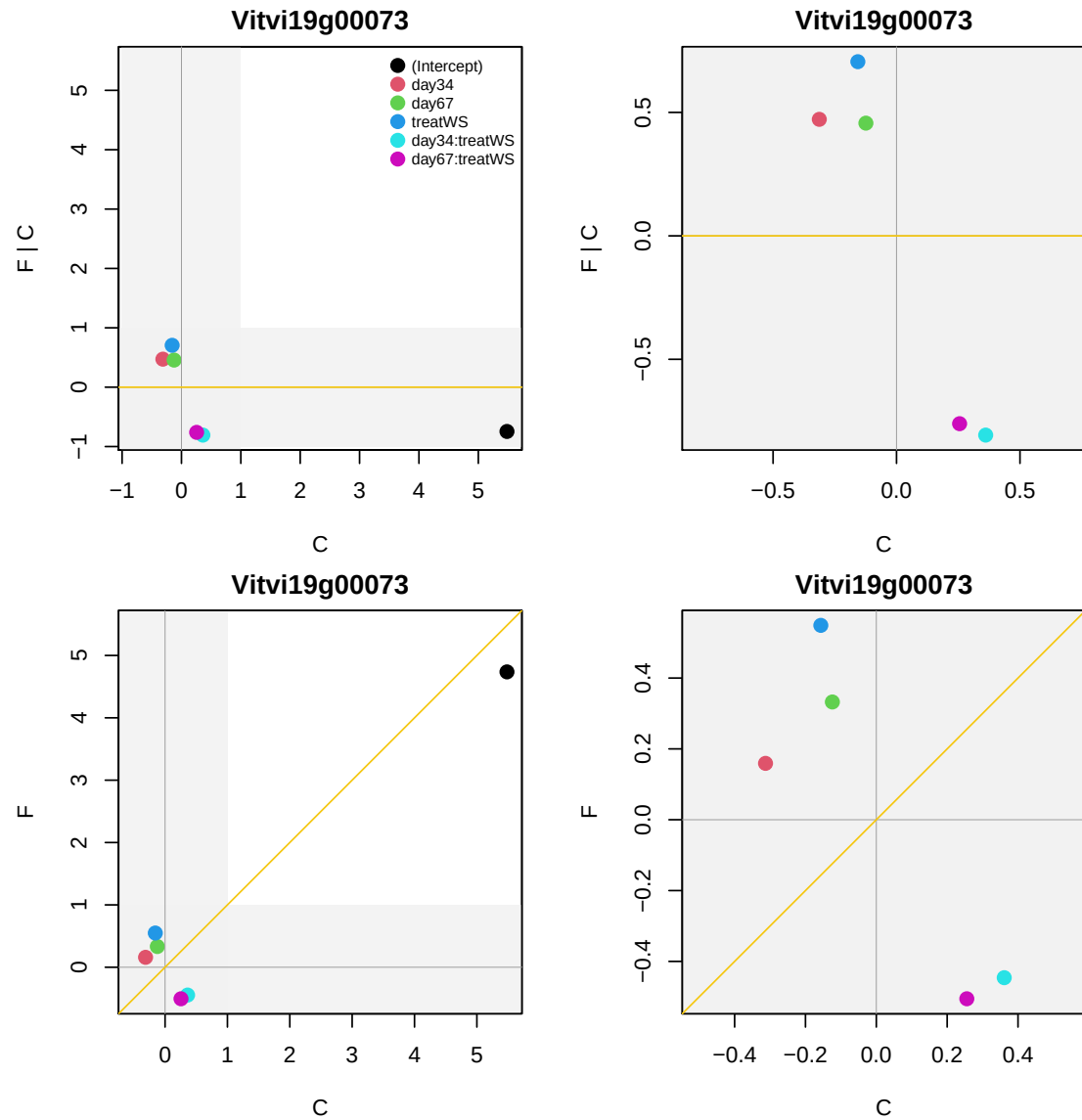


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

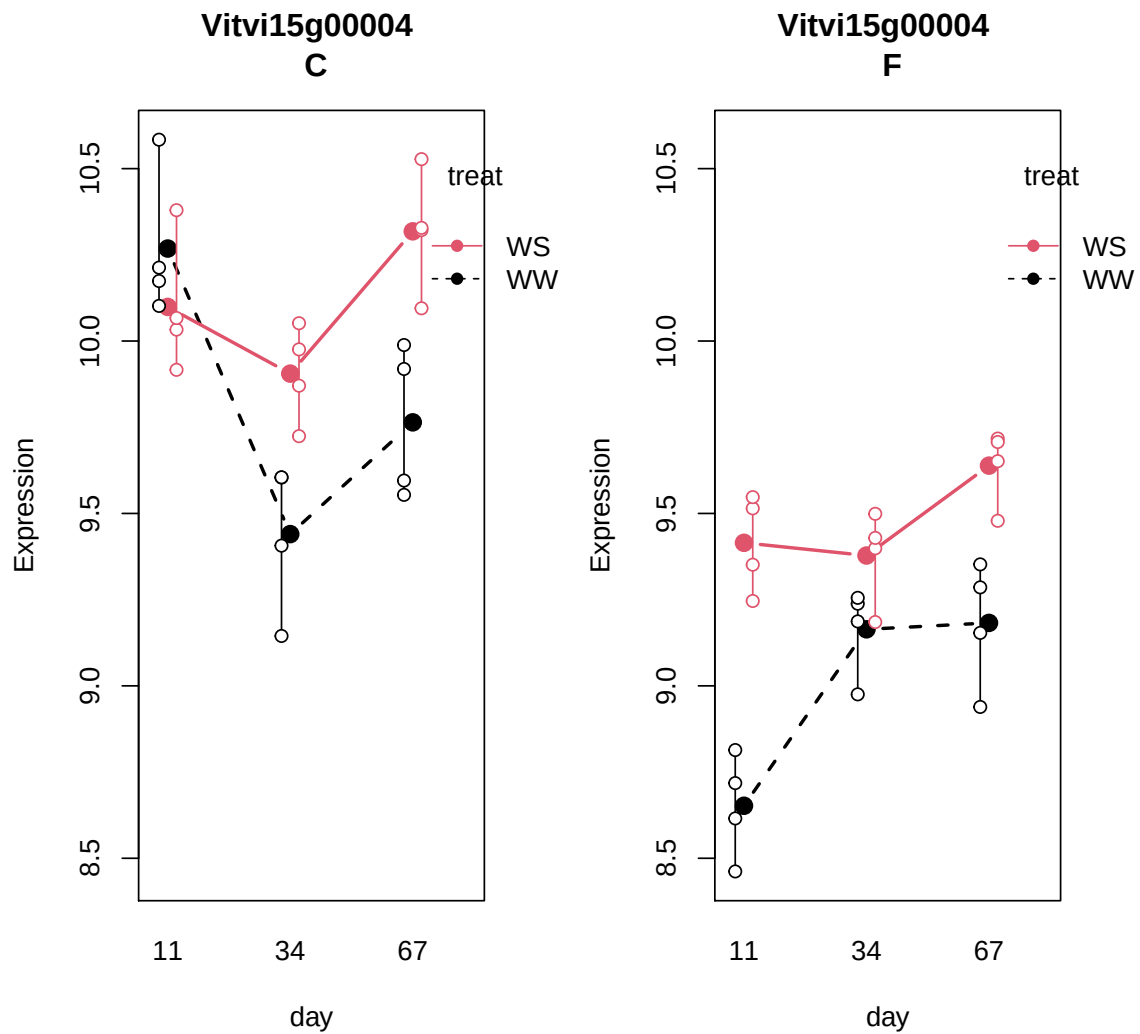


6.12.66 Vitvi15g00004

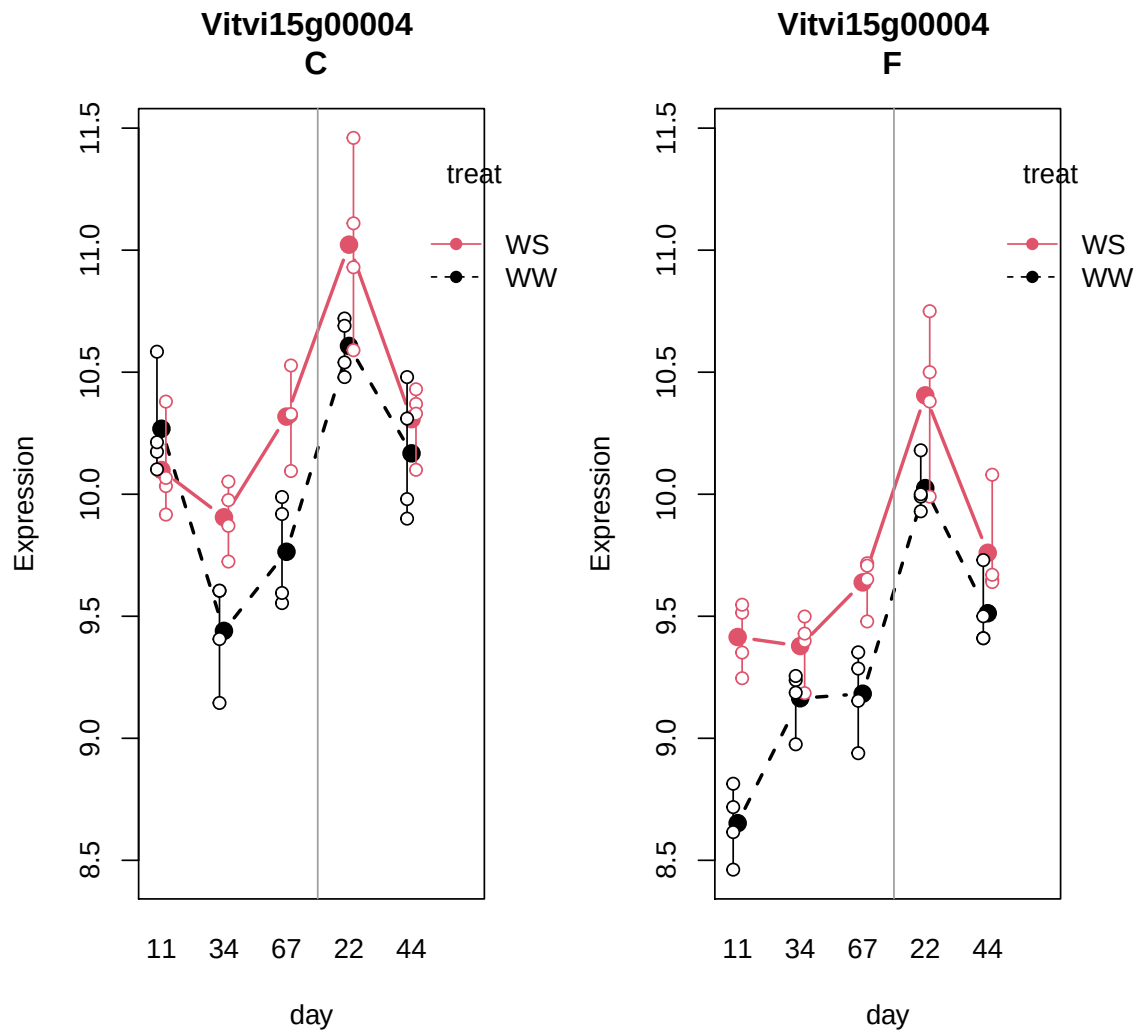
Coefficient varietyF:day67:treatWS for Vitvi15g00004.

```
> tt[varname,]
               logFC  AveExpr          t      P.Value
Vitvi15g00004 -1.029685  9.602118 -4.183035  0.0001592908
               adj.P.Val          B
Vitvi15g00004  0.03678652  0.869774

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

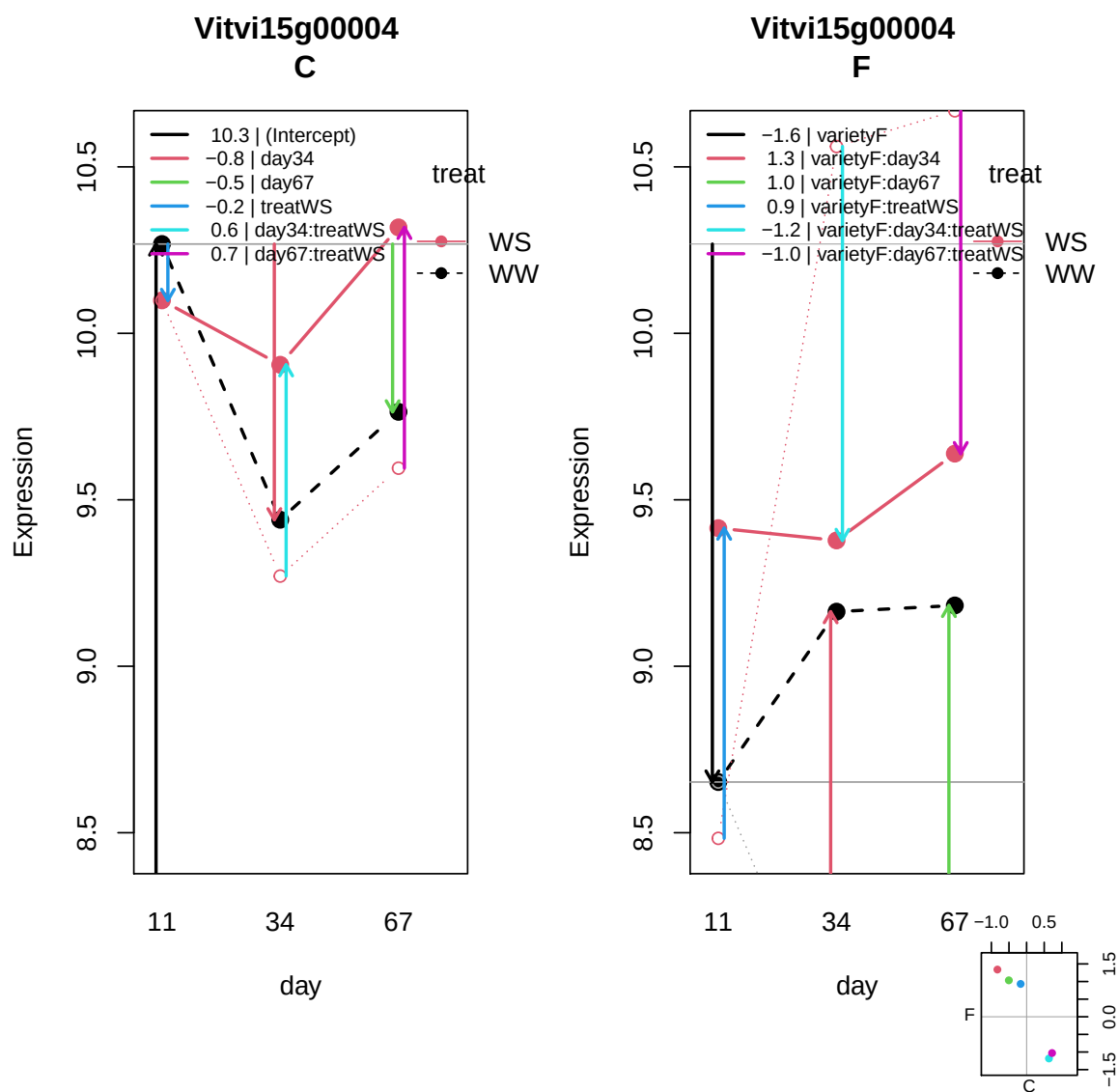
              (Intercept)  varietyF      day34      day67
Vitvi15g00004      10.2682 -1.615925 -0.8281172 -0.5040206
              treatWS varietyF:day34 varietyF:day67
Vitvi15g00004 -0.1691961      1.339805      1.034349
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi15g00004      0.9317852      0.634656      0.7231504
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi15g00004      -1.183253      -1.029685

```

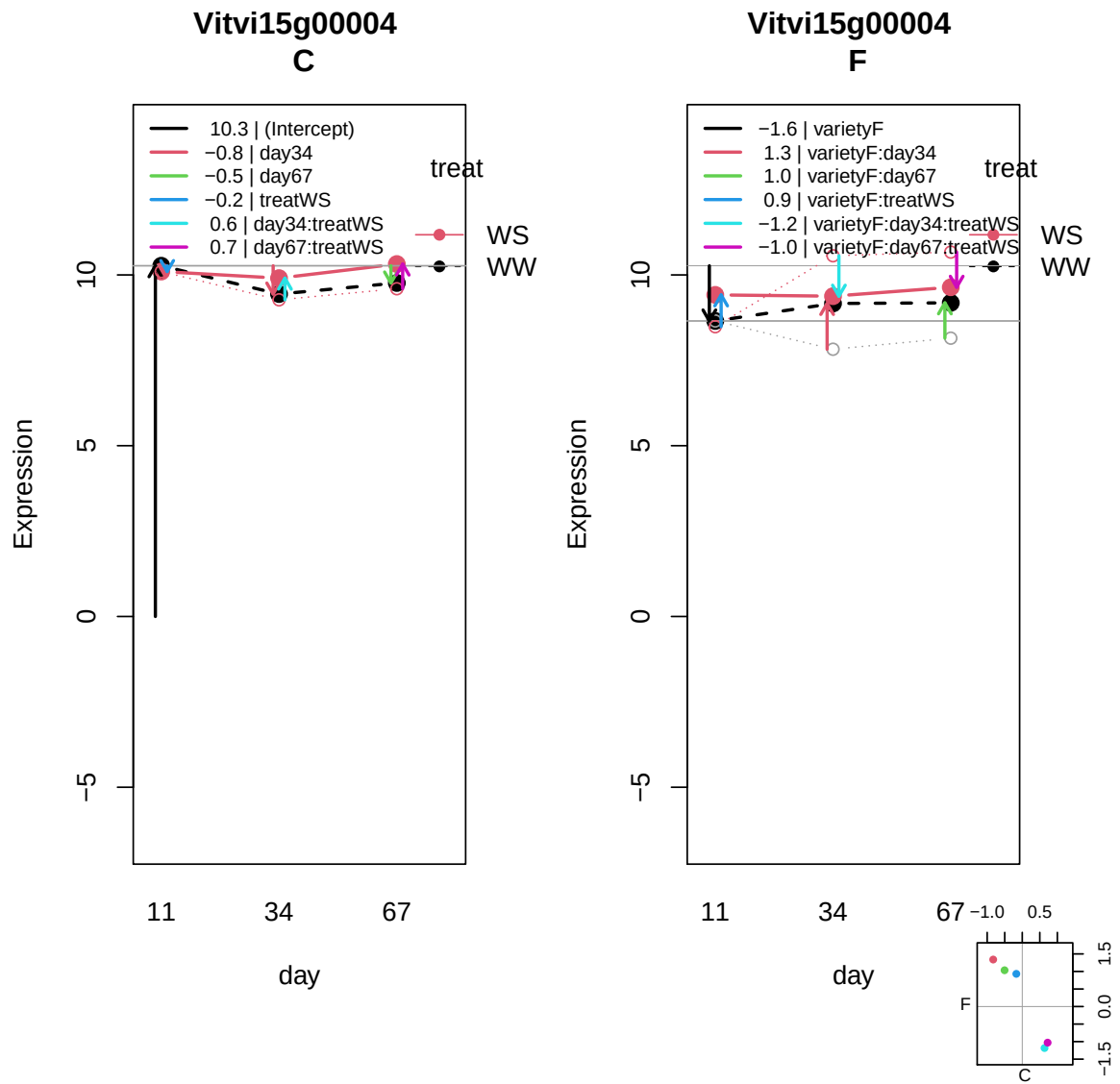
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

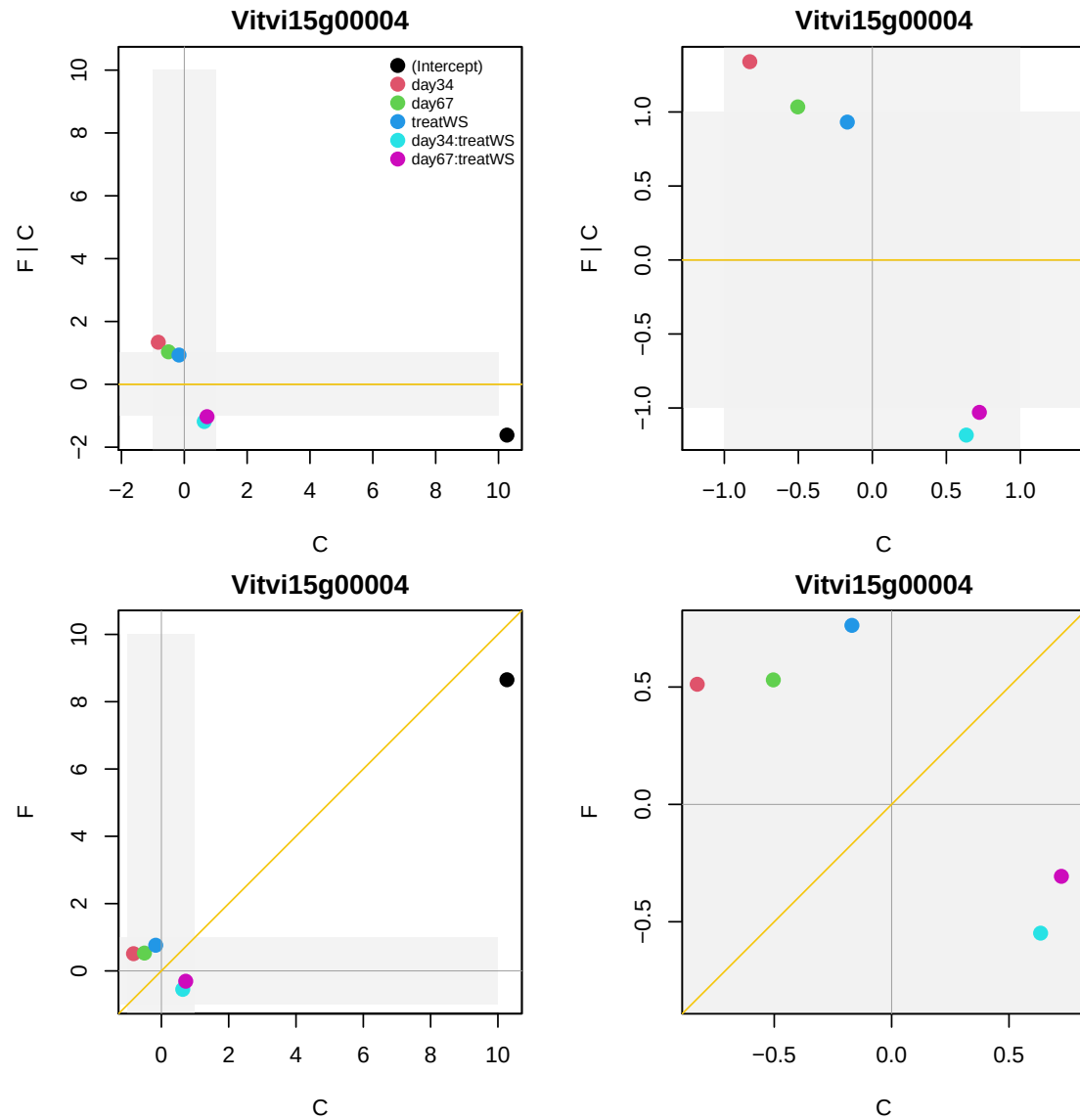


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

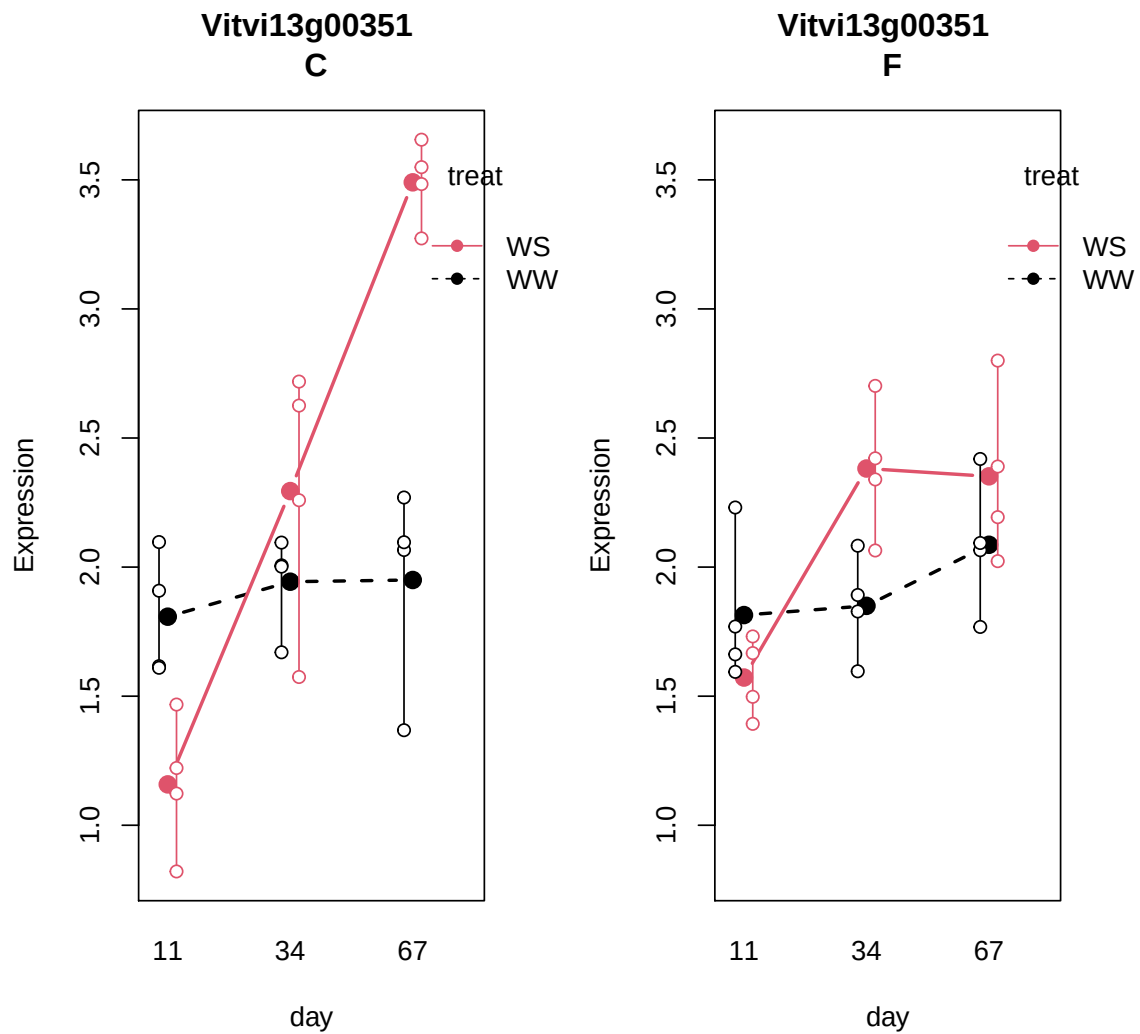
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



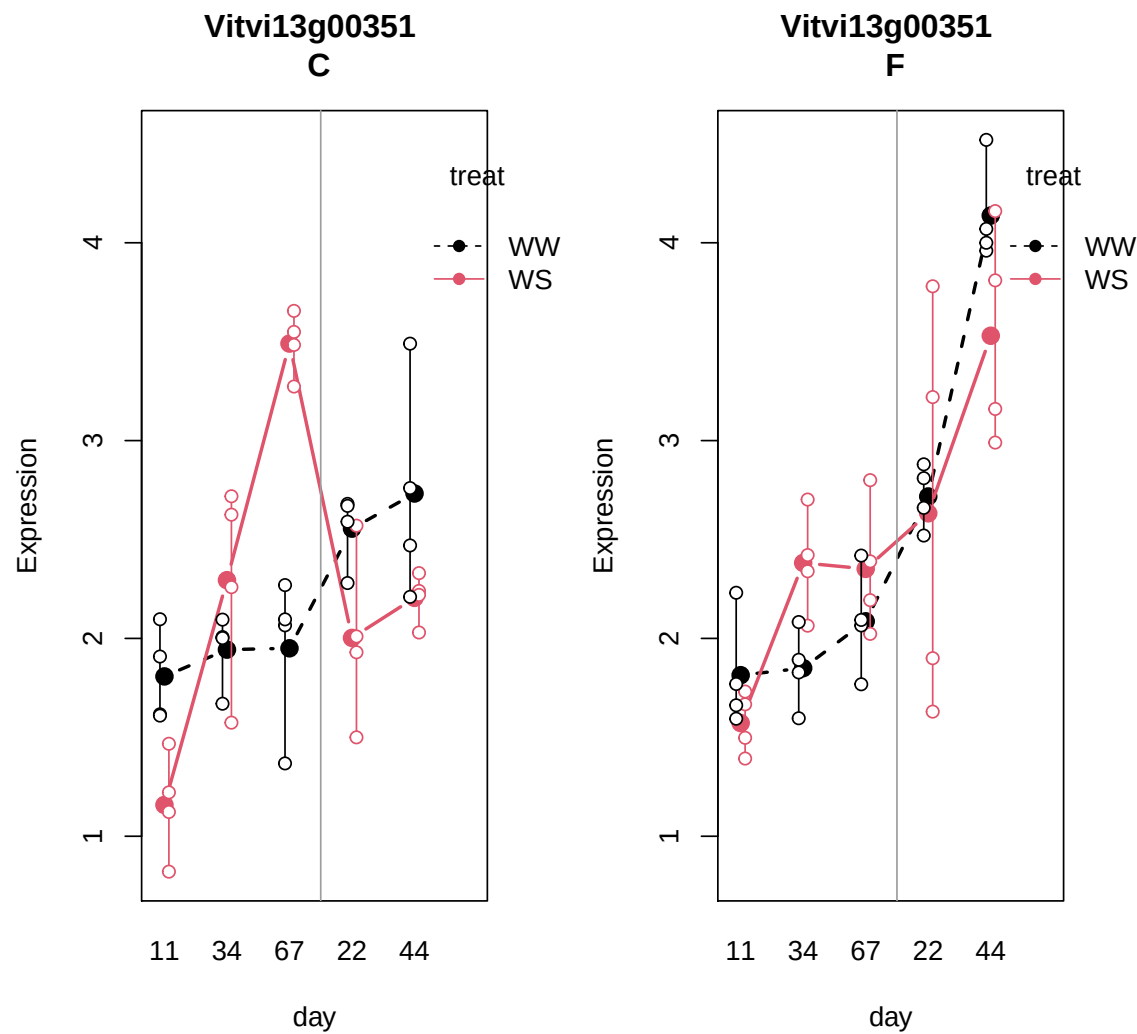
6.12.67 Vitvi13g00351

Coefficient varietyF:day67:treatWS for Vitvi13g00351.

```
> tt[varname,]
               logFC AveExpr      t      P.Value
Vitvi13g00351 -1.682929 2.058368 -4.17231 0.0001645417
               adj.P.Val      B
Vitvi13g00351 0.03723336 0.8409498
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

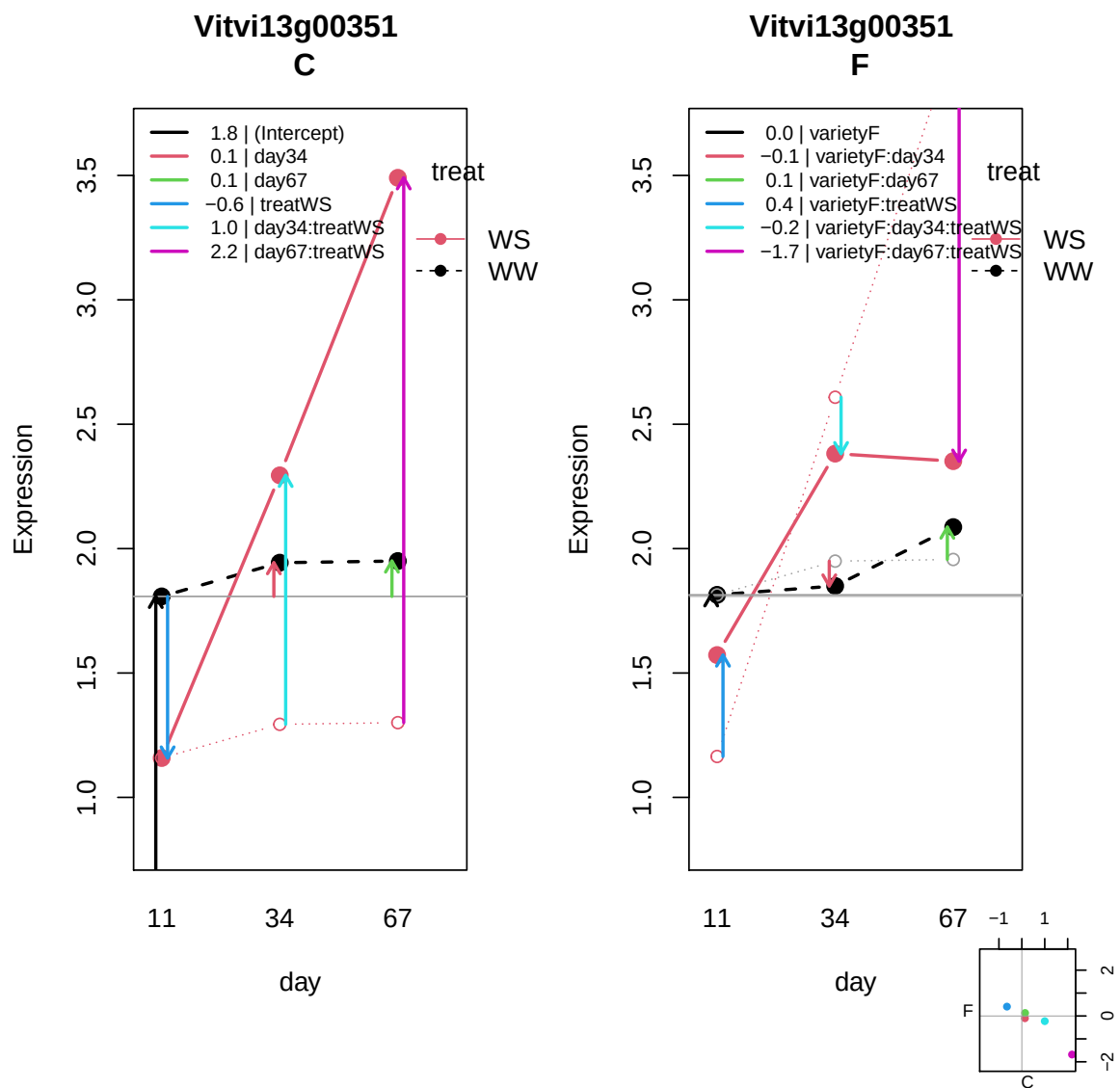
              (Intercept)      varietyF      day34      day67
Vitvi13g00351      1.807909 0.006258569 0.1354823 0.142129
              treatWS varietyF:day34 varietyF:day67
Vitvi13g00351     -0.6496104     -0.09980071      0.1301378
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi13g00351           0.4076132           1.000607           2.190008
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi13g00351           -0.22664              -1.682929

```

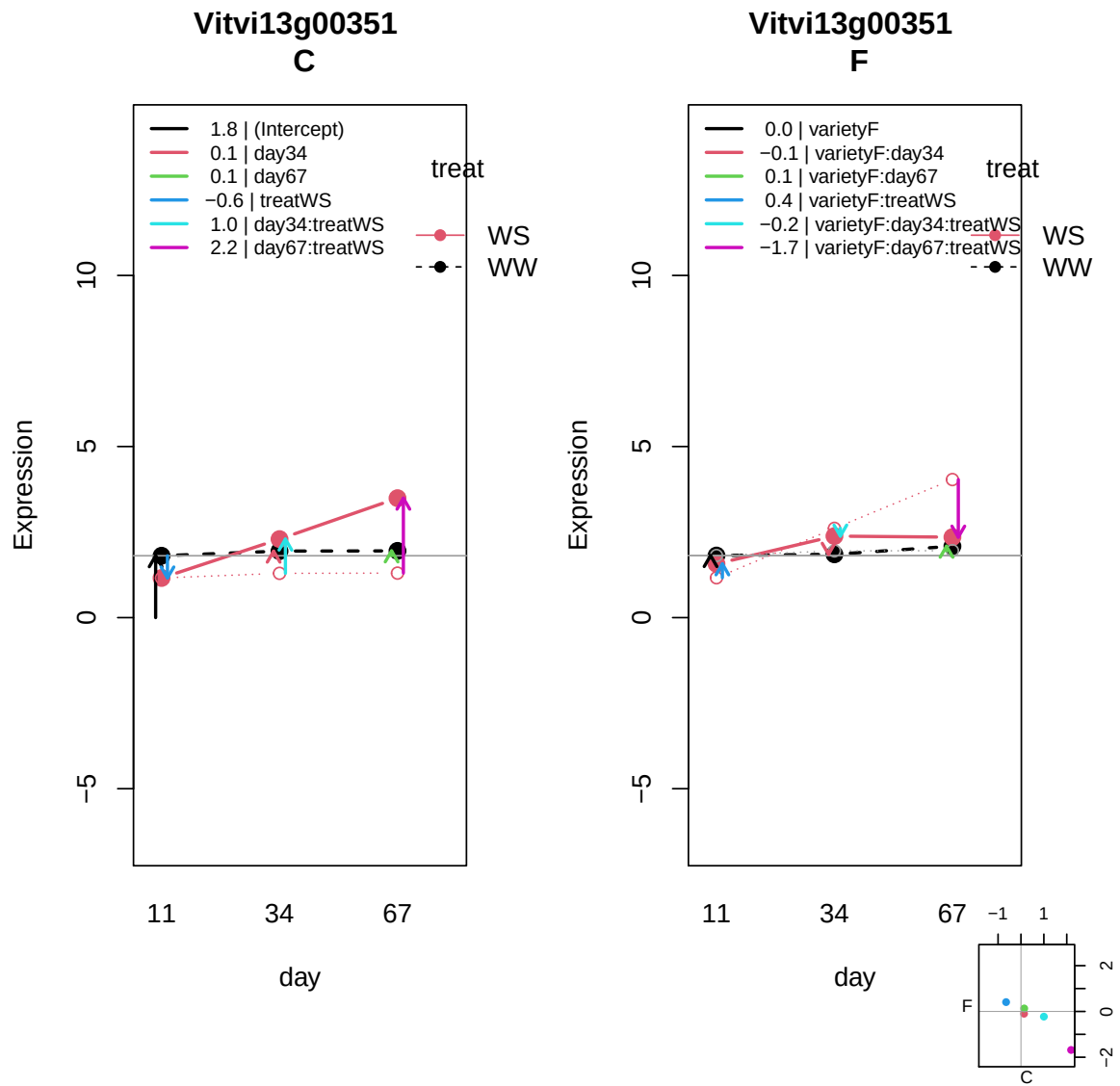
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

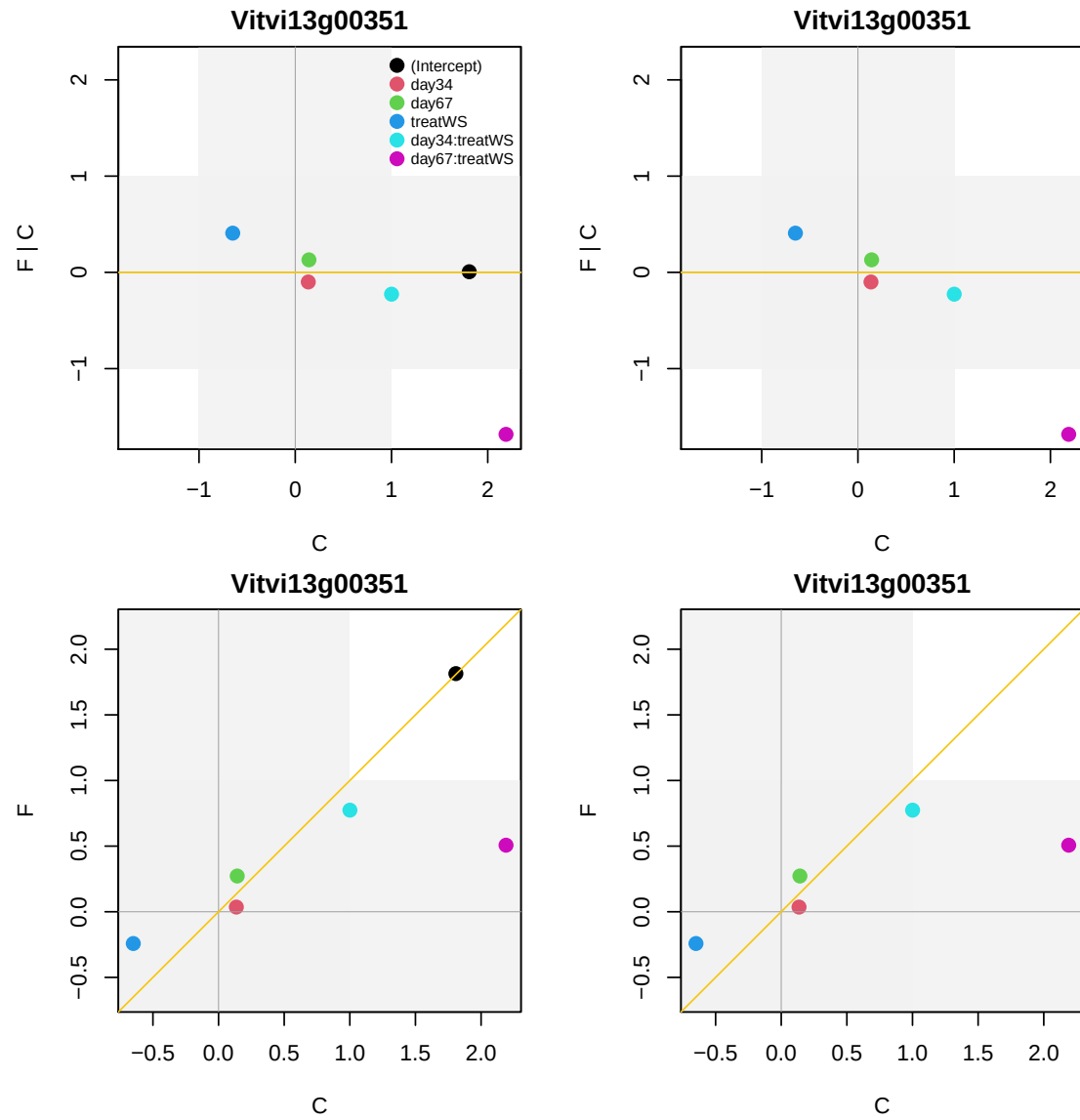



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

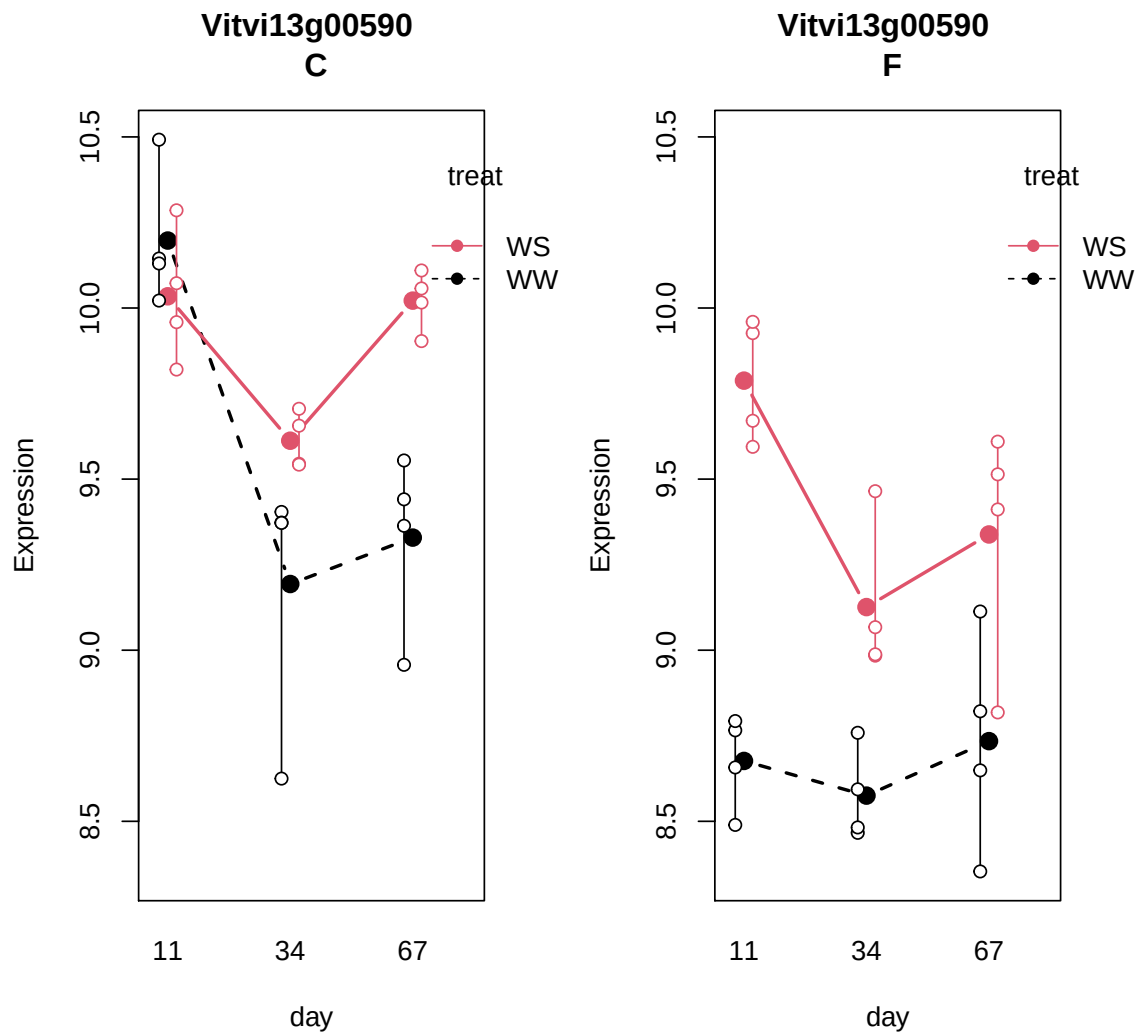


6.12.68 Vitvi13g00590

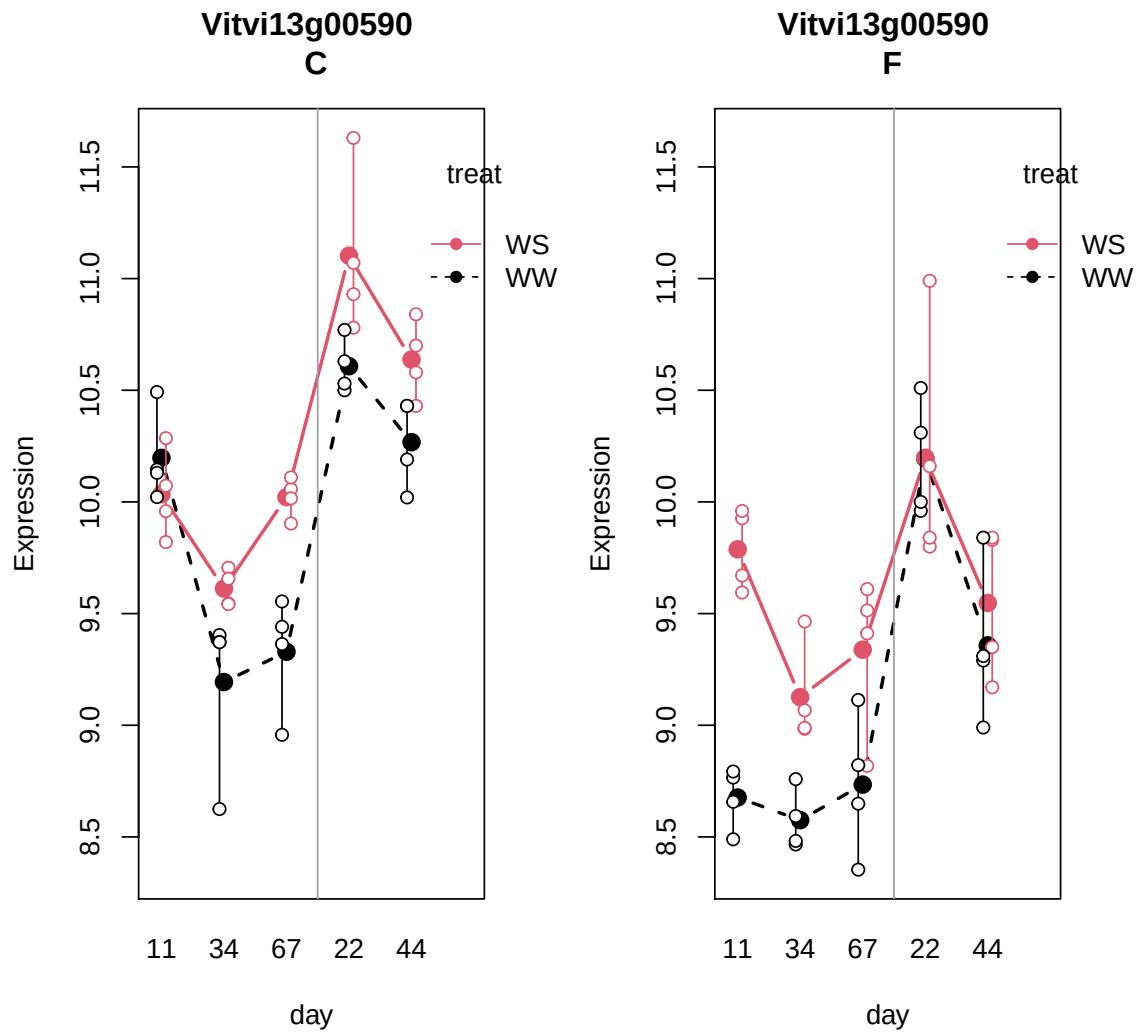
Coefficient varietyF:day67:treatWS for Vitvi13g00590.

```
> tt[varname,]
      logFC AveExpr      t    P.Value
Vitvi13g00590 -1.362812 9.385446 -4.163248 0.0001691094
      adj.P.Val      B
Vitvi13g00590 0.03723336 0.8166161

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

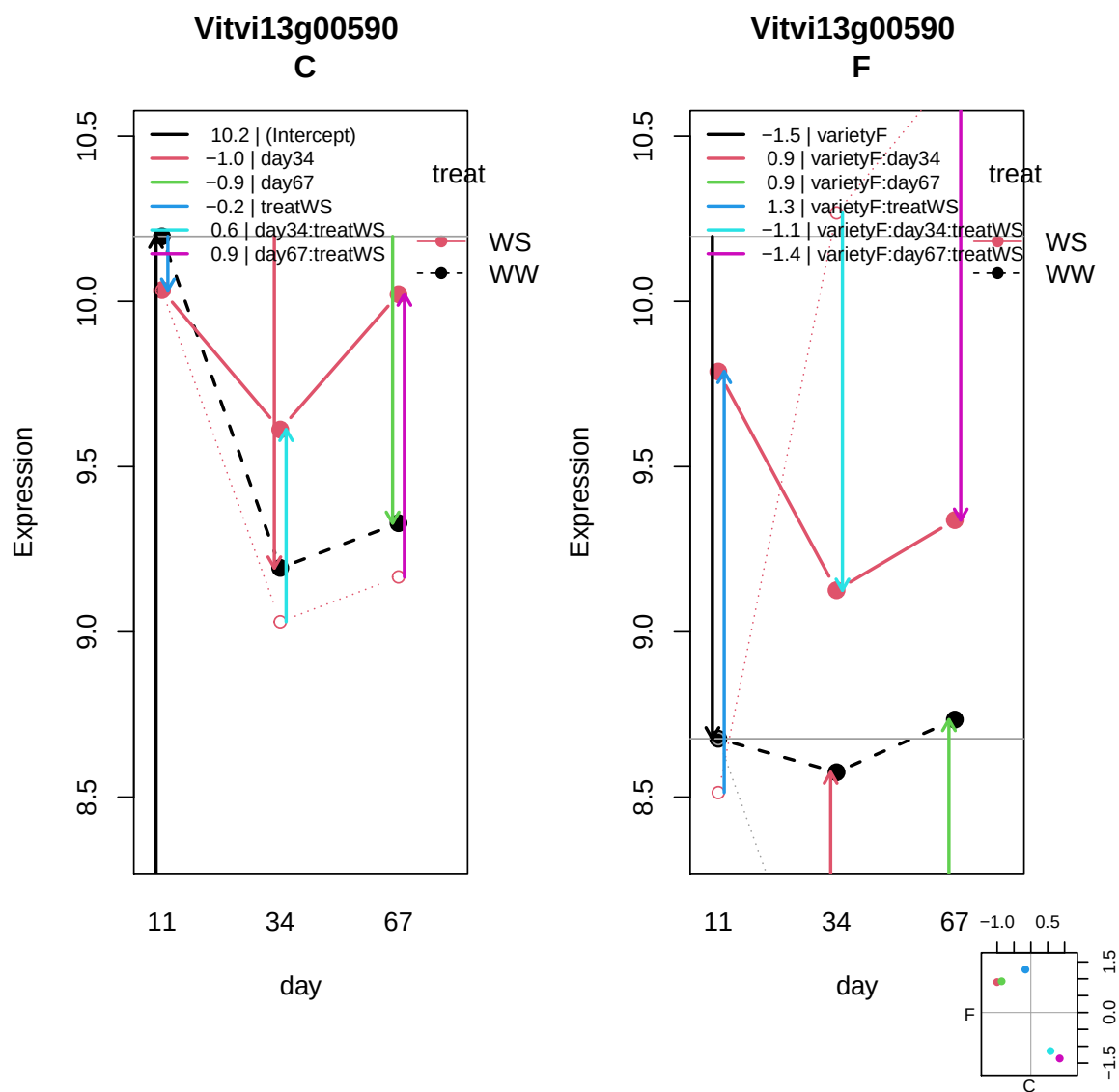
              (Intercept)  varietyF    day34    day67
Vitvi13g00590    10.19713 -1.52074 -1.00369 -0.868072
              treatWS  varietyF:day34  varietyF:day67
Vitvi13g00590   -0.1629134    0.9024033    0.9259399
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi13g00590    1.274286    0.5816823    0.8554402
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi13g00590    -1.142156    -1.362812

```

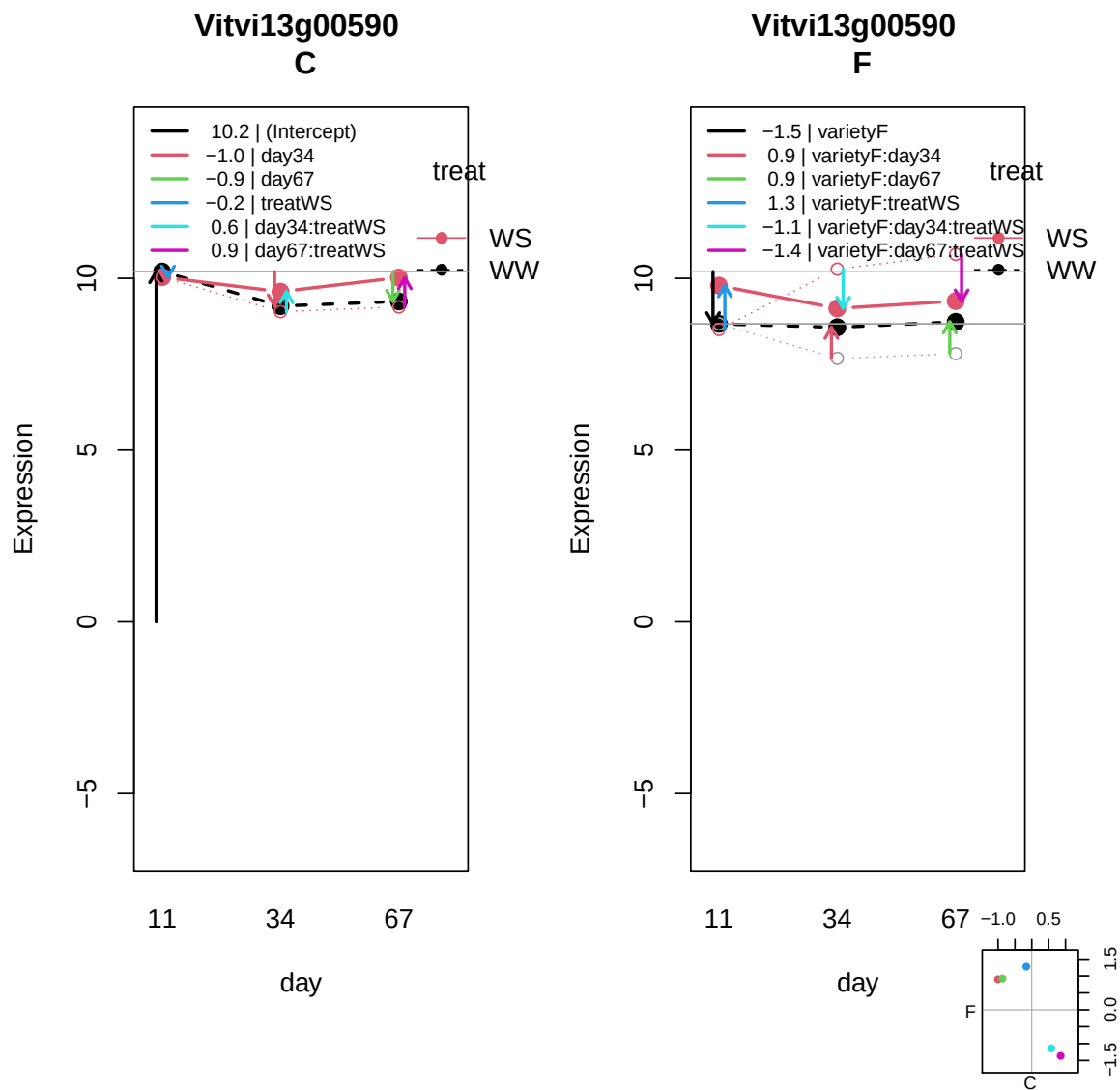
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

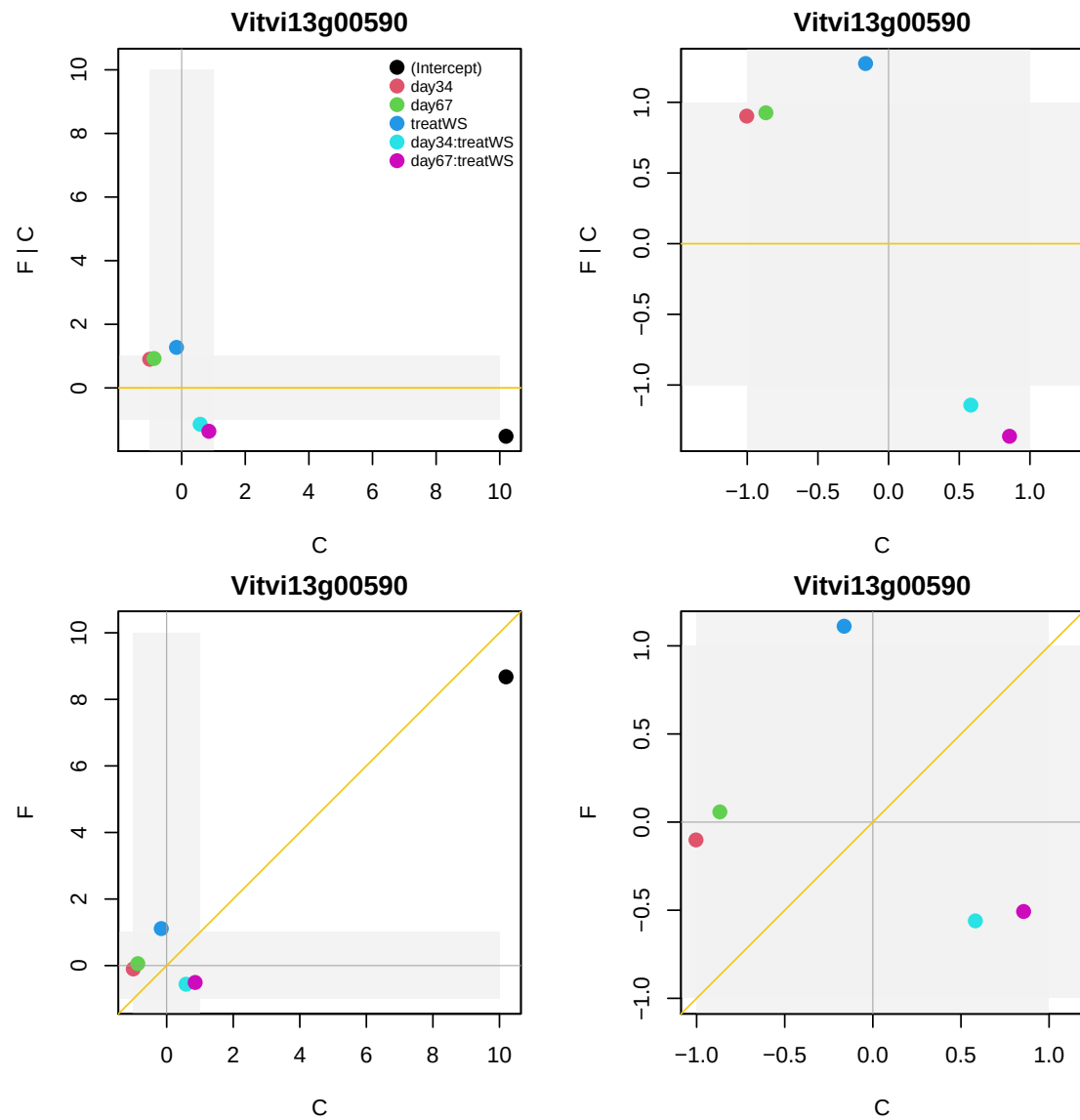


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

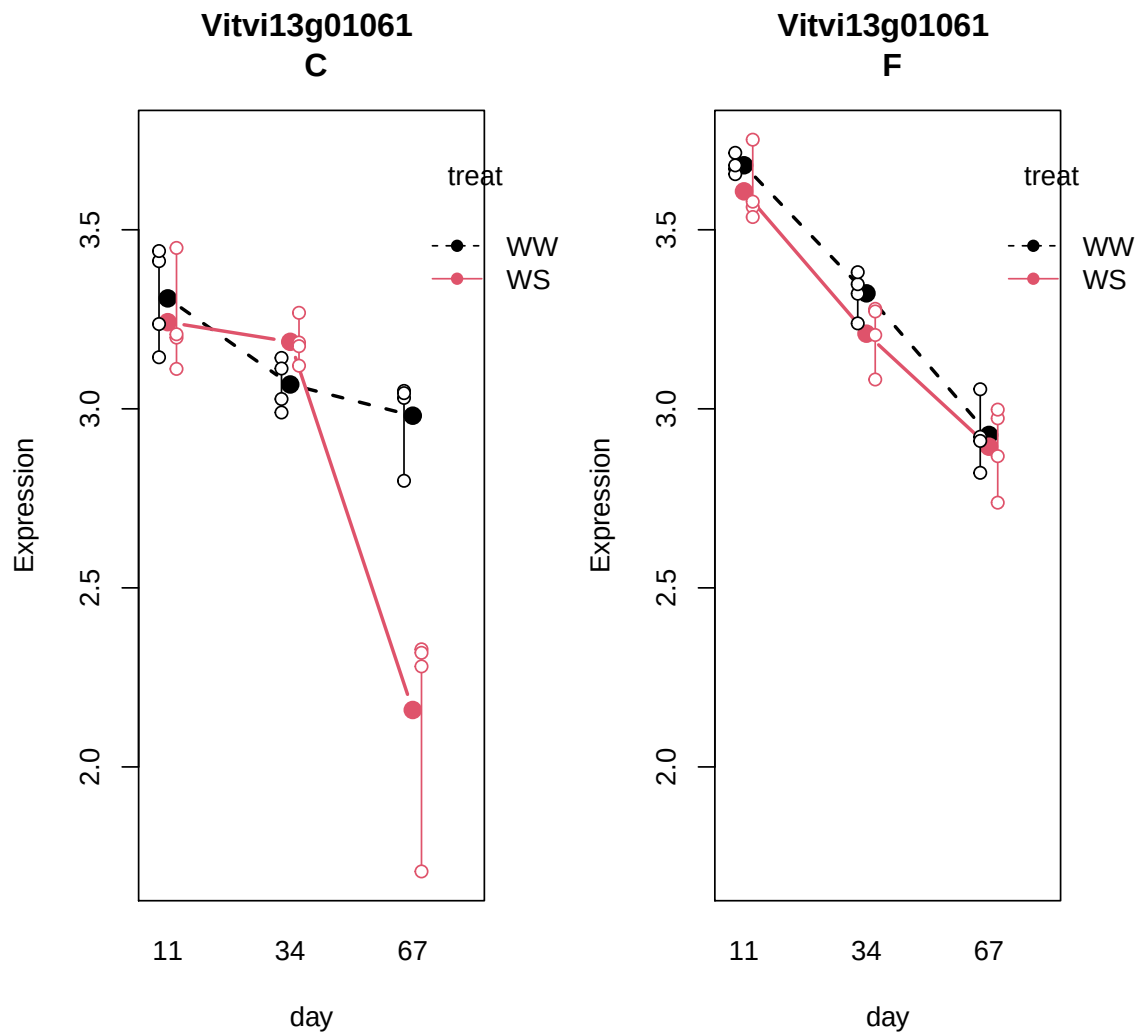
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



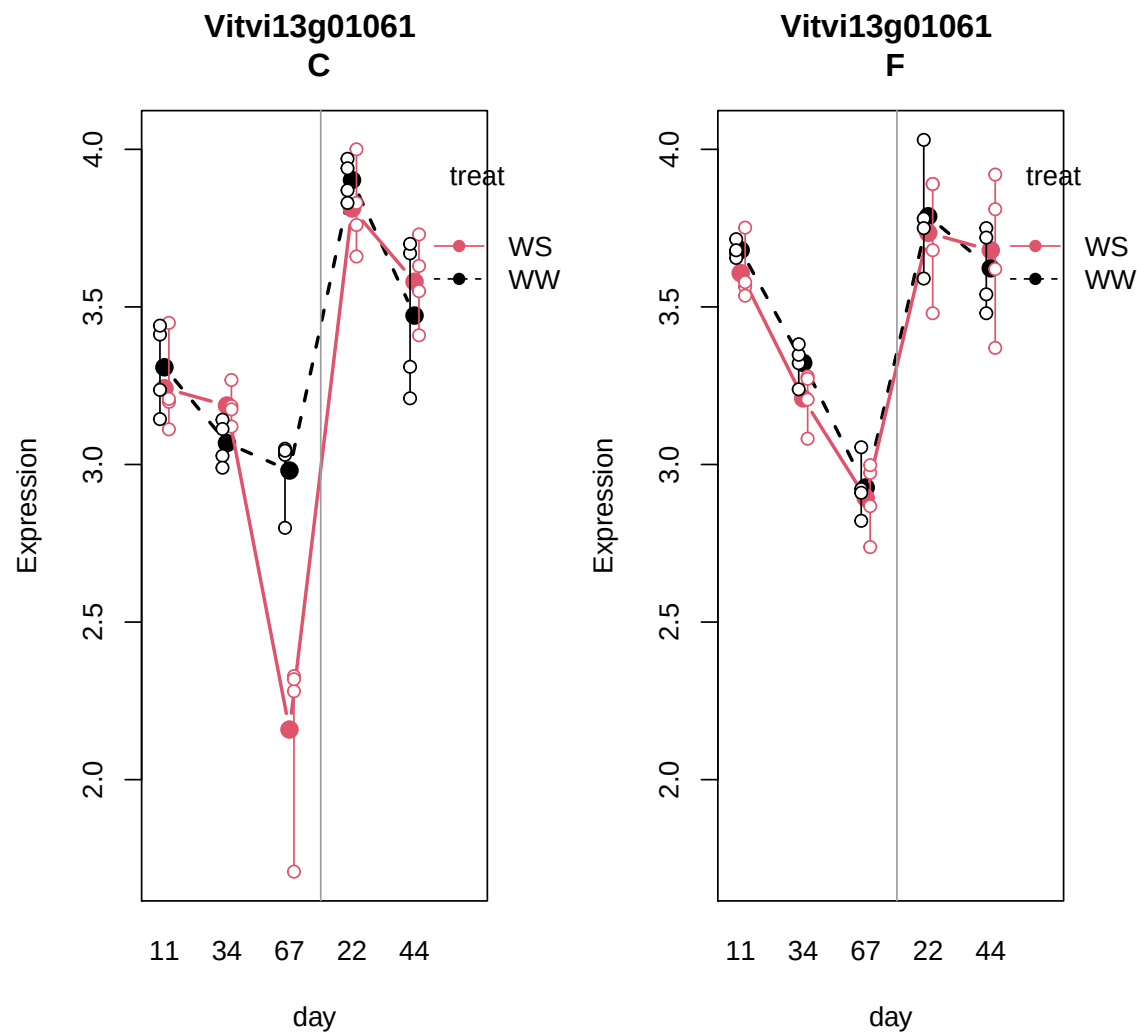
6.12.69 Vitvi13g01061

Coefficient varietyF:day67:treatWS for Vitvi13g01061.

```
> tt[varname,]
      logFC AveExpr      t    P.Value
Vitvi13g01061 0.7954222 3.132204 4.162141 0.0001696757
      adj.P.Val      B
Vitvi13g01061 0.03723336 0.8136453
> plot.interactions(varname,phdata=pd,data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



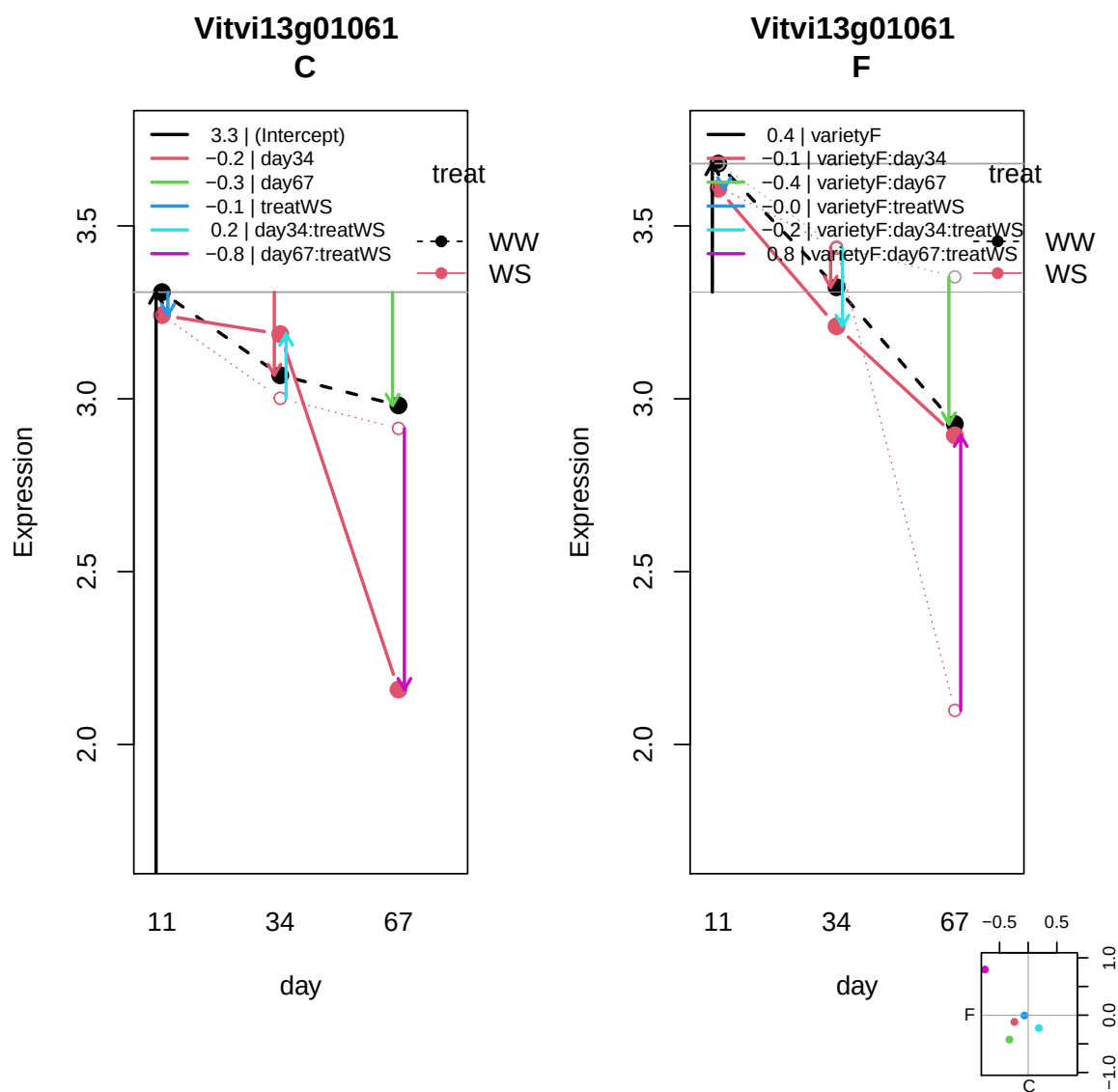
```

> fit1[varname,]$coefficients

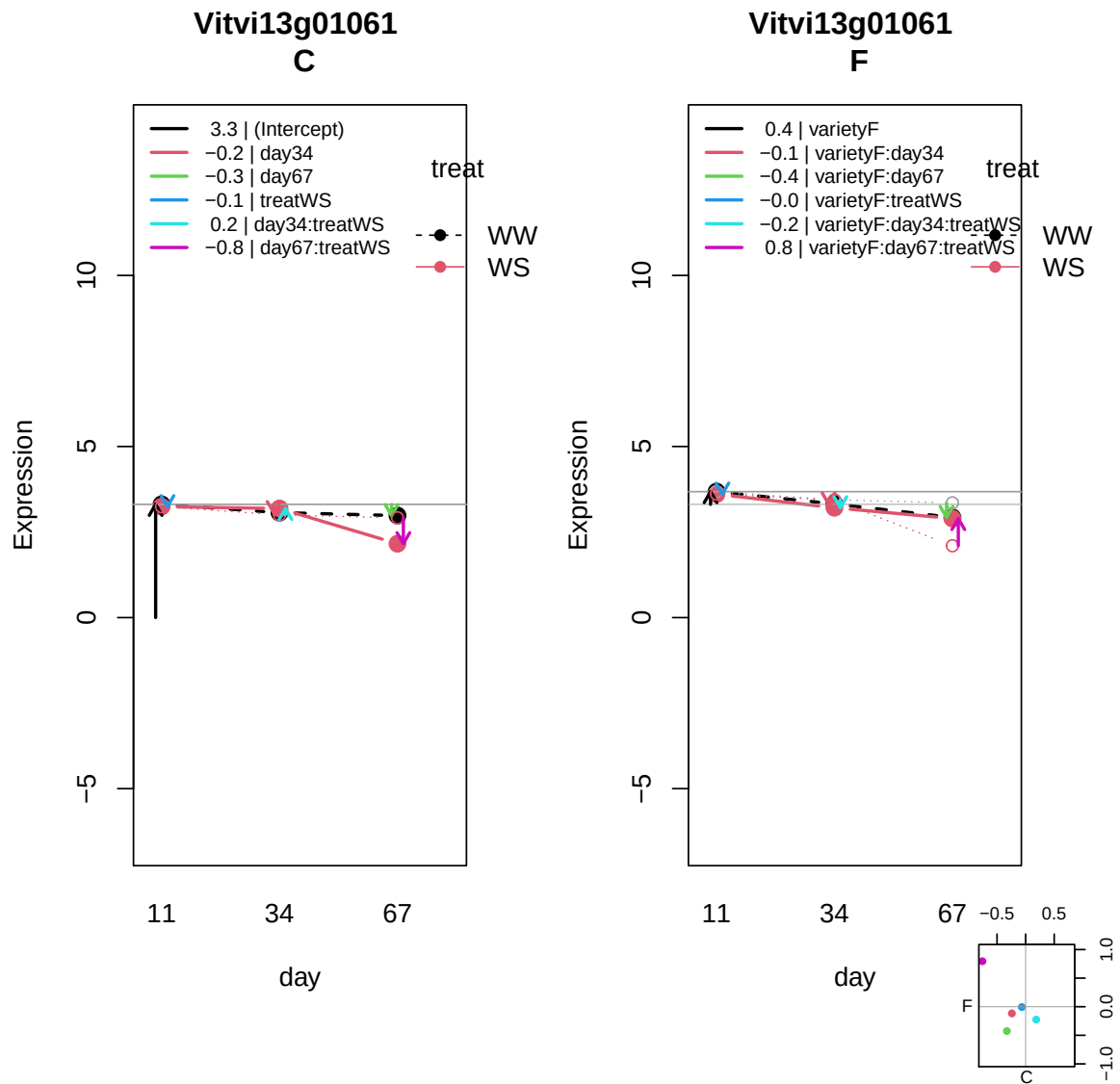
              (Intercept)  varietyF      day34      day67
Vitvi13g01061      3.308433  0.3717202 -0.2404746 -0.3276133
              treatWS  varietyF:day34  varietyF:day67
Vitvi13g01061 -0.06642877      -0.1172159      -0.4254753
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi13g01061      -0.00637024      0.1856439      -0.7554333
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi13g01061              -0.2255005              0.7954222

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

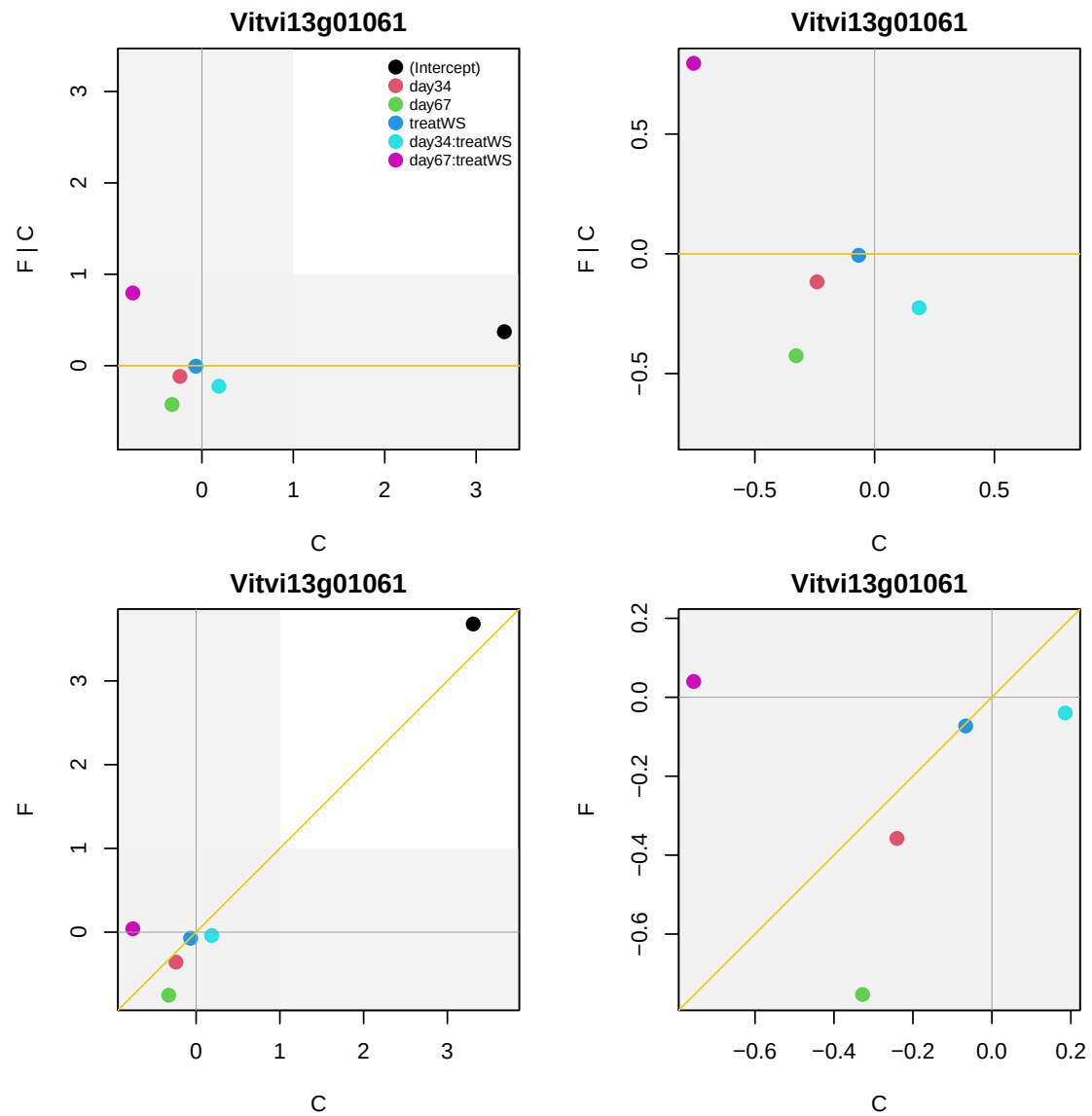


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

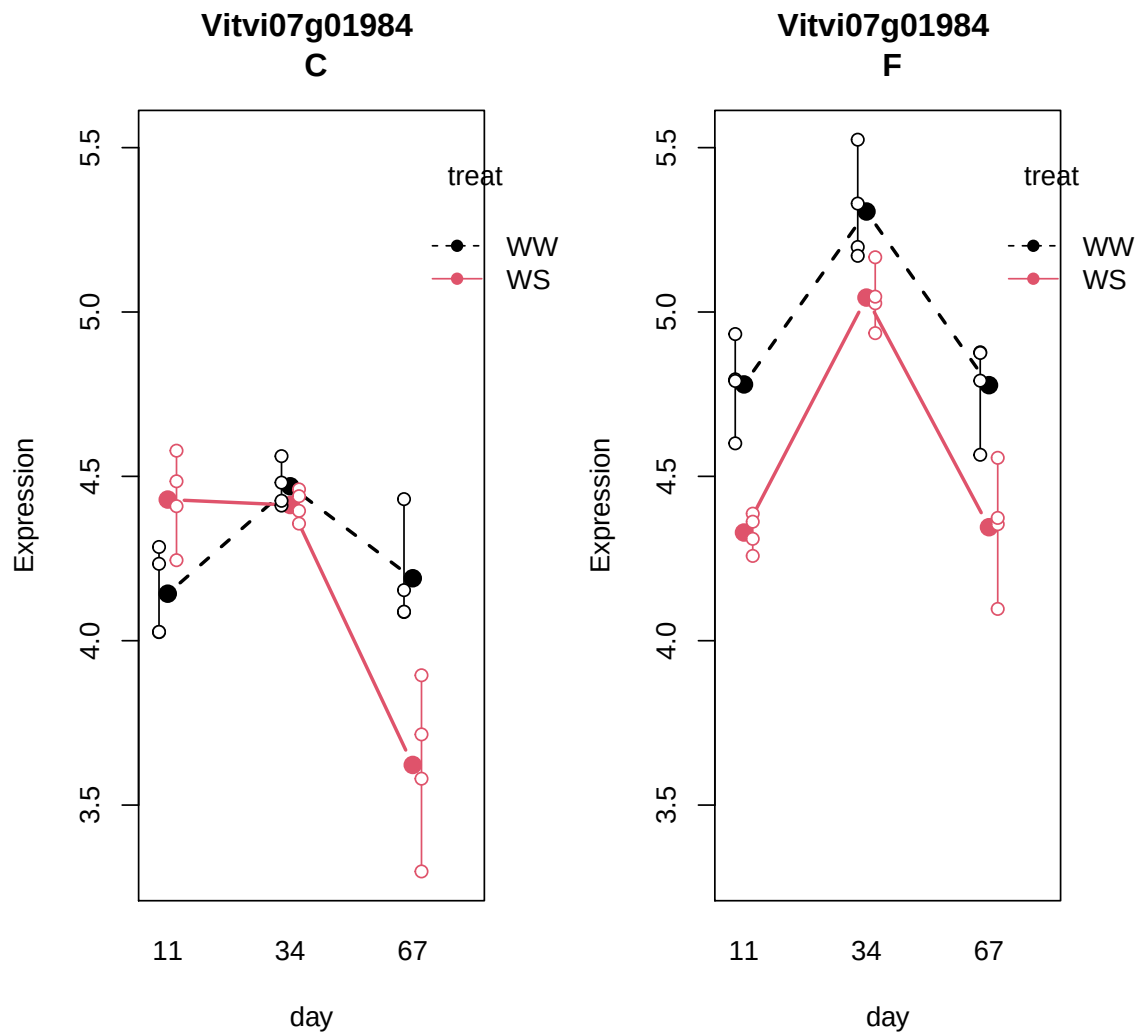


6.12.70 Vitvi07g01984

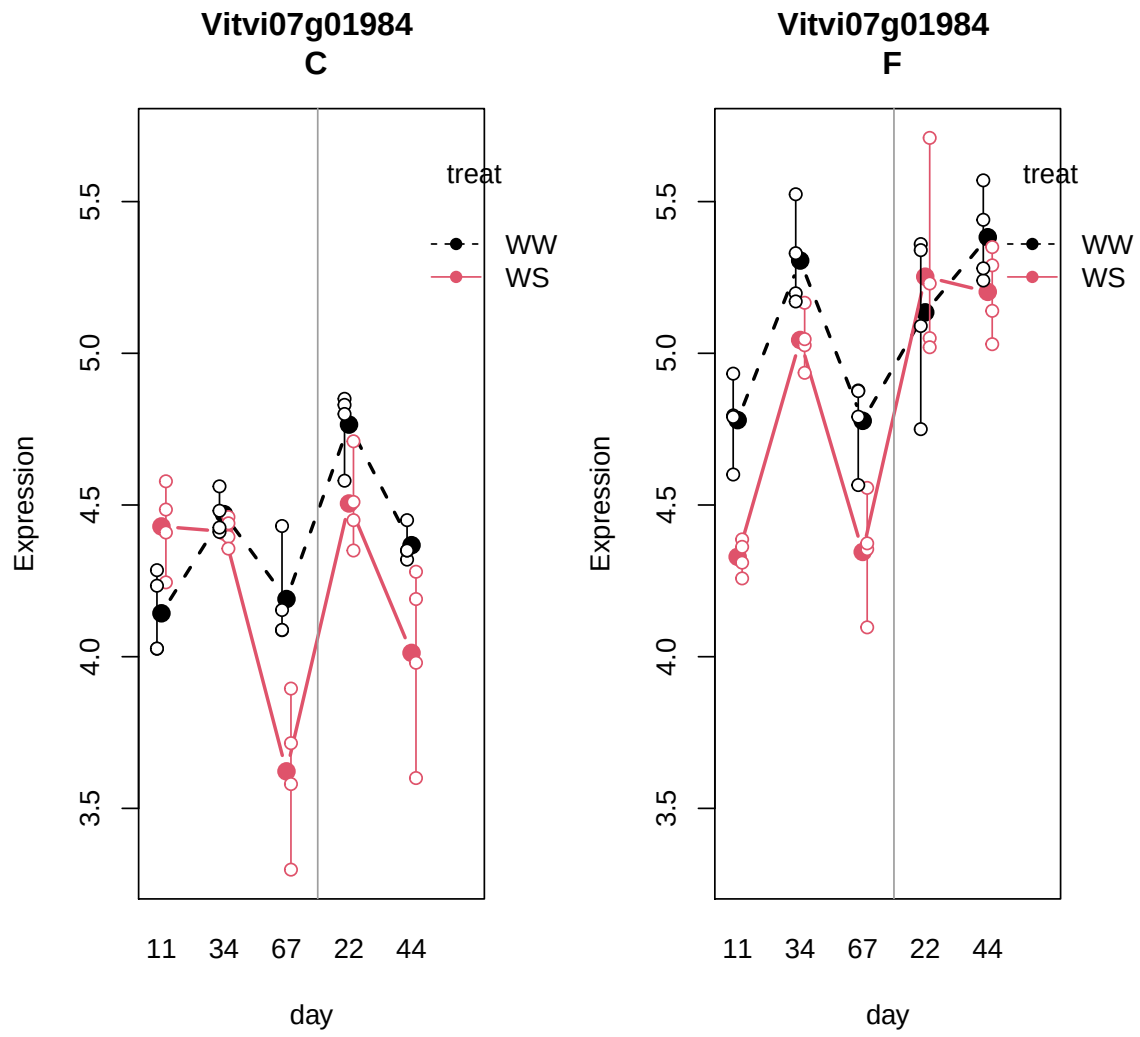
Coefficient varietyF:day67:treatWS for Vitvi07g01984.

```
> tt[varname,]
              logFC  AveExpr      t      P.Value
Vitvi07g01984 0.8726822 4.487351 4.159573 0.0001709969
              adj.P.Val      B
Vitvi07g01984 0.03723336 0.8067528

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

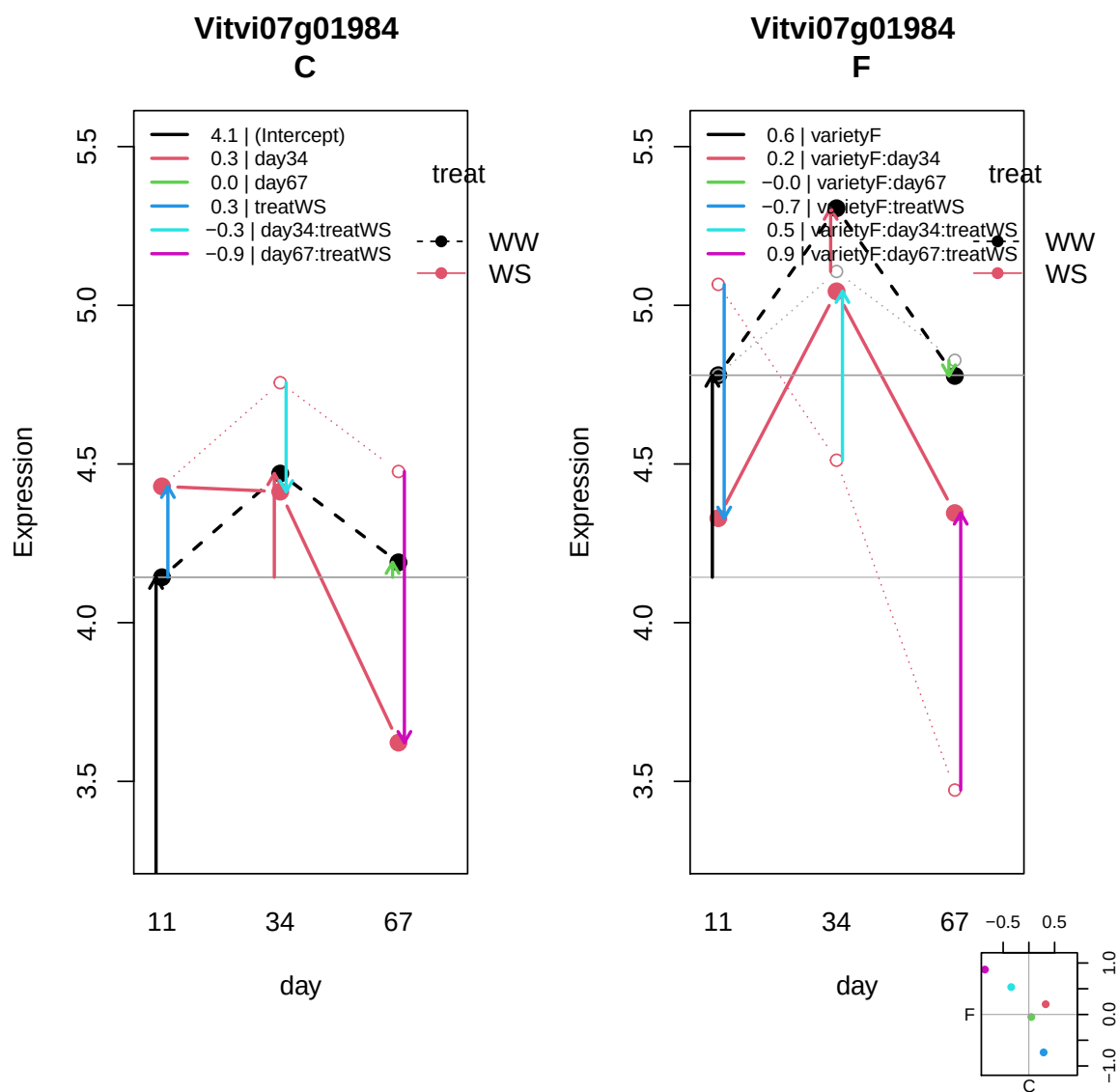
      (Intercept)  varietyF    day34    day67
Vitvi07g01984    4.143044 0.6366437 0.3267869 0.04697558
      treatWS varietyF:day34 varietyF:day67
Vitvi07g01984 0.2863205    0.1992206    -0.04924212
      varietyF:treatWS day34:treatWS day67:treatWS
Vitvi07g01984    -0.7368748    -0.3433182    -0.854275
      varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi07g01984    0.5320206                0.8726822

```

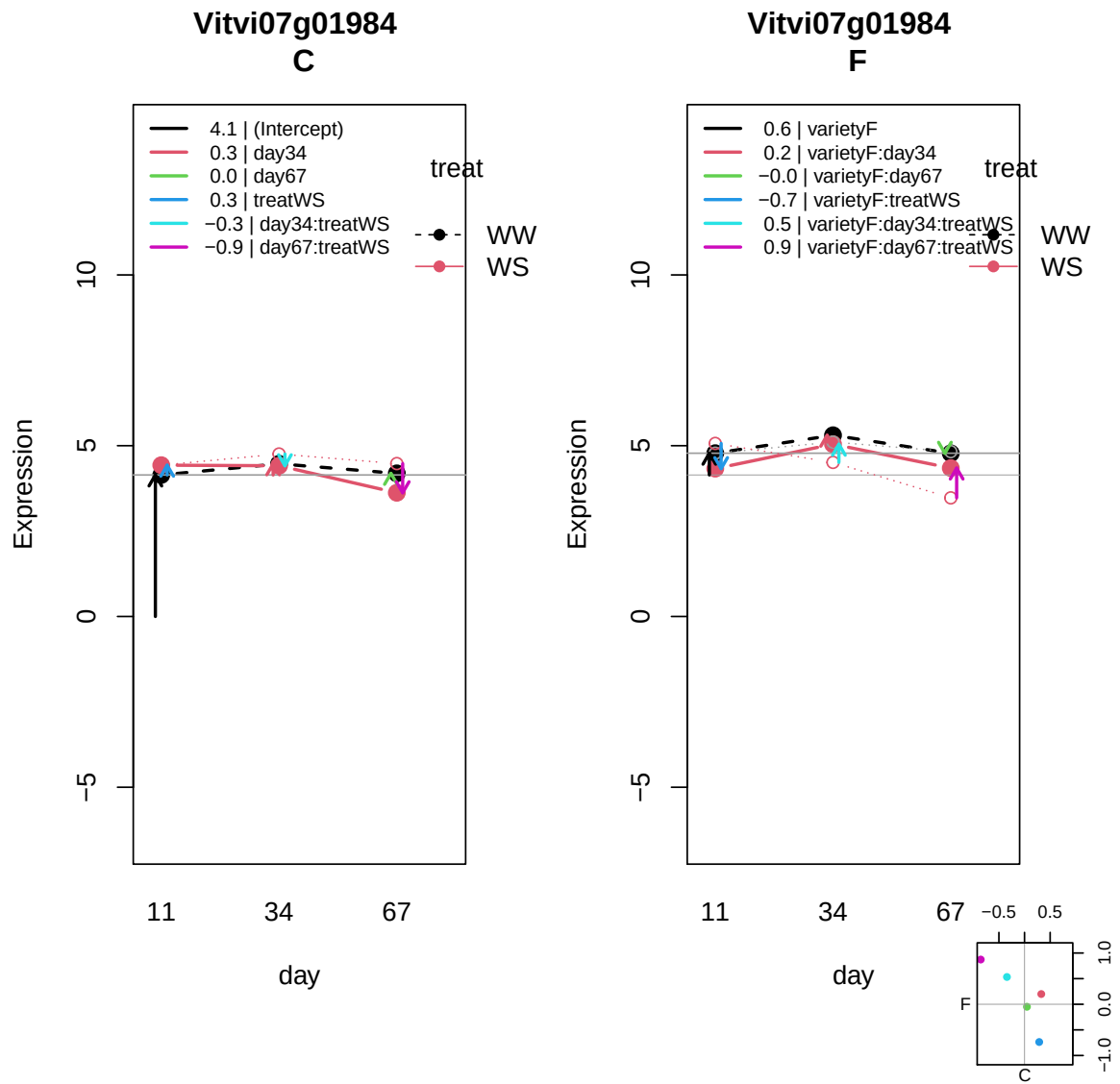
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

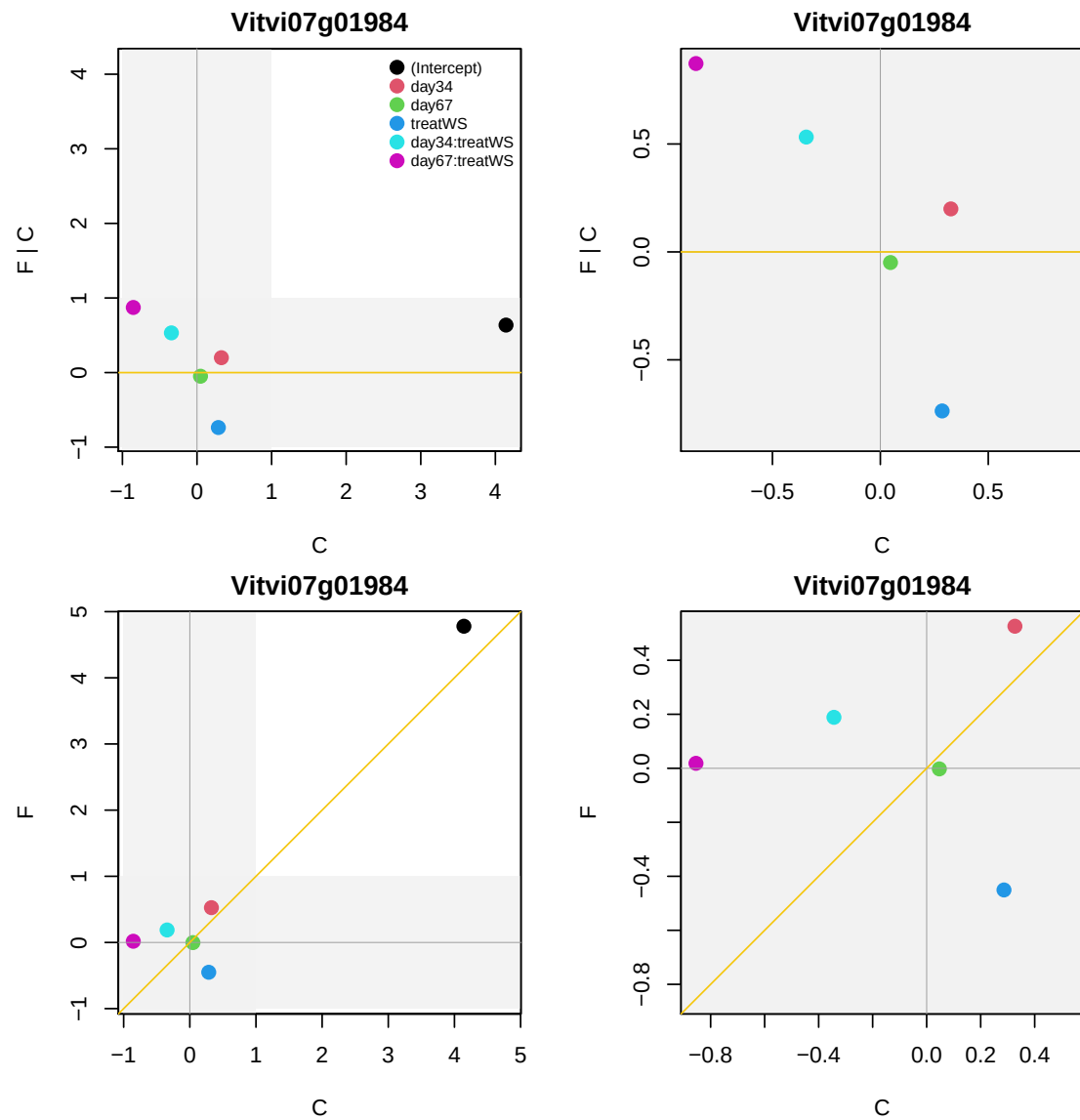


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

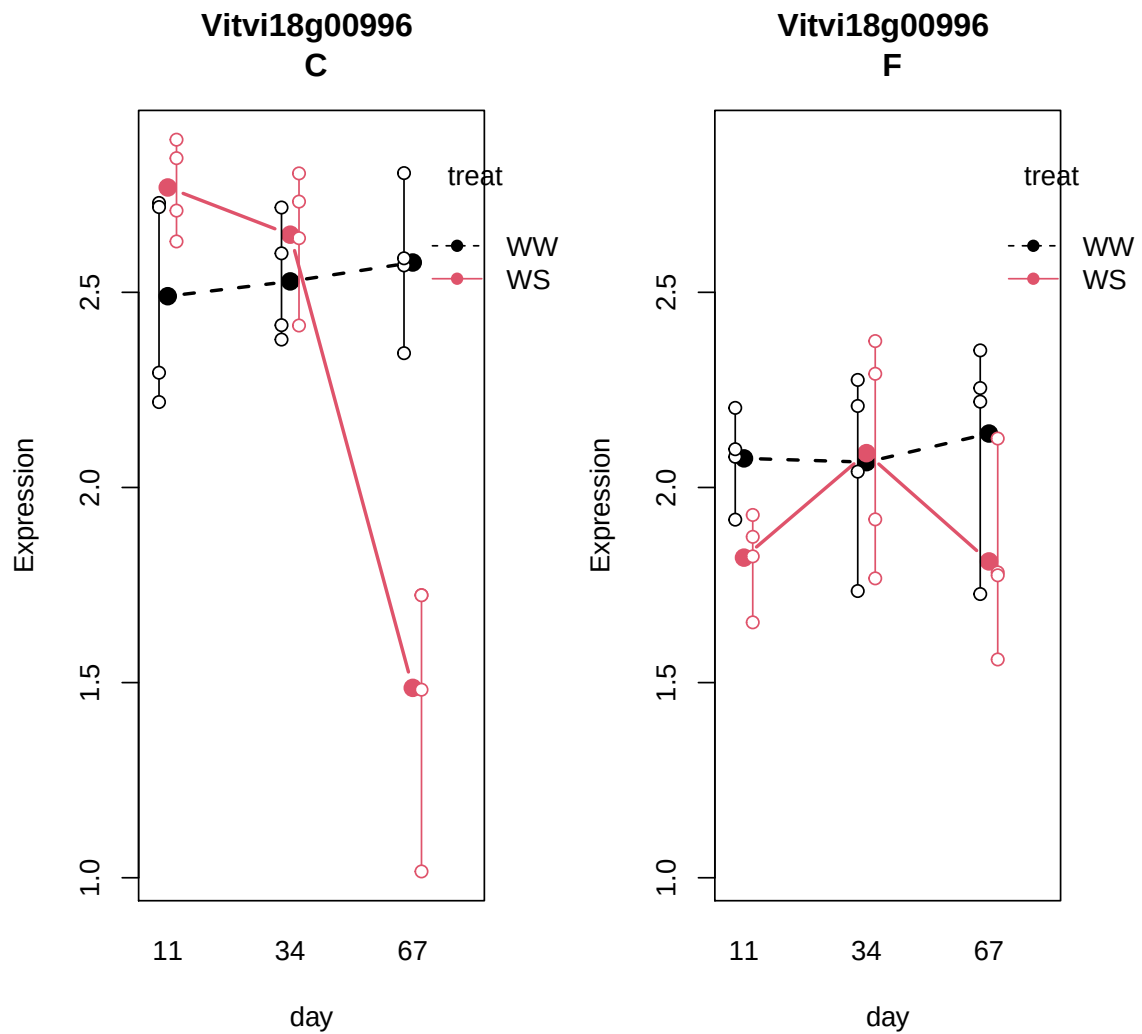
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



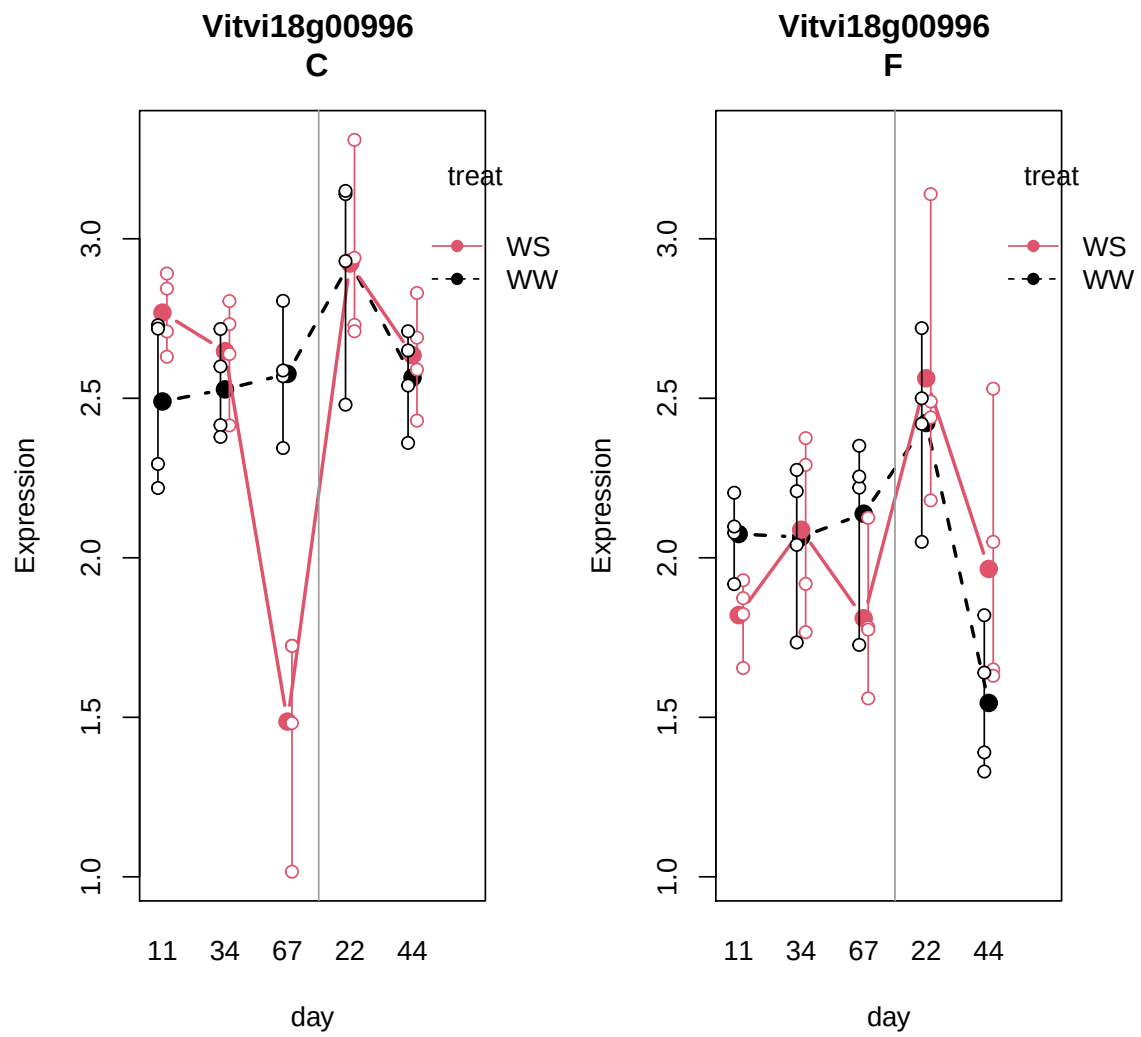
6.12.71 Vitvi18g00996

Coefficient varietyF:day67:treatWS for Vitvi18g00996.

```
> tt[varname,]
              logFC  AveExpr      t      P.Value
Vitvi18g00996 1.295062 2.207796 4.151322 0.0001753103
              adj.P.Val      B
Vitvi18g00996 0.03726067 0.7846163
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

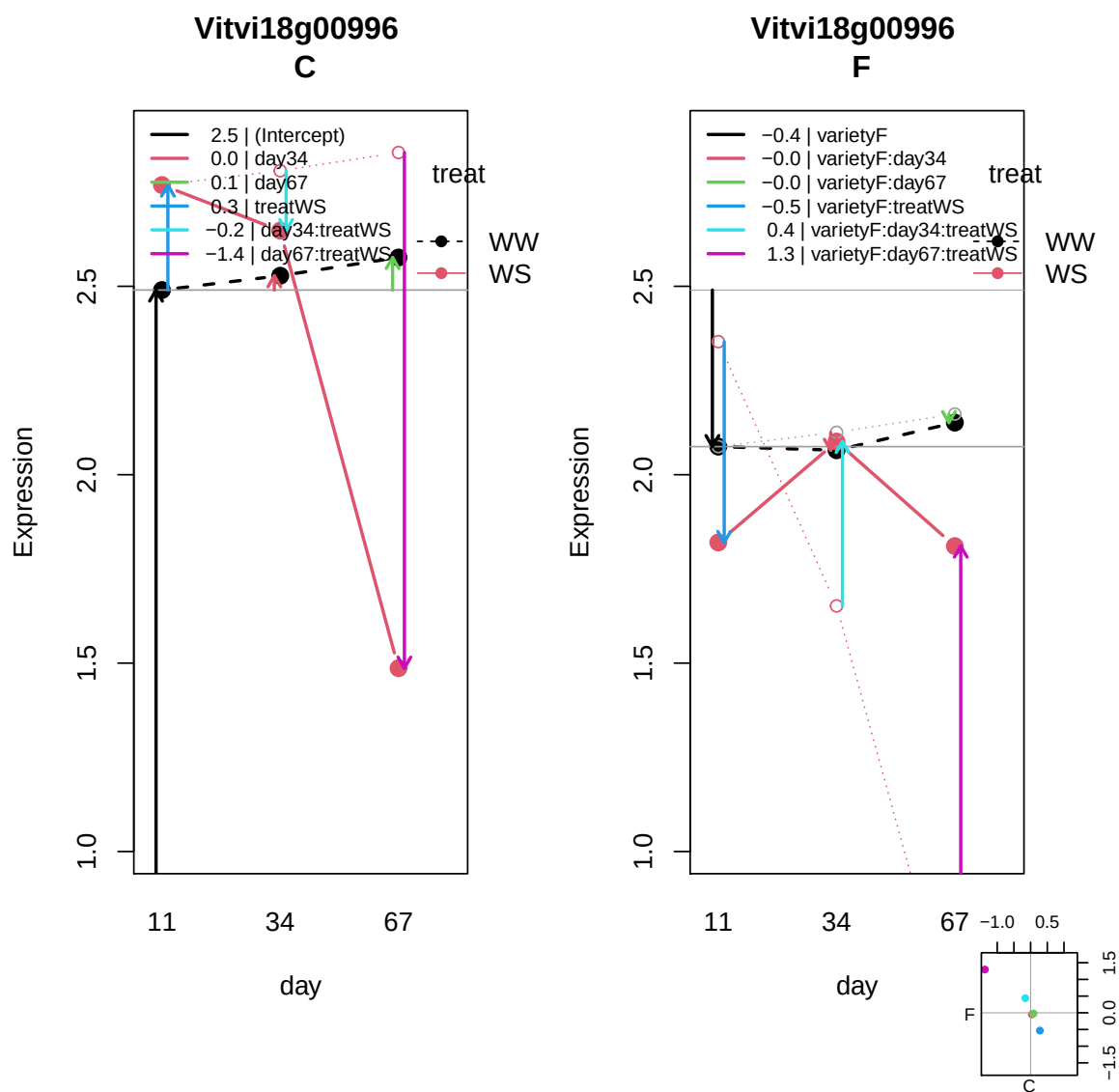
              (Intercept)  varietyF      day34      day67
Vitvi18g00996    2.490048 -0.415522  0.03793528  0.08635992
              treatWS  varietyF:day34  varietyF:day67
Vitvi18g00996  0.2785758   -0.04760083   -0.02269748
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi18g00996   -0.5328651   -0.158848   -1.368438
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi18g00996           0.4361812           1.295062

```

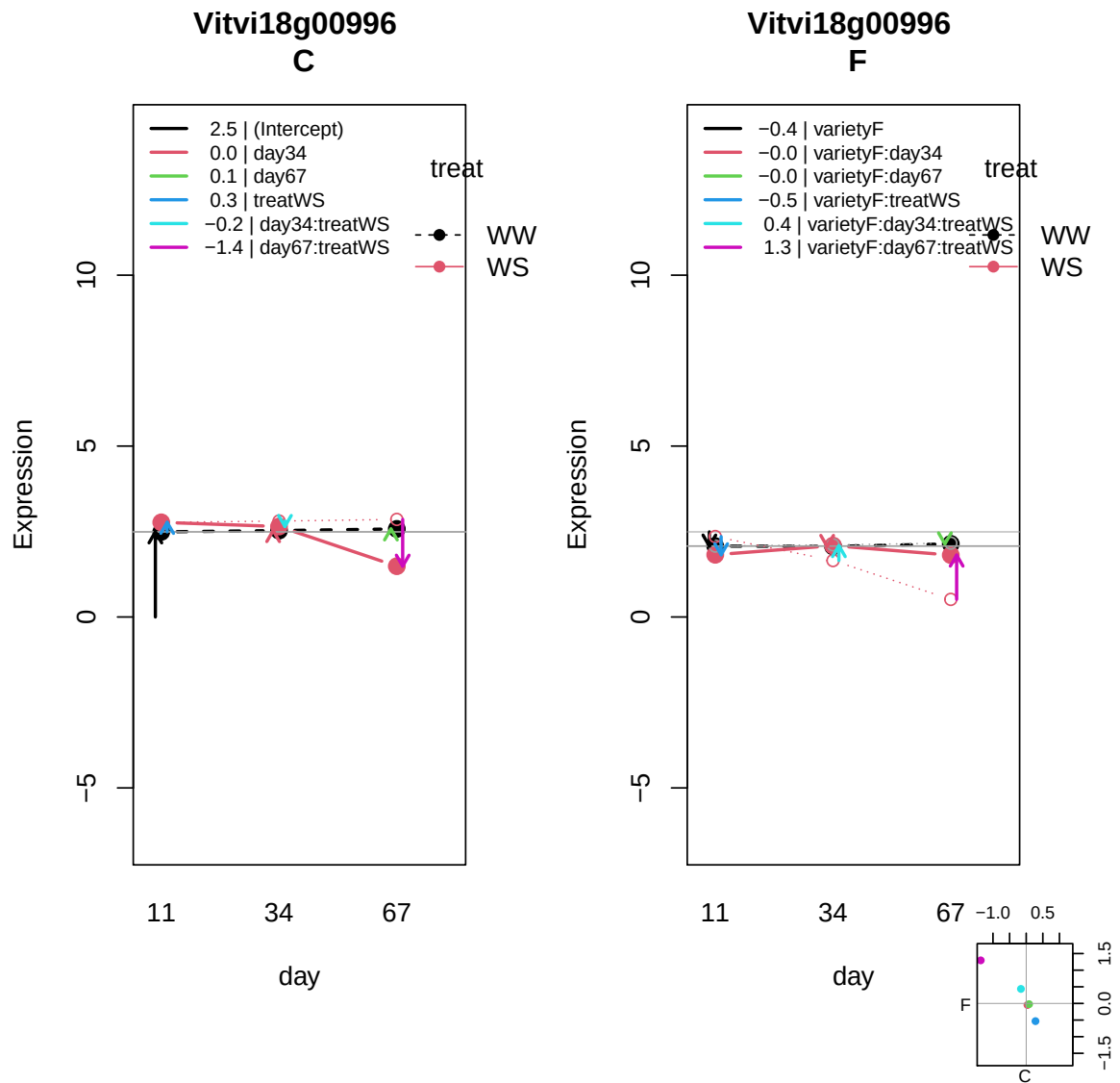
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

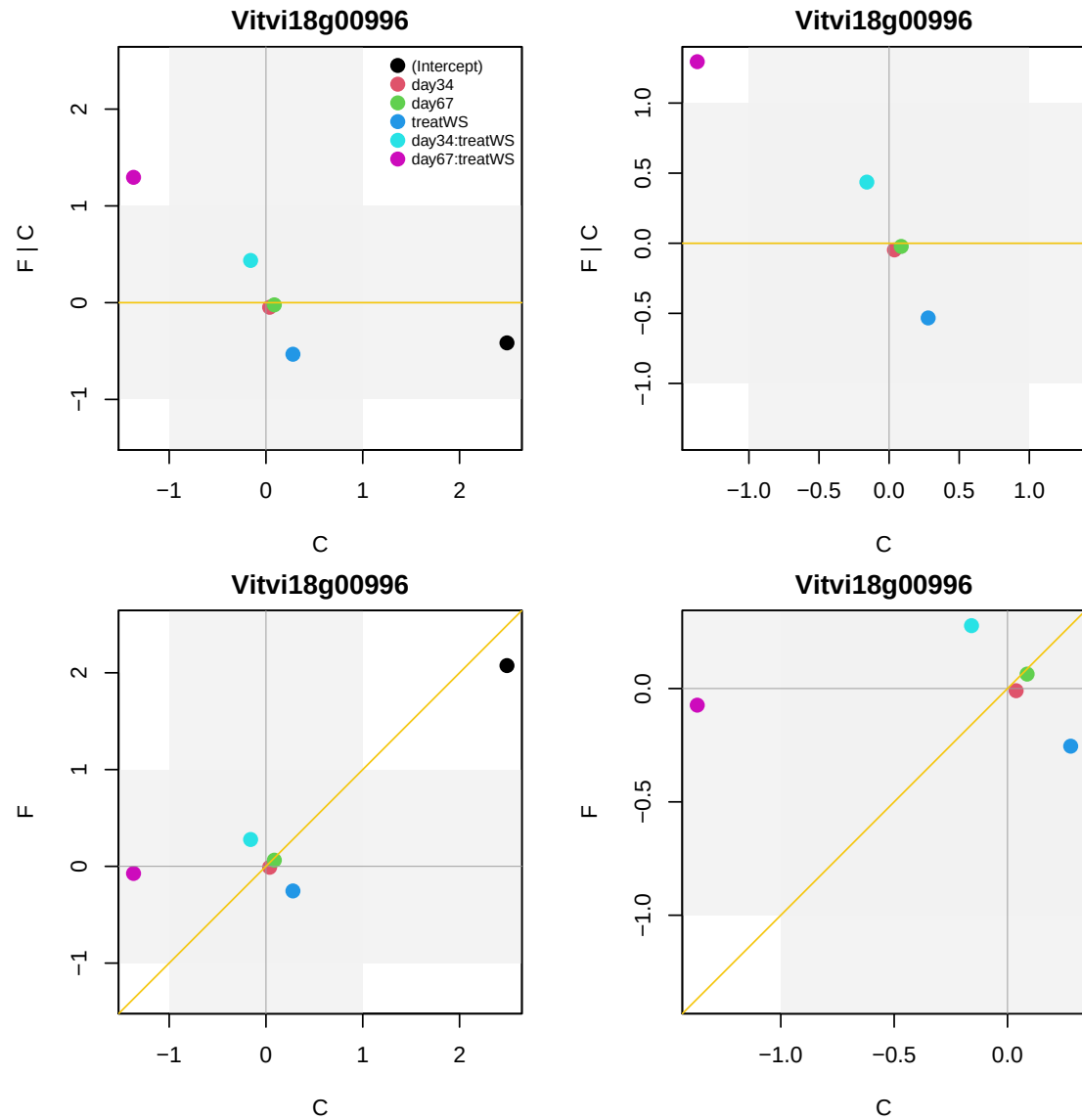


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

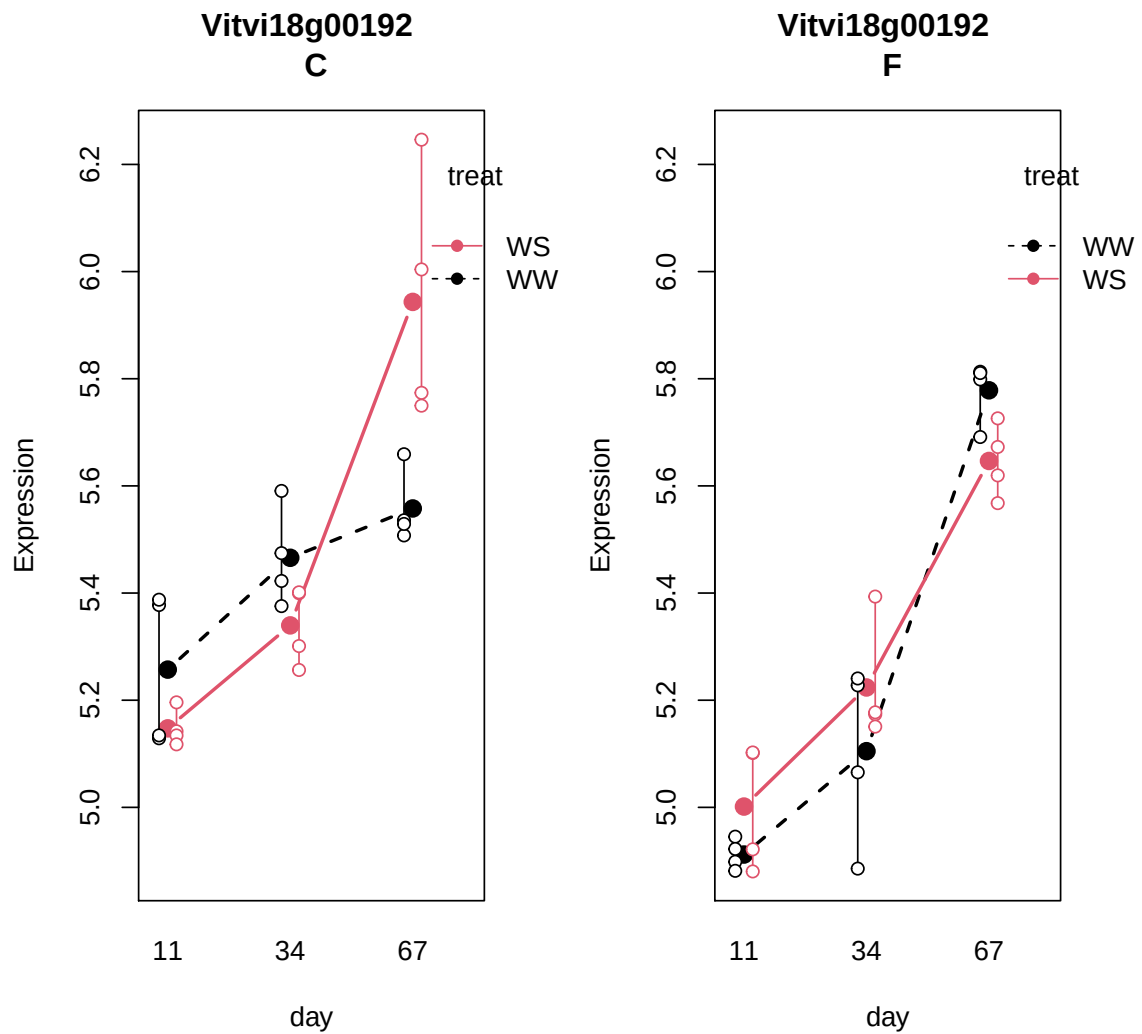


6.12.72 Vitvi18g00192

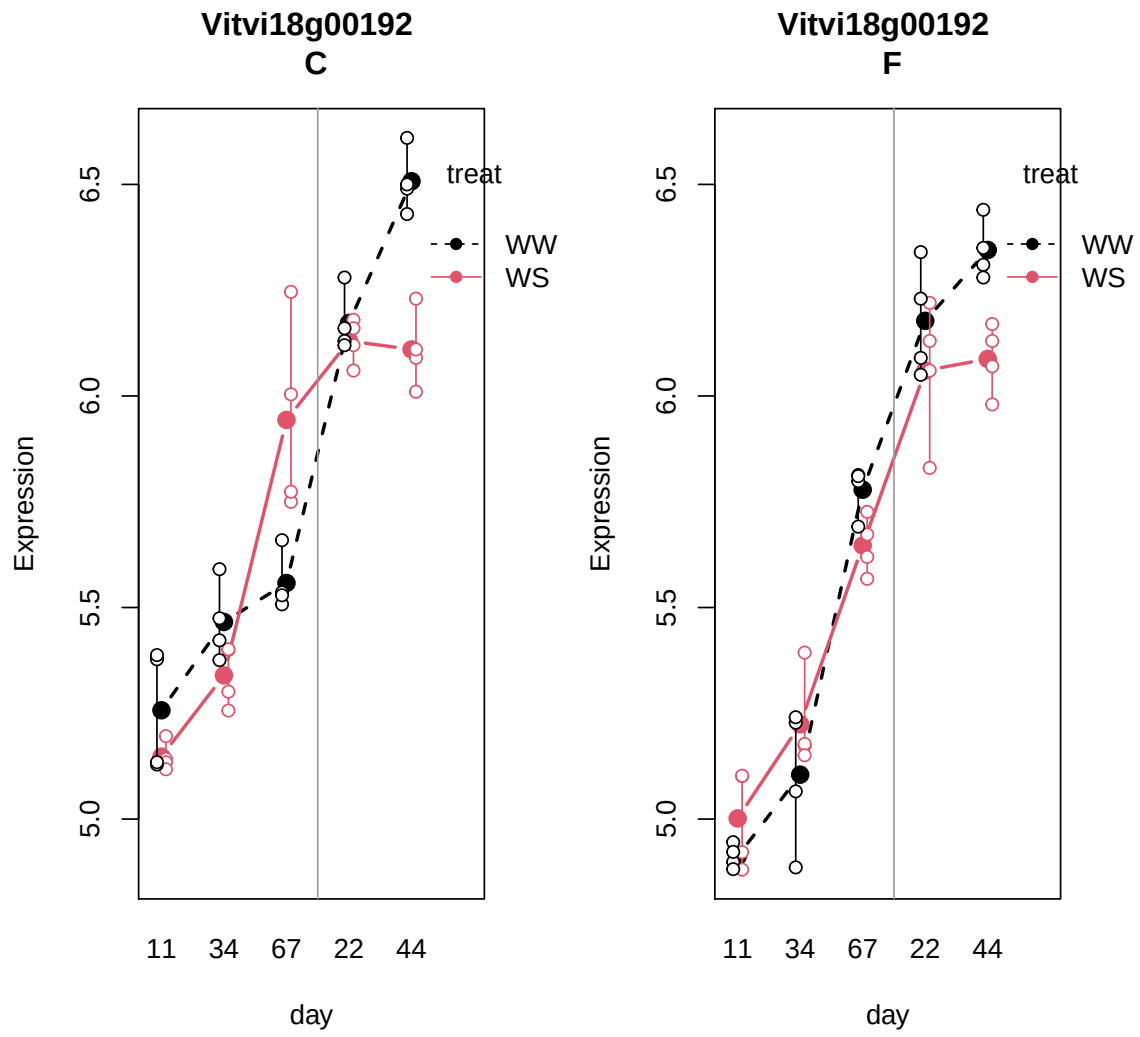
Coefficient varietyF:day67:treatWS for Vitvi18g00192.

```
> tt[varname,]
              logFC AveExpr      t      P.Value
Vitvi18g00192 -0.7165717 5.364862 -4.149999 0.0001760115
              adj.P.Val      B
Vitvi18g00192 0.03726067 0.7810692

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



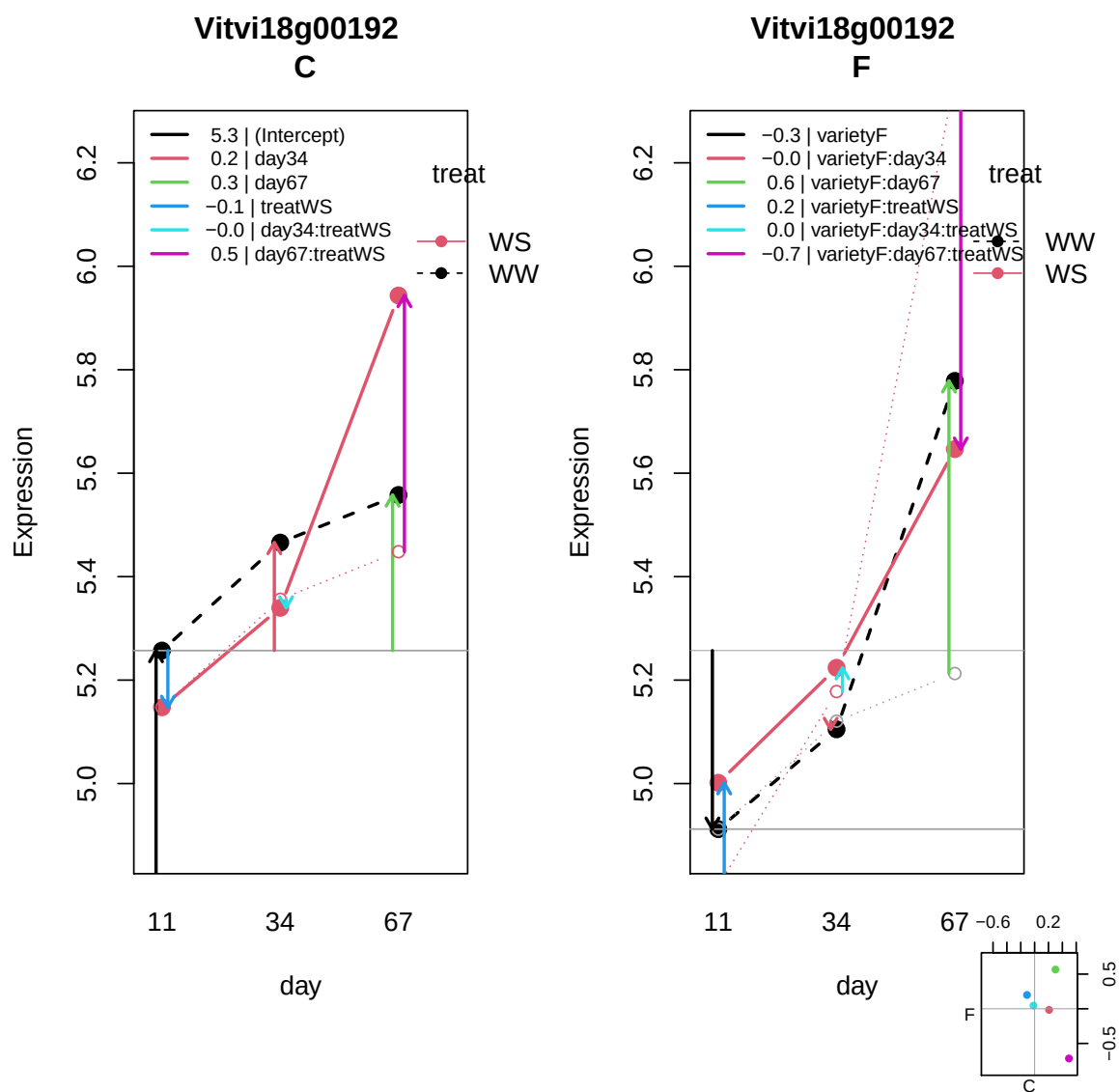

```

> fit1[varname,]$coefficients

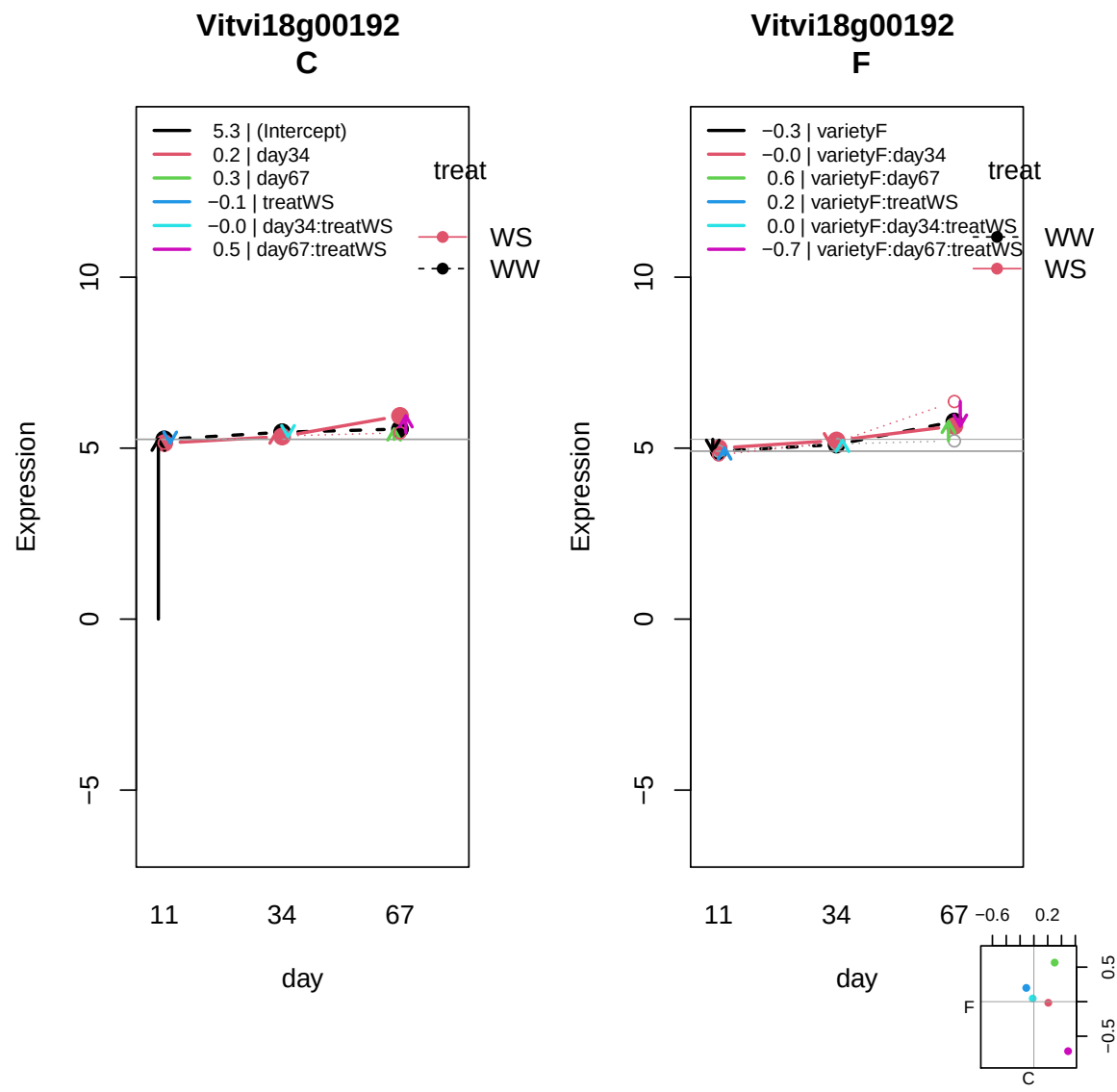
              (Intercept)  varietyF    day34    day67
Vitvi18g00192      5.25711 -0.3451431 0.208711 0.3007507
              treatWS varietyF:day34 varietyF:day67
Vitvi18g00192 -0.1096312    -0.01579769    0.5656756
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi18g00192      0.1991588    -0.01655759    0.4951739
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi18g00192      0.04593332    -0.7165717

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

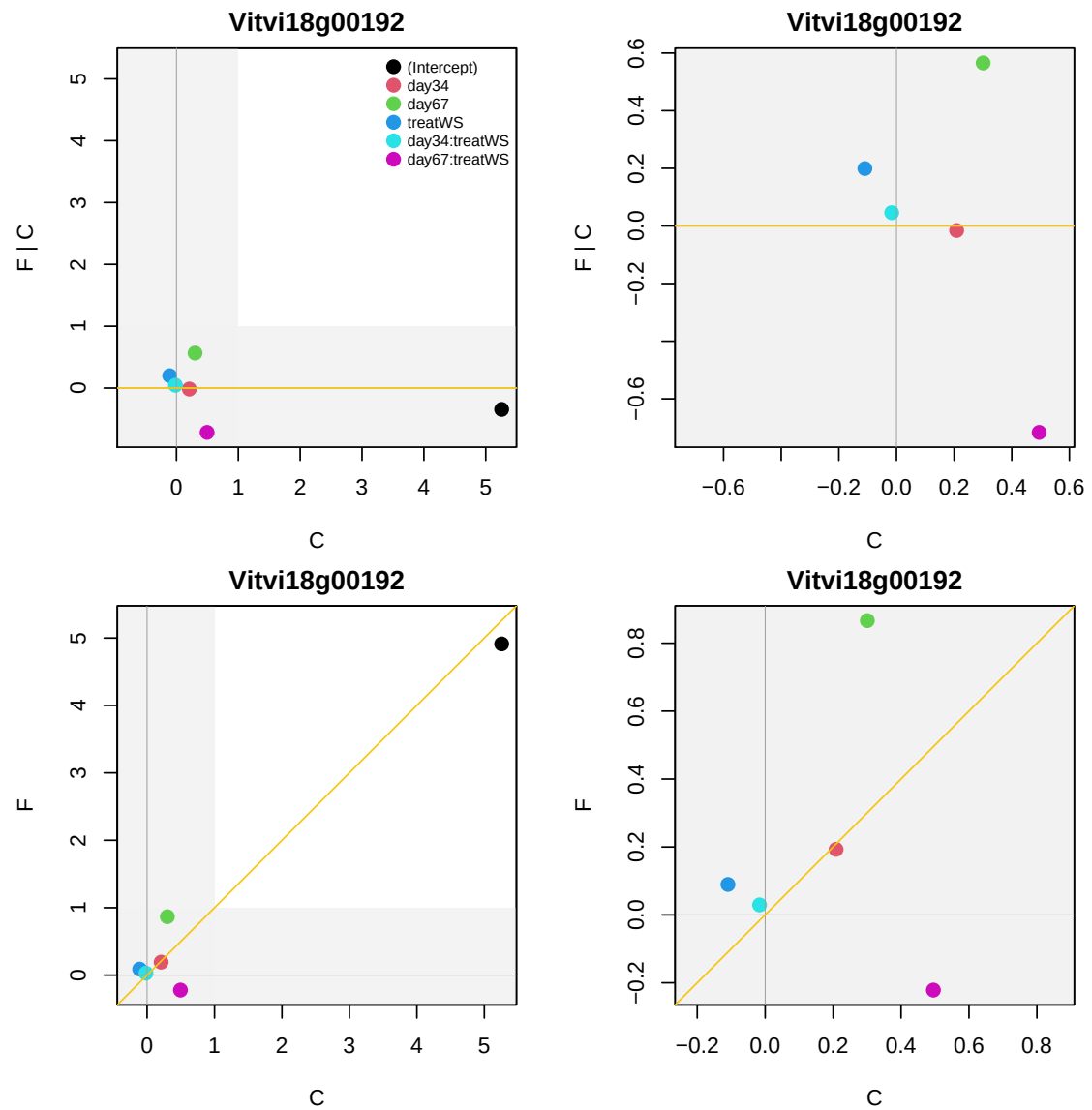


```
> coefs <- plot.interactions(varname,  
+ coef=fit1[varname,]$coefficients,  
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

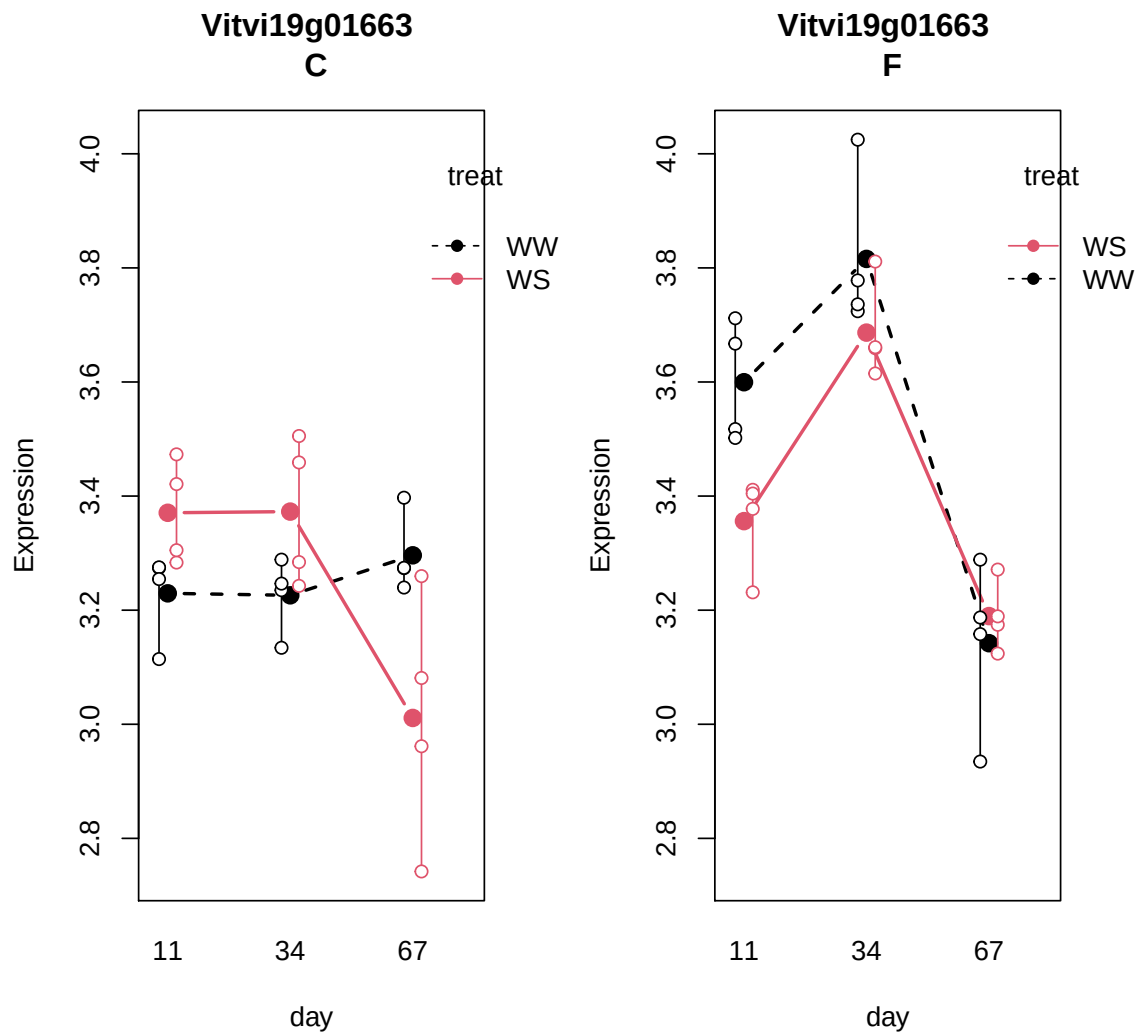


6.12.73 Vitvi19g01663

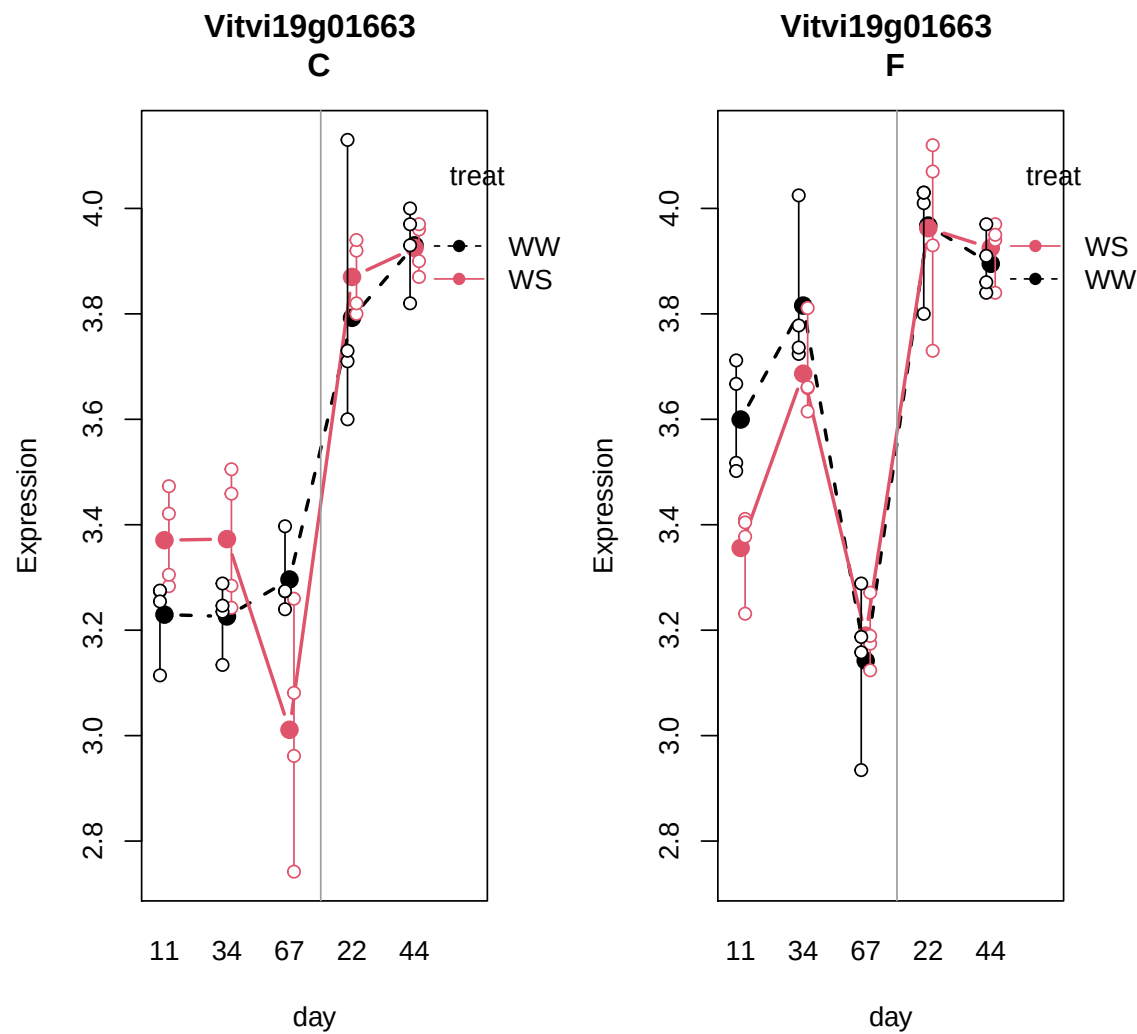
Coefficient varietyF:day67:treatWS for Vitvi19g01663.

```
> tt[varname,]
               logFC AveExpr      t      P.Value
Vitvi19g01663 0.7173537   3.358 4.144486 0.0001789638
               adj.P.Val      B
Vitvi19g01663 0.03736666 0.7662895

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

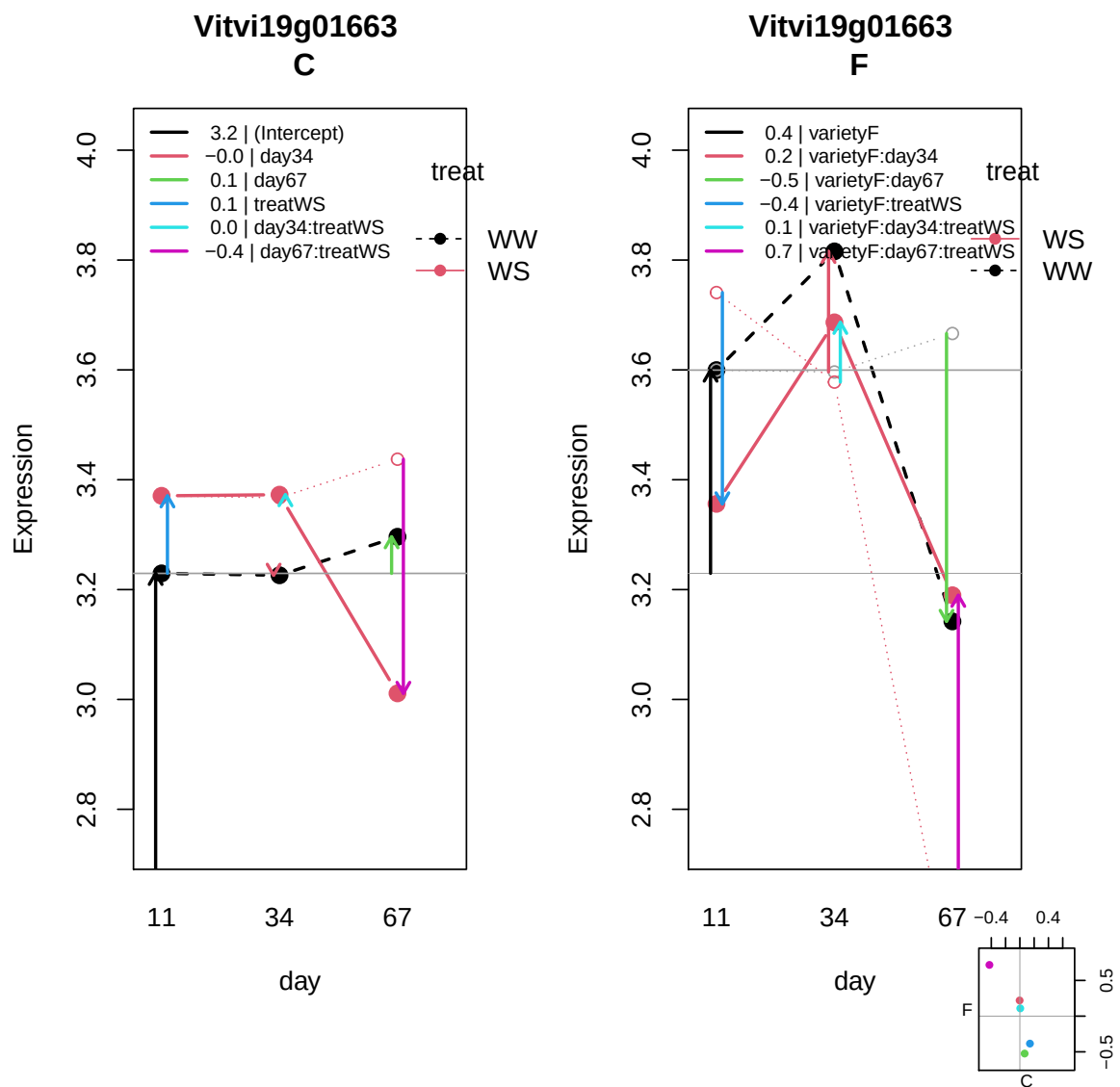
              (Intercept)  varietyF      day34      day67
Vitvi19g01663    3.229511 0.3700745 -0.003449615 0.0666603
              treatWS varietyF:day34 varietyF:day67
Vitvi19g01663  0.1411929    0.2195965    -0.5241519
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi19g01663    -0.3847058    0.005528059    -0.4262857
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi19g01663          0.1088075          0.7173537

```

```

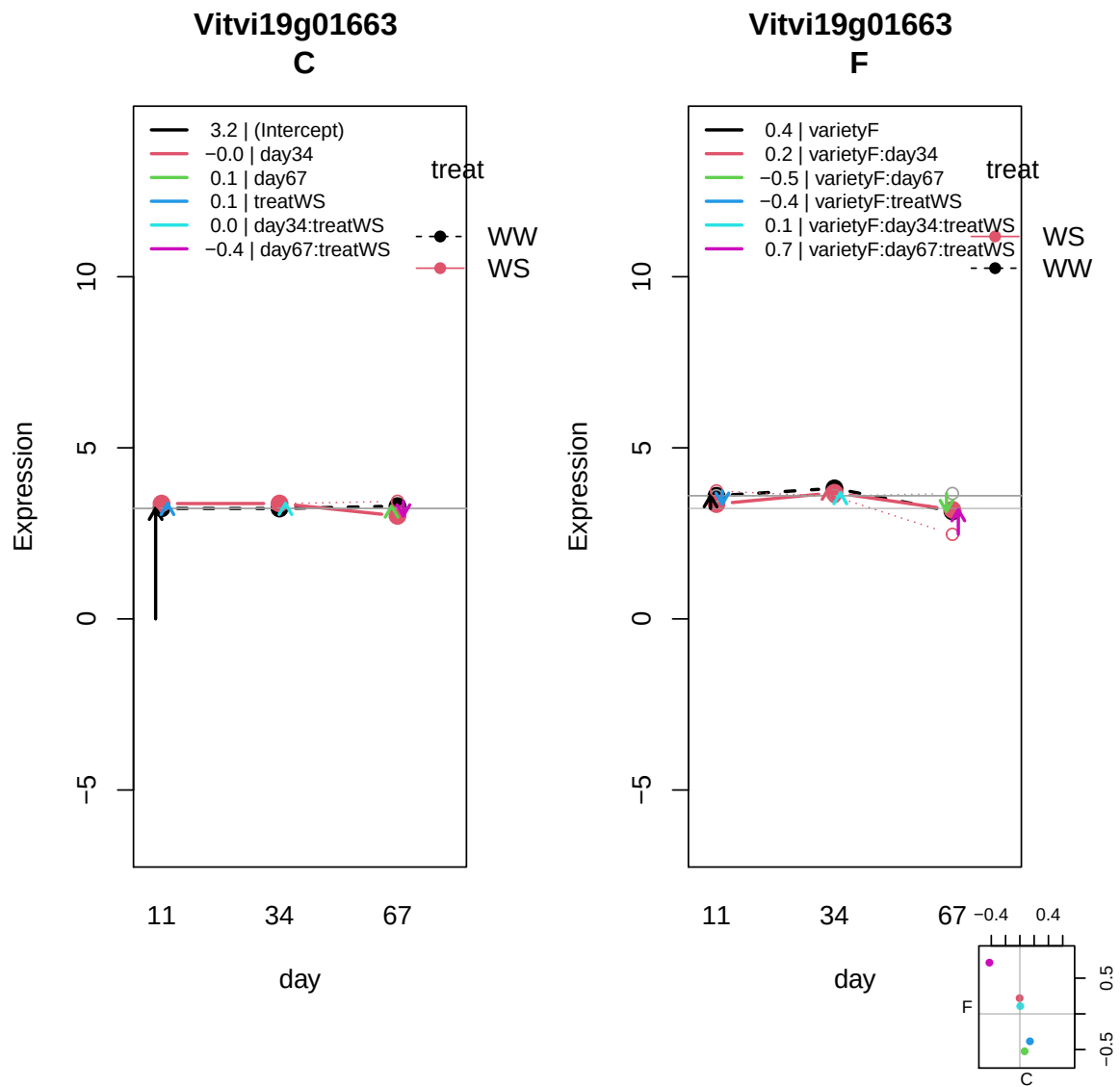
> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



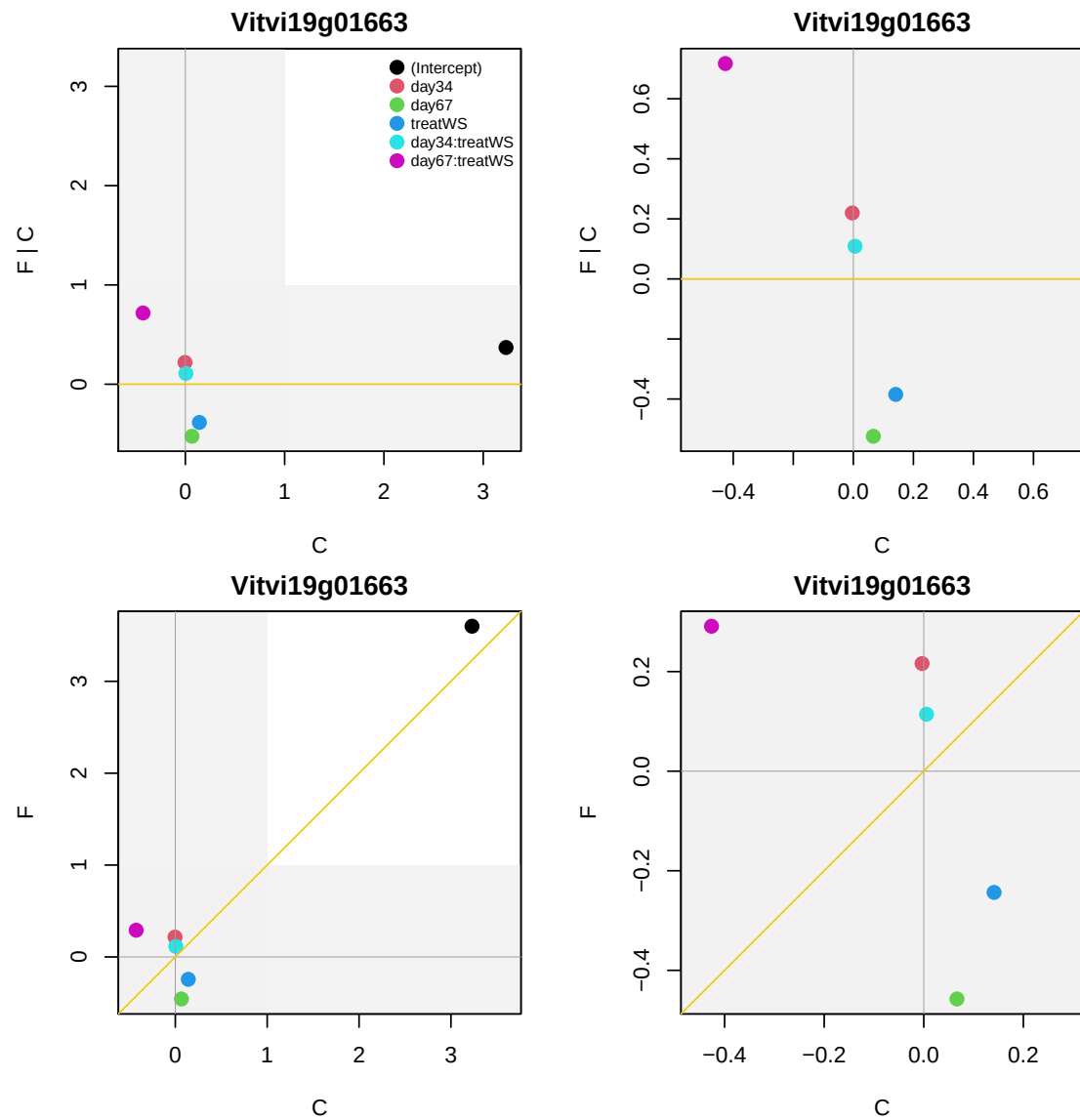
```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```

Warning in arrows(1:ndays - d, es, 1:ndays - d, esF, col = cl + 1:ndays, : zero



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

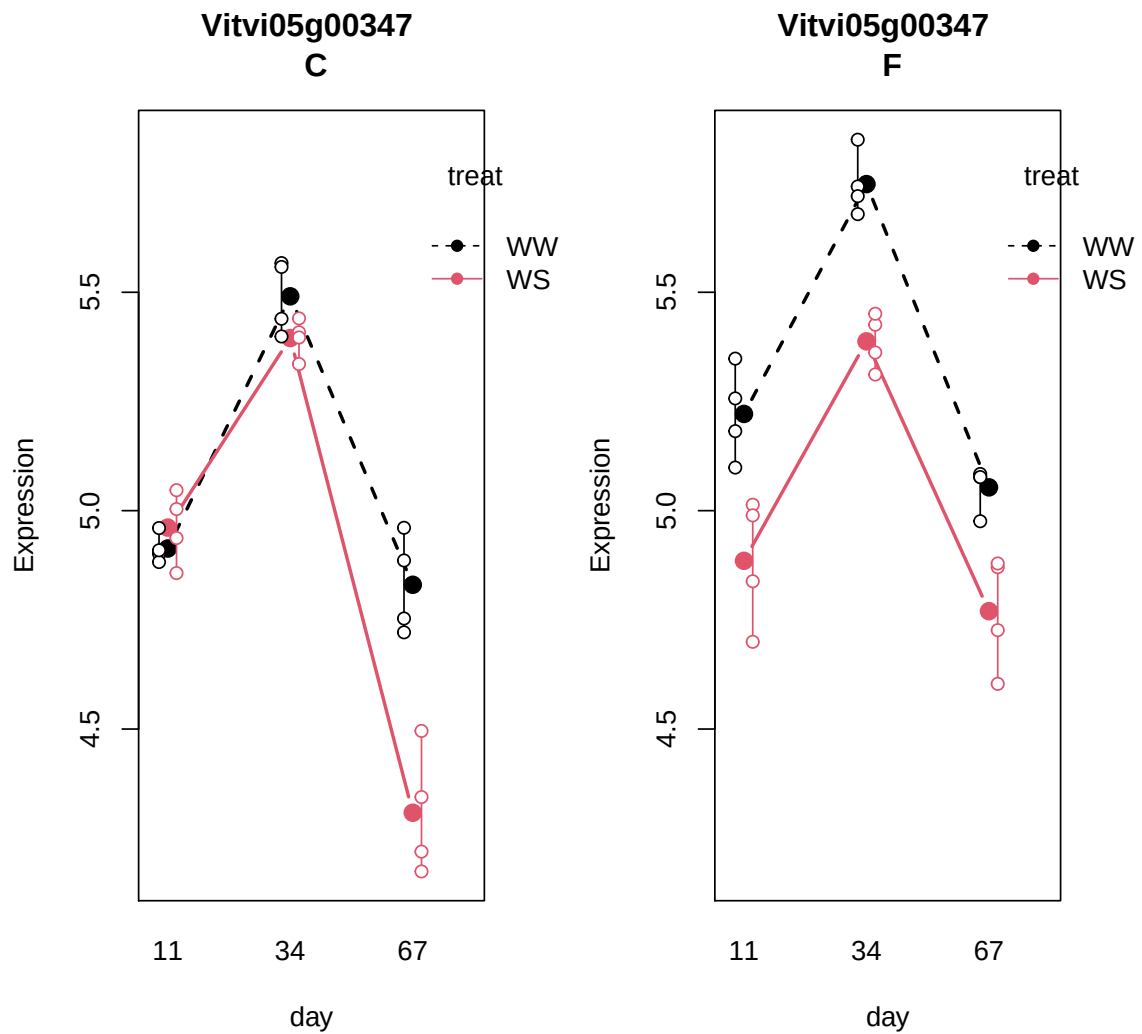


6.12.74 Vitvi05g00347

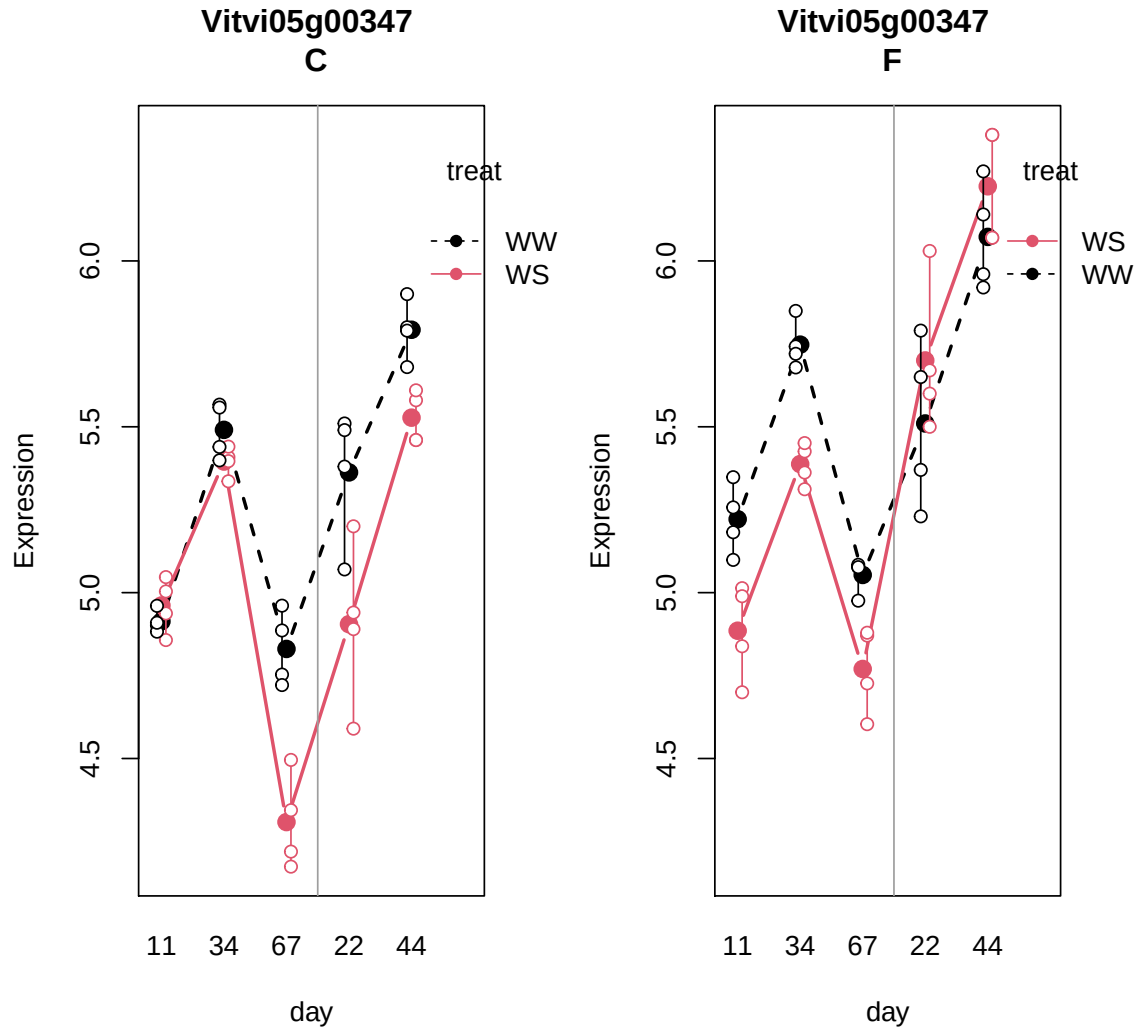
Coefficient varietyF:day67:treatWS for Vitvi05g00347.

```
> tt[varname,]
               logFC  AveExpr      t      P.Value
Vitvi05g00347 0.6227073 5.080367 4.128525 0.0001877868
               adj.P.Val      B
Vitvi05g00347 0.0385592 0.7235338

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

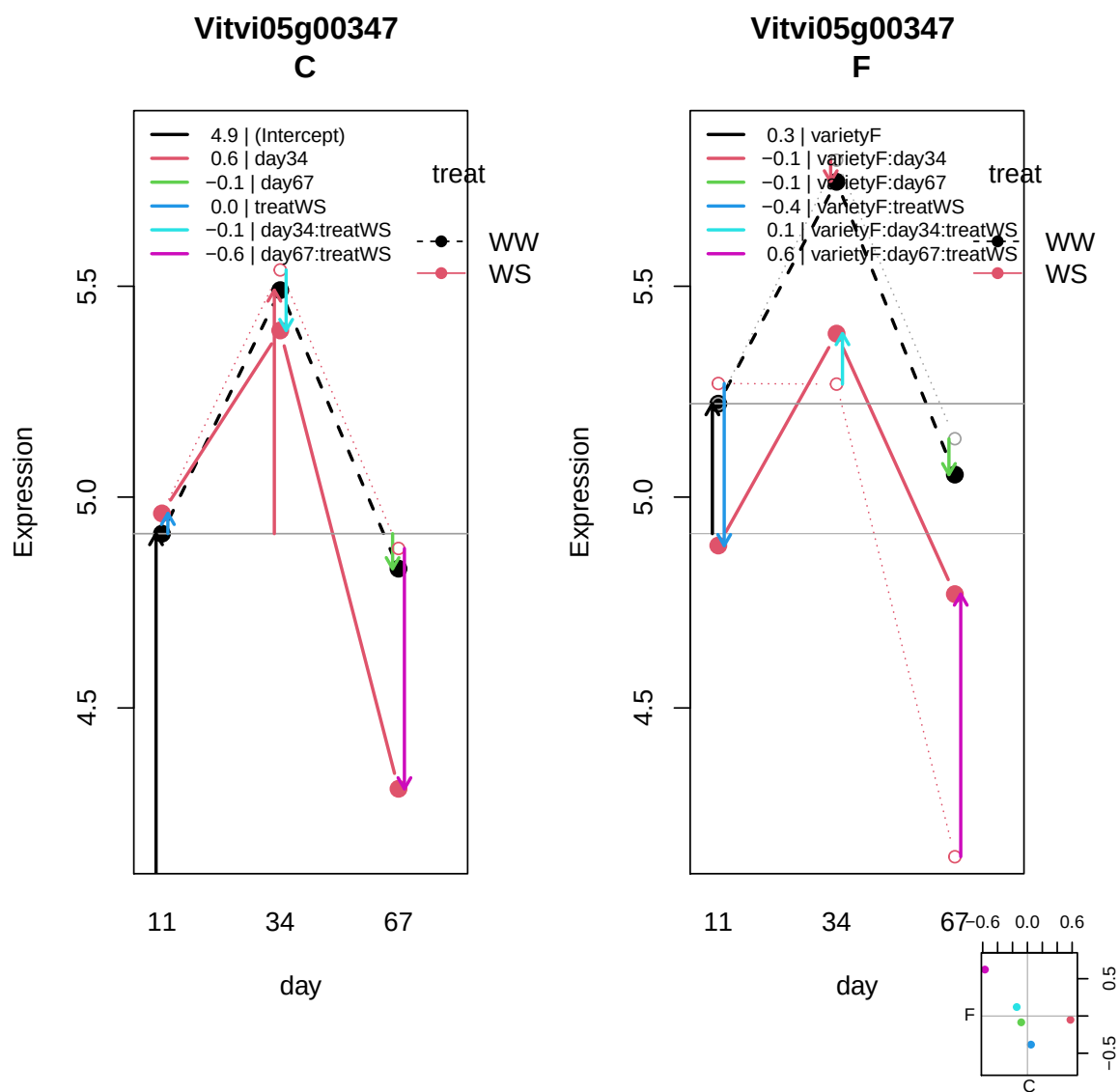
              (Intercept)  varietyF      day34      day67
Vitvi05g00347      4.913329 0.3081377 0.5774211 -0.08301384
              treatWS varietyF:day34 varietyF:day67
Vitvi05g00347 0.04792123   -0.05126073   -0.08508455
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi05g00347      -0.384183   -0.1434703   -0.569892
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi05g00347              0.1197321              0.6227073

```

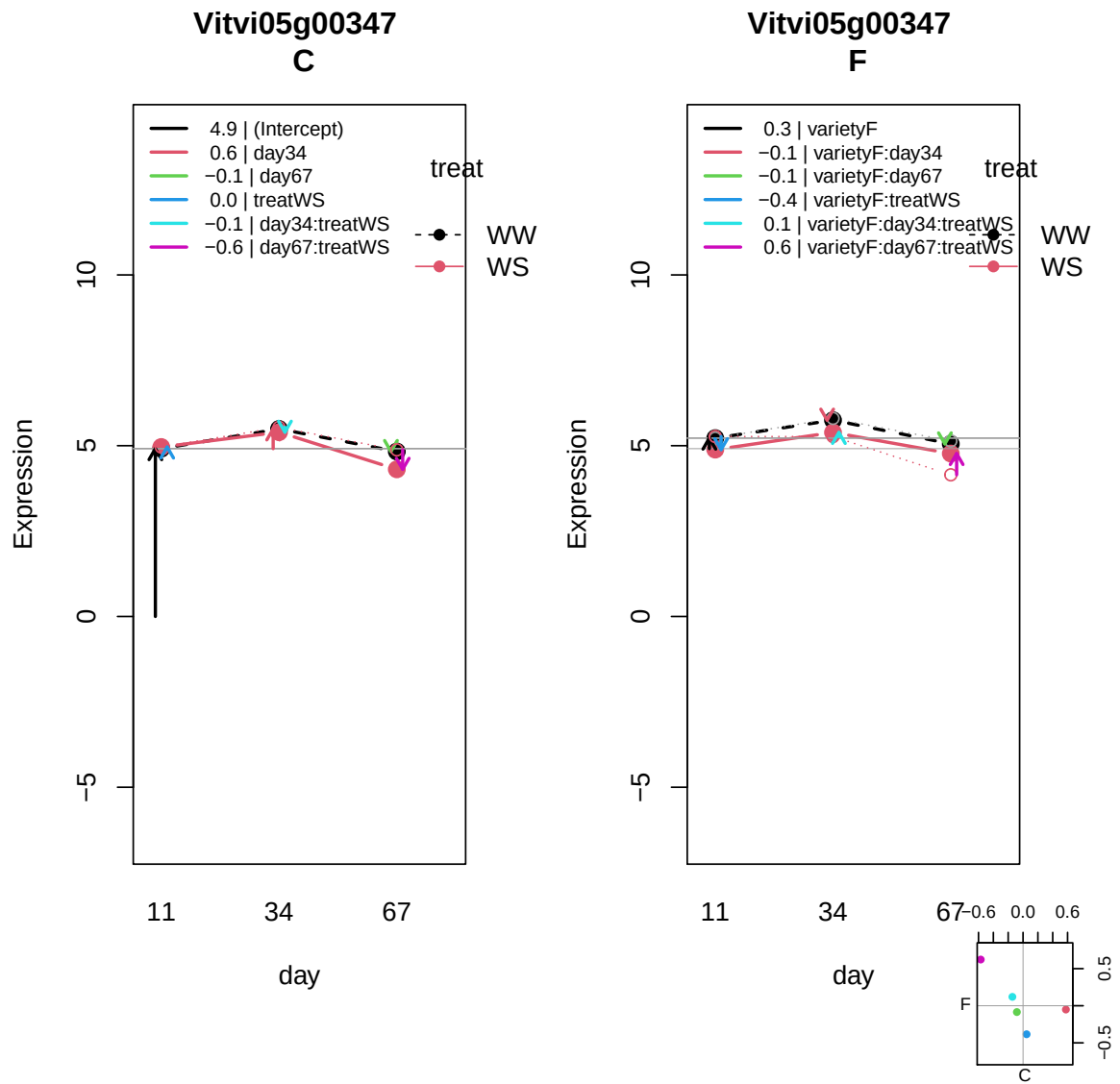
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

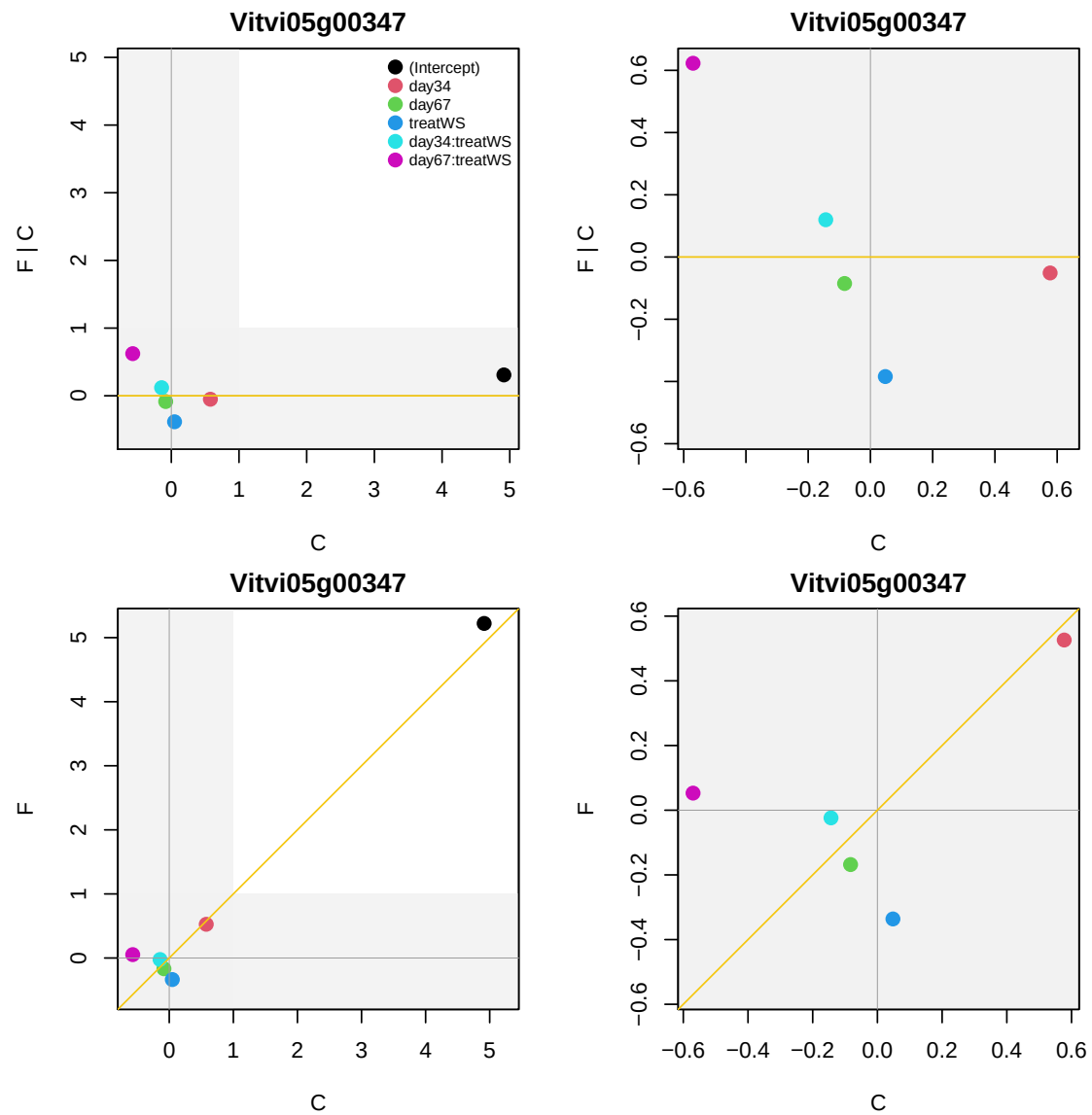


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



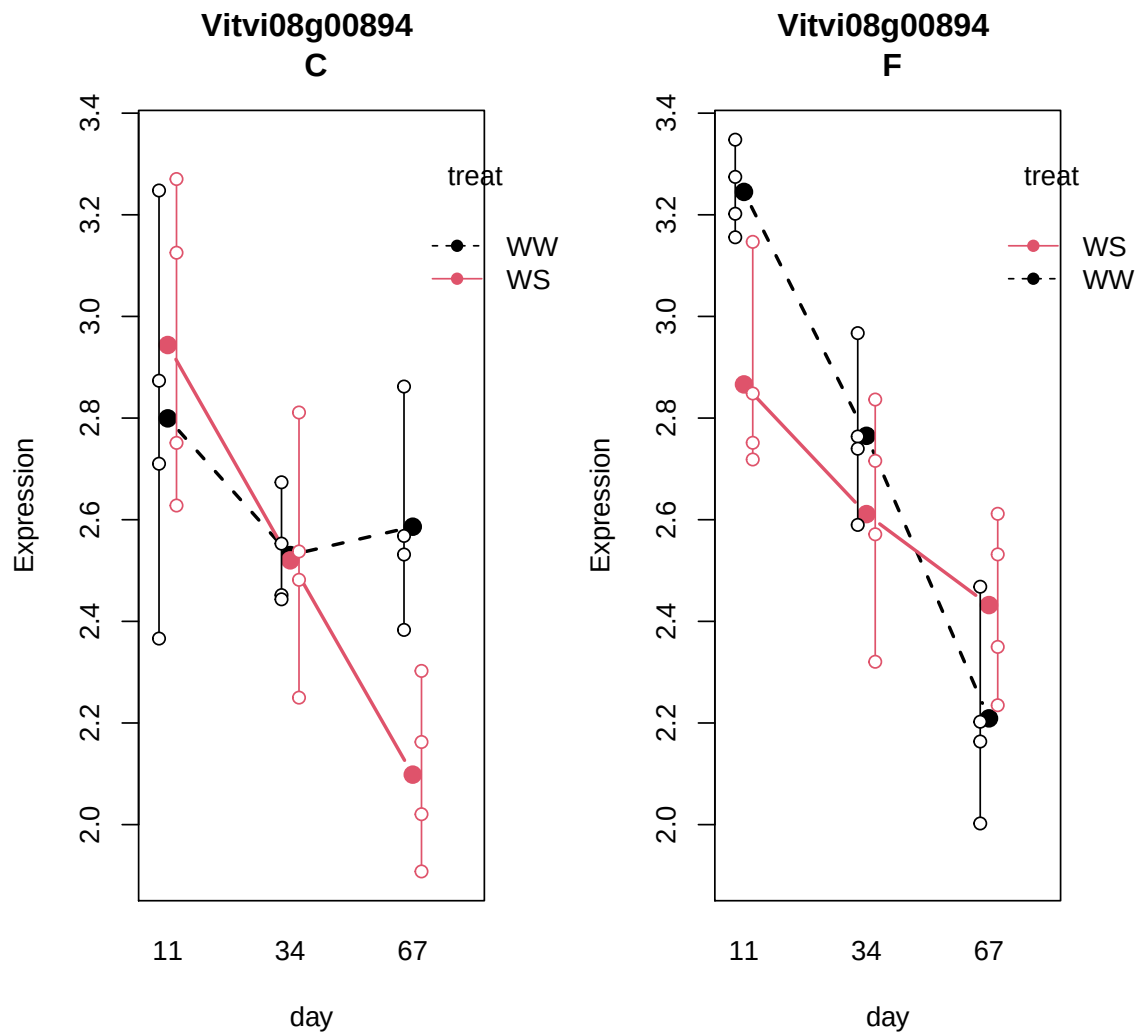
6.12.75 Vitvi08g00894

Coefficient varietyF:day67:treatWS for Vitvi08g00894.

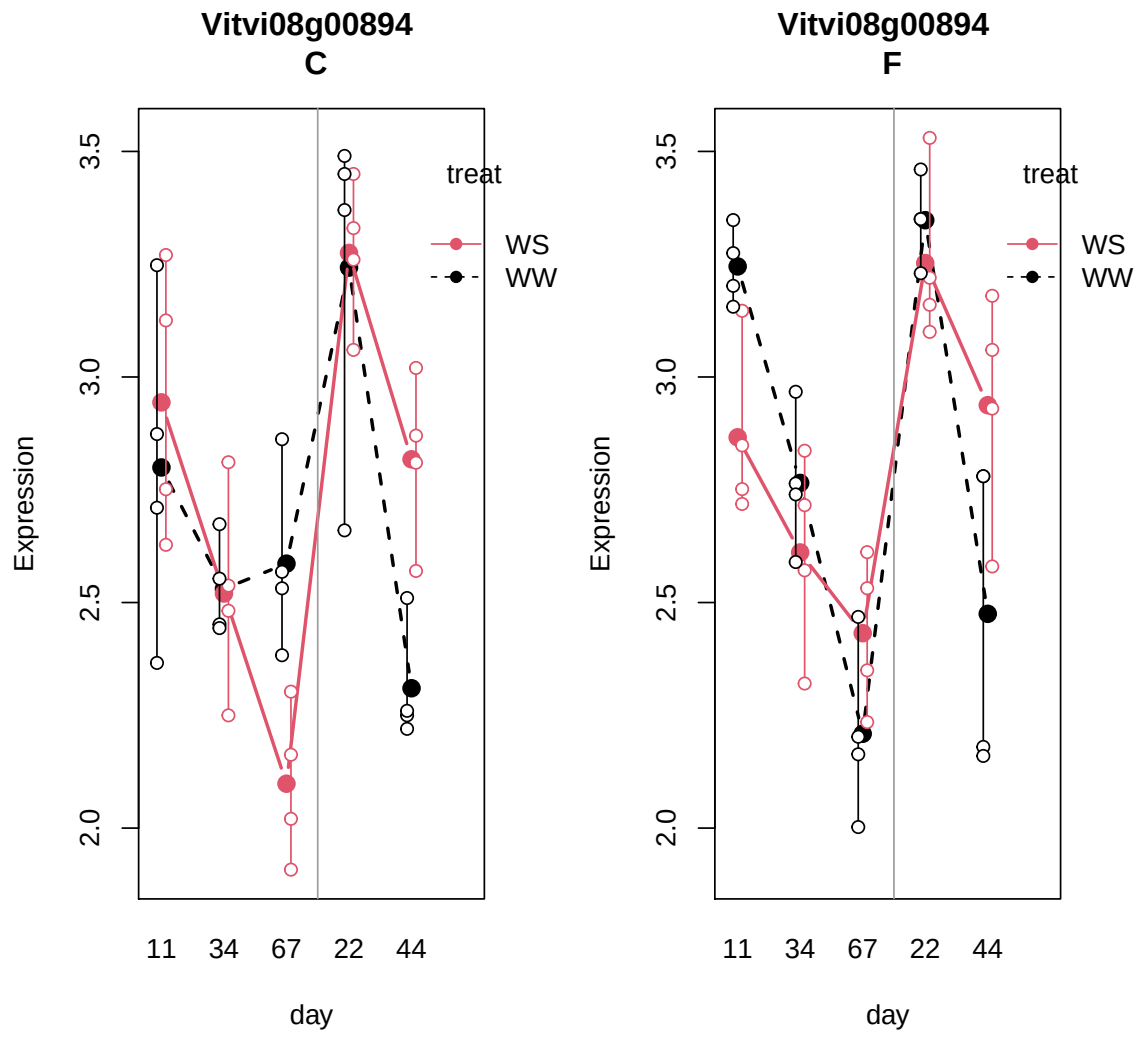
```
> tt[varname,]
```

	logFC	AveExpr	t	P.Value
Vitvi08g00894	1.233822	2.633897	4.115194	0.00019548
	adj.P.Val	B		
Vitvi08g00894	0.0385592	0.6878666		

```
> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

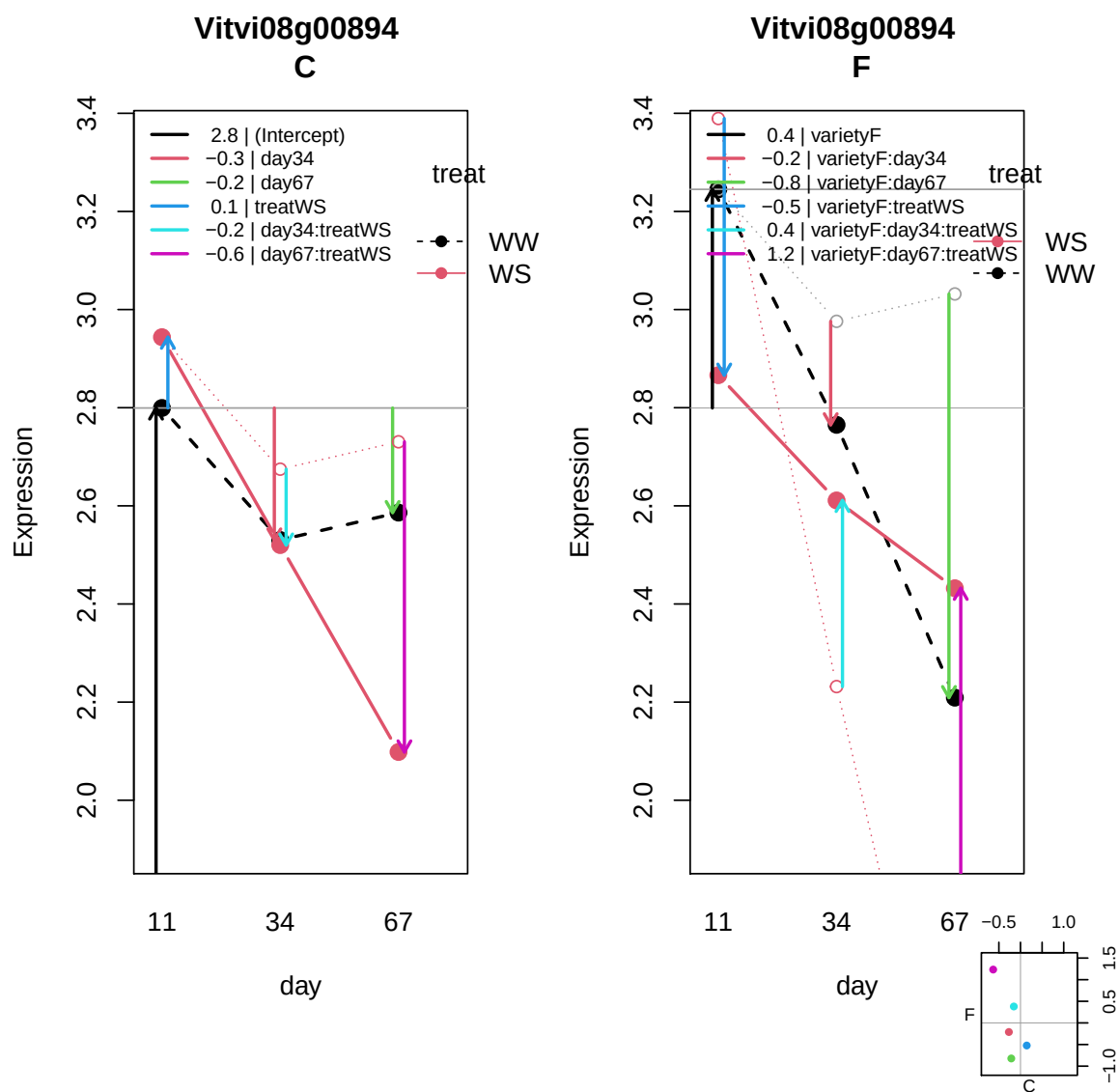
              (Intercept)  varietyF      day34      day67
Vitvi08g00894      2.799403 0.4456357 -0.2690047 -0.2131885
              treatWS  varietyF:day34  varietyF:day67
Vitvi08g00894 0.1443261      -0.2109353      -0.8227228
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi08g00894      -0.5231067      -0.1546692      -0.6321492
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi08g00894              0.3793883              1.233822

```

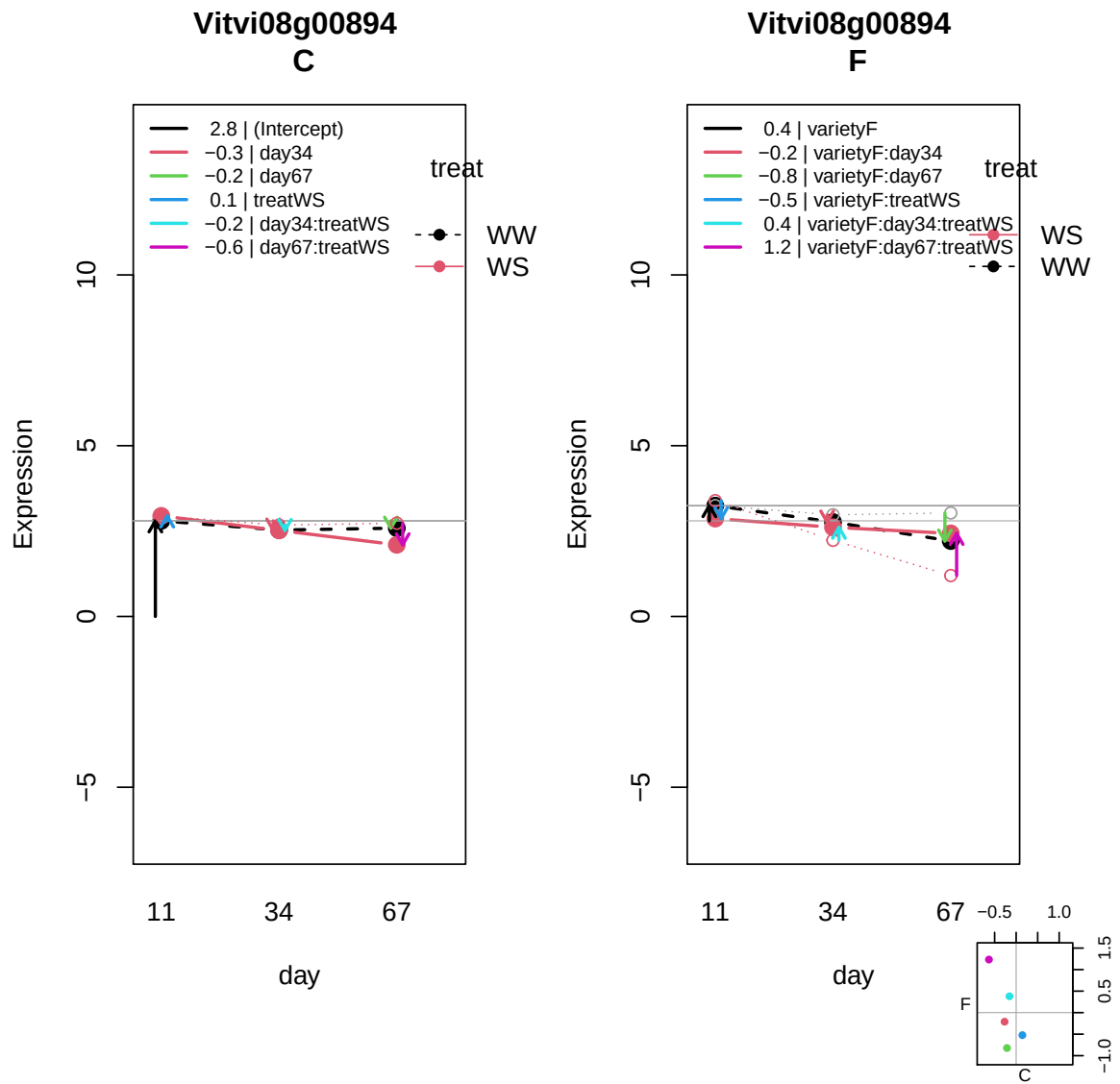
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

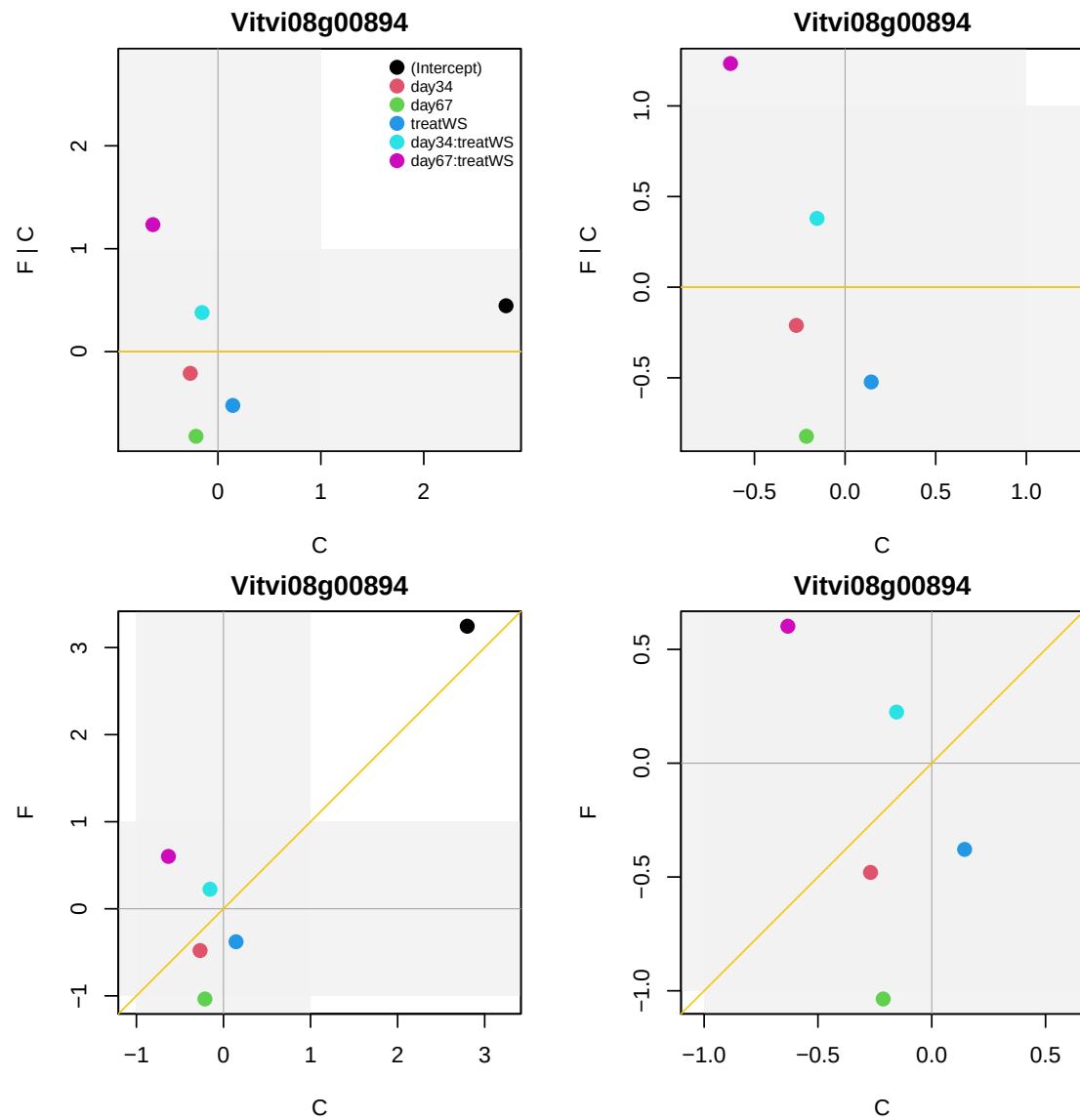



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

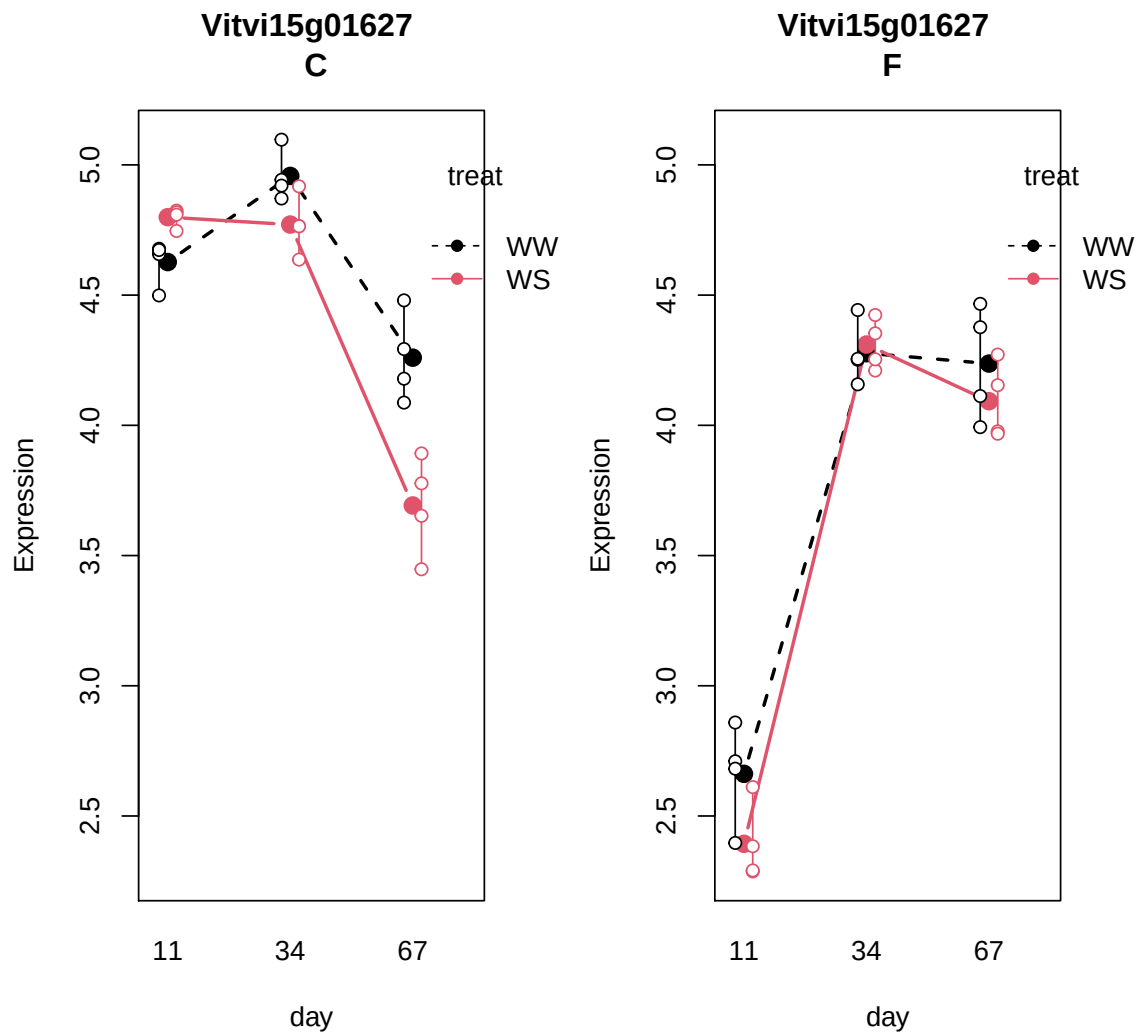


6.12.76 Vitvi15g01627

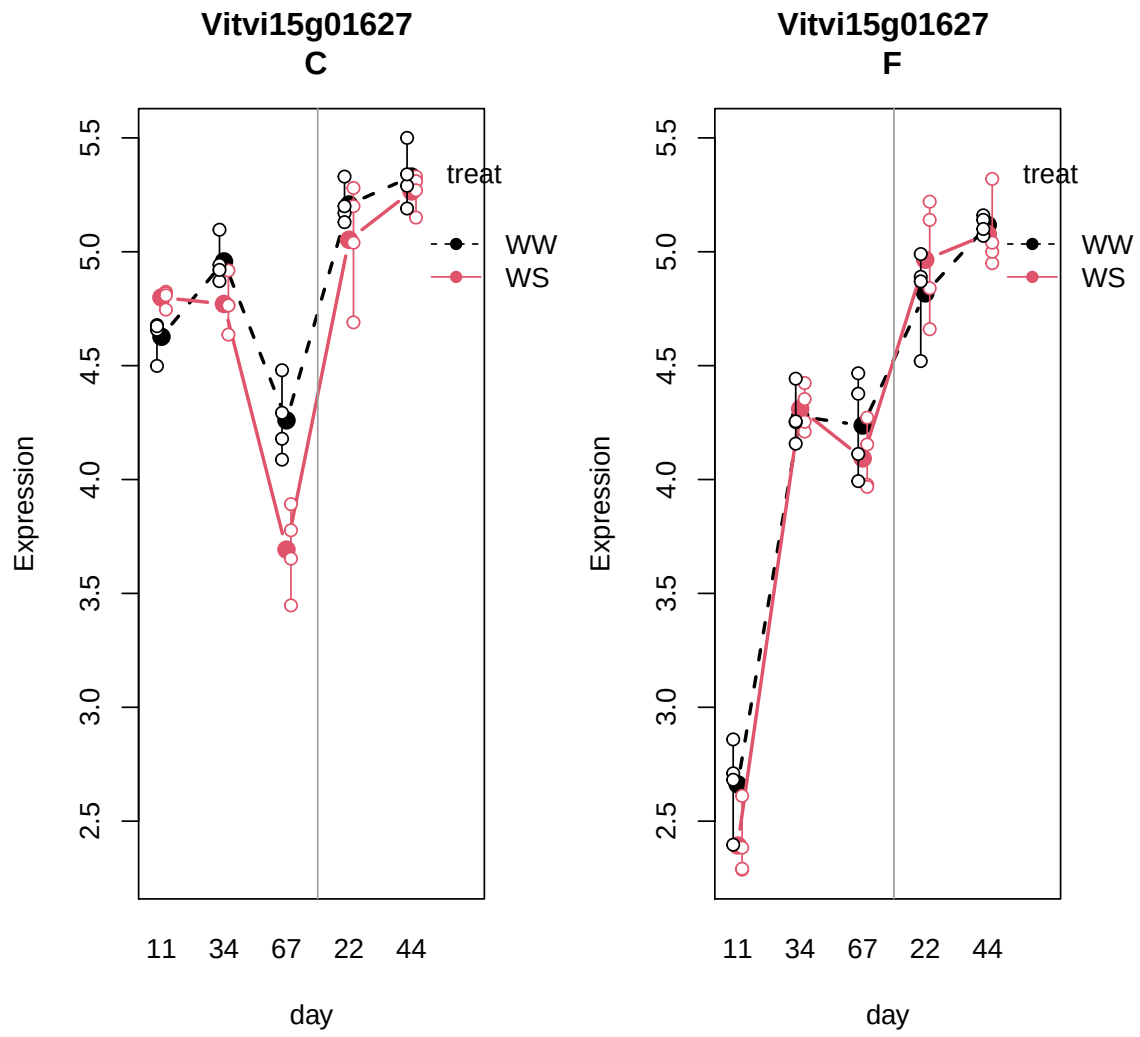
Coefficient varietyF:day67:treatWS for Vitvi15g01627.

```
> tt[varname,]
               logFC  AveExpr      t      P.Value
Vitvi15g01627 0.8639486 4.089864 4.107752 0.0001999077
               adj.P.Val      B
Vitvi15g01627 0.0385592 0.6679717

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

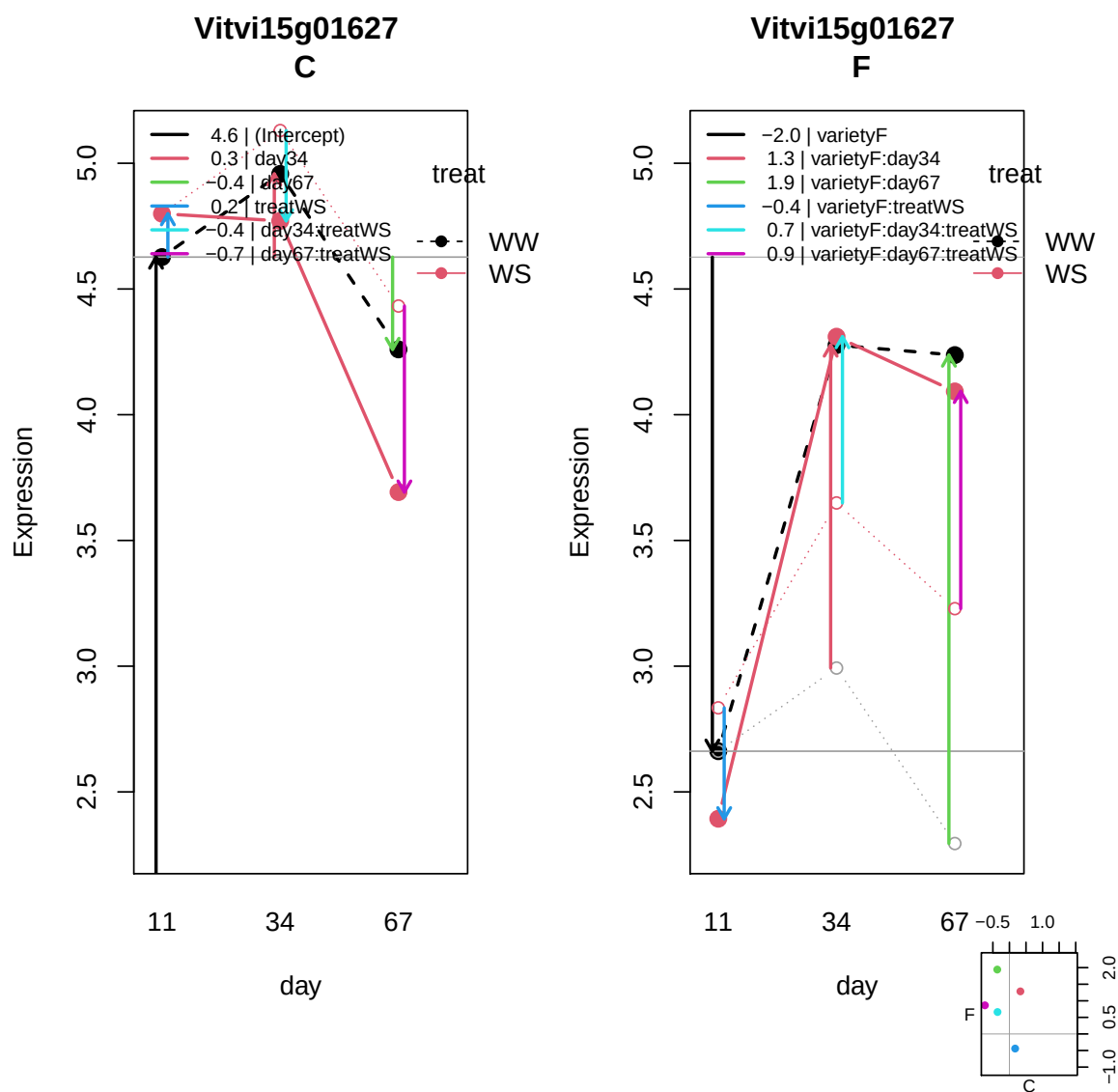
              (Intercept)  varietyF    day34    day67
Vitvi15g01627    4.626849 -1.965031  0.3307693 -0.3671281
              treatWS  varietyF:day34  varietyF:day67
Vitvi15g01627    0.172442    1.284298    1.942412
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi15g01627          -0.4410338    -0.3592564    -0.73988
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi15g01627              0.6611529              0.8639486

```

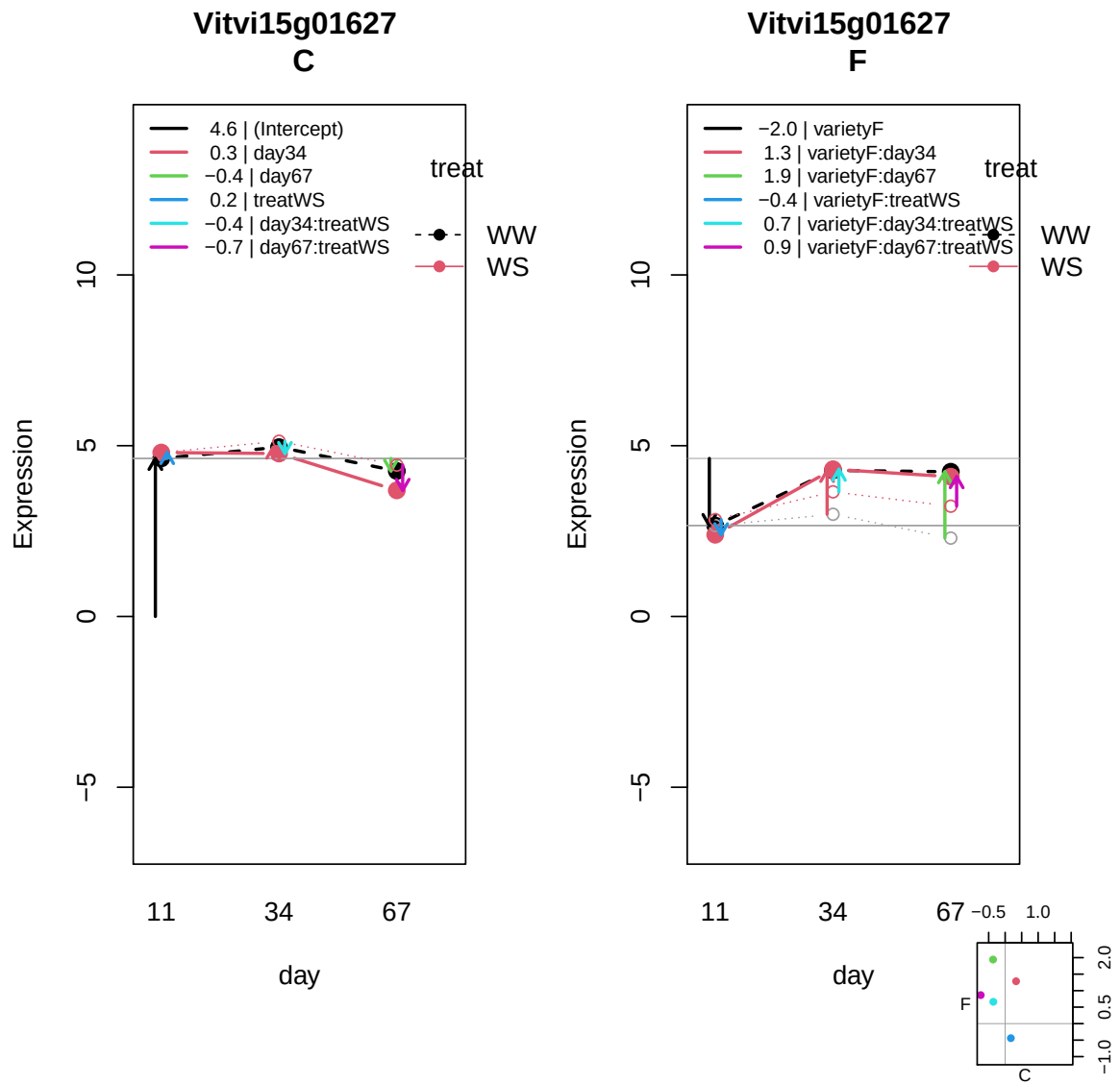
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

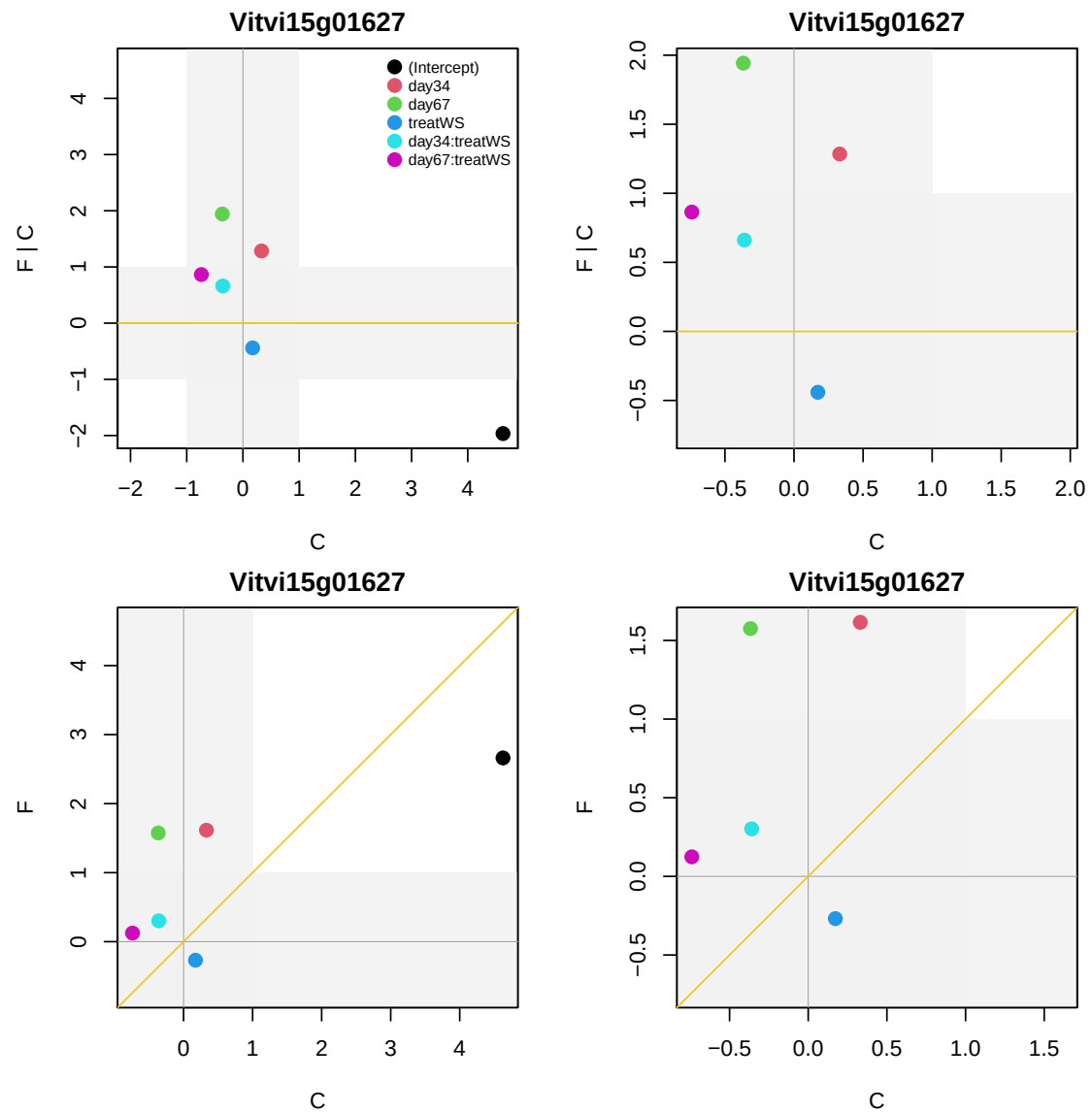


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

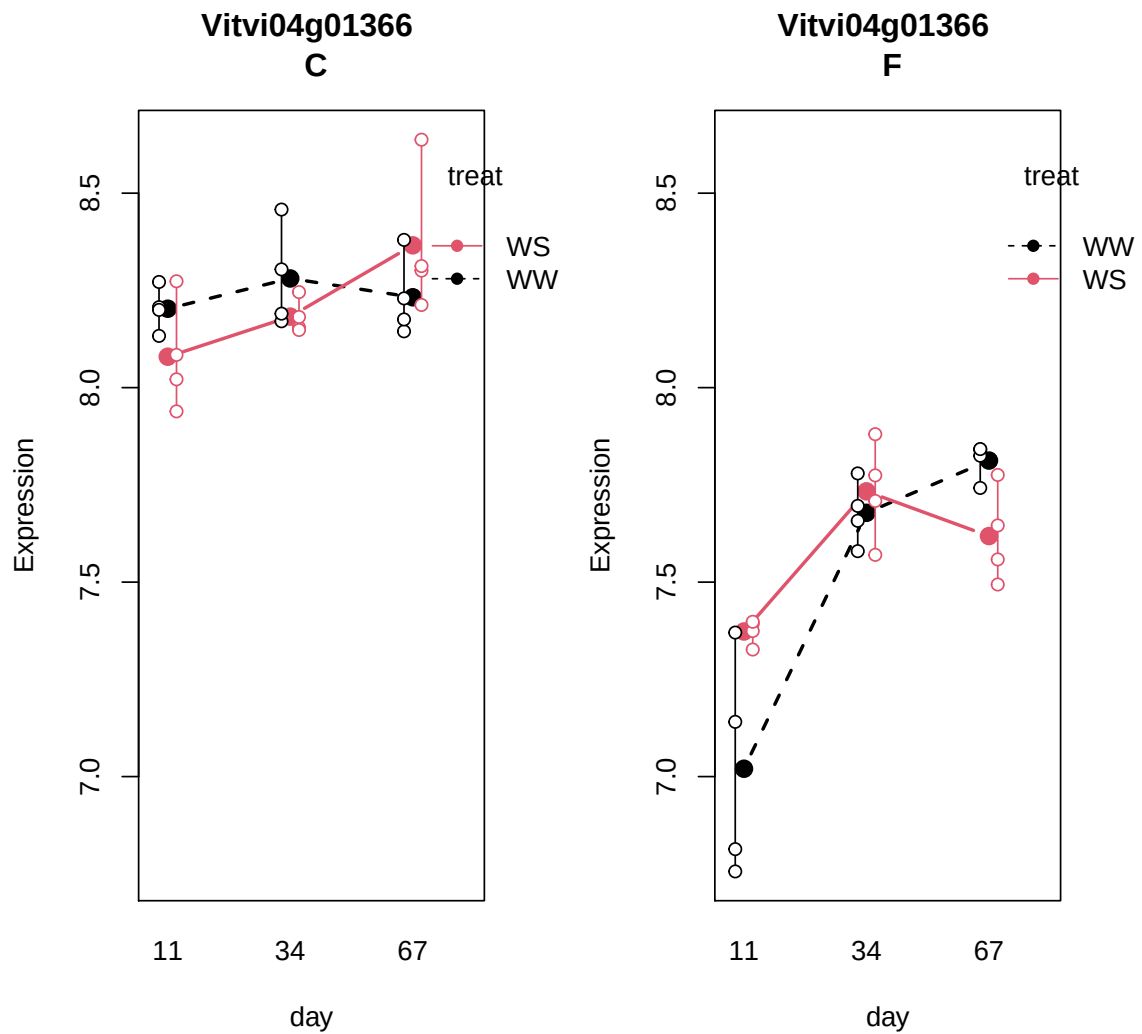


6.12.77 Vitvi04g01366

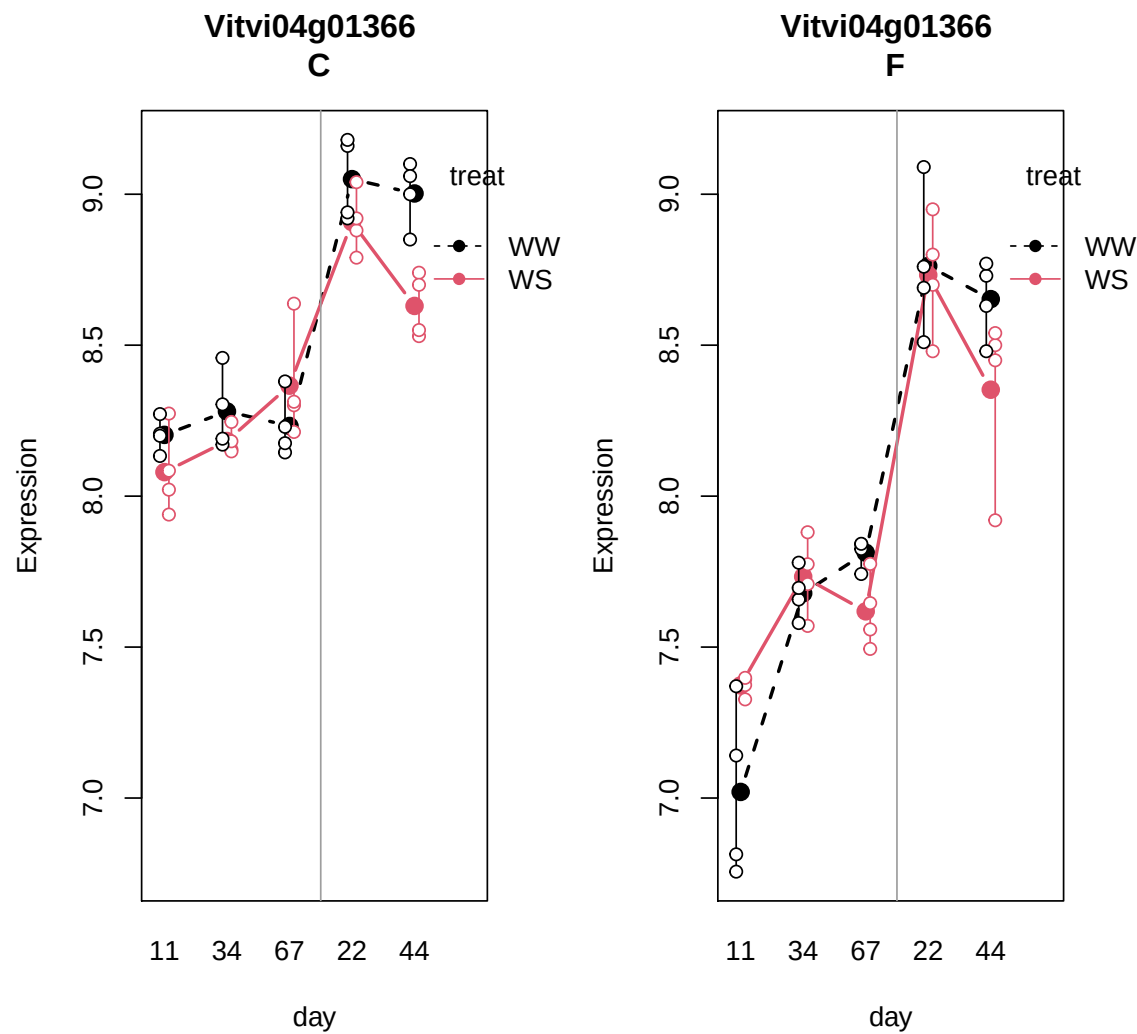
Coefficient varietyF:day67:treatWS for Vitvi04g01366.

```
> tt[varname,]
              logFC  AveExpr          t      P.Value
Vitvi04g01366 -0.8039579  7.881636 -4.098905  0.0002052989
              adj.P.Val          B
Vitvi04g01366  0.0385592  0.6443356

> plot.interactions(varname,phdata=pd,data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

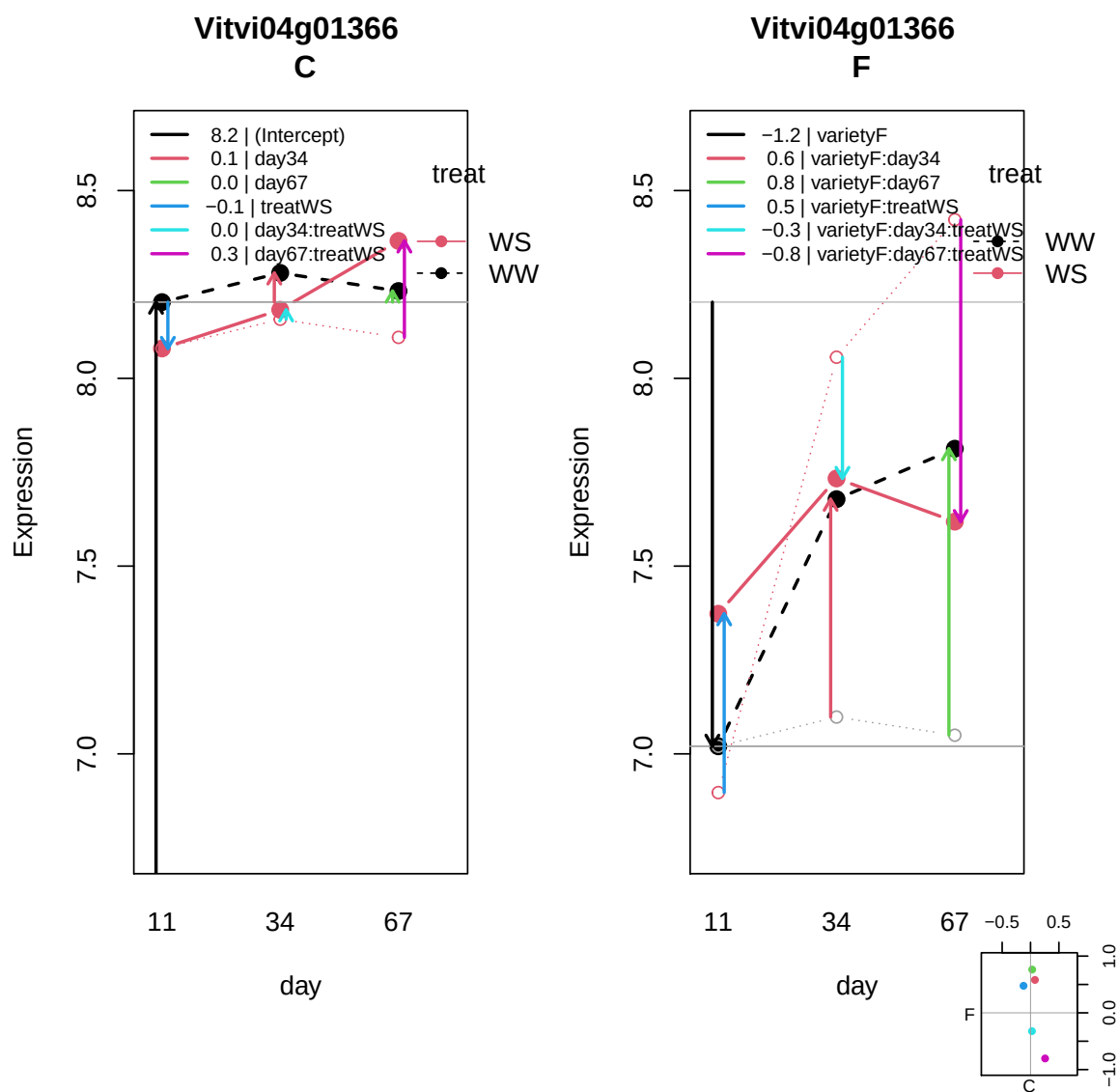
              (Intercept)  varietyF      day34      day67
Vitvi04g01366      8.202877 -1.182692  0.07783555  0.02948463
              treatWS varietyF:day34 varietyF:day67
Vitvi04g01366    -0.1233509      0.5801461      0.7628816
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi04g01366          0.4762459      0.02515558      0.2568836
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi04g01366          -0.3228371          -0.8039579

```

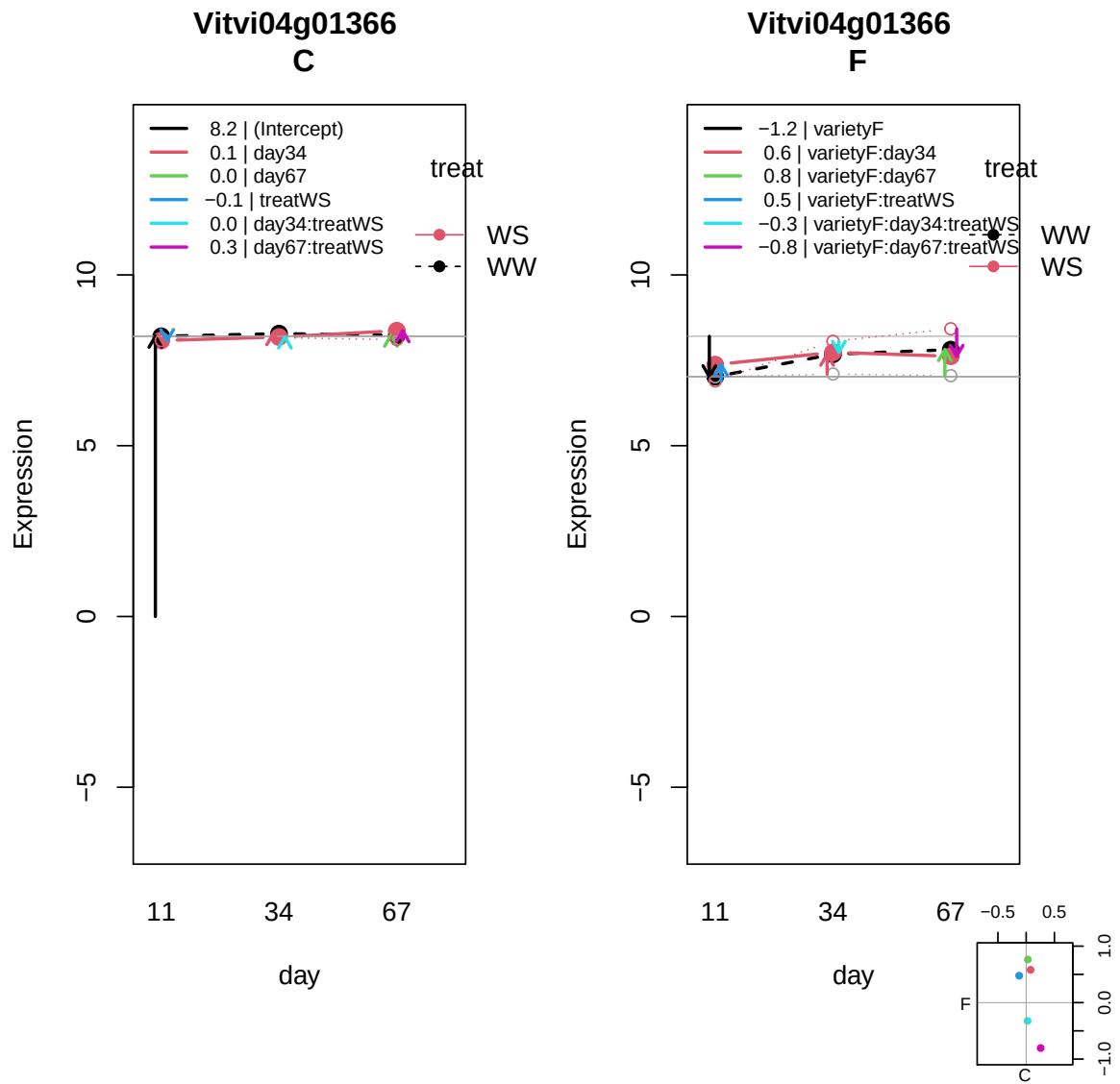
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

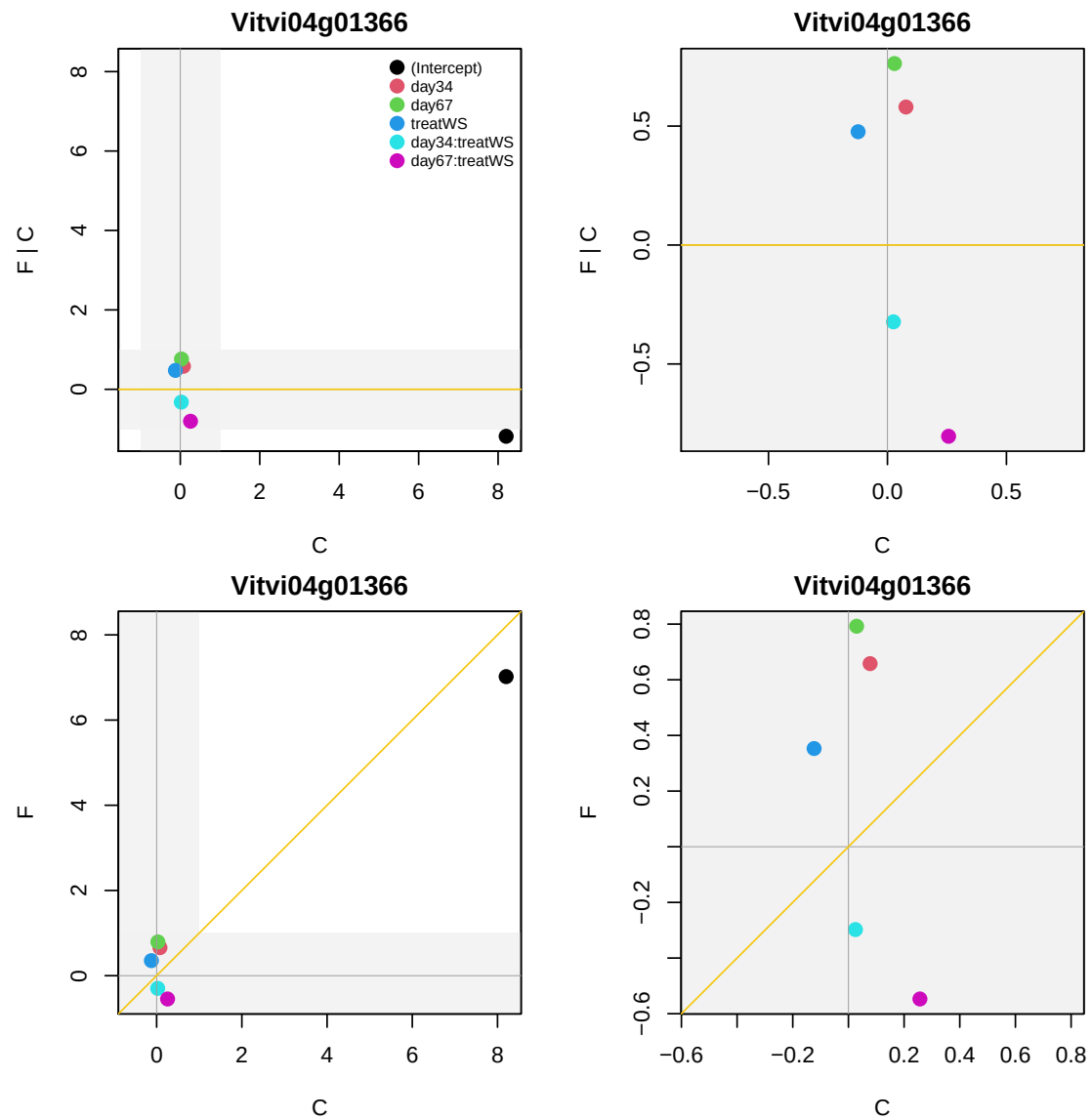


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

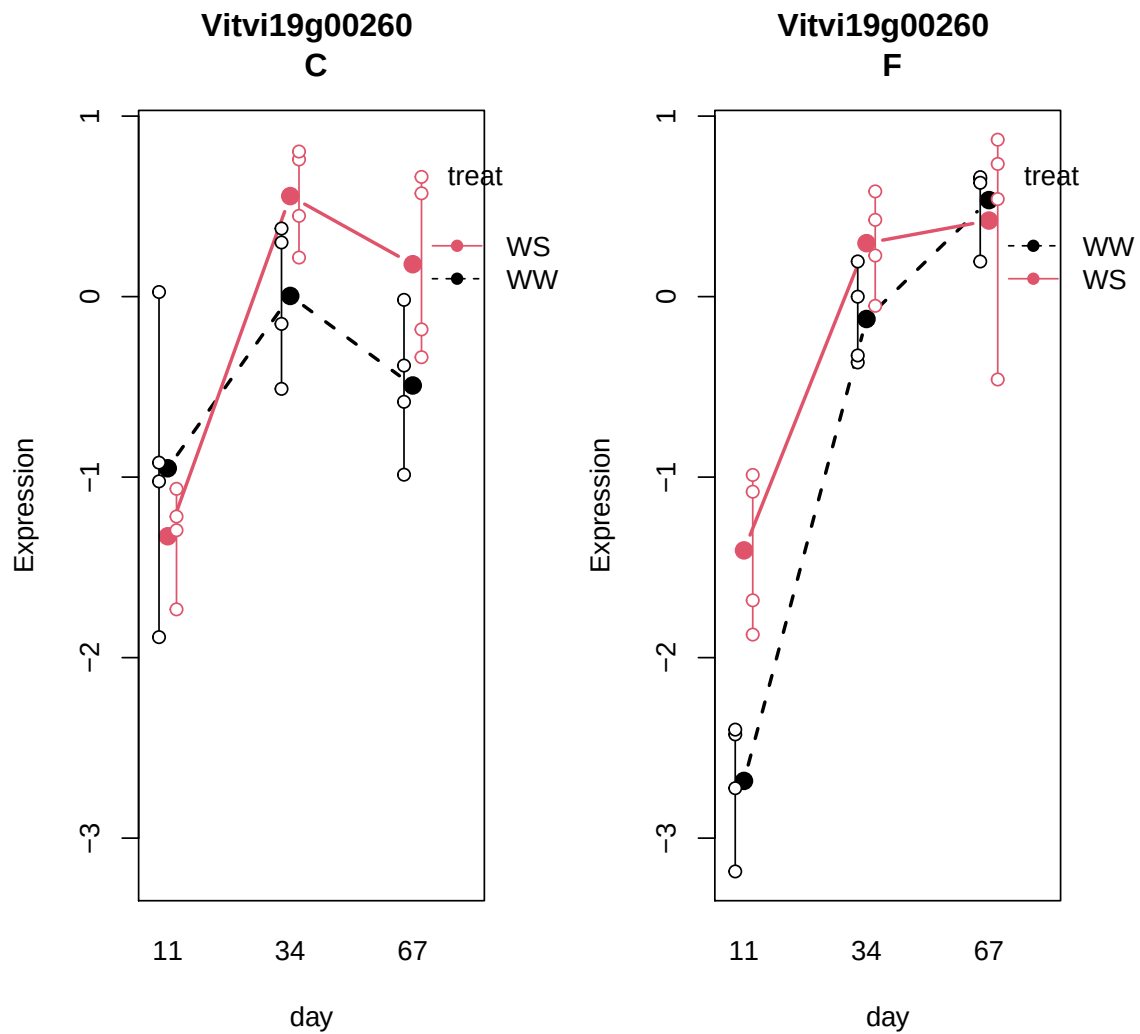


6.12.78 Vitvi19g00260

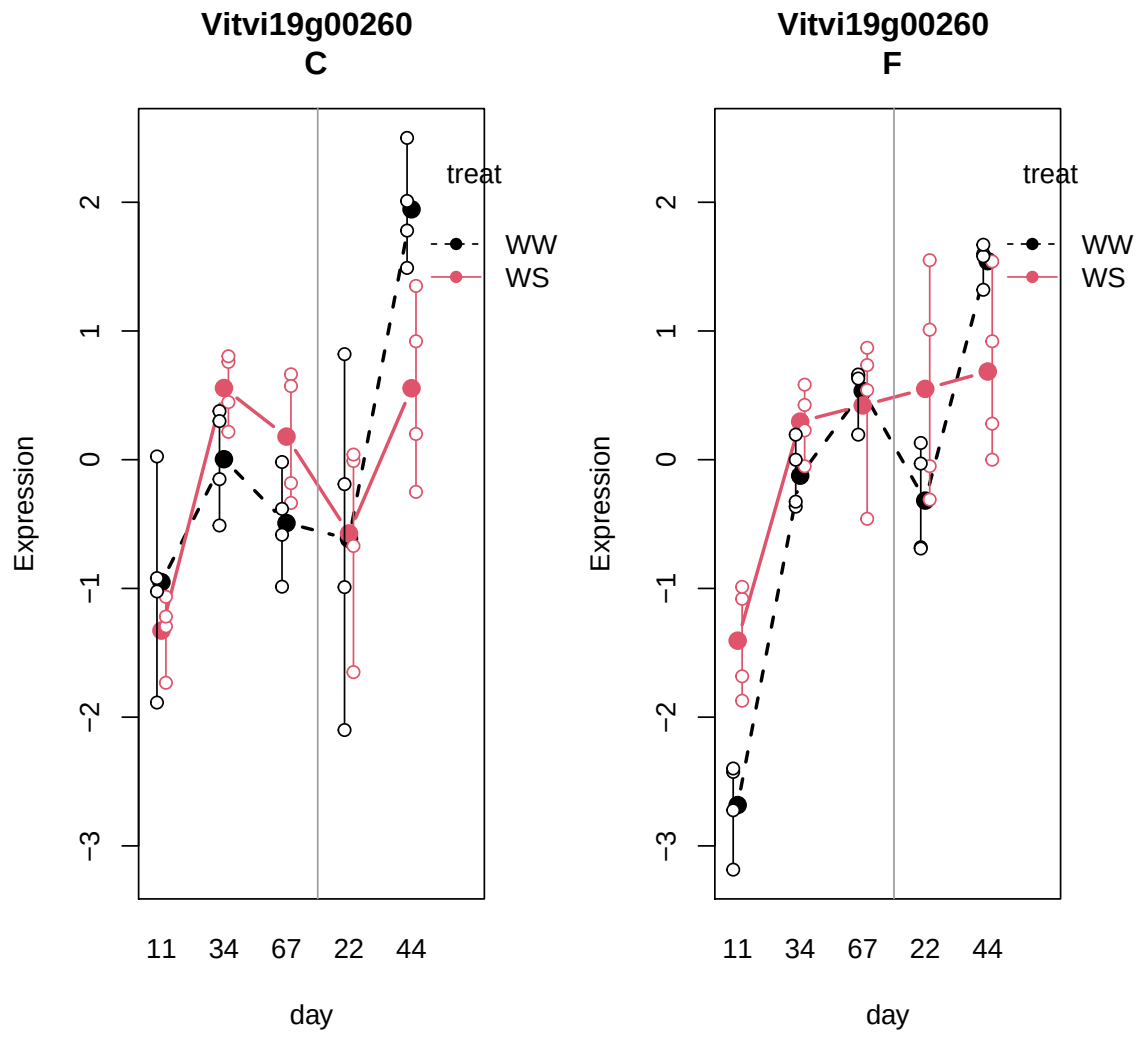
Coefficient varietyF:day67:treatWS for Vitvi19g00260.

```
> tt[varname,]
              logFC  AveExpr      t      P.Value
Vitvi19g00260 -2.438657 -0.4159435 -4.096474 0.0002068047
              adj.P.Val      B
Vitvi19g00260 0.0385592 0.637845

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

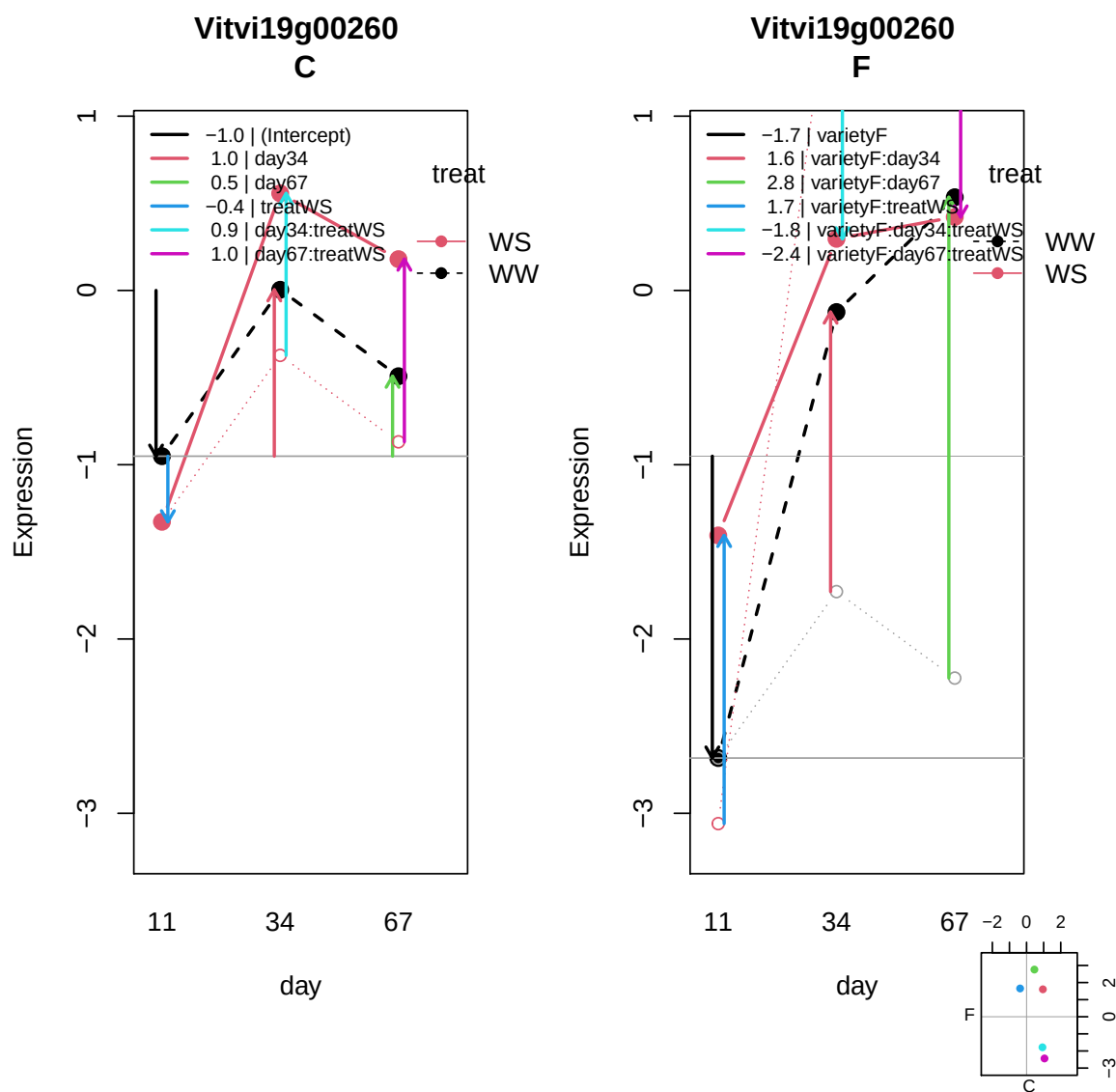
      (Intercept)  varietyF    day34    day67
Vitvi19g00260 -0.9510996 -1.731958 0.9548563 0.4588202
      treatWS varietyF:day34 varietyF:day67
Vitvi19g00260 -0.3764291    1.604153    2.758982
      varietyF:treatWS day34:treatWS day67:treatWS
Vitvi19g00260    1.653585    0.9295444    1.048242
      varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi19g00260    -1.786449    -2.438657

```

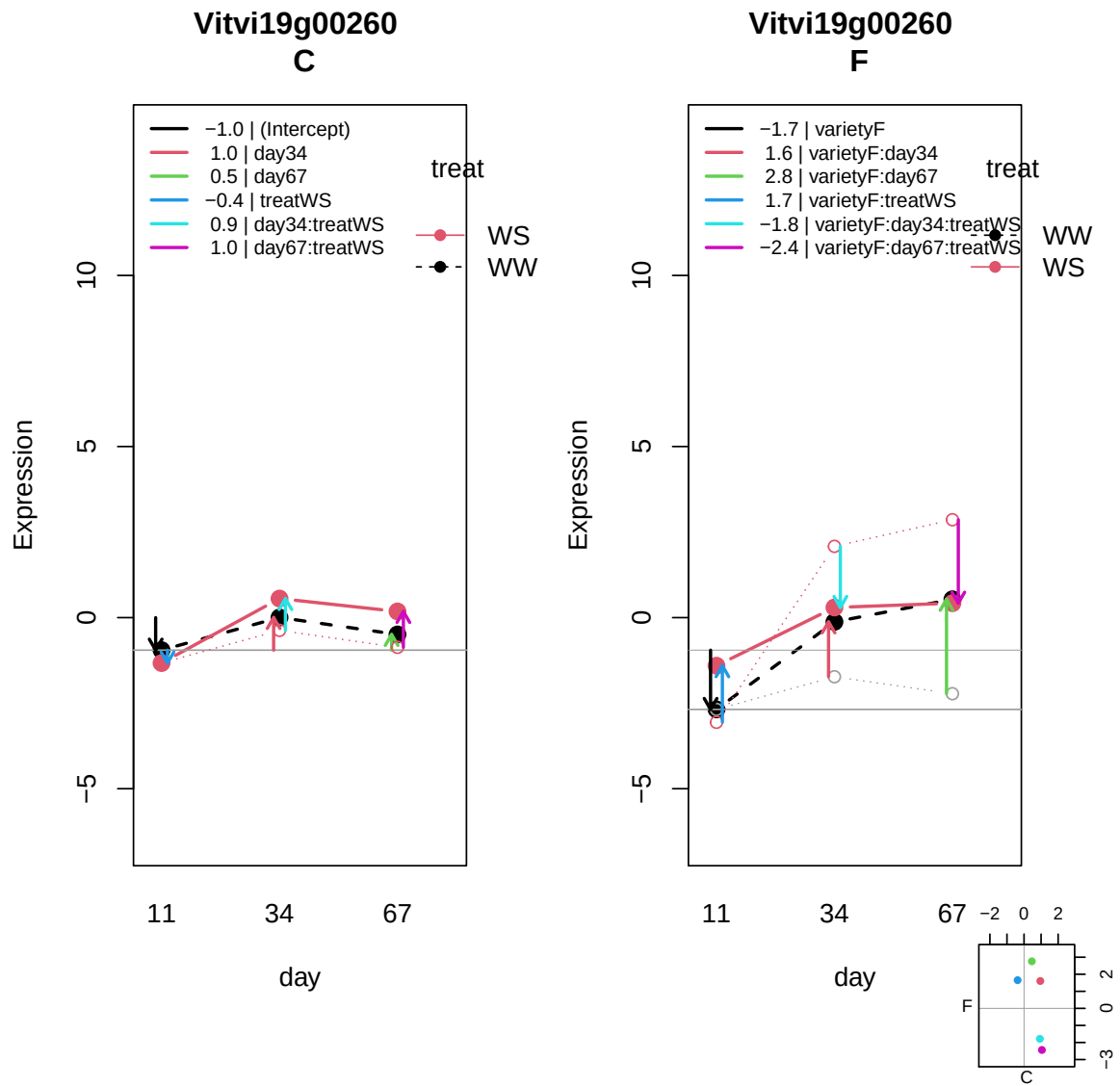
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

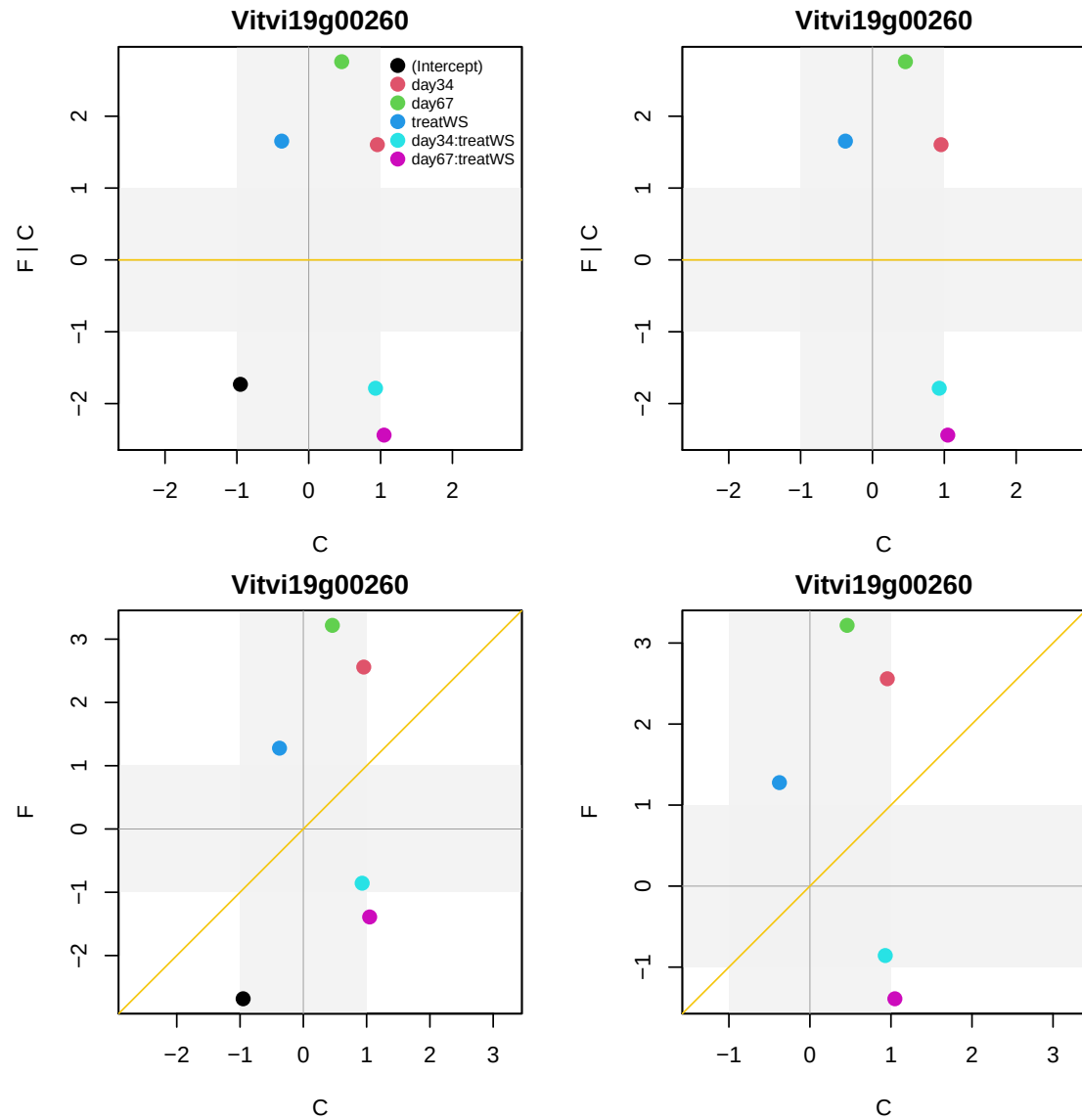


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

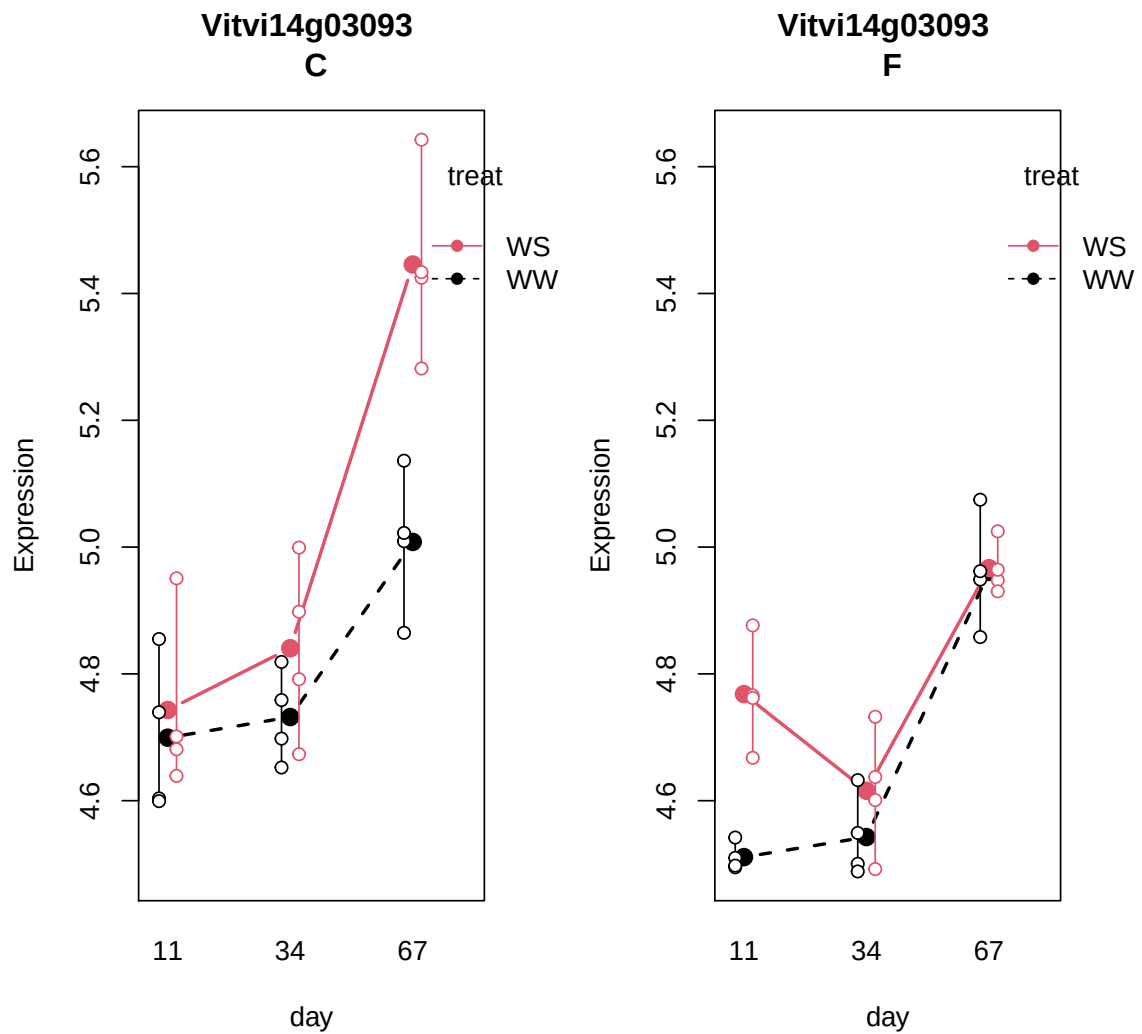


6.12.79 Vitvi14g03093

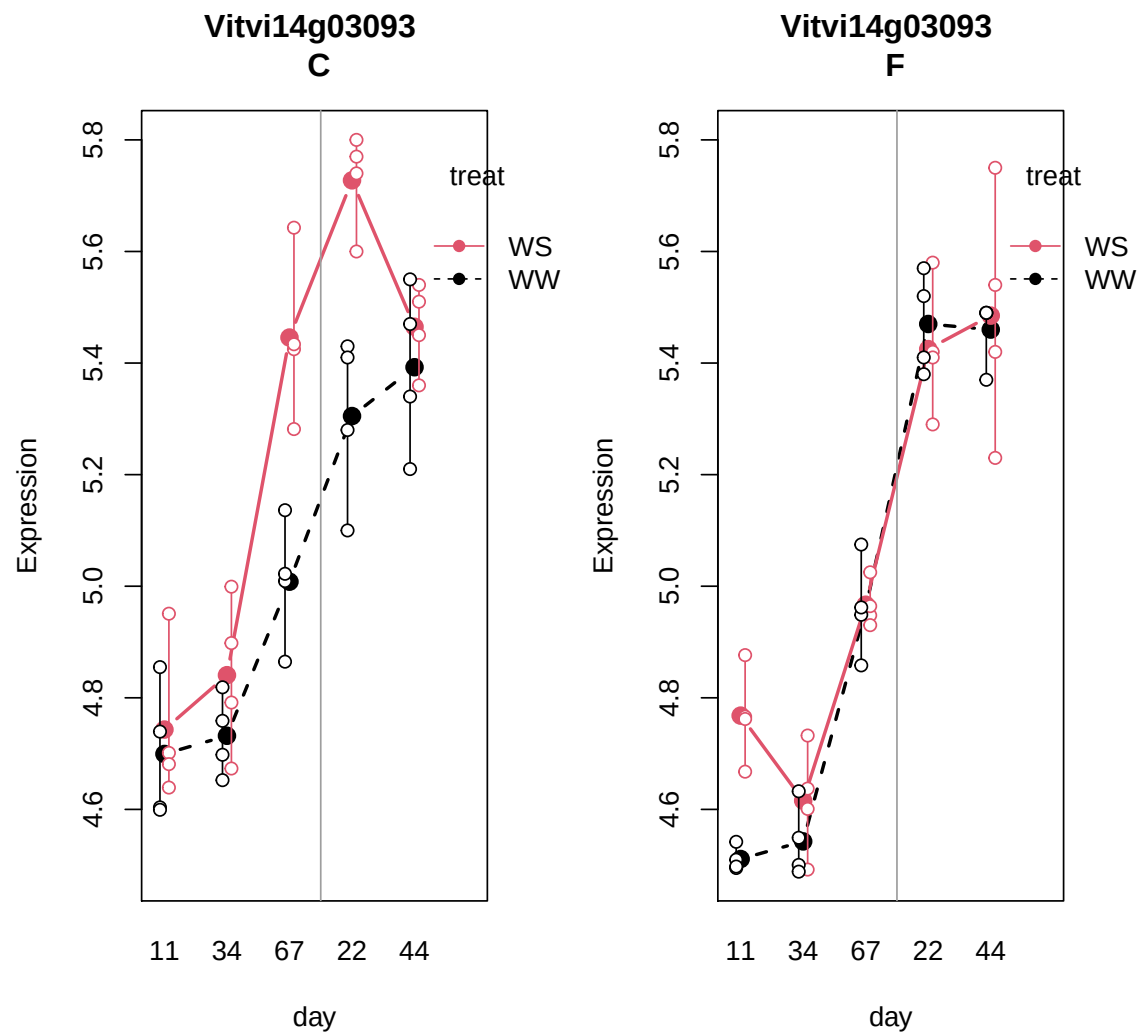
Coefficient varietyF:day67:treatWS for Vitvi14g03093.

```
> tt[varname,]
              logFC  AveExpr          t      P.Value
Vitvi14g03093 -0.6449664  4.819484 -4.092188 0.0002094859
              adj.P.Val          B
Vitvi14g03093 0.0385592 0.6264045

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

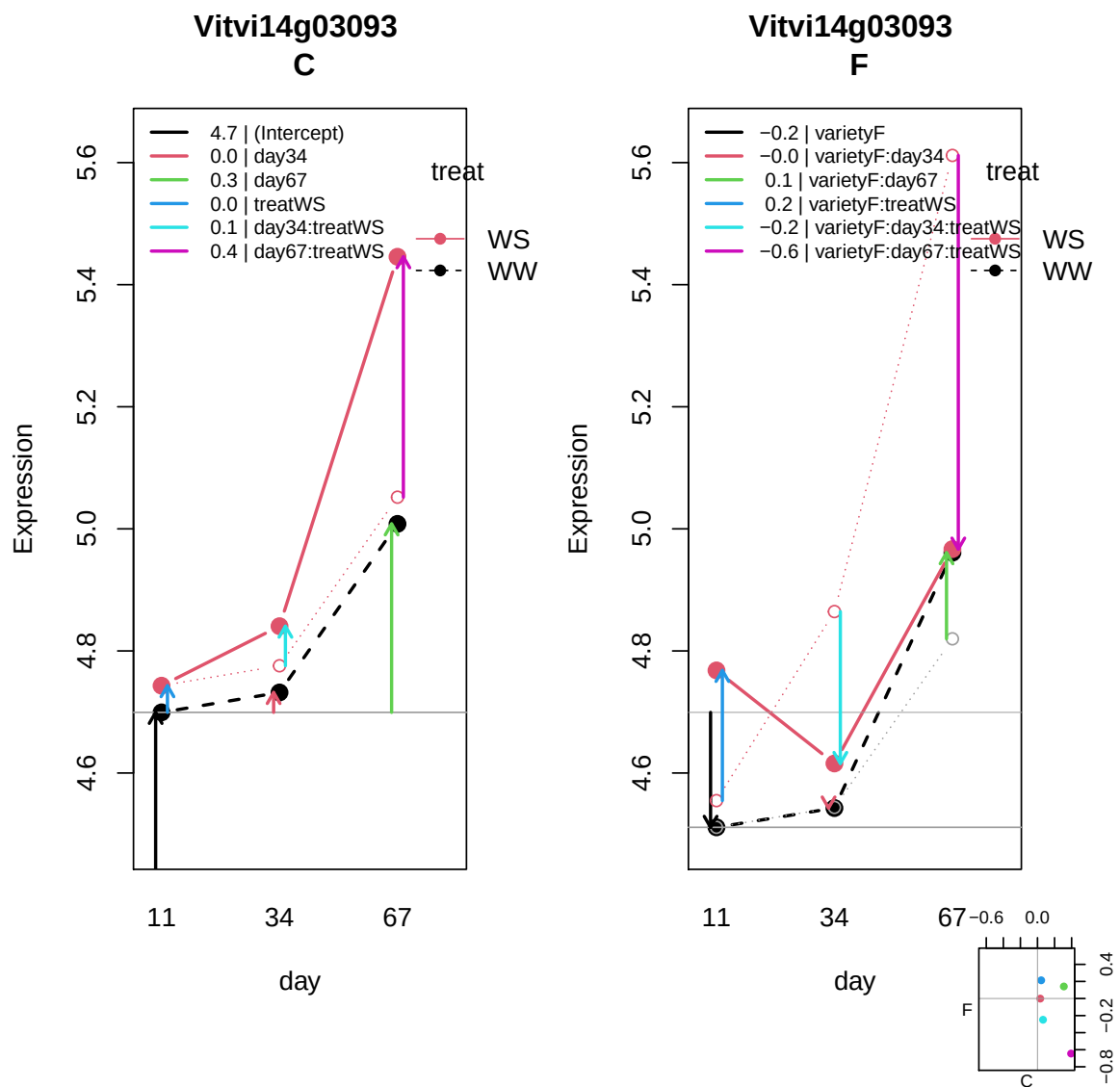
              (Intercept)    varietyF      day34      day67
Vitvi14g03093    4.699328 -0.1882866 0.03262445 0.3088103
              treatWS varietyF:day34 varietyF:day67
Vitvi14g03093  0.04373034  -0.001046453      0.1410441
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi14g03093      0.2133007      0.06484785      0.3938394
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi14g03093      -0.2488255      -0.6449664

```

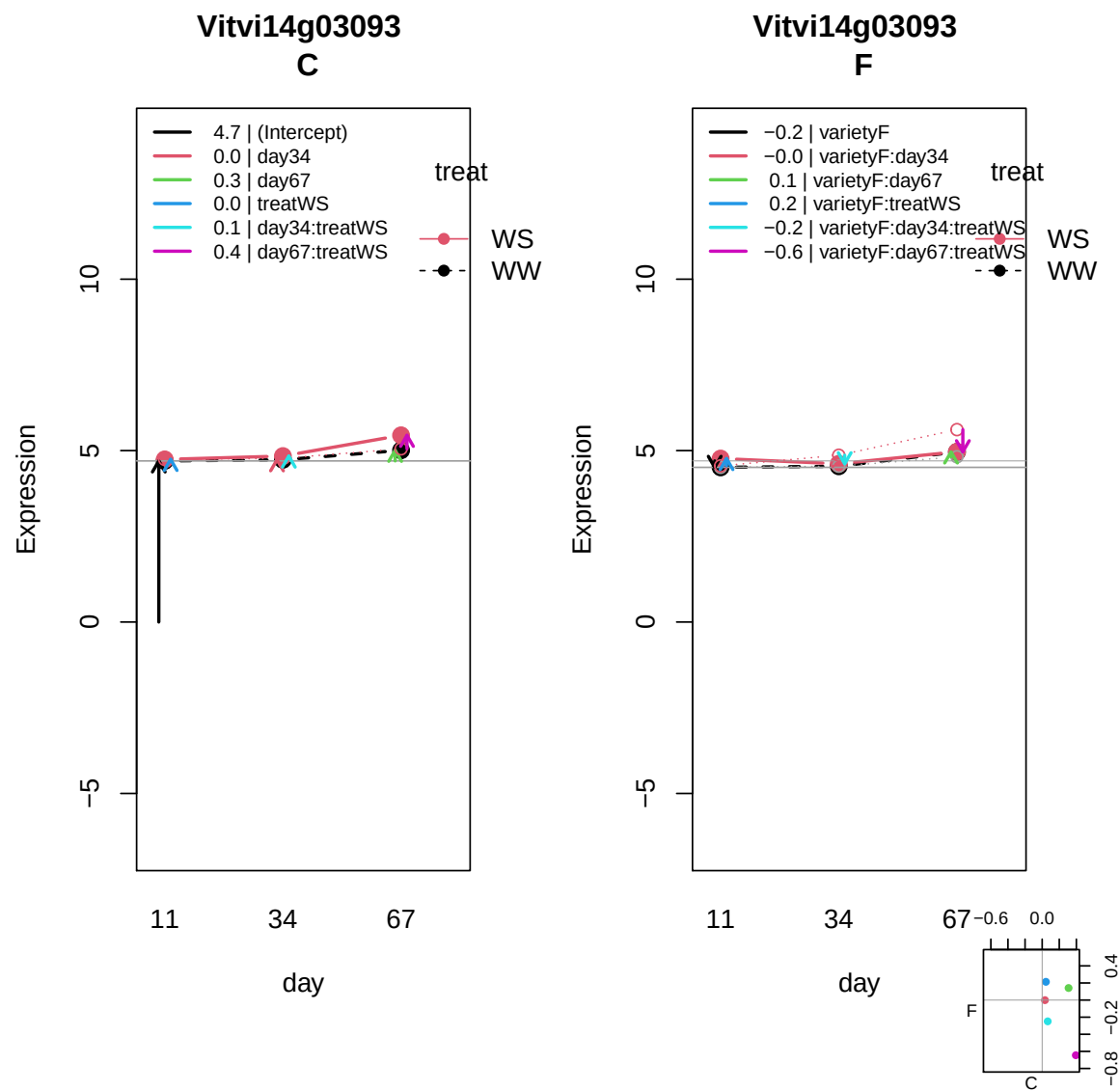
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

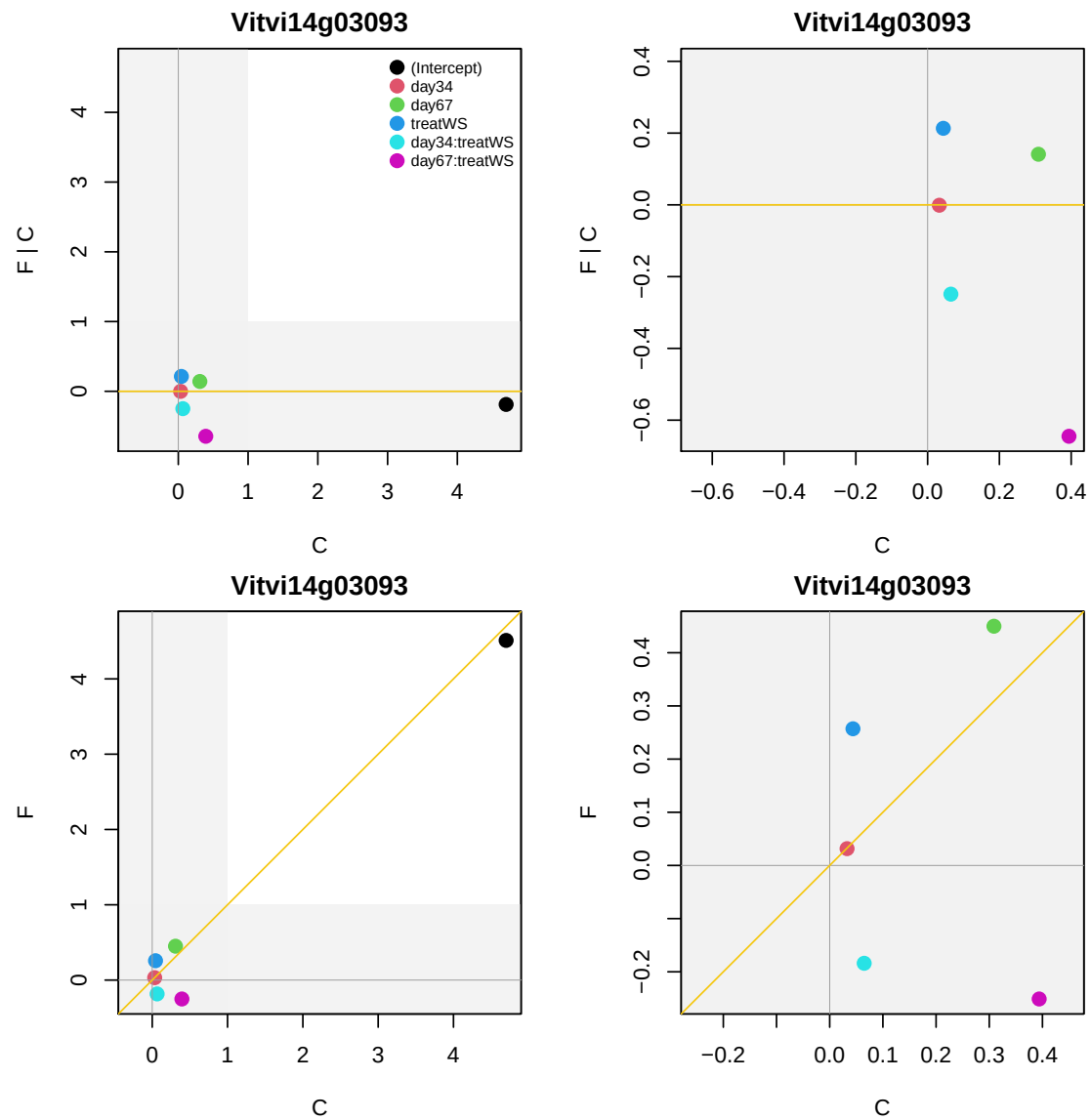


```
> coefs <- plot.interactions(varname,  
+ coef=fit1[varname,]$coefficients,  
+ coef.plt=TRUE, ylim=NA)  
Warning in arrows(1:ndays - d, es, 1:ndays - d, esF, col = cl + 1:ndays, : zero
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

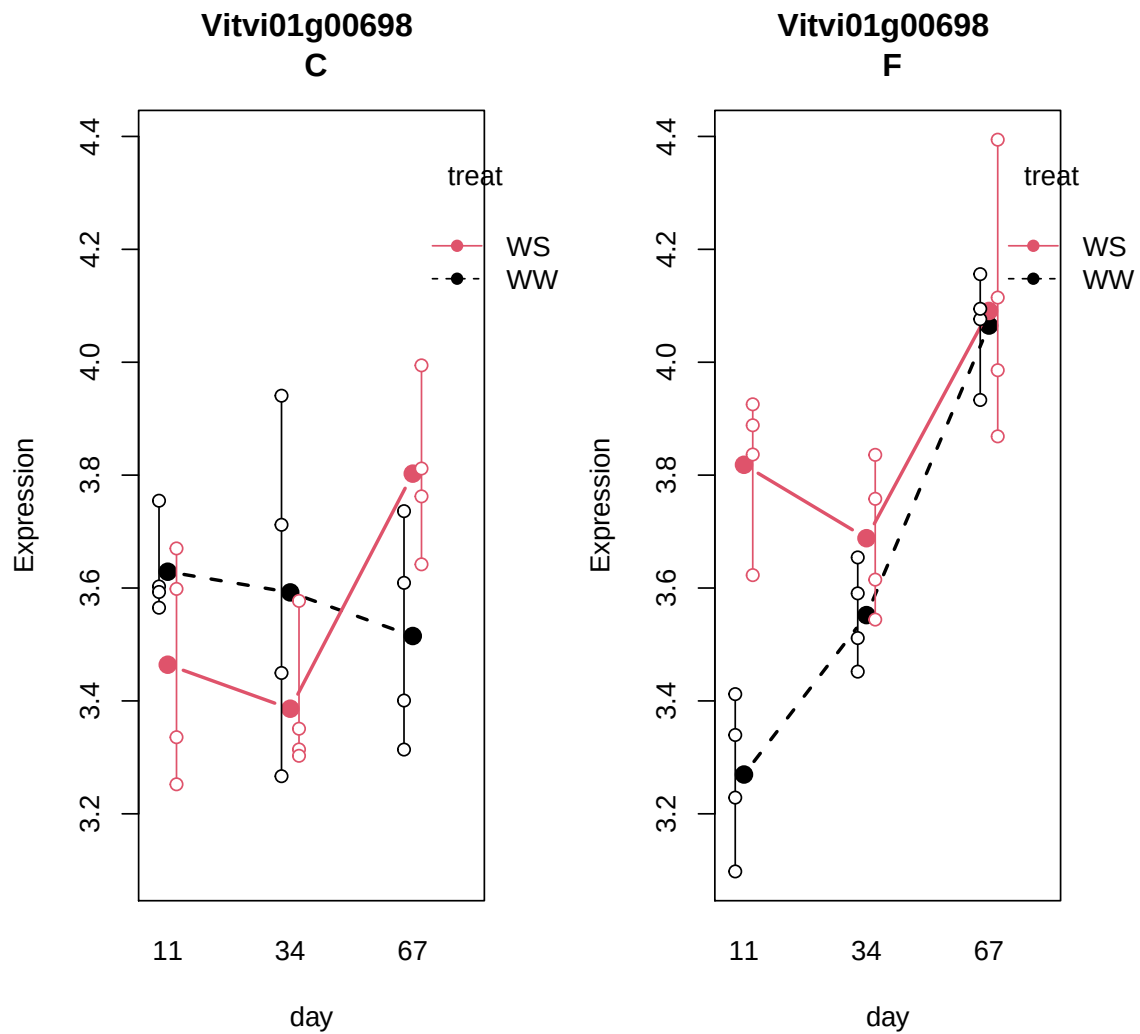


6.12.80 Vitvi01g00698

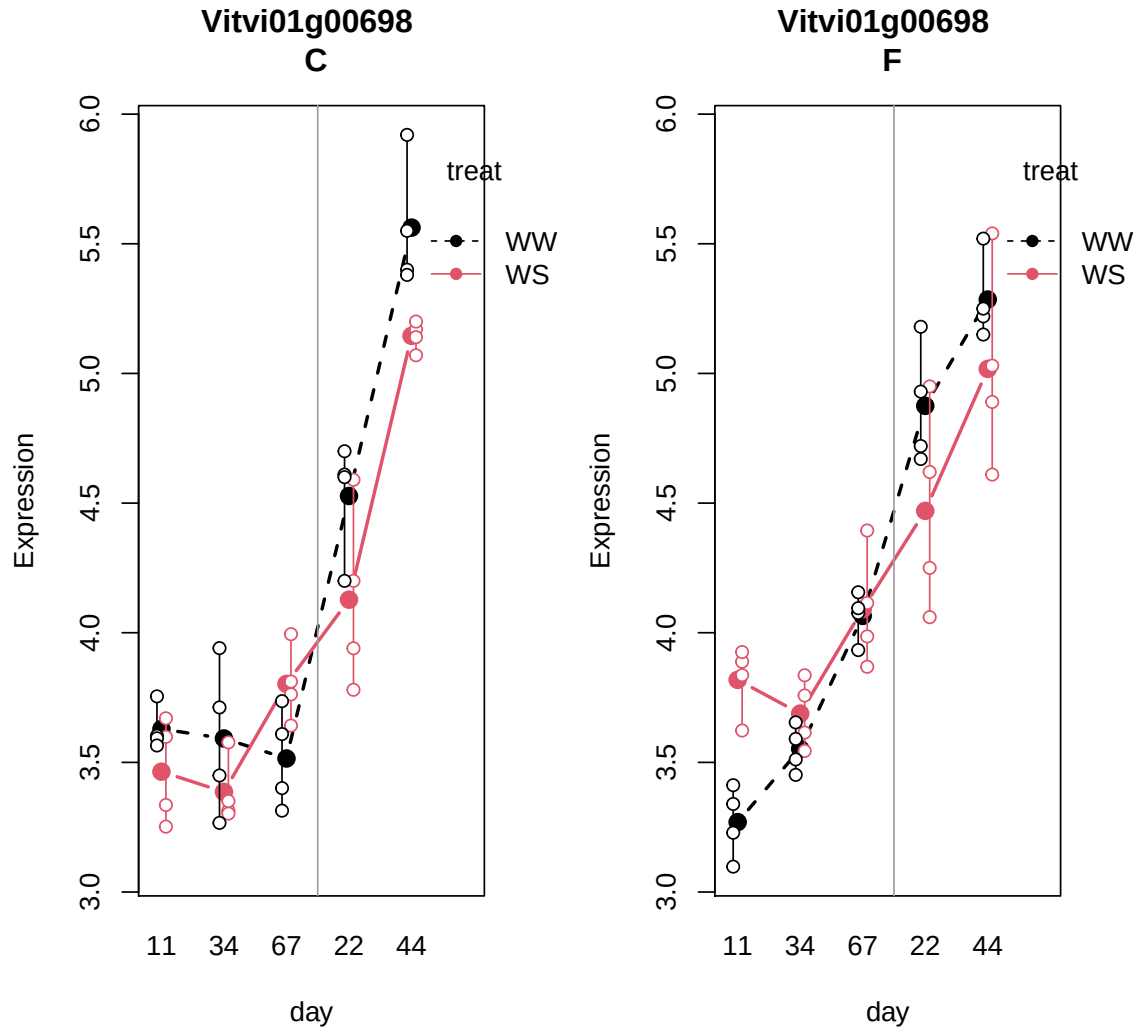
Coefficient varietyF:day67:treatWS for Vitvi01g00698.

```
> tt[varname,]
              logFC AveExpr          t      P.Value
Vitvi01g00698 -0.9752933 3.656084 -4.087053 0.0002127436
              adj.P.Val          B
Vitvi01g00698 0.0385592 0.6127004

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```




```
> fit1[varname,]$coefficients
```

```

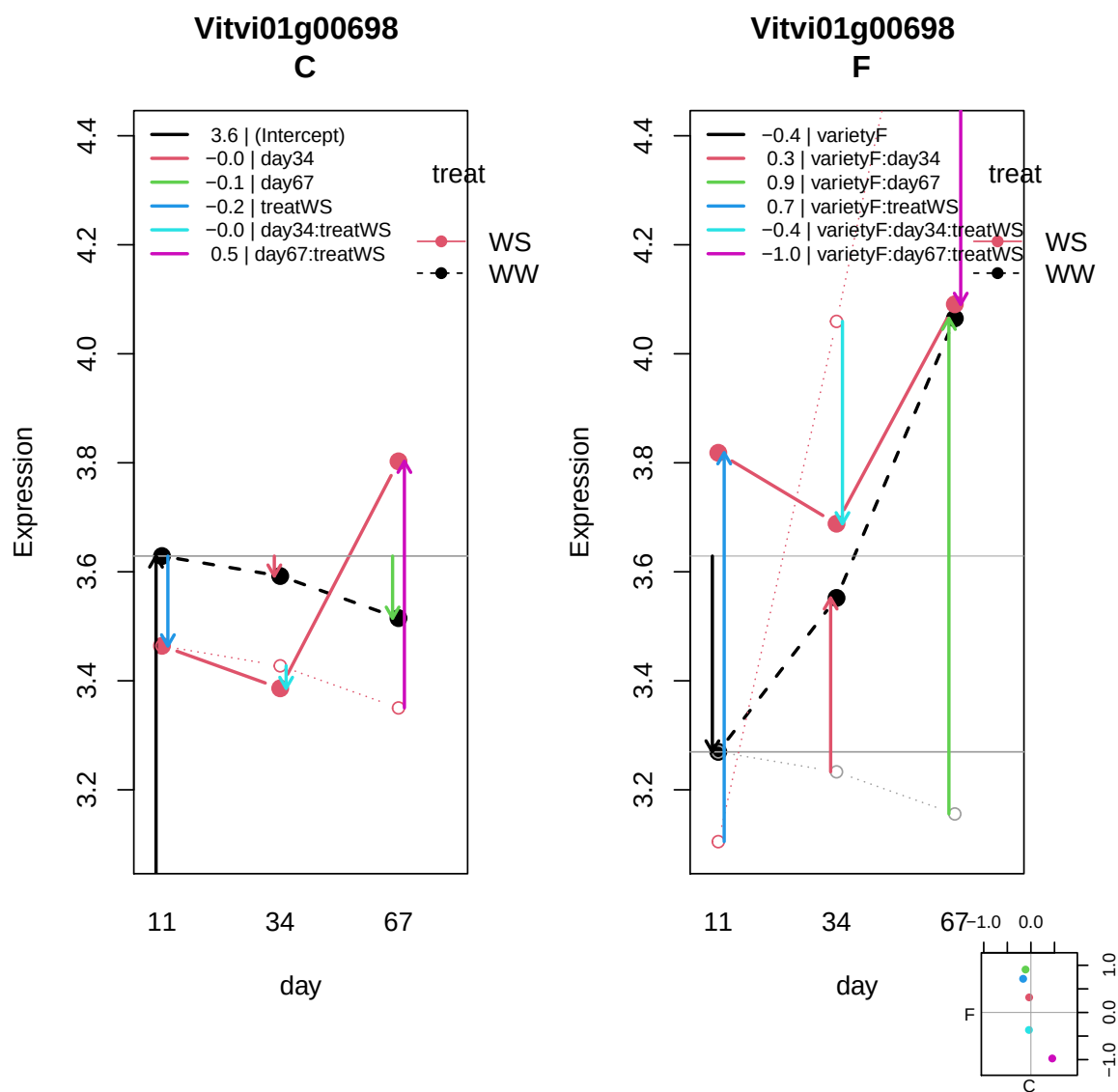
              (Intercept)    varietyF      day34      day67
Vitvi01g00698      3.628874 -0.3592848 -0.03665489 -0.1139056
              treatWS varietyF:day34 varietyF:day67
Vitvi01g00698 -0.1647378      0.3190665      0.9093135
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi01g00698      0.7134678     -0.04129899      0.4524056
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi01g00698      -0.3711827      -0.9752933

```

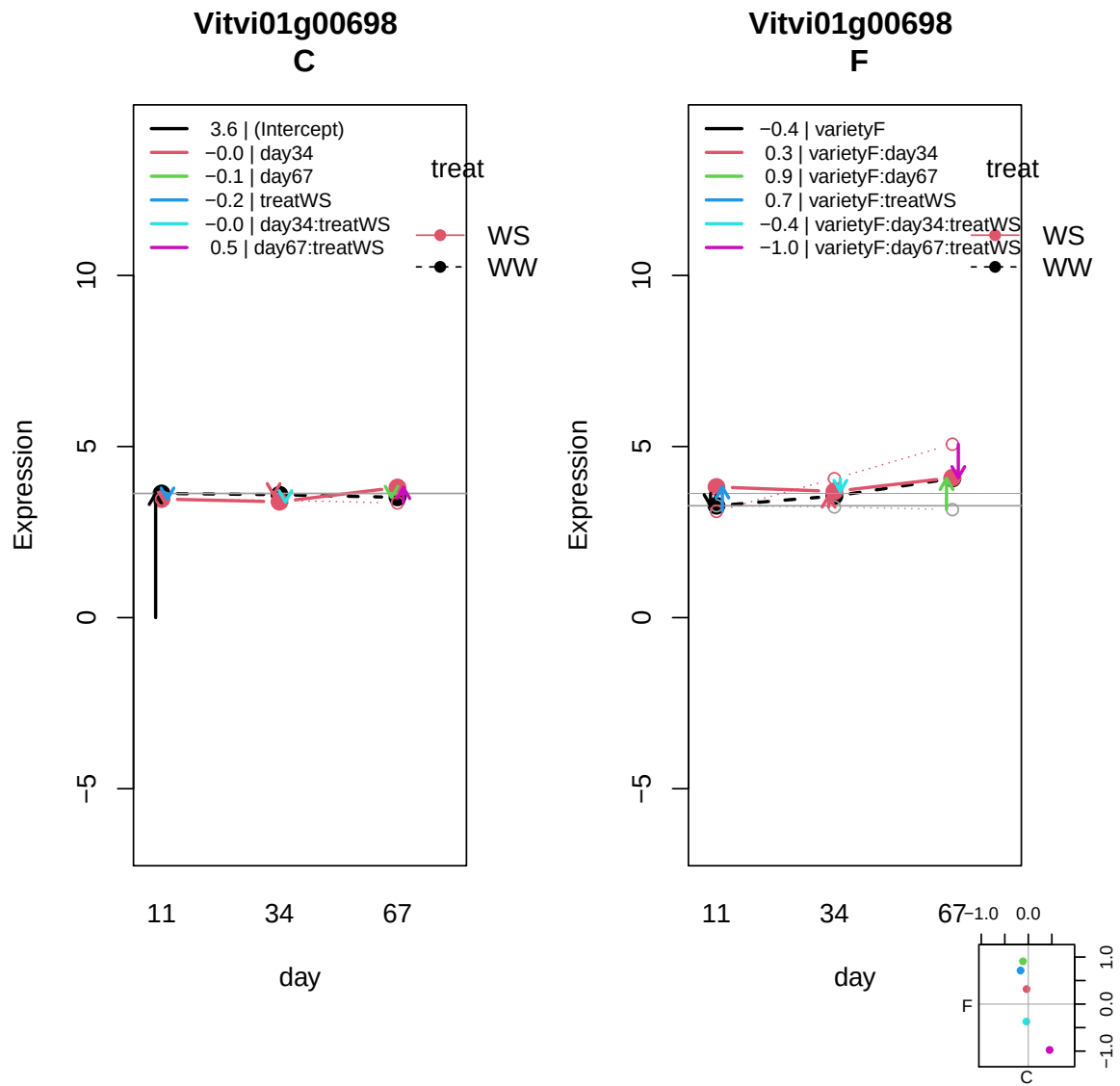
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

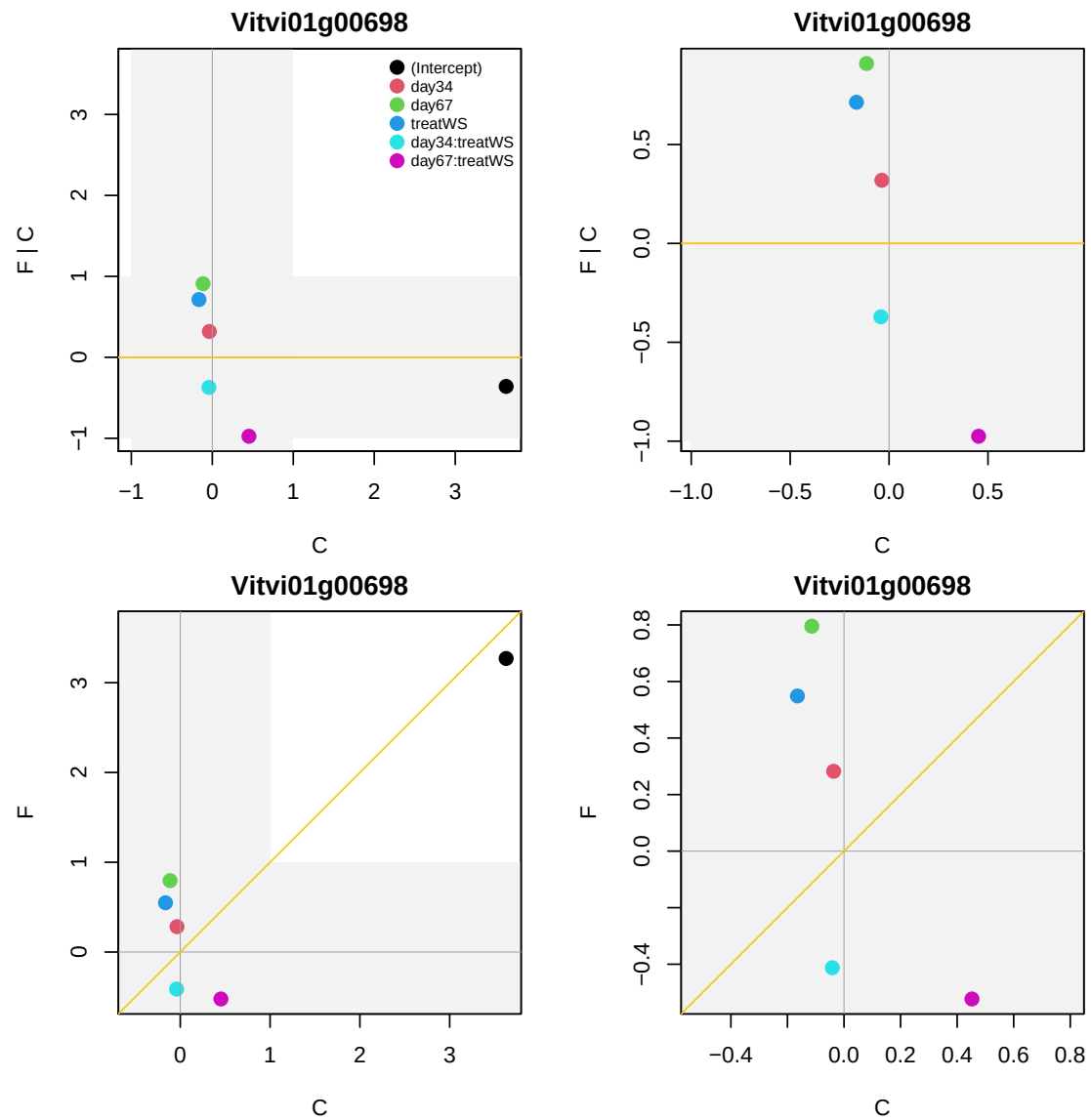


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

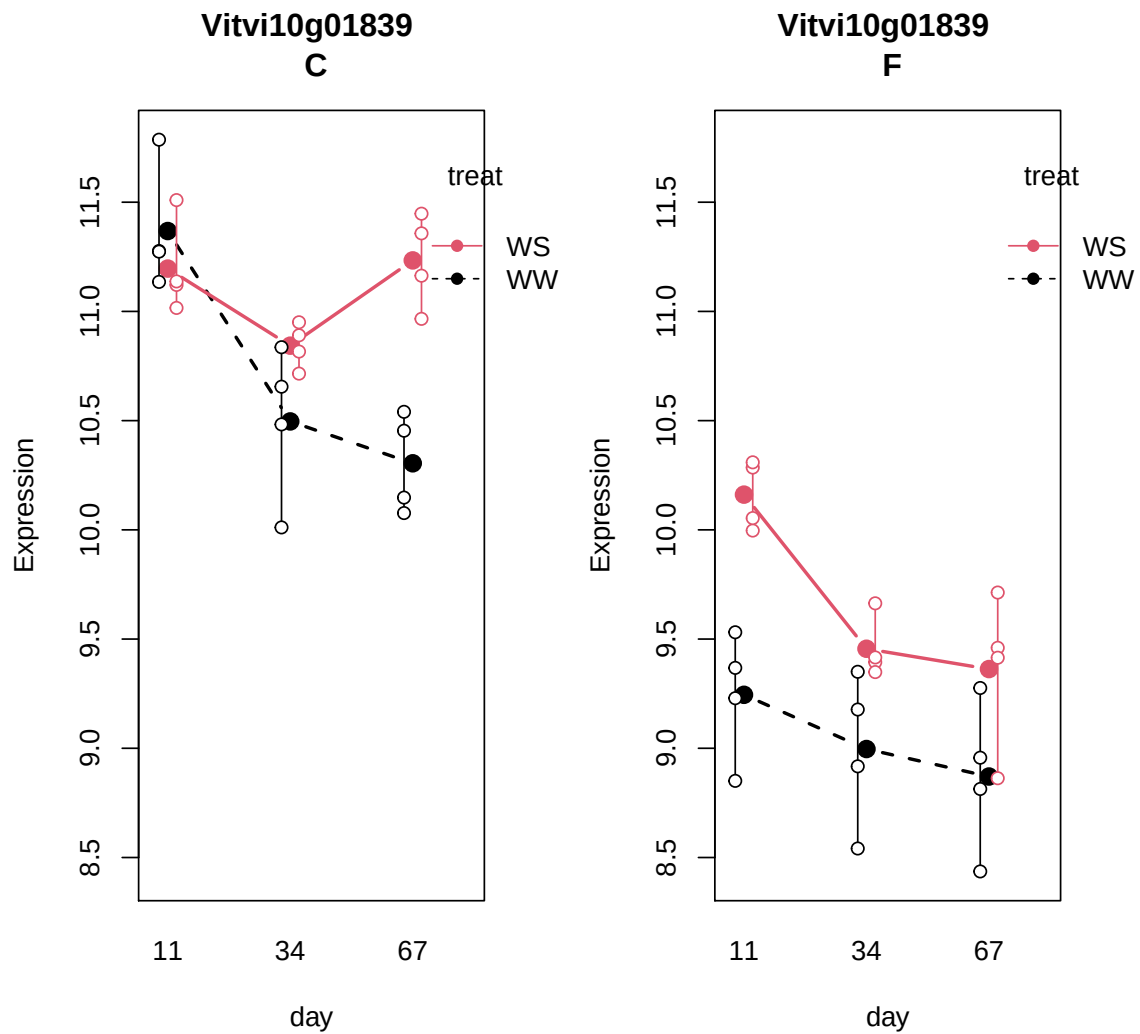


6.12.81 Vitvi10g01839

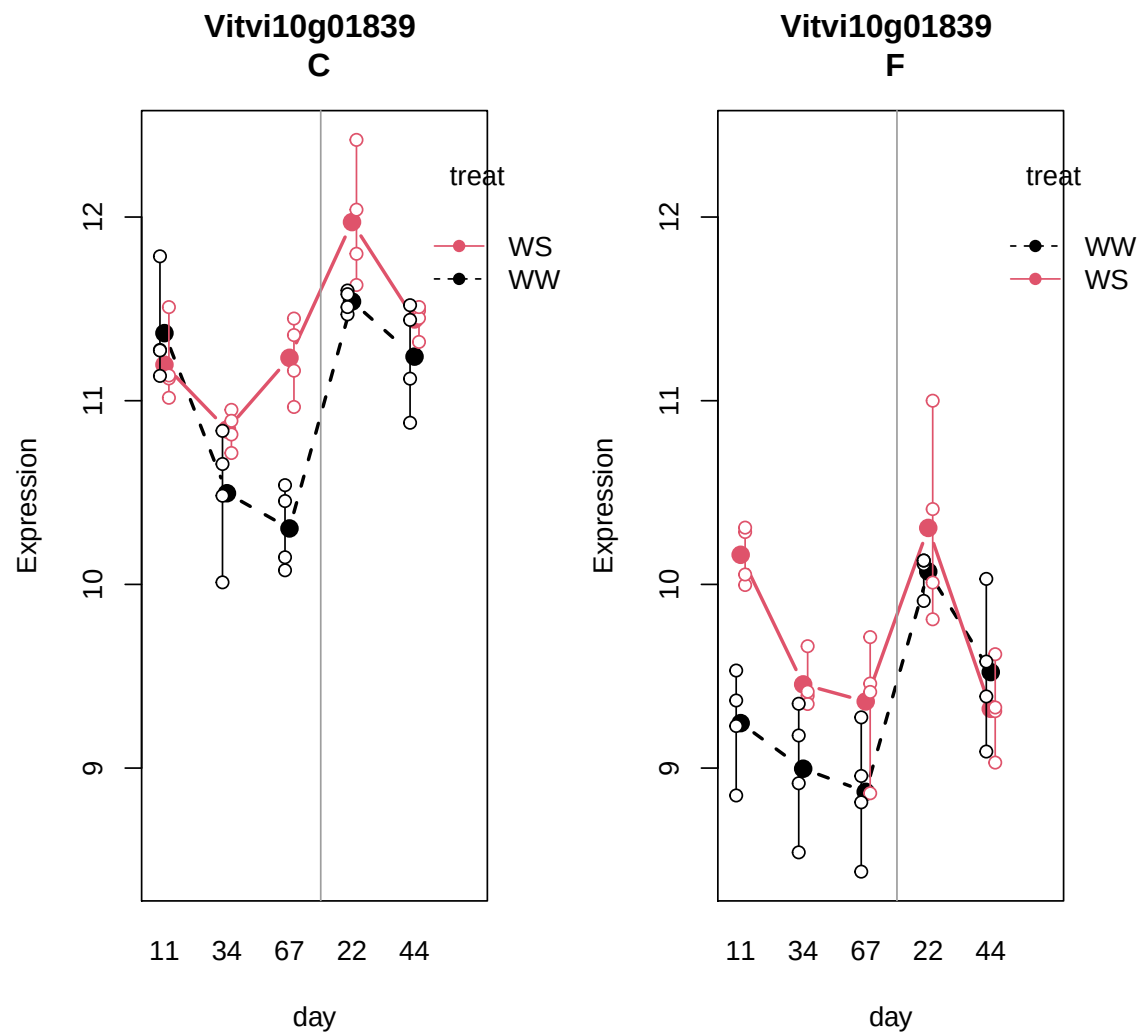
Coefficient varietyF:day67:treatWS for Vitvi10g01839.

```
> tt[varname,]
               logFC  AveExpr      t      P.Value
Vitvi10g01839 -1.52525 10.12776 -4.086709 0.0002129634
               adj.P.Val      B
Vitvi10g01839 0.0385592 0.6117835

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

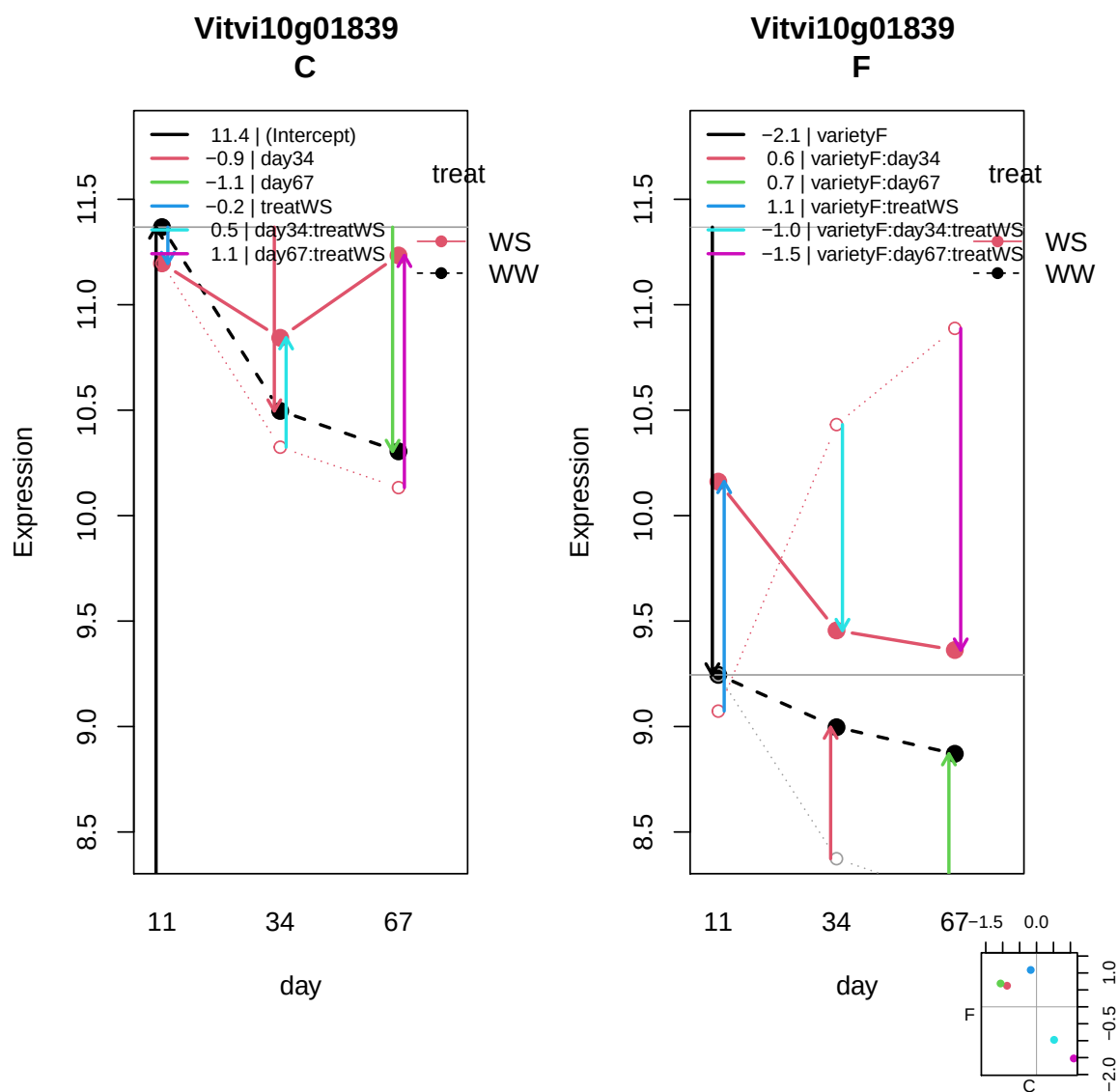
              (Intercept)  varietyF      day34      day67
Vitvi10g01839      11.3679 -2.123073 -0.8715945 -1.063259
              treatWS varietyF:day34 varietyF:day67
Vitvi10g01839 -0.1718572      0.6233339      0.6891385
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi10g01839      1.088261      0.5186626      1.100766
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi10g01839      -0.9760255      -1.52525

```

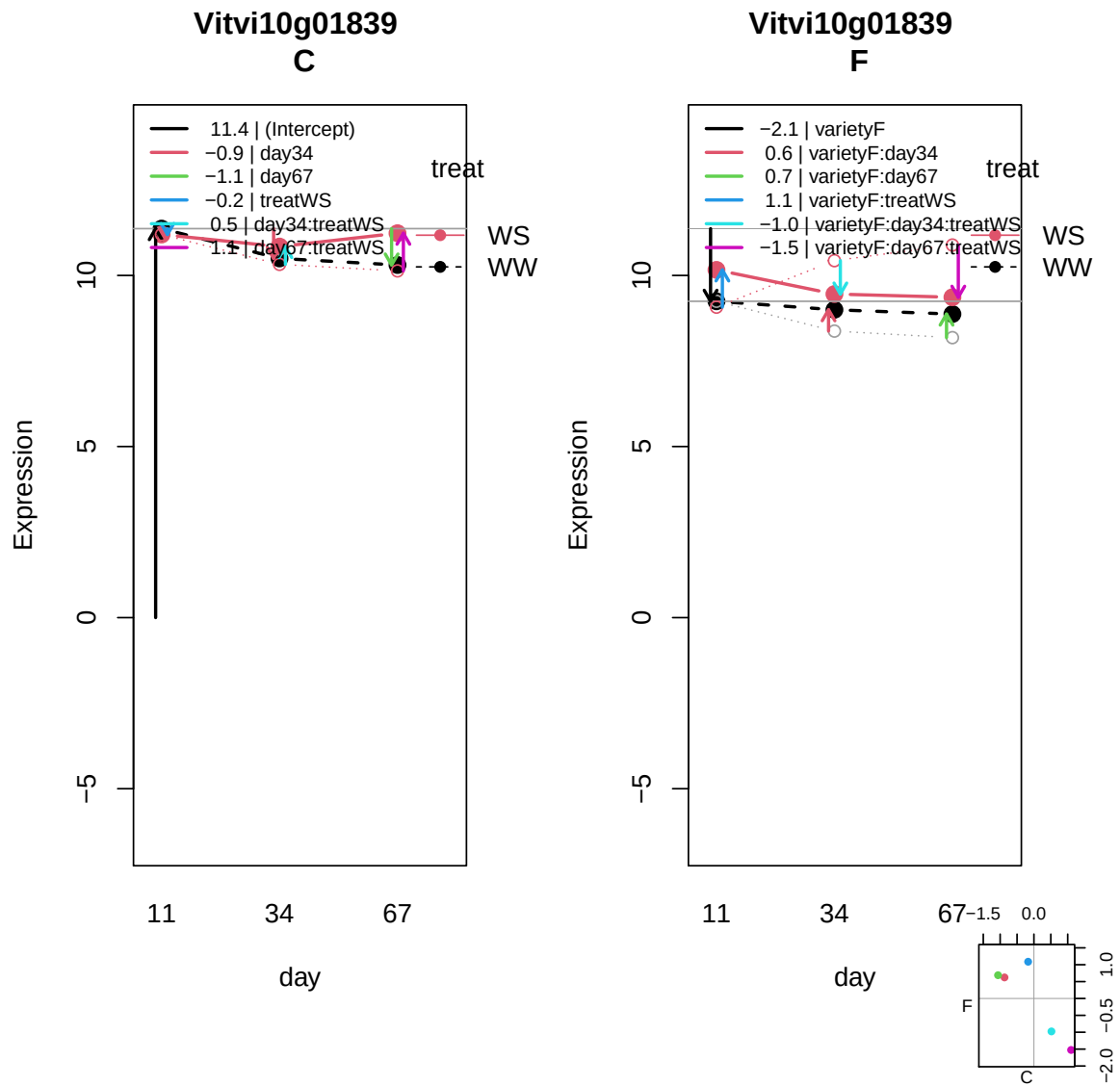
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

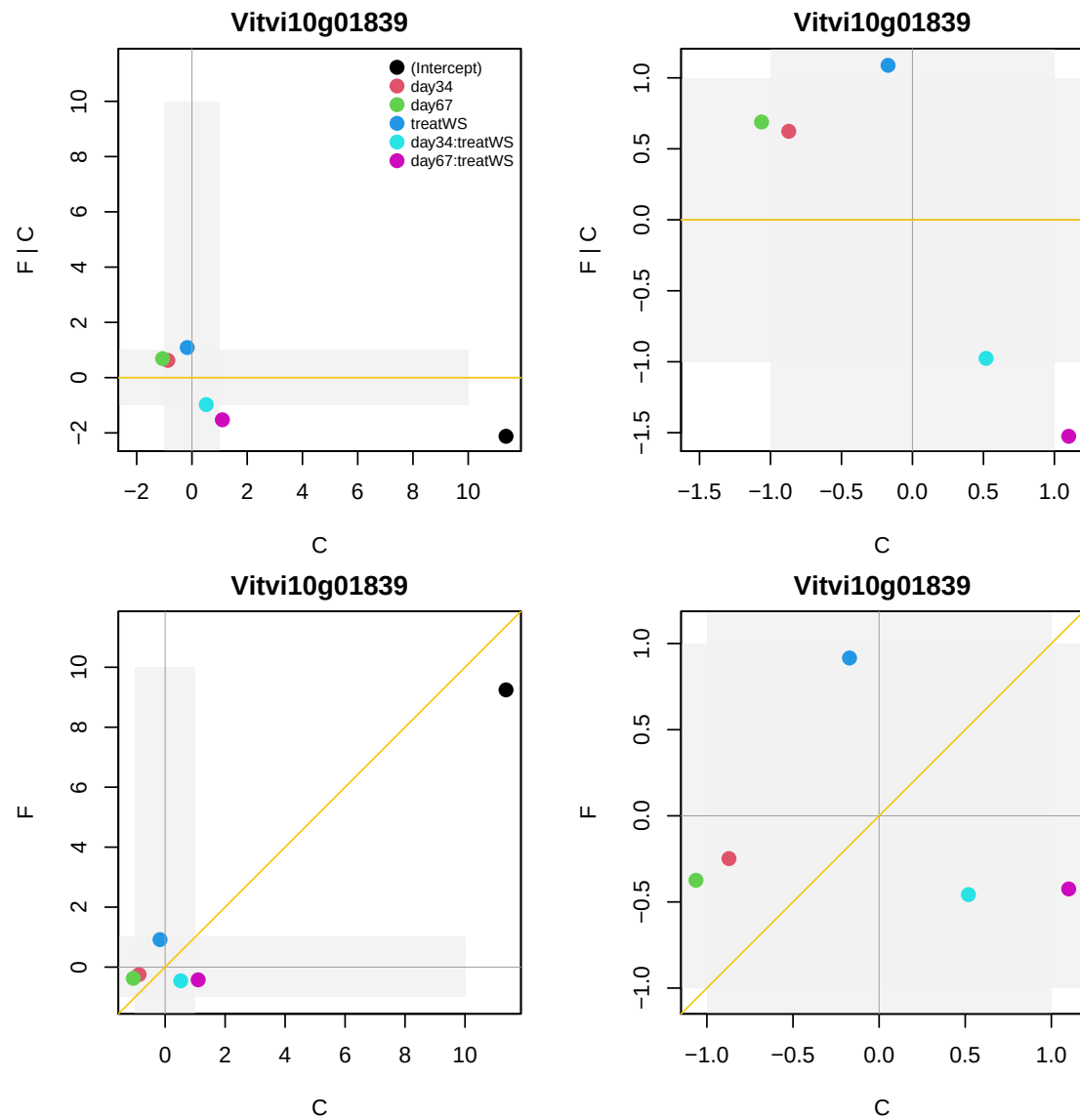


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

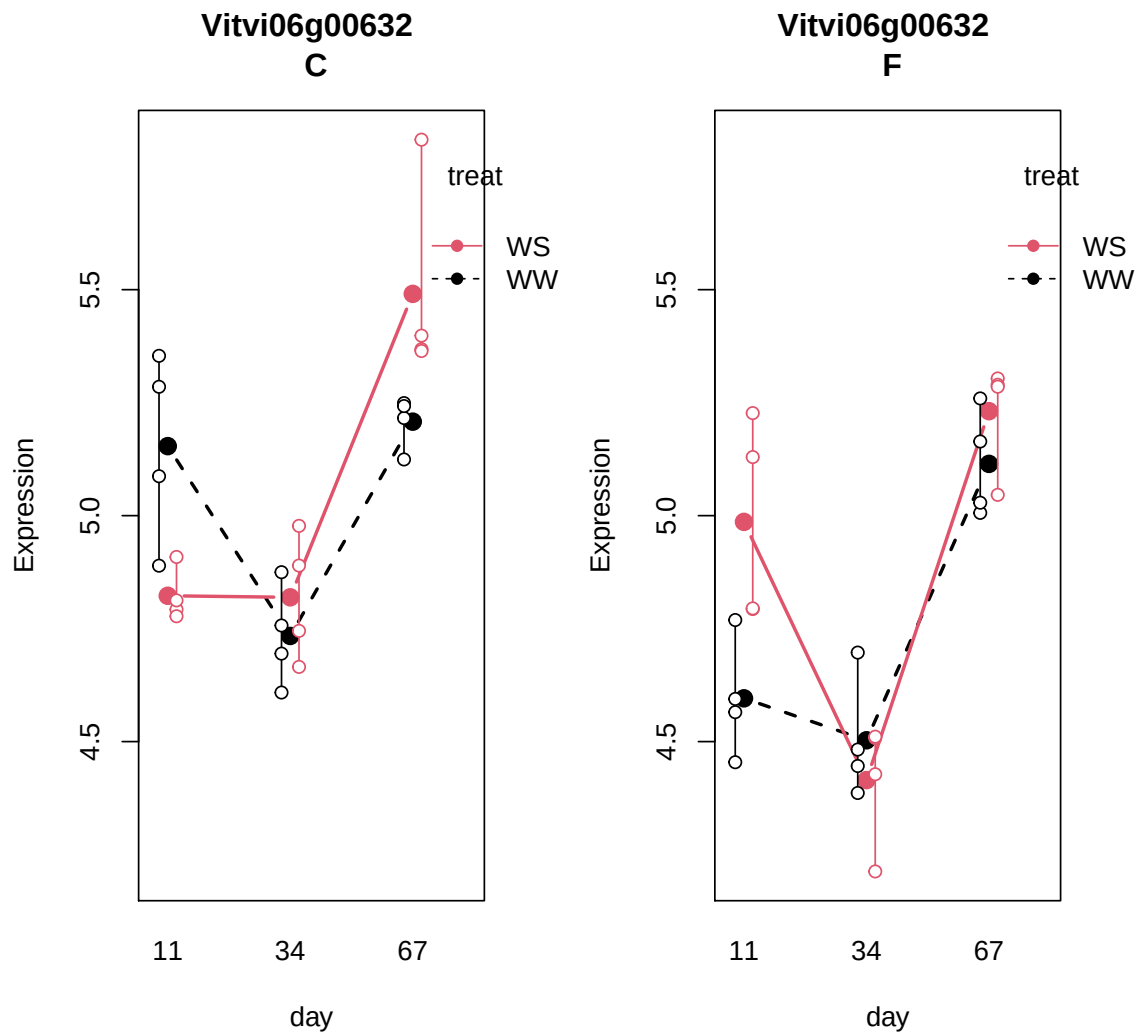


6.12.82 Vitvi06g00632

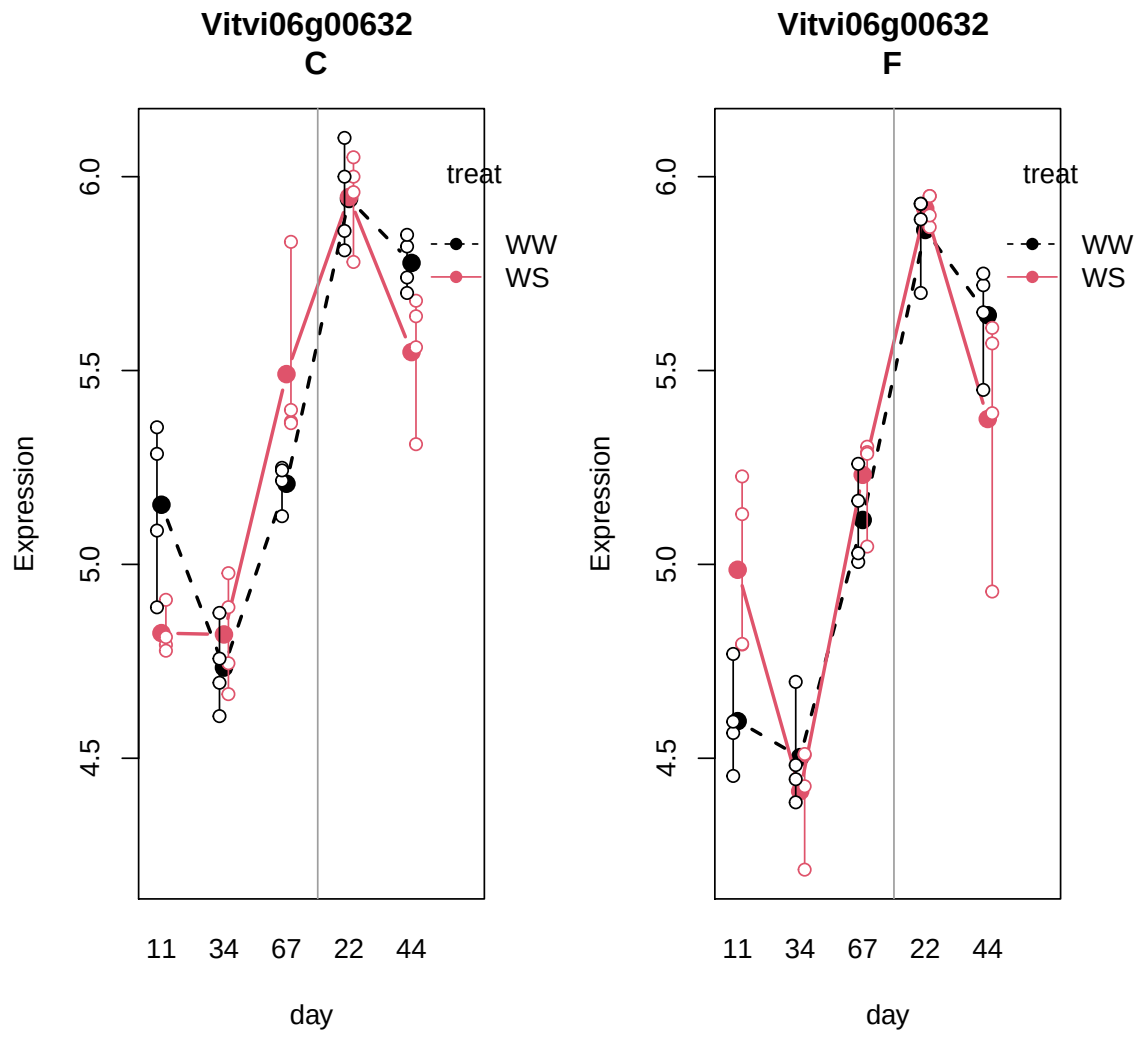
Coefficient varietyF:day67:treatWS for Vitvi06g00632.

```
> tt[varname,]
               logFC AveExpr          t      P.Value
Vitvi06g00632 -0.8877449   4.9228 -4.085807 0.000213541
               adj.P.Val          B
Vitvi06g00632 0.0385592 0.6093782

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

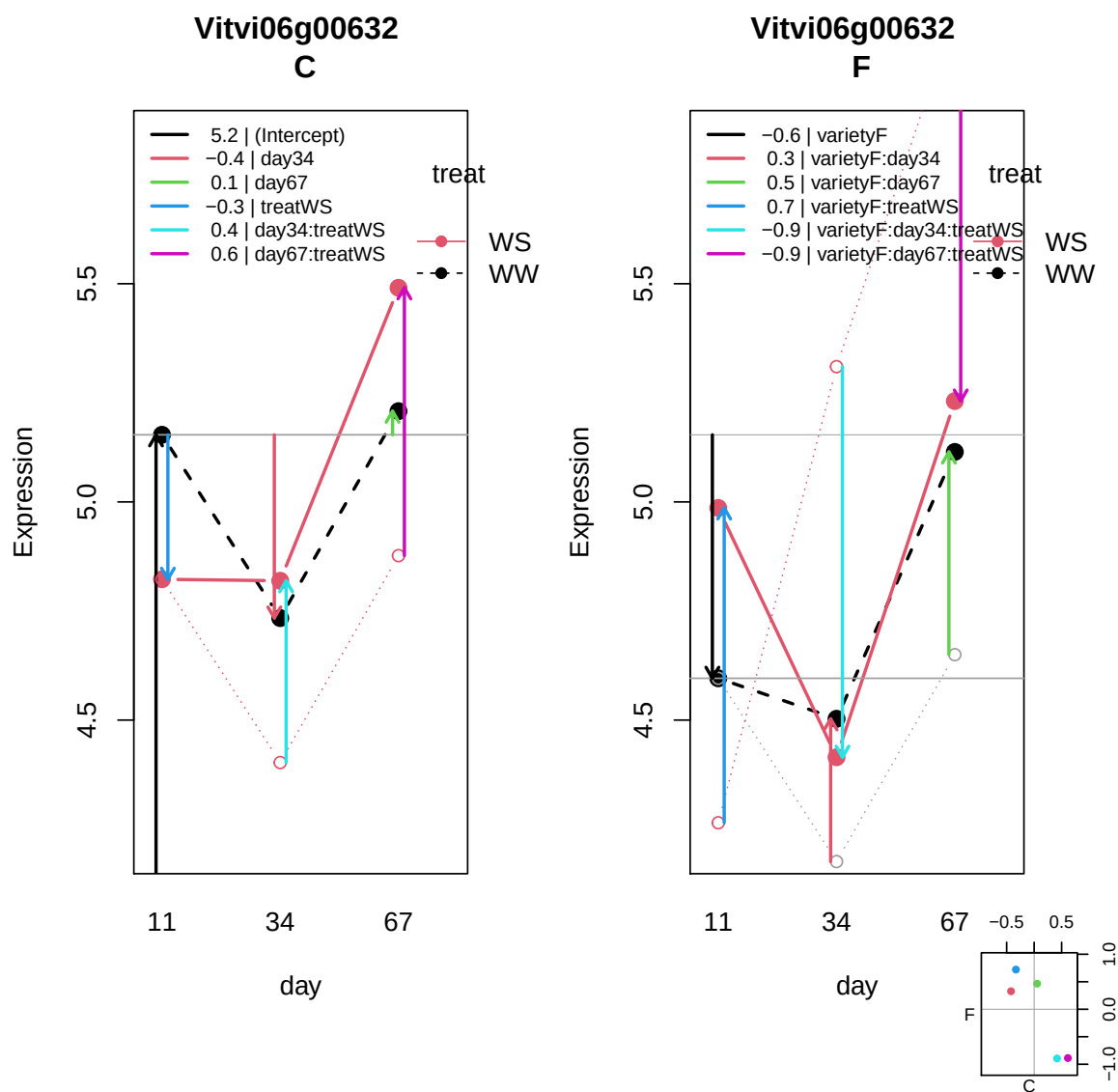
              (Intercept)    varietyF      day34      day67
Vitvi06g00632    5.153812 -0.5580694 -0.4200214 0.0541399
              treatWS varietyF:day34 varietyF:day67
Vitvi06g00632 -0.3311164    0.3272035    0.4646724
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi06g00632    0.721534    0.416647    0.6138779
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi06g00632          -0.8951526          -0.8877449

```

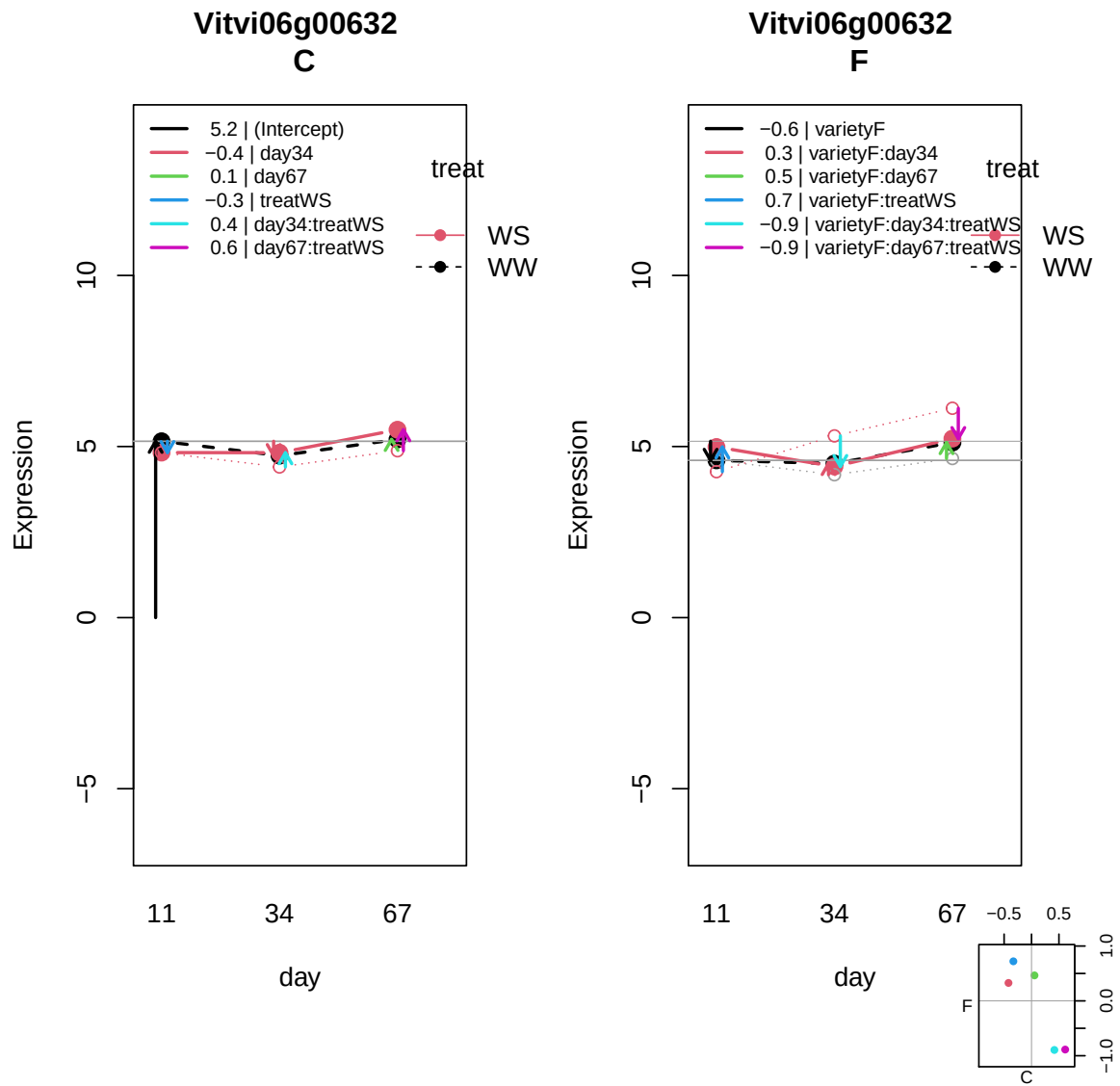
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

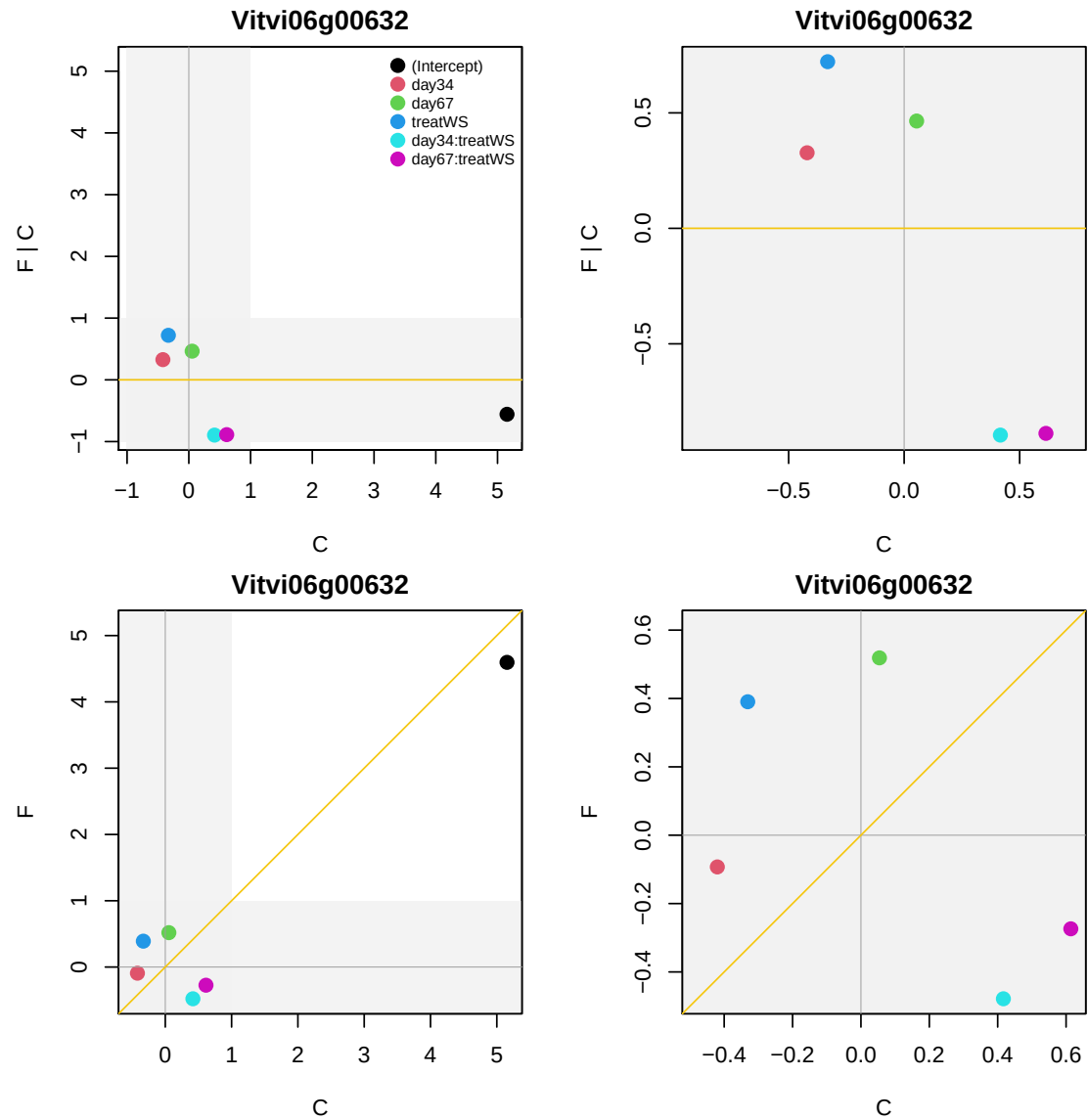


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

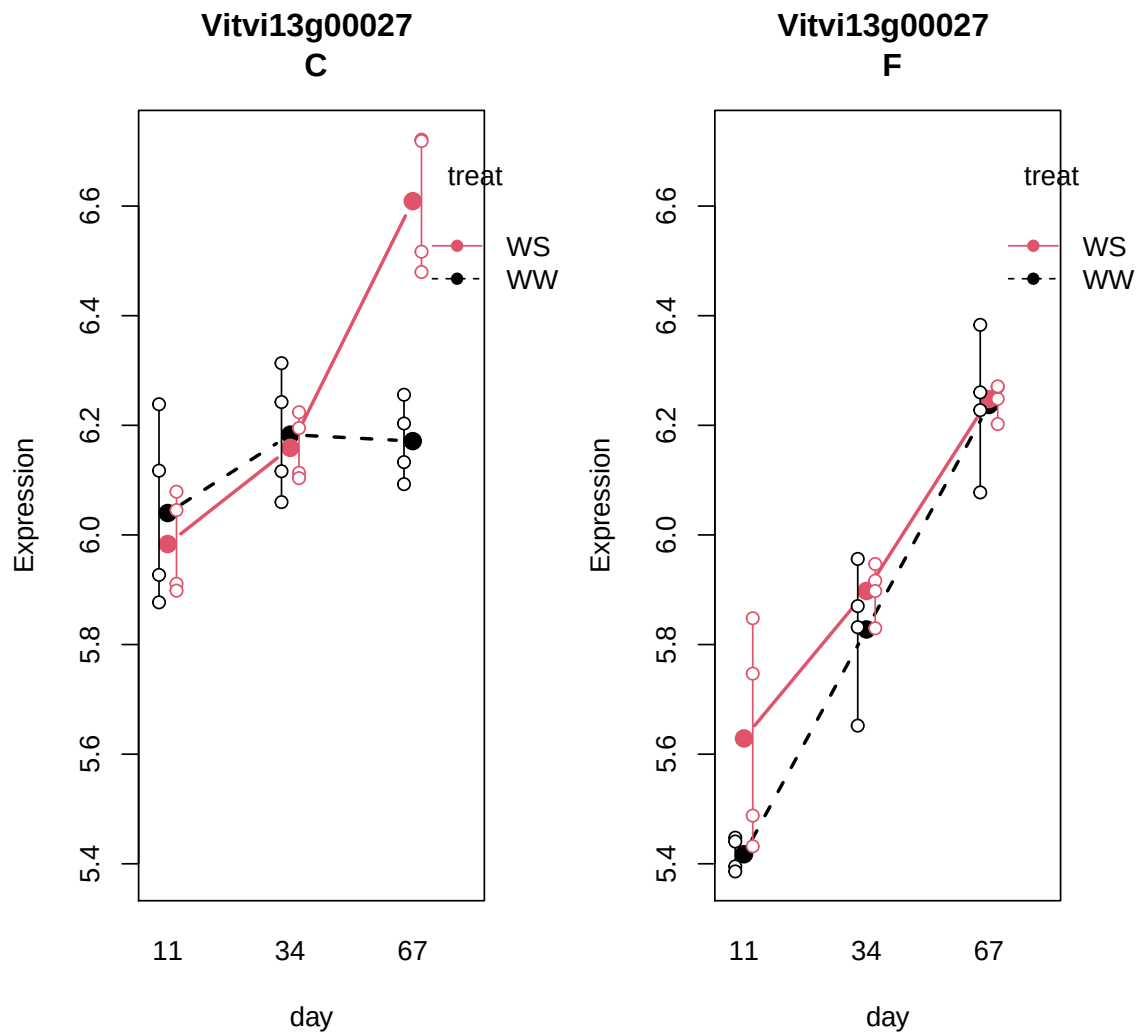


6.12.83 Vitvi13g00027

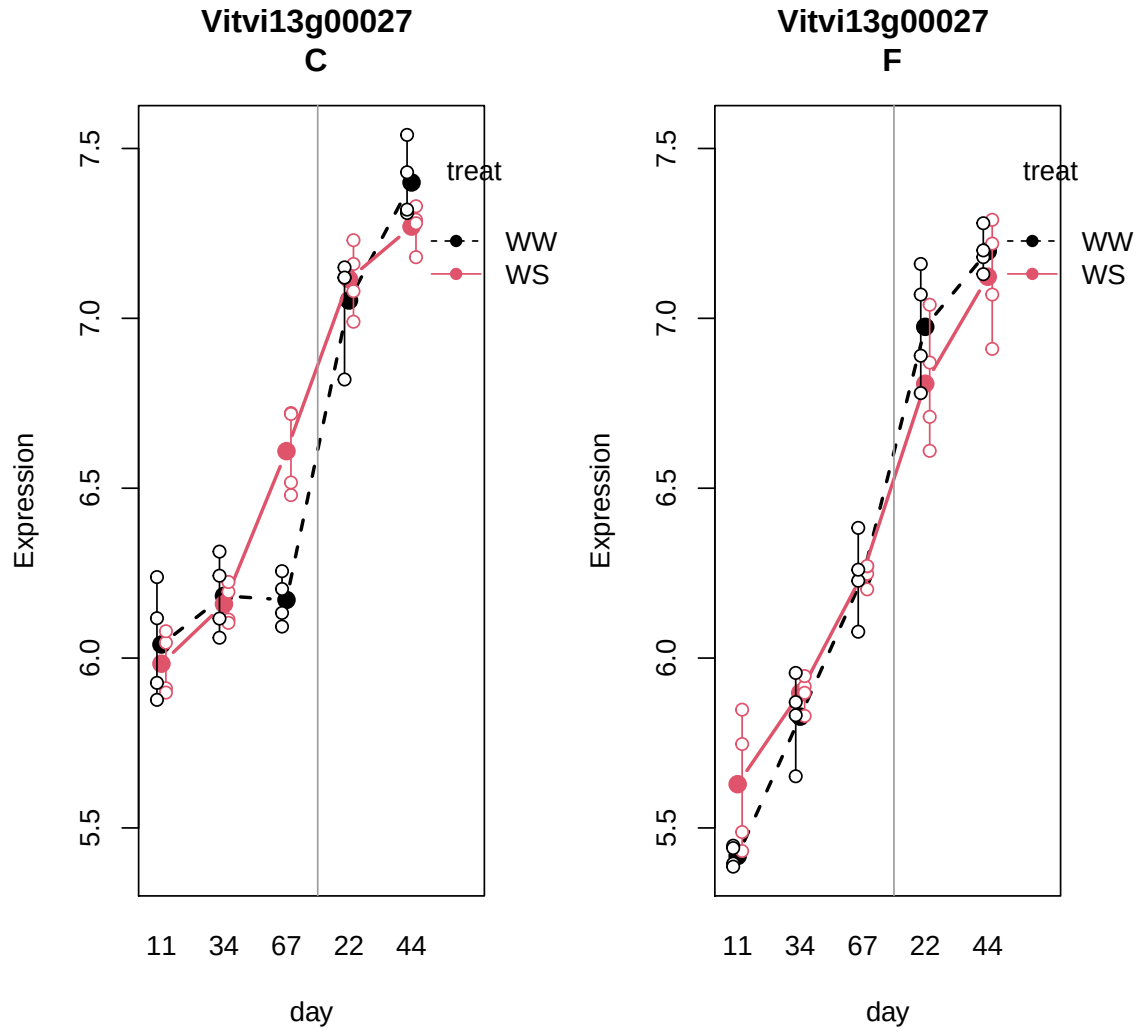
Coefficient varietyF:day67:treatWS for Vitvi13g00027.

```
> tt[varname,]
              logFC AveExpr      t      P.Value
Vitvi13g00027 -0.6950506 6.033476 -4.082567 0.0002156296
              adj.P.Val      B
Vitvi13g00027 0.0385592 0.6007344

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

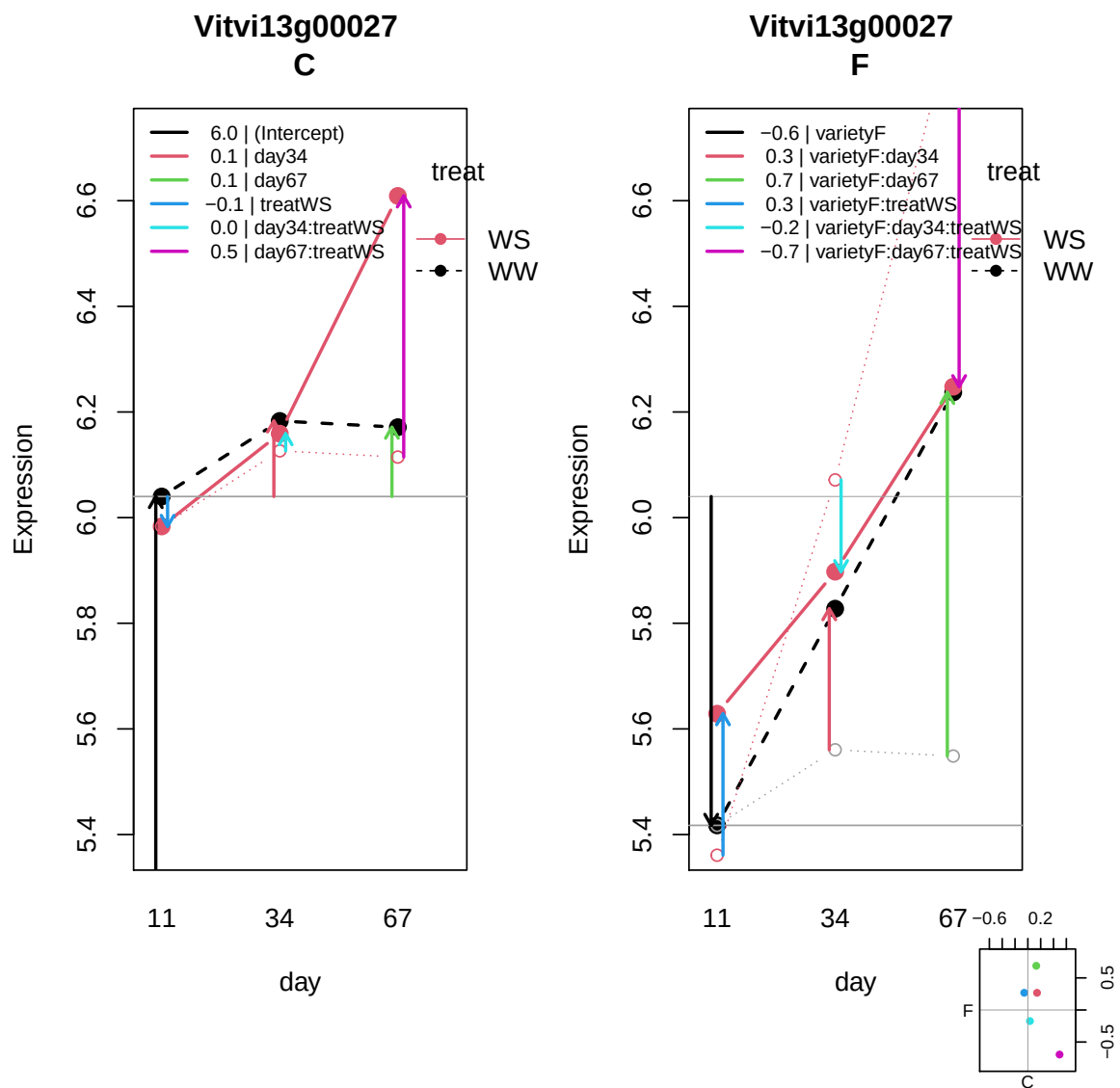


```

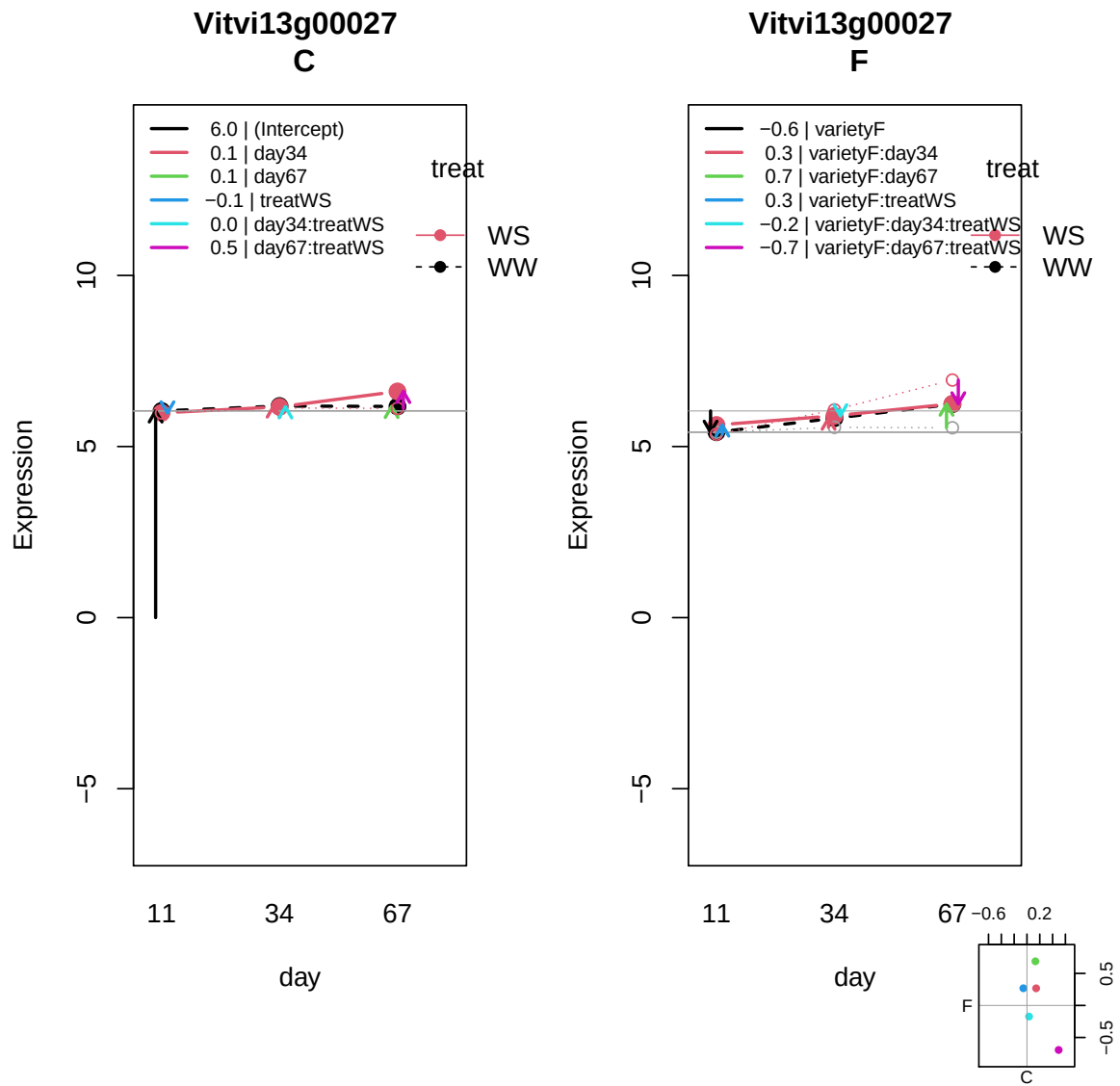
> fit1[varname,]$coefficients
              (Intercept)  varietyF    day34    day67
Vitvi13g00027      6.039932 -0.6225562 0.143045 0.1312229
              treatWS  varietyF:day34  varietyF:day67
Vitvi13g00027 -0.05655201    0.2671261    0.6885397
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi13g00027    0.2678681    0.03250378    0.494437
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi13g00027    -0.1736717    -0.6950506

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

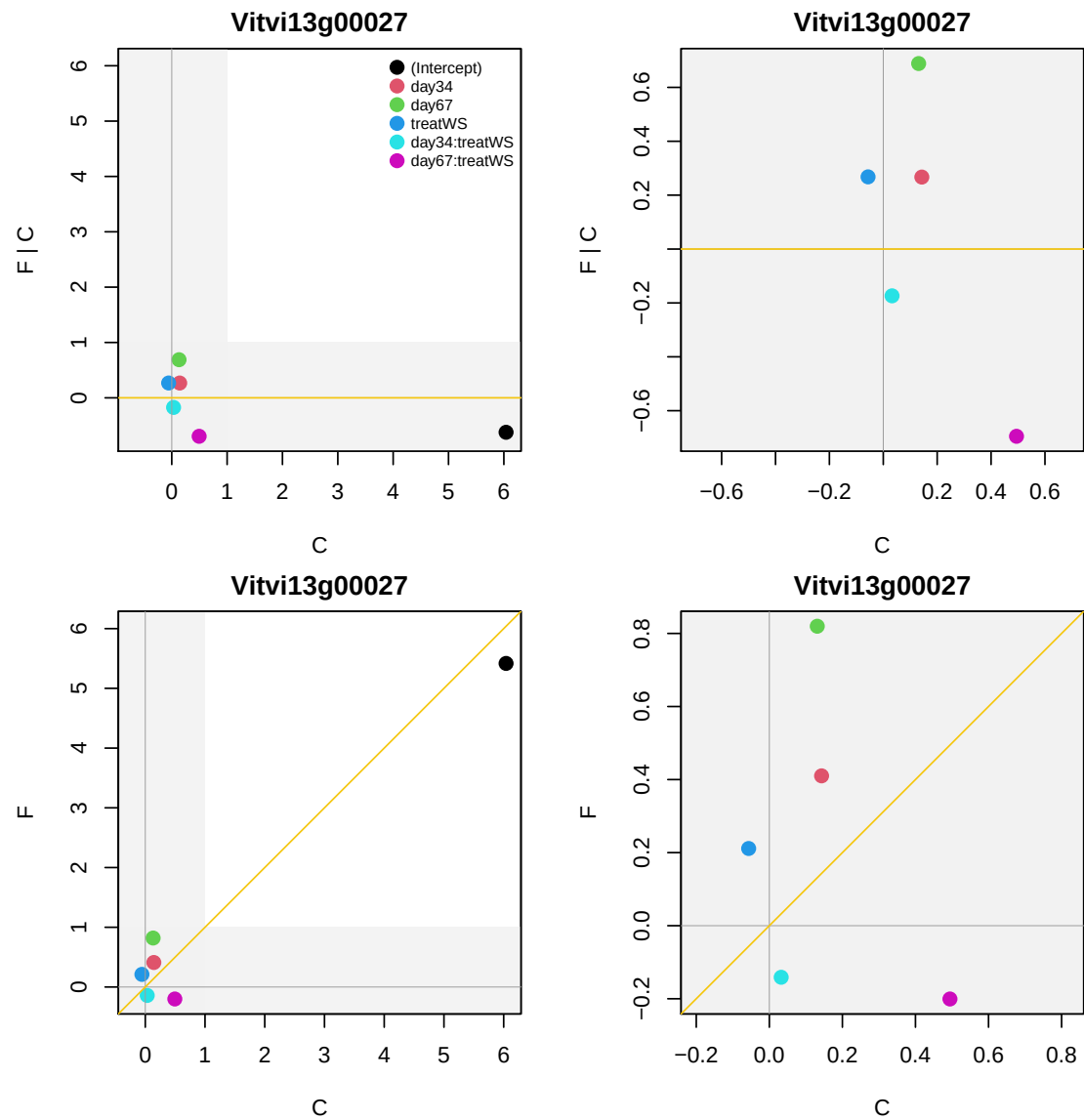



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

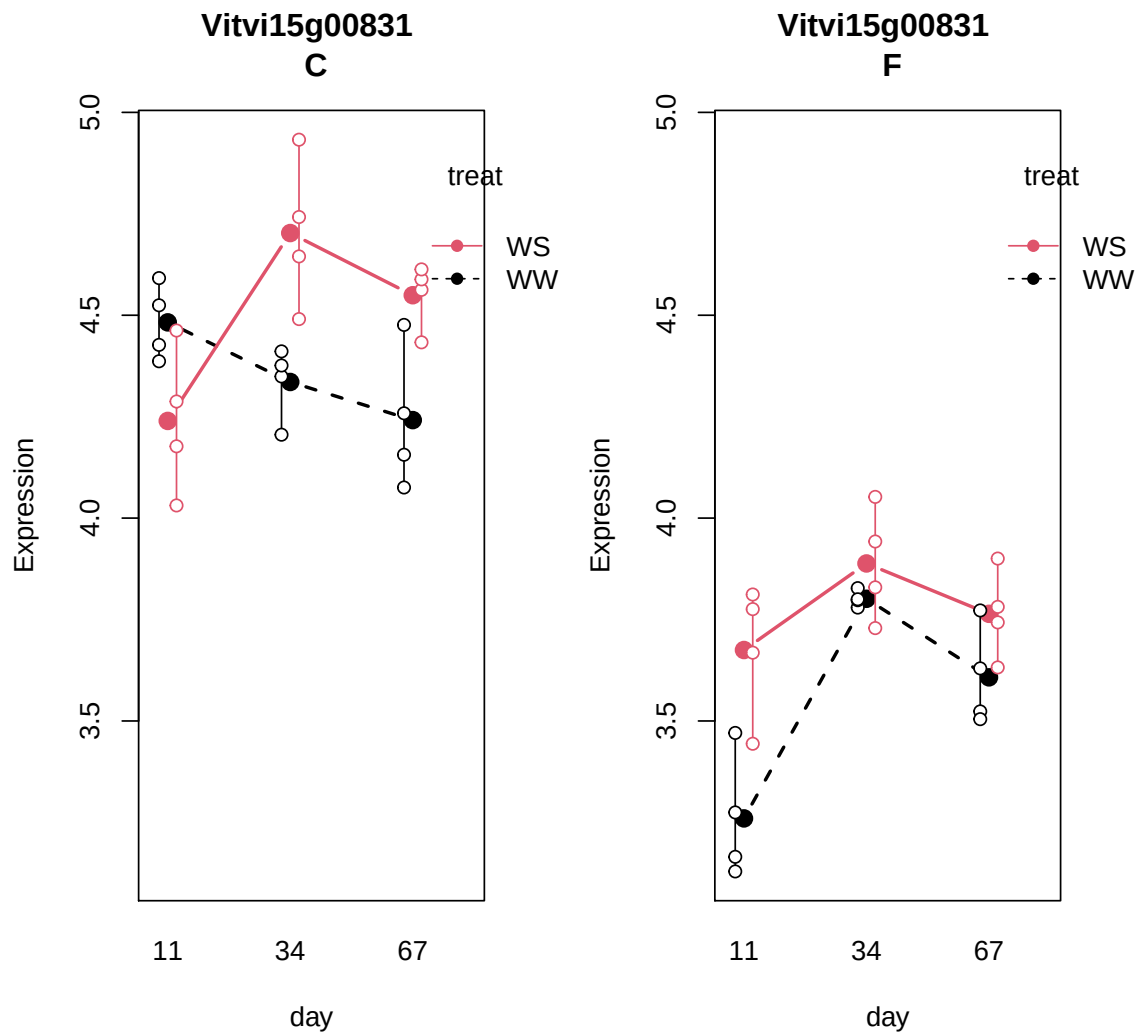


6.12.84 Vitvi15g00831

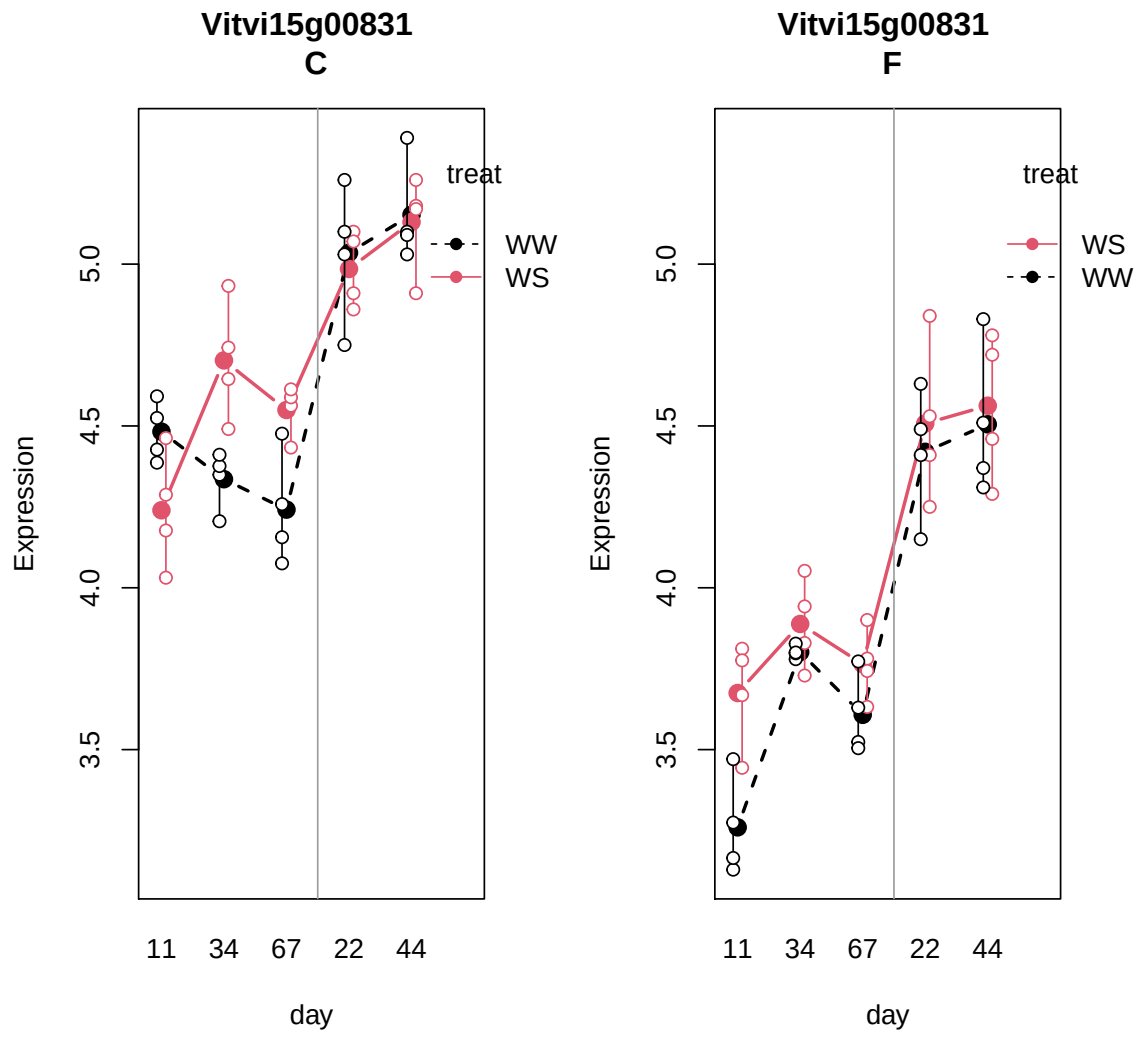
Coefficient varietyF:day67:treatWS for Vitvi15g00831.

```
> tt[varname,]
              logFC AveExpr      t      P.Value
Vitvi15g00831 -0.8091439 4.045528 -4.082266 0.0002158246
              adj.P.Val      B
Vitvi15g00831 0.0385592 0.5999317

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

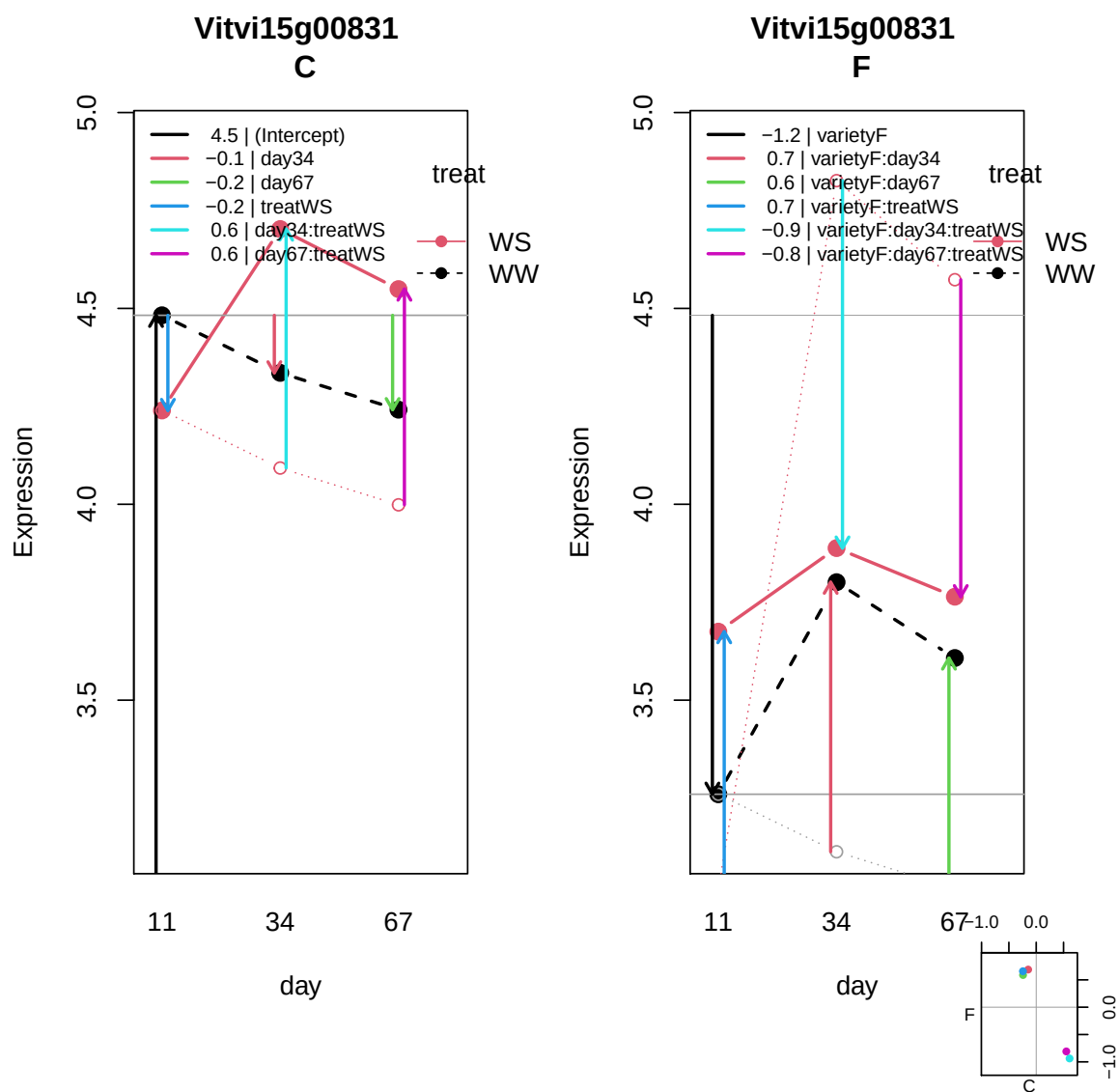
              (Intercept)  varietyF      day34      day67
Vitvi15g00831      4.482393 -1.222557 -0.1469347 -0.2408851
              treatWS varietyF:day34 varietyF:day67
Vitvi15g00831     -0.2429056      0.6881957      0.5885565
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi15g00831      0.6579437      0.6099985      0.550709
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi15g00831      -0.9379326      -0.8091439

```

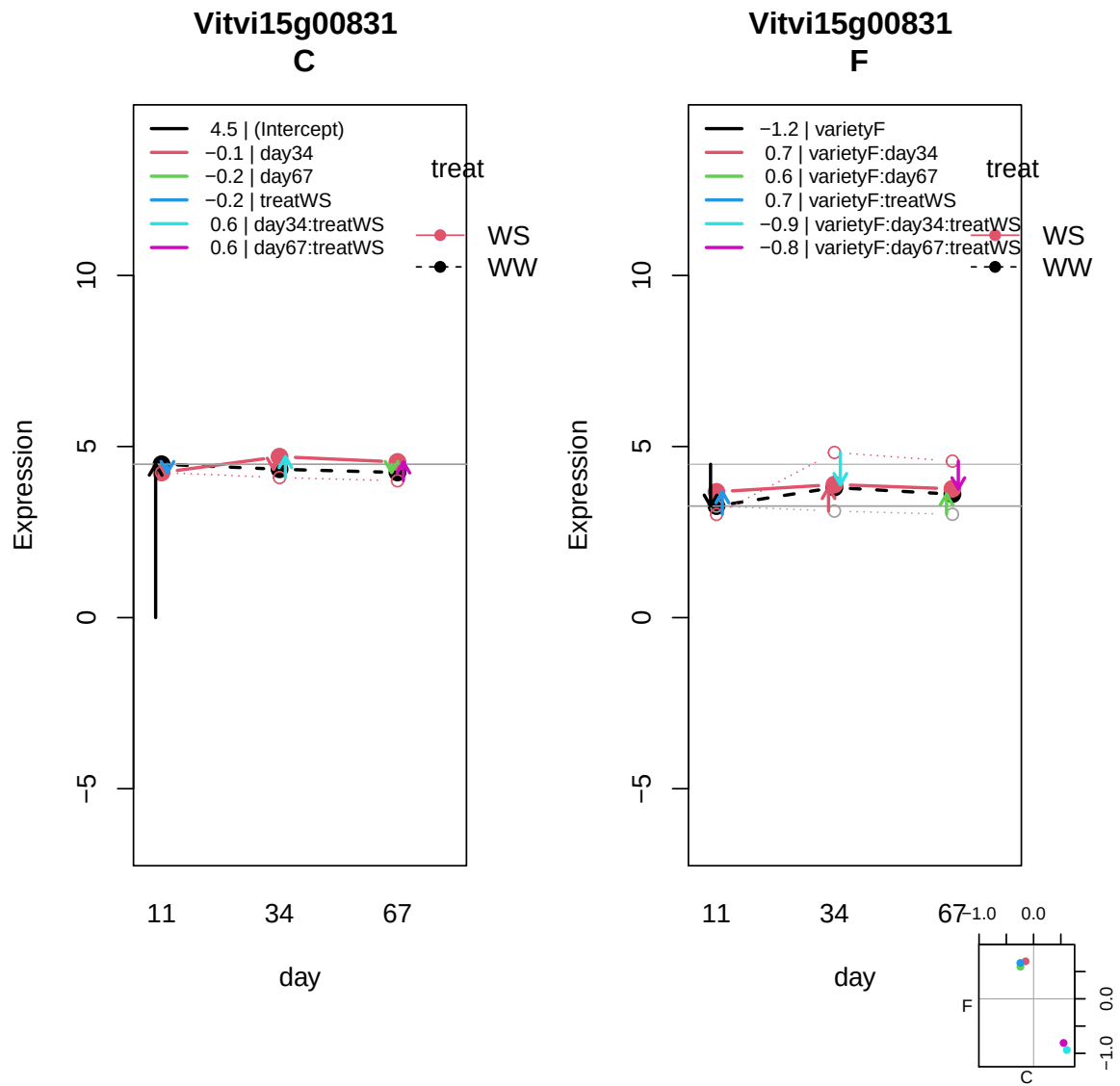
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

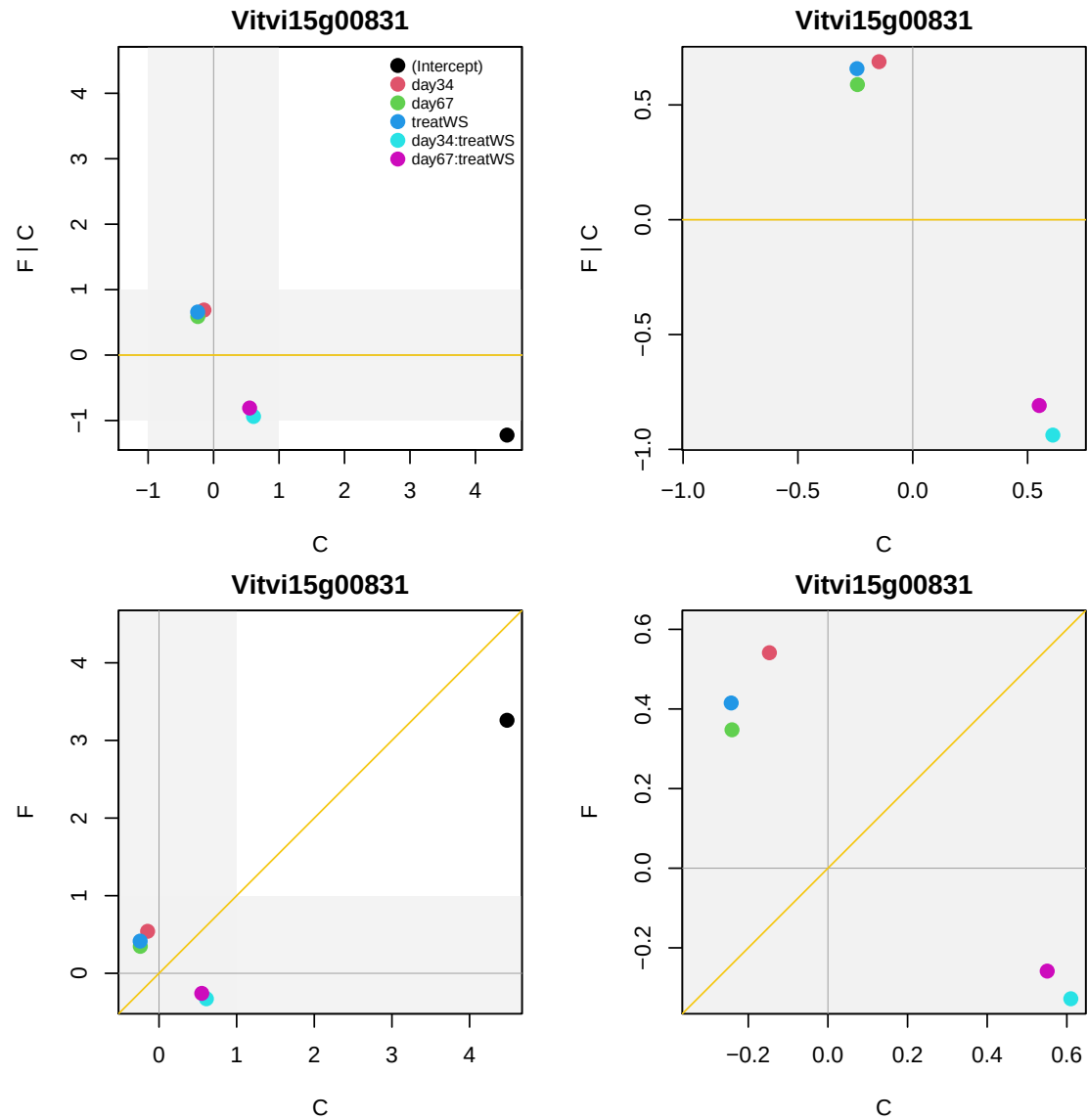


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

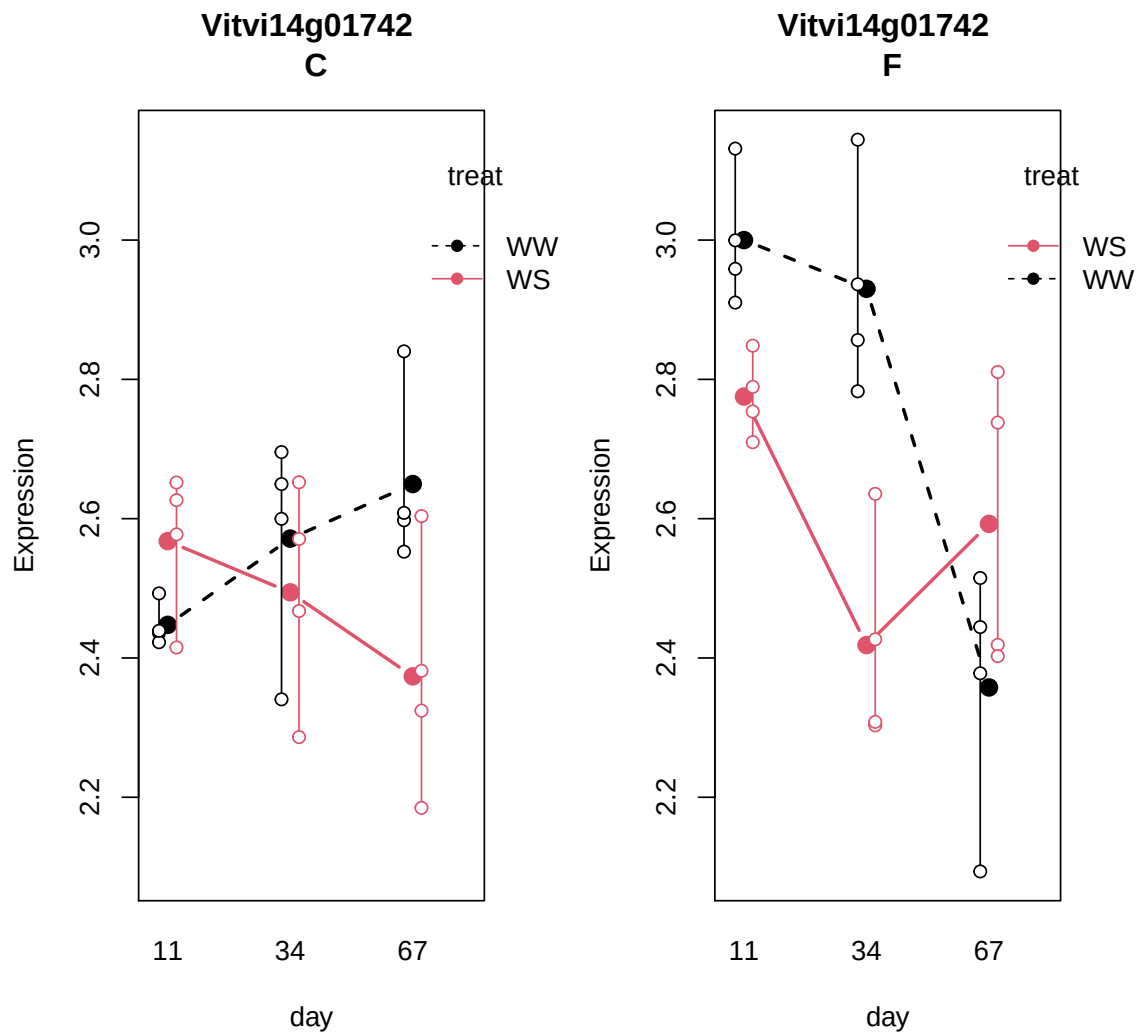


6.12.85 Vitvi14g01742

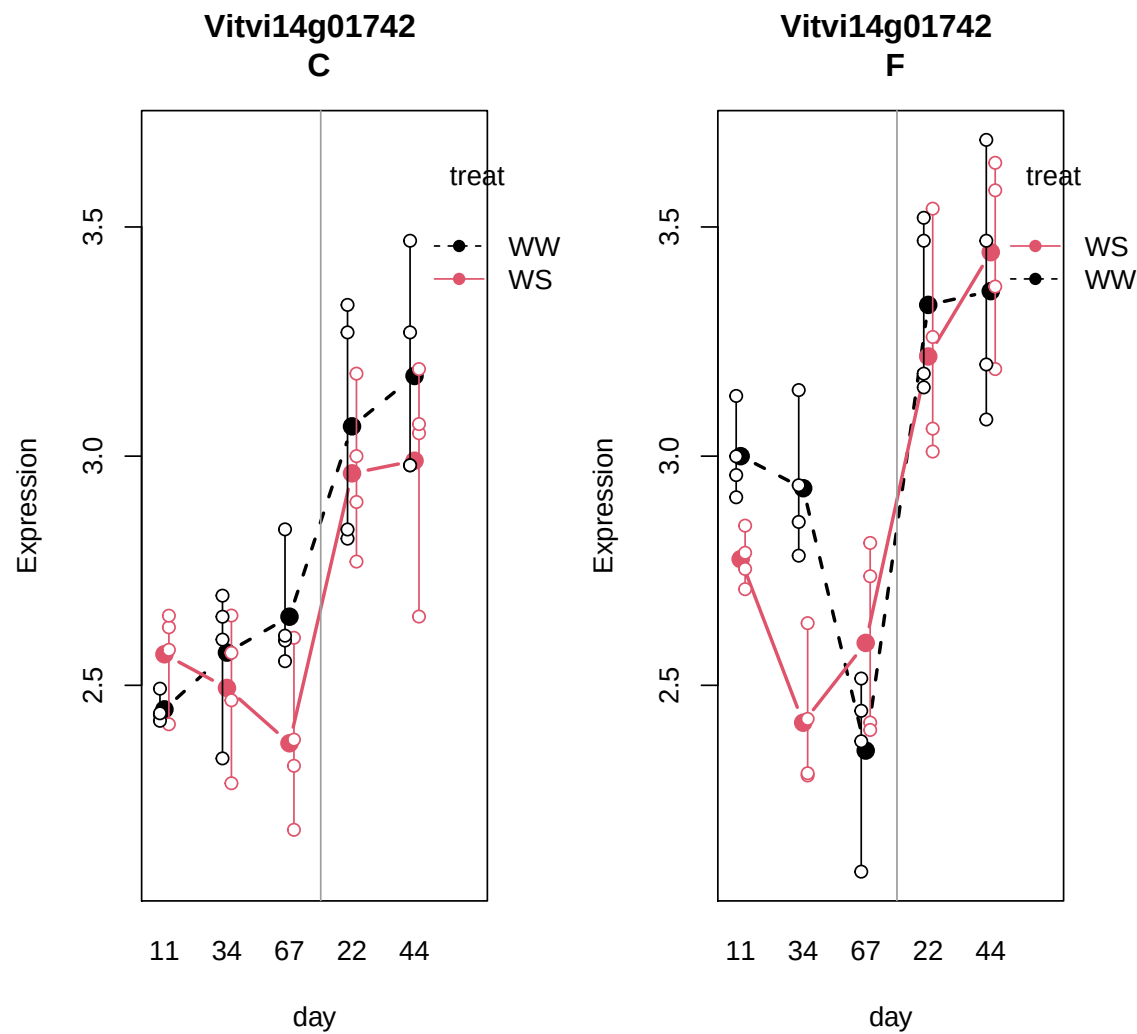
Coefficient varietyF:day67:treatWS for Vitvi14g01742.

```
> tt[varname,]
              logFC  AveExpr          t      P.Value
Vitvi14g01742  0.8558462  2.598182  4.078403  0.0002183424
              adj.P.Val          B
Vitvi14g01742  0.0385592  0.5896323

> plot.interactions(varname, phdata=pd, data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

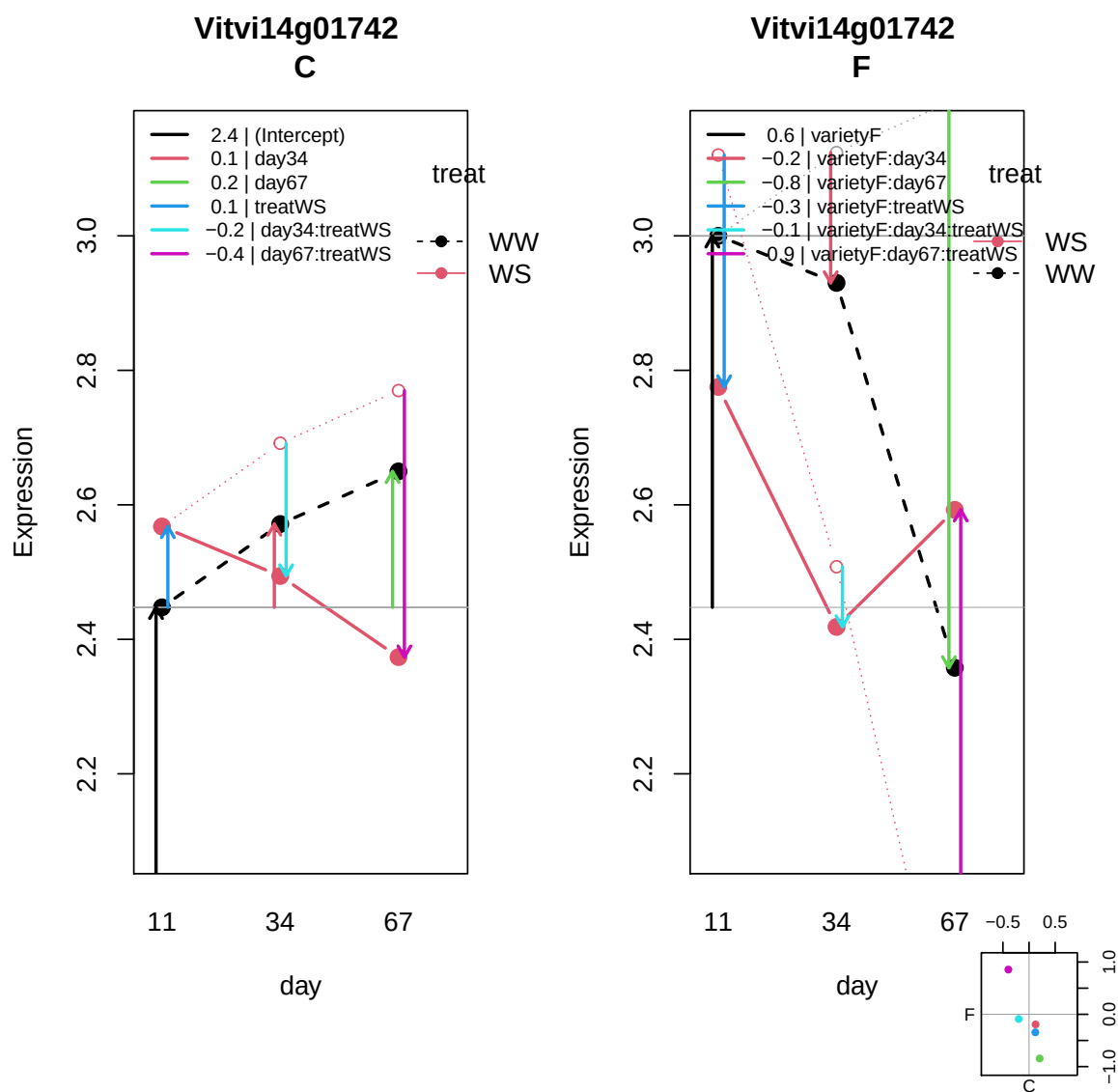
      (Intercept)  varietyF    day34    day67
Vitvi14g01742    2.447539 0.5524414 0.1238574 0.2021835
      treatWS varietyF:day34 varietyF:day67
Vitvi14g01742 0.1202234    -0.1938332    -0.8444977
      varietyF:treatWS day34:treatWS day67:treatWS
Vitvi14g01742    -0.3448762    -0.1974032    -0.3963474
      varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi14g01742    -0.08949025    0.8558462

```

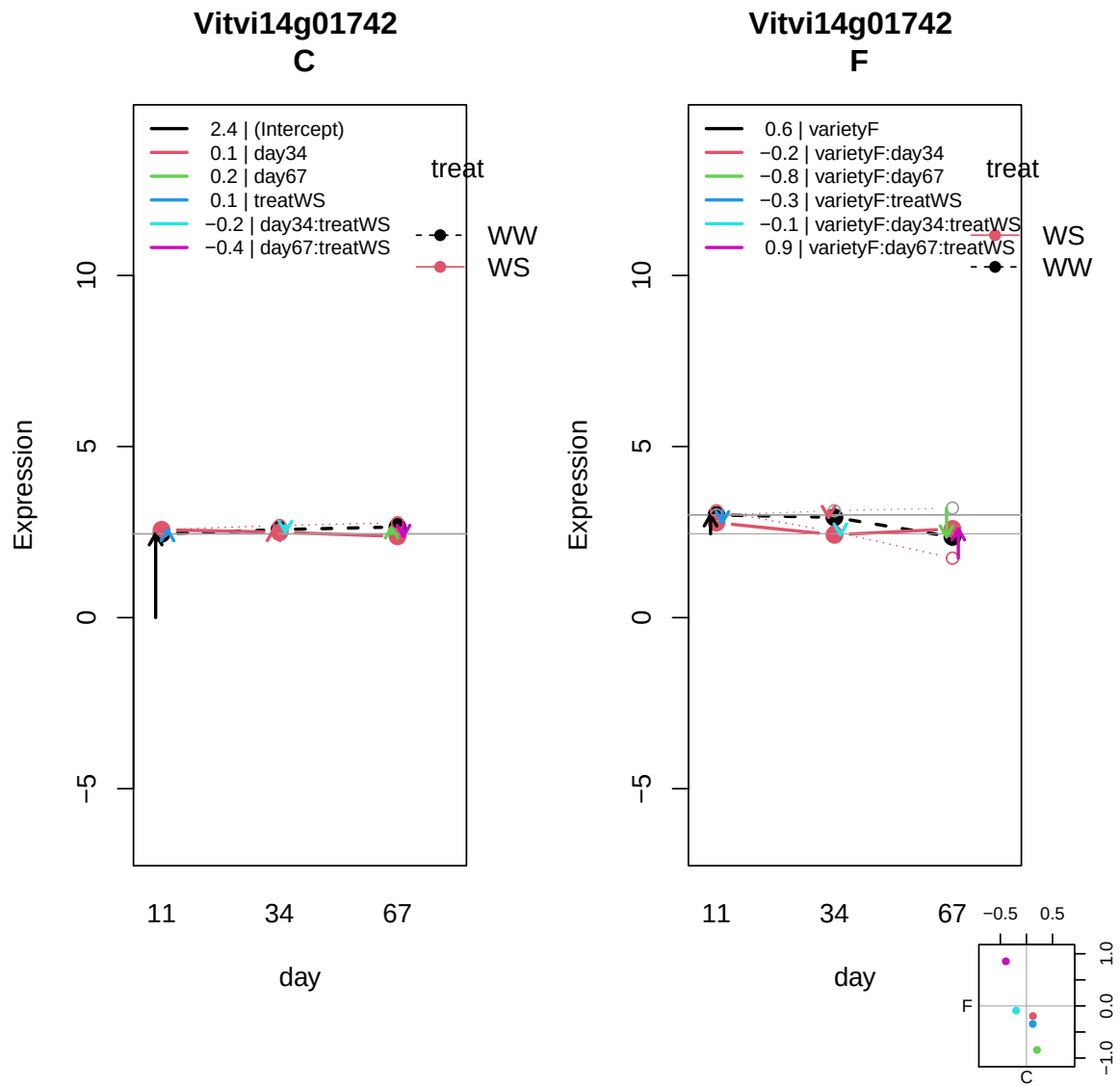
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

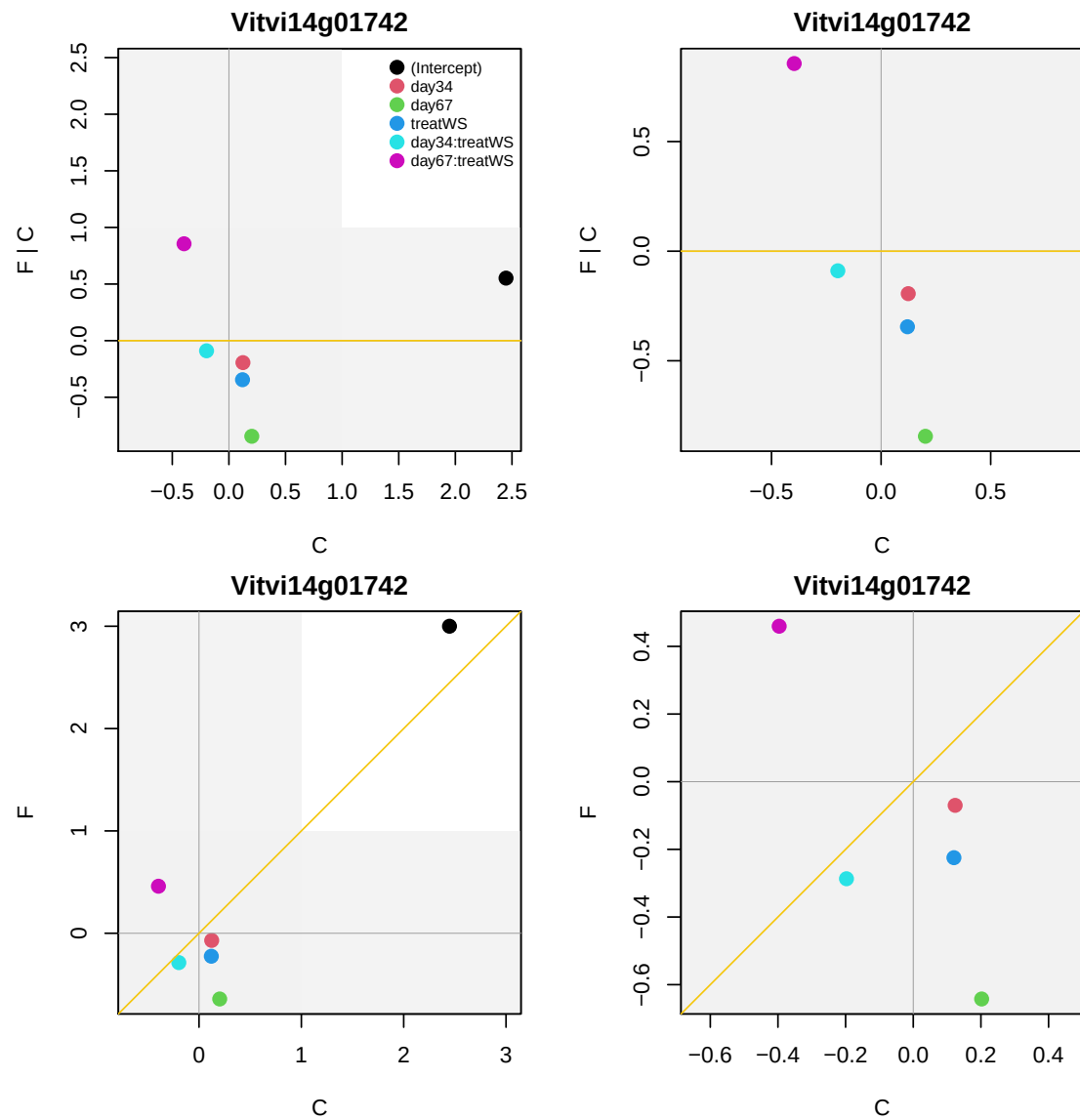


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

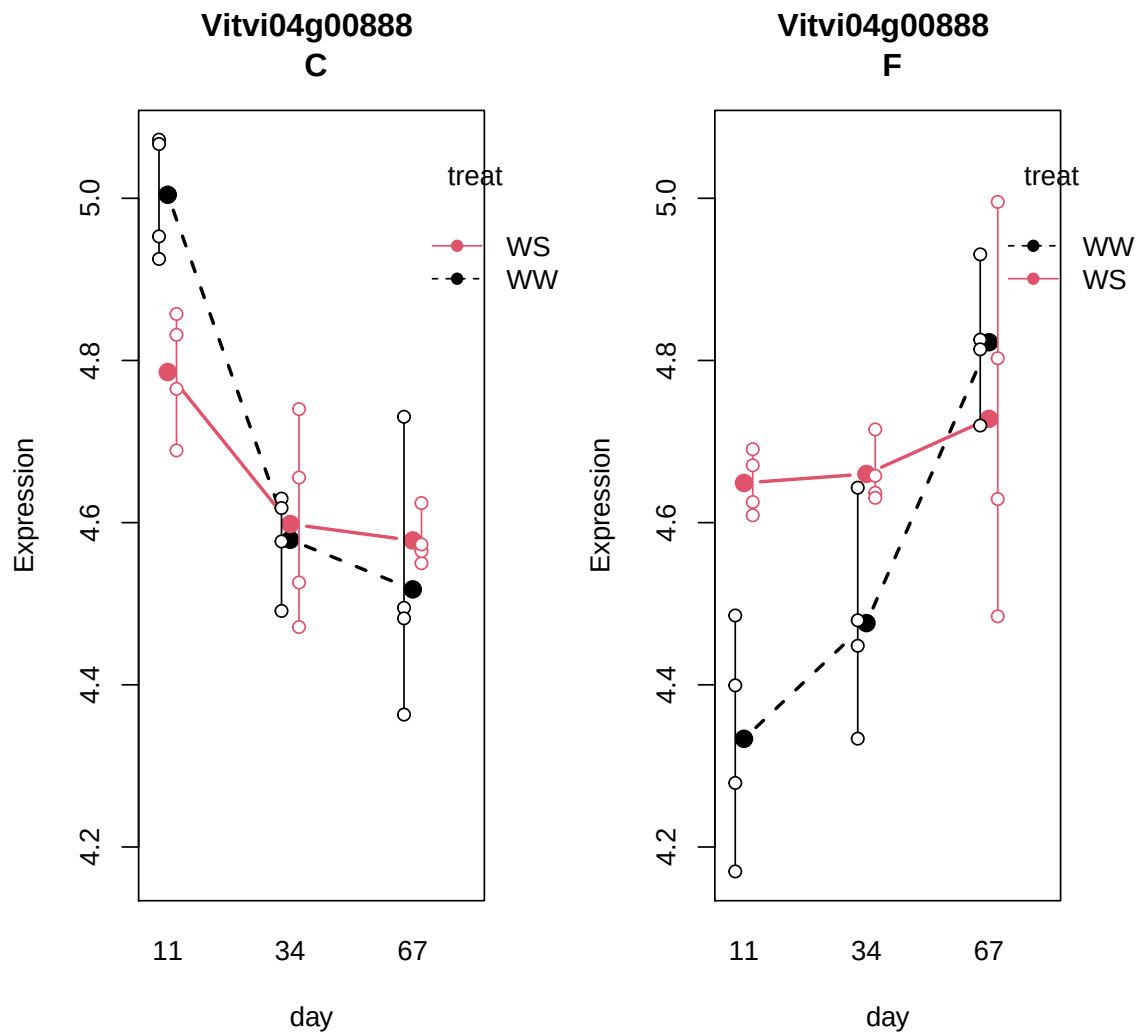


6.12.86 Vitvi04g00888

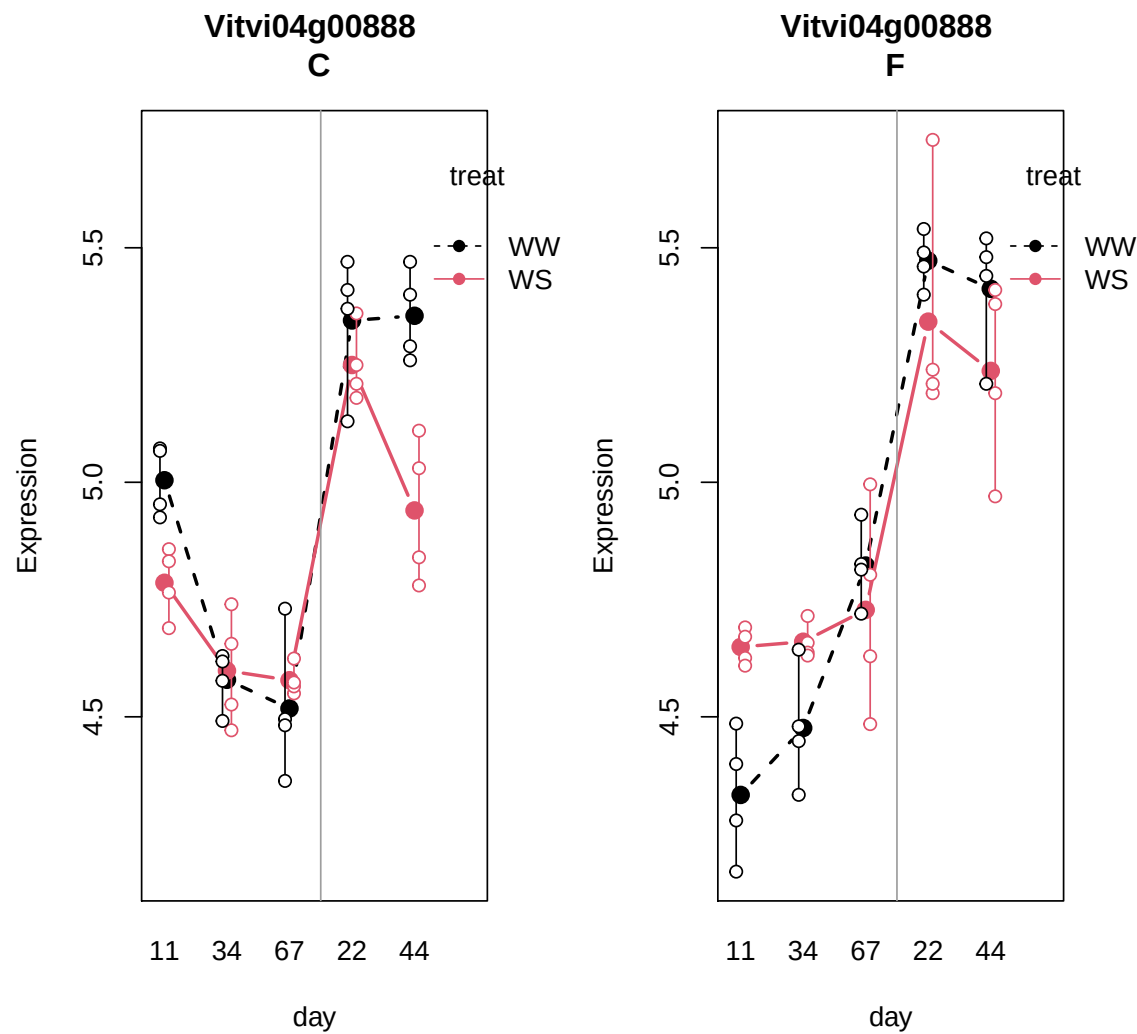
Coefficient varietyF:day67:treatWS for Vitvi04g00888.

```
> tt[varname,]
              logFC  AveExpr          t      P.Value
Vitvi04g00888 -0.6889385  4.644327 -4.078124  0.0002185249
              adj.P.Val          B
Vitvi04g00888  0.0385592  0.5888902

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

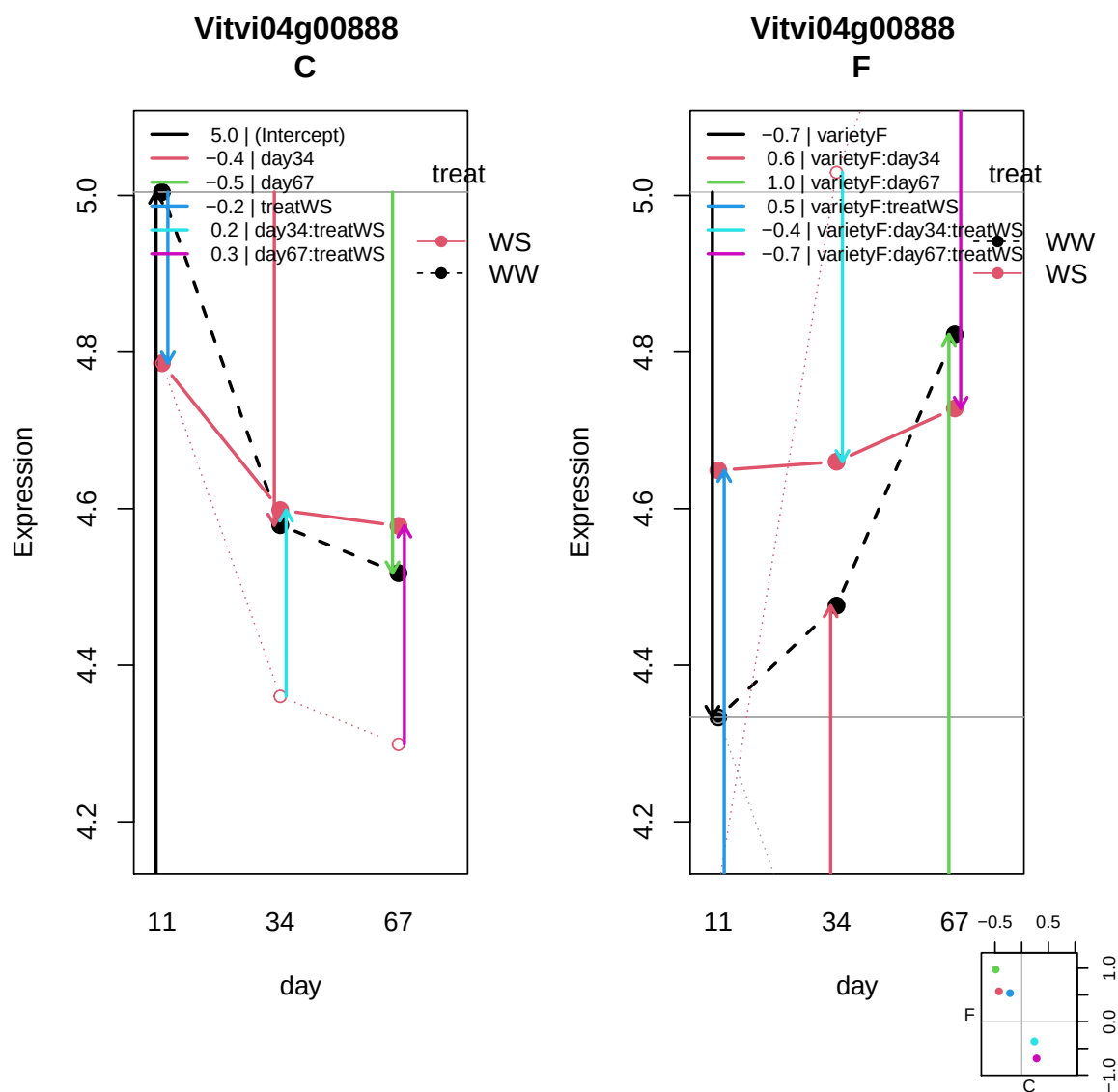
              (Intercept)    varietyF      day34      day67
Vitvi04g00888      5.004348 -0.6709161 -0.4254565 -0.4866632
              treatWS varietyF:day34 varietyF:day67
Vitvi04g00888    -0.2186038      0.5681512      0.9757402
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi04g00888          0.5340939      0.2379658      0.278914
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi04g00888          -0.3695465          -0.6889385

```

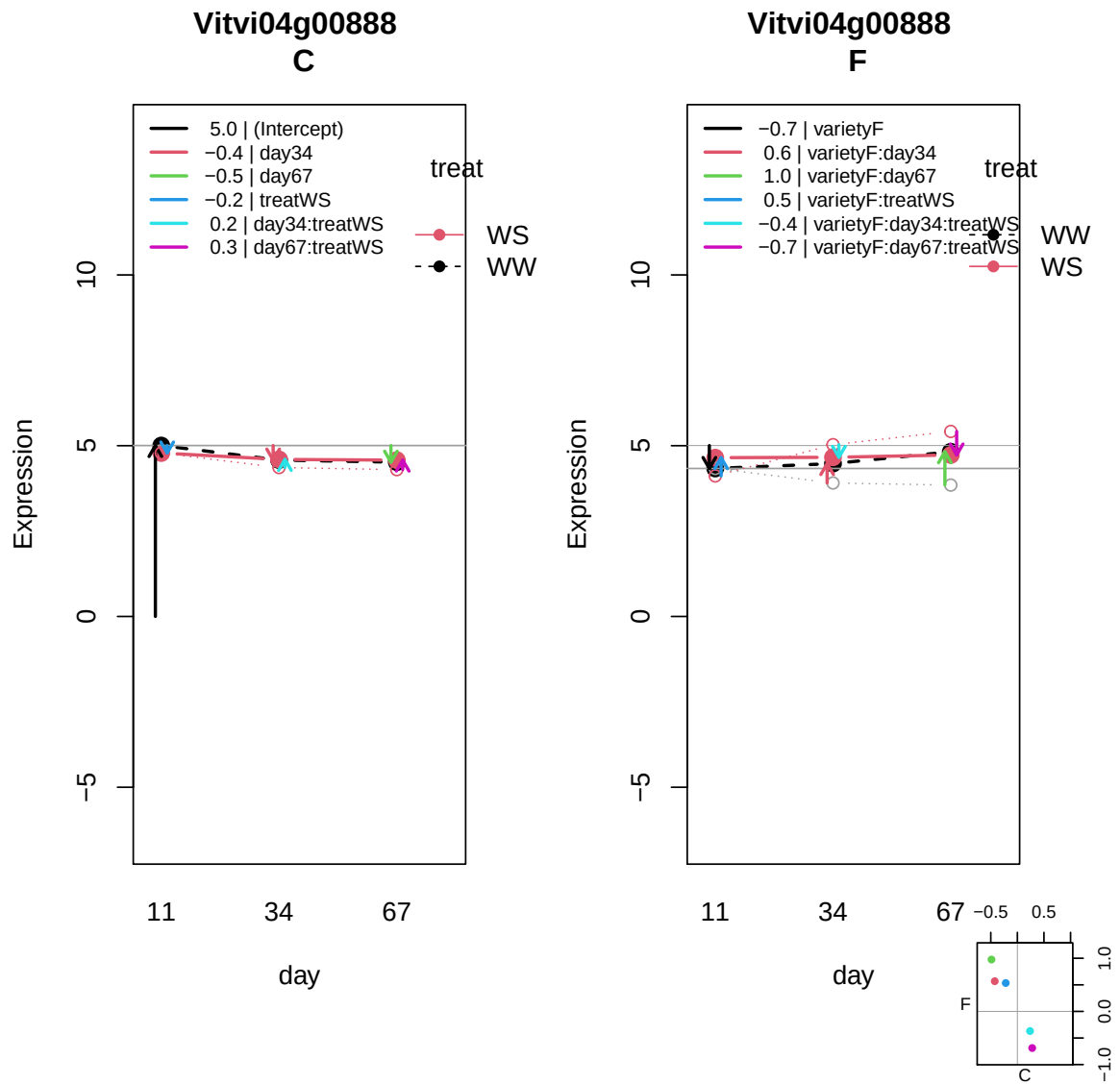
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

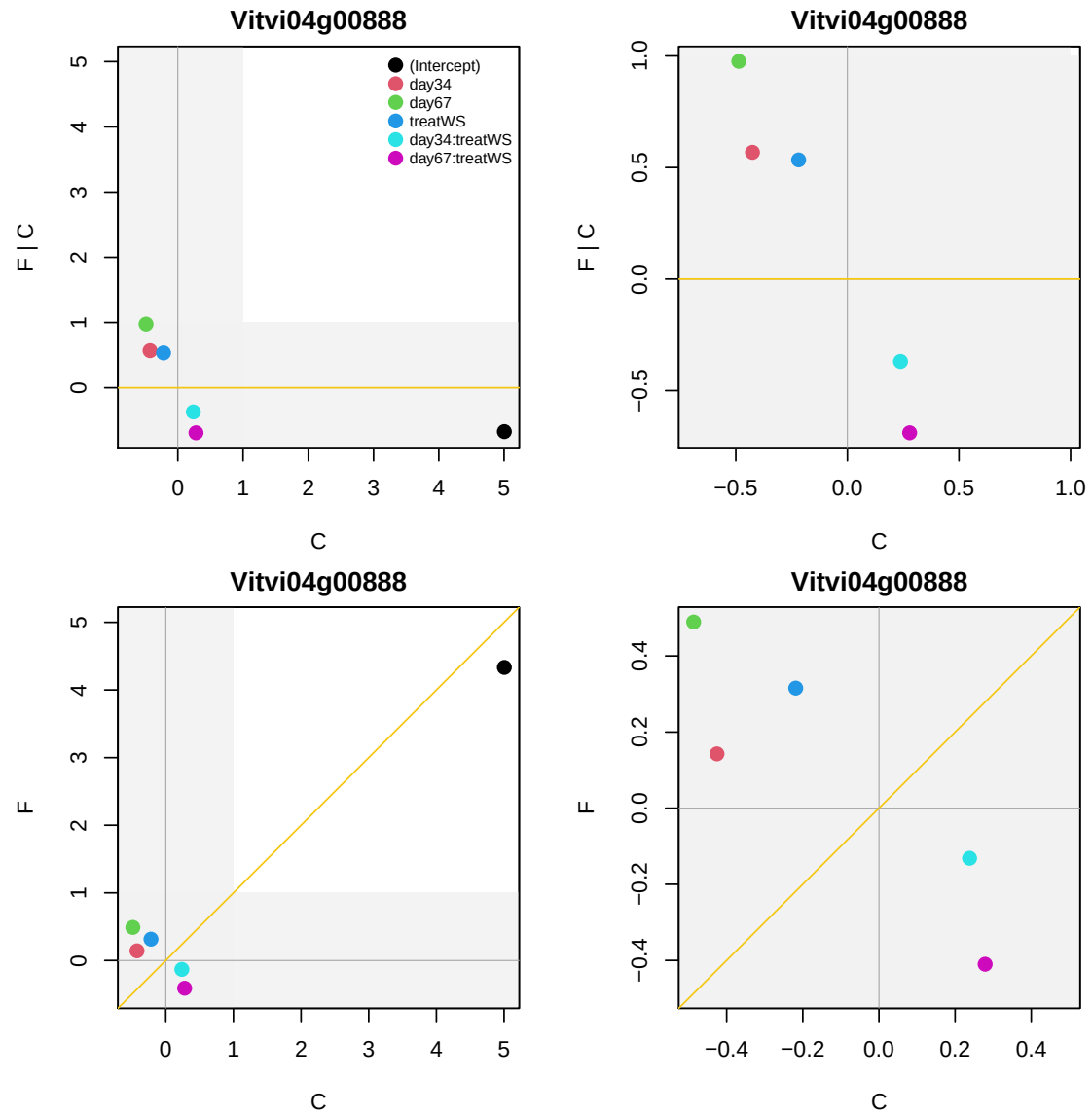


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

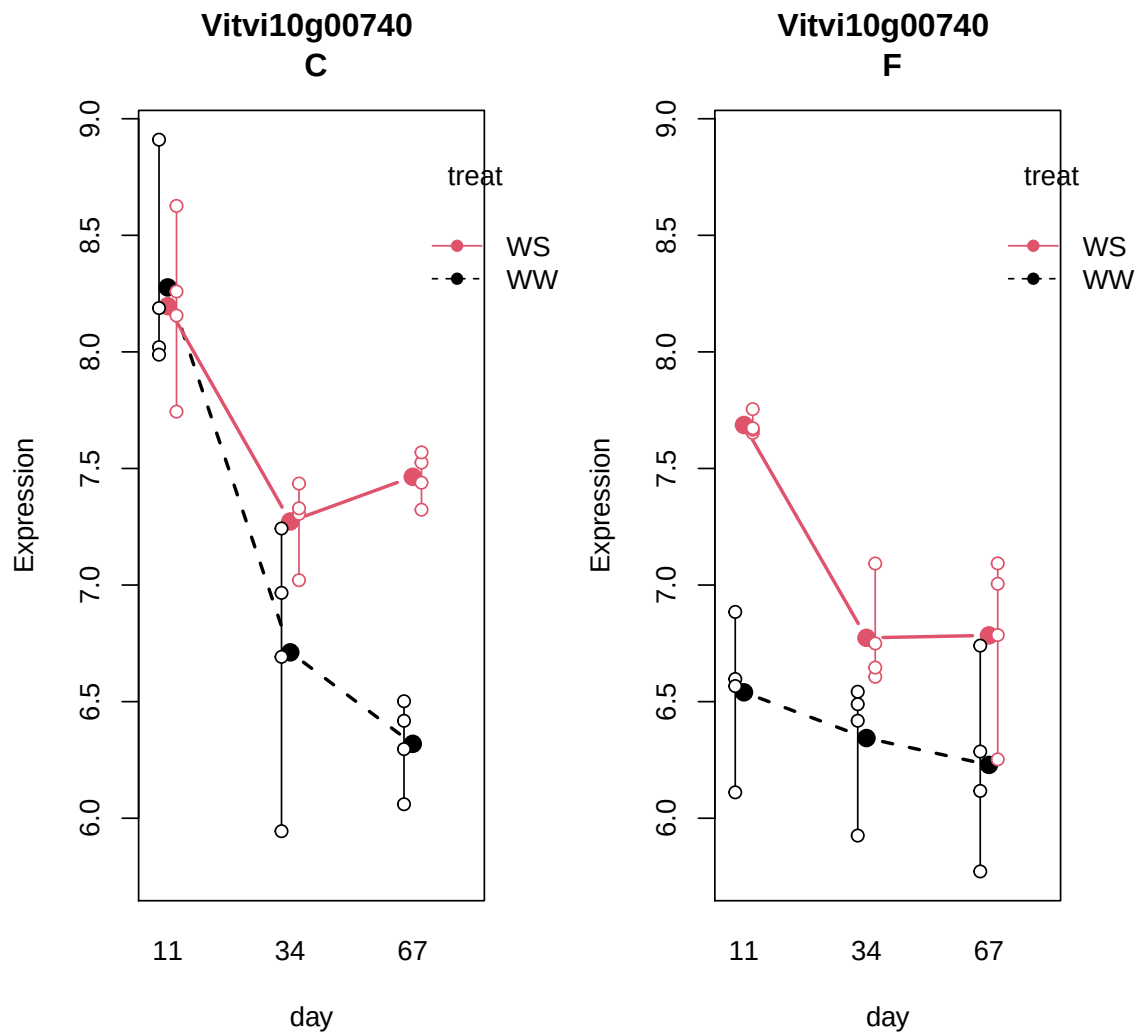


6.12.87 Vitvi10g00740

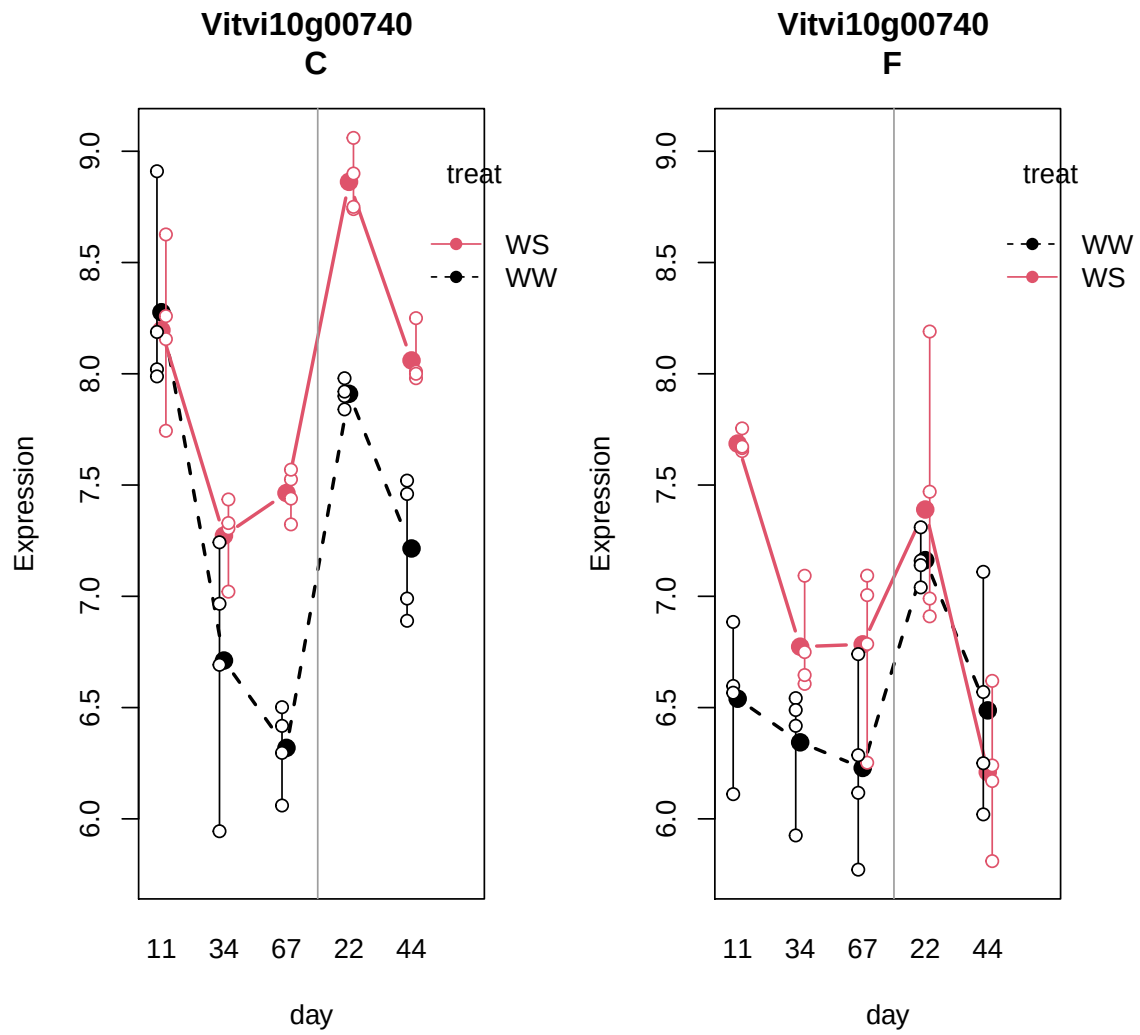
Coefficient varietyF:day67:treatWS for Vitvi10g00740.

```
> tt[varname,]
              logFC  AveExpr          t      P.Value
Vitvi10g00740 -1.816689  7.049723 -4.075743  0.0002200926
              adj.P.Val          B
Vitvi10g00740  0.0385592  0.5825428

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

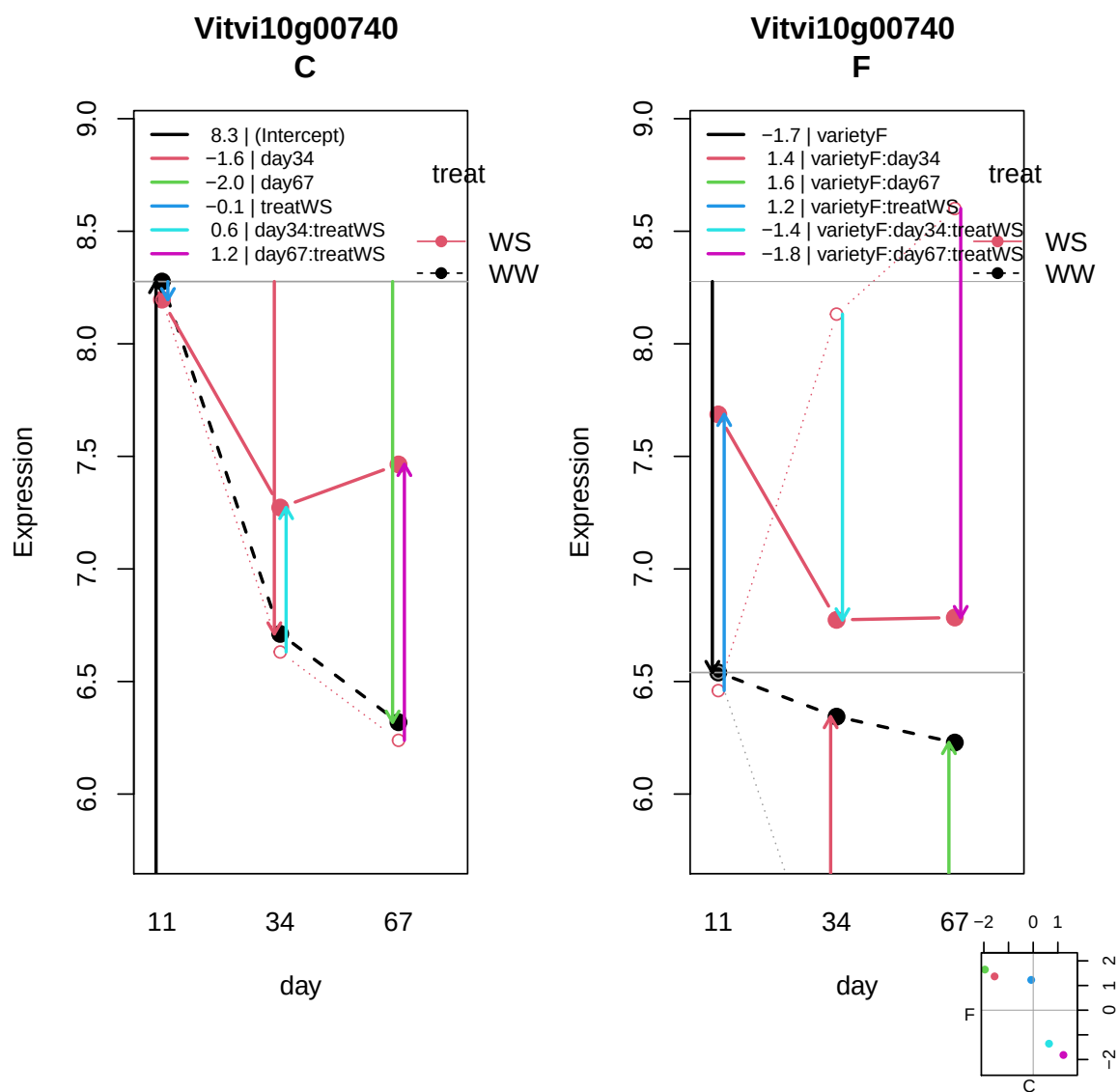
              (Intercept)  varietyF    day34    day67
Vitvi10g00740      8.276584 -1.736686 -1.56515 -1.957595
              treatWS  varietyF:day34  varietyF:day67
Vitvi10g00740 -0.08039148    1.369045    1.646488
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi10g00740      1.226875    0.6416421    1.225544
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi10g00740      -1.358264              -1.816689

```

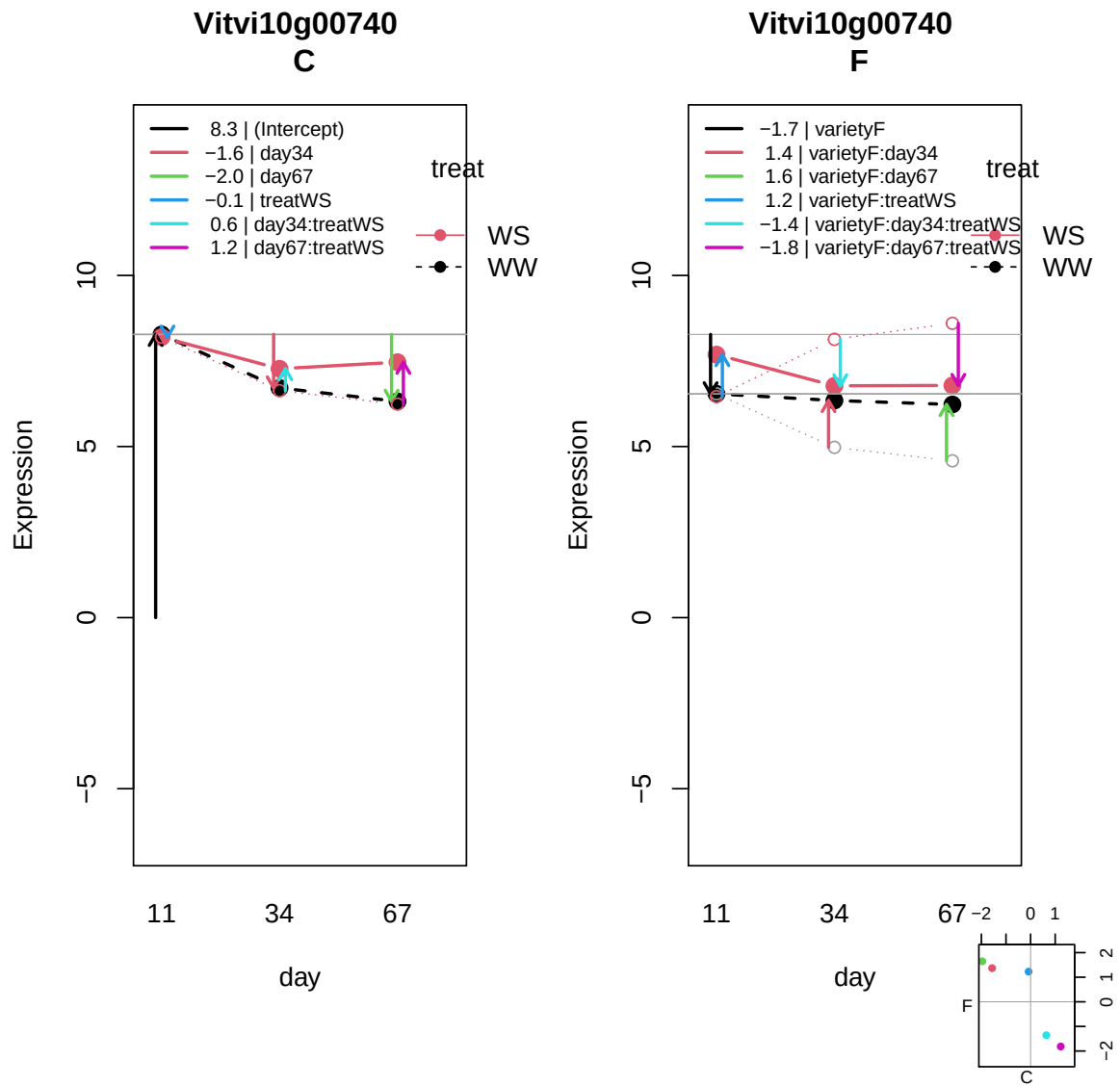
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

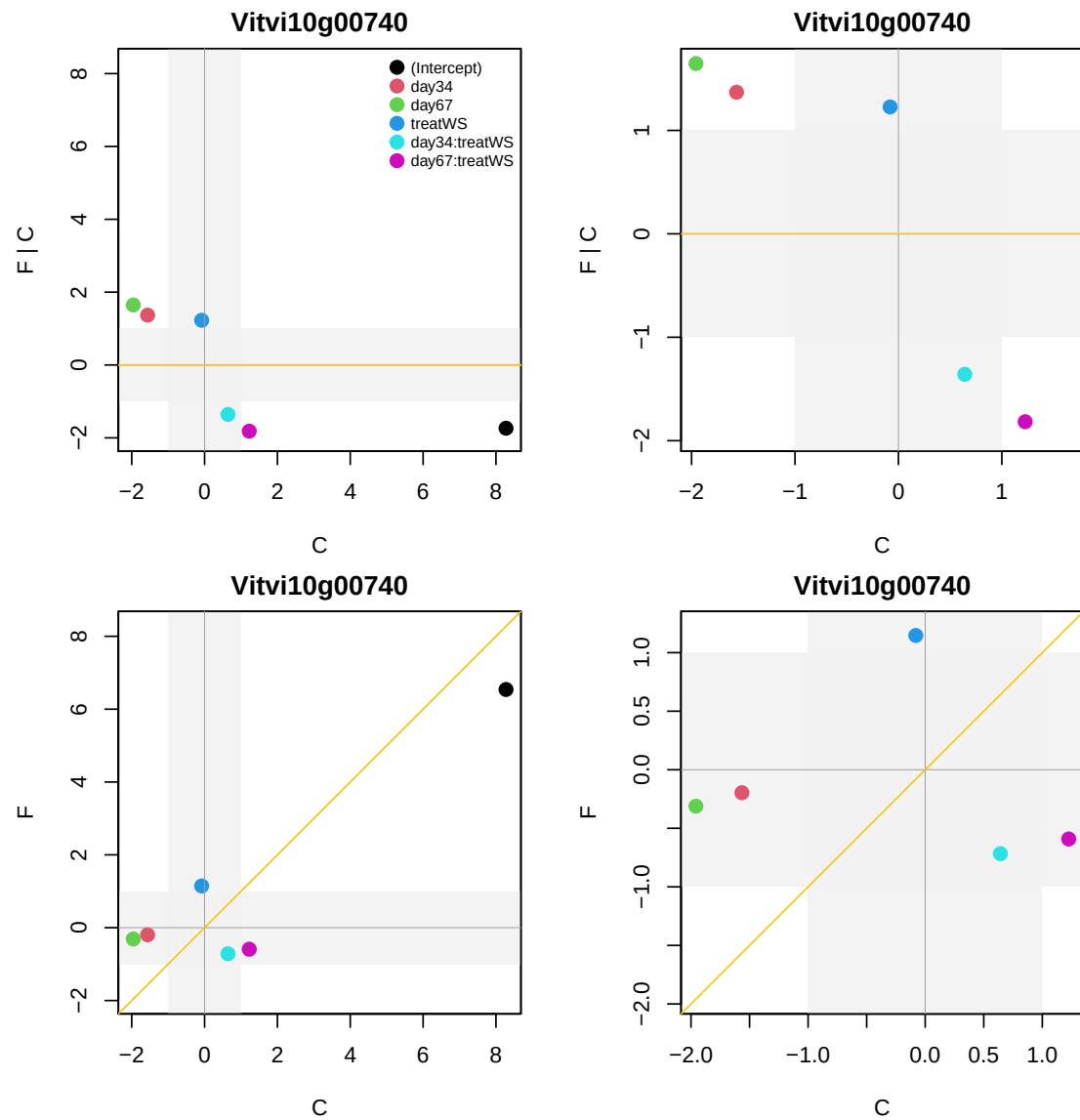


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

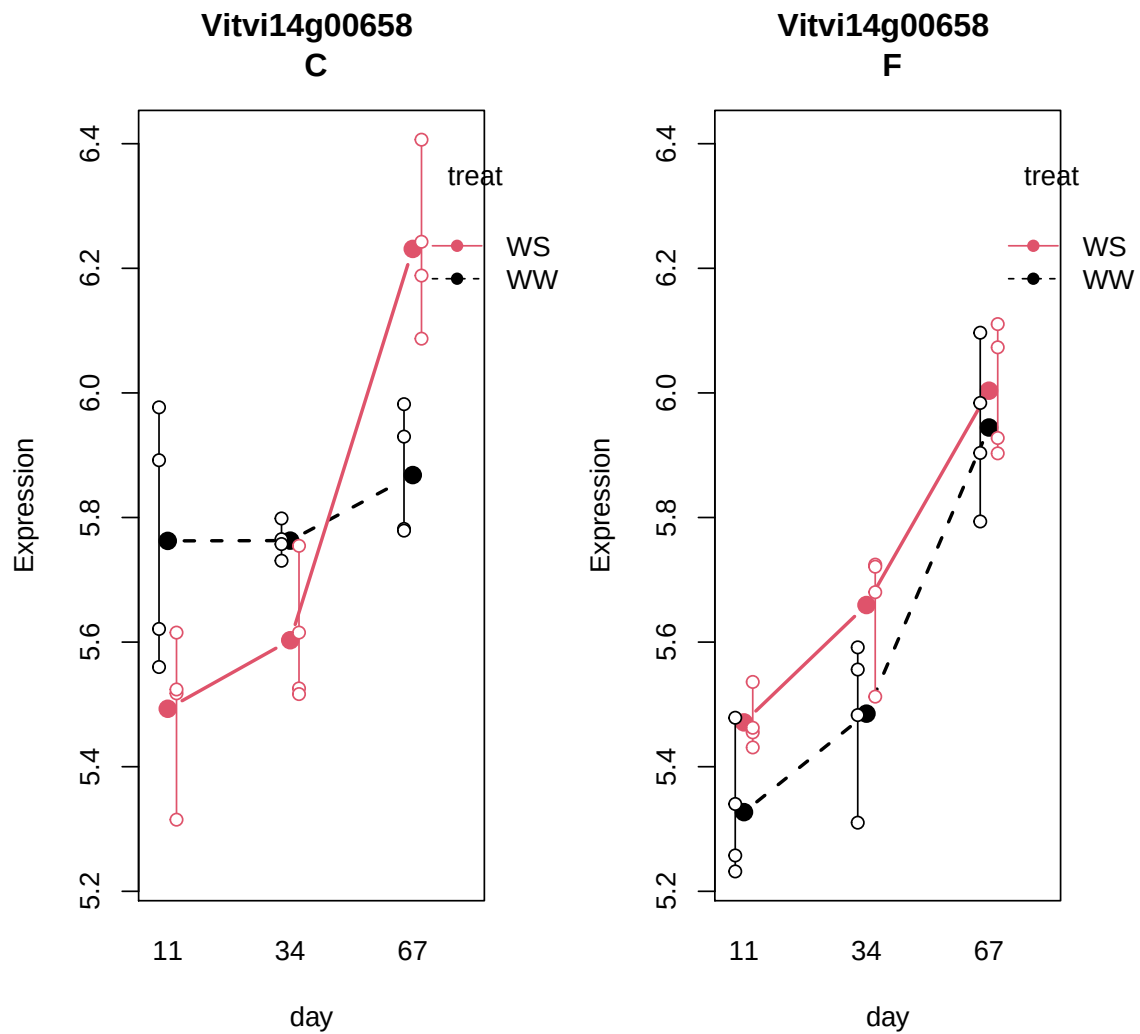


6.12.88 Vitvi14g00658

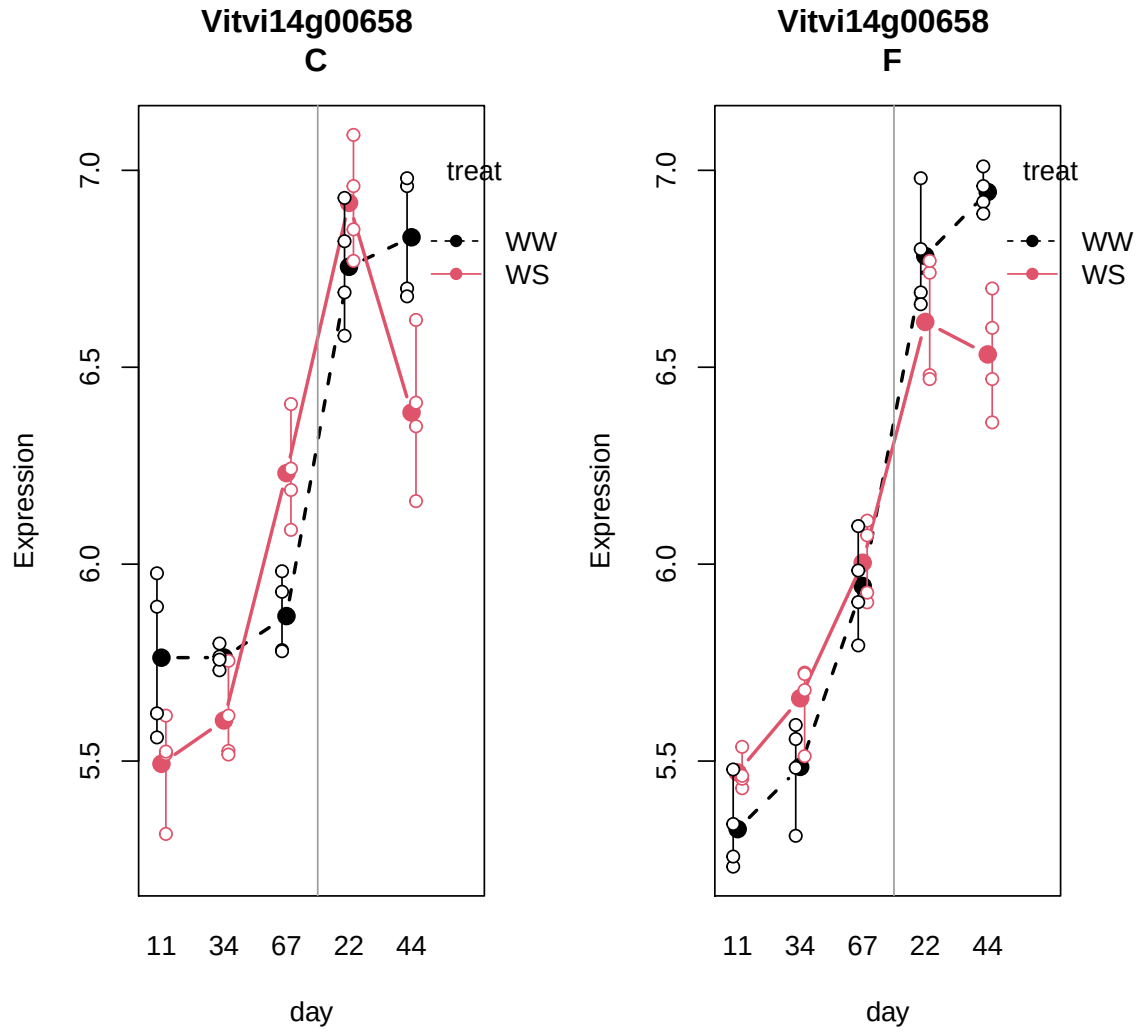
Coefficient varietyF:day67:treatWS for Vitvi14g00658.

```
> tt[varname,]
              logFC AveExpr      t      P.Value
Vitvi14g00658 -0.7174604 5.717627 -4.069491 0.0002242608
              adj.P.Val      B
Vitvi14g00658 0.0388196 0.5658838

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```




```
> fit1[varname,]$coefficients
```

```

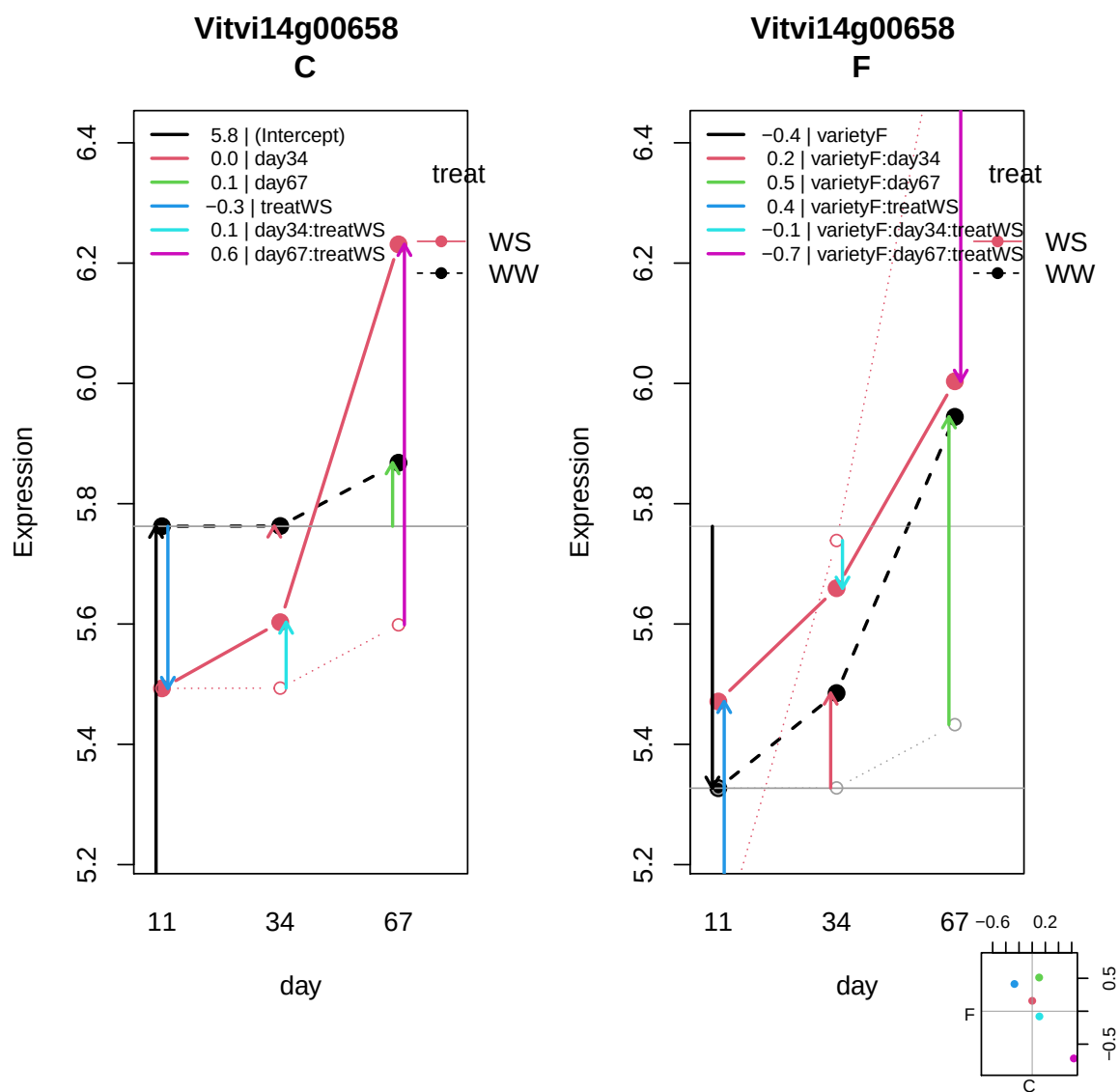
              (Intercept)      varietyF      day34      day67
Vitvi14g00658      5.762471 -0.4354136 0.0004544405 0.1056331
              treatWS varietyF:day34 varietyF:day67
Vitvi14g00658 -0.2694687      0.1576519      0.5117418
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi14g00658      0.4135669      0.1095796      0.6324833
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi14g00658      -0.07934292      -0.7174604

```

```

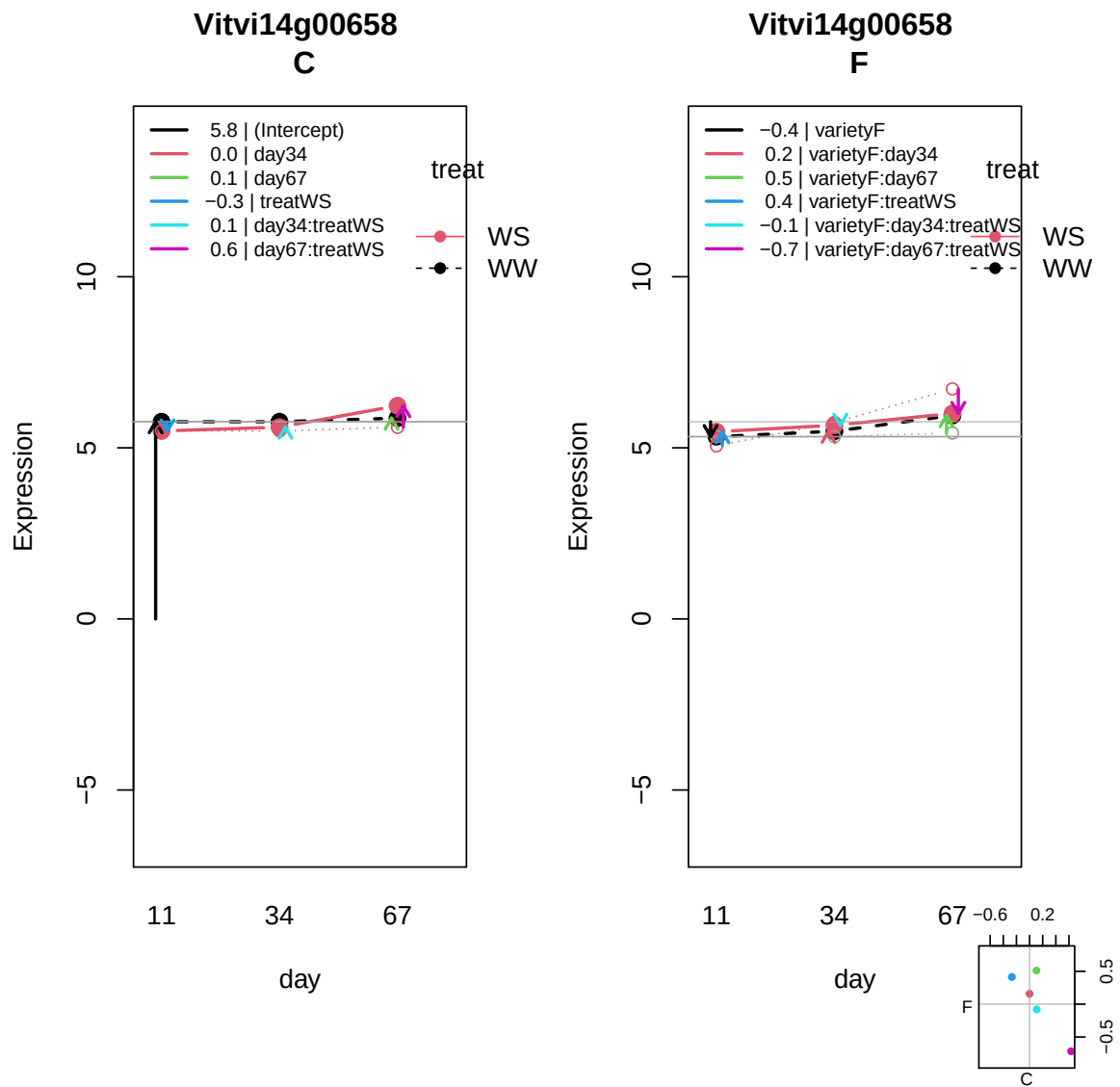
> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



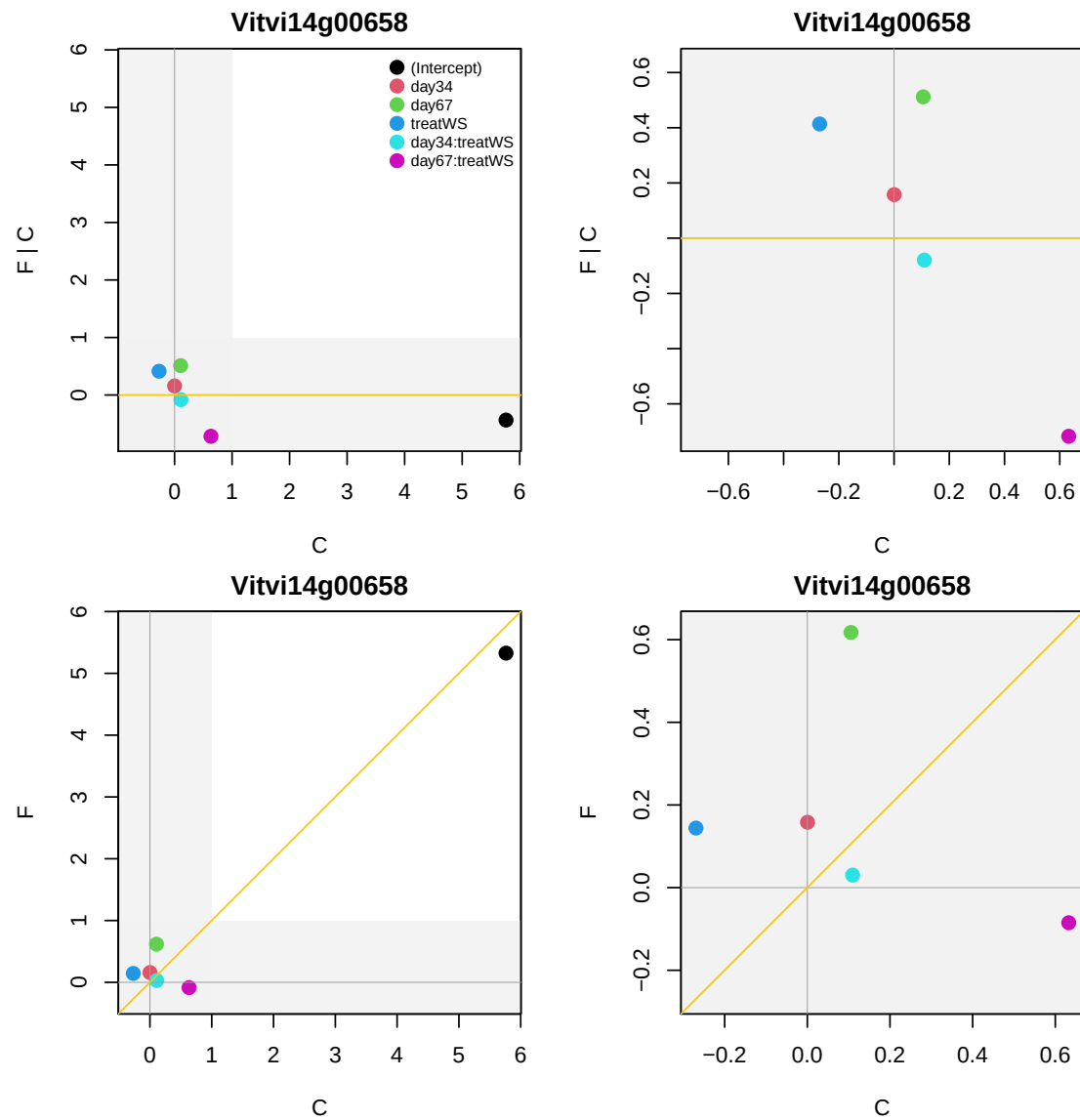
```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```

Warning in arrows(1:ndays - d, es, 1:ndays - d, esF, col = cl + 1:ndays, : zero



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

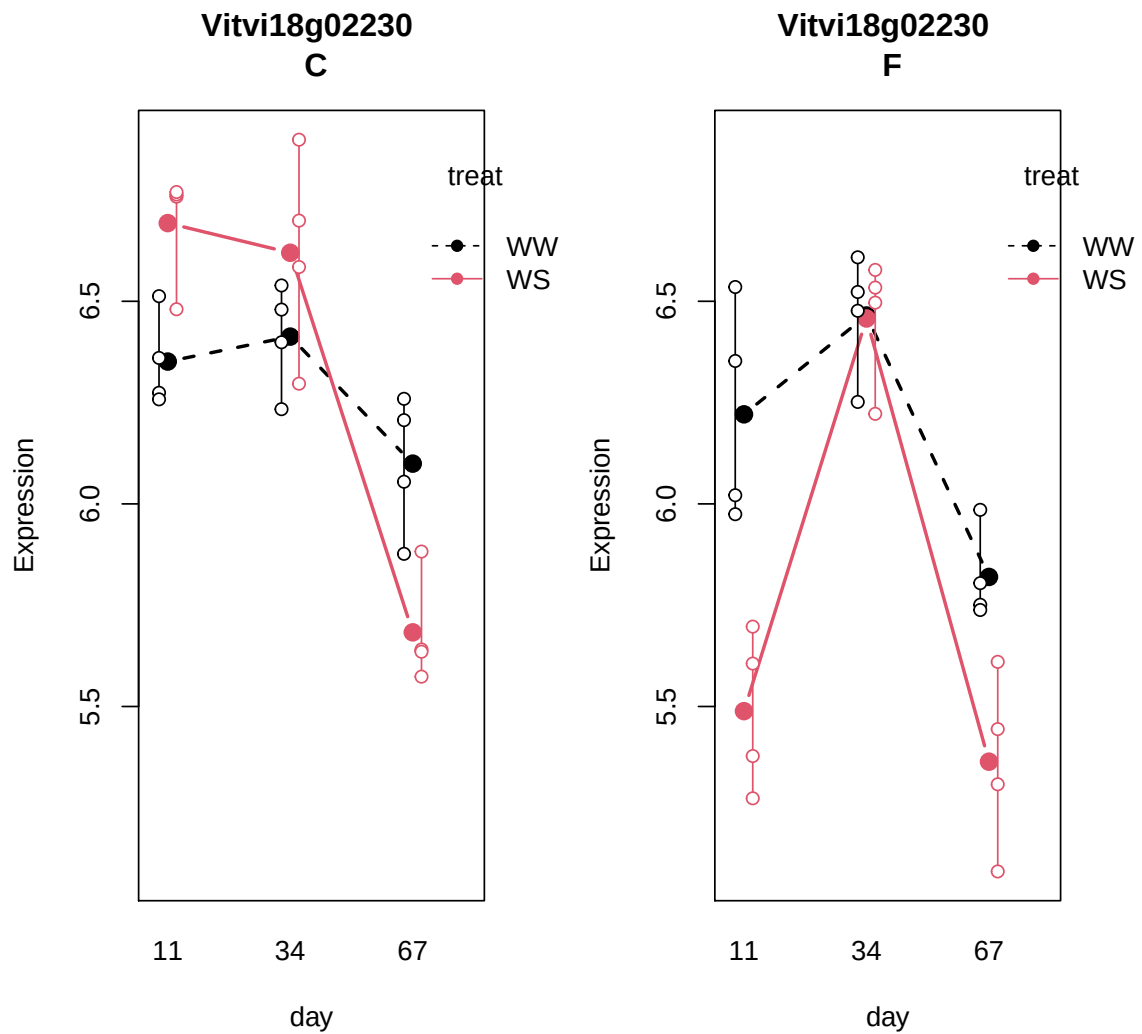


6.12.89 Vitvi18g02230

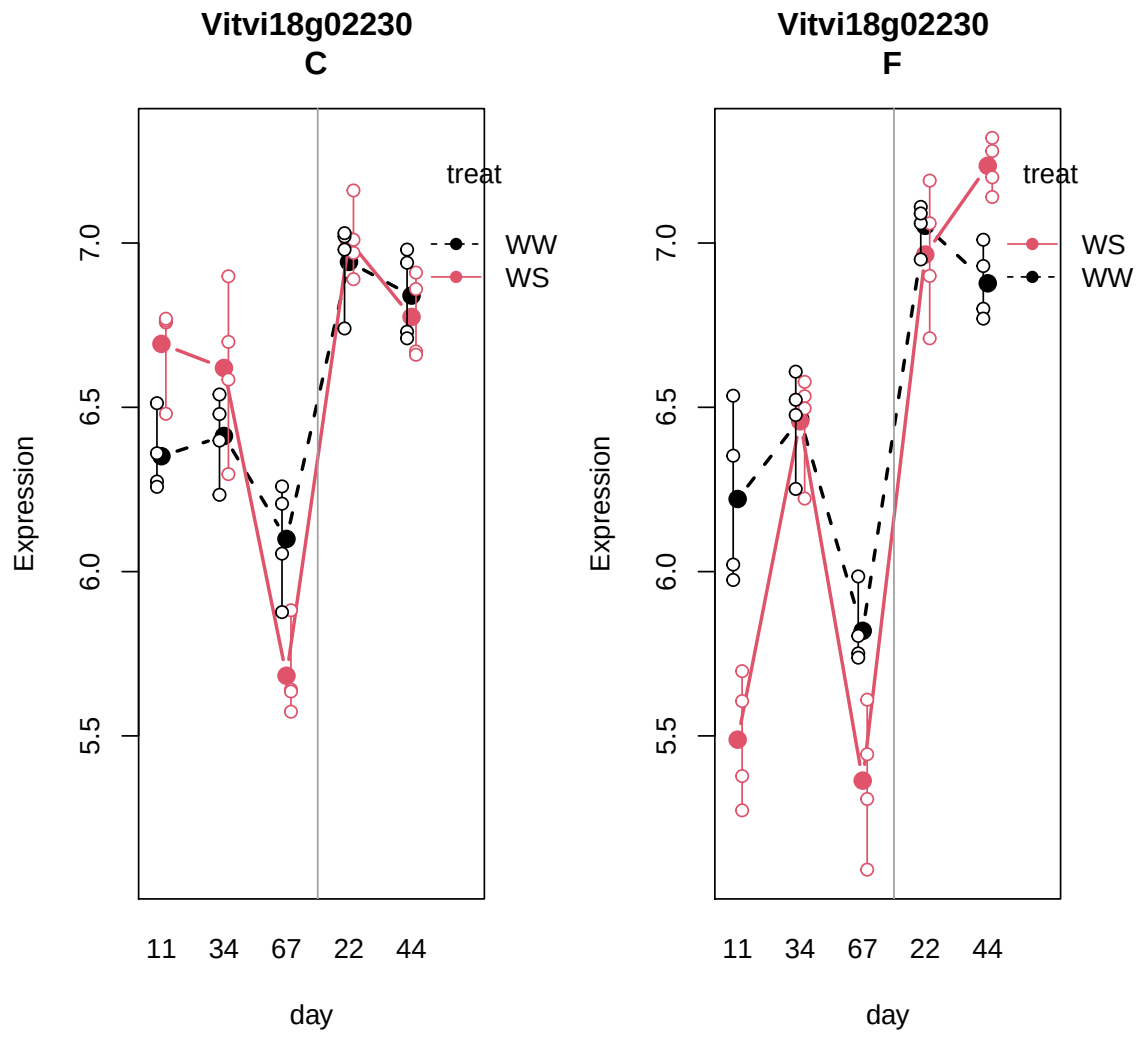
Coefficient varietyF:day67:treatWS for Vitvi18g02230.

```
> tt[varname,]
               logFC  AveExpr      t      P.Value
Vitvi18g02230 1.034607  6.139546  4.065925 0.0002266727
               adj.P.Val      B
Vitvi18g02230 0.0388196 0.5563855

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

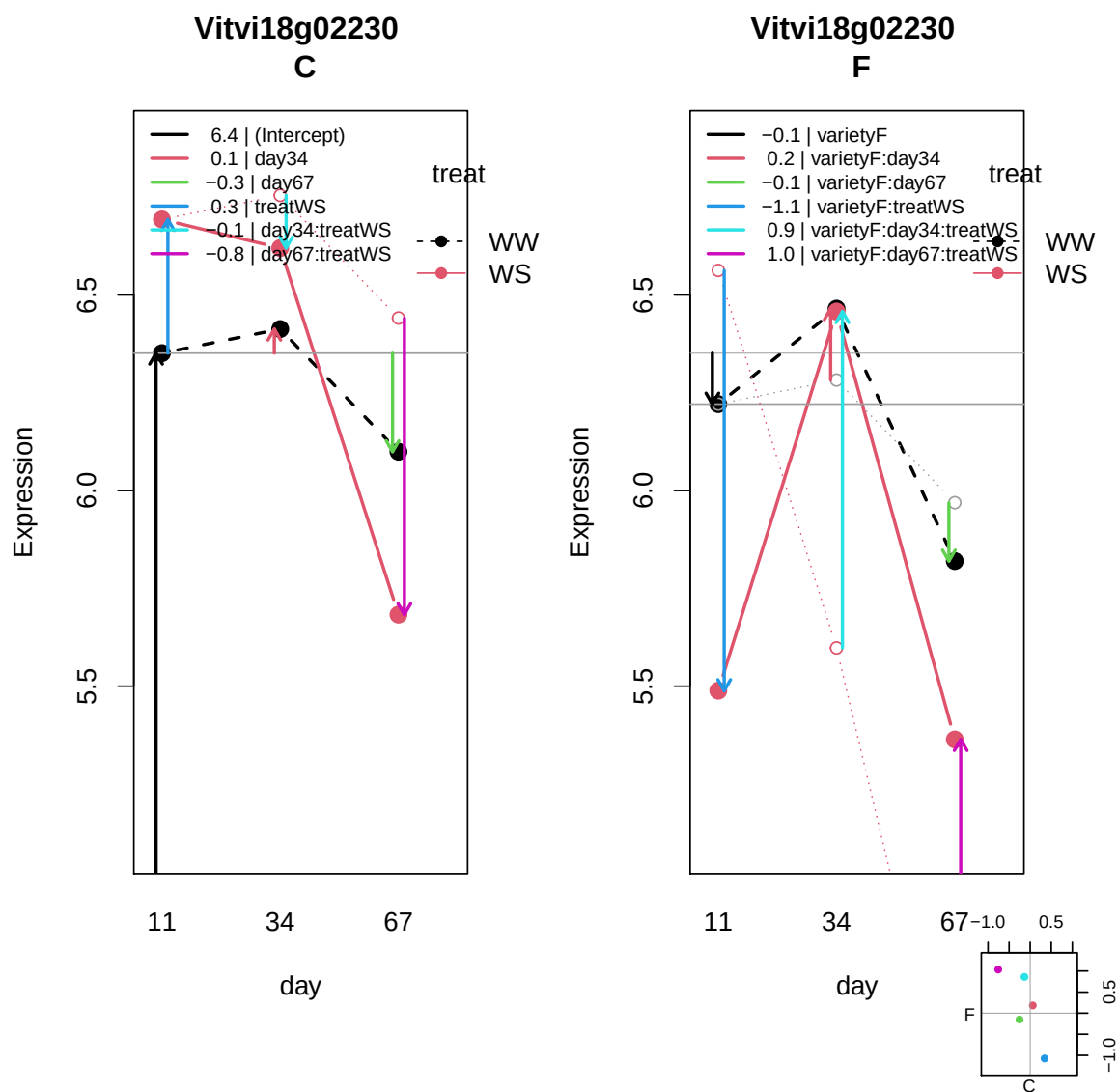
              (Intercept)    varietyF      day34      day67
Vitvi18g02230      6.351251 -0.1302961 0.06153389 -0.2519093
              treatWS  varietyF:day34  varietyF:day67
Vitvi18g02230  0.3417017      0.1824121      -0.1493208
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi18g02230      -1.074117      -0.1347191      -0.7580791
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi18g02230              0.8597643              1.034607

```

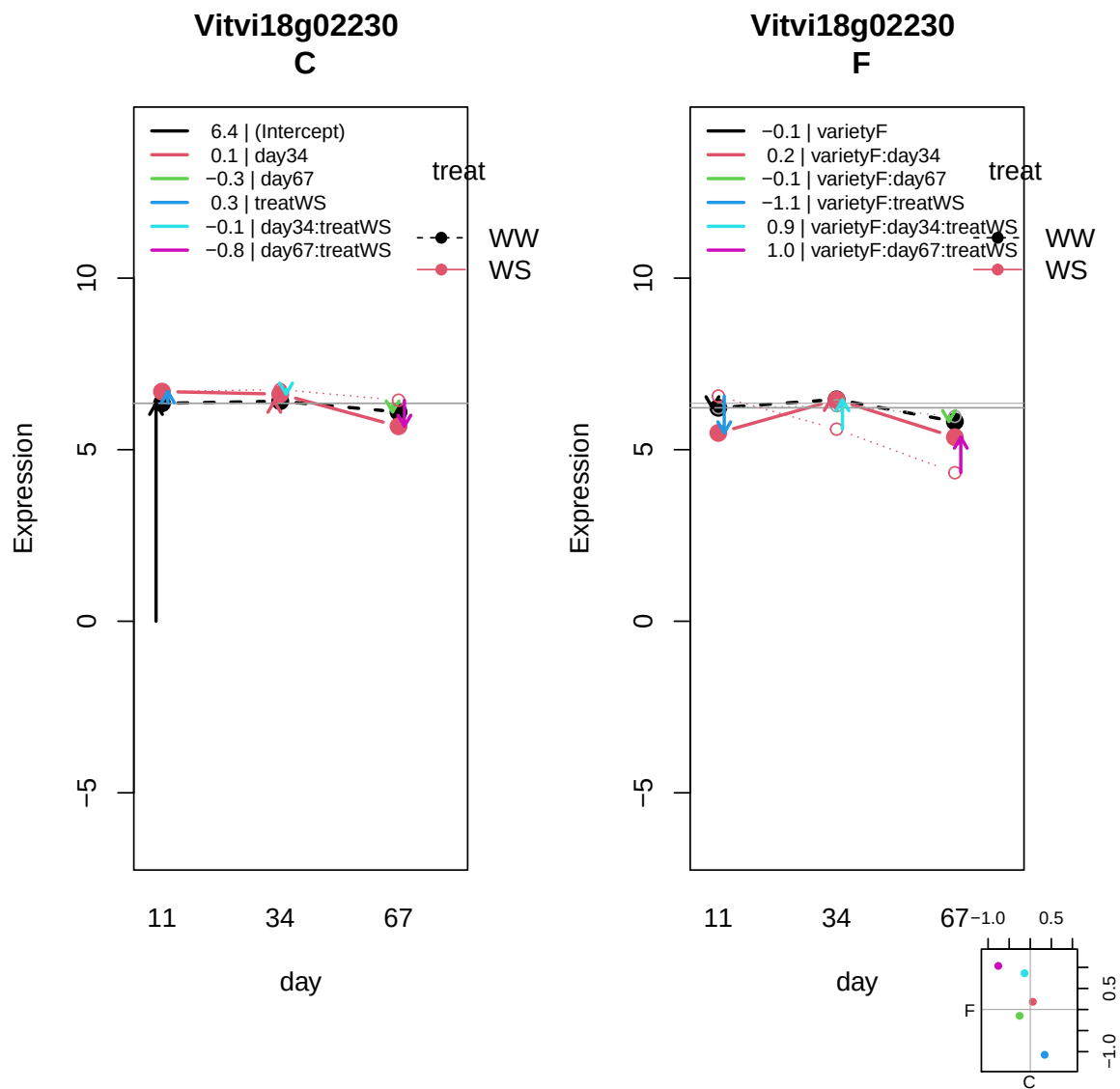
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

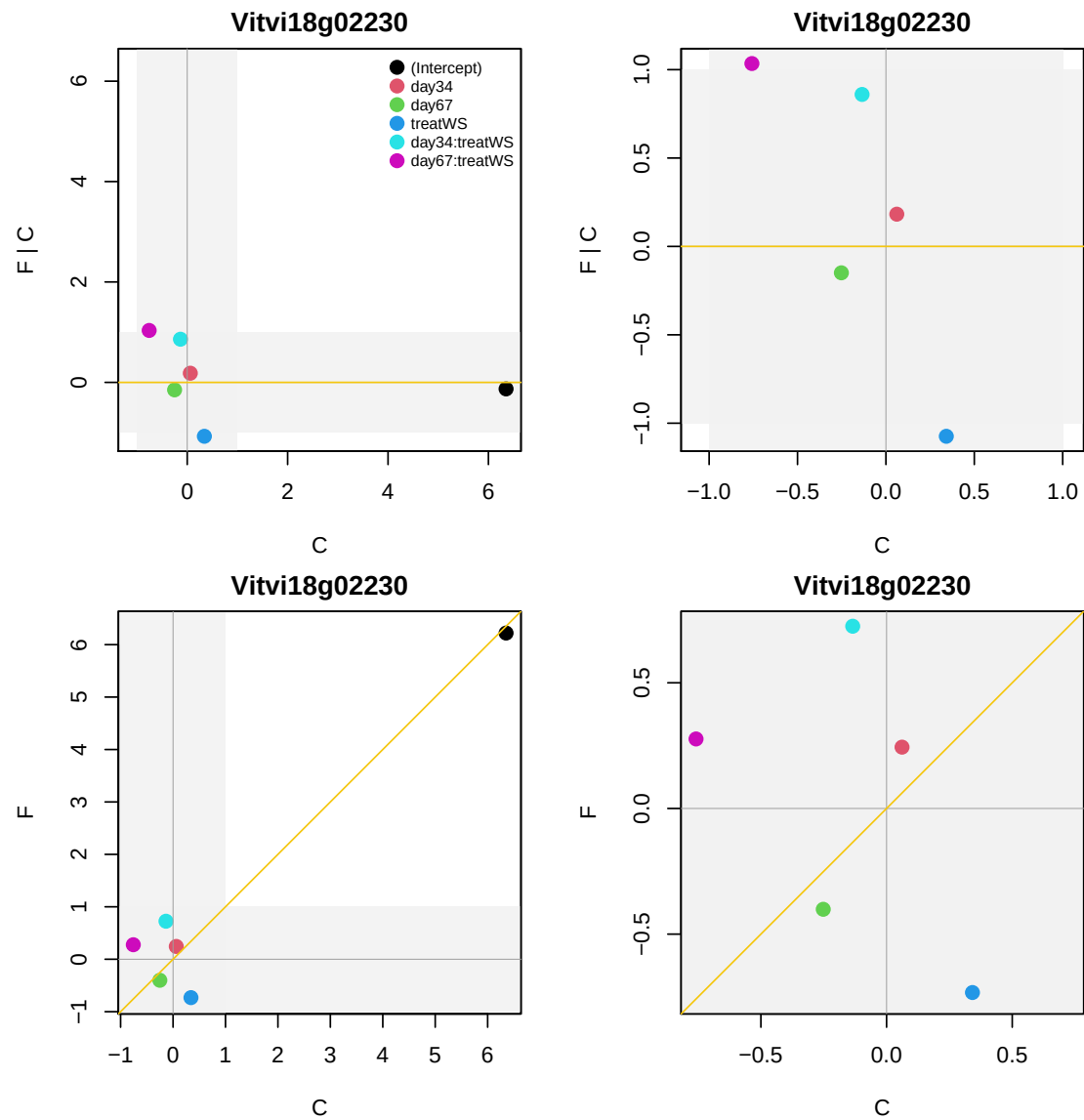


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

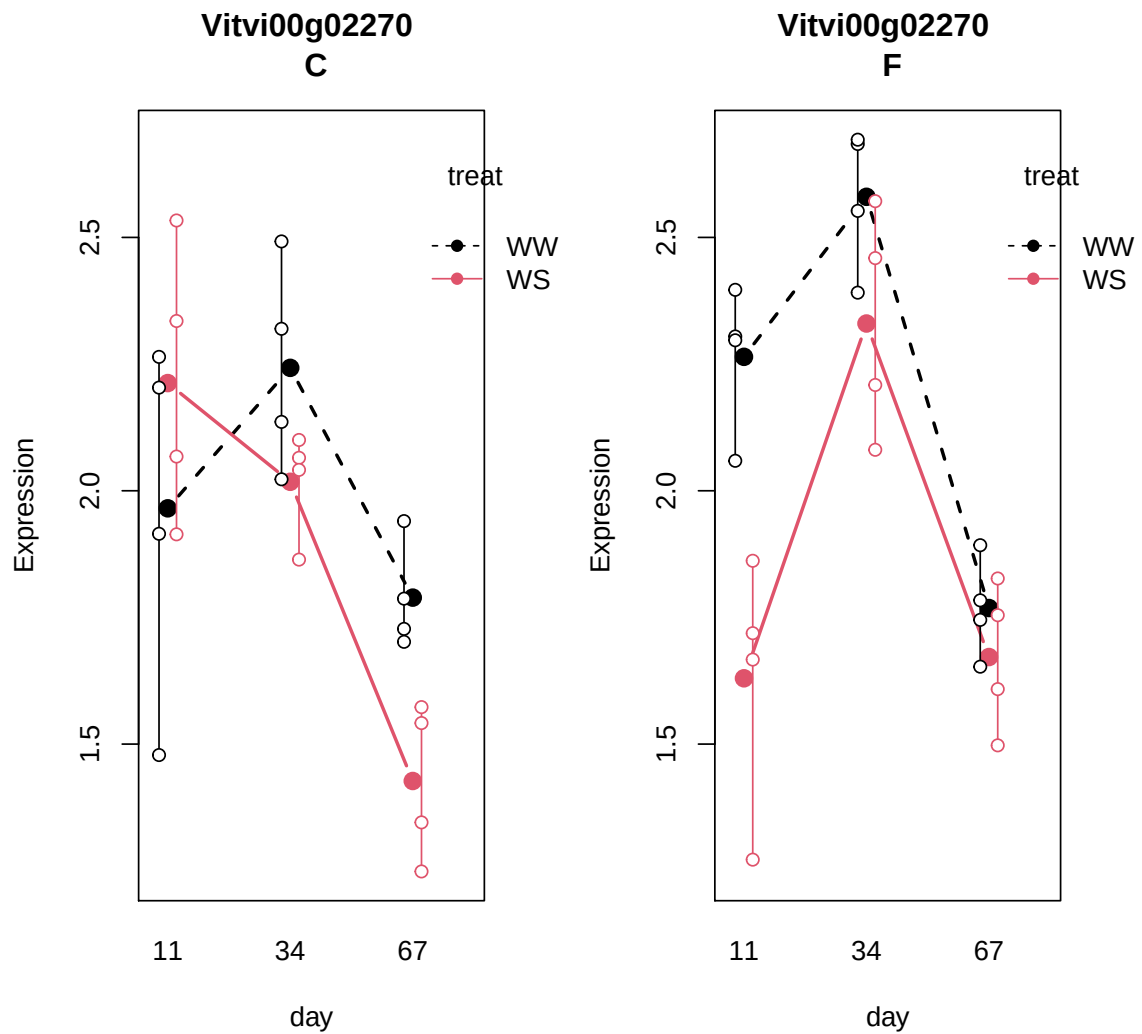
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



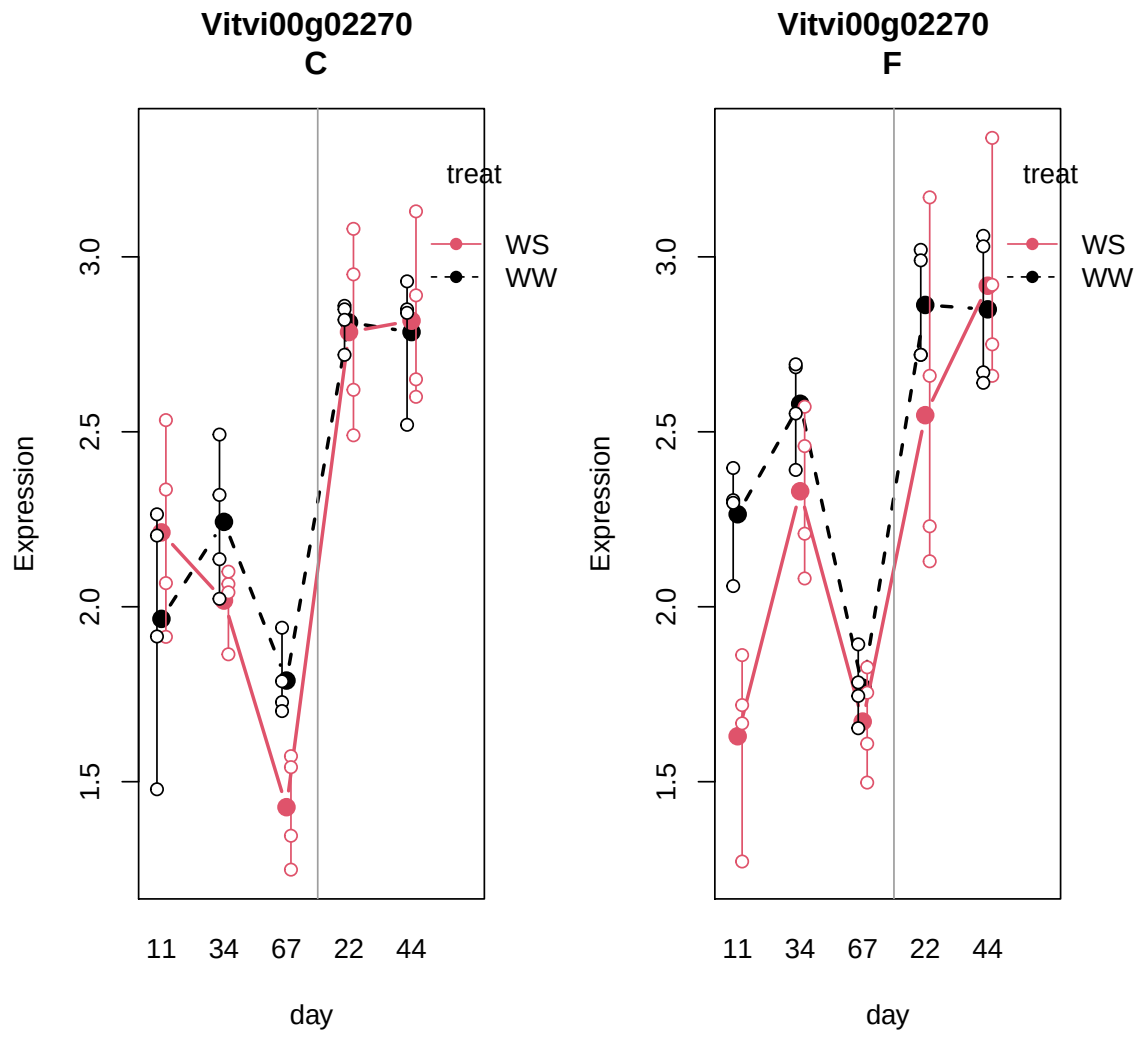
6.12.90 Vitvi00g02270

Coefficient varietyF:day67:treatWS for Vitvi00g02270.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi00g02270 1.146809 1.991593 4.058503 0.0002317742
      adj.P.Val      B
Vitvi00g02270 0.03925225 0.5366248
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

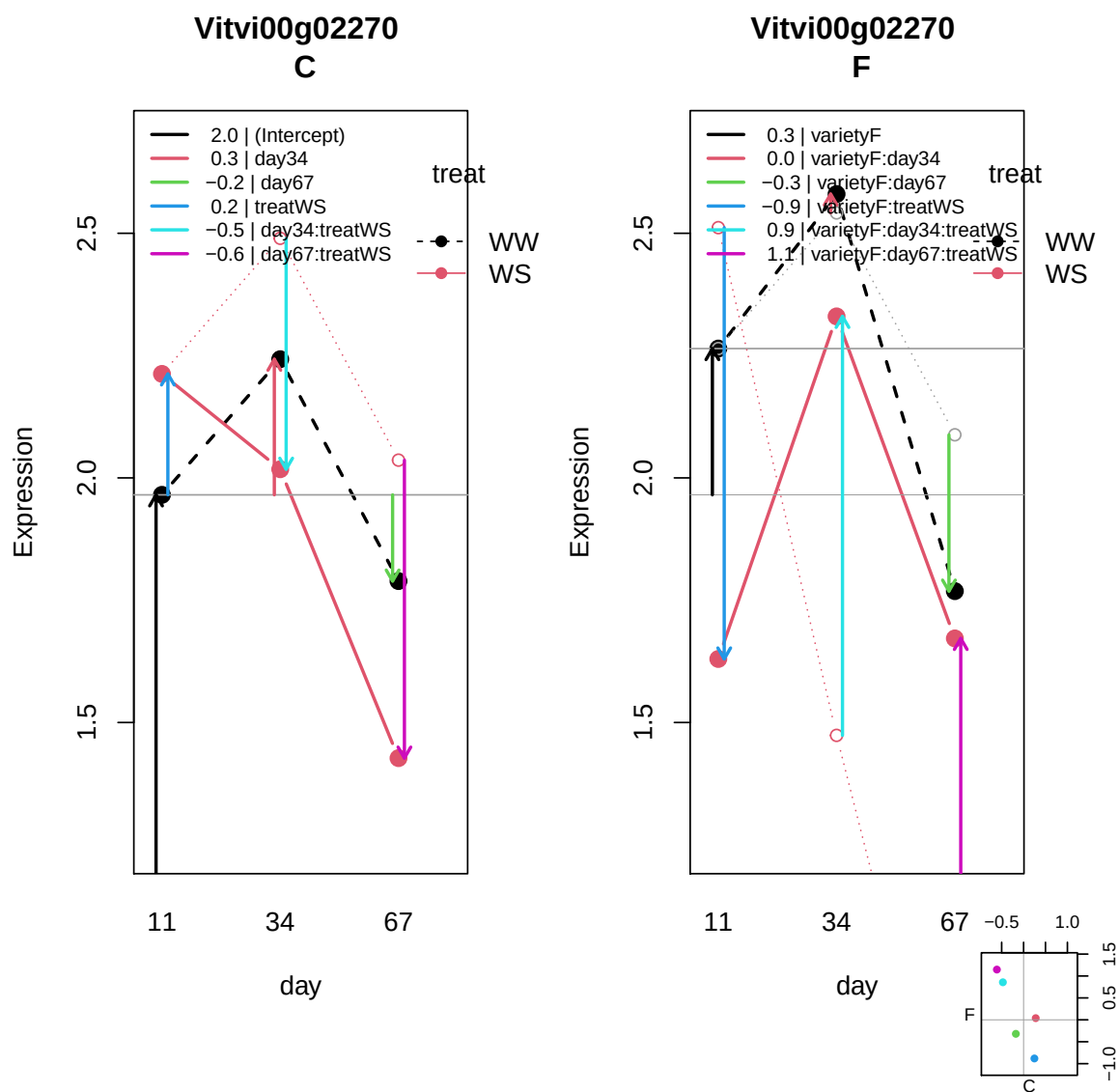
              (Intercept)  varietyF    day34    day67
Vitvi00g02270      1.965316 0.2989959 0.277251 -0.176218
              treatWS  varietyF:day34  varietyF:day67
Vitvi00g02270 0.2471753      0.03859377      -0.319535
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi00g02270      -0.88161      -0.4720854      -0.6091031
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi00g02270              0.8564474              1.146809

```

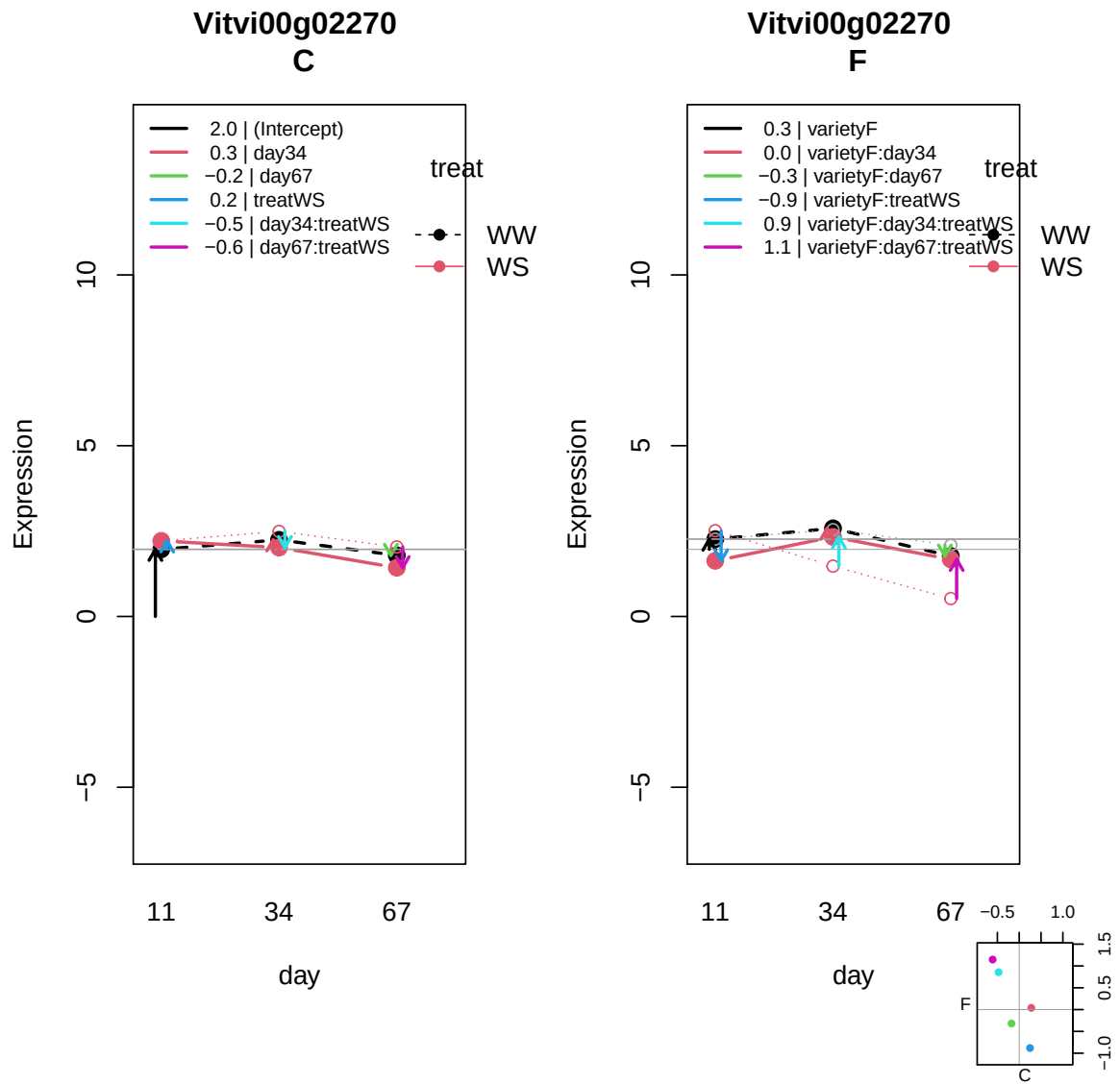
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

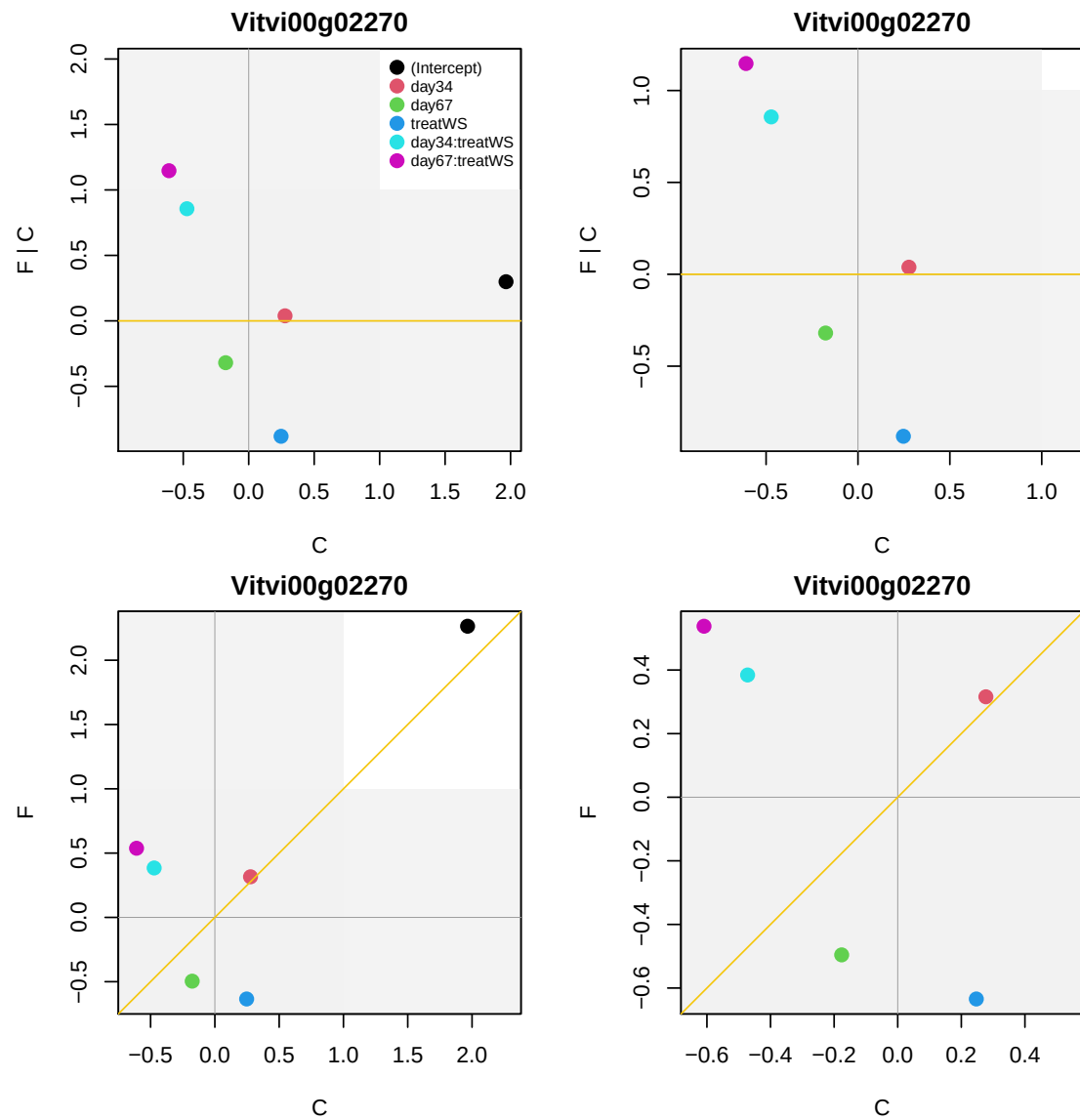


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

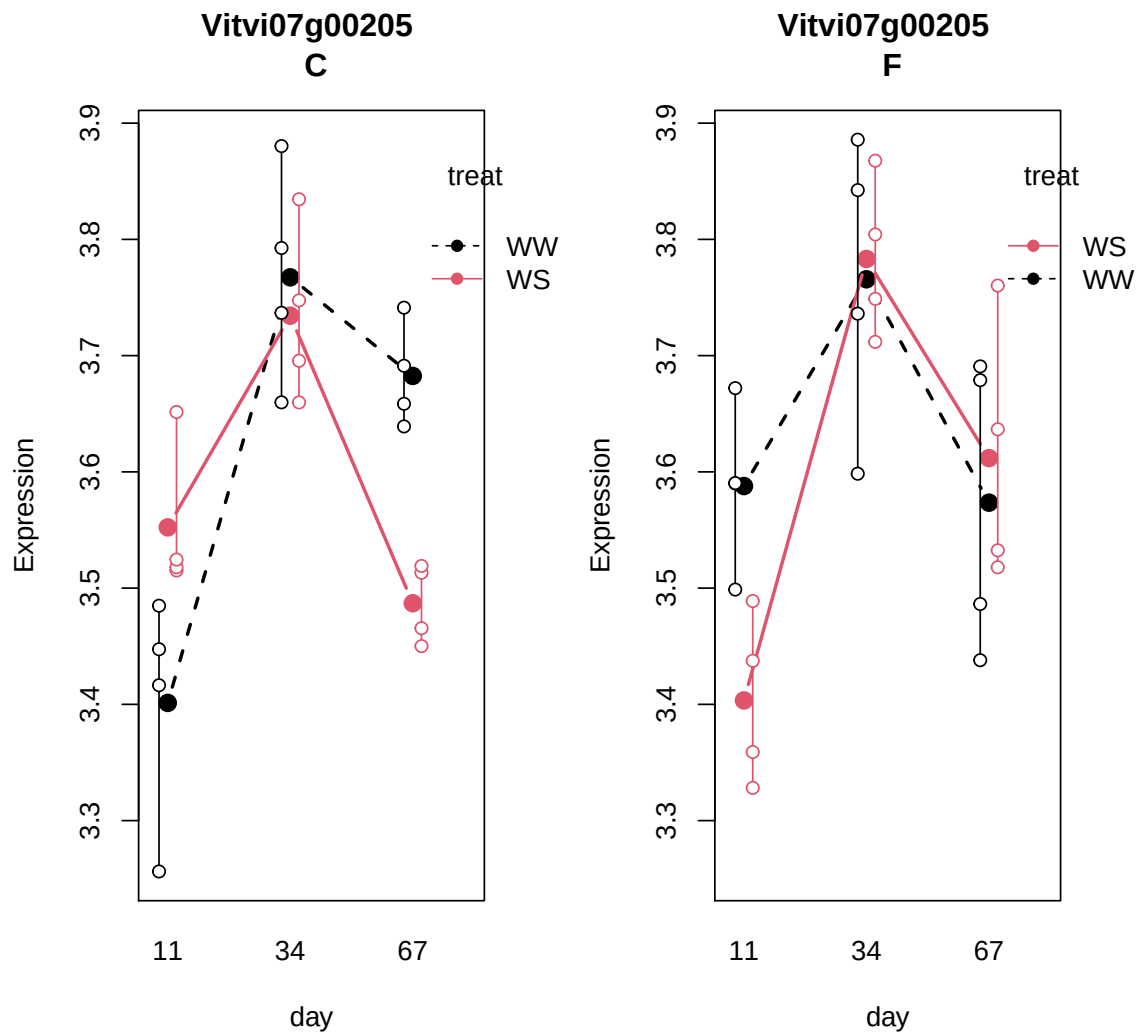


6.12.91 Vitvi07g00205

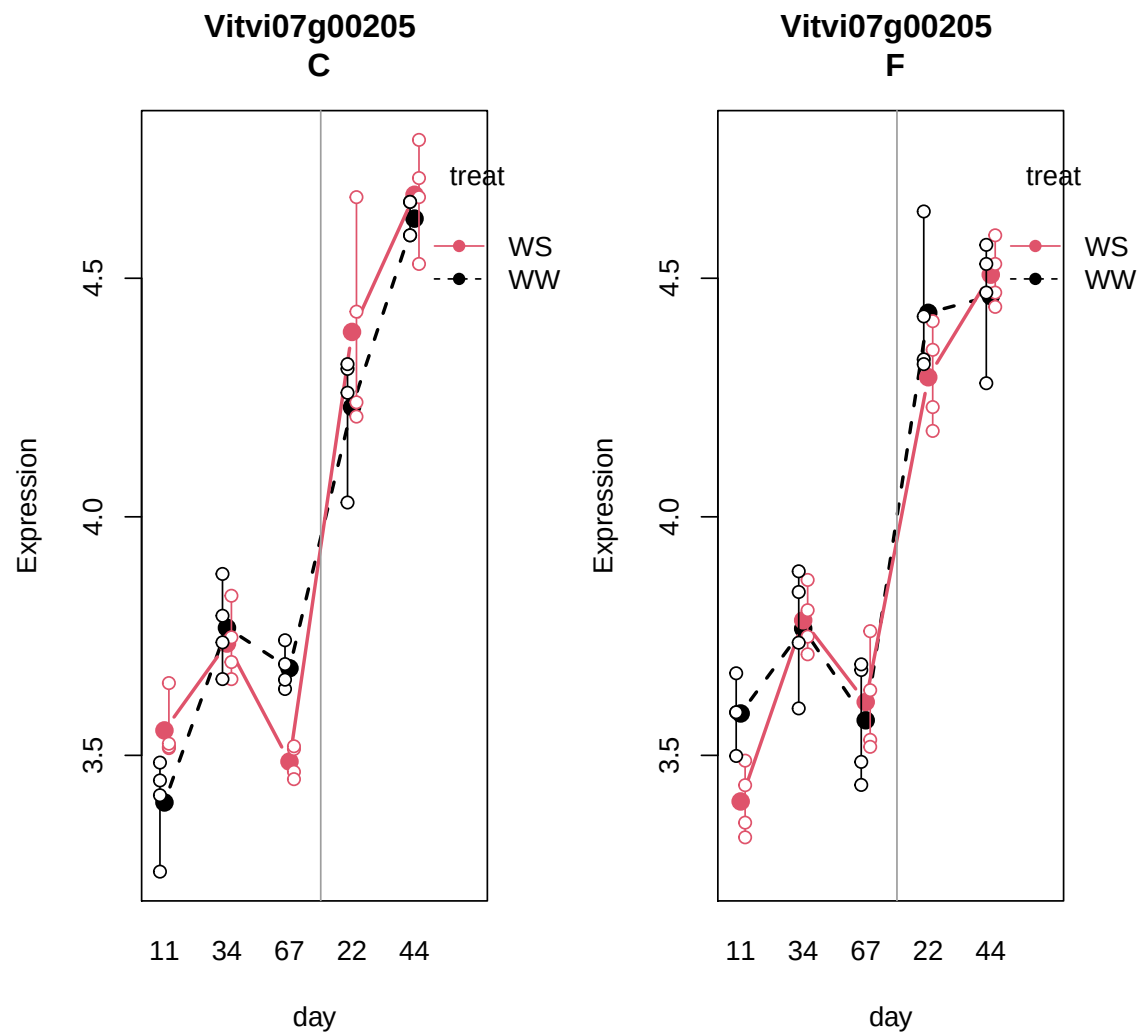
Coefficient varietyF:day67:treatWS for Vitvi07g00205.

```
> tt[varname,]
              logFC AveExpr      t      P.Value
Vitvi07g00205 0.5693787 3.612507 4.04887 0.0002385618
              adj.P.Val      B
Vitvi07g00205 0.03951738 0.5109991

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

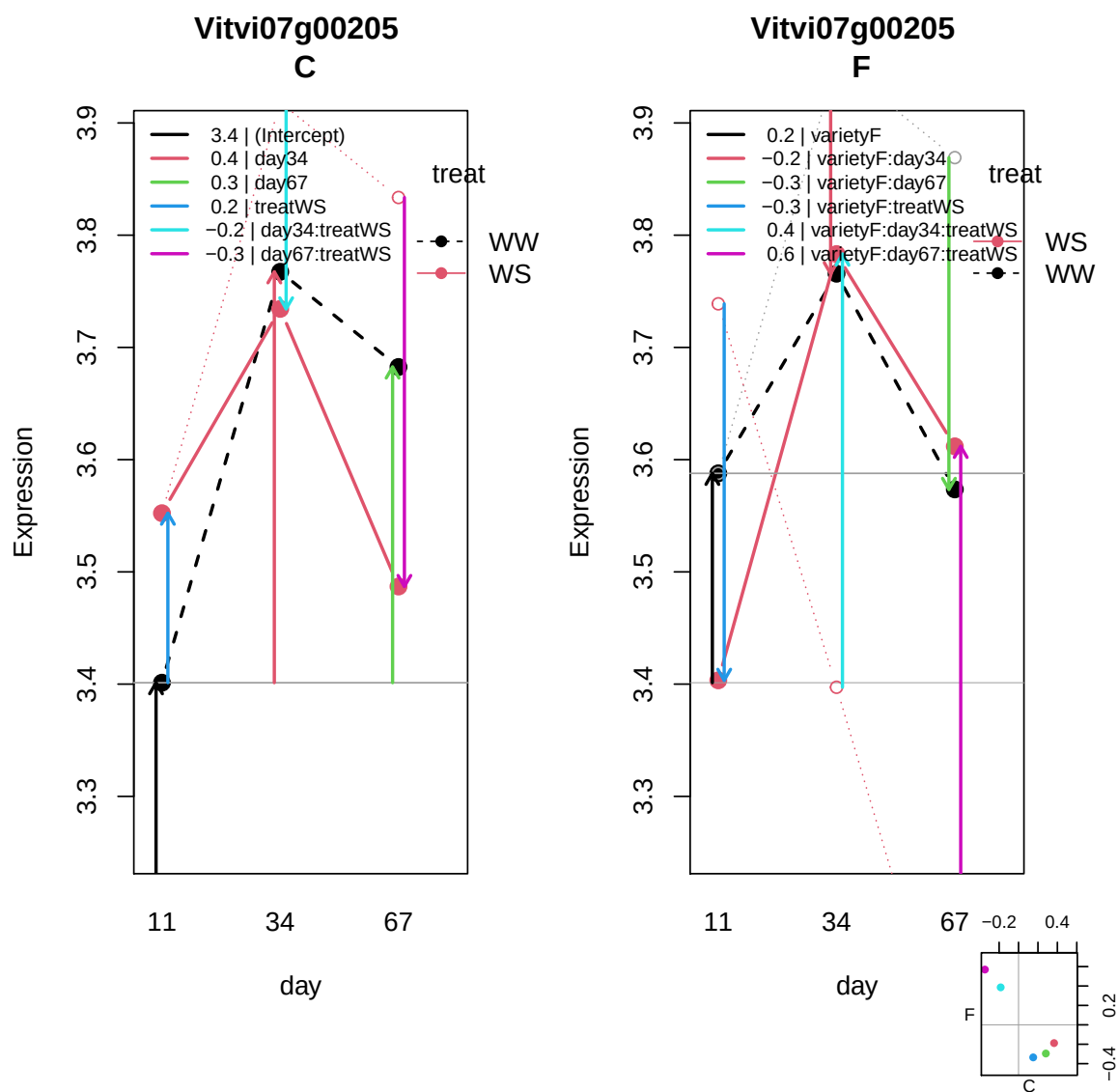
              (Intercept)  varietyF    day34    day67
Vitvi07g00205      3.401251 0.1865515 0.3661197 0.2812963
              treatWS  varietyF:day34  varietyF:day67
Vitvi07g00205 0.1510276      -0.1882463      -0.2956074
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi07g00205      -0.3354557      -0.1840583      -0.3466062
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi07g00205              0.3859625              0.5693787

```

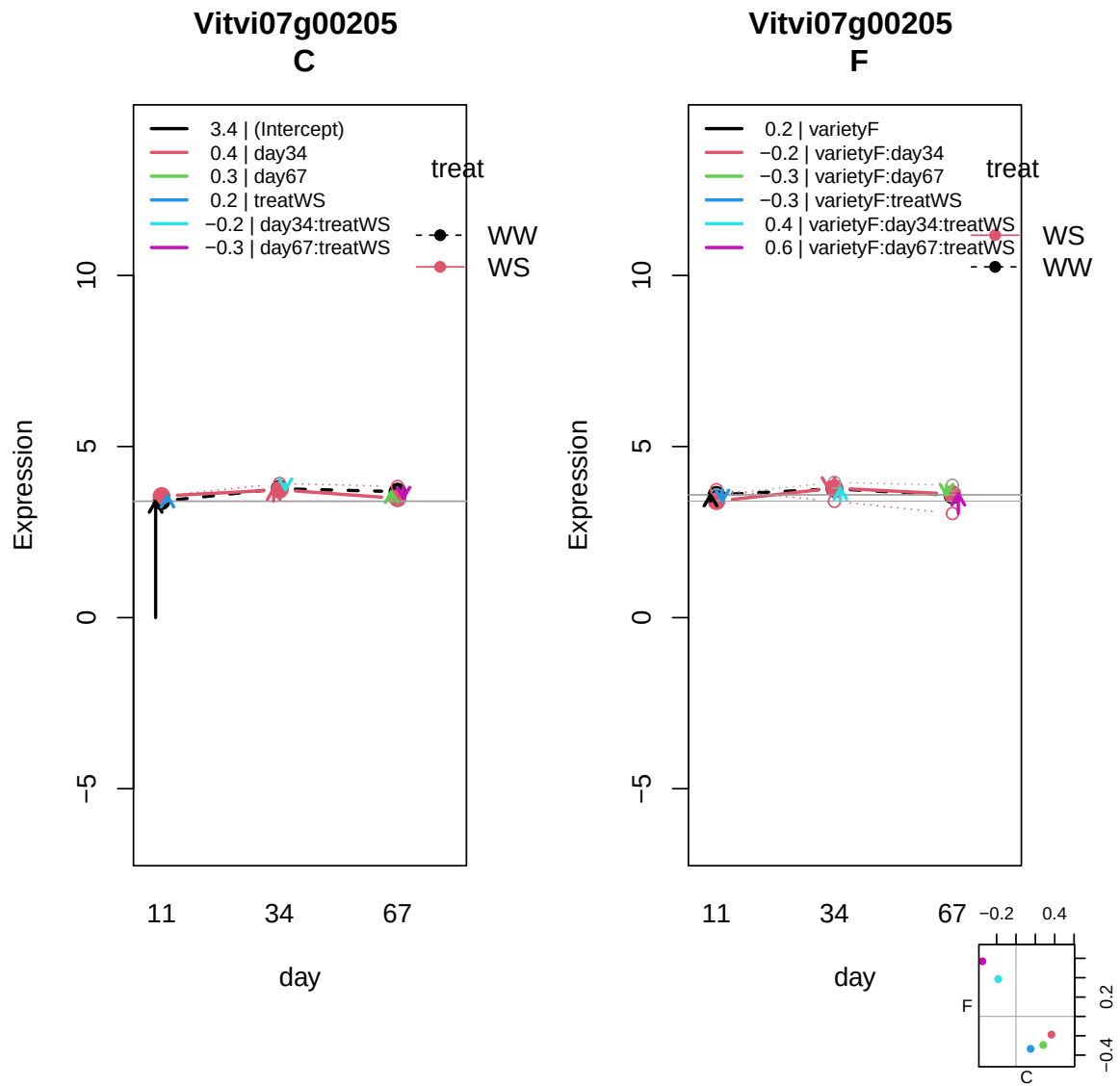
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

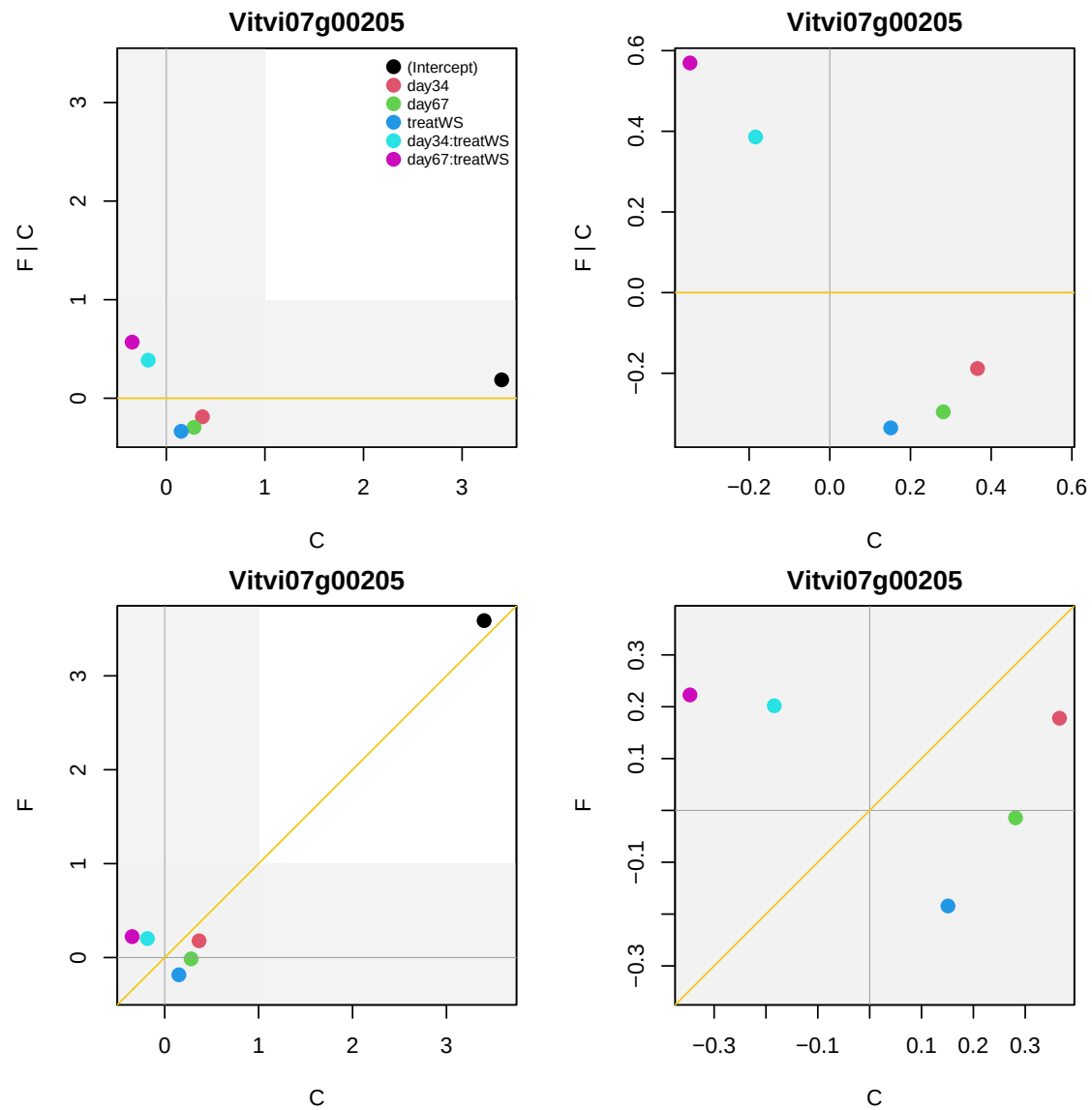



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

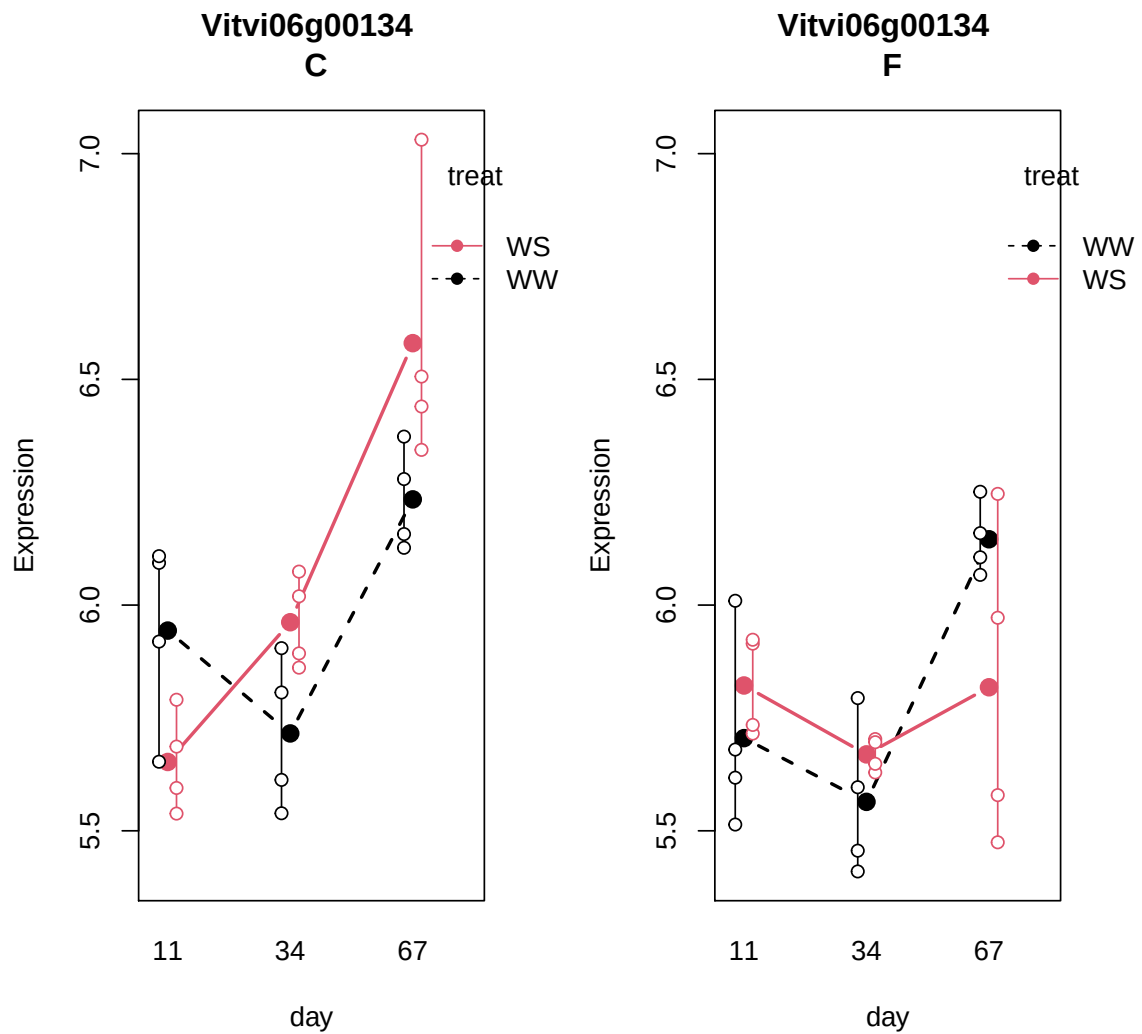


6.12.92 Vitvi06g00134

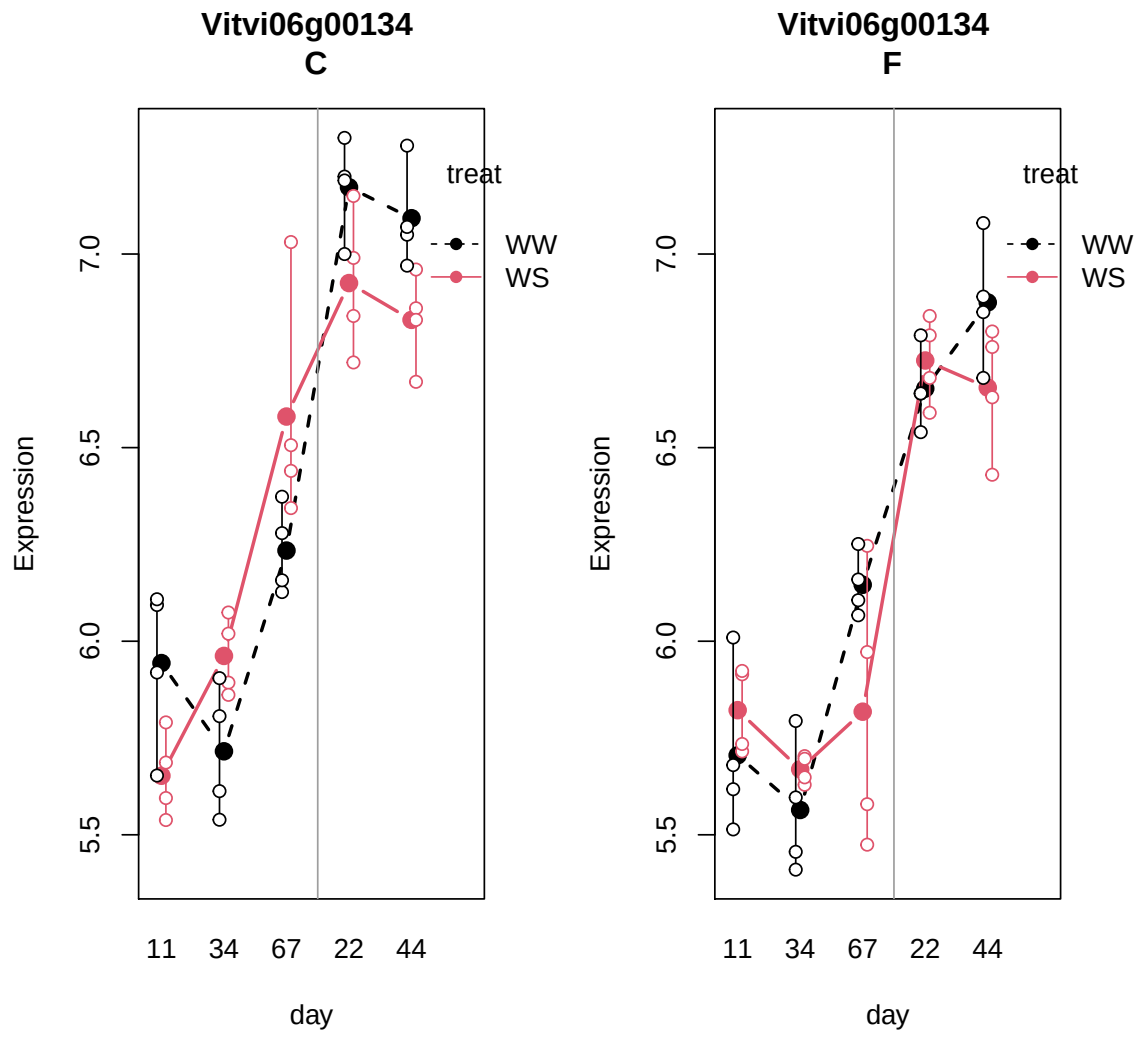
Coefficient varietyF:day67:treatWS for Vitvi06g00134.

```
> tt[varname,]
               logFC AveExpr      t      P.Value
Vitvi06g00134 -1.081625  5.90104 -4.04504 0.0002413137
               adj.P.Val      B
Vitvi06g00134 0.03951738 0.5008174

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

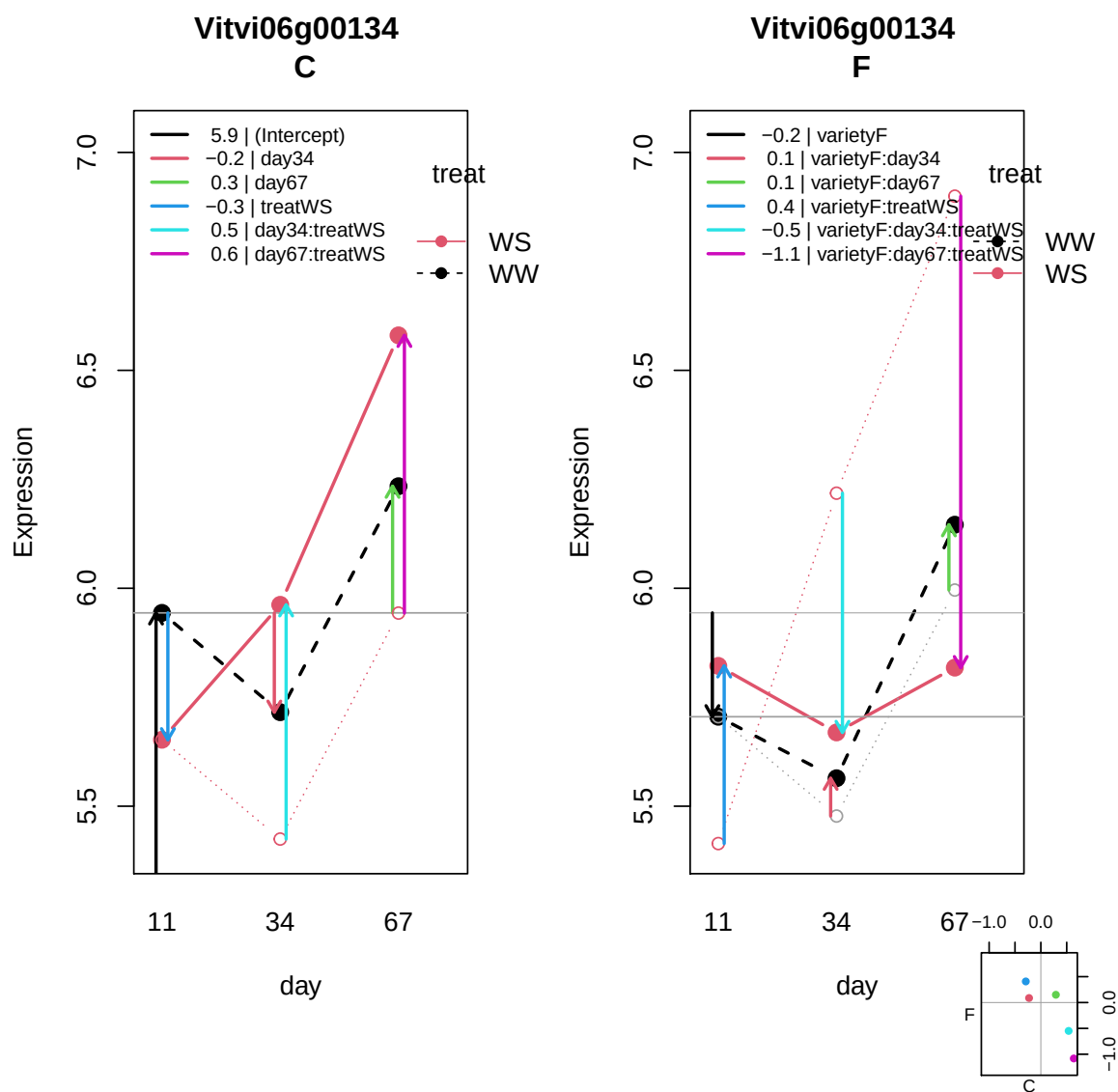
              (Intercept)    varietyF      day34      day67
Vitvi06g00134      5.943535 -0.2382533 -0.2278644 0.2906234
              treatWS varietyF:day34 varietyF:day67
Vitvi06g00134 -0.2910531      0.08669386      0.1499028
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi06g00134      0.4076962      0.5373966      0.6371416
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi06g00134      -0.5488751      -1.081625

```

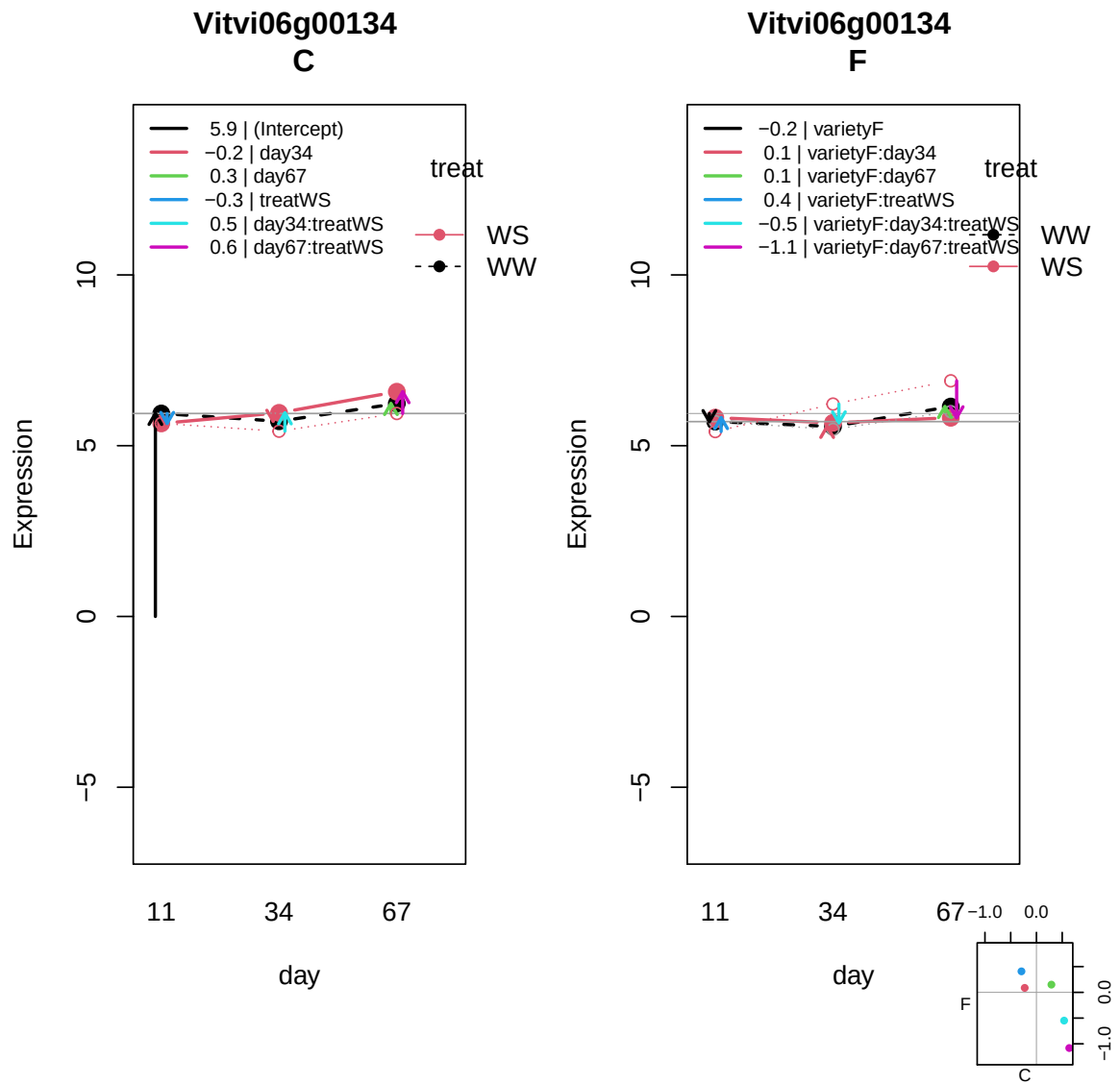
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

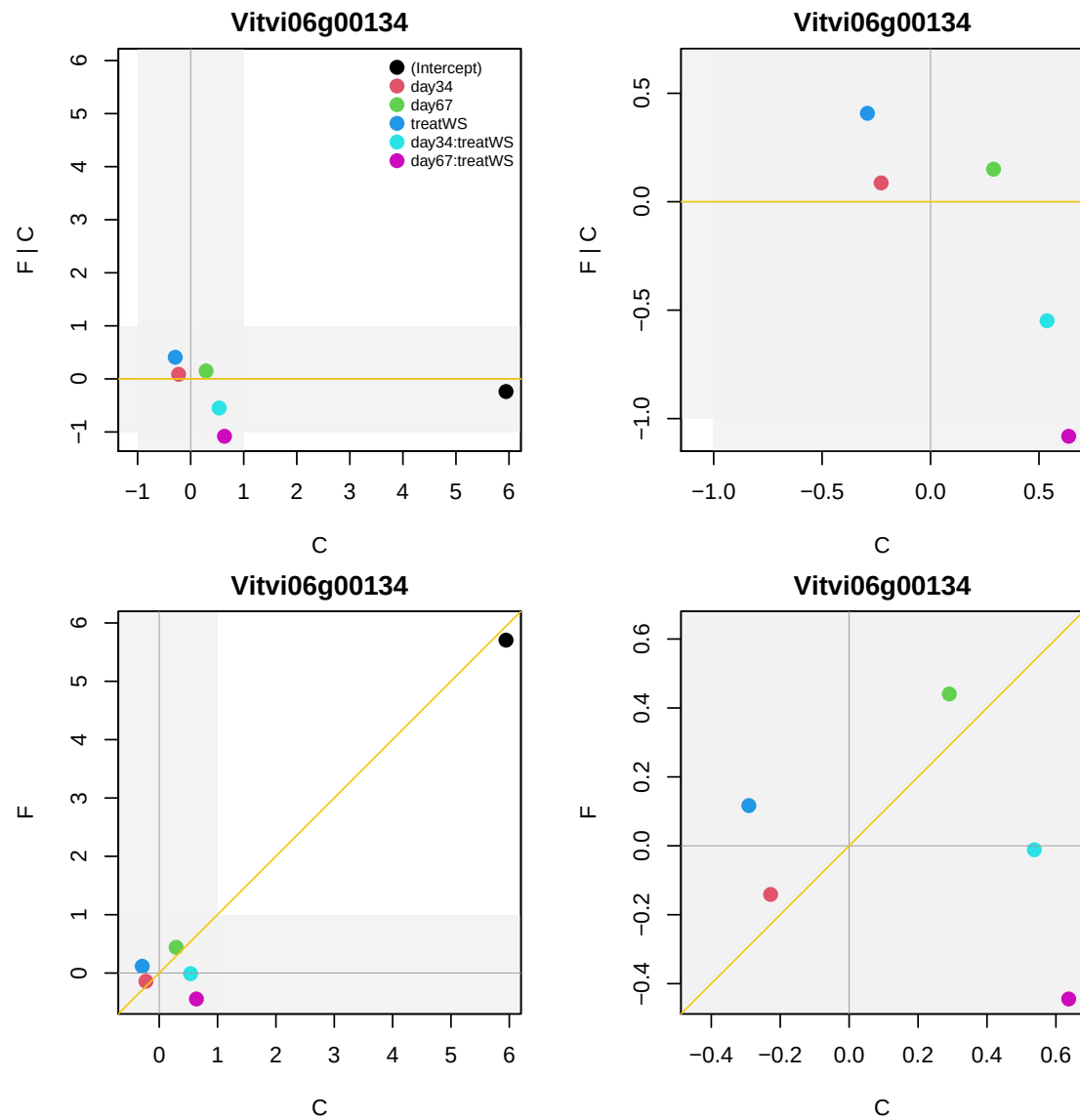


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

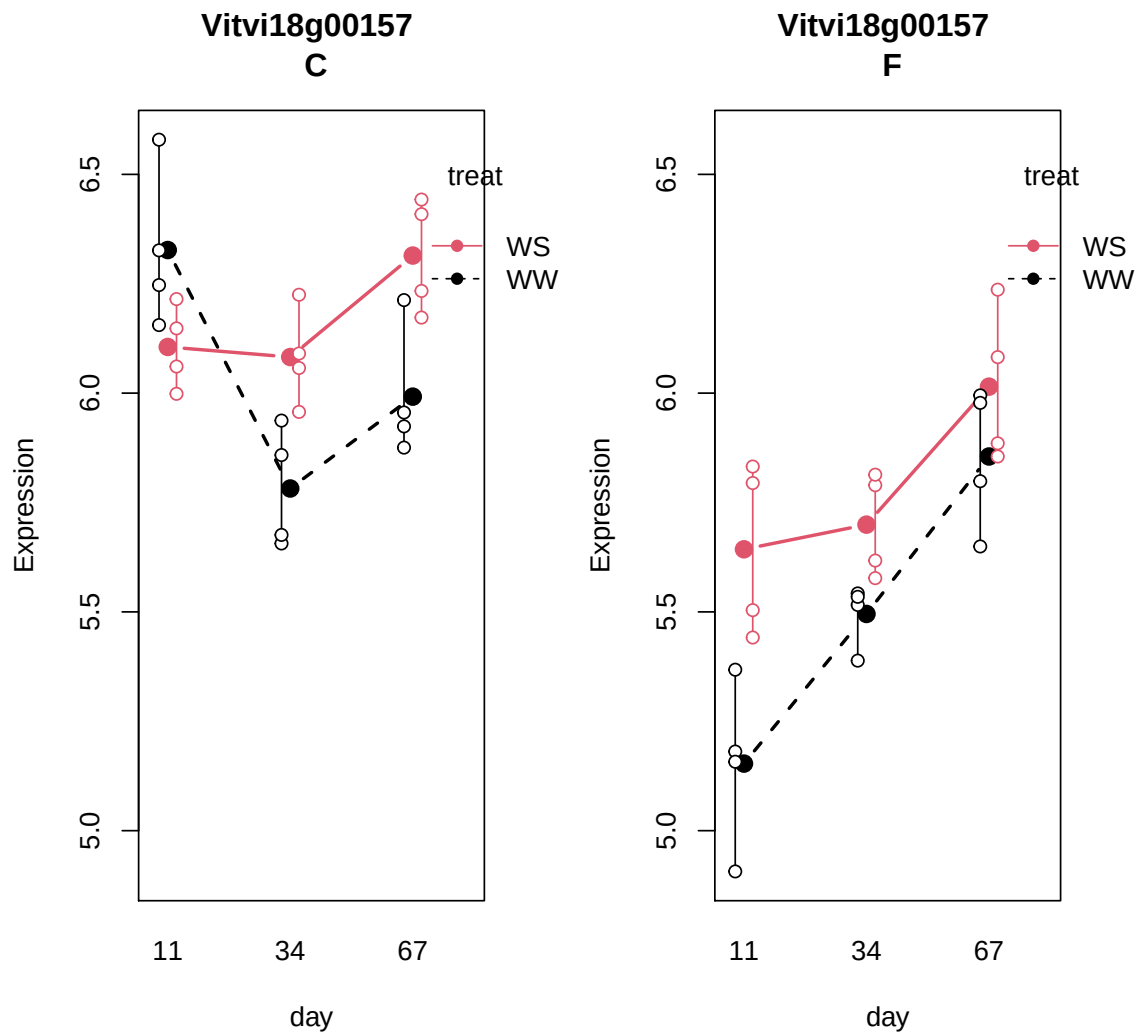
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



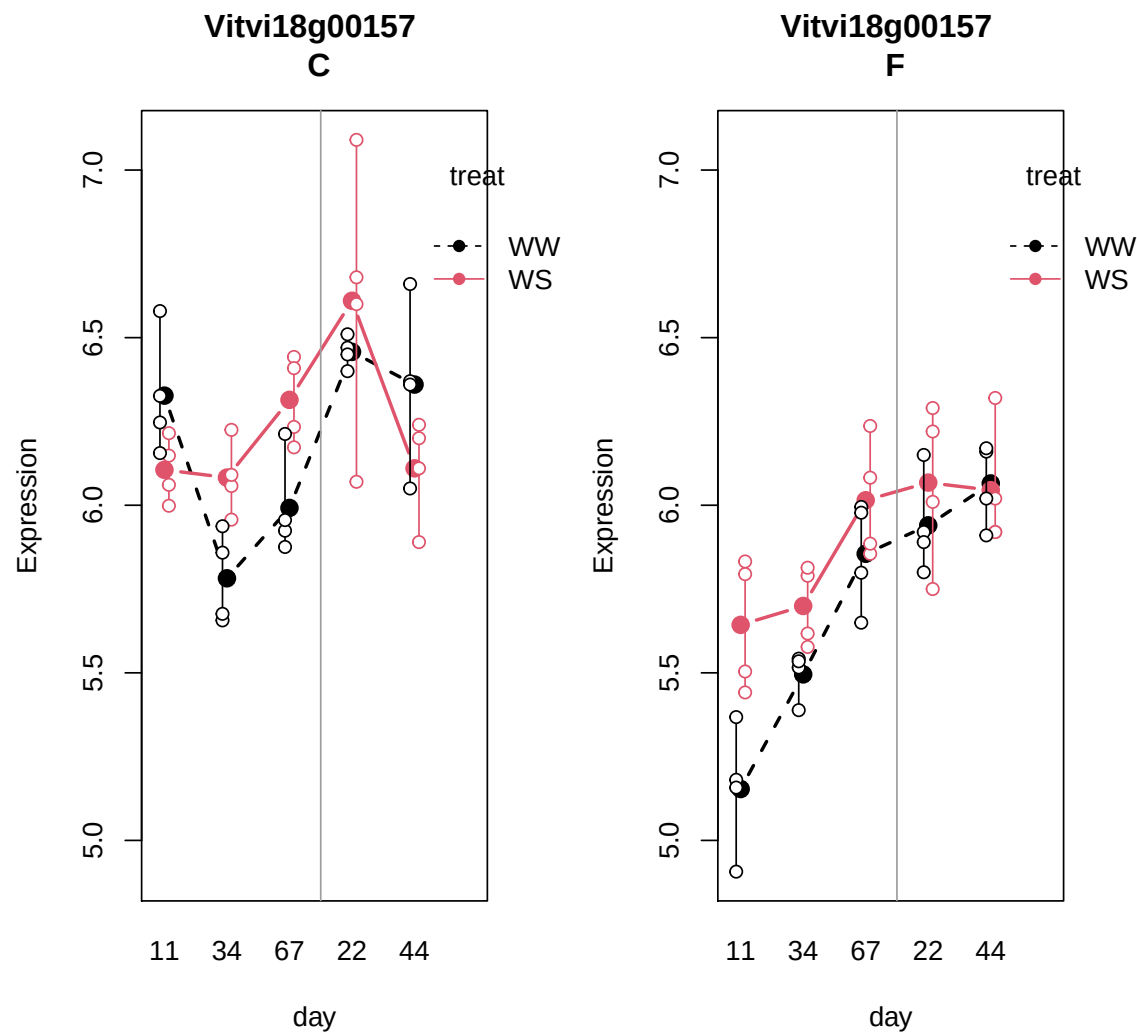
6.12.93 Vitvi18g00157

Coefficient varietyF:day67:treatWS for Vitvi18g00157.

```
> tt[varname,]
              logFC AveExpr      t      P.Value
Vitvi18g00157 -0.8740408 5.872054 -4.043011 0.0002427843
              adj.P.Val      B
Vitvi18g00157 0.03951738 0.4954242
> plot.interactions(varname,phdata=pd,data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

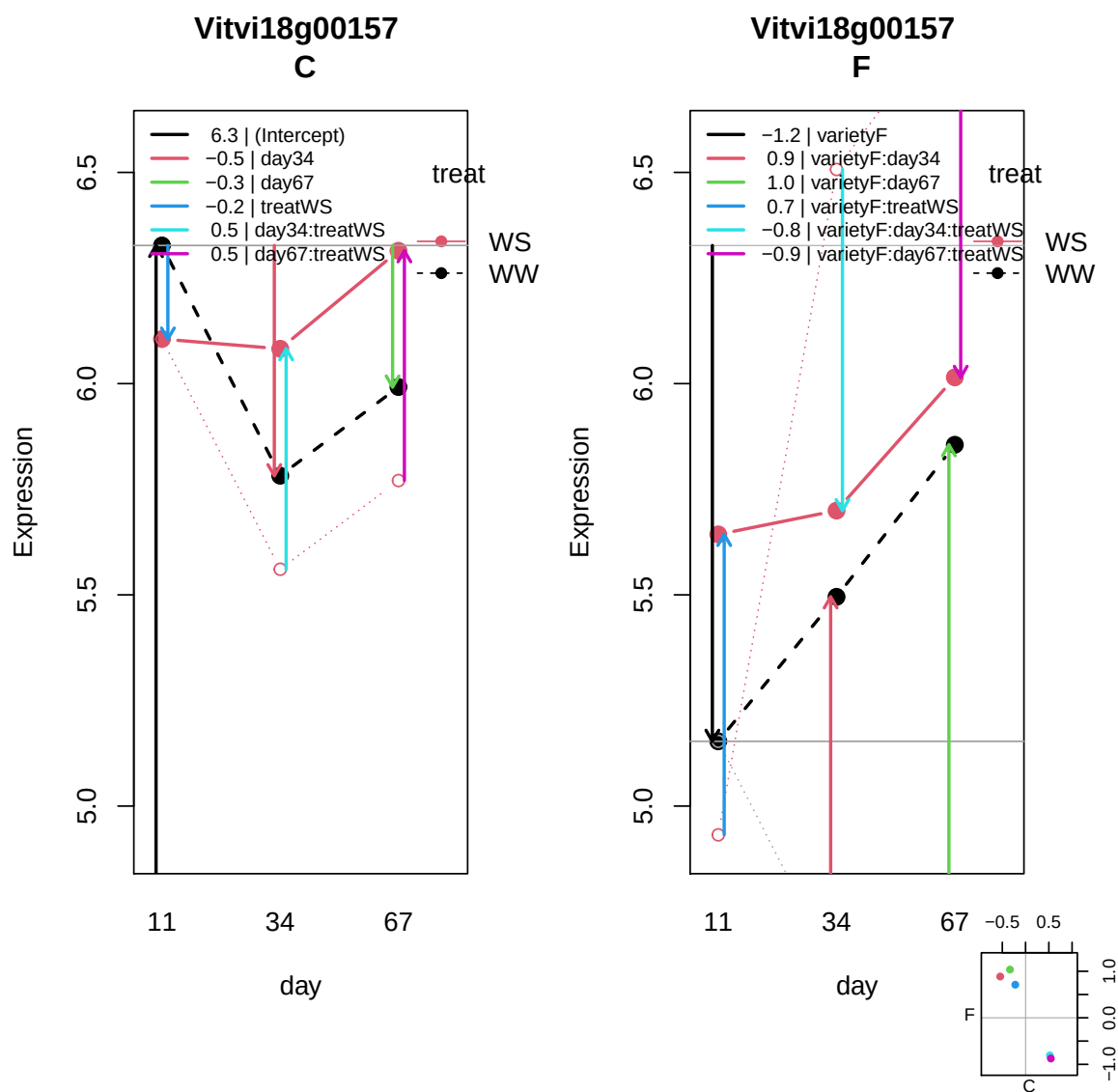
      (Intercept)  varietyF      day34      day67
Vitvi18g00157    6.327015 -1.173704 -0.5449844 -0.3350475
      treatWS varietyF:day34 varietyF:day67
Vitvi18g00157 -0.2214489      0.8869902      1.036963
      varietyF:treatWS day34:treatWS day67:treatWS
Vitvi18g00157      0.711195      0.5218882      0.5439005
      varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi18g00157      -0.8075116      -0.8740408

```

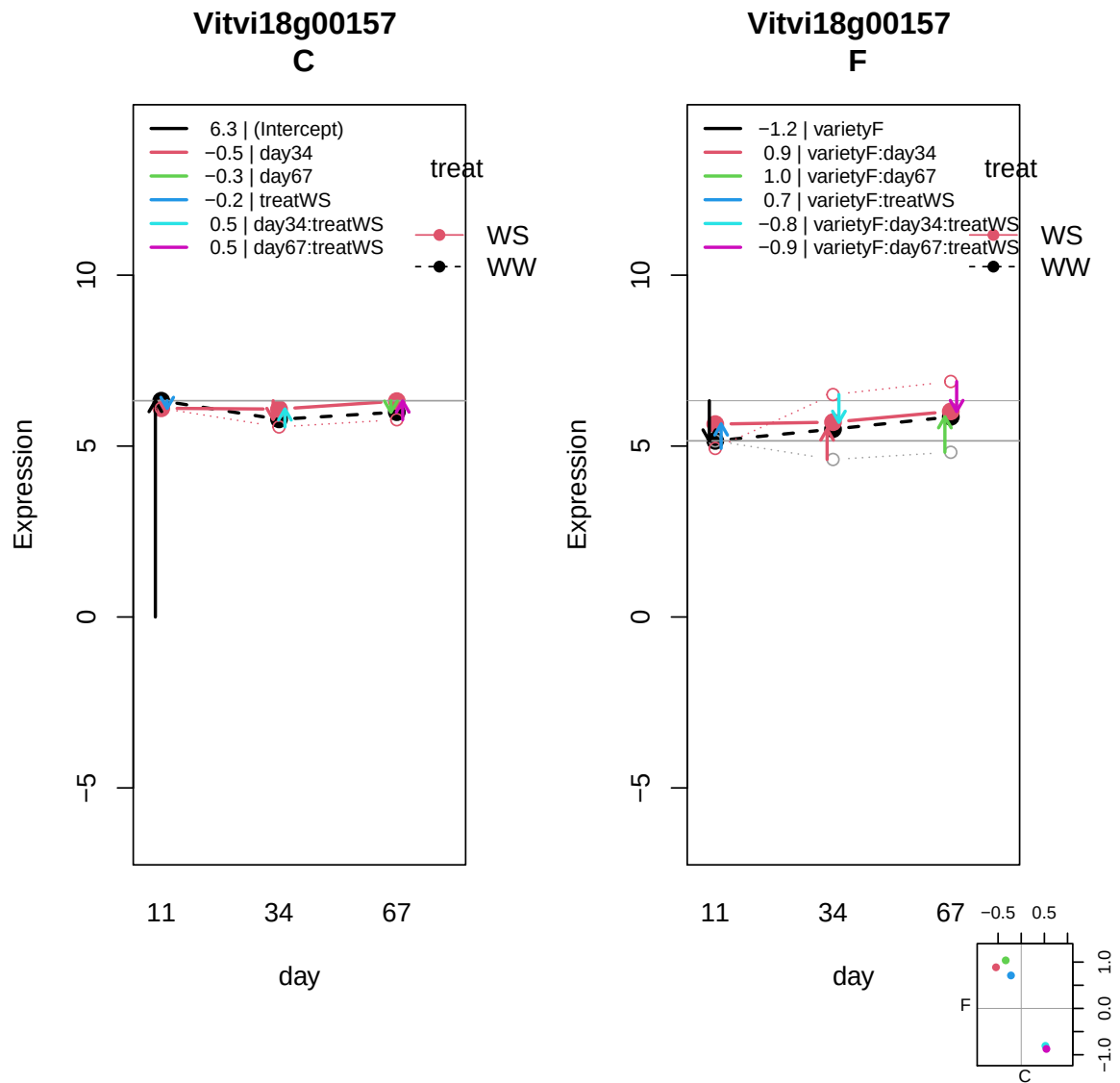
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

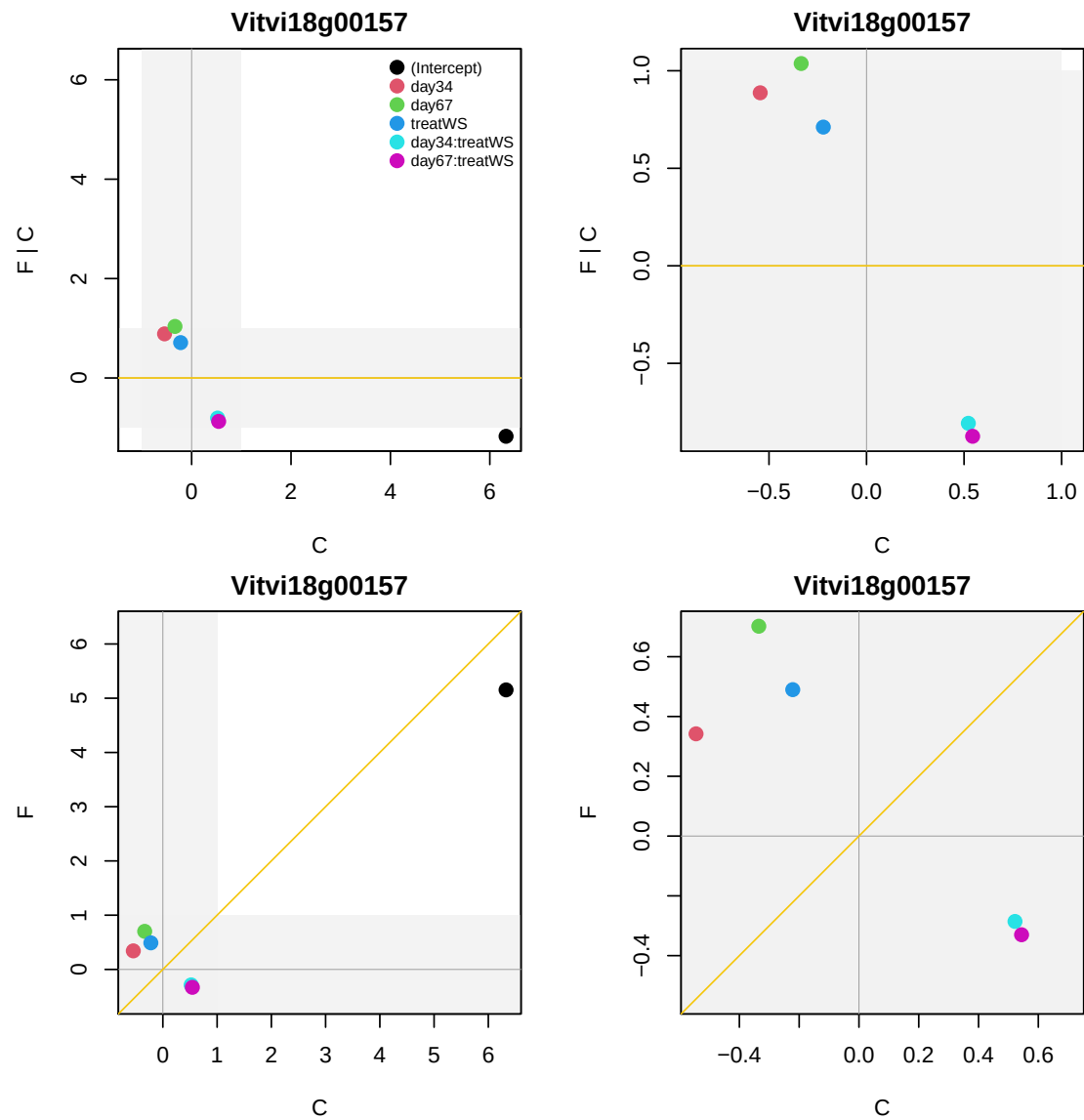


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

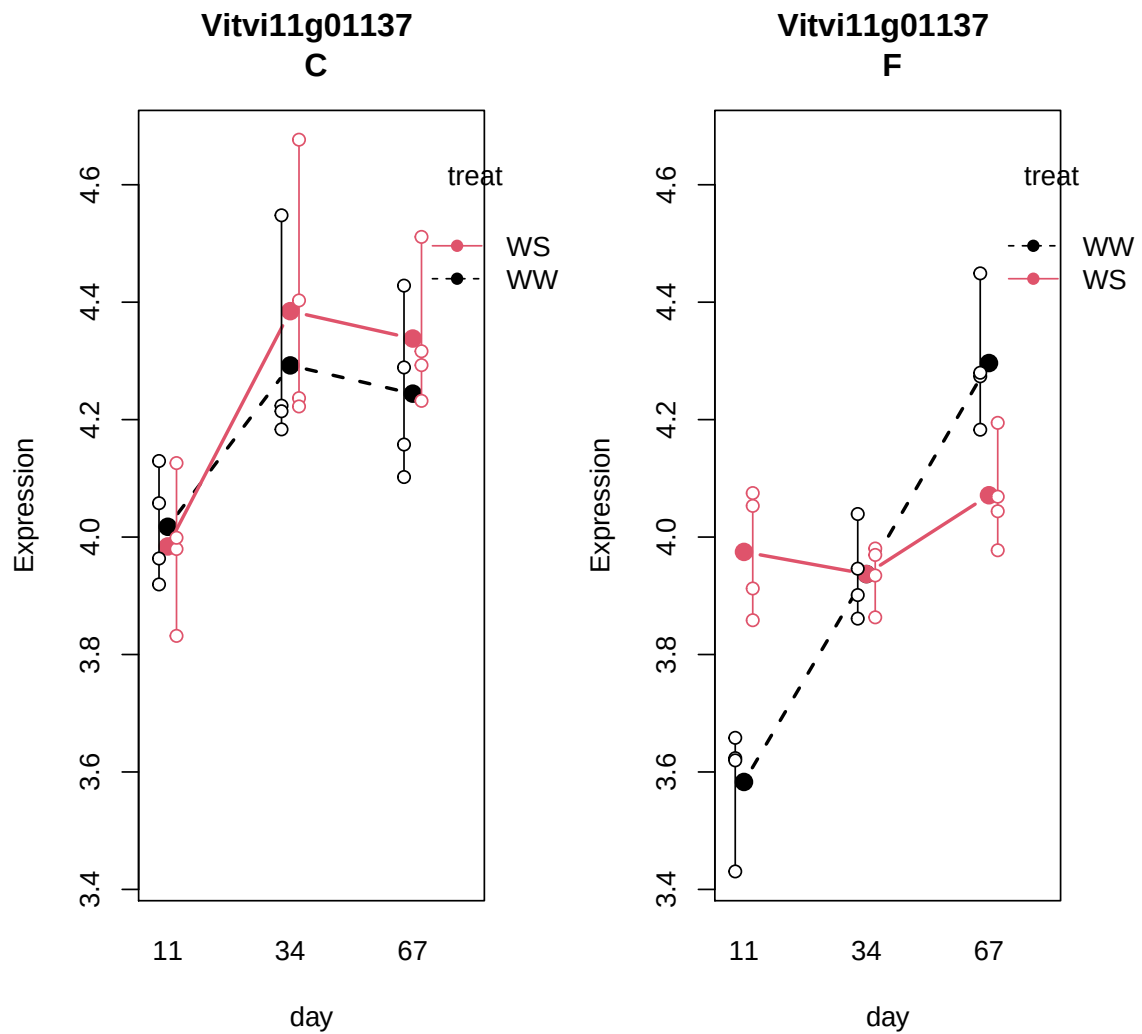
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



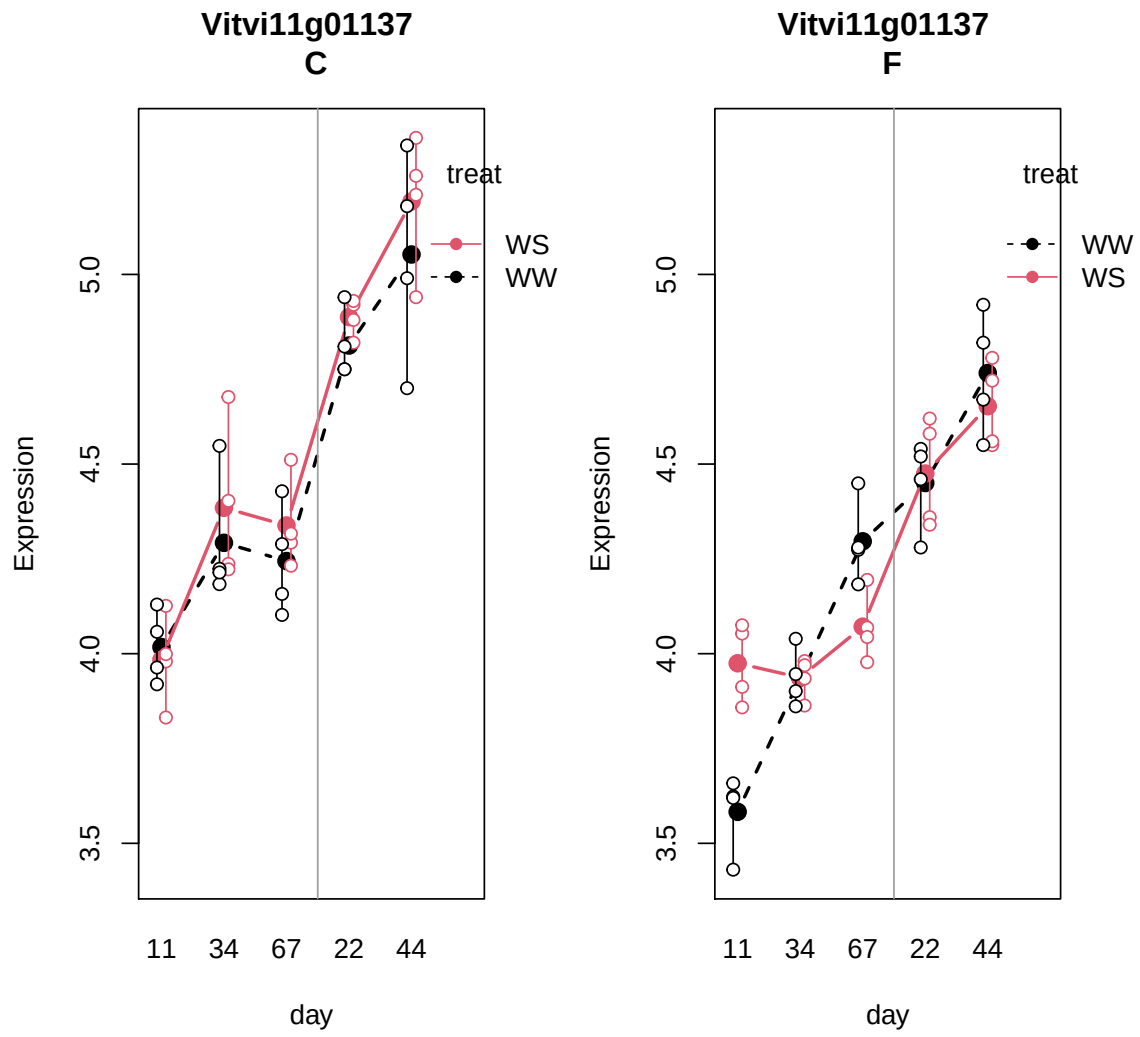
6.12.94 Vitvi11g01137

Coefficient varietyF:day67:treatWS for Vitvi11g01137.

```
> tt[varname,]
              logFC AveExpr      t      P.Value
Vitvi11g01137 -0.7442369 4.088359 -4.041739 0.0002437104
              adj.P.Val      B
Vitvi11g01137 0.03951738 0.4920444
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

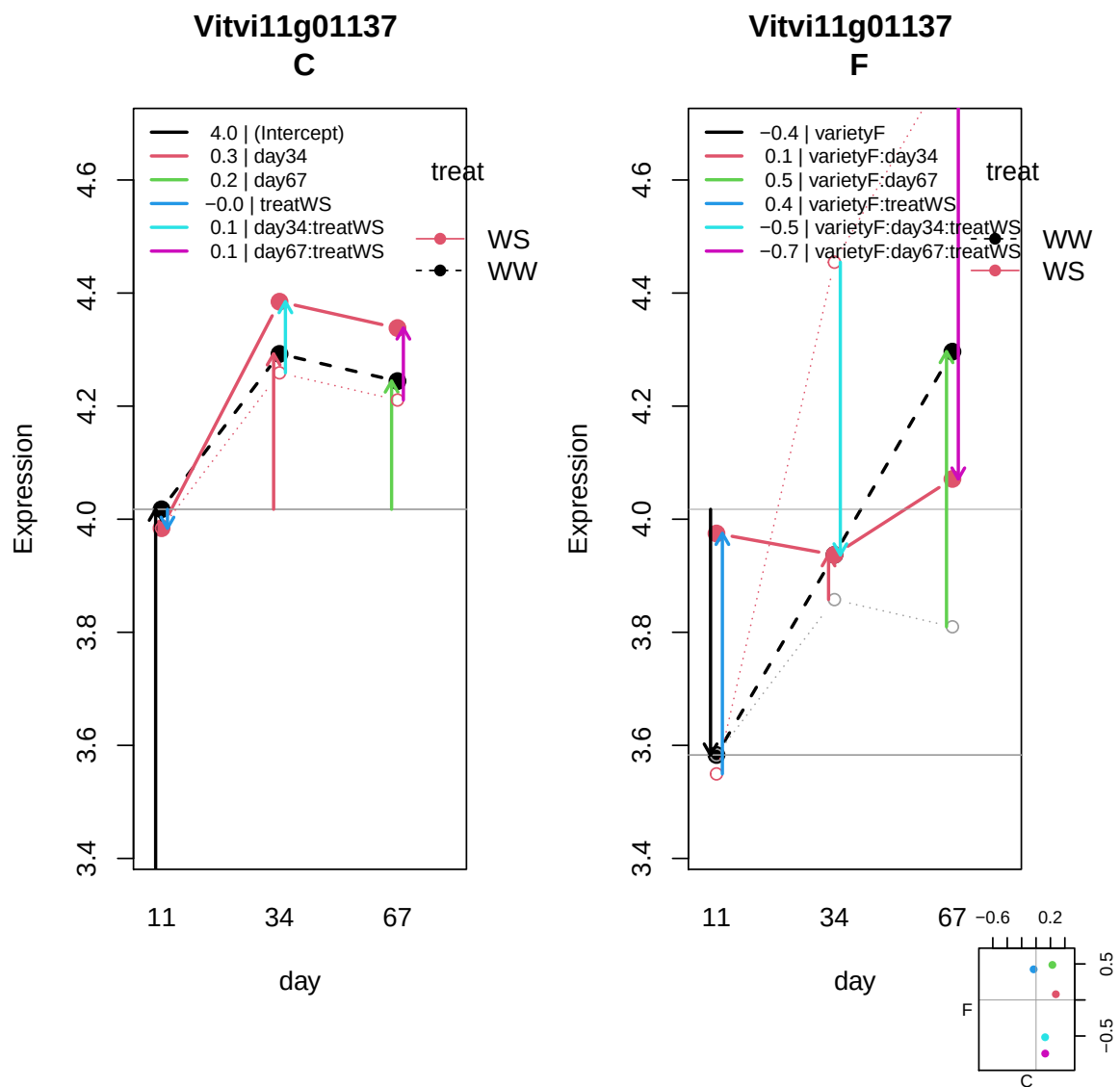
              (Intercept)    varietyF    day34    day67
Vitvi11g01137      4.017532 -0.4345352 0.2748037 0.2267077
              treatWS    varietyF:day34    varietyF:day67
Vitvi11g01137 -0.03345609      0.07917584      0.486668
              varietyF:treatWS    day34:treatWS    day67:treatWS
Vitvi11g01137      0.4252102      0.1258266      0.1273258
              varietyF:day34:treatWS    varietyF:day67:treatWS
Vitvi11g01137      -0.5175539      -0.7442369

```

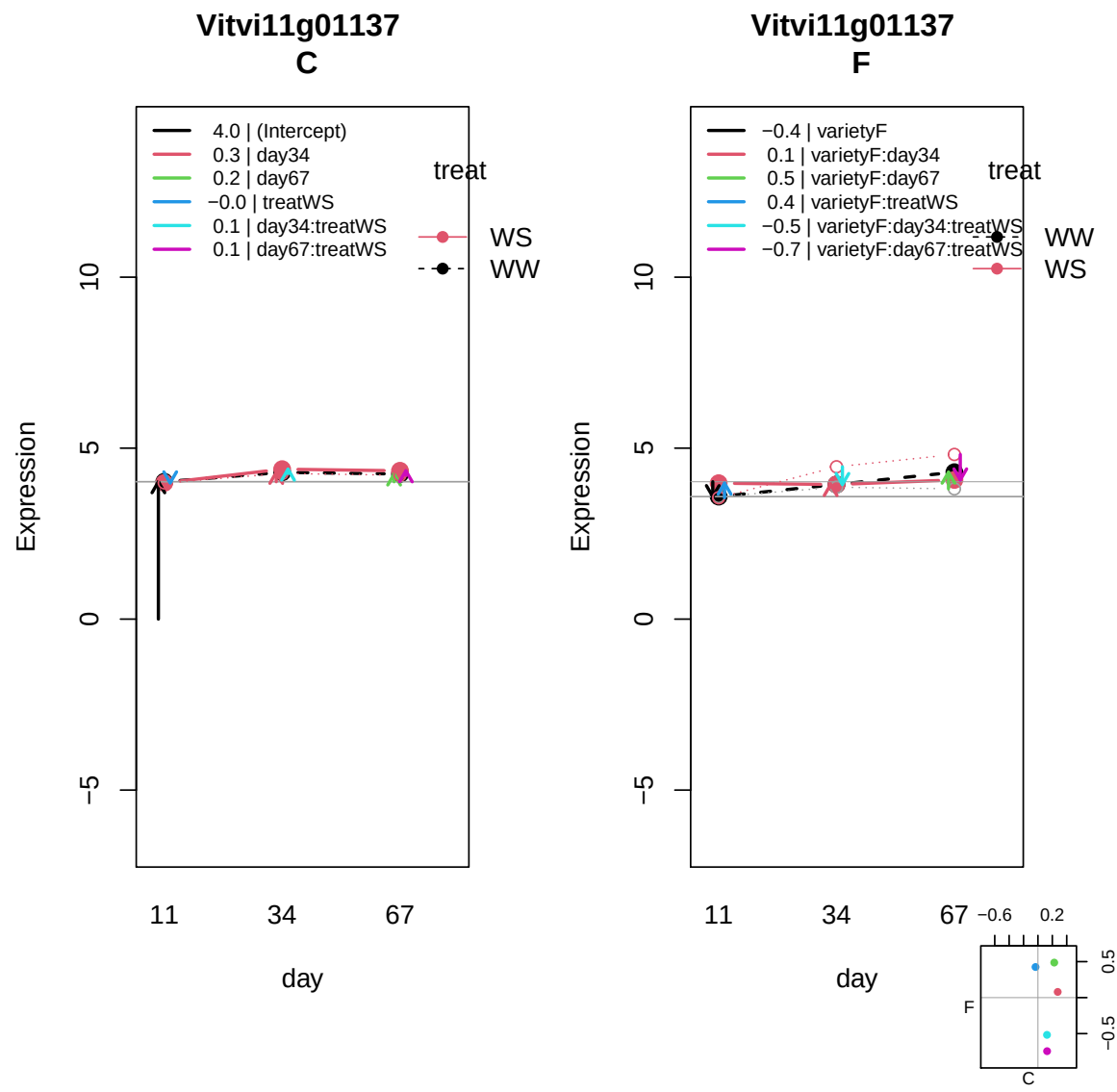
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

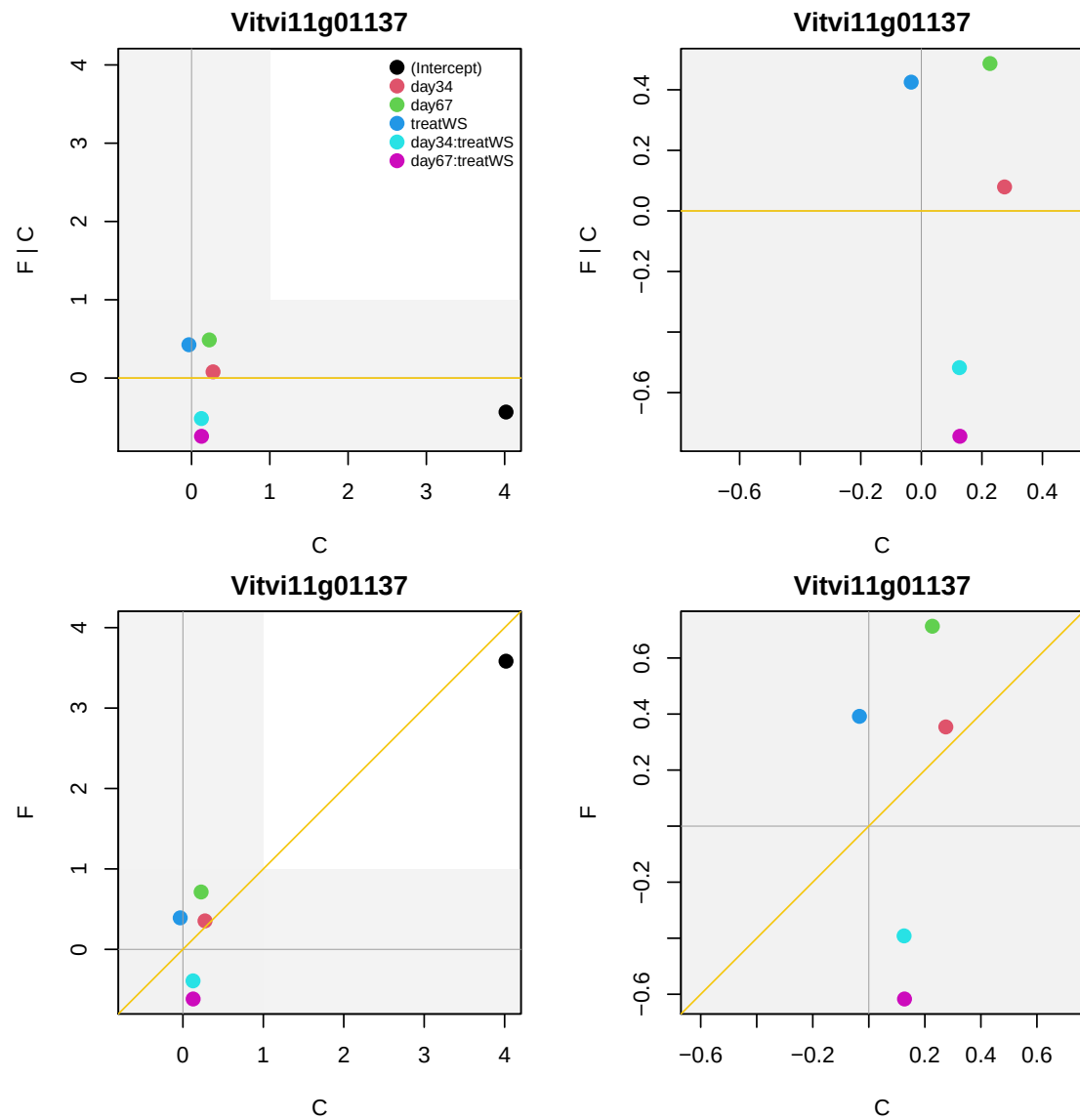


```
> coefs <- plot.interactions(varname,  
+ coef=fit1[varname,]$coefficients,  
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

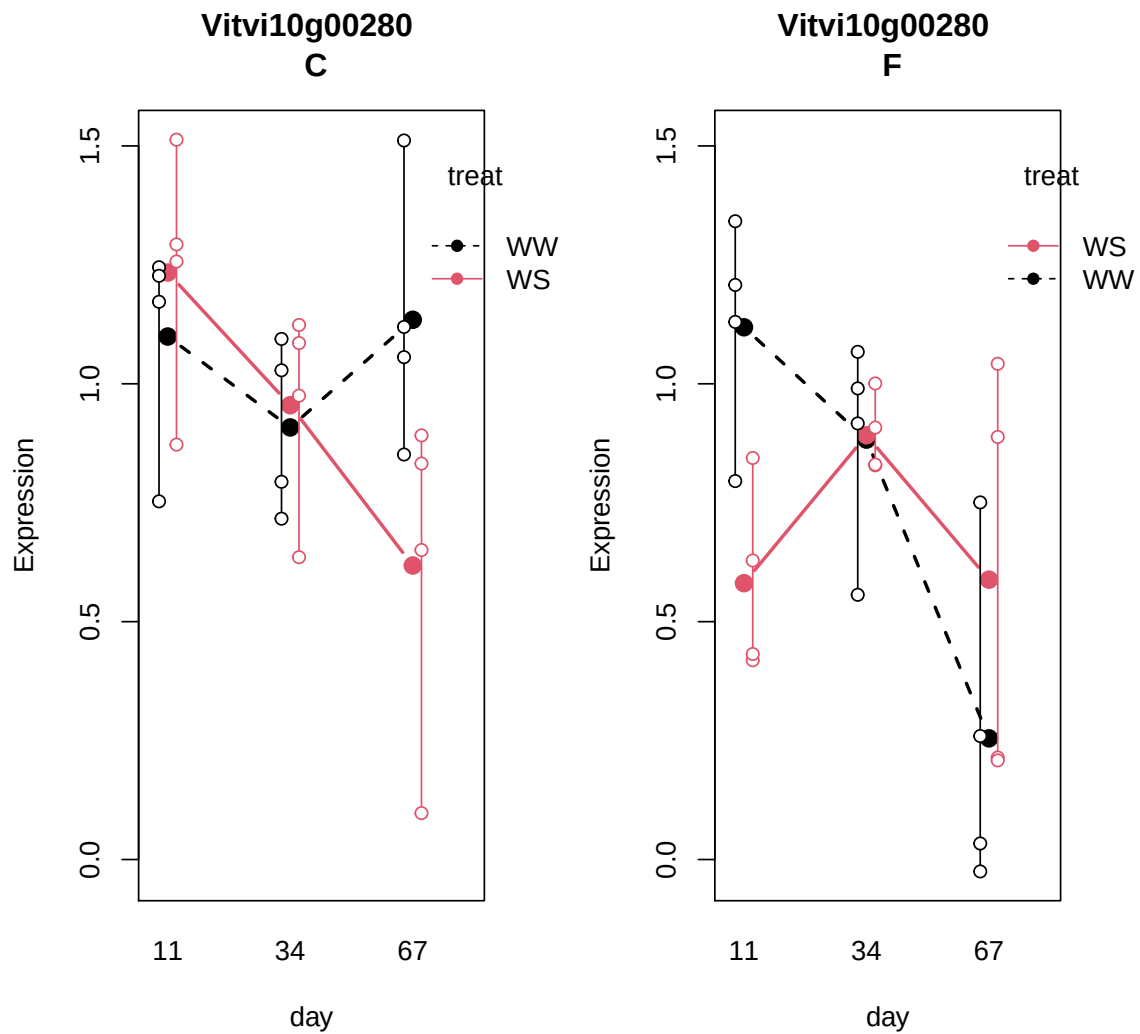


6.12.95 Vitvi10g00280

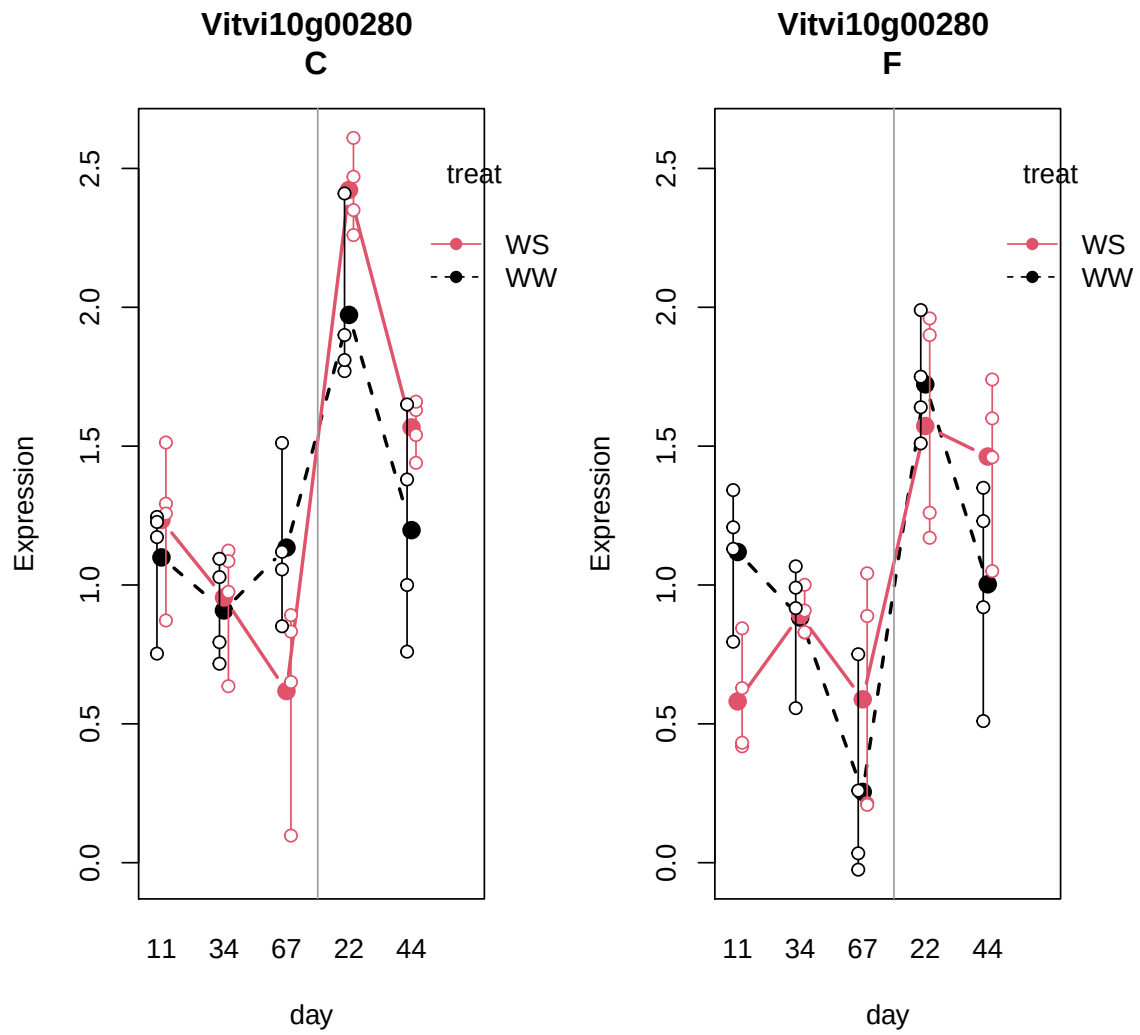
Coefficient varietyF:day67:treatWS for Vitvi10g00280.

```
> tt[varname,]
      logFC  AveExpr      t    P.Value
Vitvi10g00280 1.522425 0.8555144 4.035427 0.000248359
      adj.P.Val      B
Vitvi10g00280 0.03984724 0.4752726

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

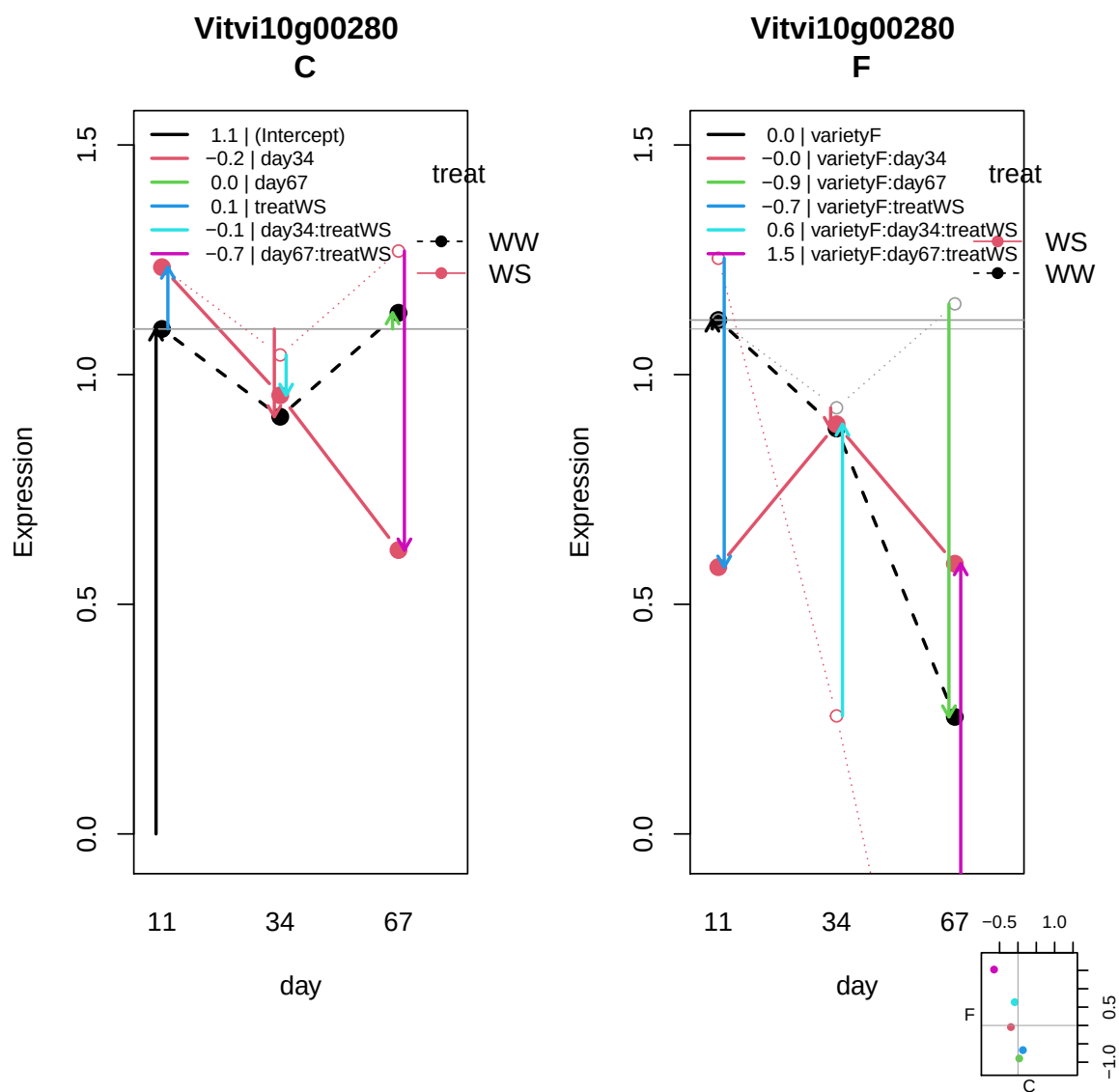
              (Intercept)    varietyF      day34      day67
Vitvi10g00280    1.099325  0.01944539 -0.1910395  0.03522413
              treatWS  varietyF:day34  varietyF:day67
Vitvi10g00280    0.1345016    -0.0450626    -0.8992516
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi10g00280          -0.6724016    -0.08780964    -0.6510201
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi10g00280              0.6349214              1.522425

```

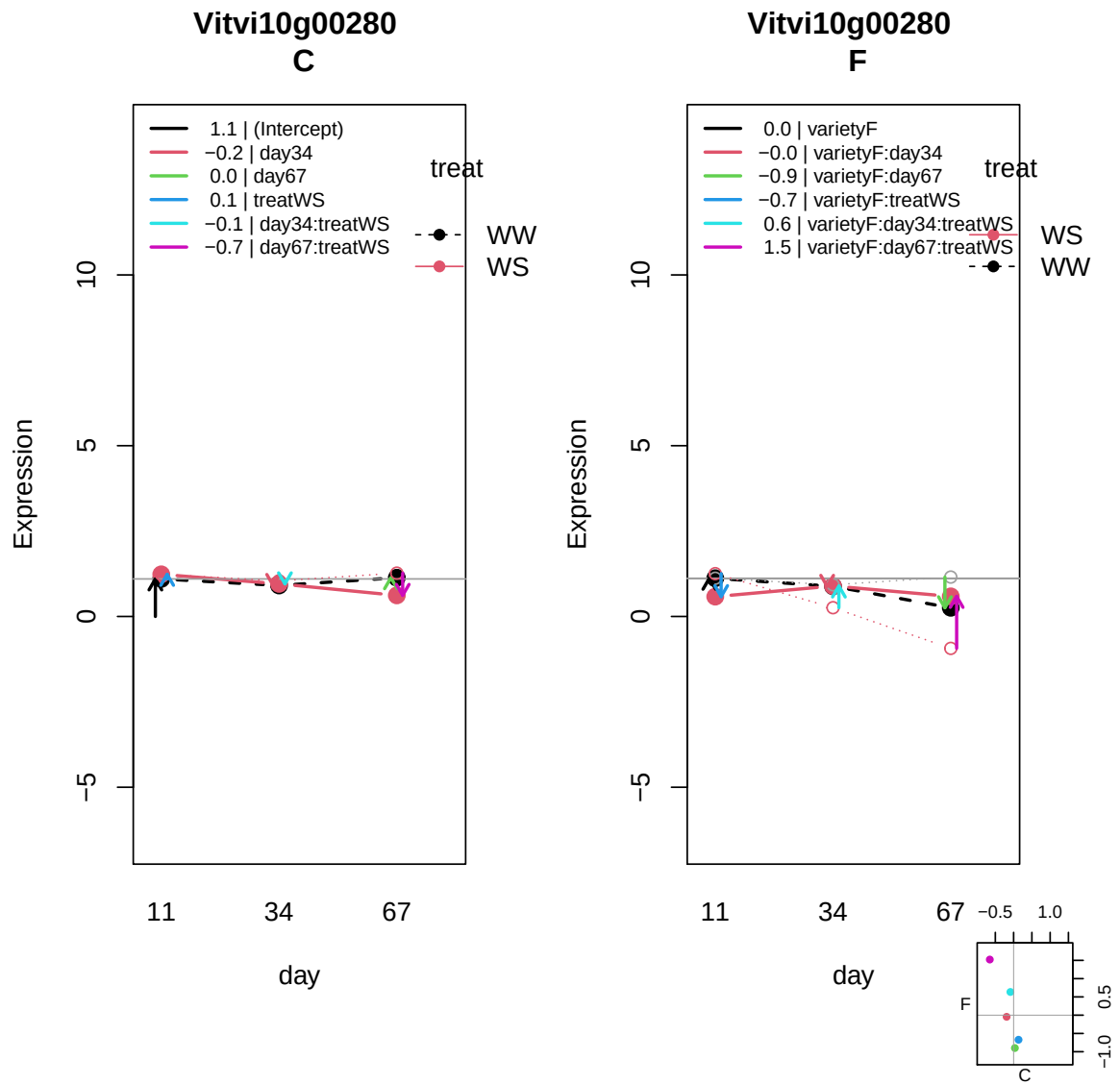
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

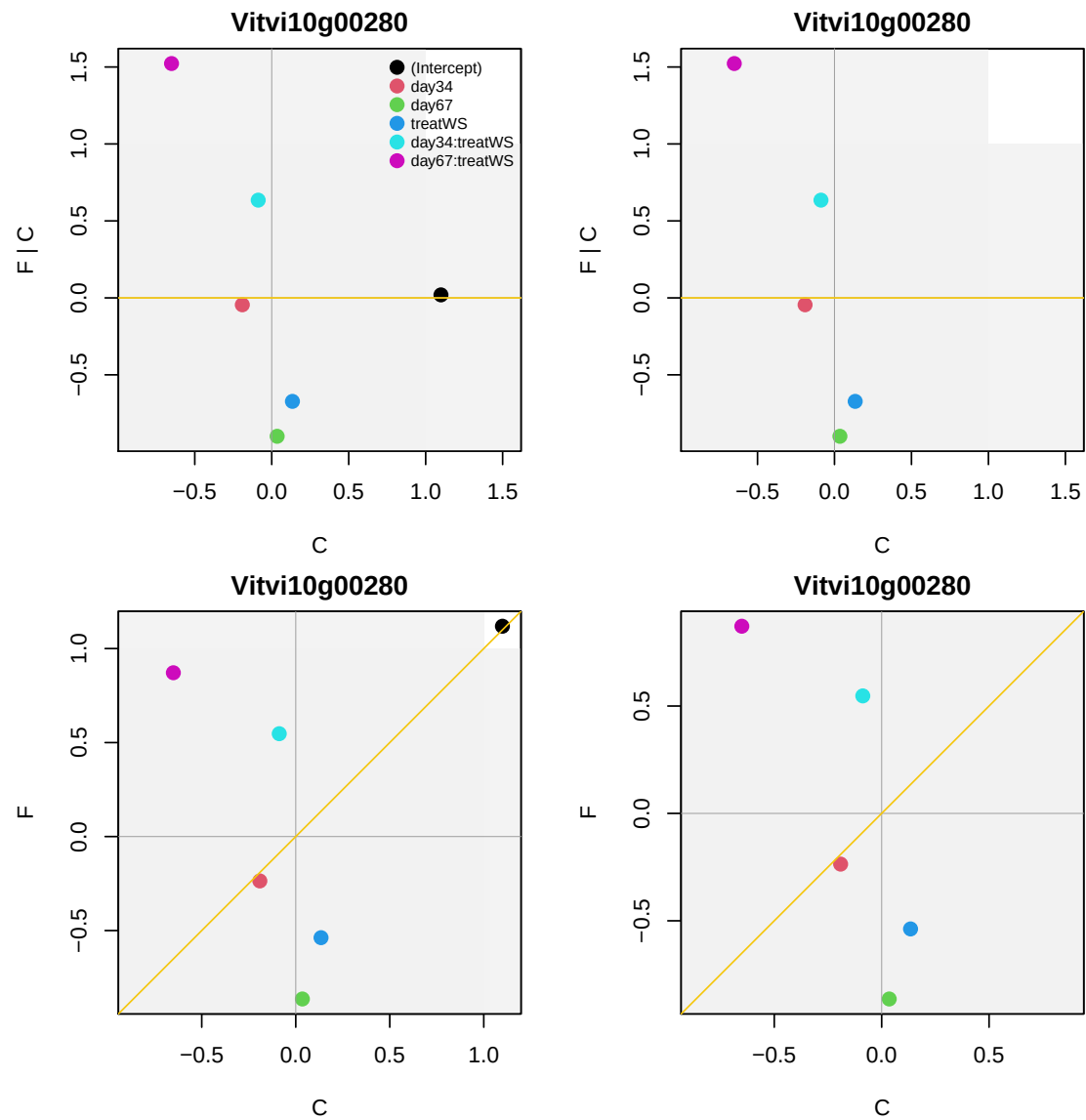


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

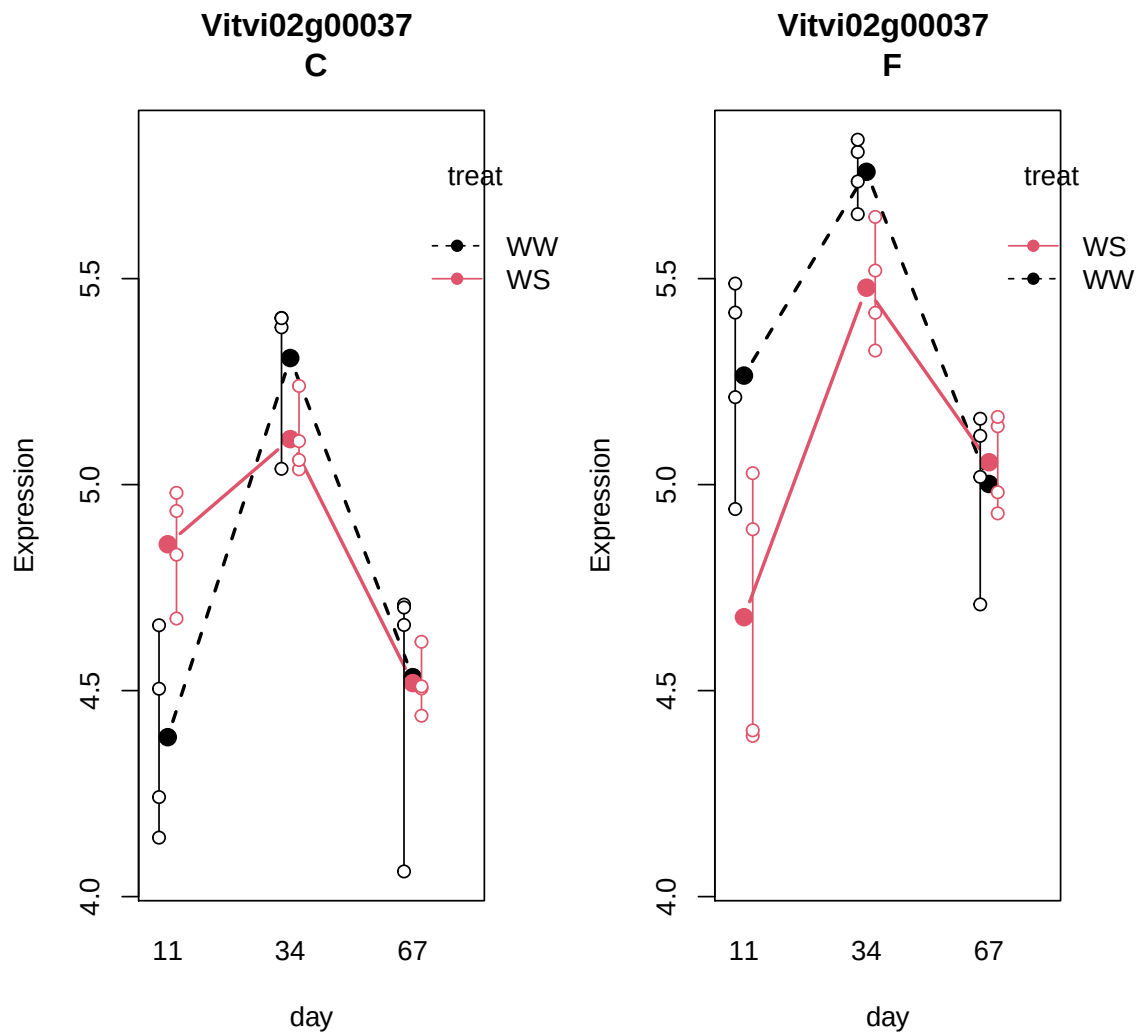


6.12.96 Vitvi02g00037

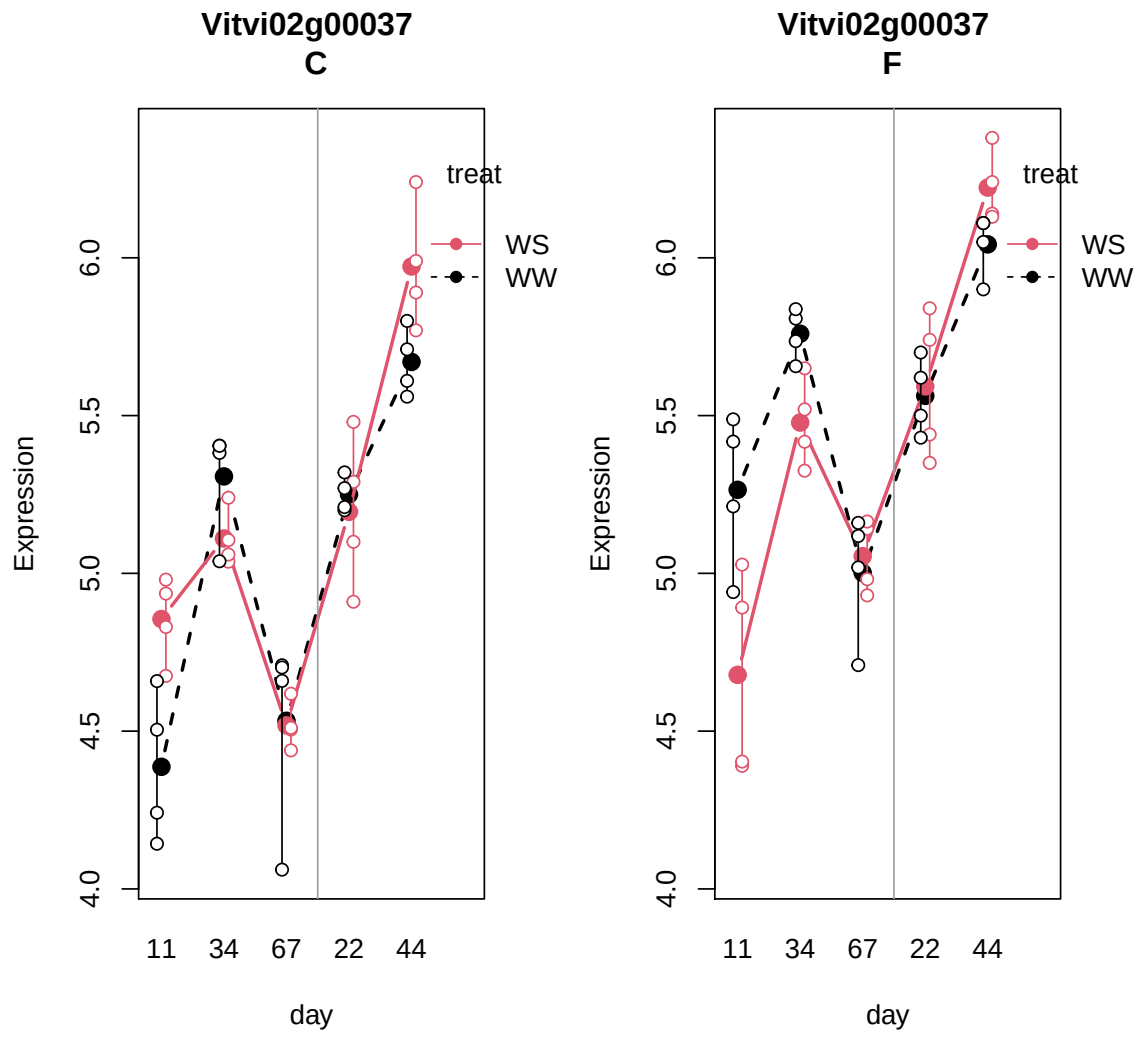
Coefficient varietyF:day67:treatWS for Vitvi02g00037.

```
> tt[varname,]
               logFC  AveExpr          t      P.Value
Vitvi02g00037  1.12195  4.995586  4.013646  0.0002650696
               adj.P.Val          B
Vitvi02g00037  0.04208532  0.4174796

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



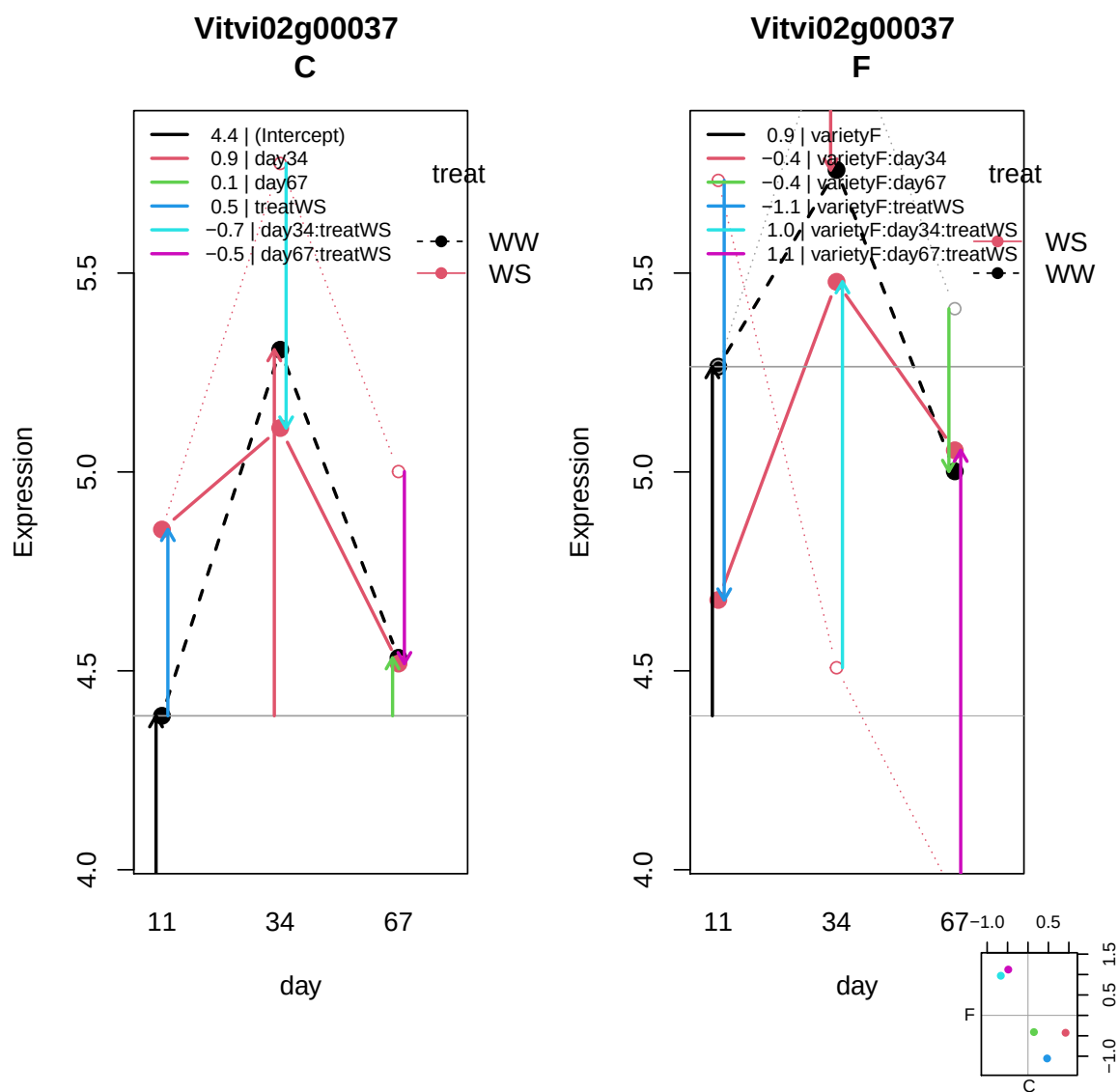

```

> fit1[varname,]$coefficients

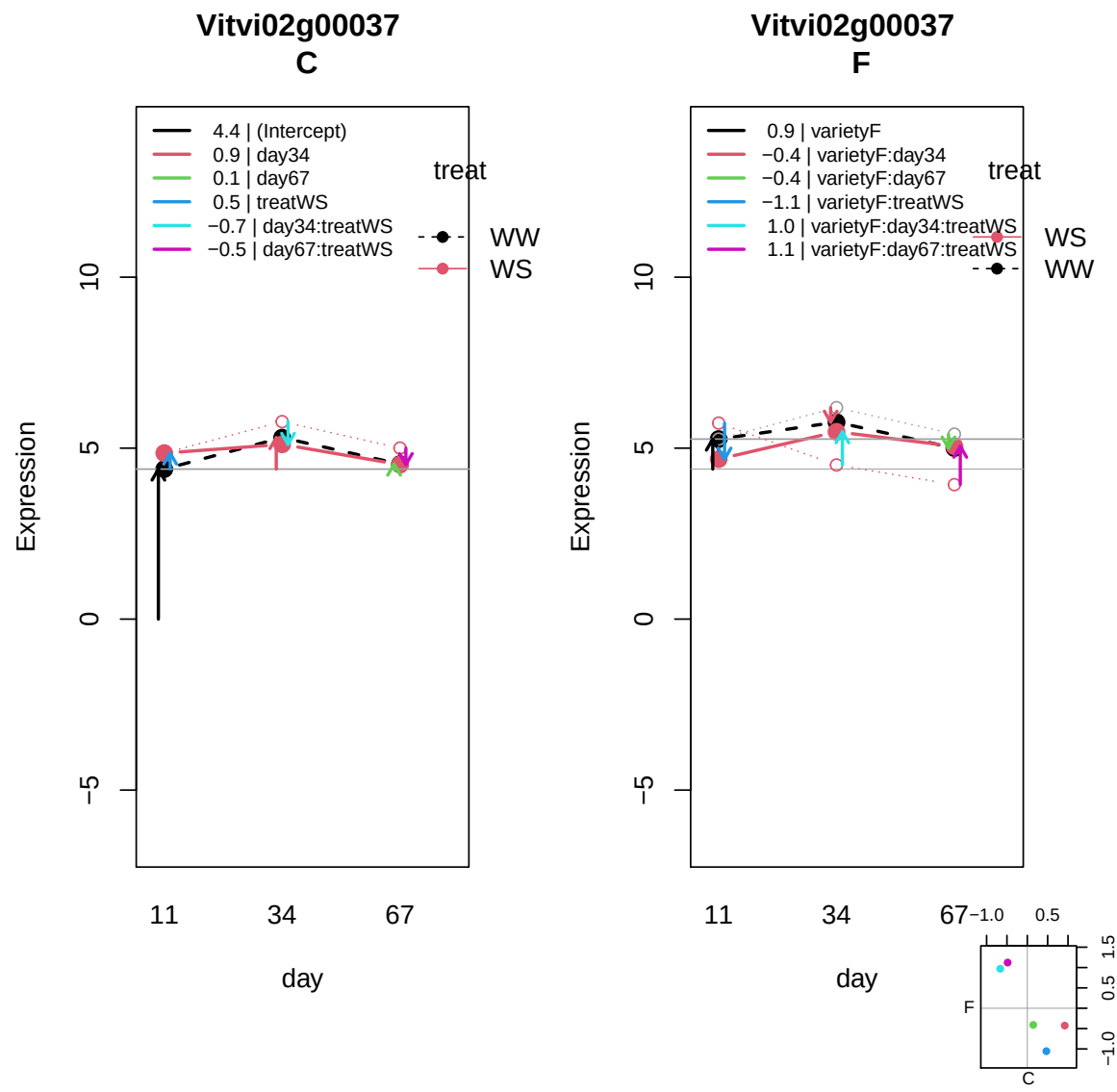
              (Intercept)  varietyF      day34      day67
Vitvi02g00037      4.386959 0.8776892 0.9202552 0.1457731
              treatWS  varietyF:day34  varietyF:day67
Vitvi02g00037 0.4683054      -0.4256772      -0.4088393
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi02g00037      -1.054704      -0.665034      -0.4827339
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi02g00037      0.9701754      1.12195

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

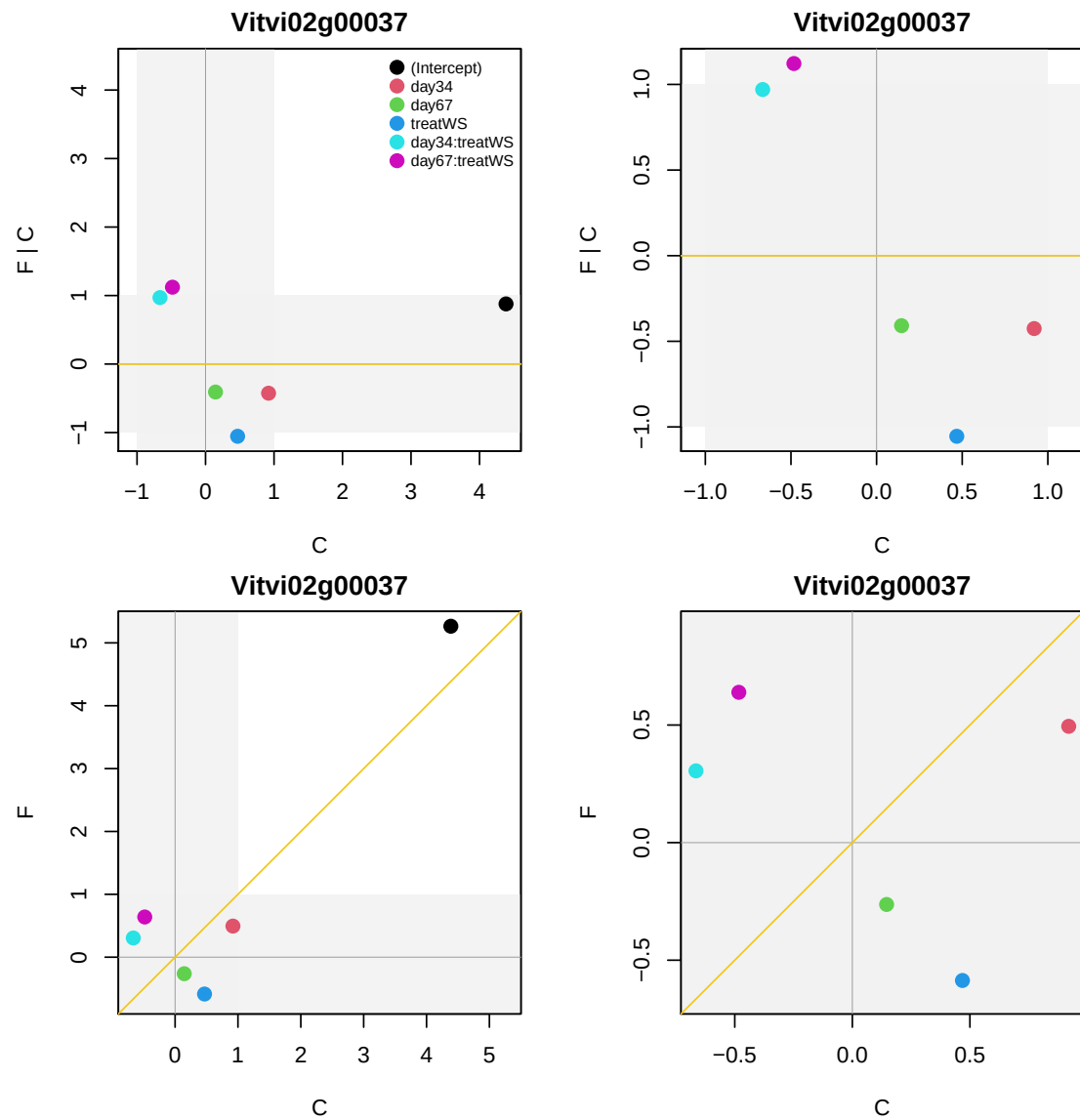


```
> coefs <- plot.interactions(varname,  
+ coef=fit1[varname,]$coefficients,  
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



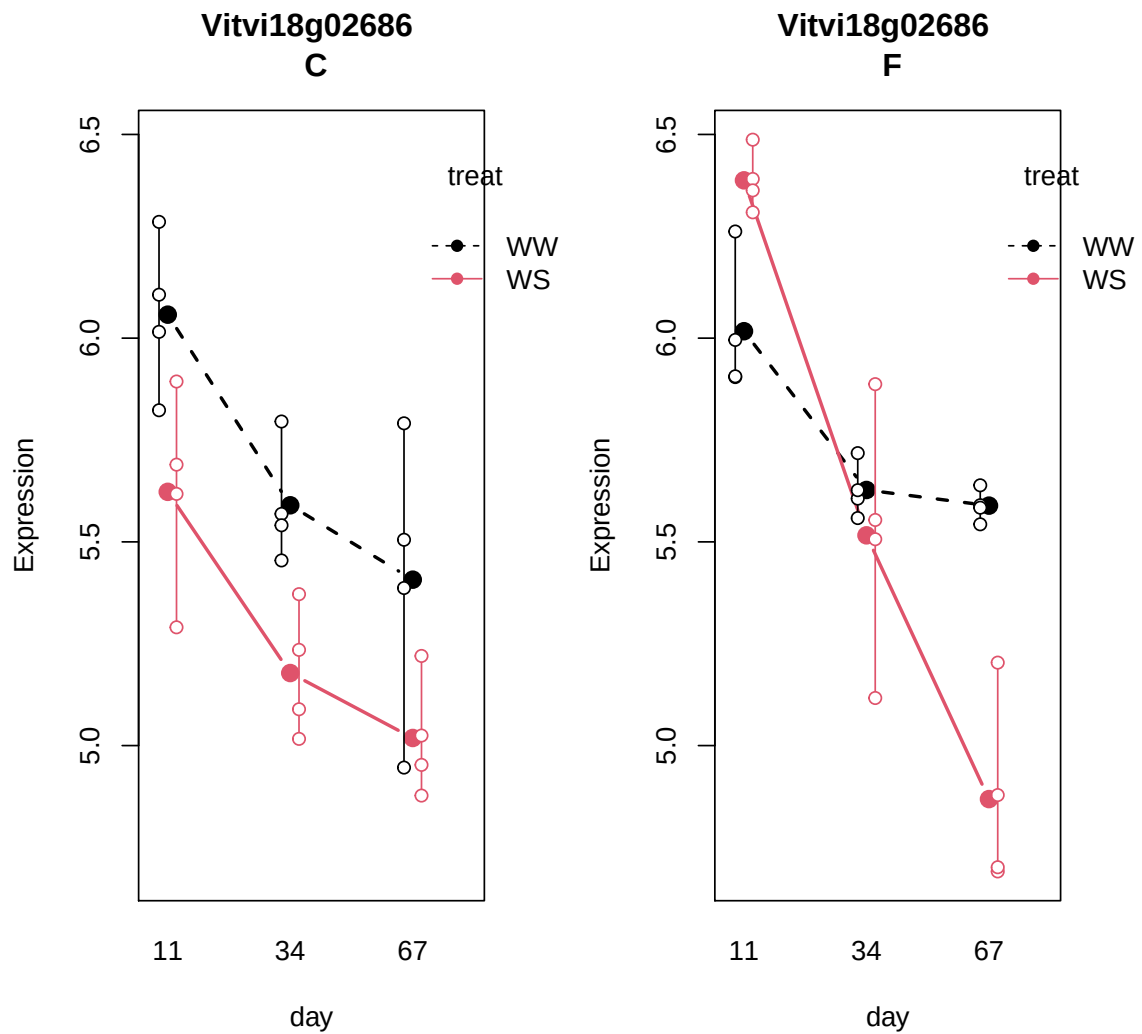
6.12.97 Vitvi18g02686

Coefficient varietyF:day67:treatWS for Vitvi18g02686.

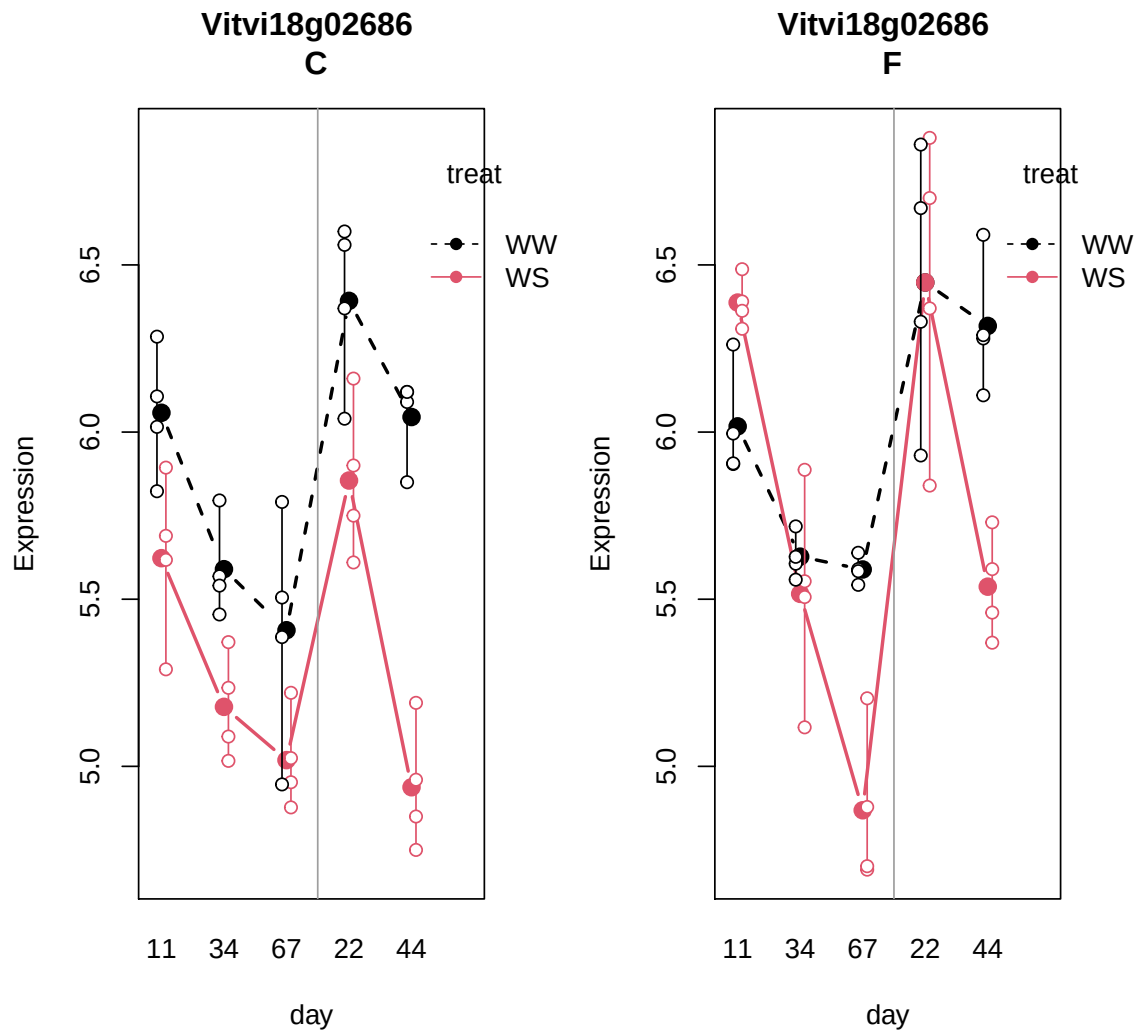
```
> tt[varname,]
```

	logFC	AveExpr	t	P.Value
Vitvi18g02686	-1.136948	5.573291	-3.996686	0.0002788357
	adj.P.Val	B		
Vitvi18g02686	0.04347943	0.372553		

```
> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

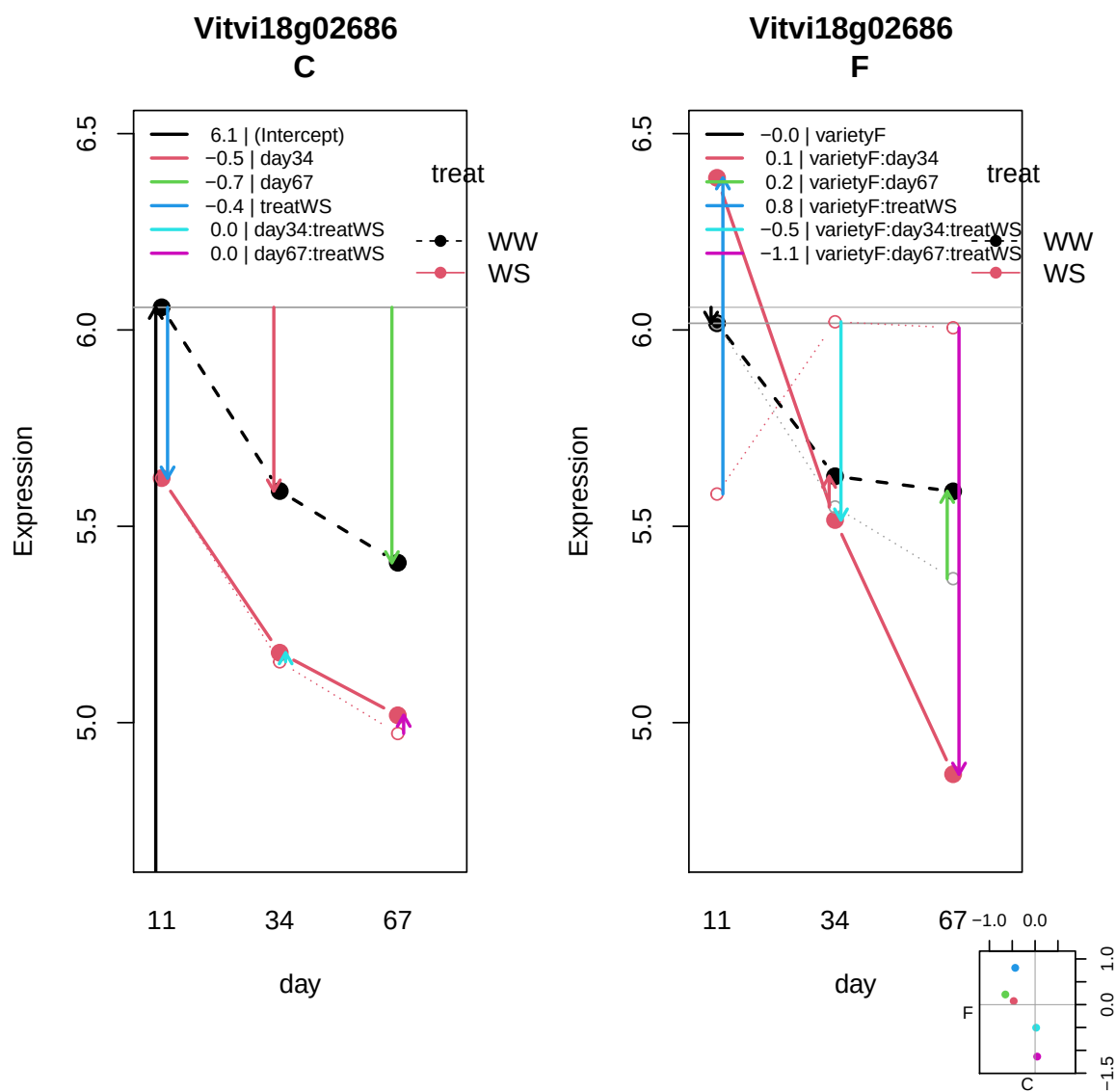
              (Intercept)      varietyF      day34      day67
Vitvi18g02686      6.057679 -0.04062732 -0.4678857 -0.6504759
              treatWS varietyF:day34 varietyF:day67
Vitvi18g02686 -0.4348817      0.07815521      0.2223577
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi18g02686      0.8052212      0.0231343      0.04630868
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi18g02686      -0.5047826      -1.136948

```

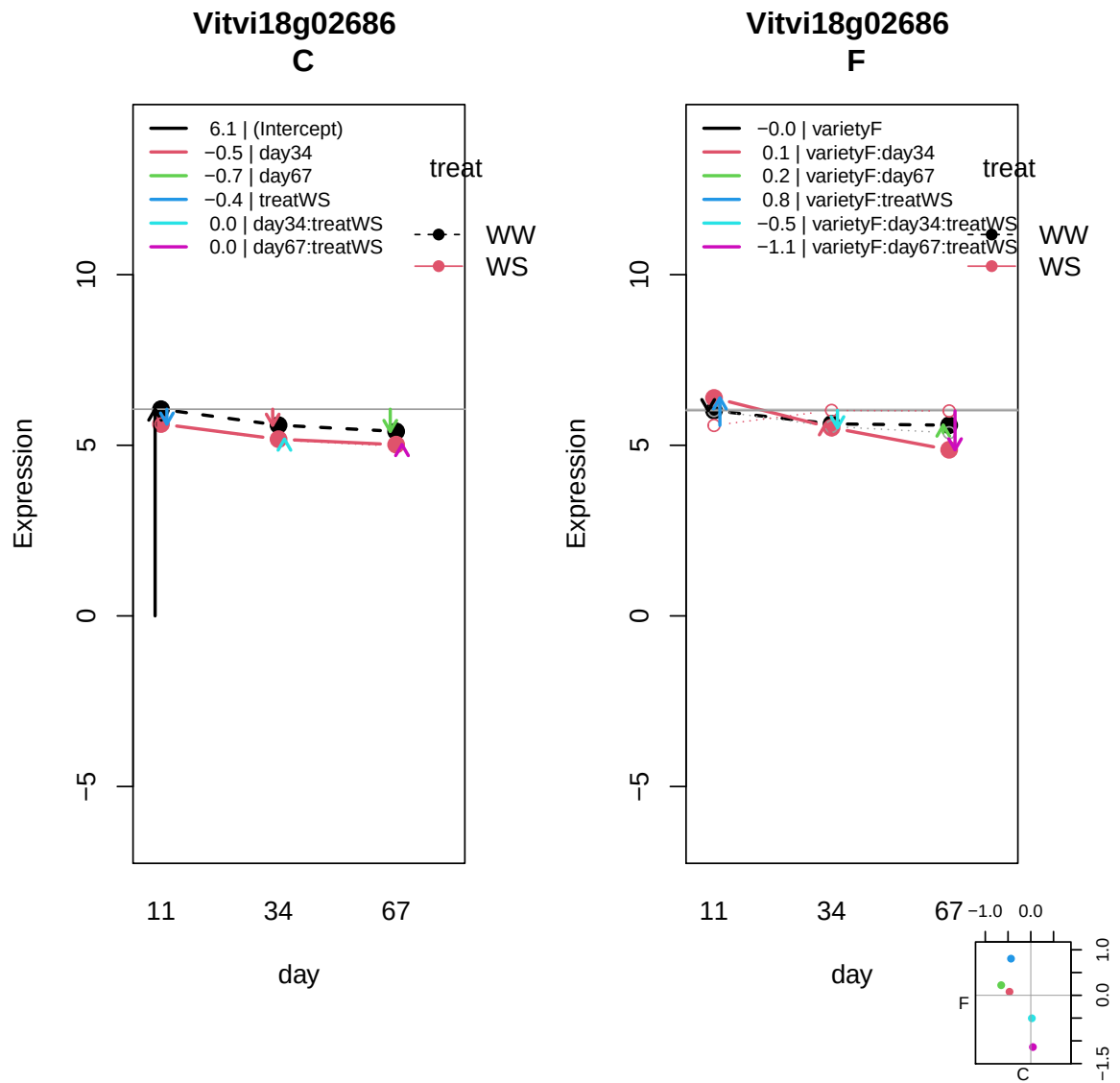
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

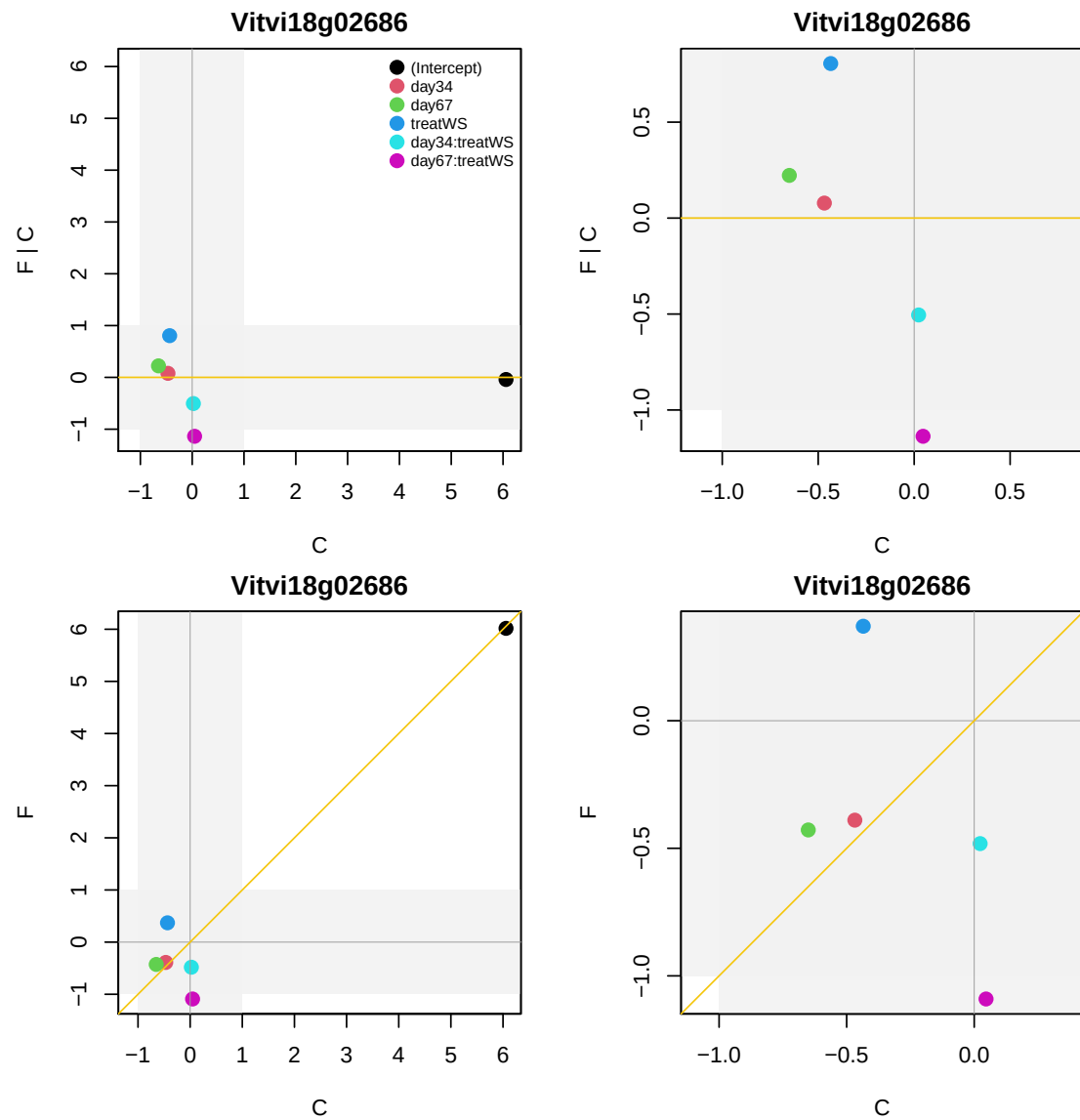


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



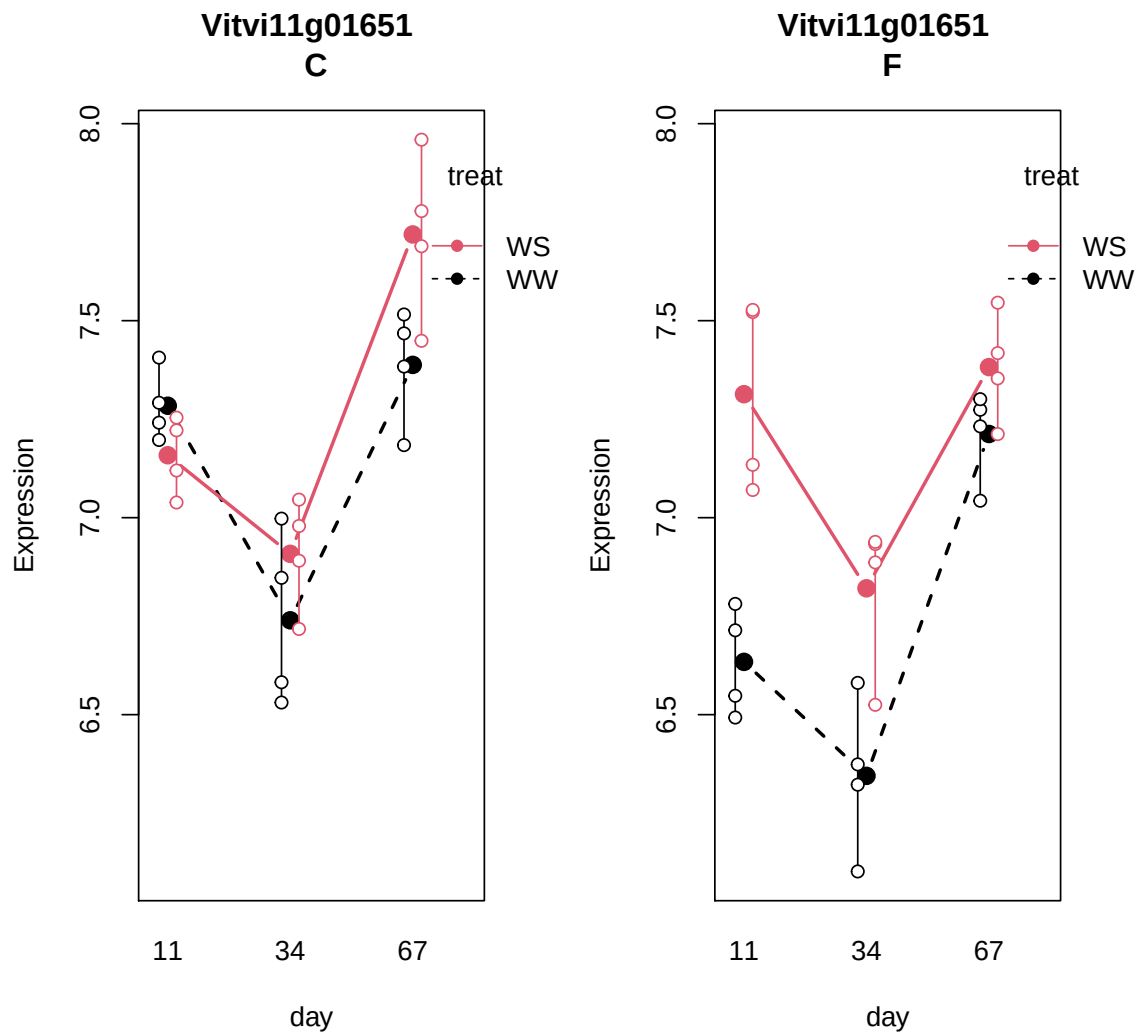
6.12.98 Vitvi11g01651

Coefficient varietyF:day67:treatWS for Vitvi11g01651.

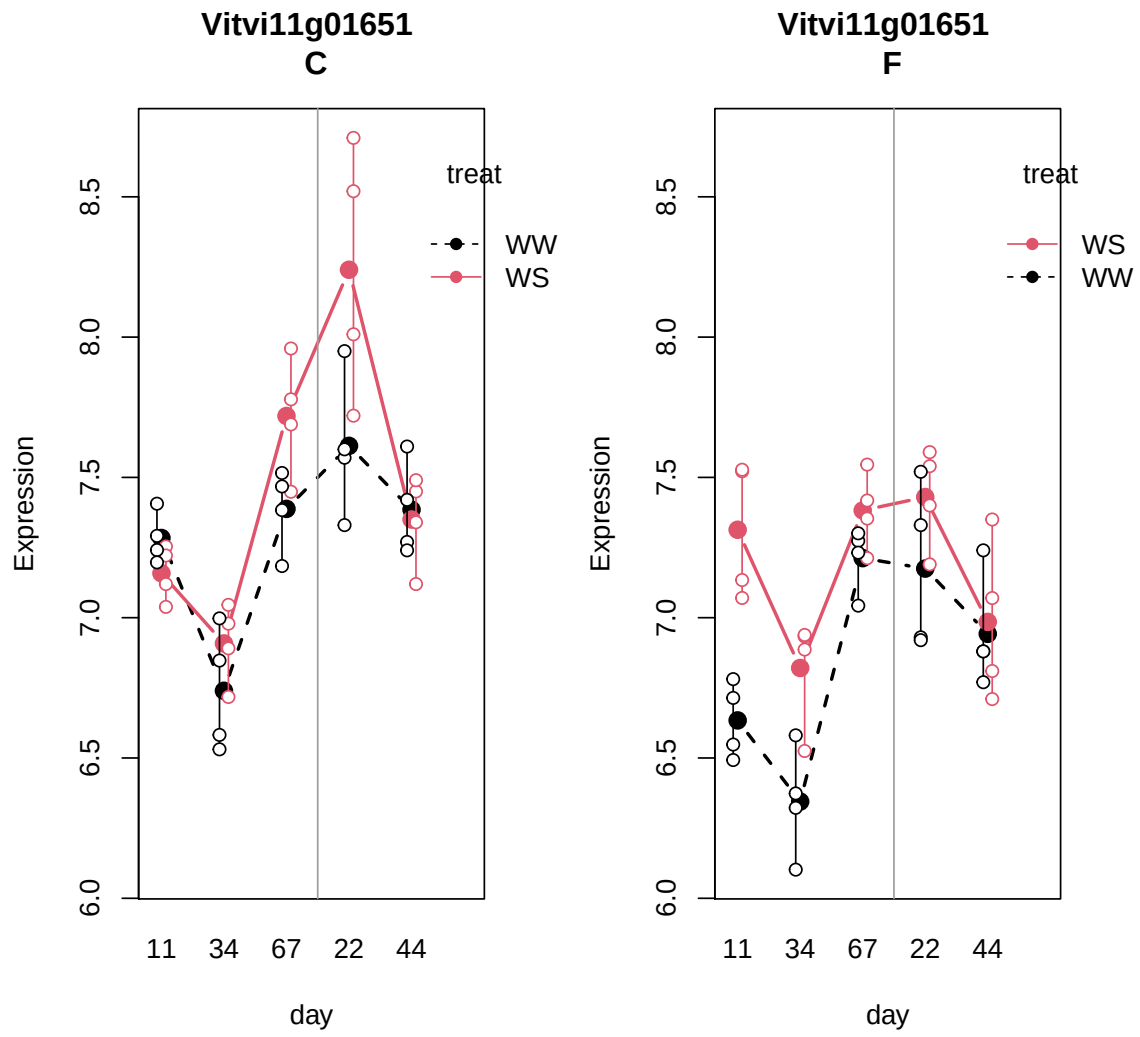
```
> tt[varname,]
```

	logFC	AveExpr	t	P.Value
Vitvi11g01651	-0.9662082	7.075356	-3.995822	0.0002795554
	adj.P.Val	B		
Vitvi11g01651	0.04347943	0.3702659		

```
> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

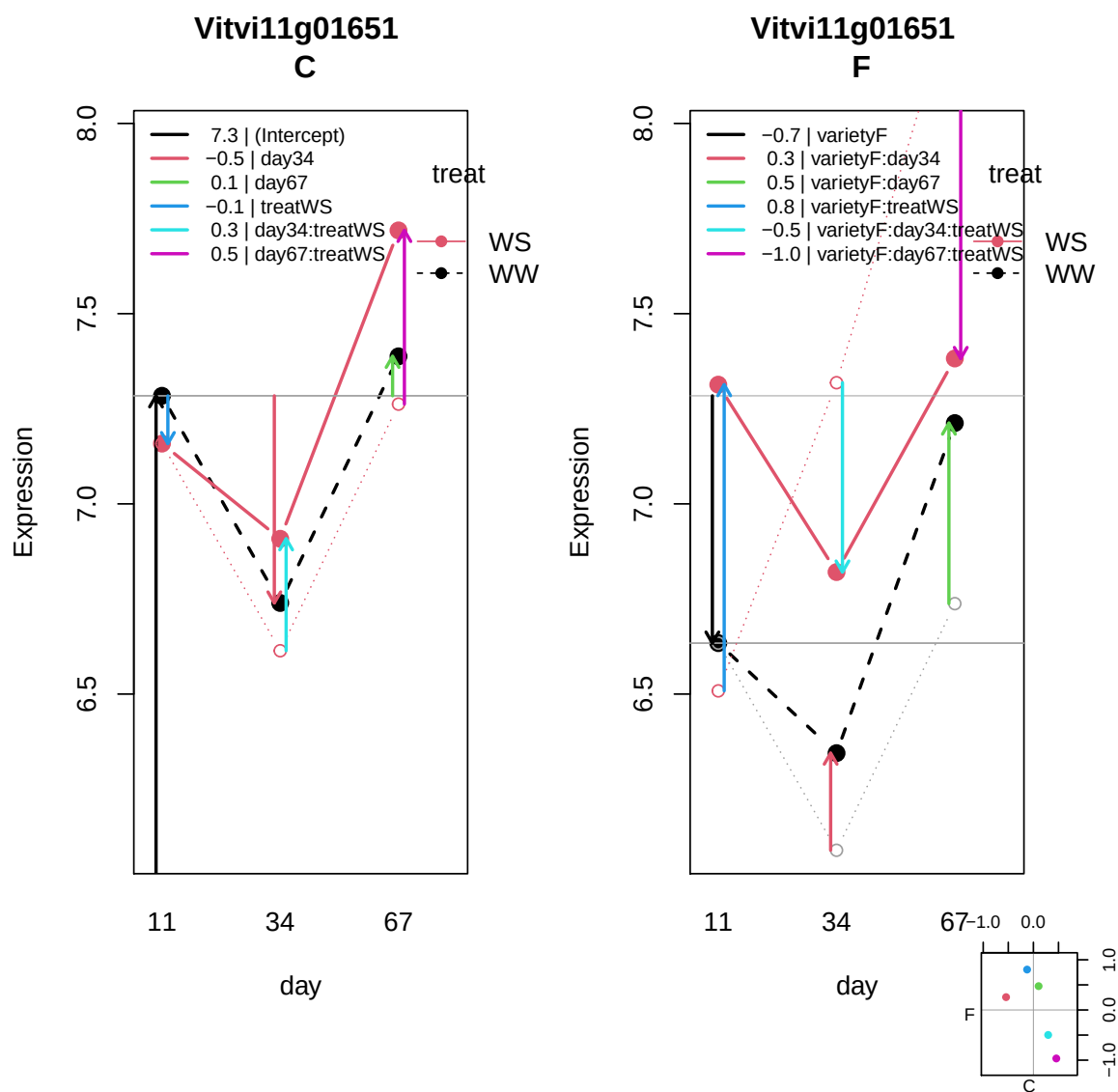


```

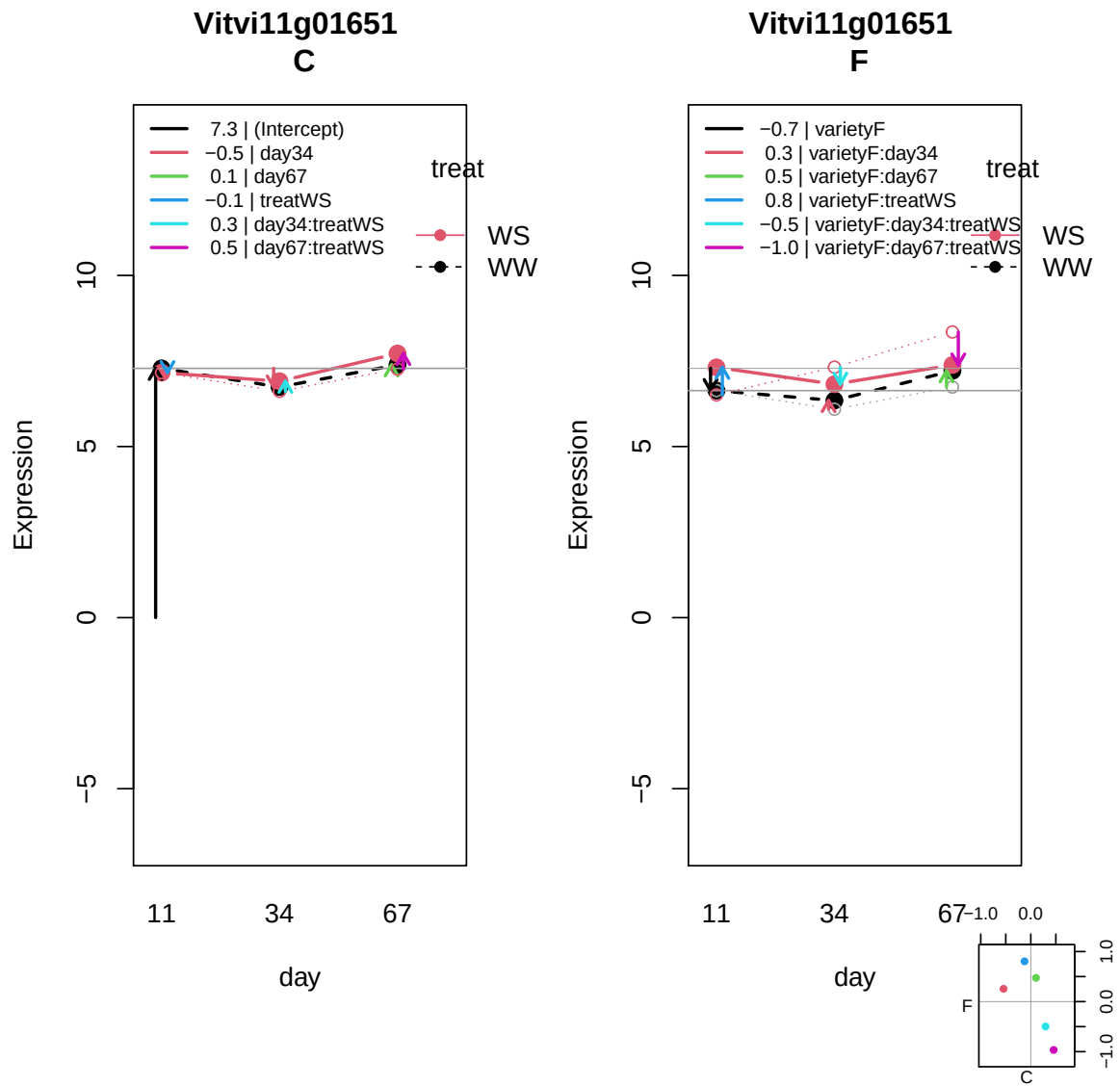
> fit1[varname,]$coefficients
              (Intercept)  varietyF      day34      day67
Vitvi11g01651      7.284067 -0.65011 -0.5445733 0.1037341
              treatWS  varietyF:day34  varietyF:day67
Vitvi11g01651 -0.125617      0.2553343      0.4746489
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi11g01651      0.8050419      0.2943443      0.4566768
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi11g01651      -0.4977424      -0.9662082

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

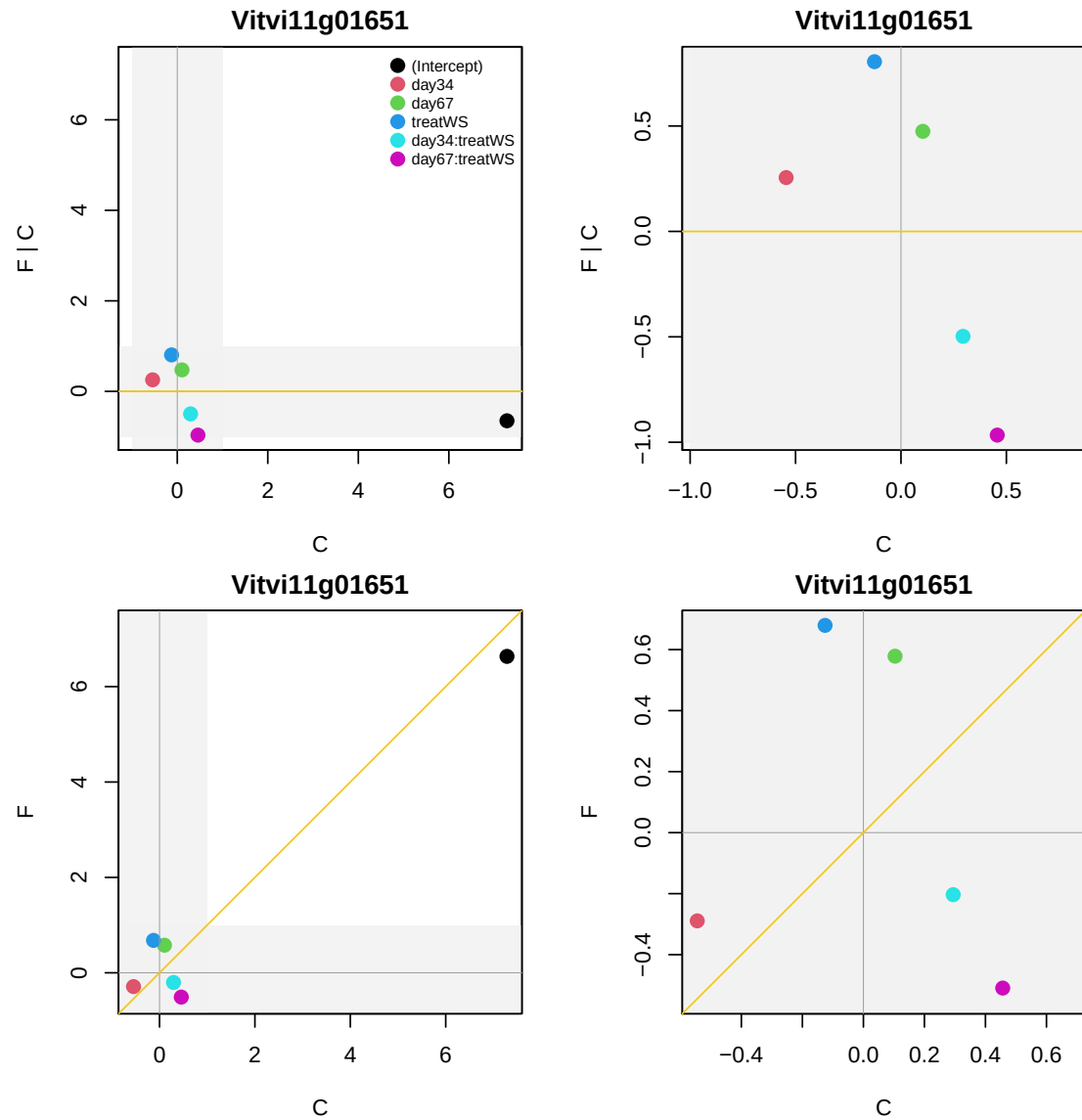


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

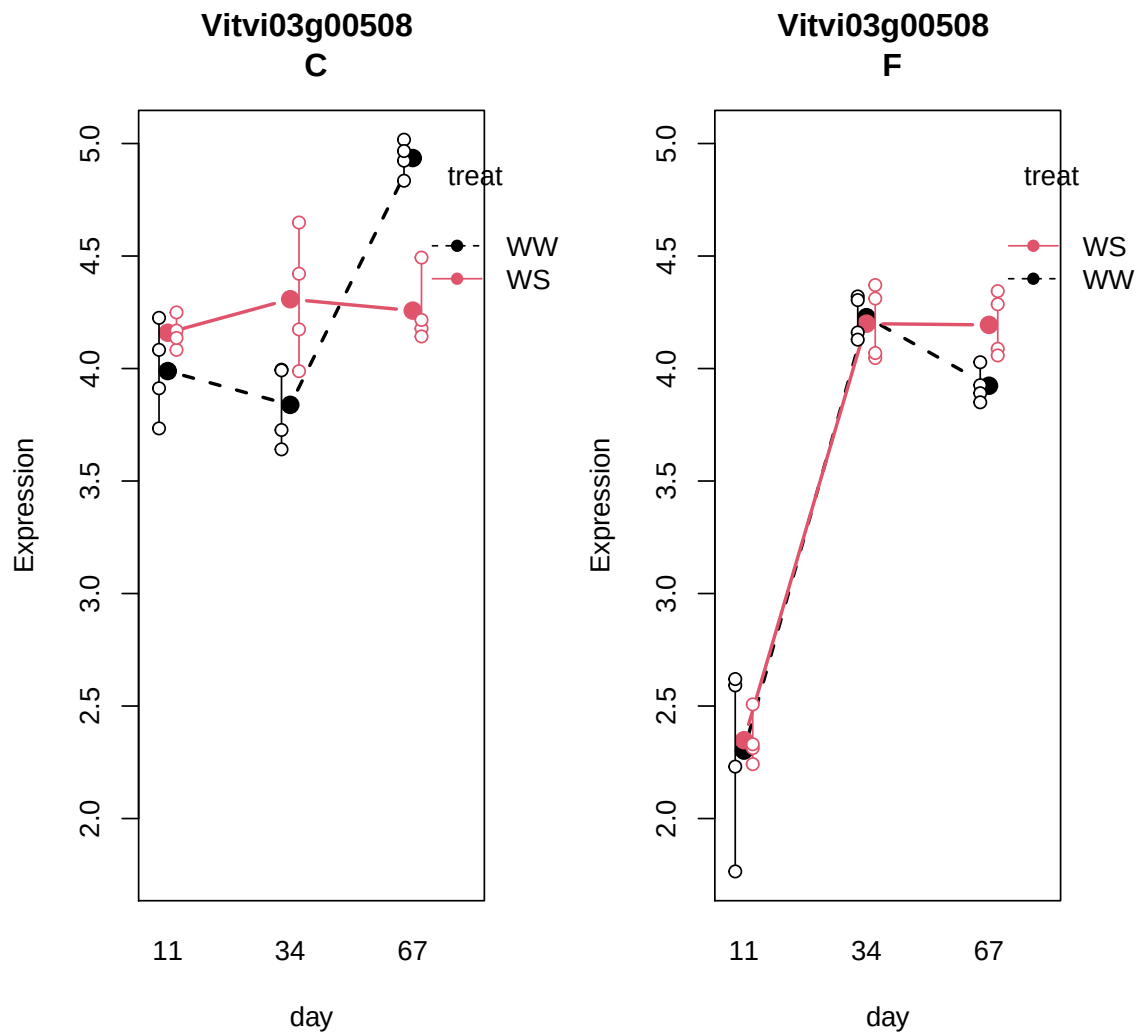


6.12.99 Vitvi03g00508

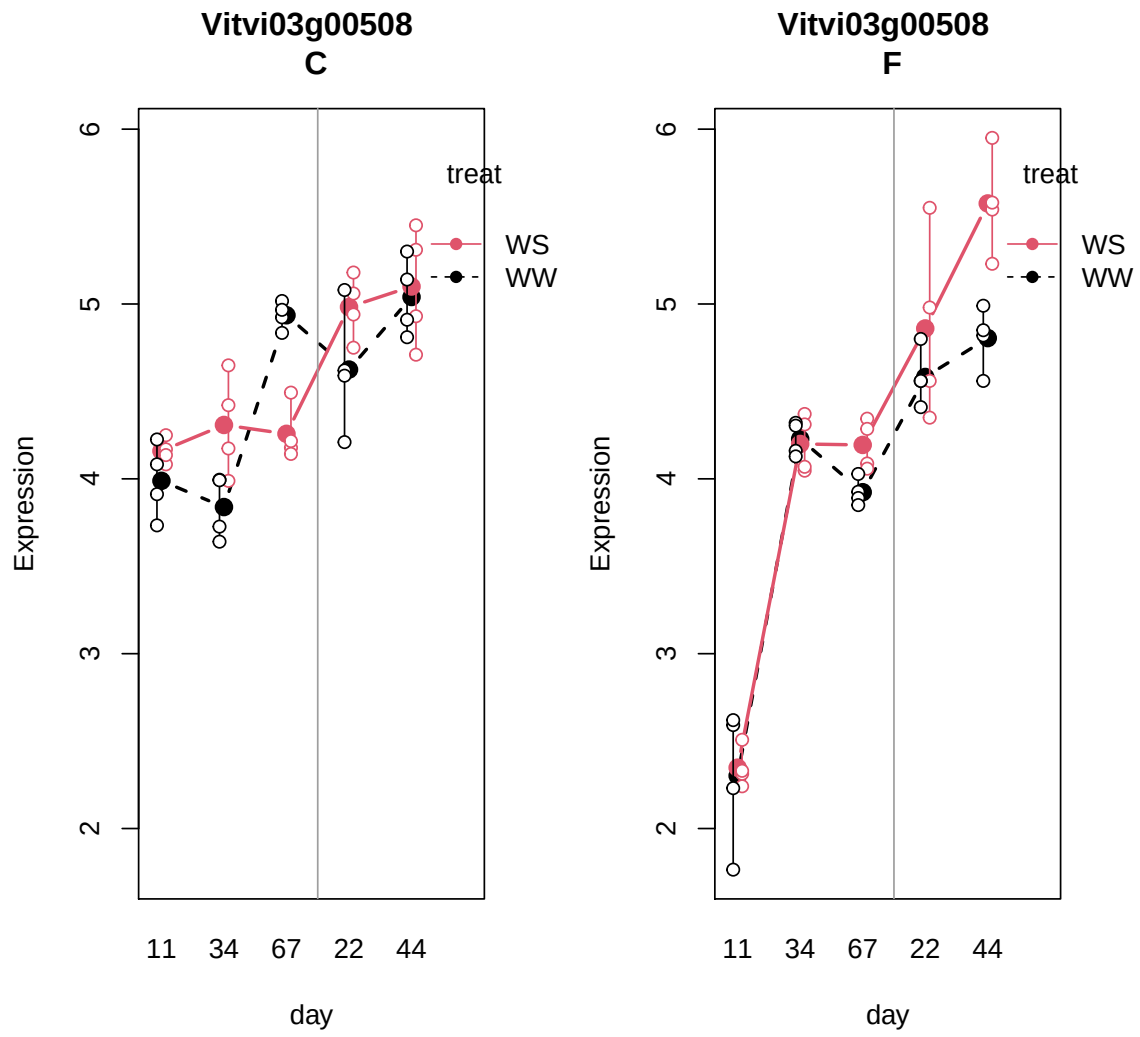
Coefficient varietyF:day67:treatWS for Vitvi03g00508.

```
> tt[varname,]
               logFC AveExpr          t      P.Value
Vitvi03g00508 1.072953  3.8902 3.985015 0.00028871
               adj.P.Val          B
Vitvi03g00508 0.04426776 0.3416784

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



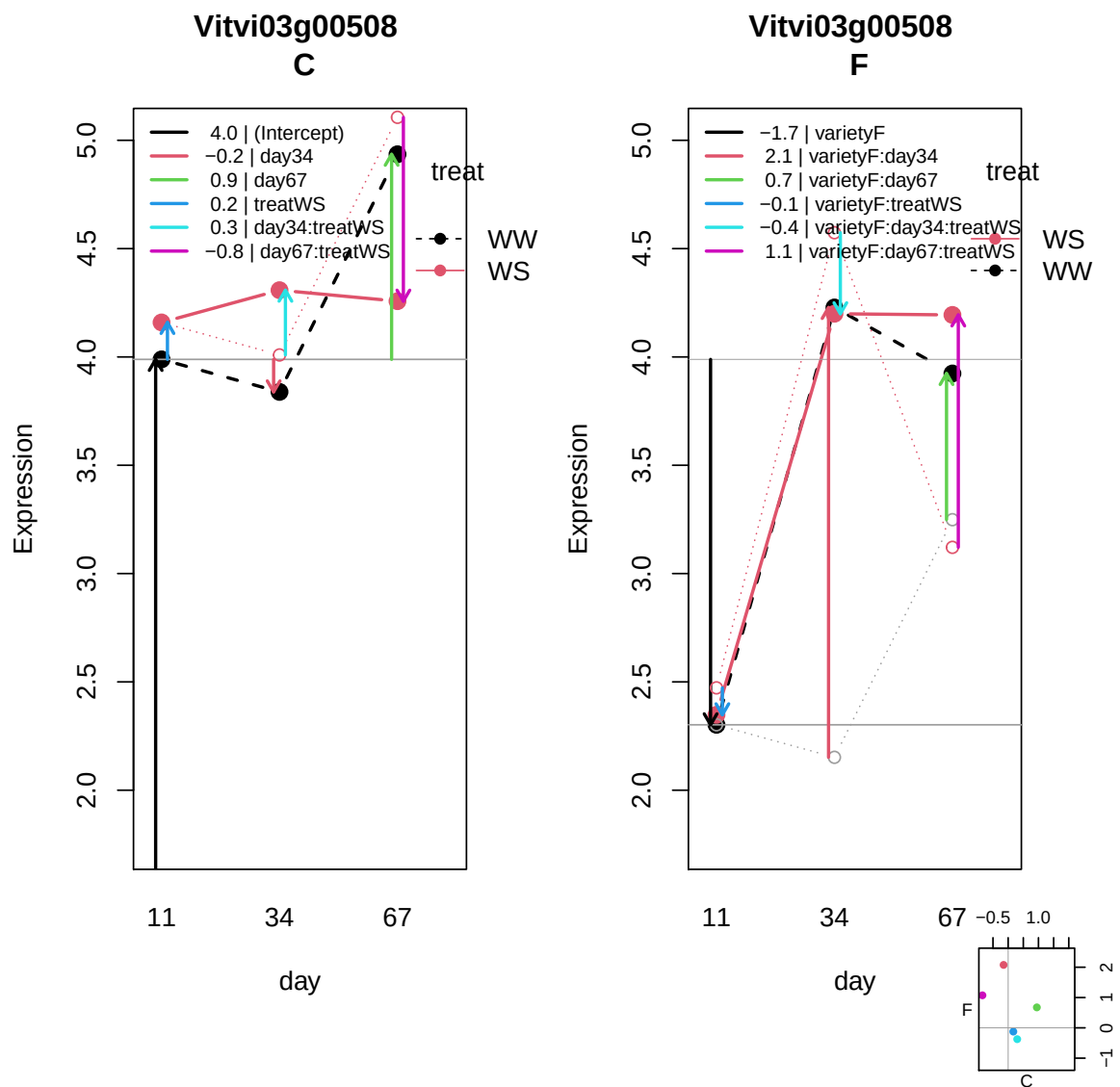
```

> fit1[varname,]$coefficients

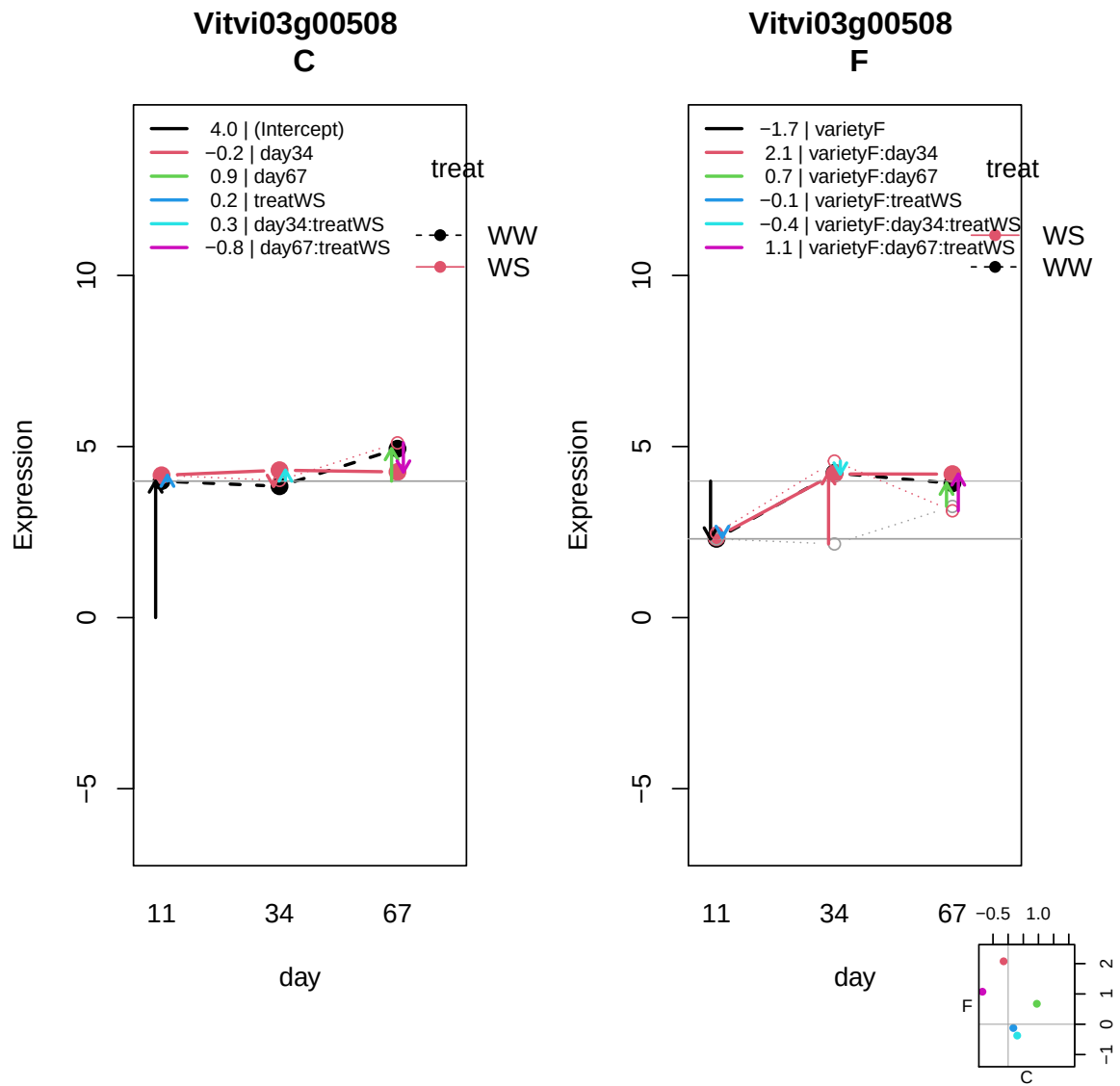
              (Intercept)  varietyF      day34      day67
Vitvi03g00508      3.988629 -1.686769 -0.150066 0.9468727
              treatWS  varietyF:day34  varietyF:day67
Vitvi03g00508  0.1705797      2.076471      0.6747562
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi03g00508      -0.1243544      0.2989458      -0.8487114
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi03g00508      -0.3740405      1.072953

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

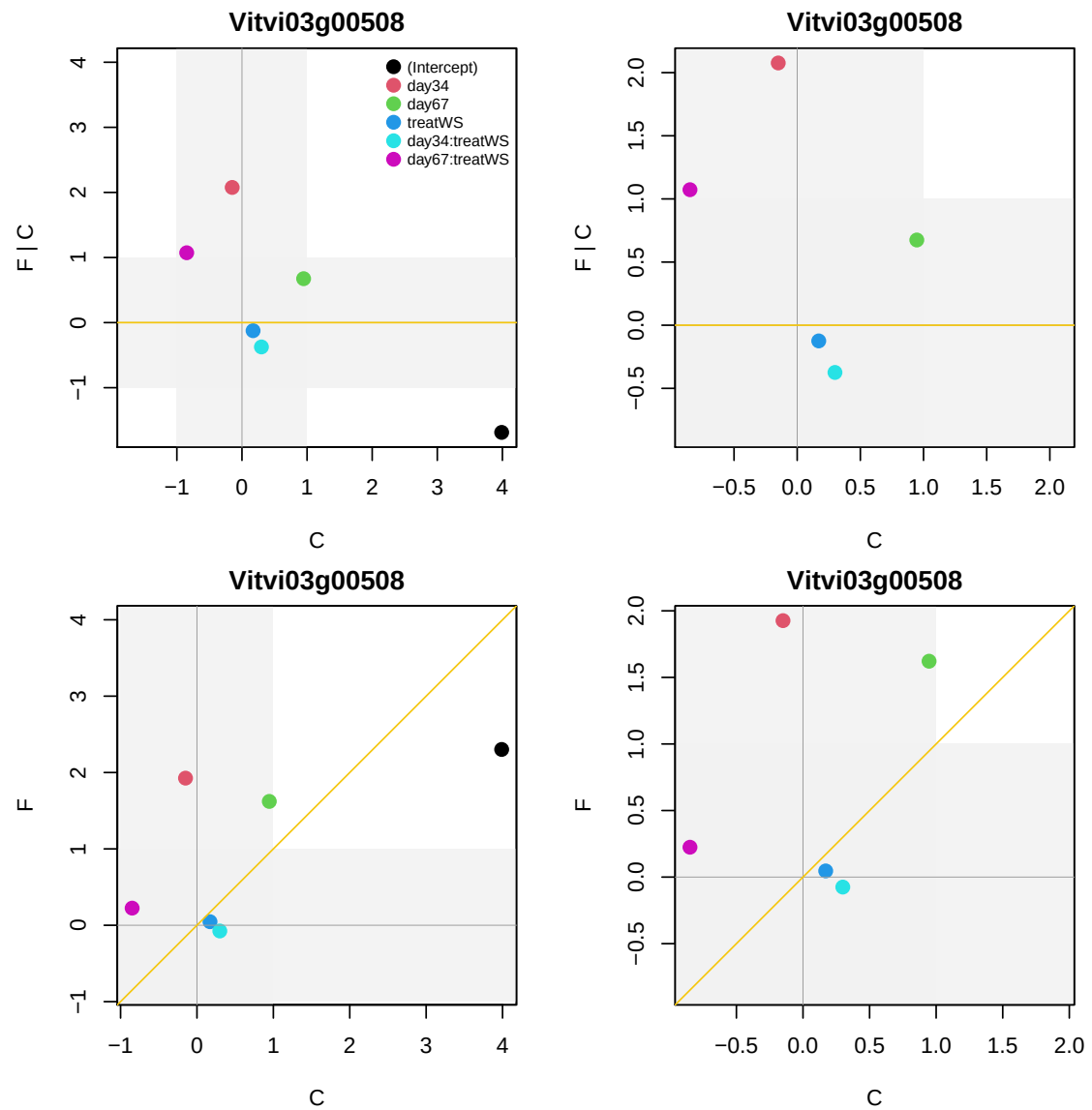



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

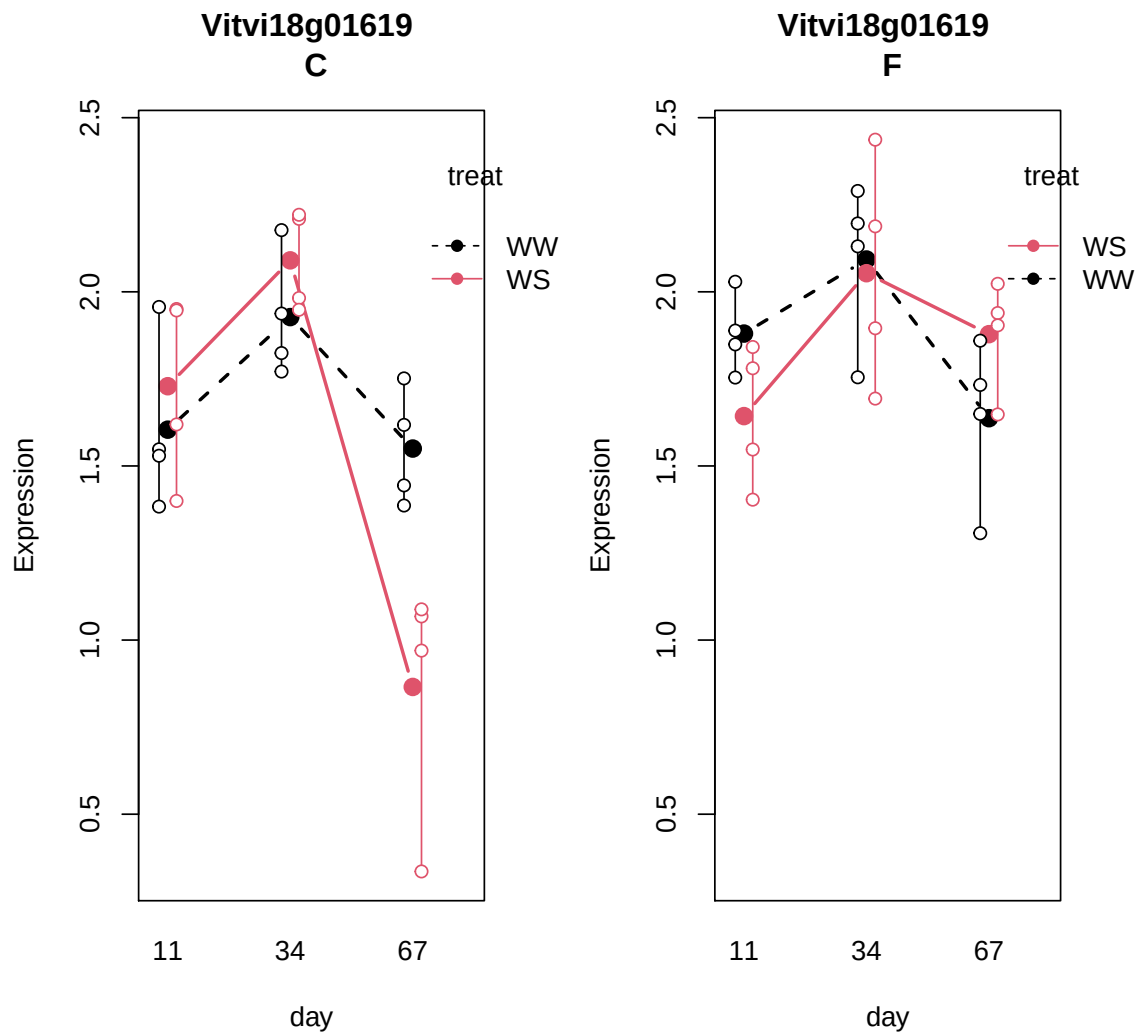
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



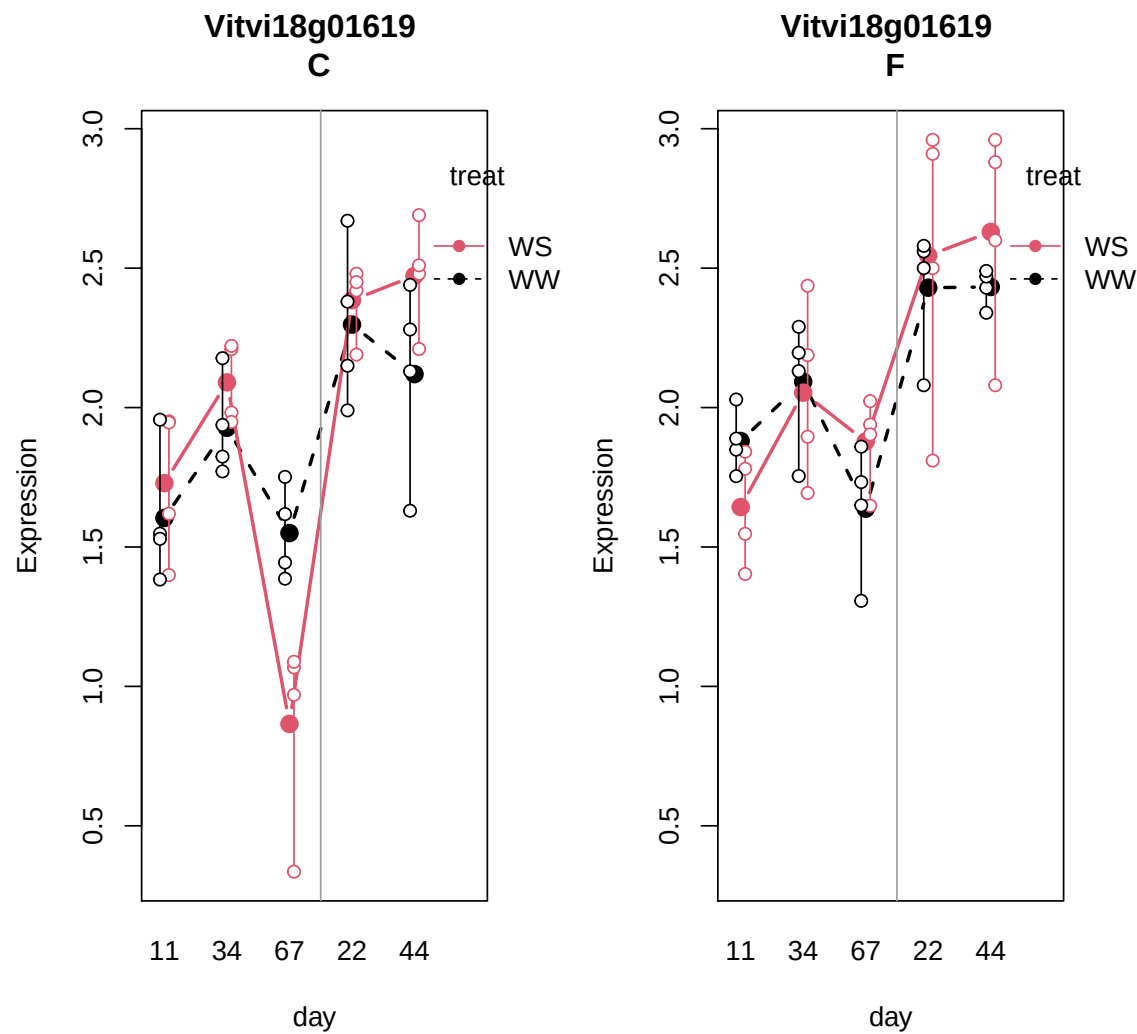
6.12.100 Vitvi18g01619

Coefficient varietyF:day67:treatWS for Vitvi18g01619.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi18g01619 1.28751 1.745952 3.982171 0.0002911668
      adj.P.Val      B
Vitvi18g01619 0.04426776 0.334161
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

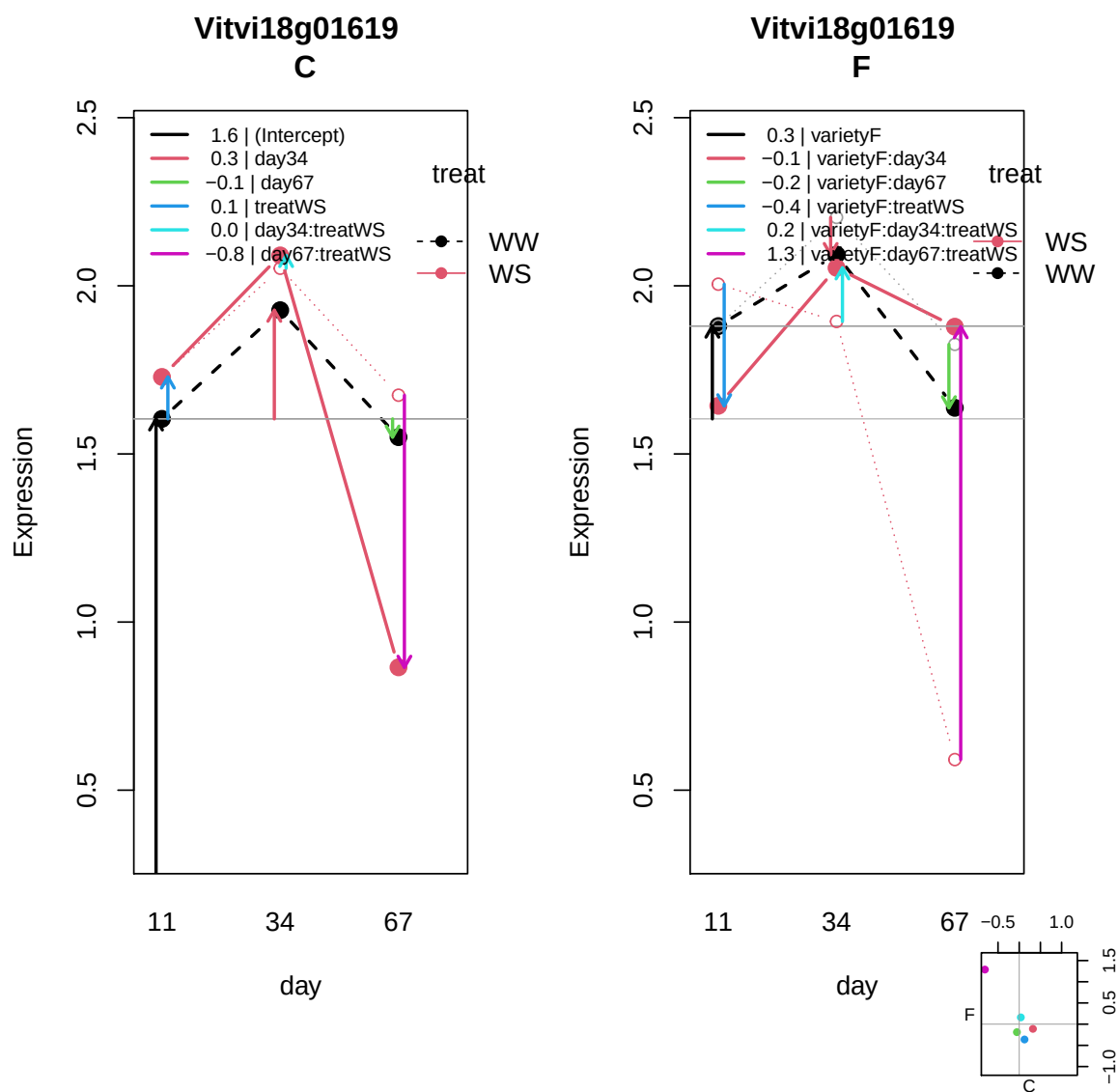


```

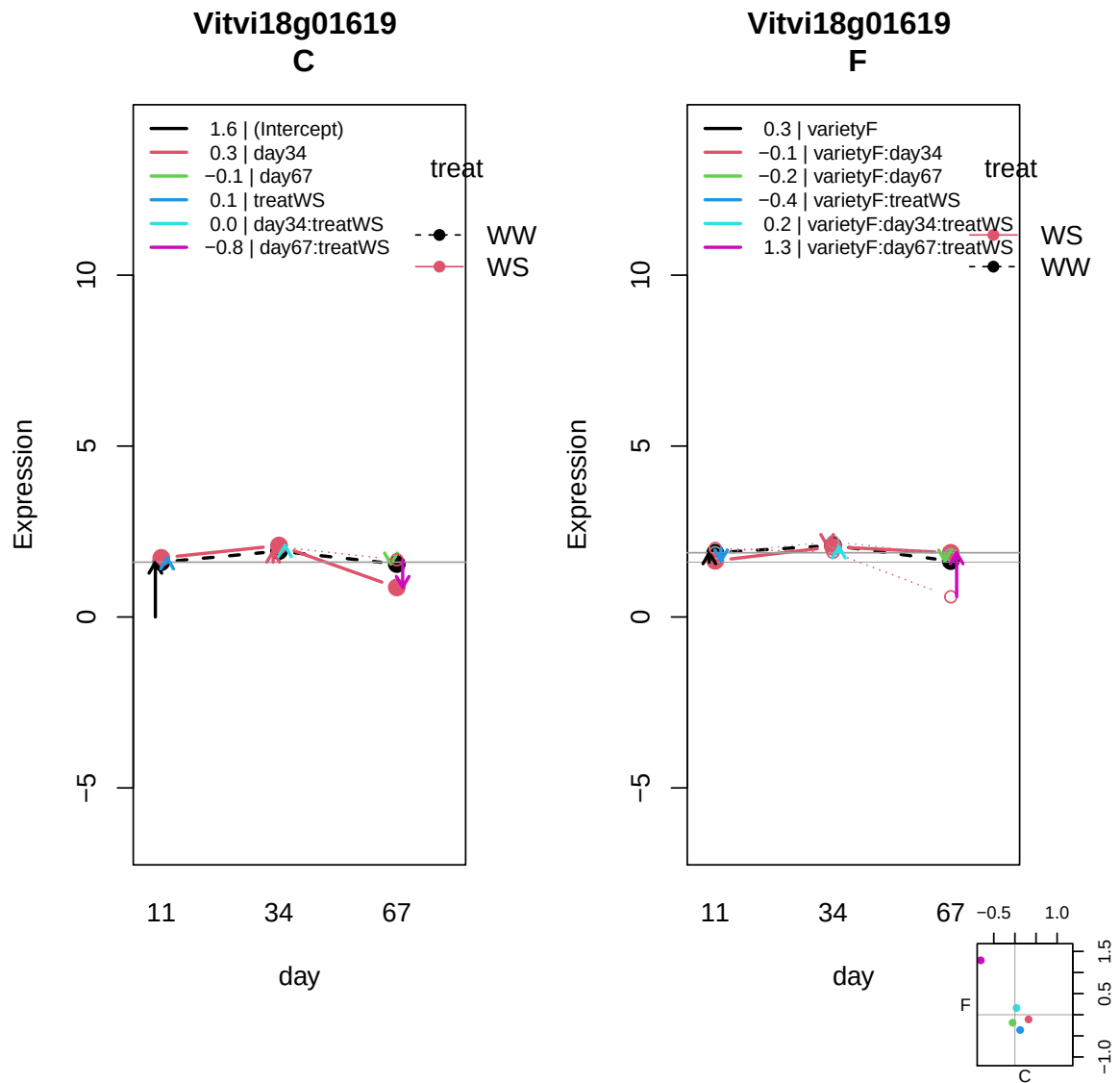
> fit1[varname,]$coefficients
              (Intercept)  varietyF      day34      day67
Vitvi18g01619      1.60422 0.2759119 0.3232631 -0.05428919
              treatWS varietyF:day34 varietyF:day67
Vitvi18g01619 0.1247215      -0.1106165      -0.1886901
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi18g01619      -0.361713      0.03814923      -0.8092399
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi18g01619              0.159506              1.28751

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

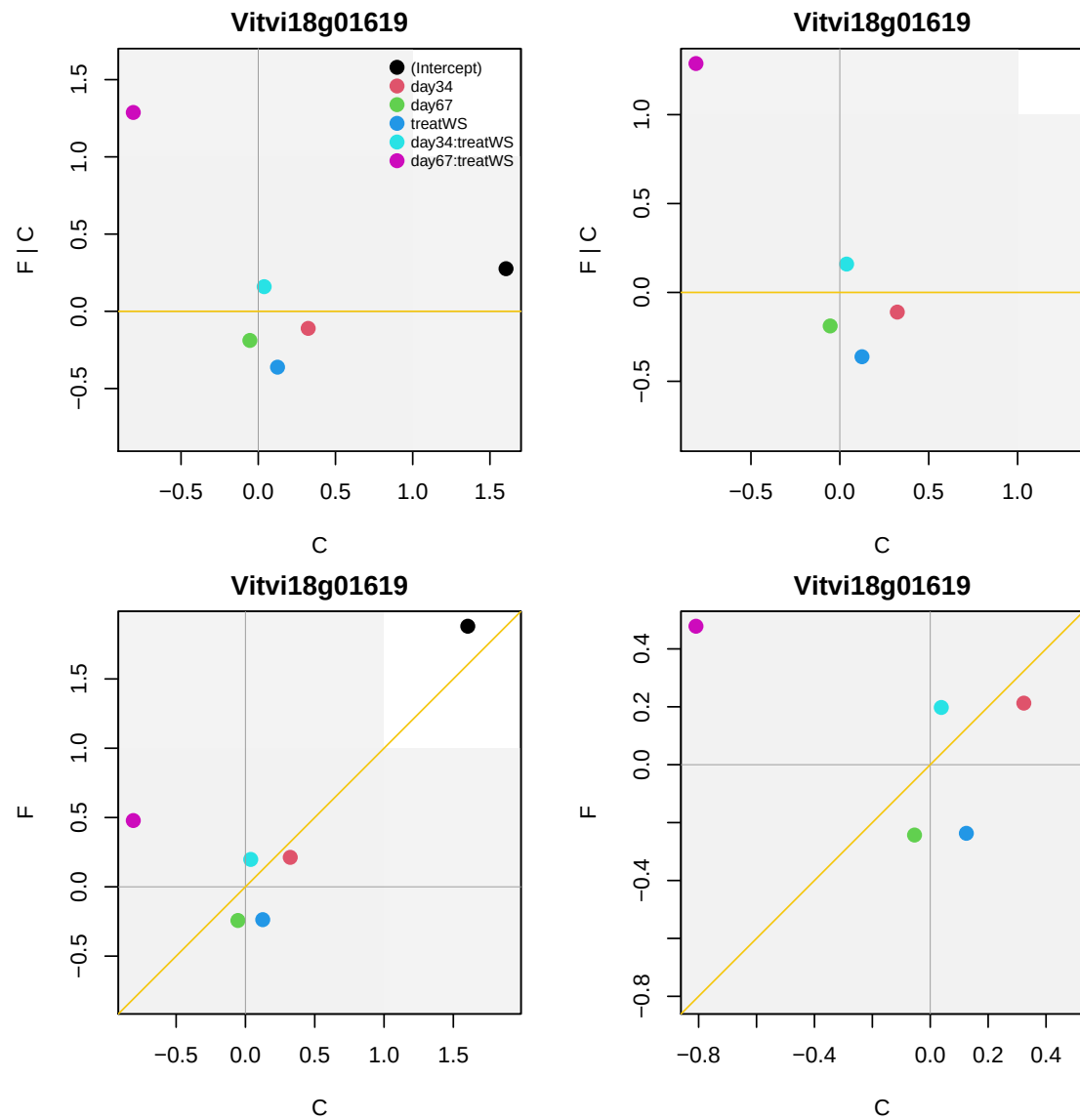


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

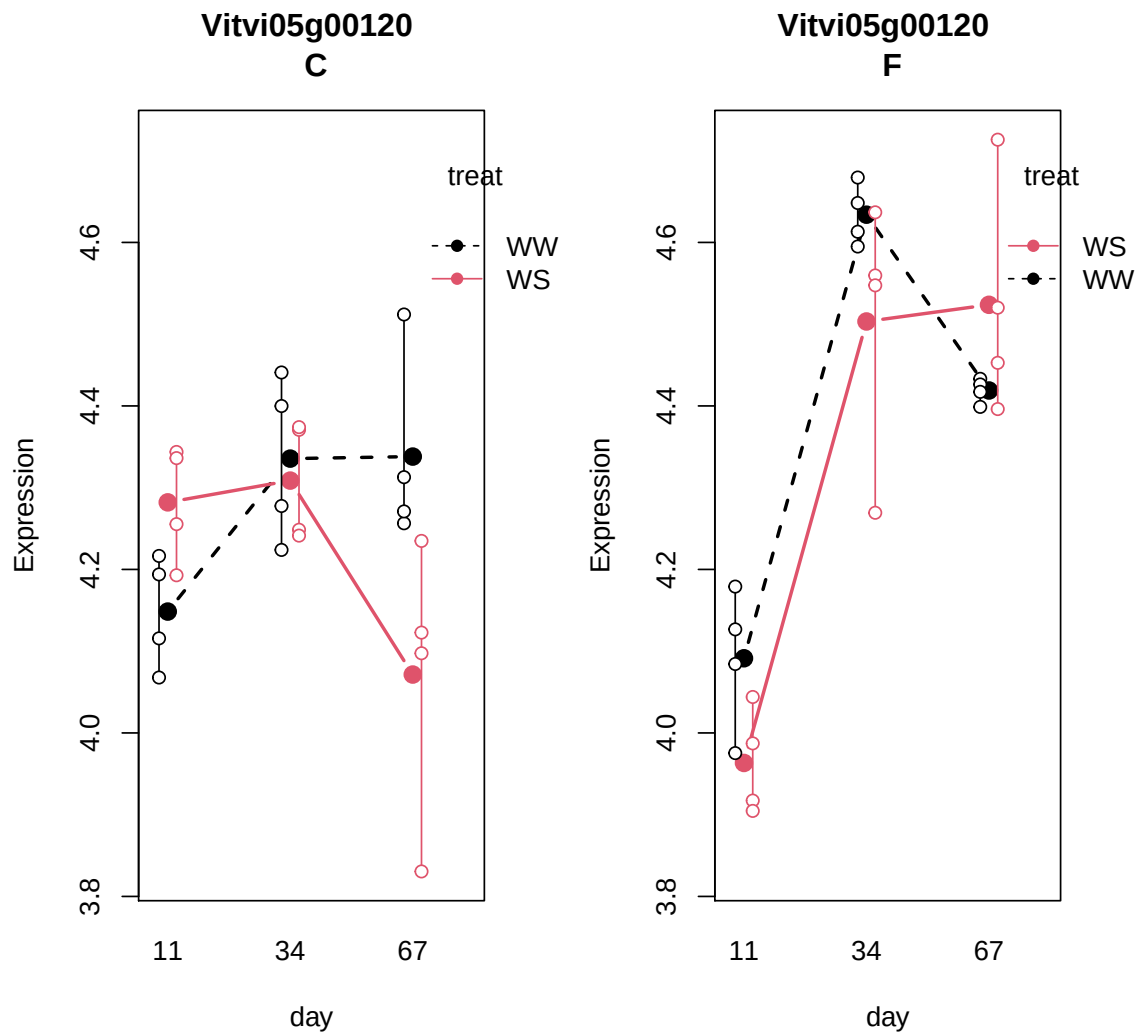


6.12.101 Vitvi05g00120

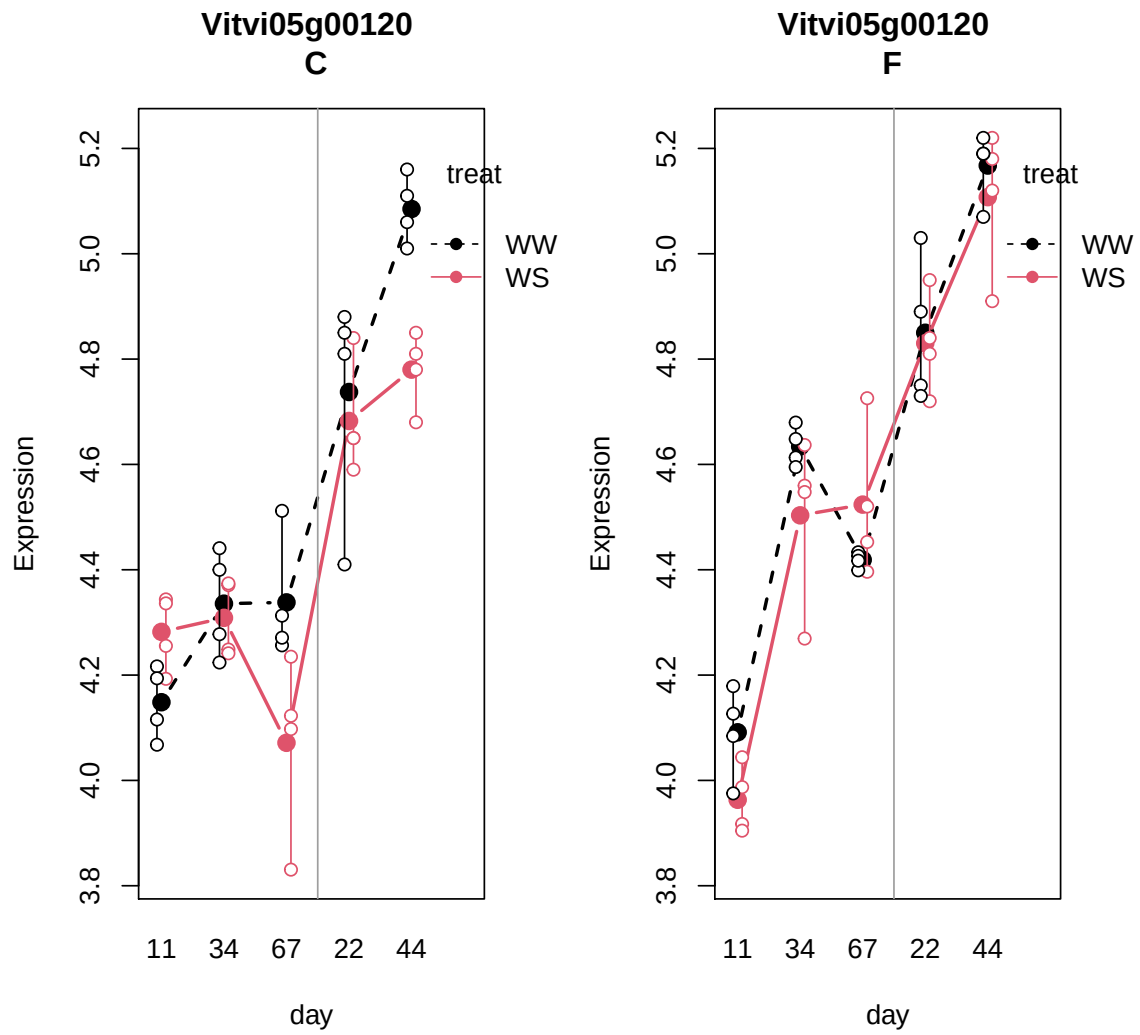
Coefficient varietyF:day67:treatWS for Vitvi05g00120.

```
> tt[varname,]
      logFC AveExpr      t    P.Value
Vitvi05g00120 0.6330759 4.301557 3.976465 0.0002961586
      adj.P.Val      B
Vitvi05g00120 0.04426776 0.3190815

> plot.interactions(varname, phdata=pd, data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

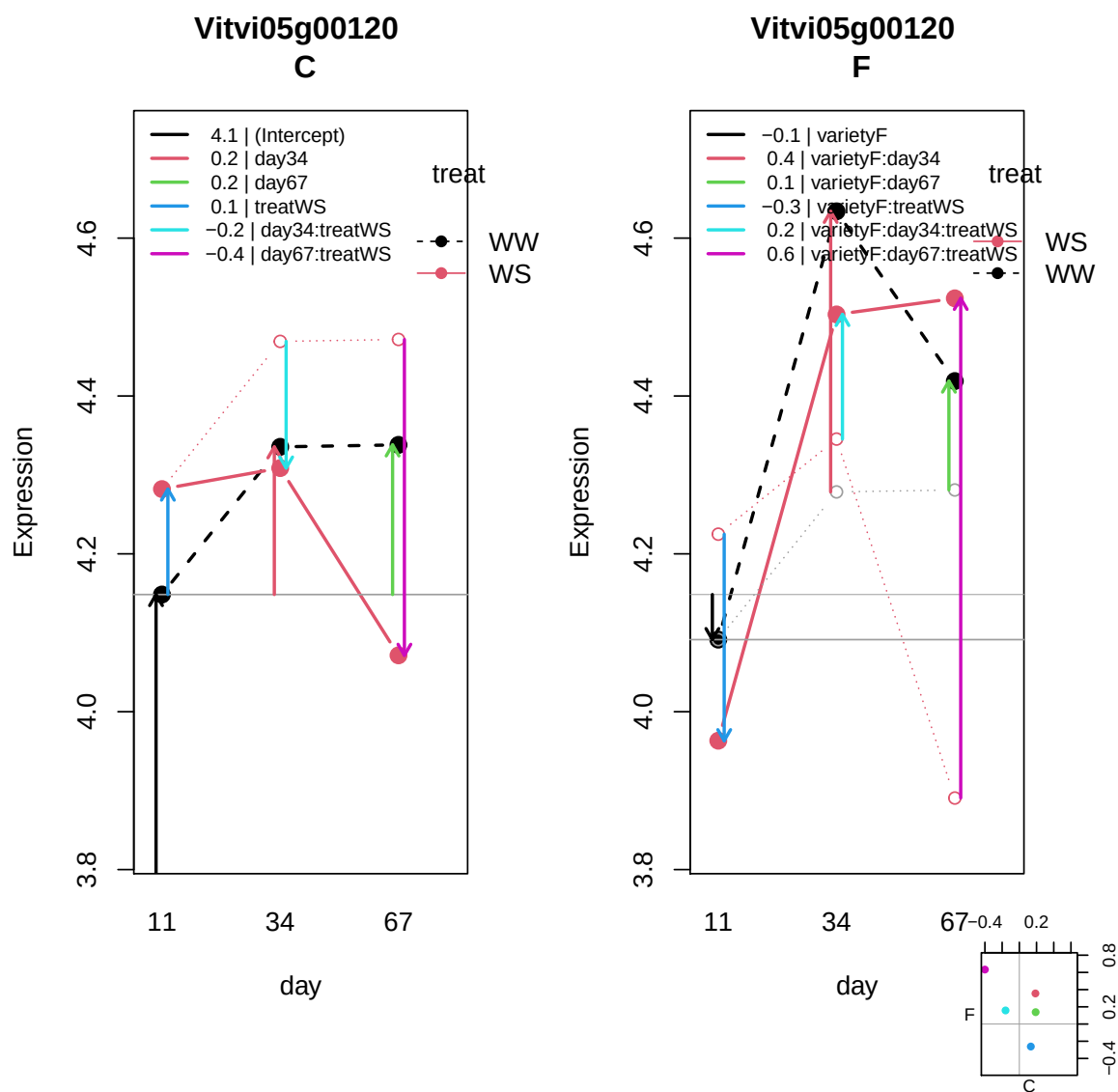
              (Intercept)      varietyF      day34      day67
Vitvi05g00120      4.148466 -0.05712564  0.1871072  0.1895716
              treatWS varietyF:day34 varietyF:day67
Vitvi05g00120  0.1335806      0.3554941      0.1379699
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi05g00120      -0.2616508      -0.1604623      -0.4001909
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi05g00120      0.1579051              0.6330759

```

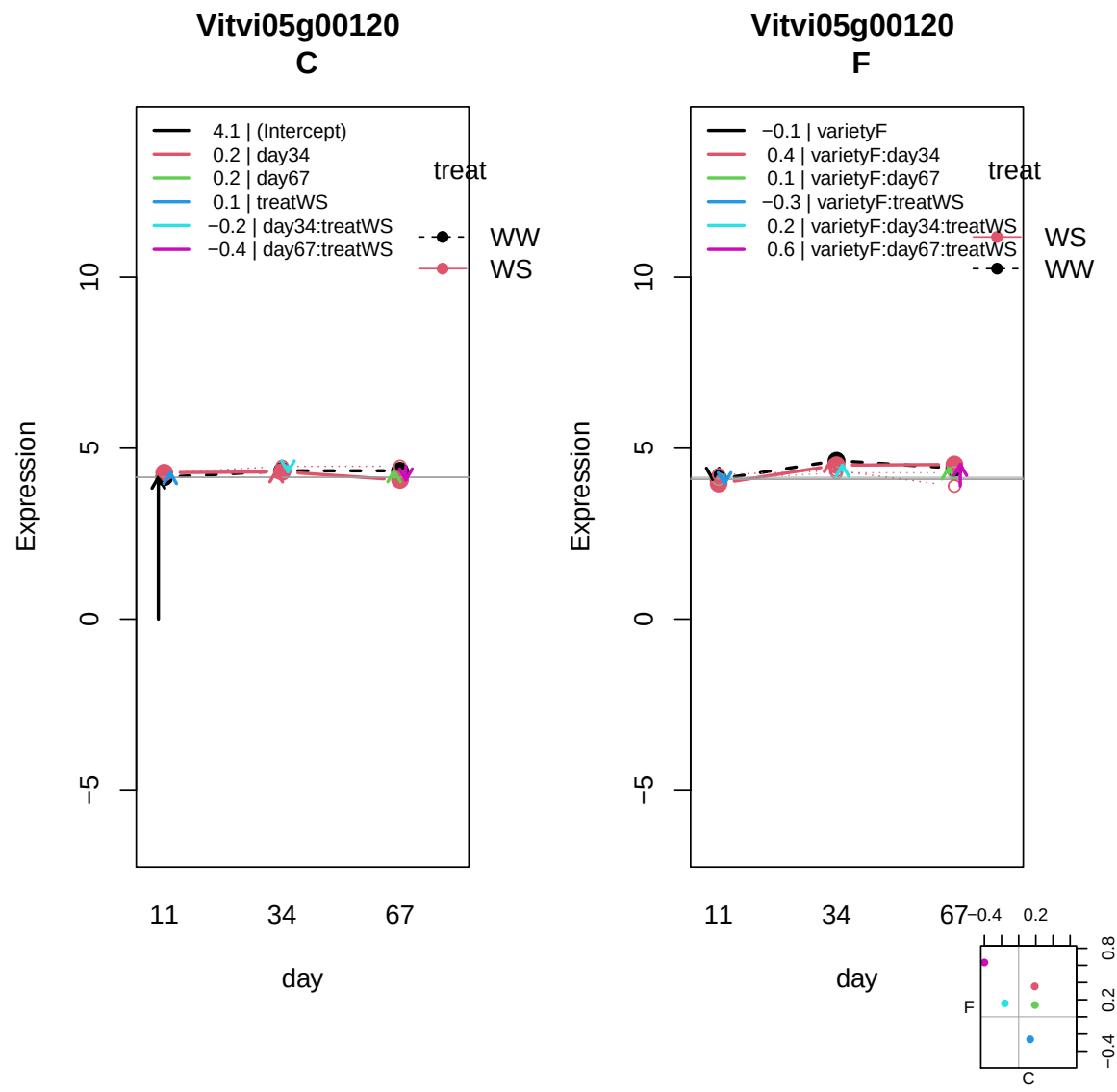
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

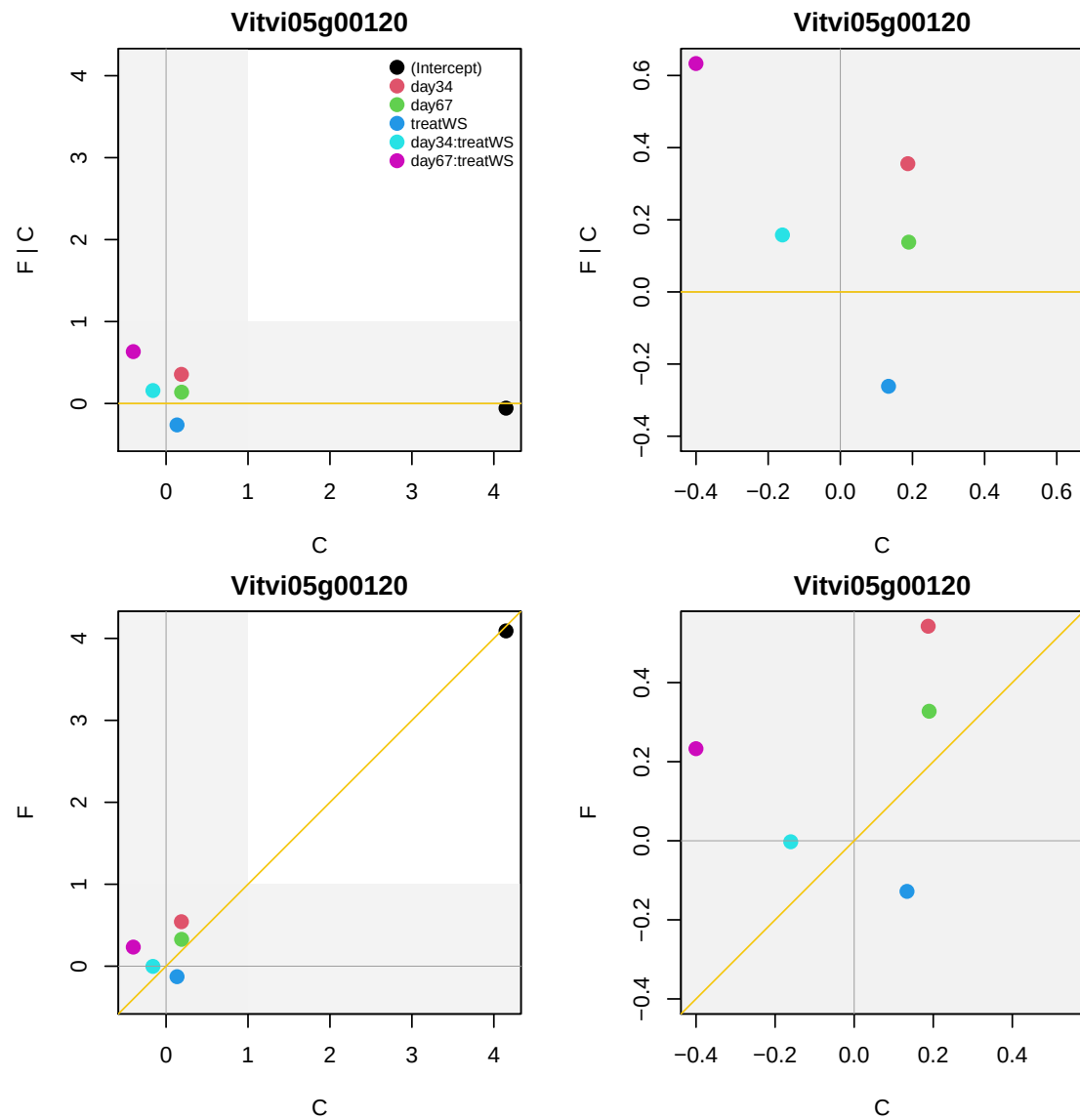


```
> coefs <- plot.interactions(varname,  
+ coef=fit1[varname,]$coefficients,  
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

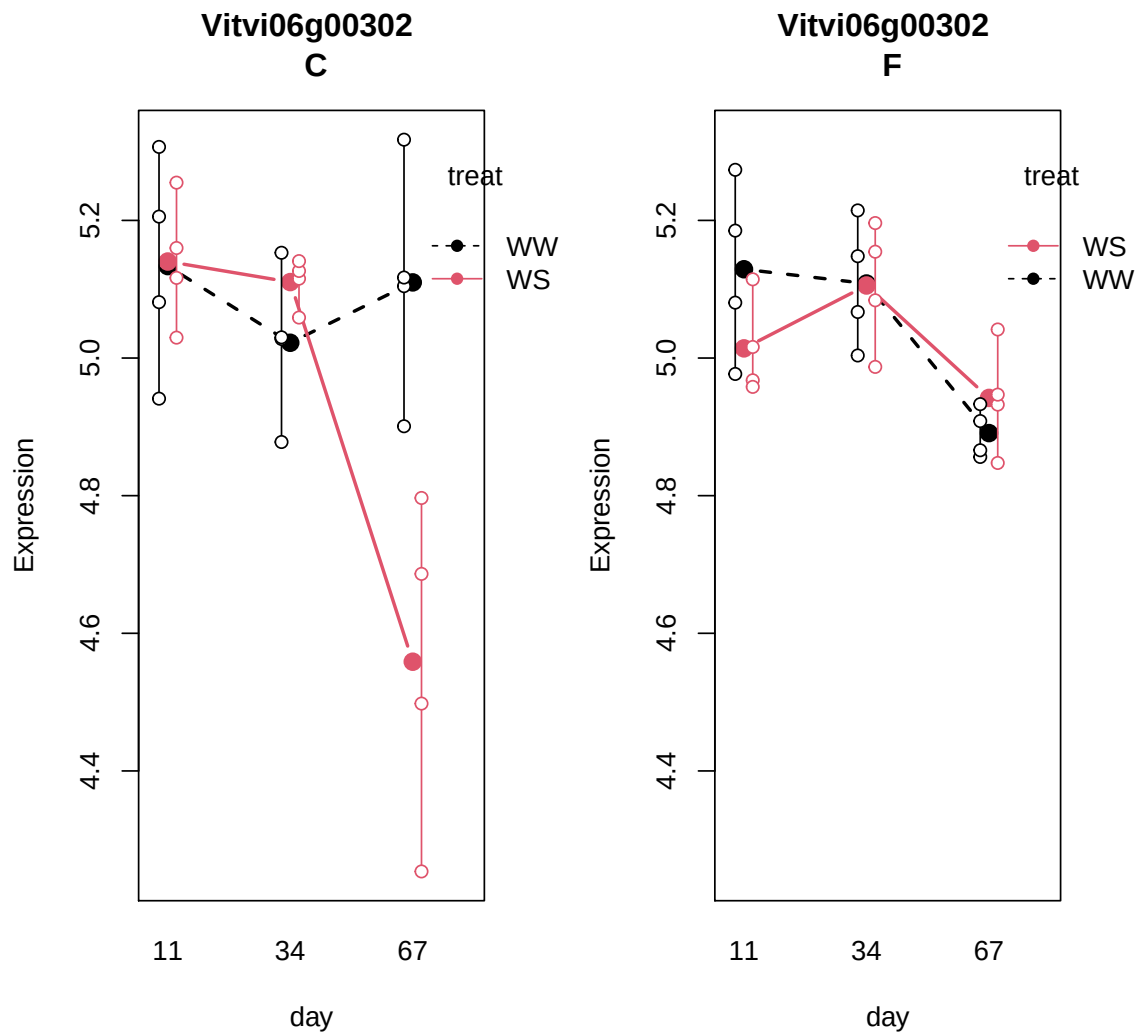


6.12.102 Vitvi06g00302

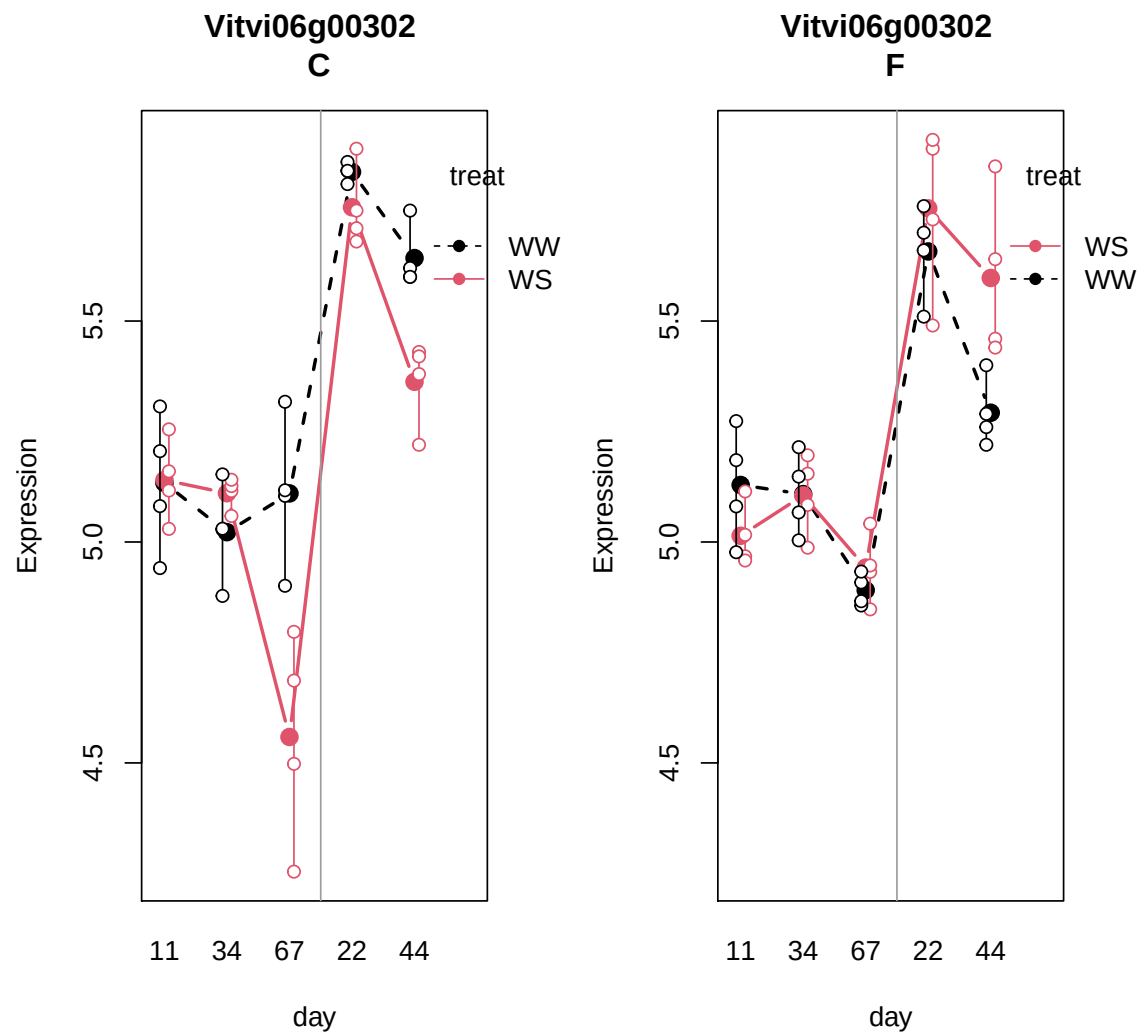
Coefficient varietyF:day67:treatWS for Vitvi06g00302.

```
> tt[varname,]
              logFC AveExpr      t      P.Value
Vitvi06g00302 0.7239087 5.022066 3.976371 0.0002962414
              adj.P.Val      B
Vitvi06g00302 0.04426776 0.3188336

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

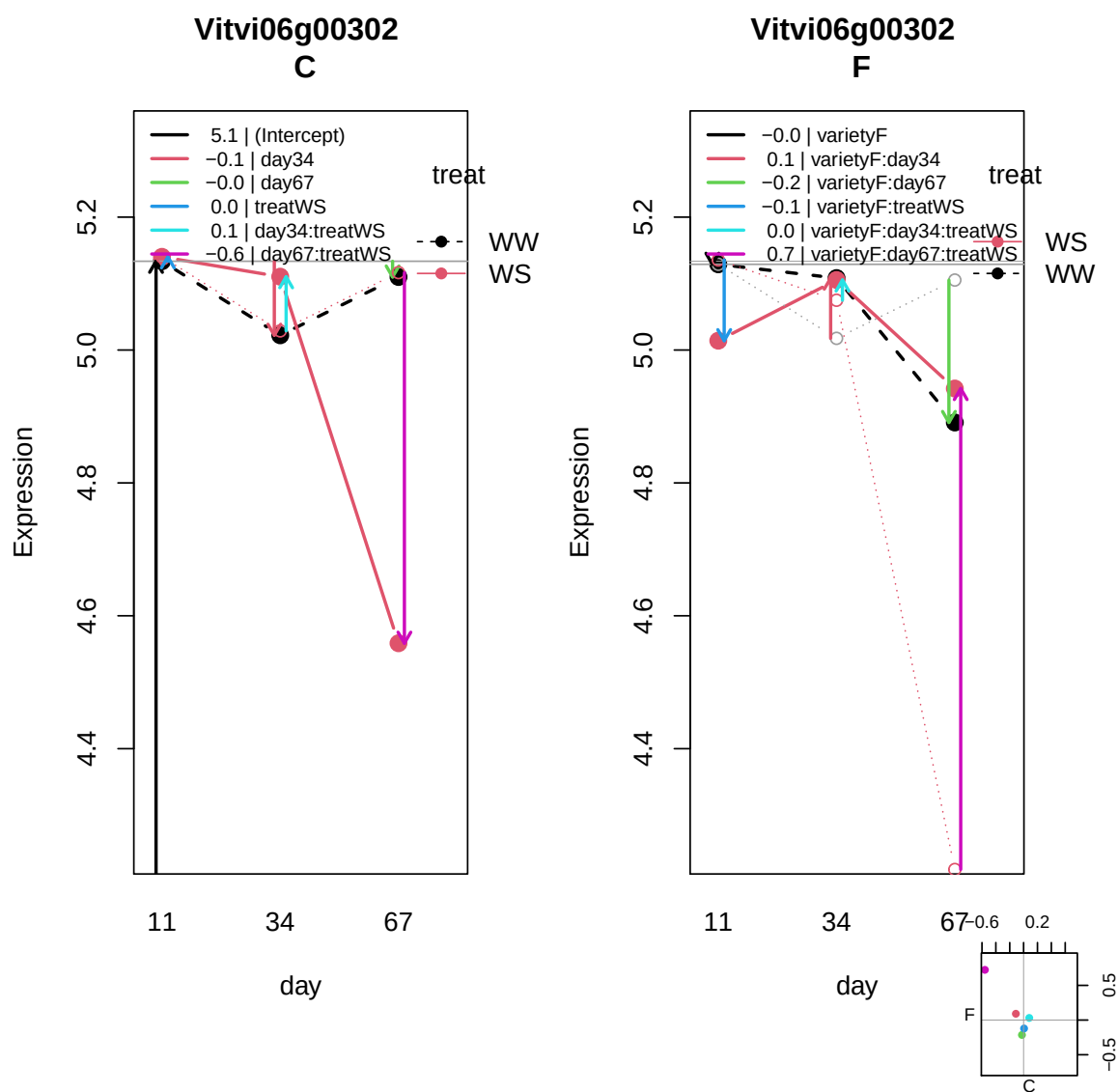
              (Intercept)      varietyF      day34
Vitvi06g00302      5.133619 -0.004610556 -0.1114407
              day67      treatWS varietyF:day34
Vitvi06g00302 -0.02371512  0.006627753      0.09072439
              varietyF:day67 varietyF:treatWS day34:treatWS
Vitvi06g00302      -0.2143696      -0.1215803      0.08158023
              day67:treatWS varietyF:day34:treatWS
Vitvi06g00302      -0.5578336      0.03050972
              varietyF:day67:treatWS
Vitvi06g00302      0.7239087

```

```

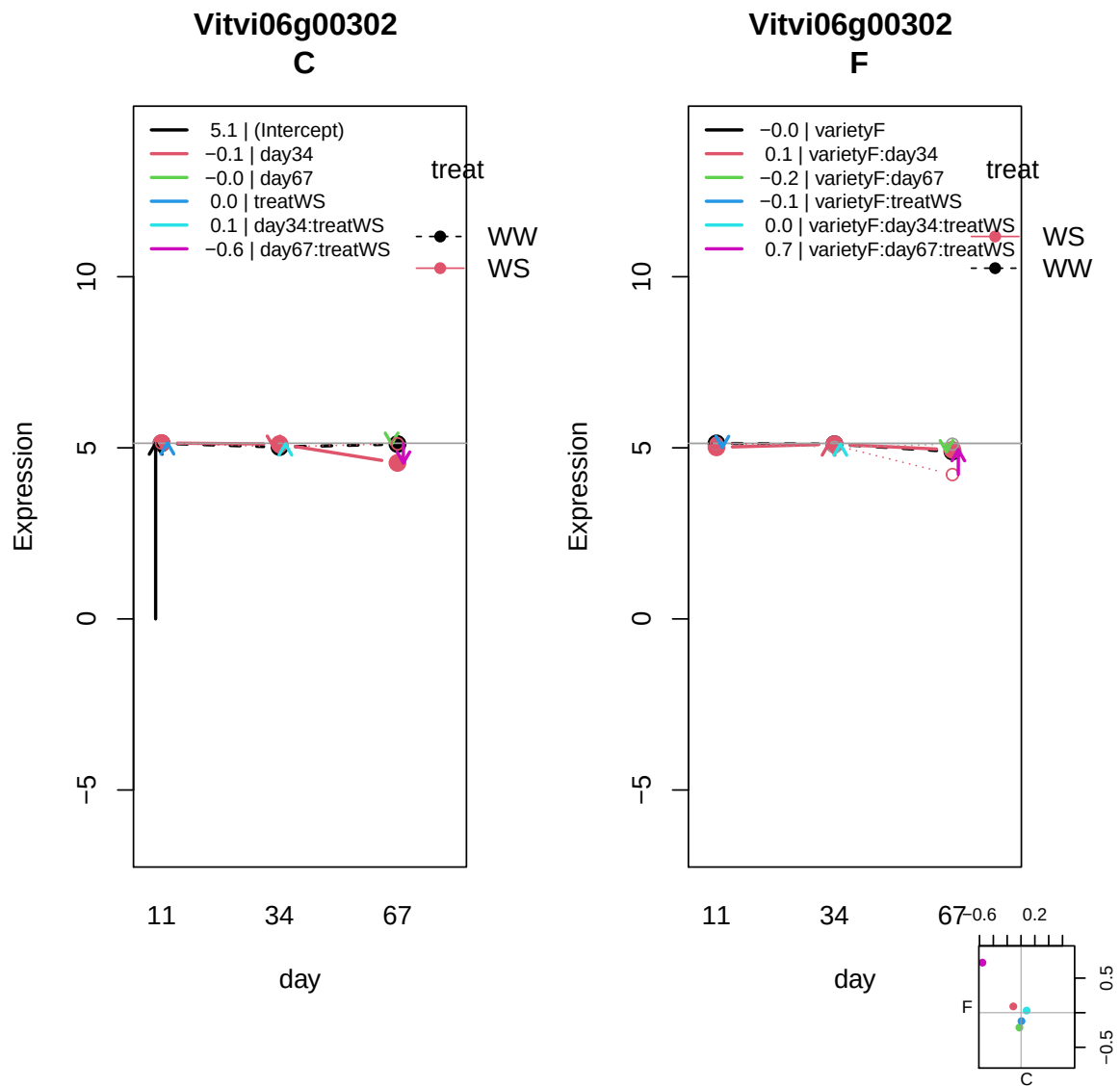
> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



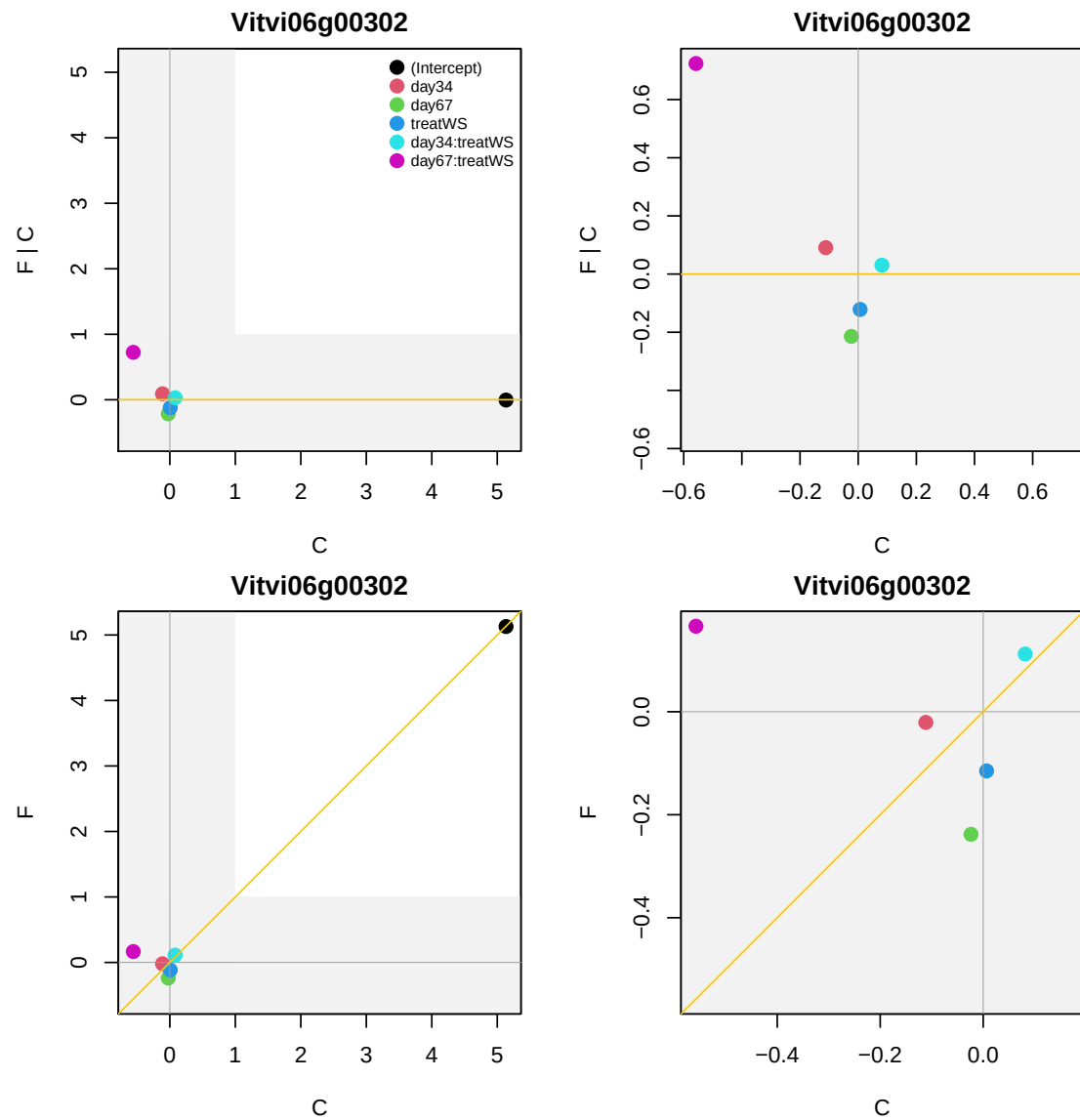
```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```

Warning in arrows(1:ndays - d, es, 1:ndays - d, esF, col = cl + 1:ndays, : zero



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

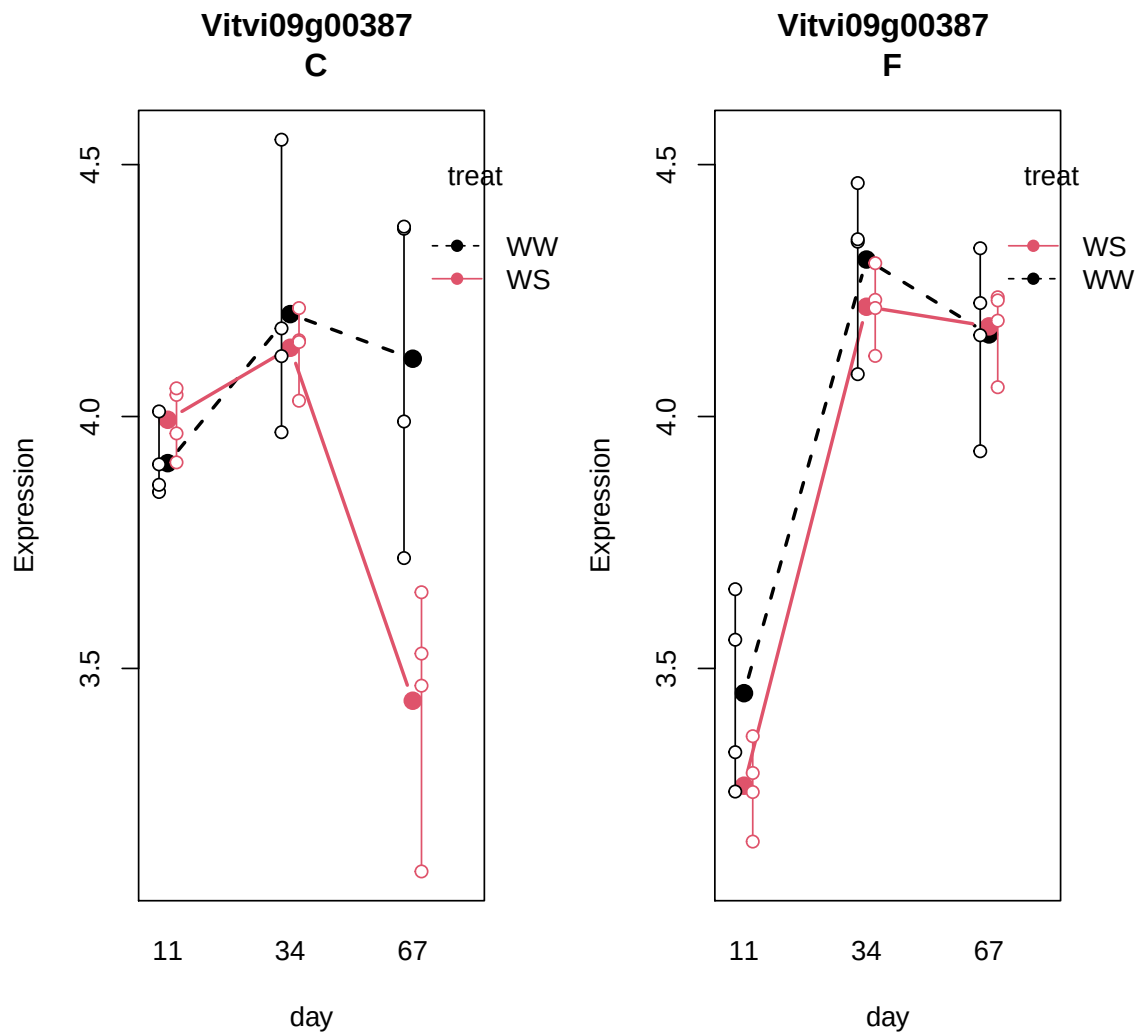


6.12.103 Vitvi09g00387

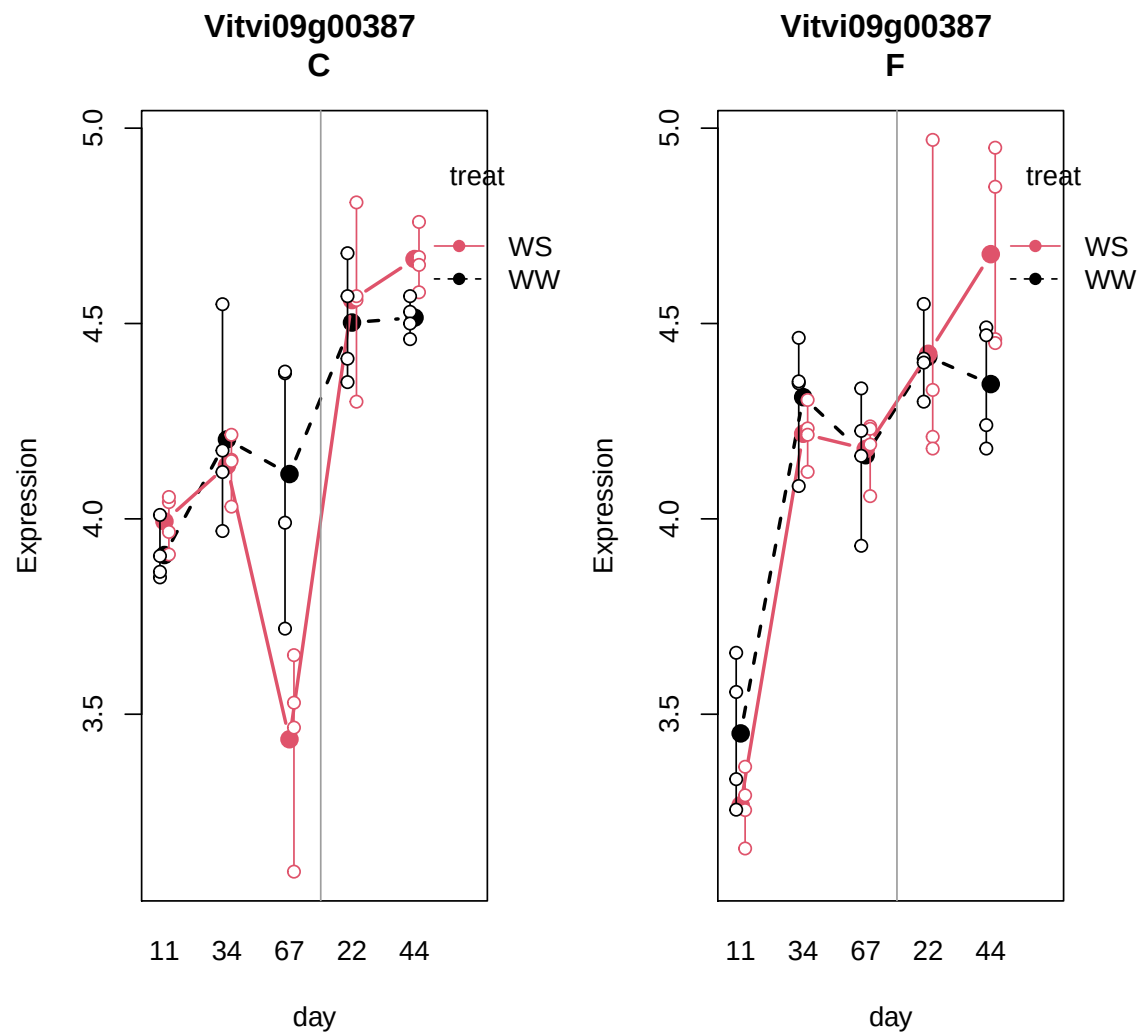
Coefficient varietyF:day67:treatWS for Vitvi09g00387.

```
> tt[varname,]
               logFC  AveExpr          t      P.Value
Vitvi09g00387  0.9645659  3.948409  3.970199  0.0003017357
               adj.P.Val          B
Vitvi09g00387  0.04451339  0.3025327

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

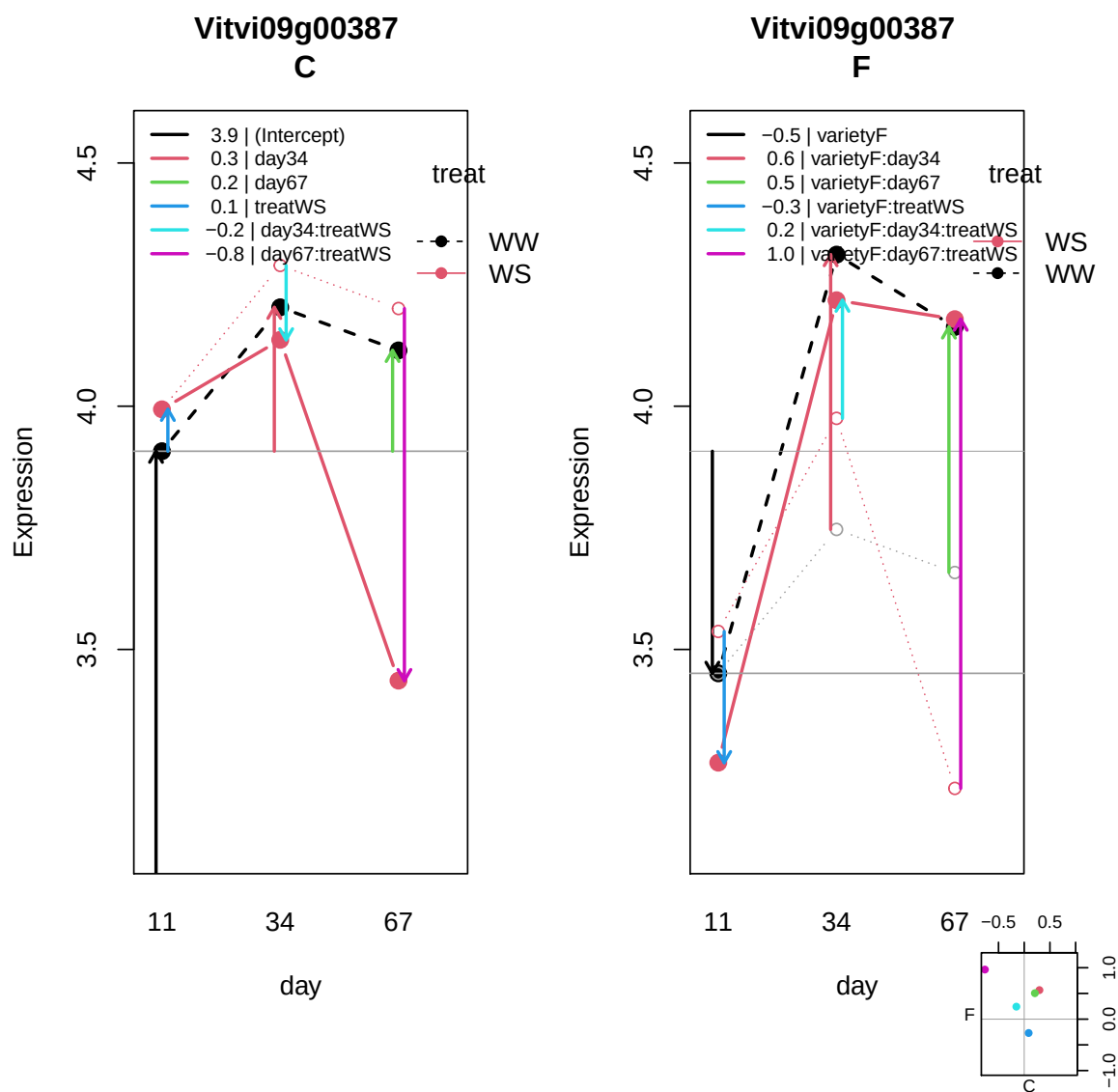
              (Intercept)    varietyF      day34      day67
Vitvi09g00387      3.907478 -0.4565619  0.2957998  0.2072345
              treatWS  varietyF:day34  varietyF:day67
Vitvi09g00387  0.08611093      0.5648742      0.5047441
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi09g00387      -0.2697511      -0.1529295      -0.7649061
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi09g00387      0.2428693      0.9645659

```

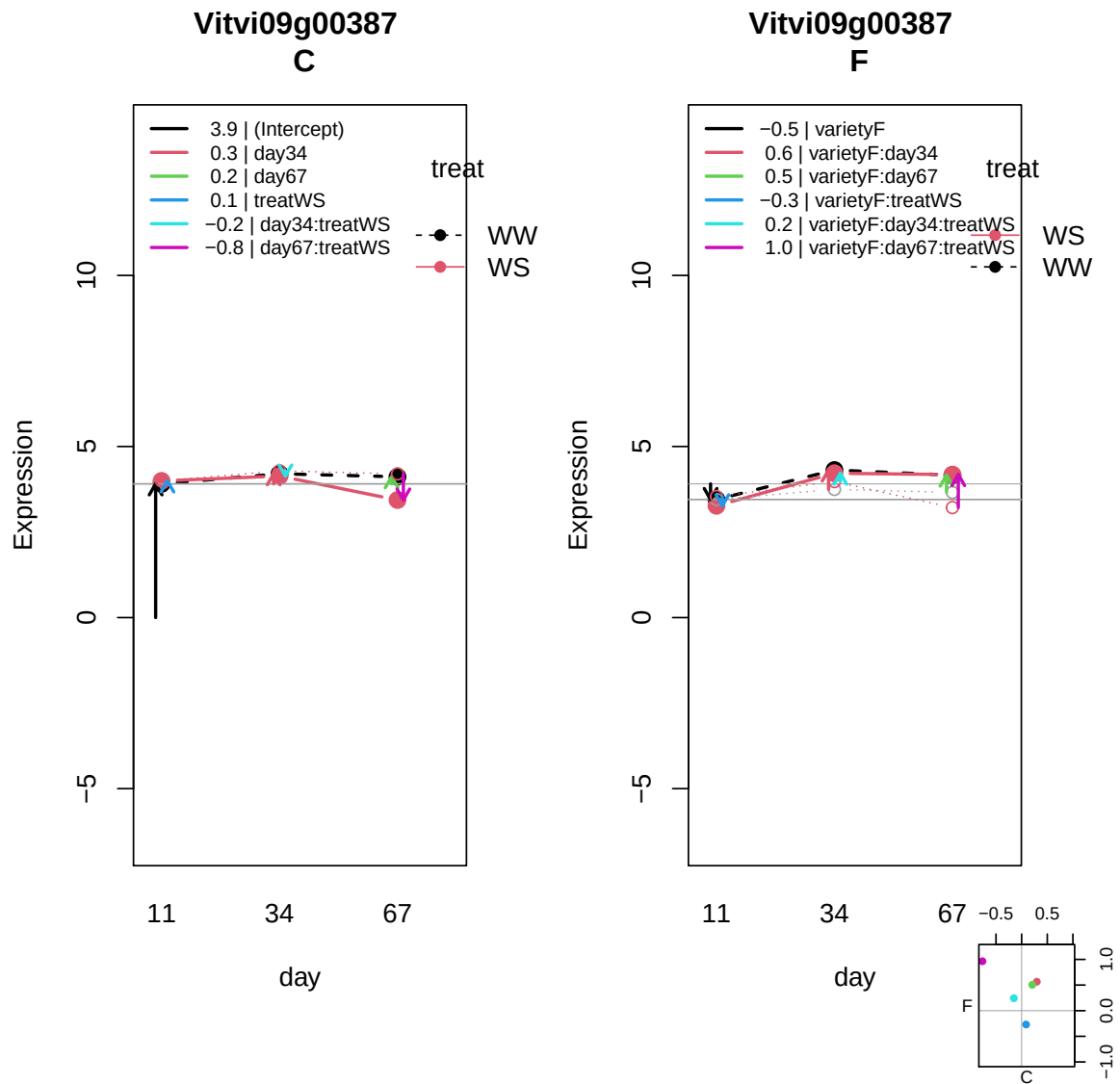
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

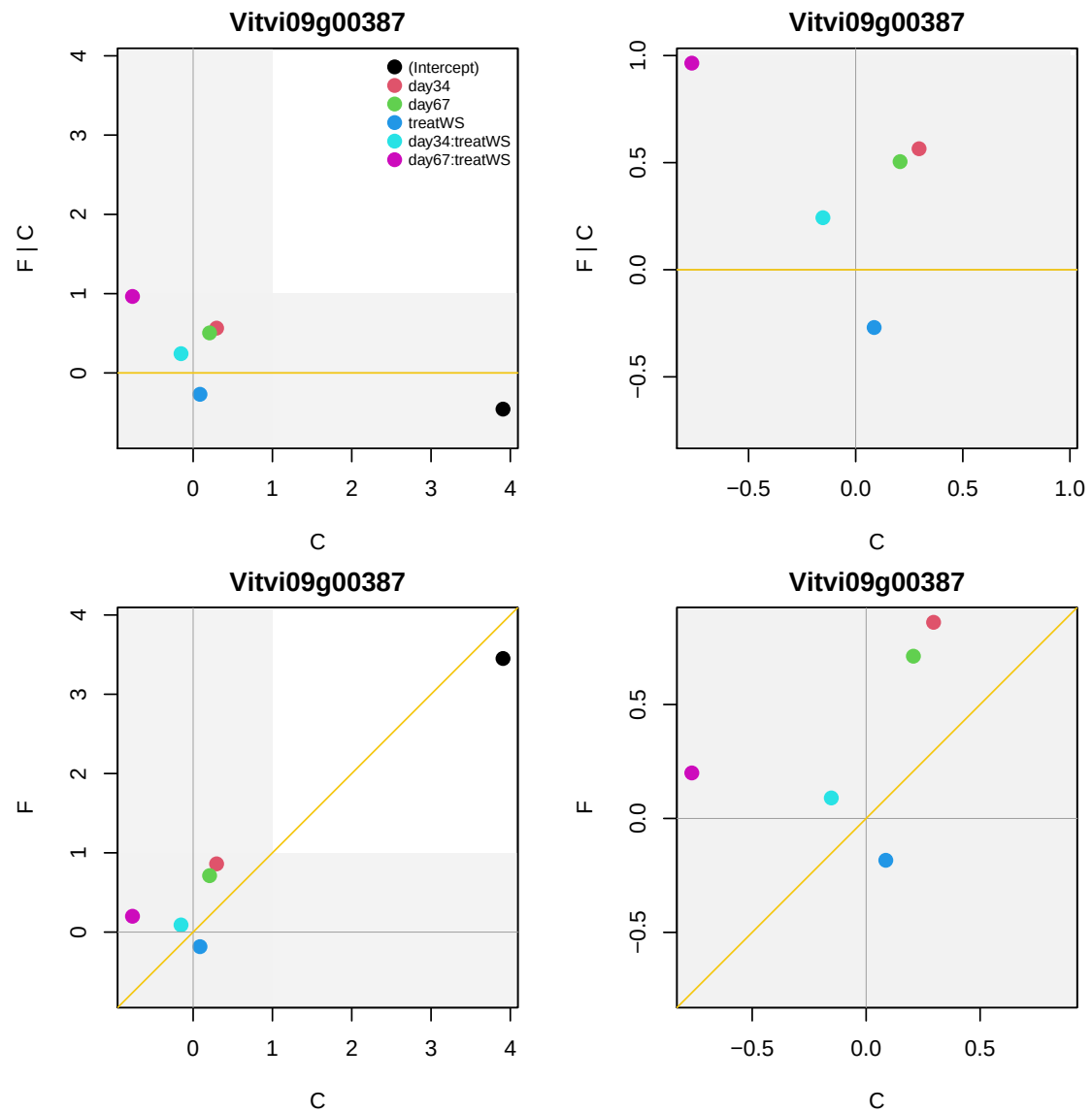


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

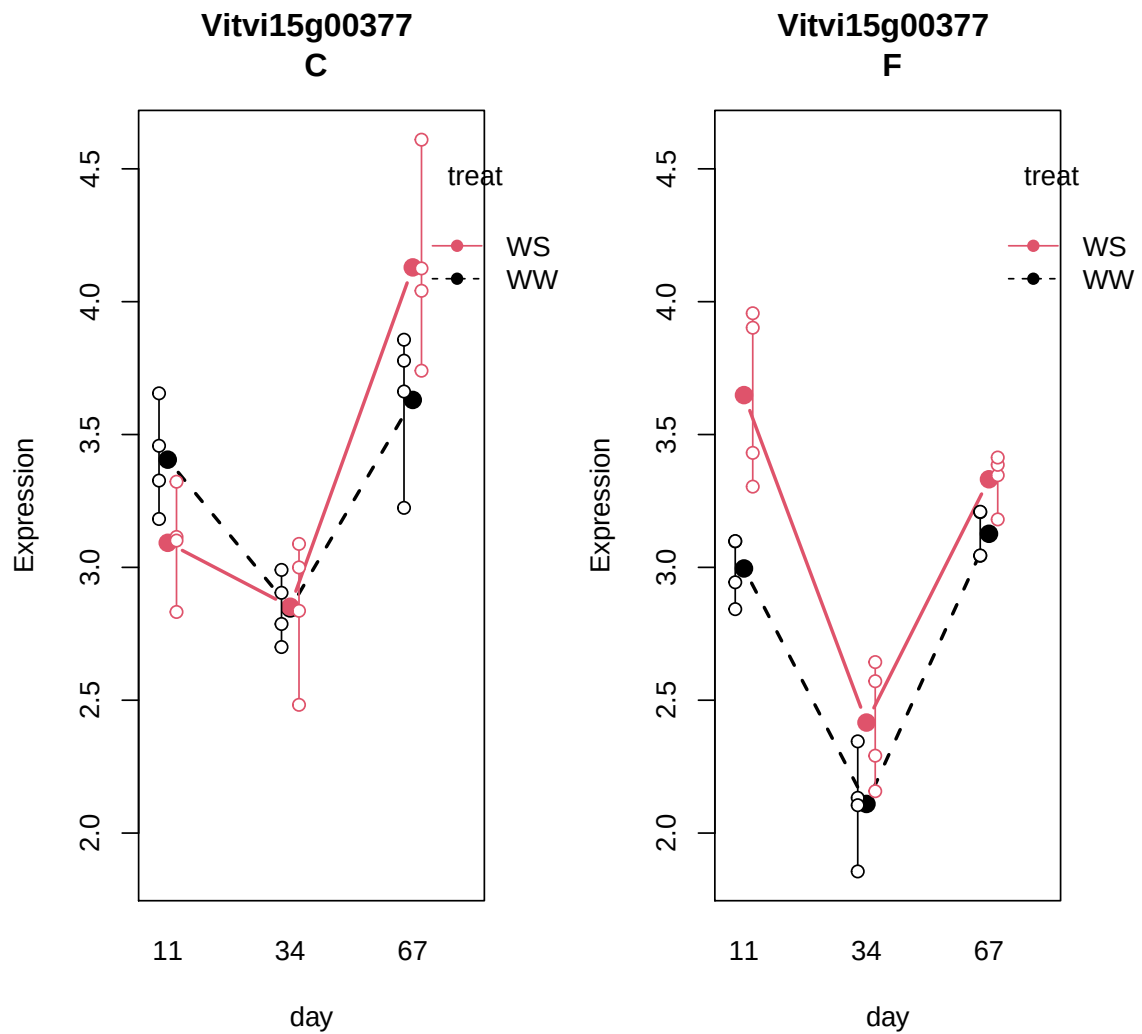


6.12.104 Vitvi15g00377

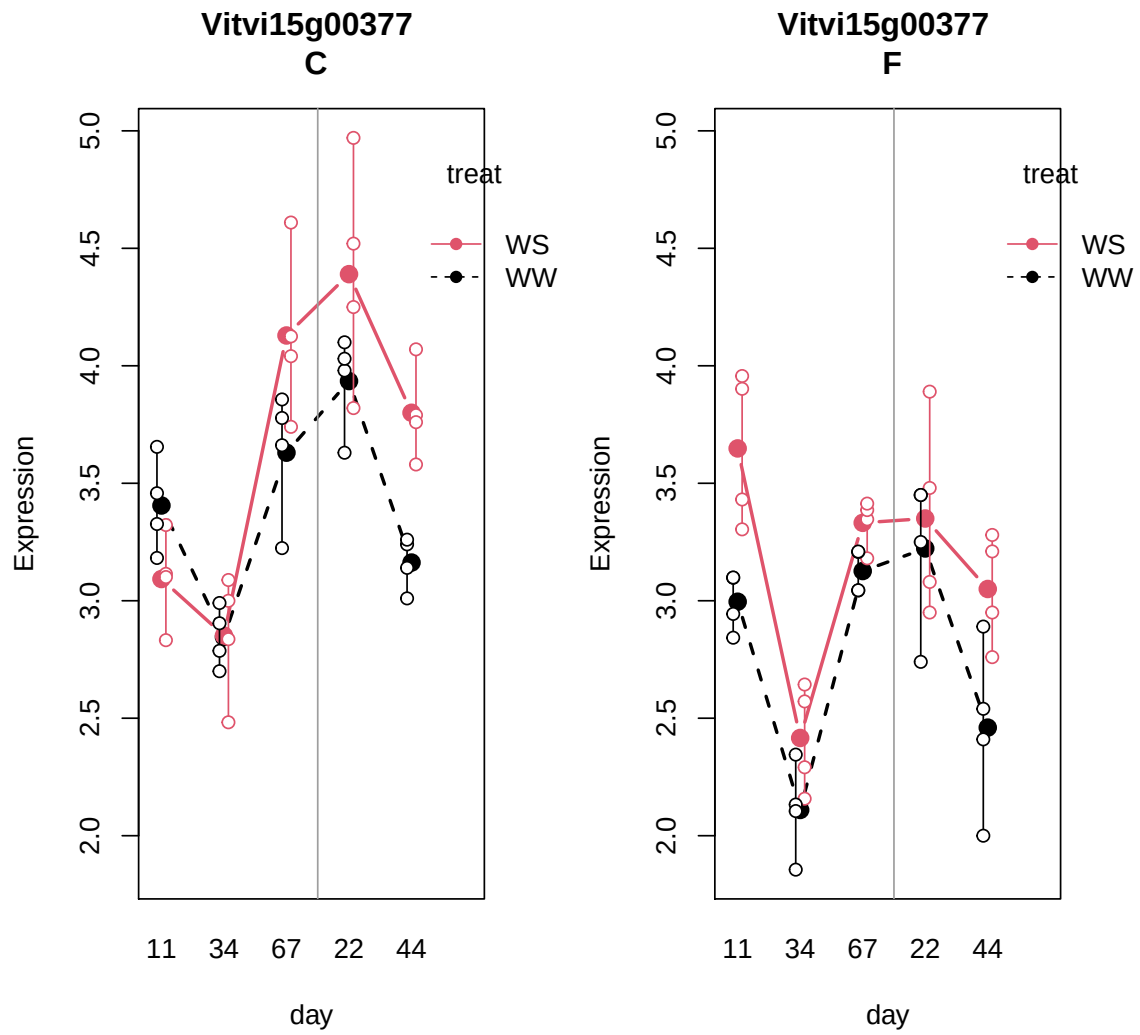
Coefficient varietyF:day67:treatWS for Vitvi15g00377.

```
> tt[varname,]
      logFC AveExpr      t    P.Value
Vitvi15g00377 -1.259036 3.131825 -3.96799 0.0003037261
      adj.P.Val      B
Vitvi15g00377 0.04451339 0.2967009

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```




```
> fit1[varname,]$coefficients
```

```

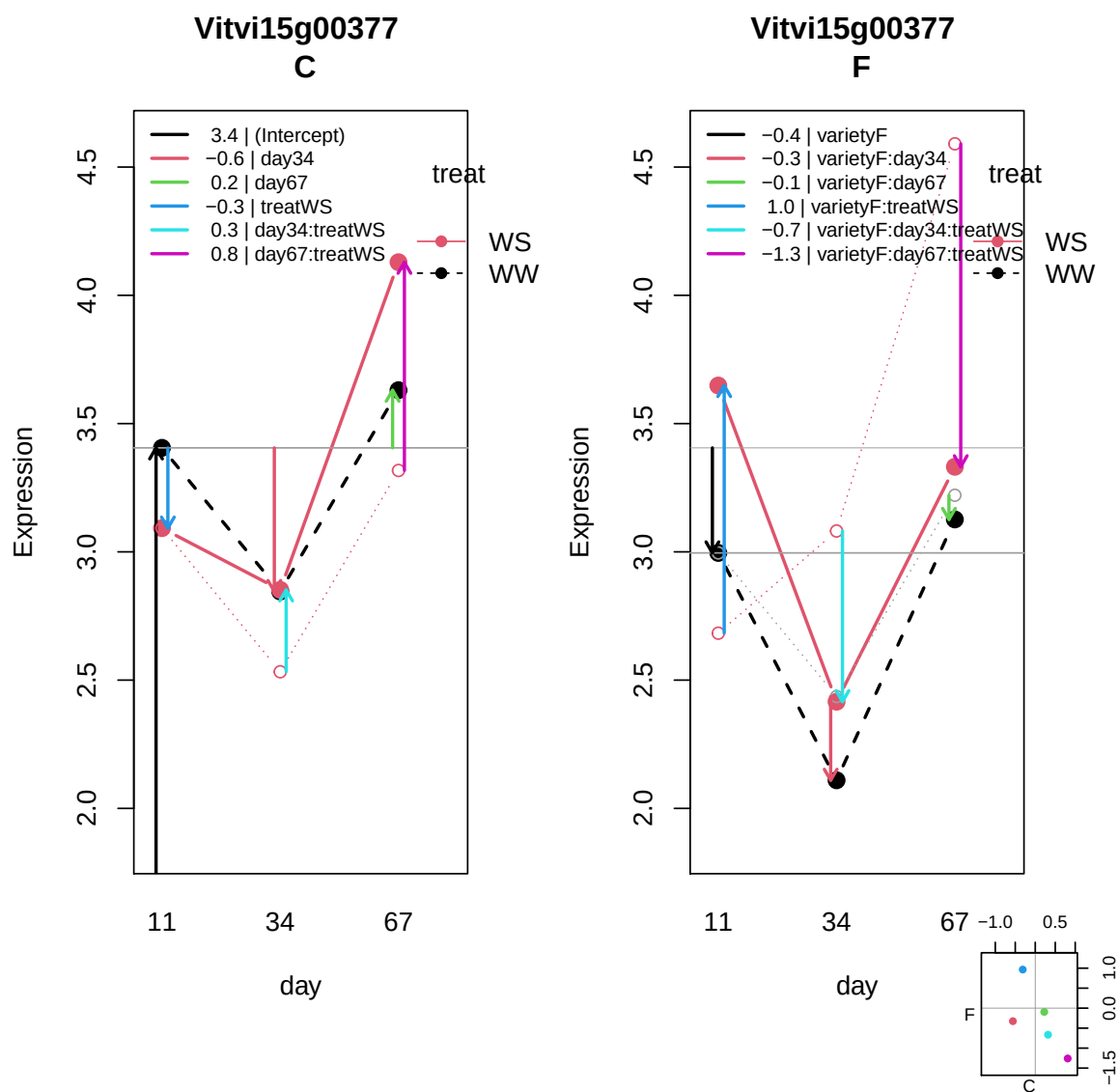
              (Intercept)    varietyF      day34      day67
Vitvi15g00377      3.405356 -0.4095082 -0.5599304 0.2248001
              treatWS varietyF:day34 varietyF:day67
Vitvi15g00377 -0.3128922      -0.3263915      -0.09424227
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi15g00377      0.9653708      0.3192904      0.8117535
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi15g00377      -0.6653486                      -1.259036

```

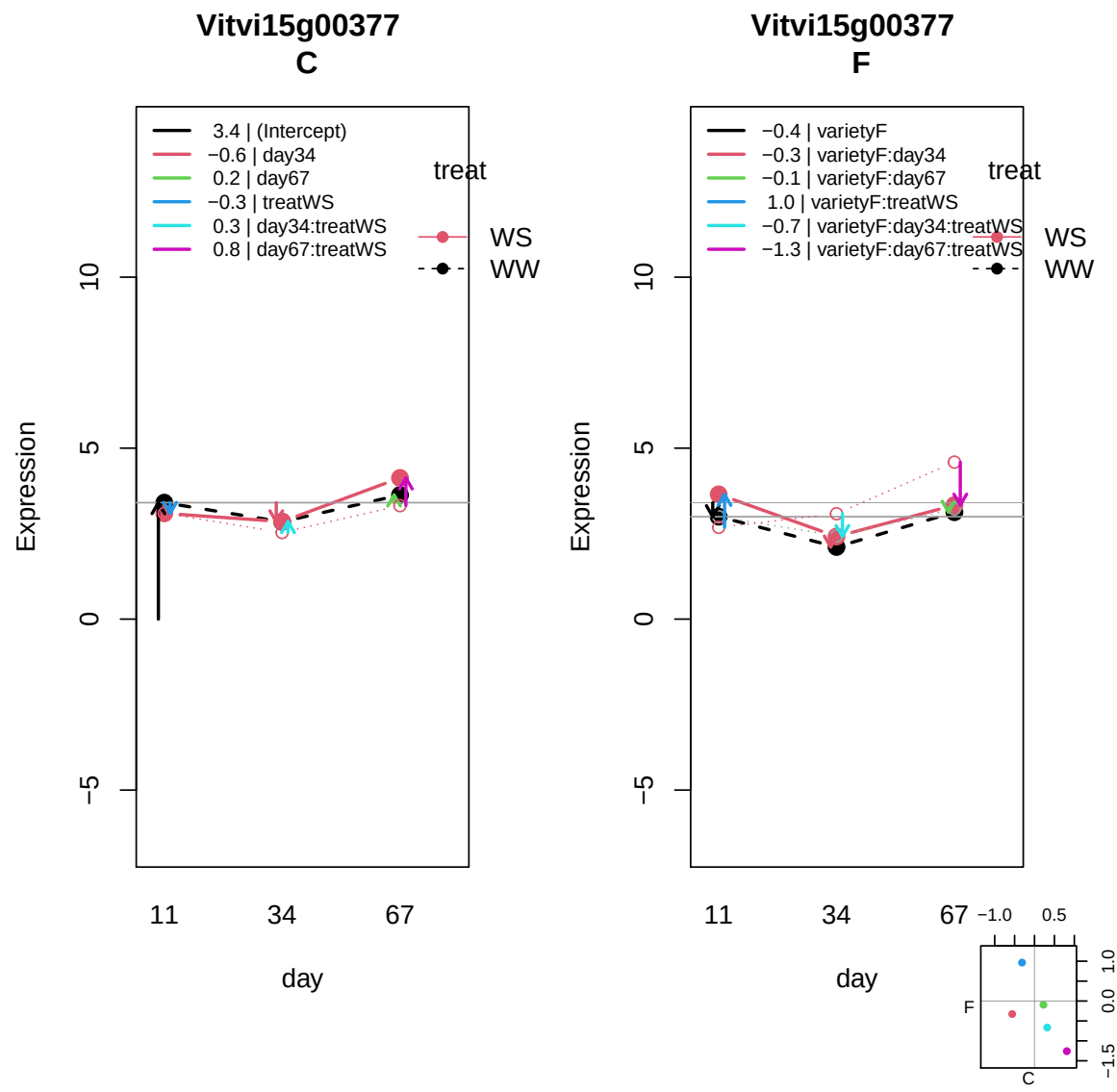
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

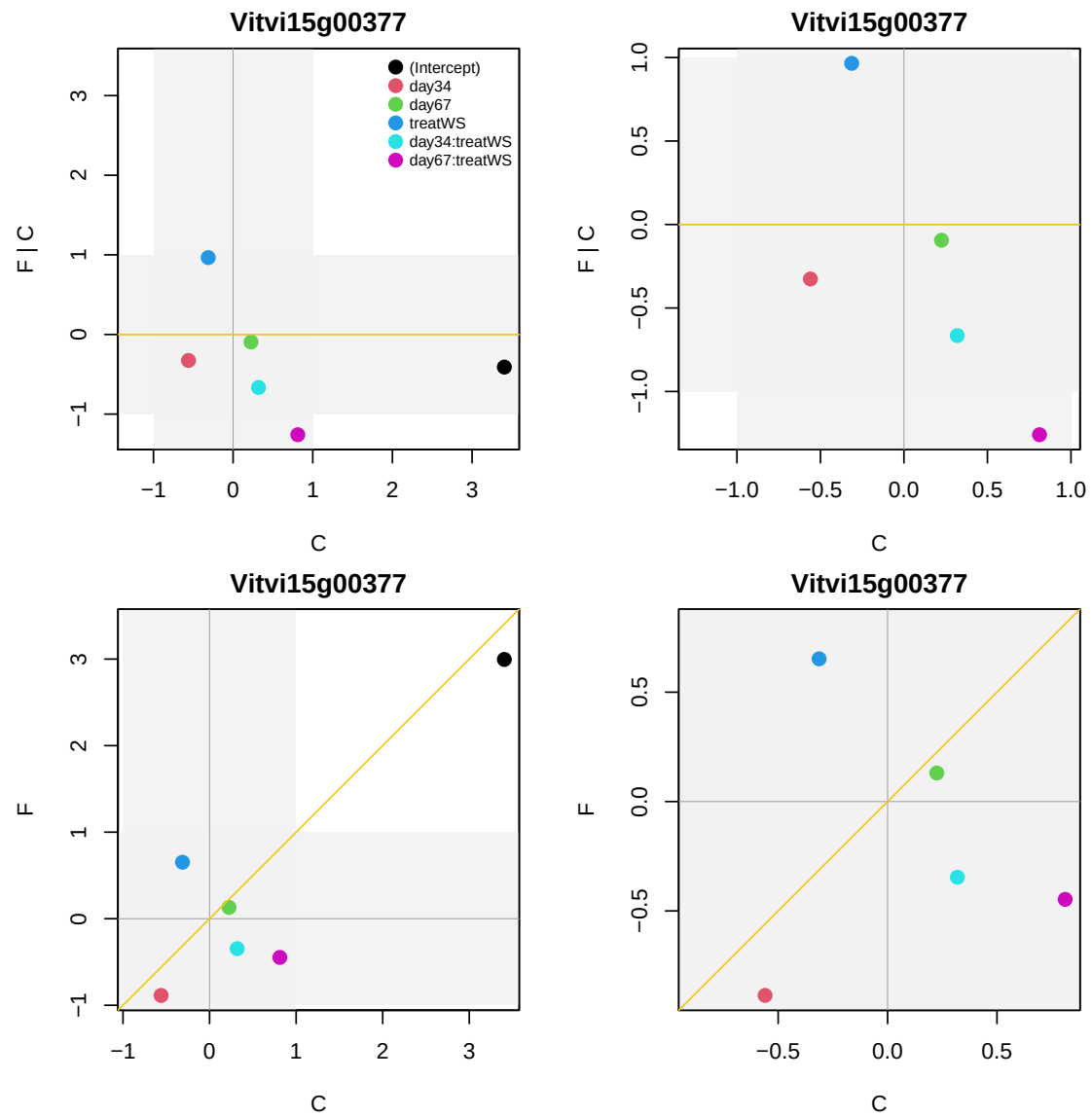


```
> coefs <- plot.interactions(varname,  
+ coef=fit1[varname,]$coefficients,  
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

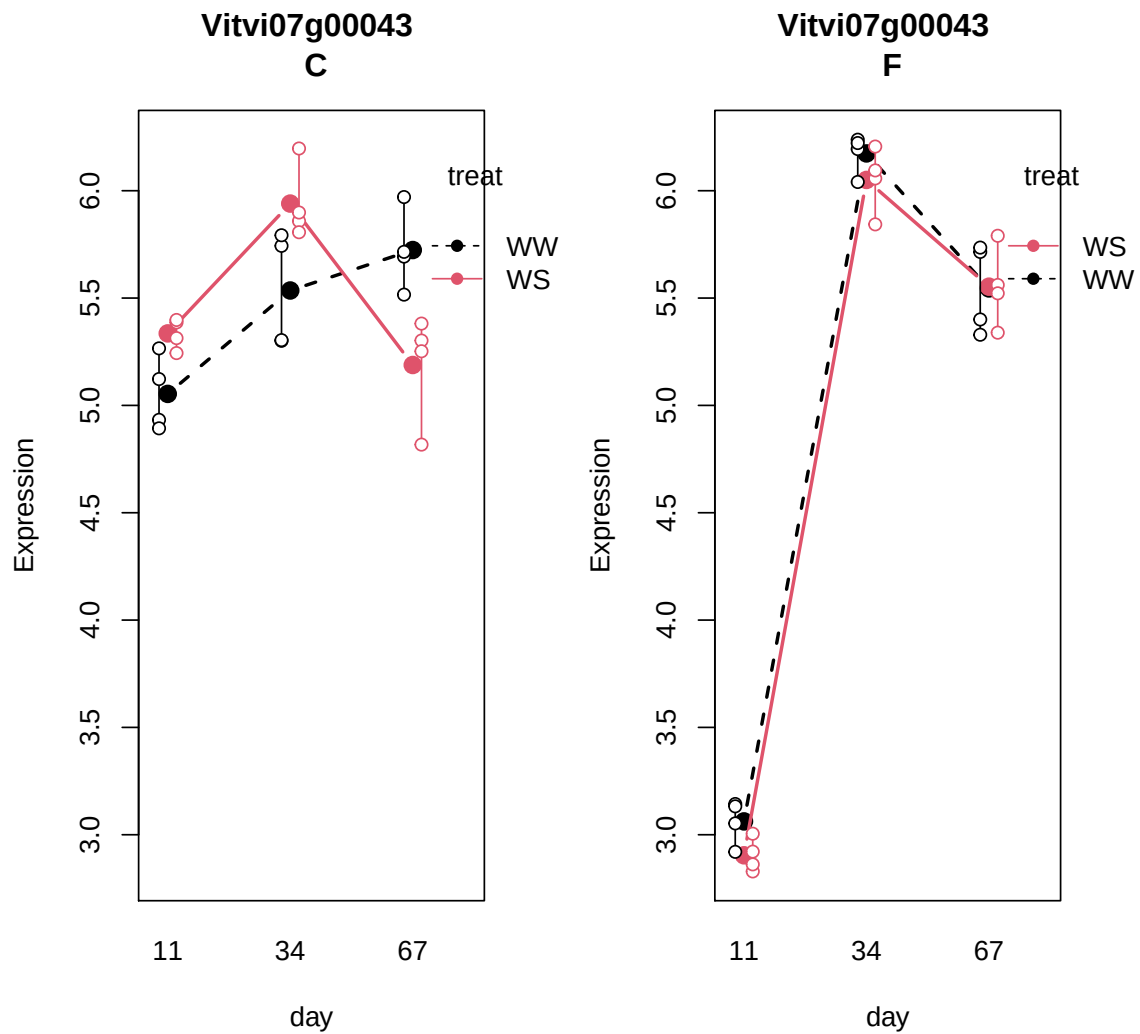
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



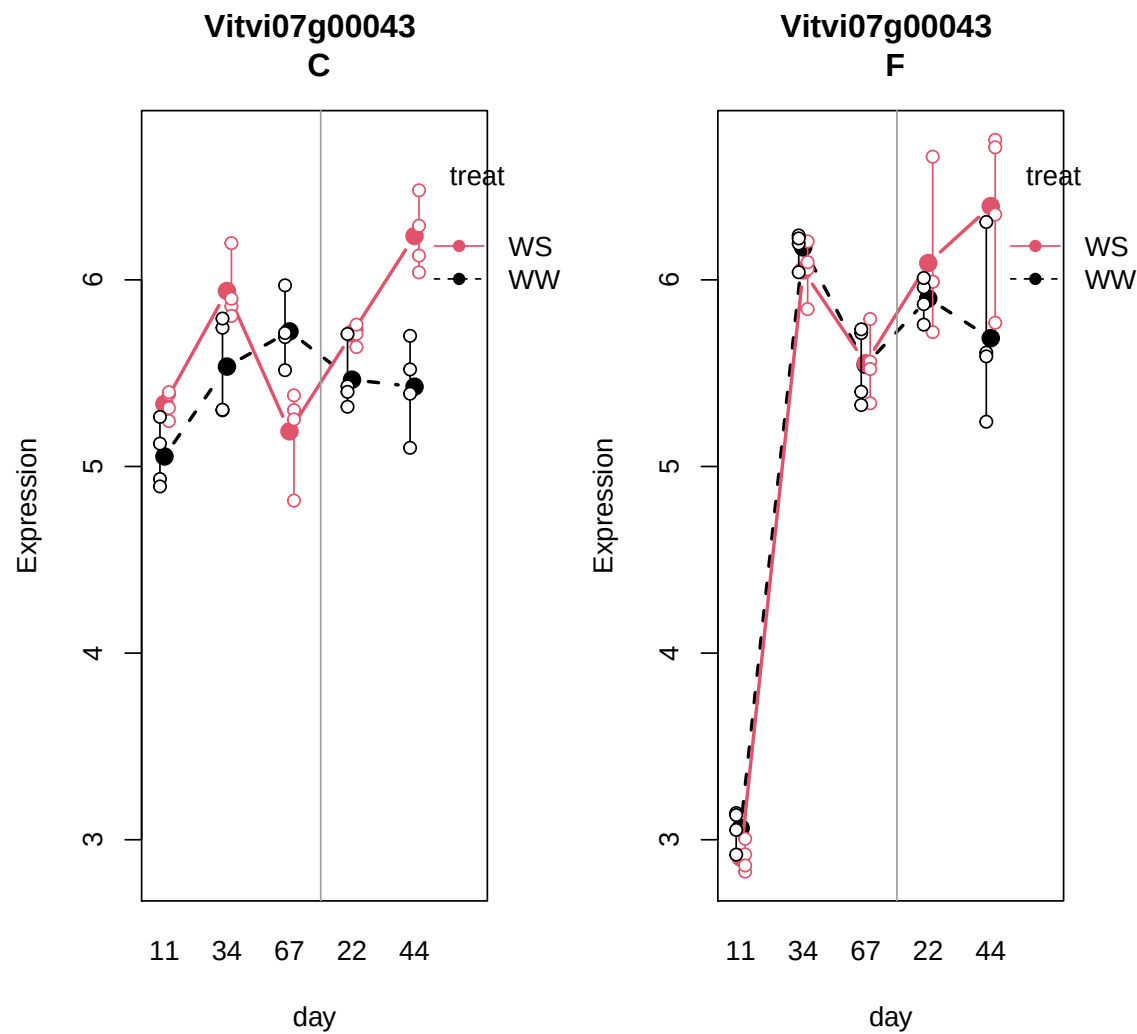
6.12.105 Vitvi07g00043

Coefficient varietyF:day67:treatWS for Vitvi07g00043.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi07g00043 0.9833568 5.172055 3.958171 0.0003127289
      adj.P.Val      B
Vitvi07g00043 0.04539632 0.2707933
> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

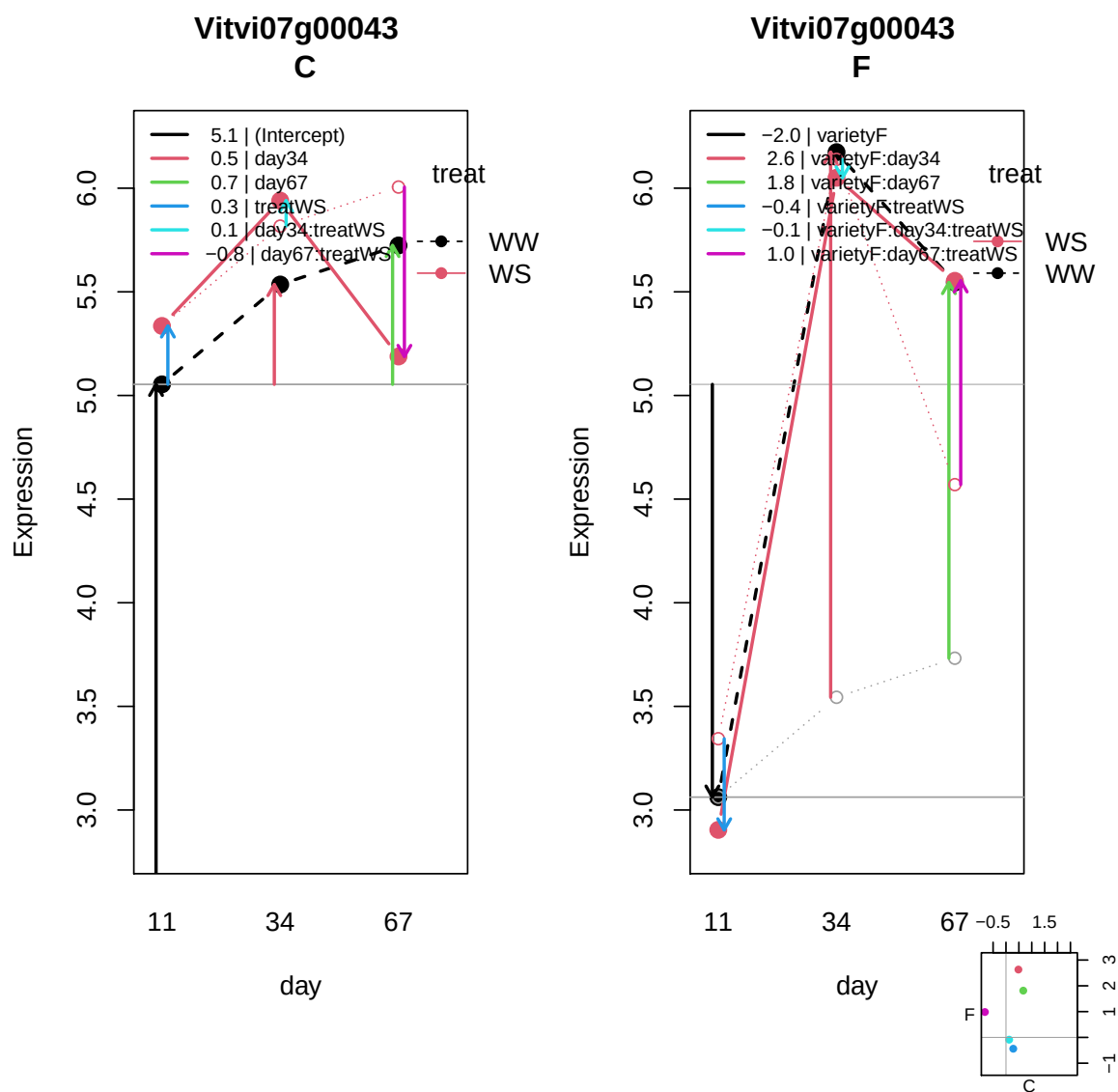
      (Intercept)  varietyF    day34    day67
Vitvi07g00043    5.053582 -1.991416 0.4816363 0.6701314
      treatWS varietyF:day34 varietyF:day67
Vitvi07g00043  0.2818222    2.629918    1.812587
      varietyF:treatWS day34:treatWS day67:treatWS
Vitvi07g00043   -0.4396918    0.1231007   -0.8173191
      varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi07g00043   -0.08869501    0.9833568

```

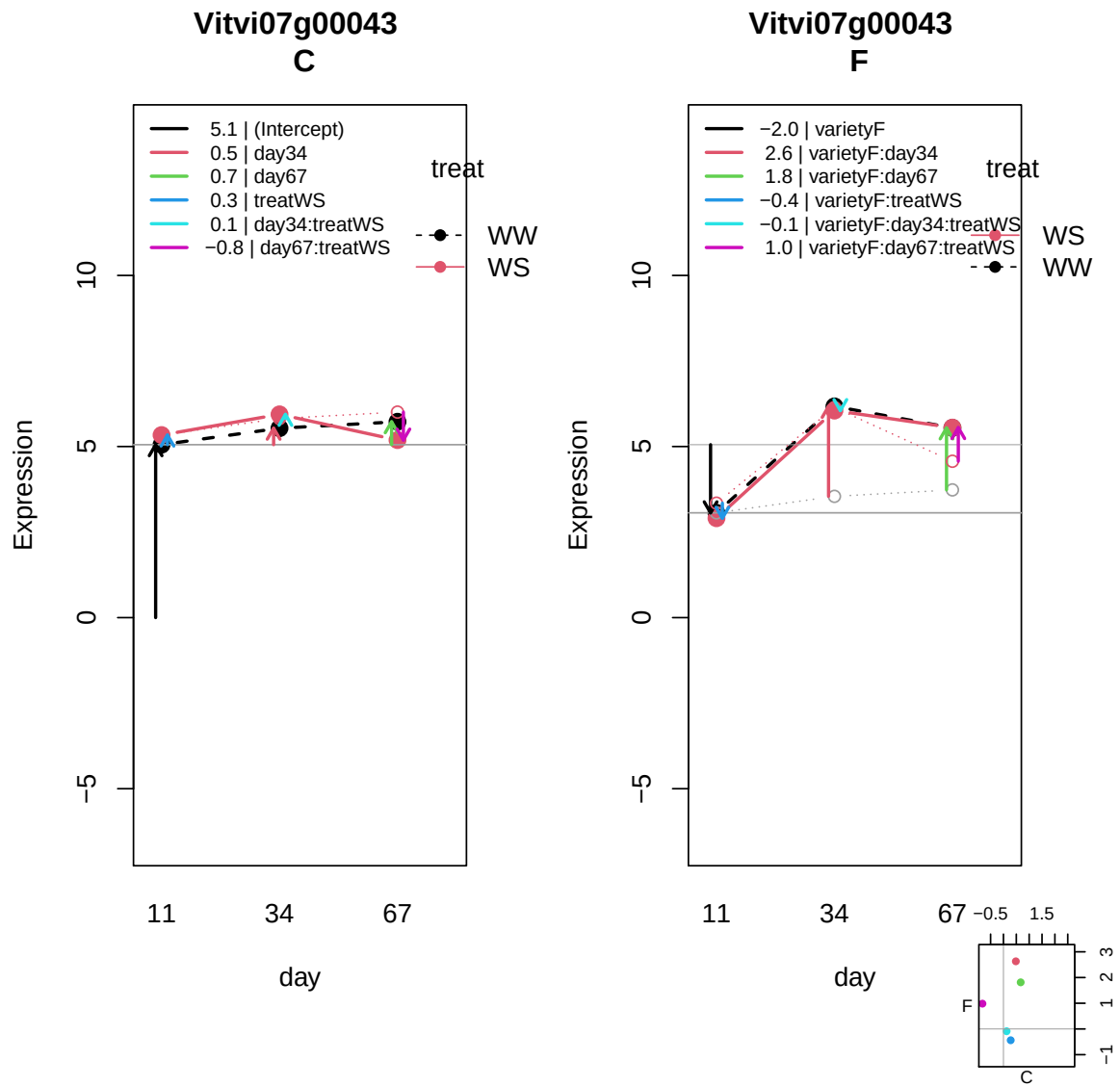
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

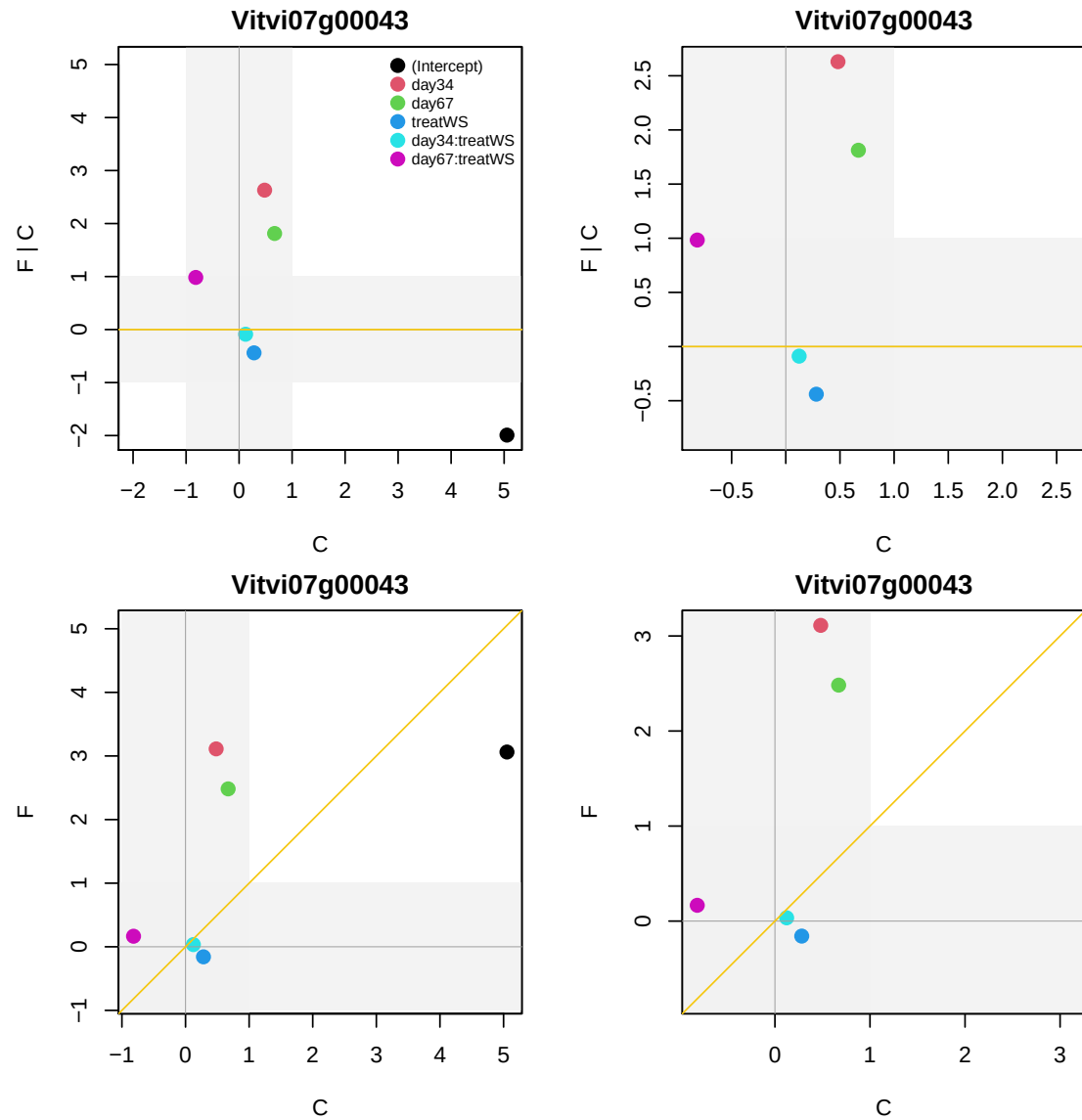


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

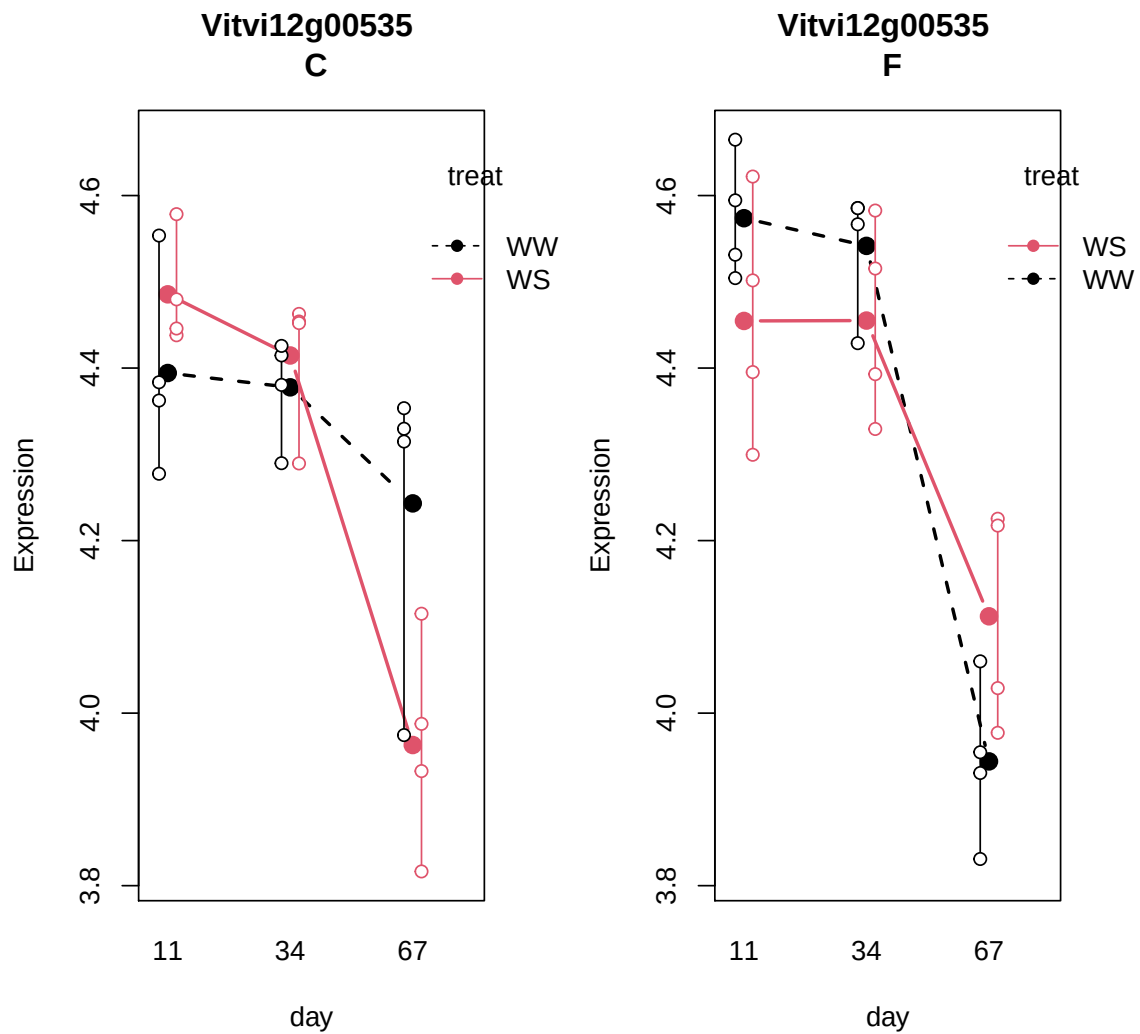


6.12.106 Vitvi12g00535

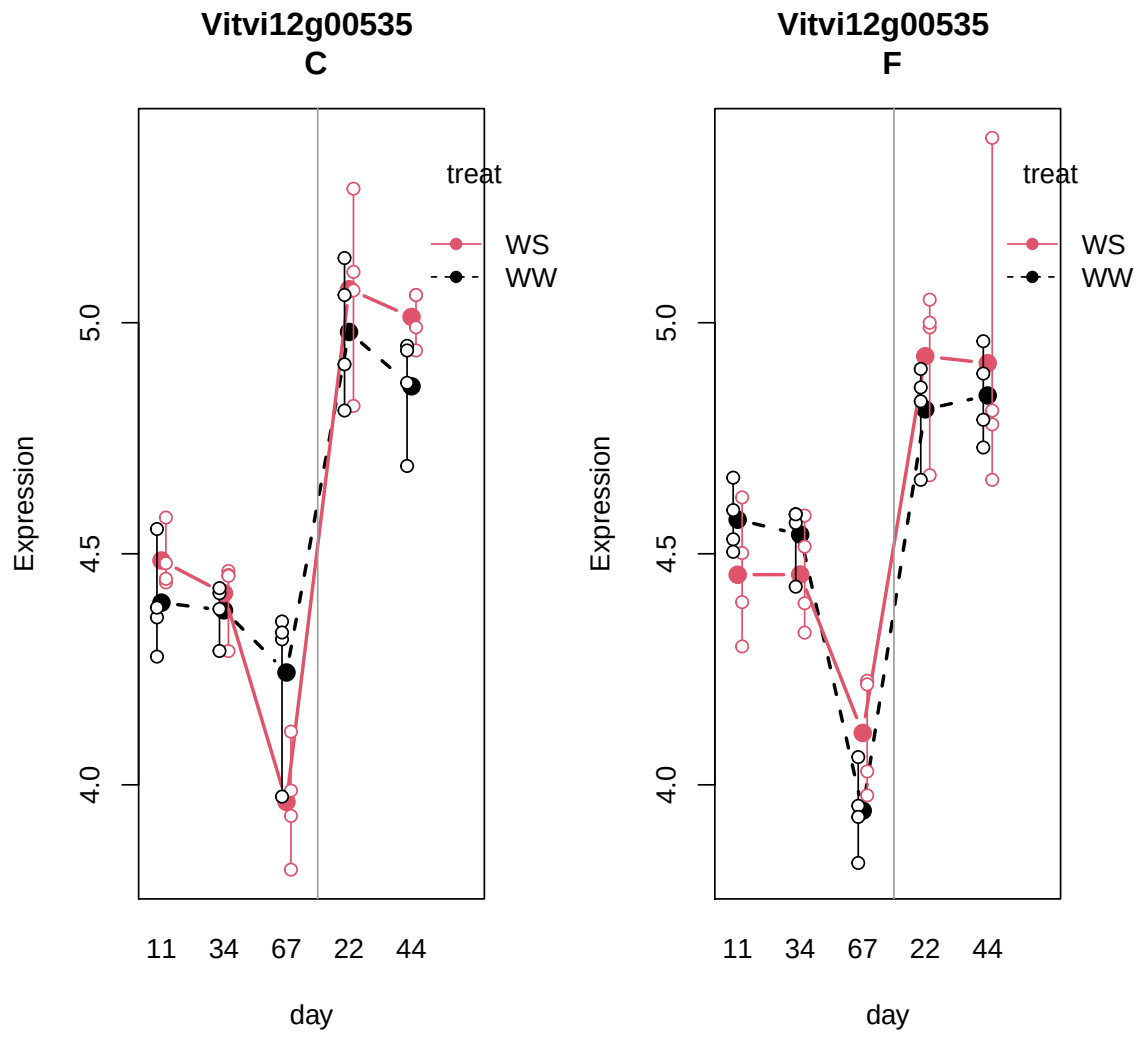
Coefficient varietyF:day67:treatWS for Vitvi12g00535.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi12g00535 0.6586291 4.329957 3.953045 0.0003175318
      adj.P.Val      B
Vitvi12g00535 0.04565868 0.2572763

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

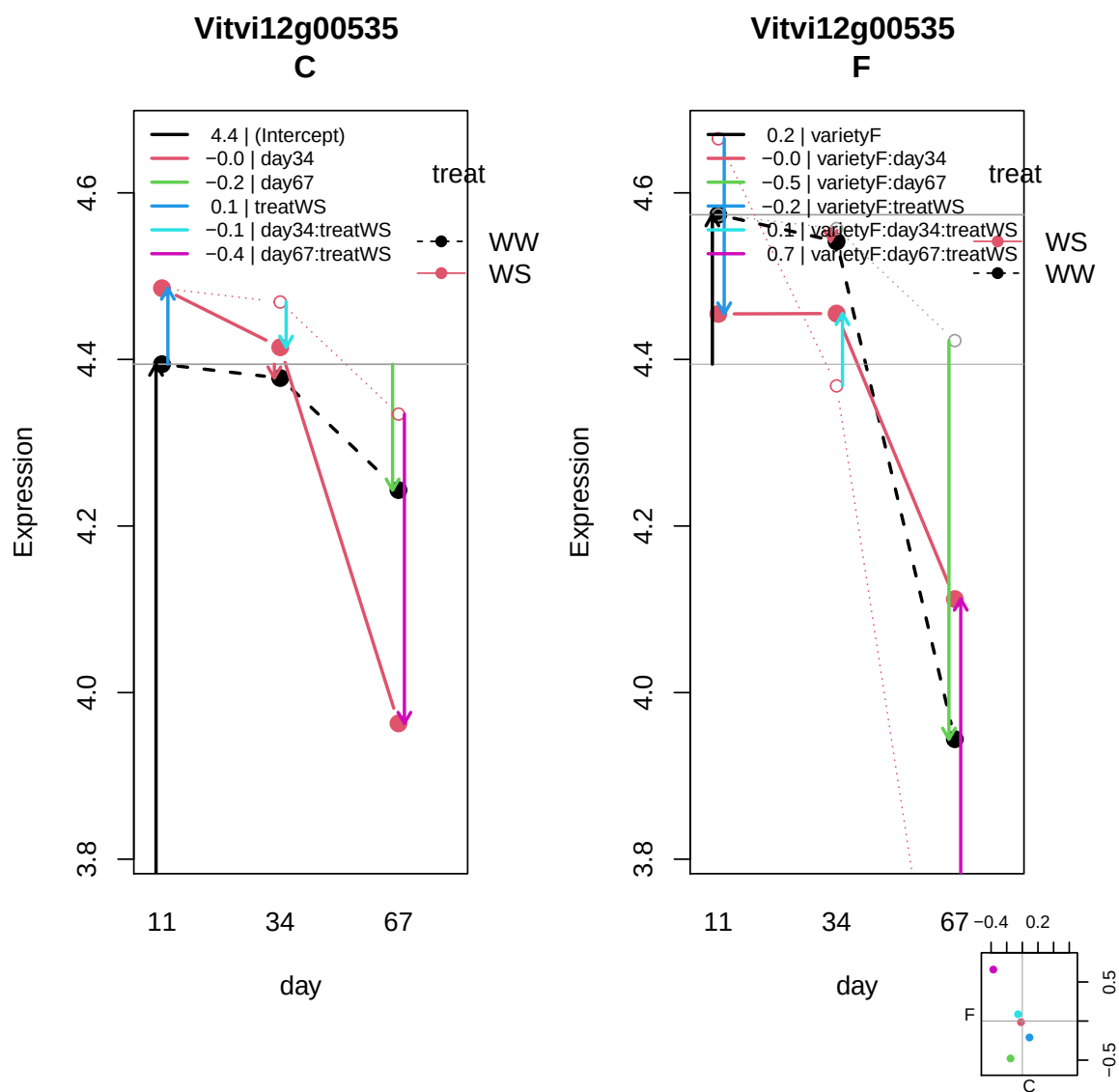
              (Intercept)  varietyF      day34      day67
Vitvi12g00535    4.394247 0.1794795 -0.01659296 -0.1511208
              treatWS varietyF:day34 varietyF:day67
Vitvi12g00535 0.09123754   -0.01549485   -0.4785551
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi12g00535   -0.2103363   -0.0543019   -0.3713441
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi12g00535           0.08684177           0.6586291

```

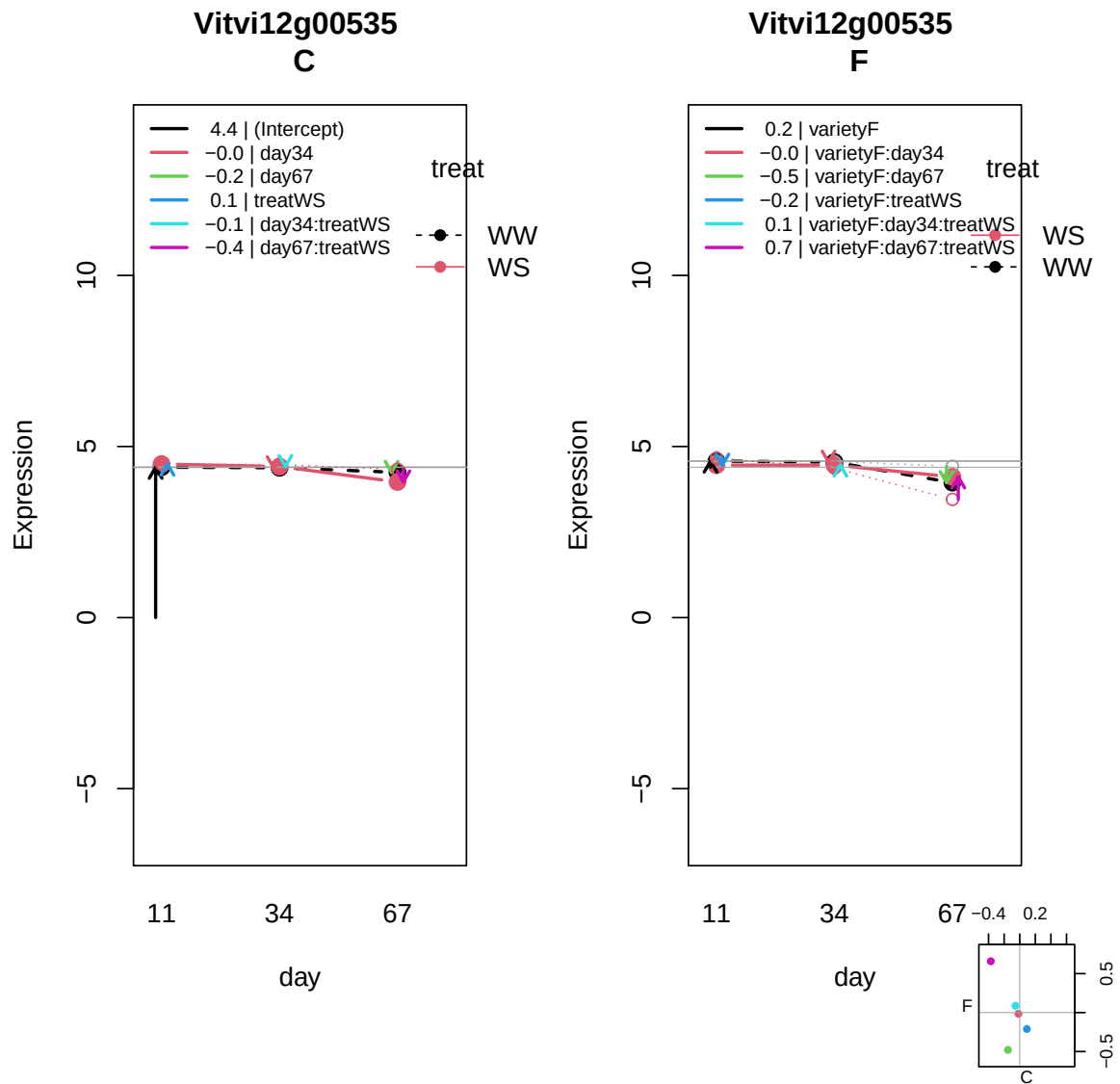
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

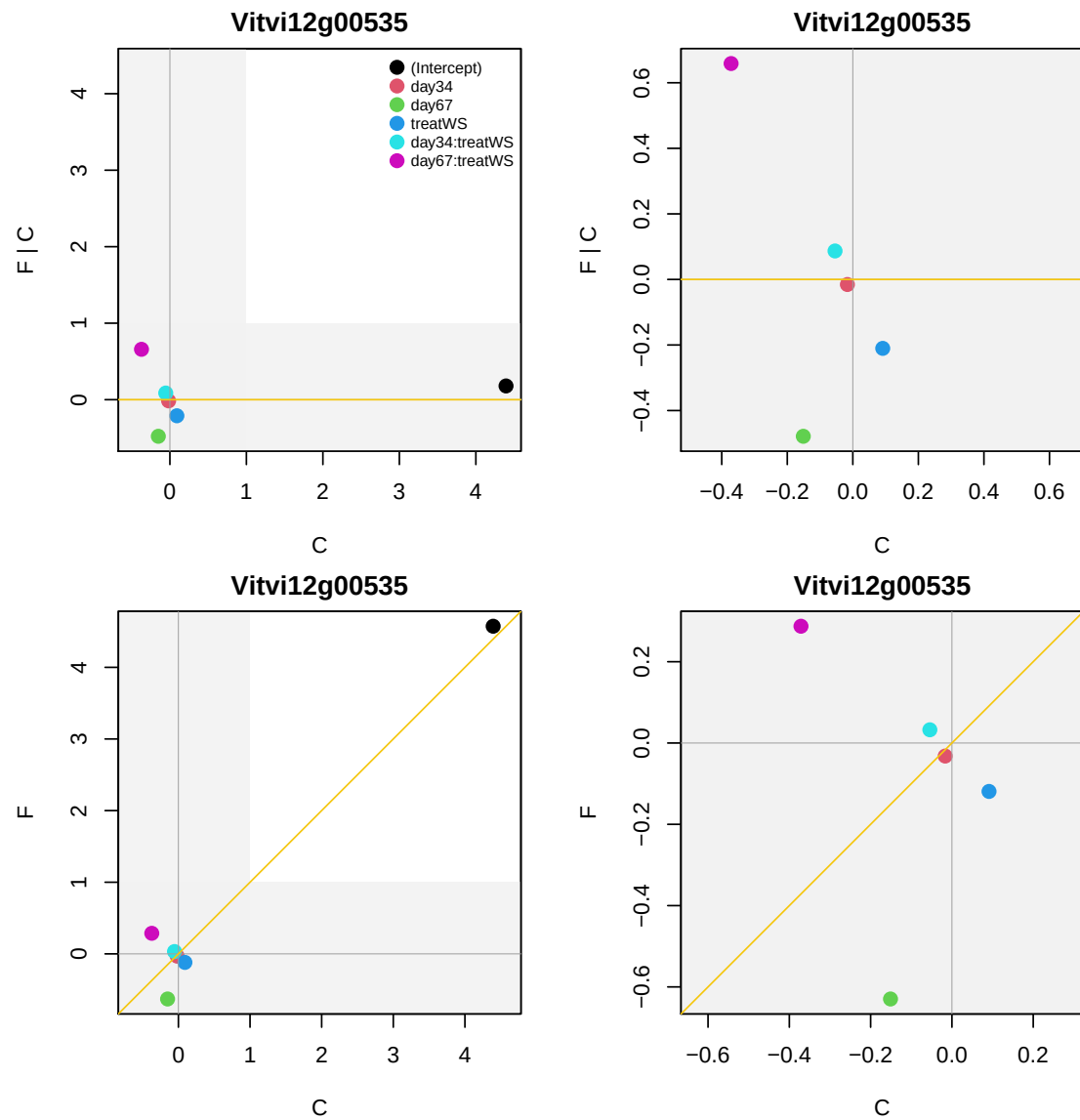


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

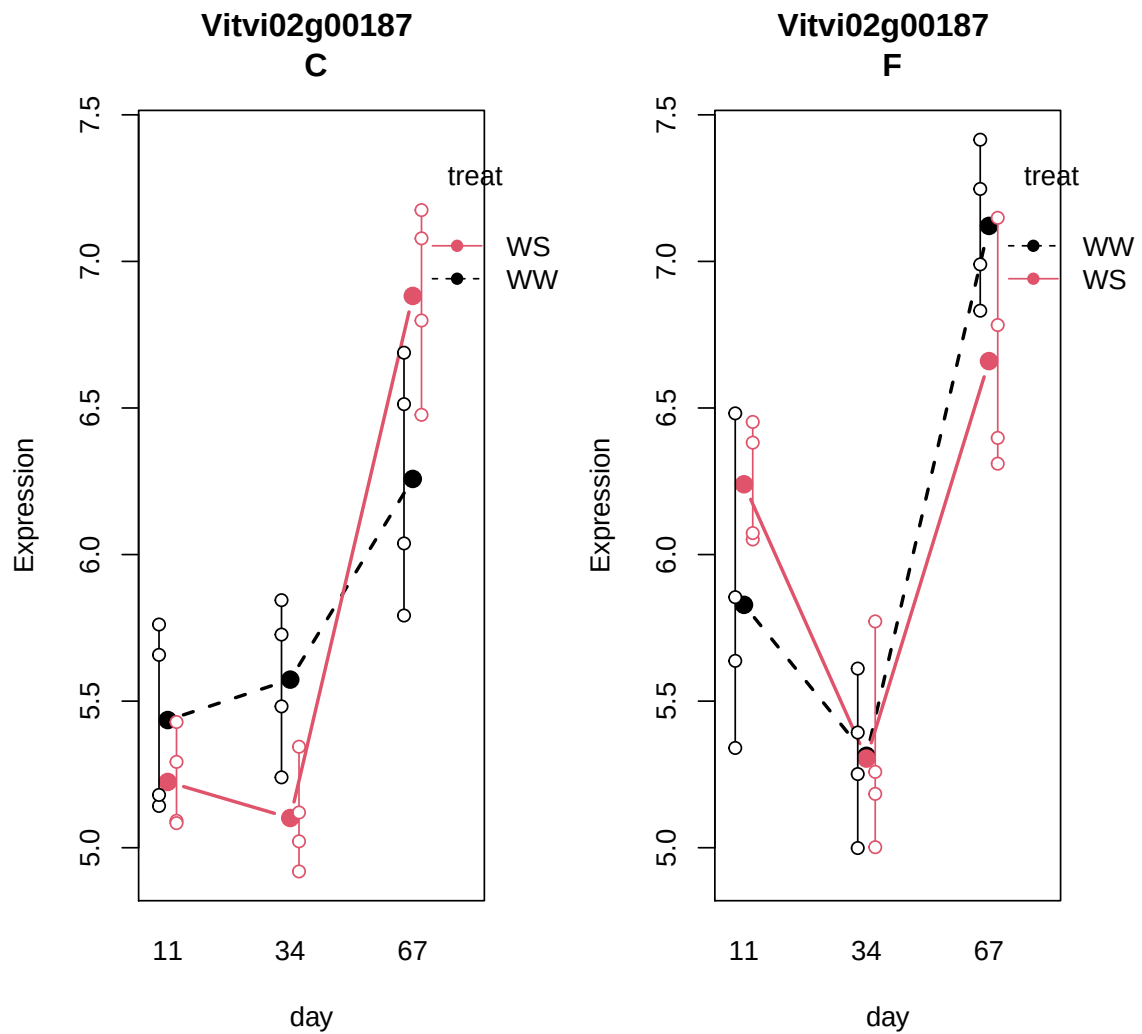


6.12.107 Vitvi02g00187

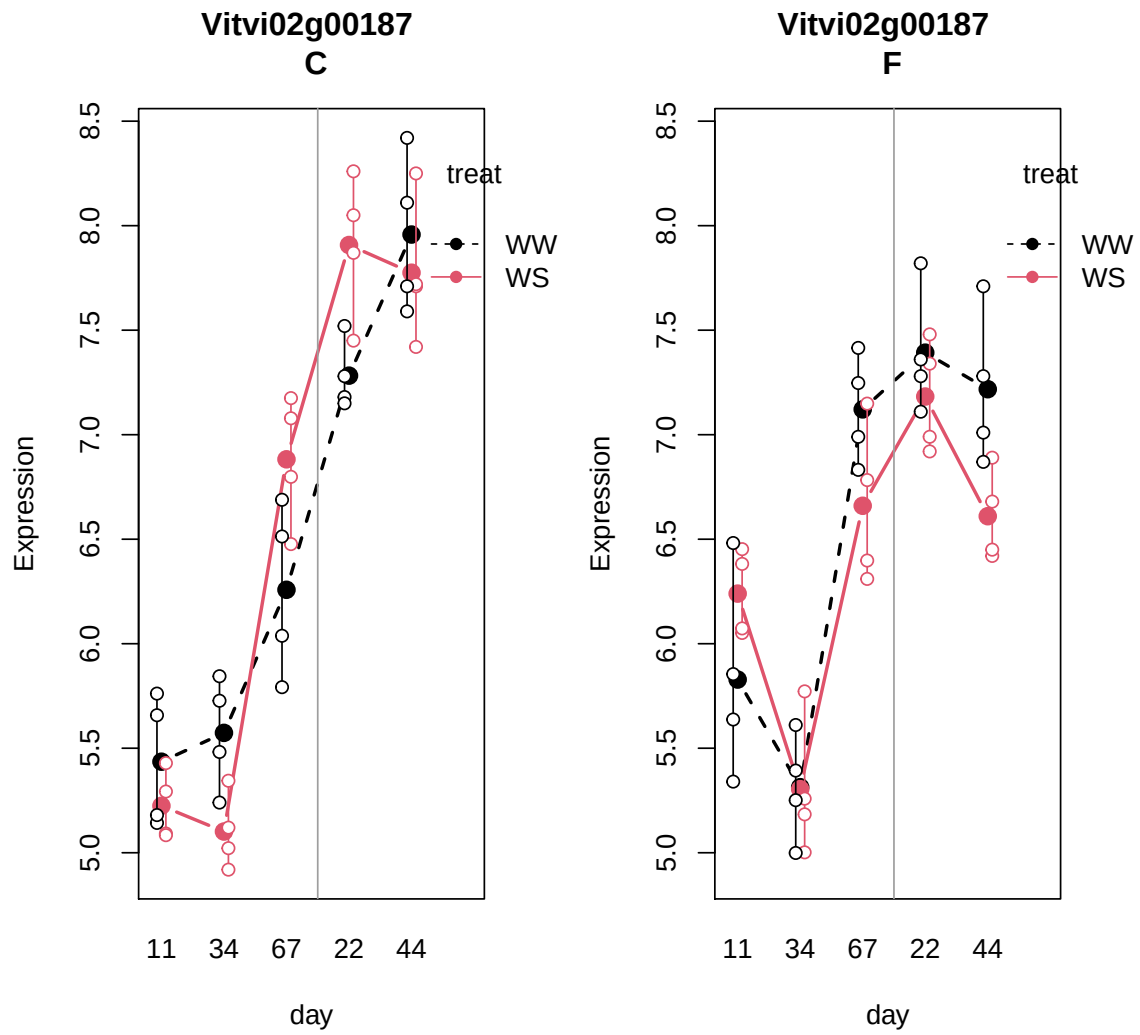
Coefficient varietyF:day67:treatWS for Vitvi02g00187.

```
> tt[varname,]
               logFC AveExpr          t      P.Value
Vitvi02g00187 -1.707725  5.9118 -3.946839 0.0003234418
               adj.P.Val          B
Vitvi02g00187 0.04591429 0.2409228

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

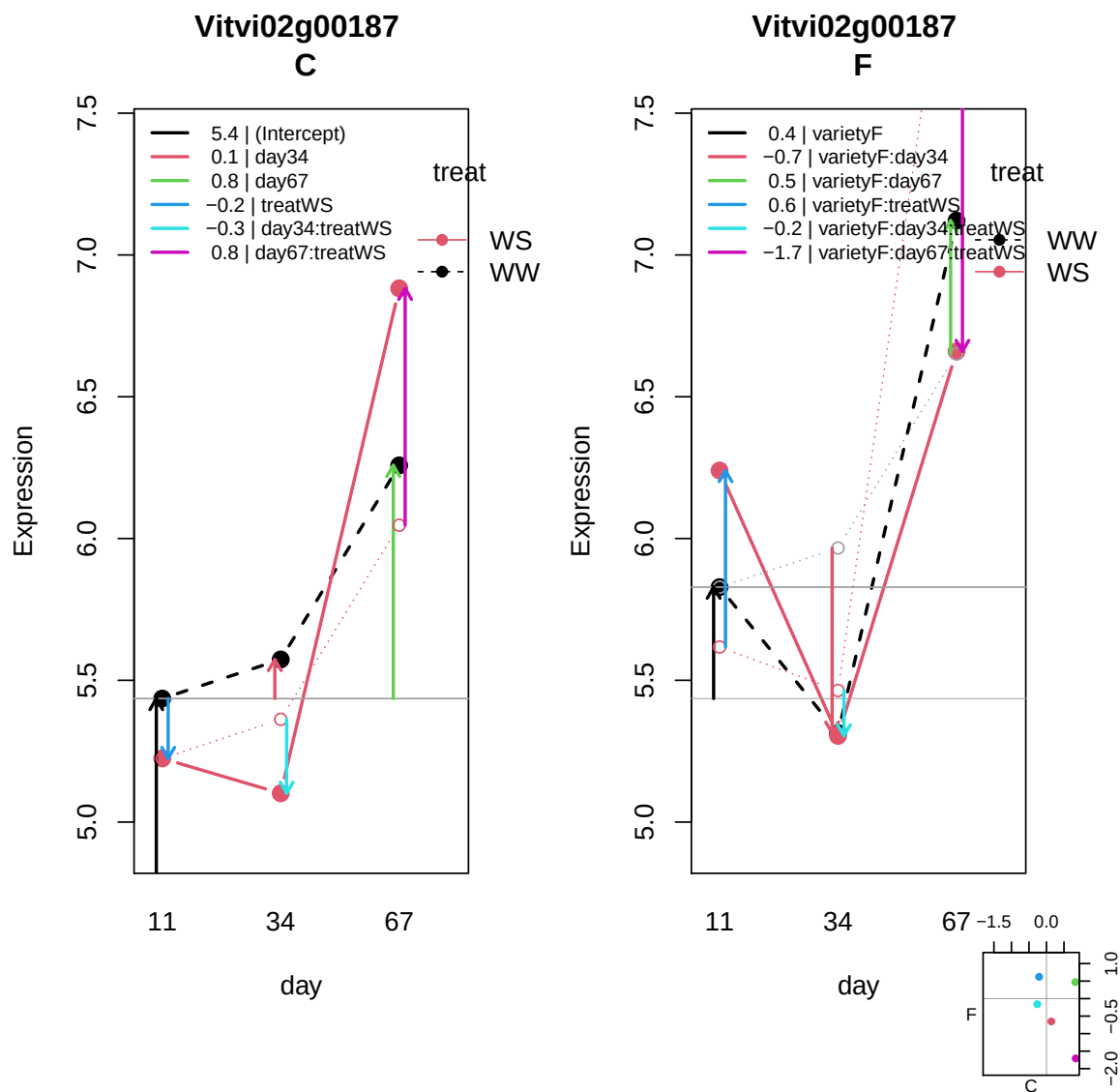
              (Intercept)  varietyF    day34    day67
Vitvi02g00187      5.435481 0.3930043 0.1379429 0.8224549
              treatWS varietyF:day34 varietyF:day67
Vitvi02g00187    -0.2111114      -0.6528369      0.4700833
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi02g00187          0.6223613      -0.2609033      0.8353611
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi02g00187          -0.159893          -1.707725

```

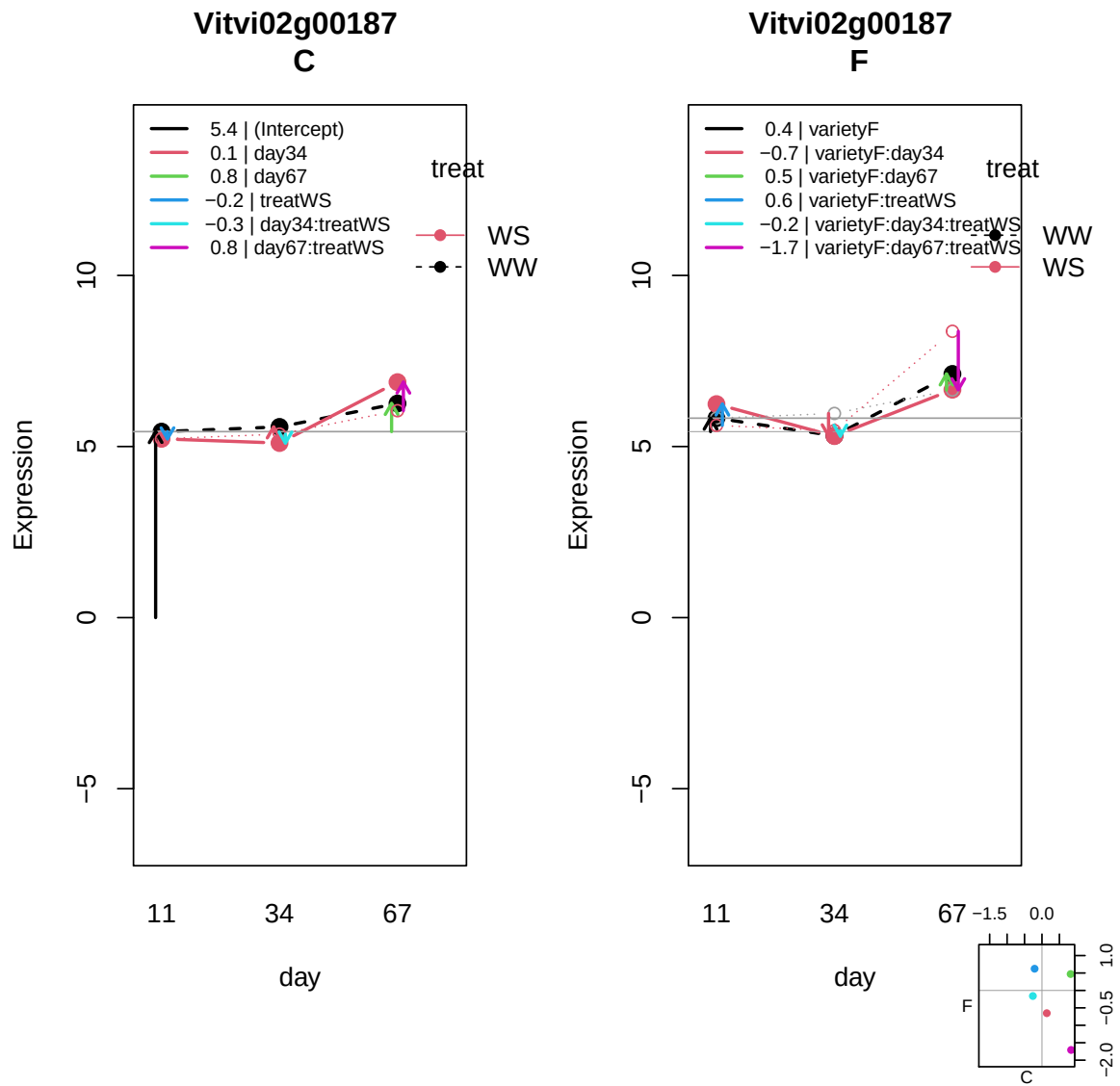
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

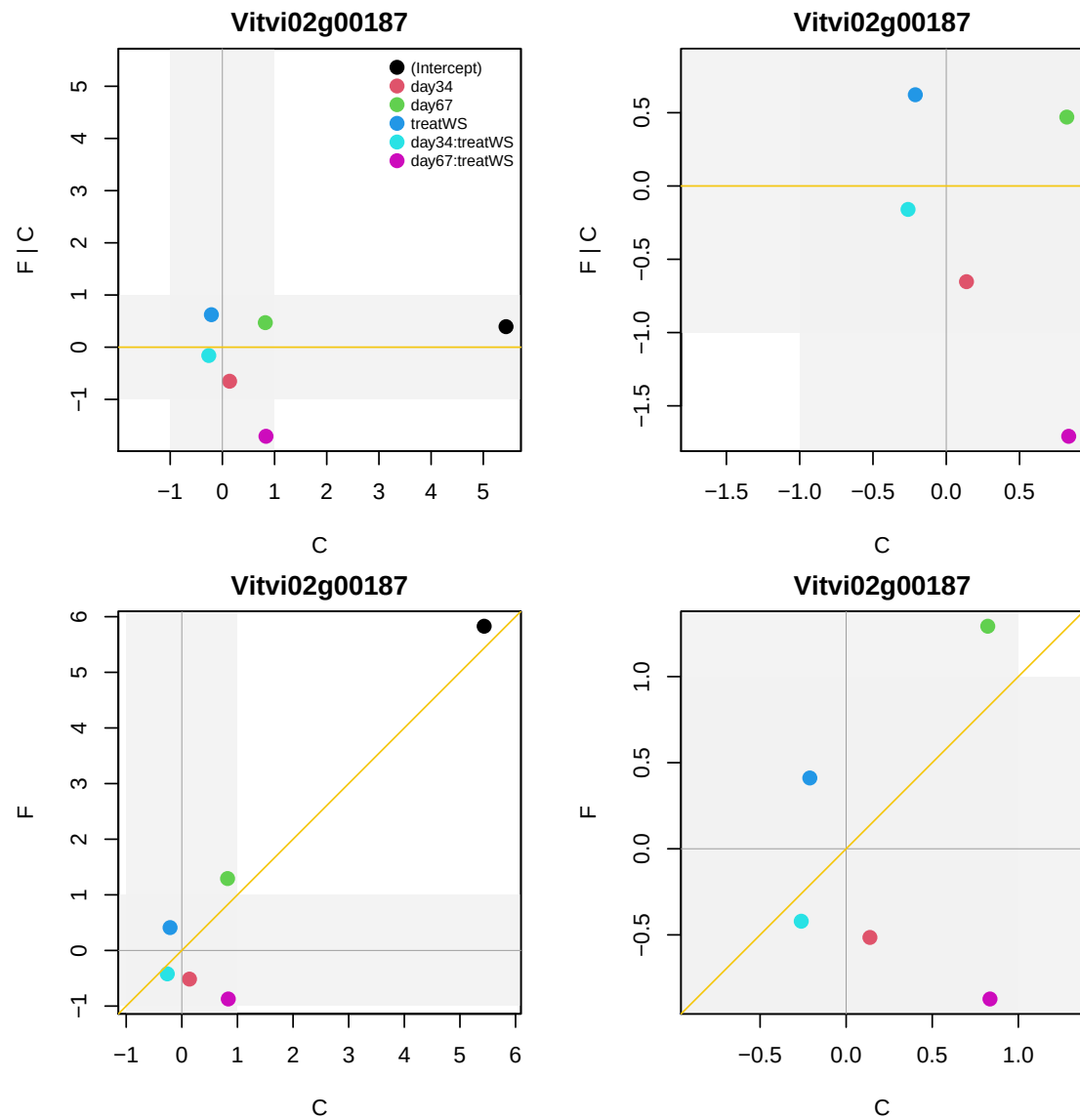



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

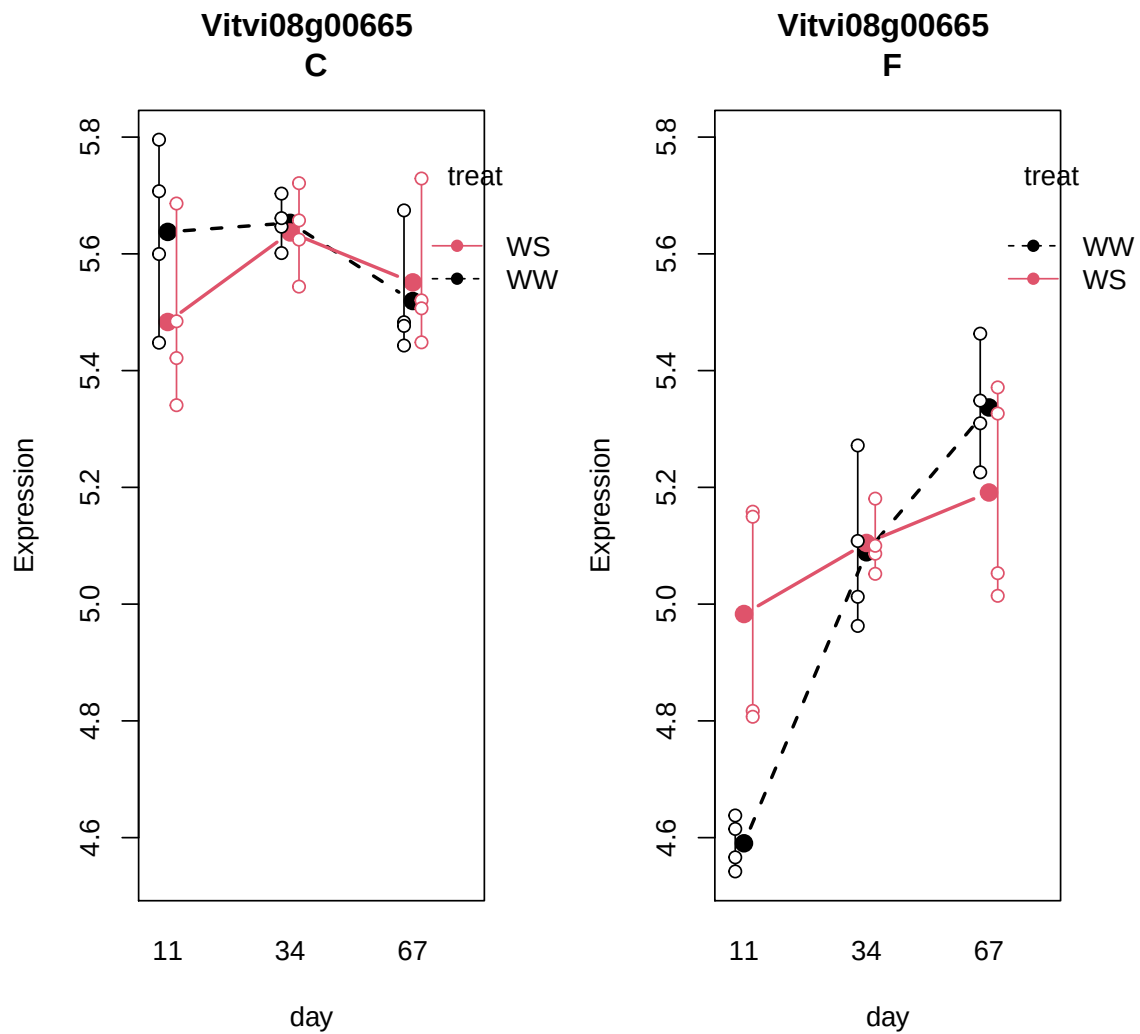


6.12.108 Vitvi08g00665

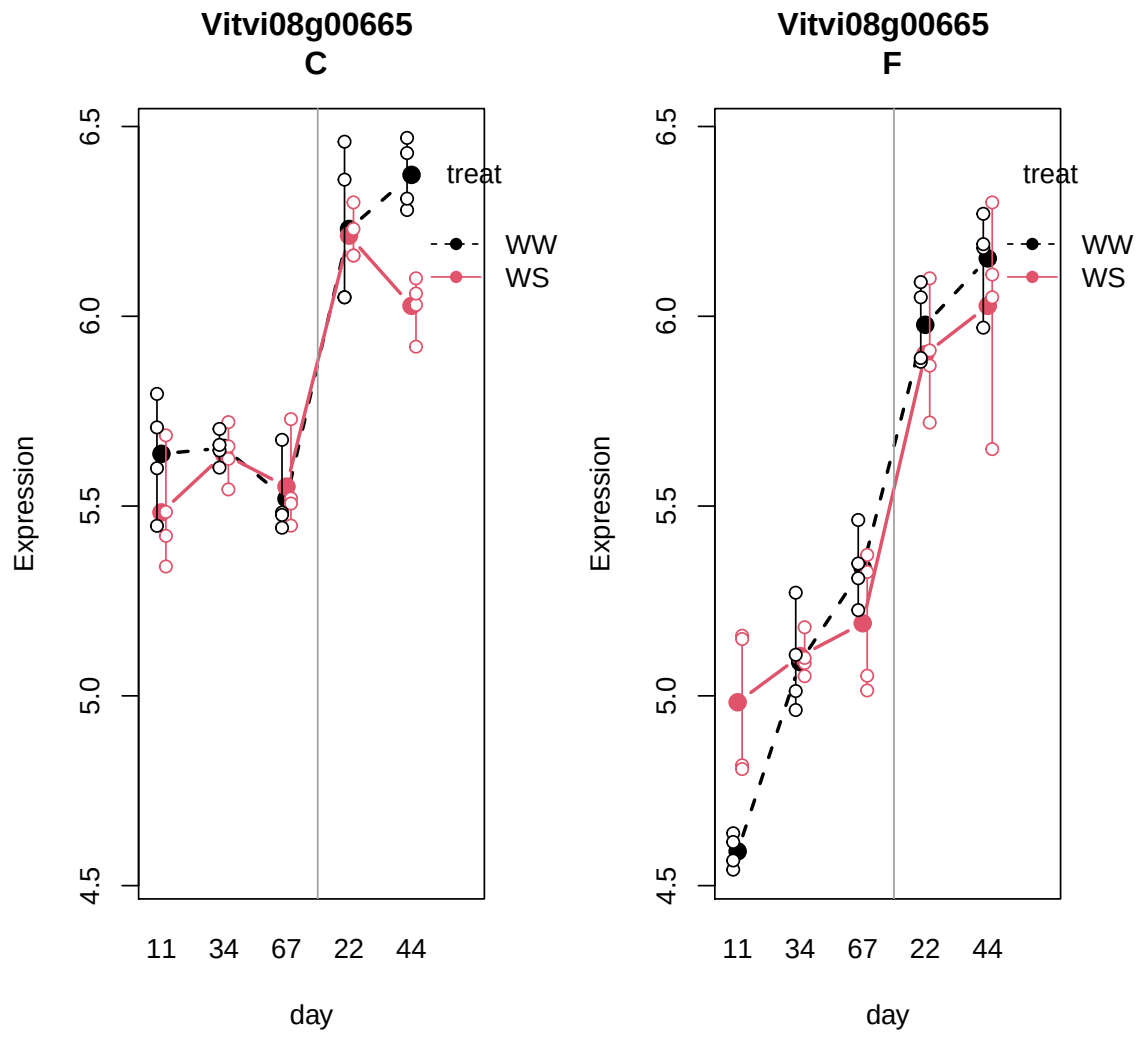
Coefficient varietyF:day67:treatWS for Vitvi08g00665.

```
> tt[varname,]
              logFC AveExpr          t      P.Value
Vitvi08g00665 -0.7246612  5.31465 -3.943325 0.0003268357
              adj.P.Val          B
Vitvi08g00665 0.04591429 0.2316664

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

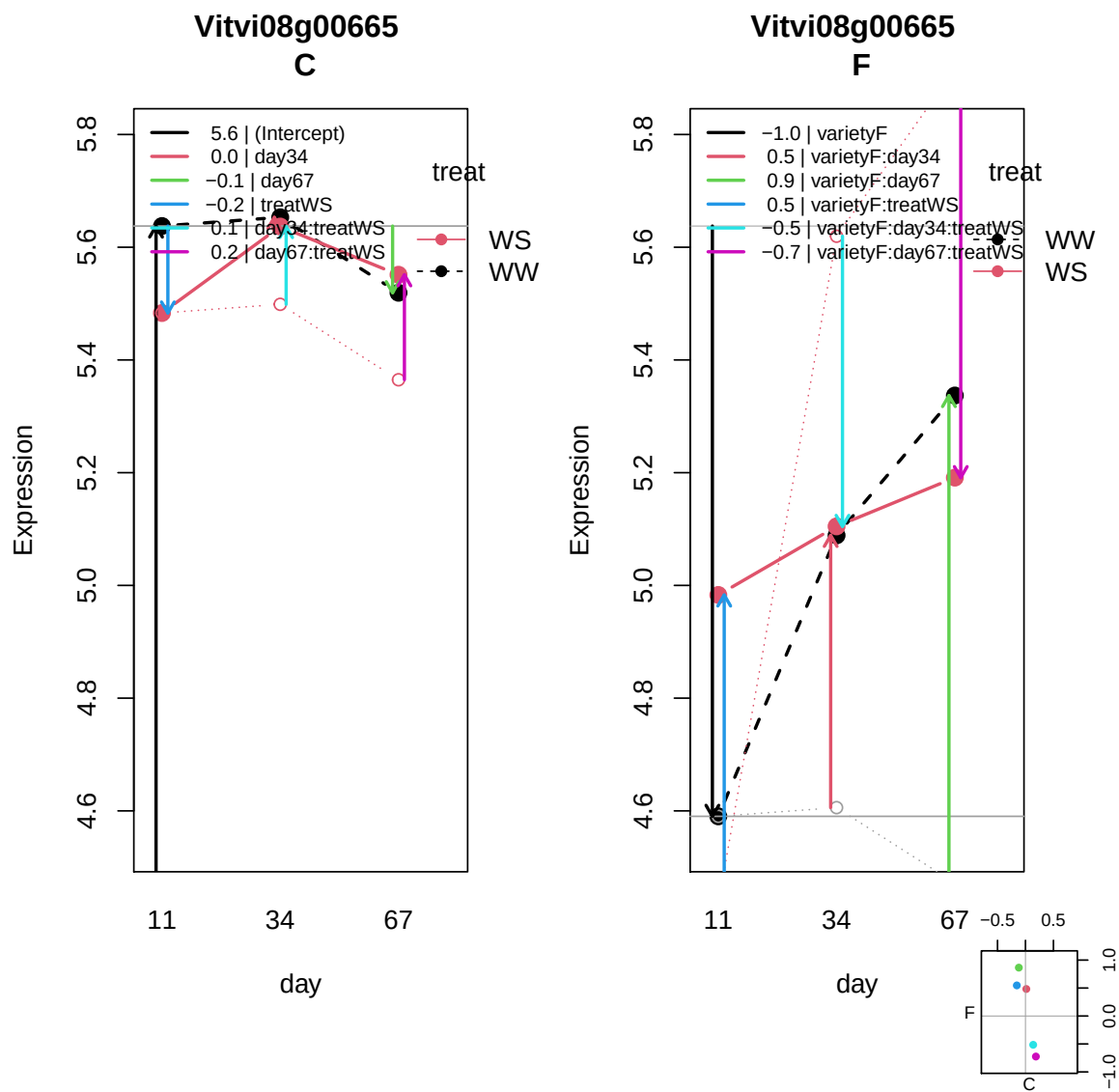
              (Intercept)  varietyF      day34      day67
Vitvi08g00665      5.637598 -1.047299  0.01545068 -0.1183944
              treatWS varietyF:day34 varietyF:day67
Vitvi08g00665     -0.1543503      0.4830254      0.864962
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi08g00665           0.5470993      0.1379536      0.1862648
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi08g00665           -0.5147499           -0.7246612

```

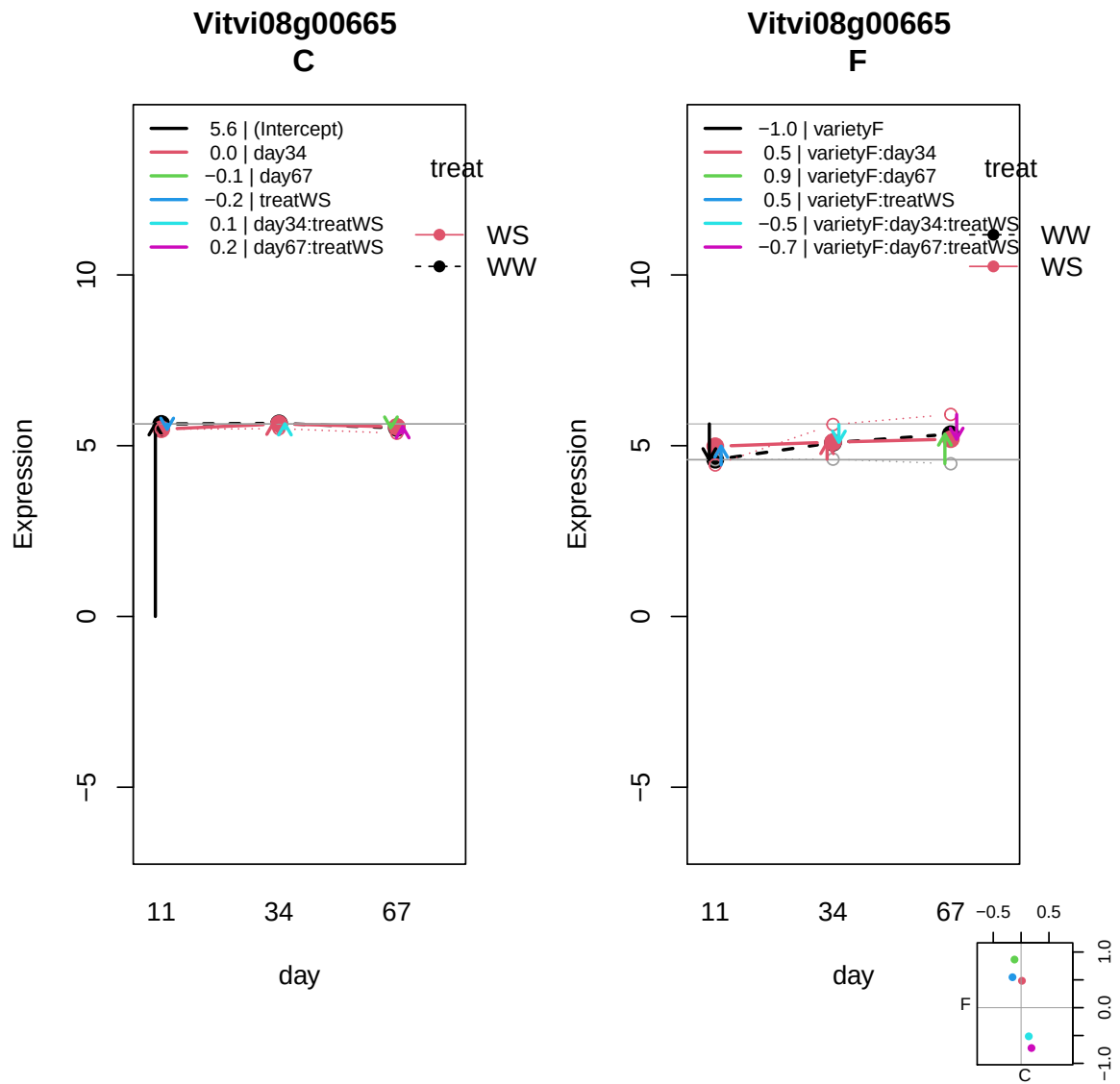
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

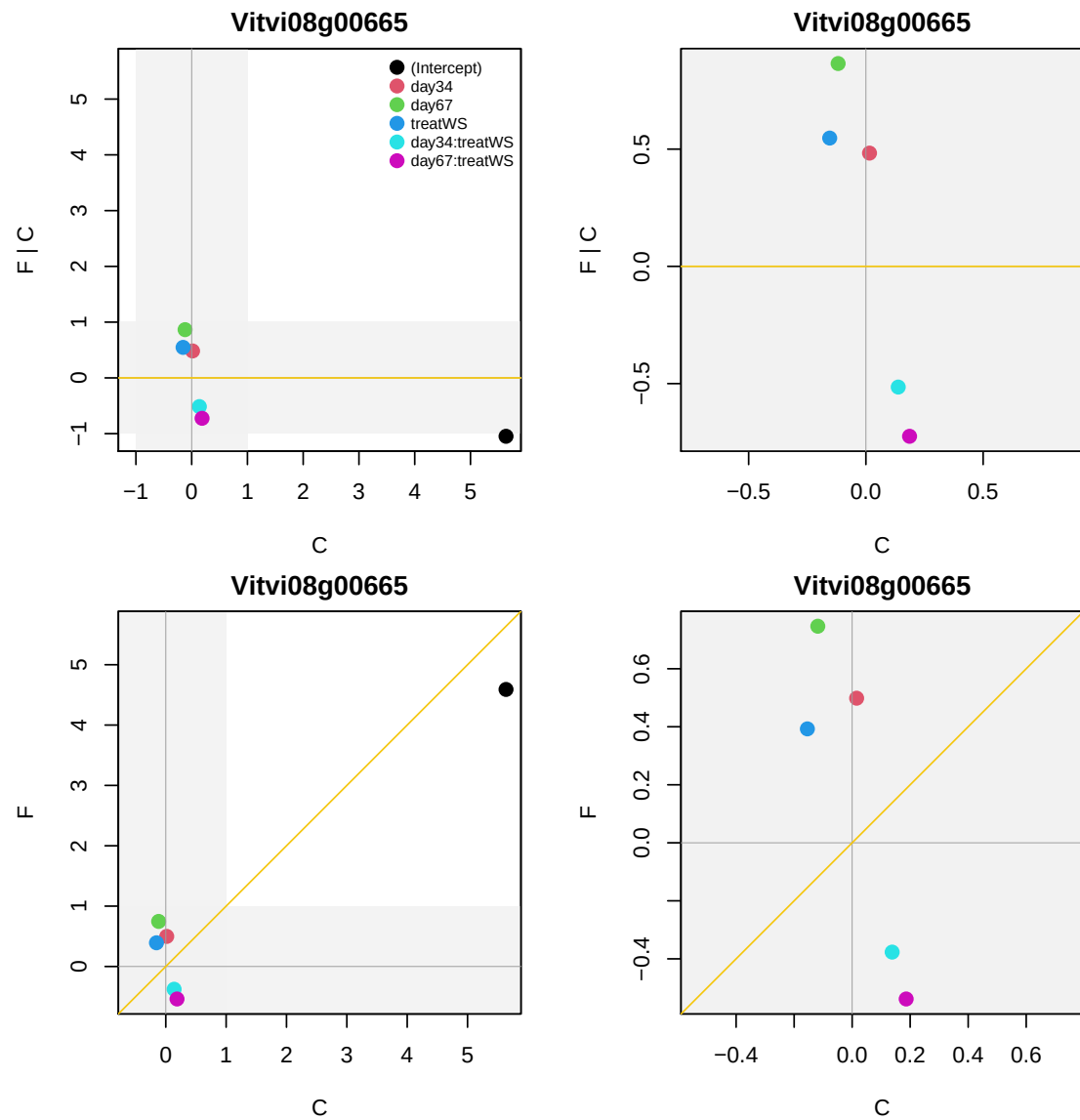


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

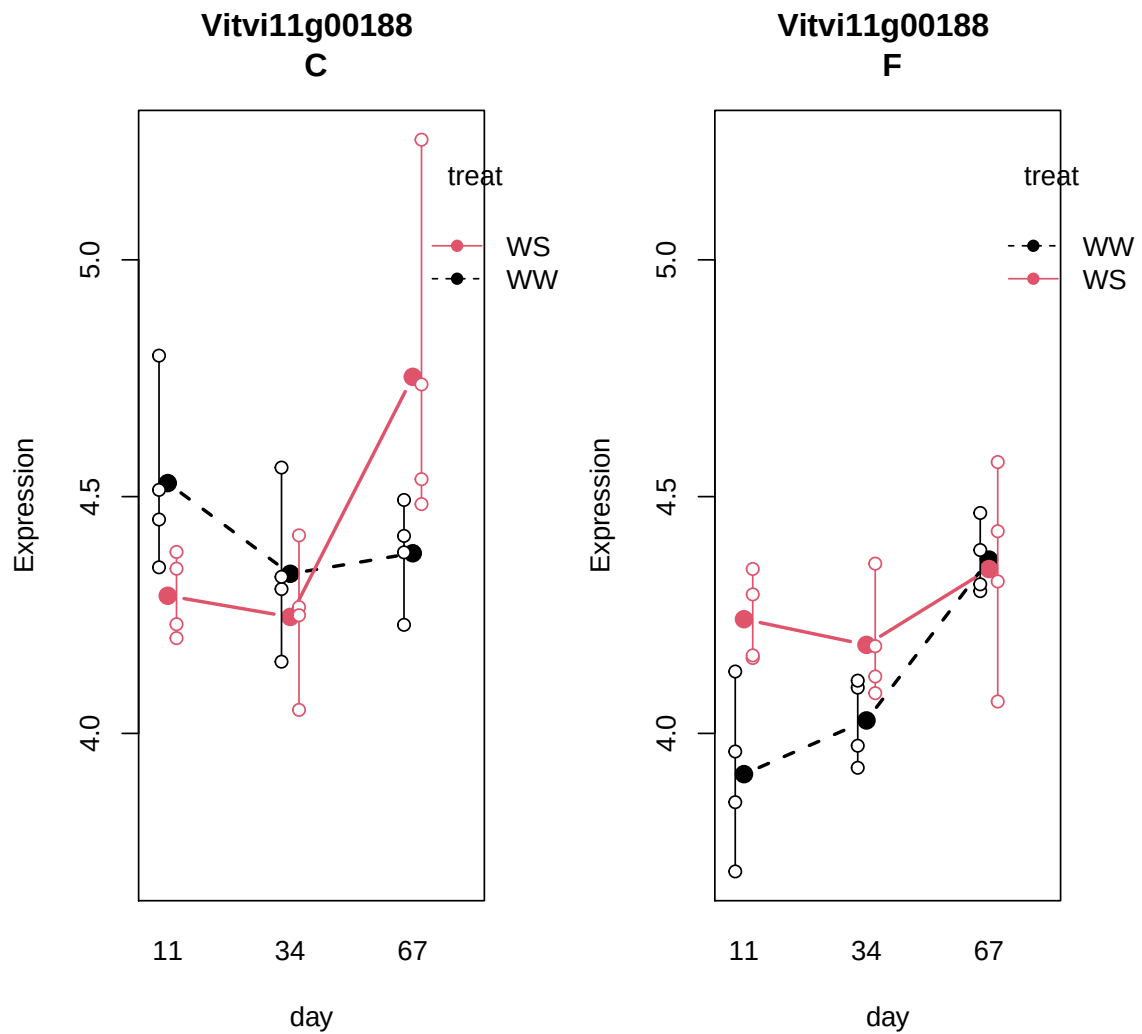


6.12.109 Vitvi11g00188

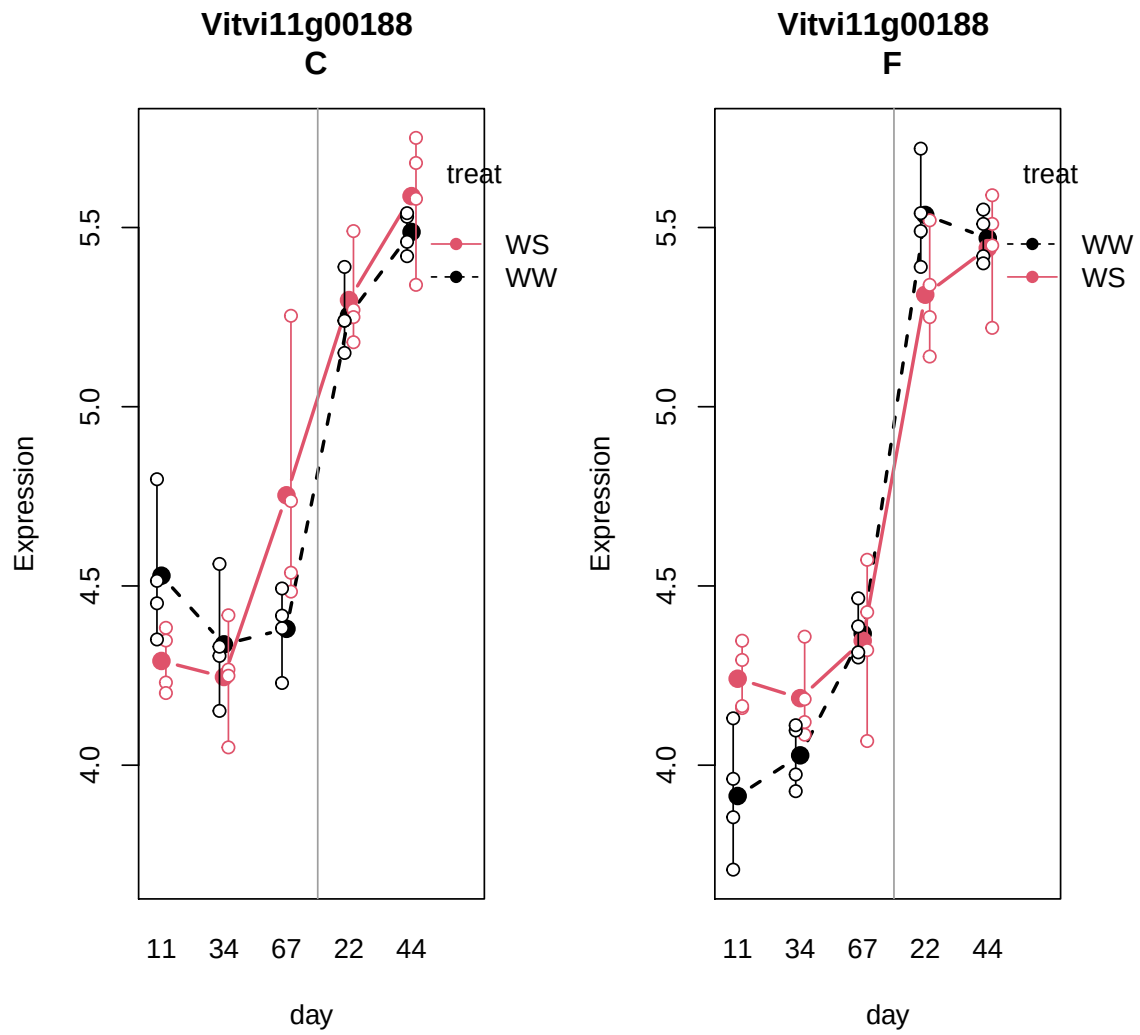
Coefficient varietyF:day67:treatWS for Vitvi11g00188.

```
> tt[varname,]
              logFC AveExpr      t      P.Value
Vitvi11g00188 -0.9576086 4.301608 -3.941773 0.0003283466
              adj.P.Val      B
Vitvi11g00188 0.04591429 0.227577

> plot.interactions(varname, phdata=pd, data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

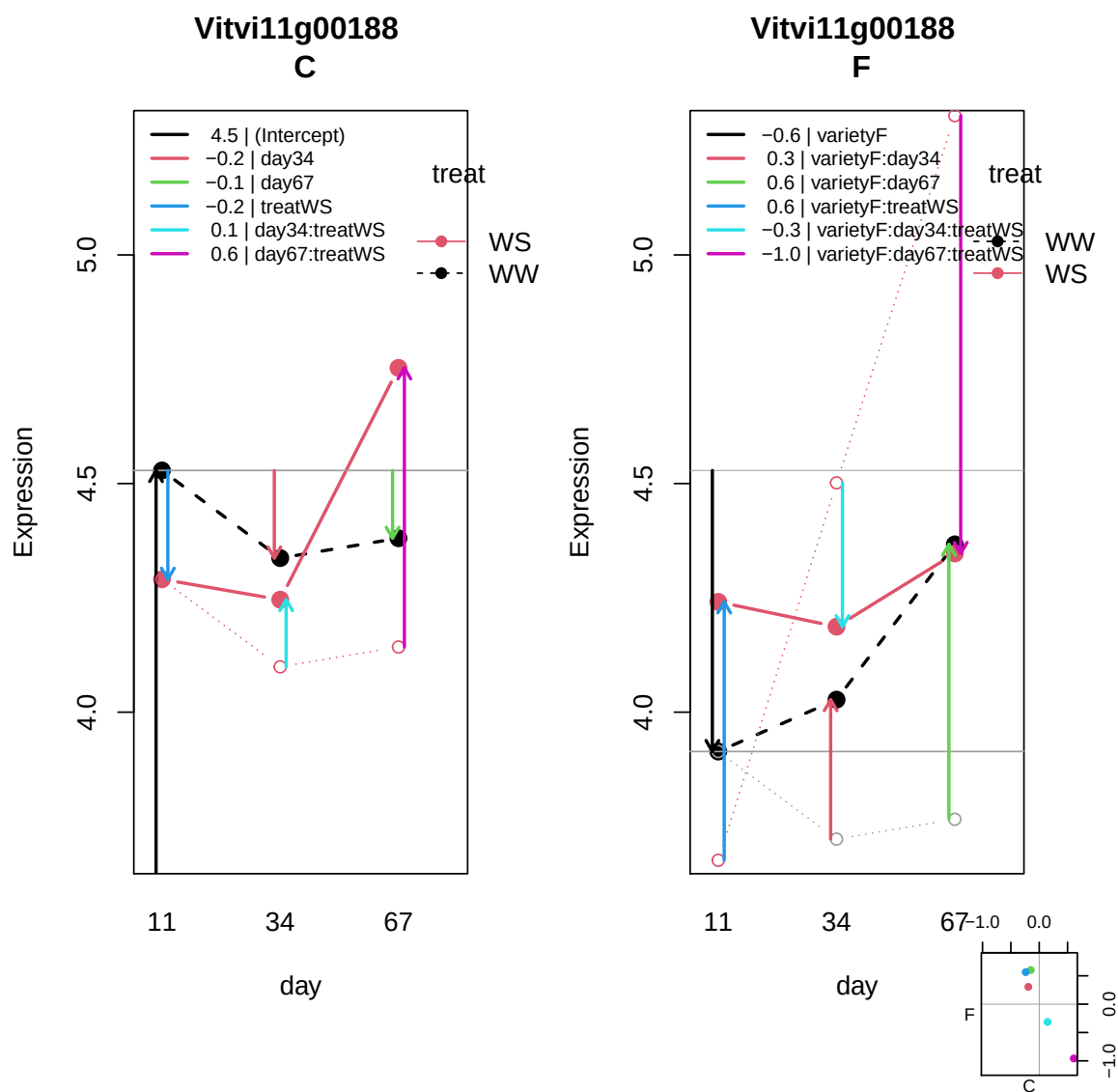
              (Intercept)    varietyF      day34      day67
Vitvi11g00188      4.528583 -0.6146199 -0.191523 -0.1481833
              treatWS varietyF:day34 varietyF:day67
Vitvi11g00188 -0.2379001      0.3049672      0.6012132
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi11g00188      0.5651445      0.146858      0.6104306
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi11g00188      -0.3145231      -0.9576086

```

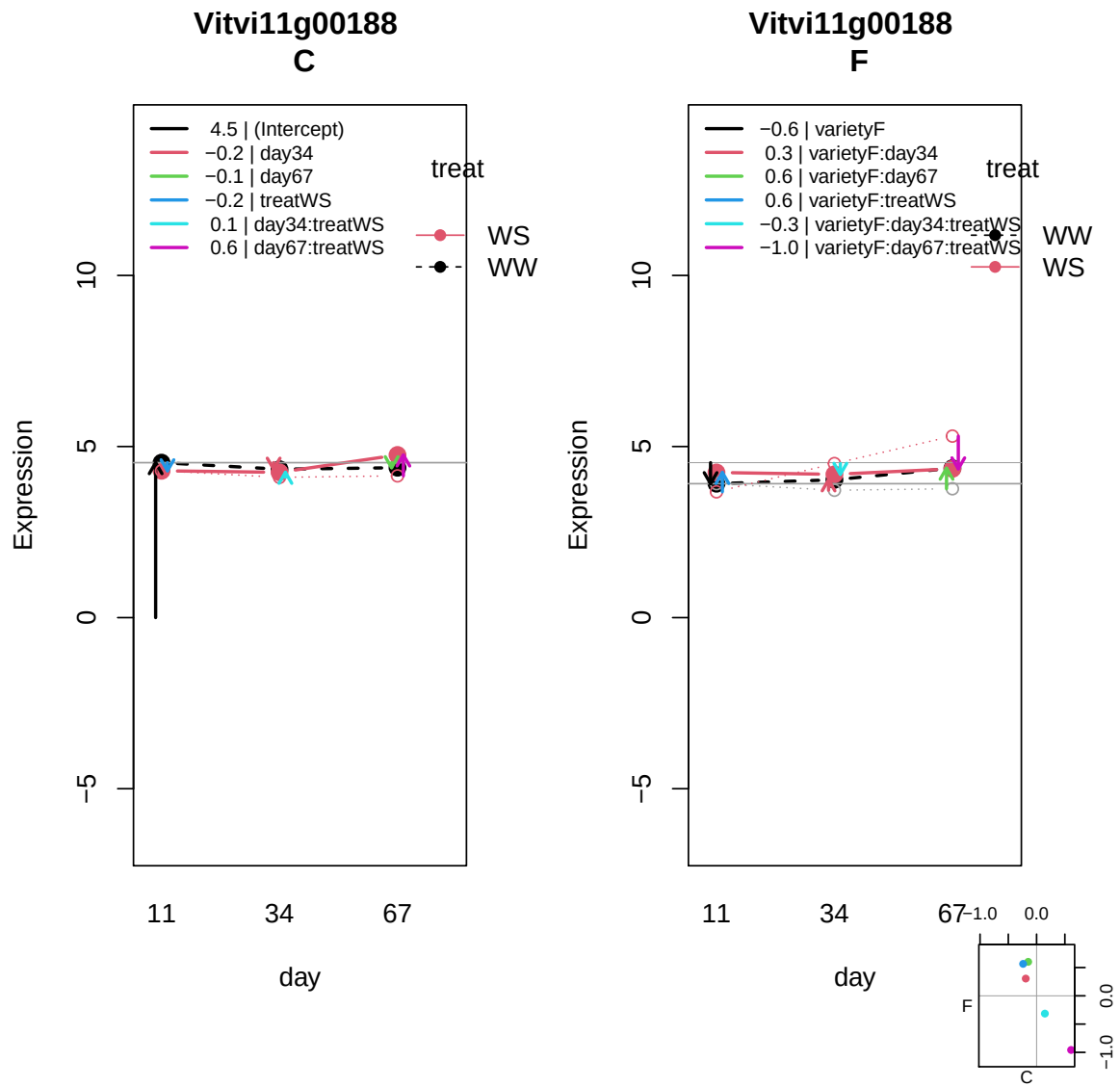
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

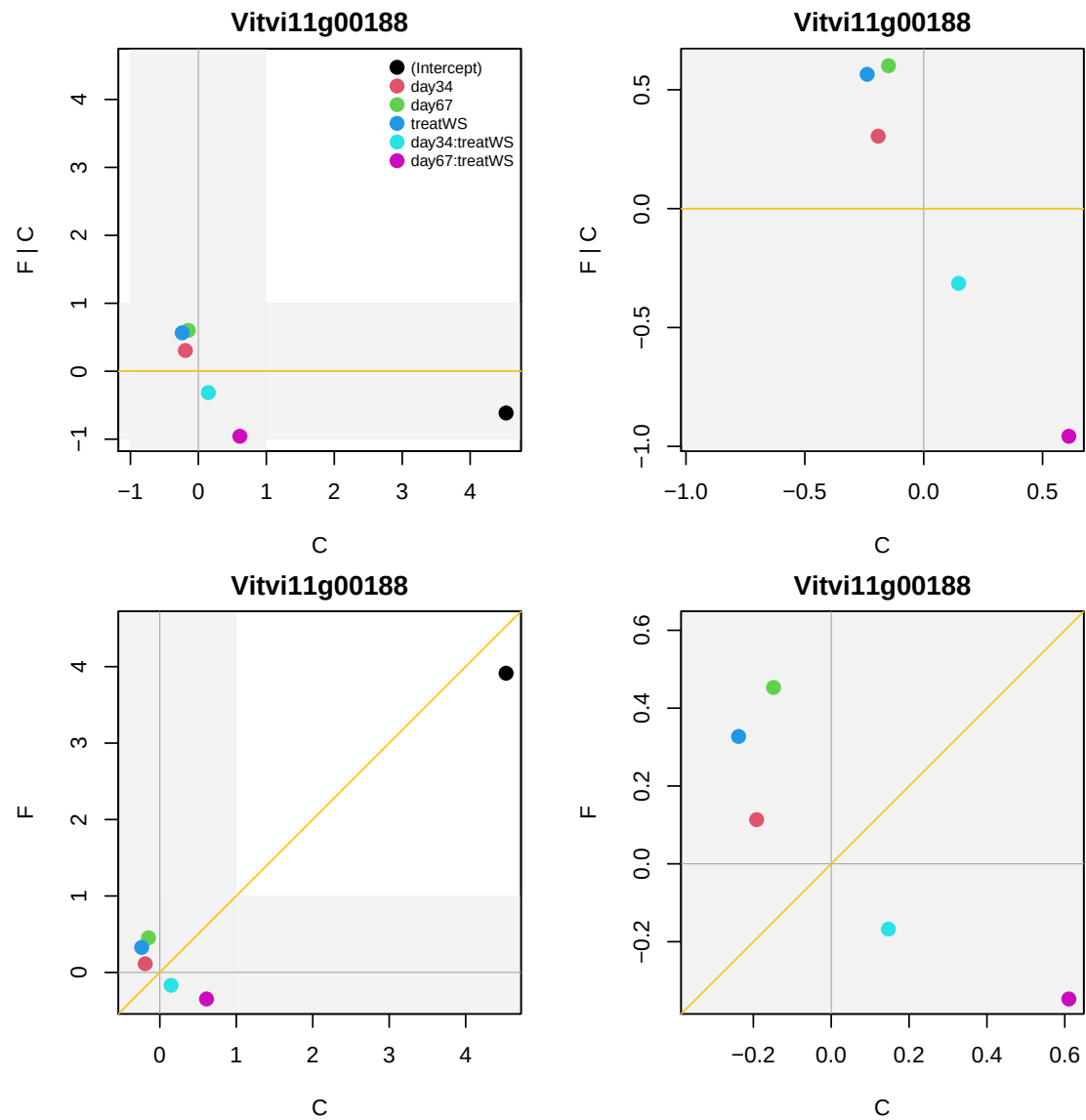


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

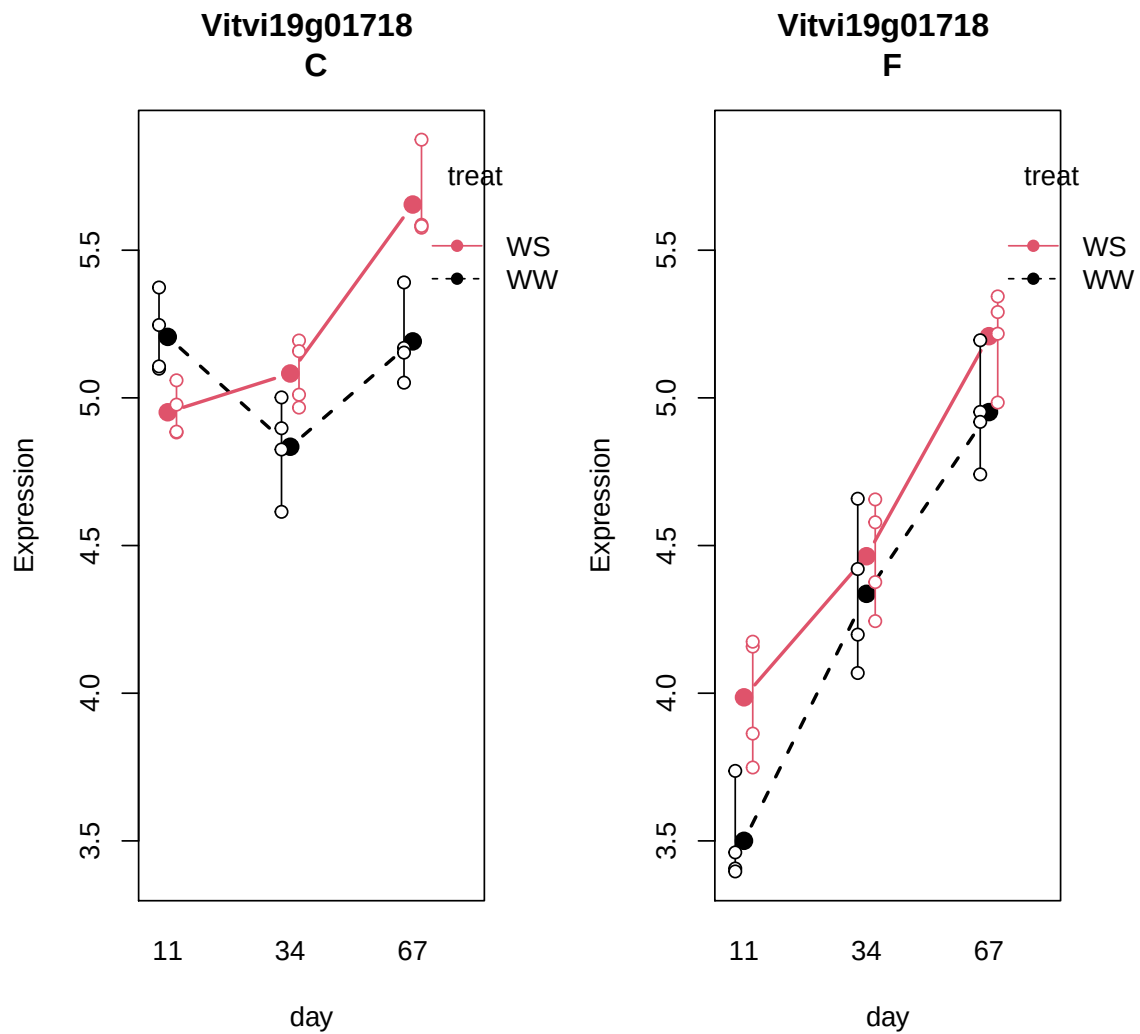


6.12.110 Vitvi19g01718

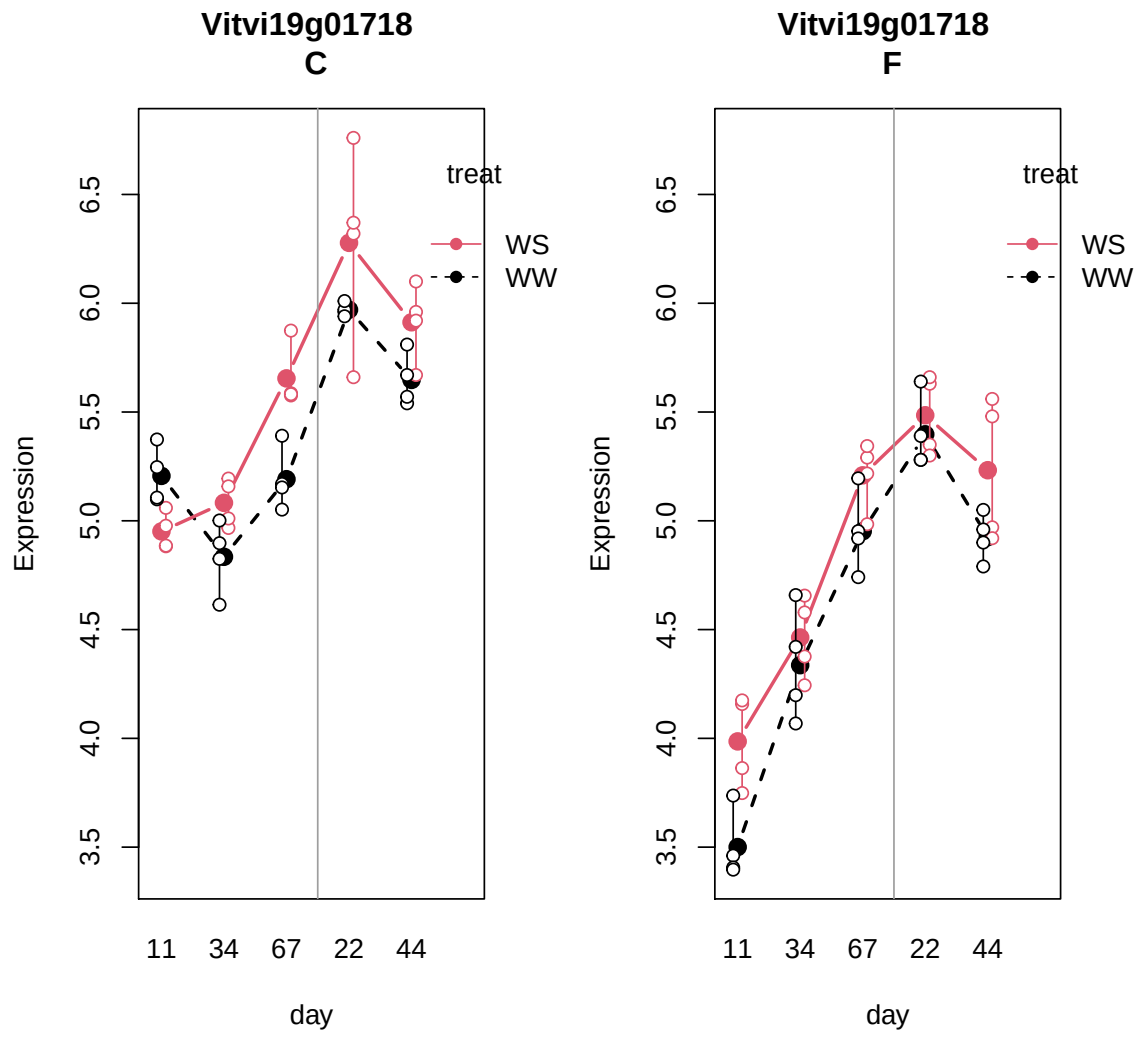
Coefficient varietyF:day67:treatWS for Vitvi19g01718.

```
> tt[varname,]
              logFC  AveExpr          t      P.Value
Vitvi19g01718 -0.9472627  4.780632 -3.937457 0.0003325813
              adj.P.Val          B
Vitvi19g01718 0.04608367 0.2162143

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

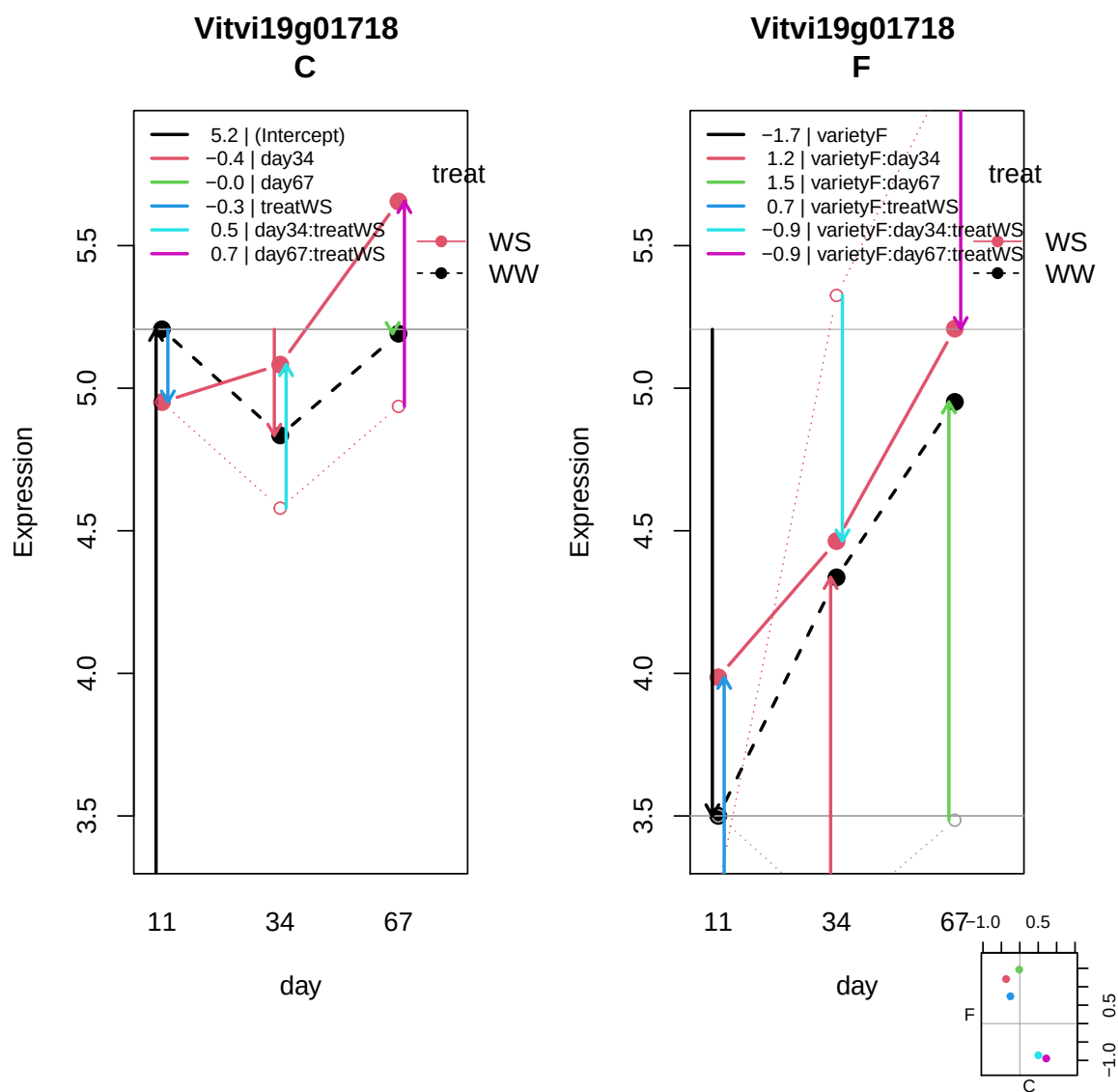
              (Intercept)  varietyF      day34      day67
Vitvi19g01718    5.206412 -1.706178 -0.3719201 -0.01521597
              treatWS varietyF:day34 varietyF:day67
Vitvi19g01718 -0.2551551    1.208128    1.466787
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi19g01718    0.7409373    0.5032096    0.7185416
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi19g01718          -0.861701          -0.9472627

```

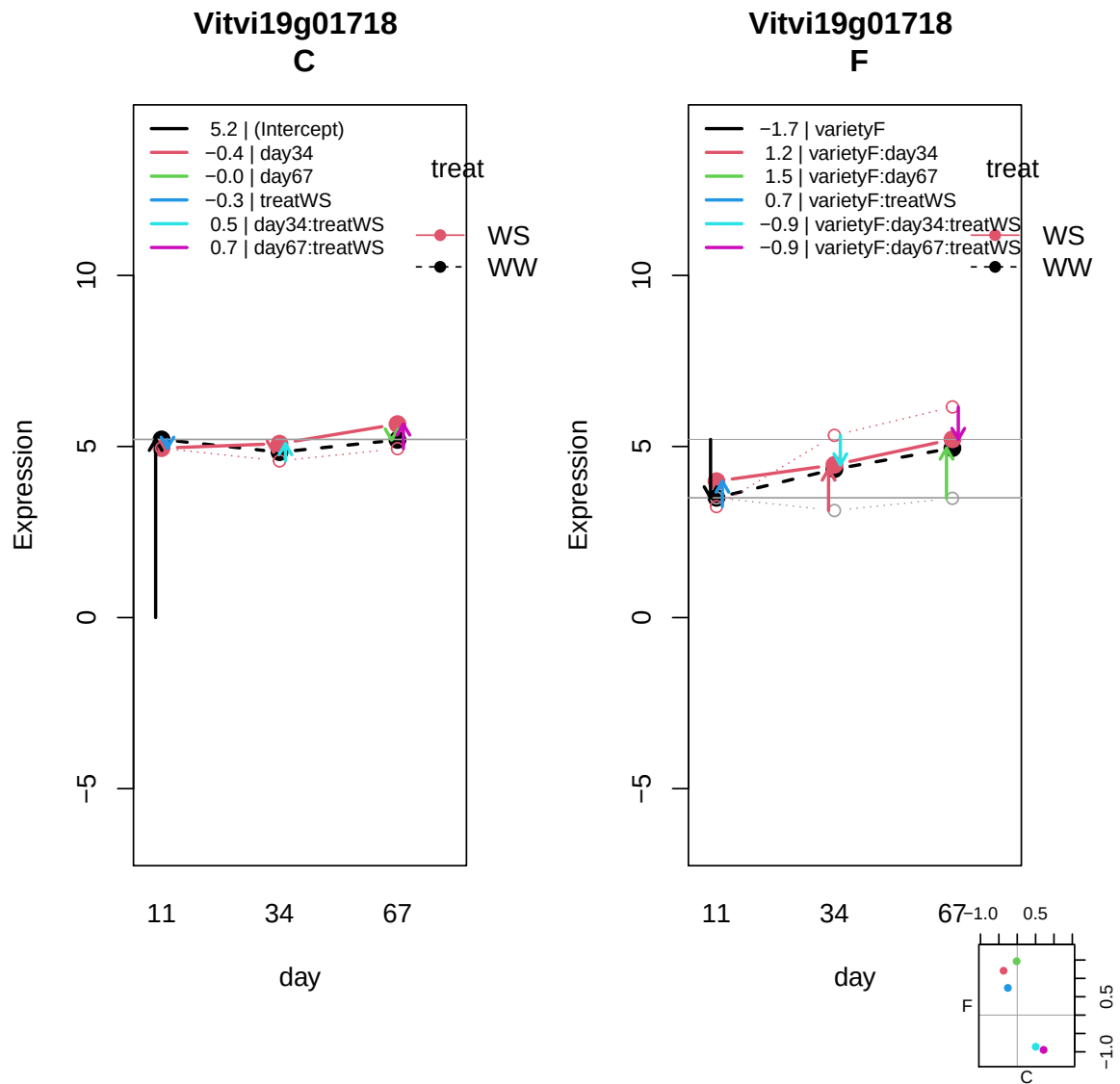
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

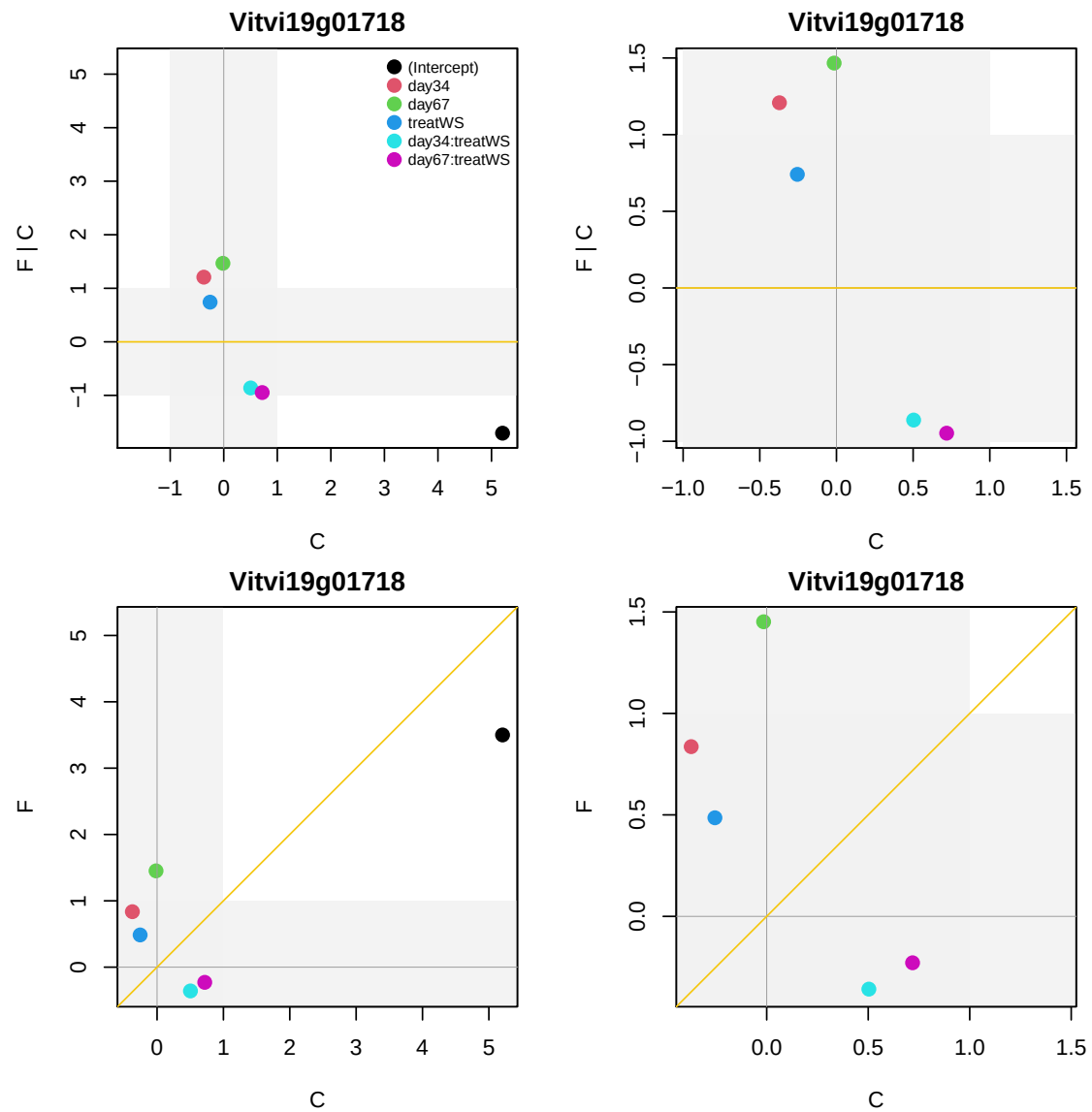


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

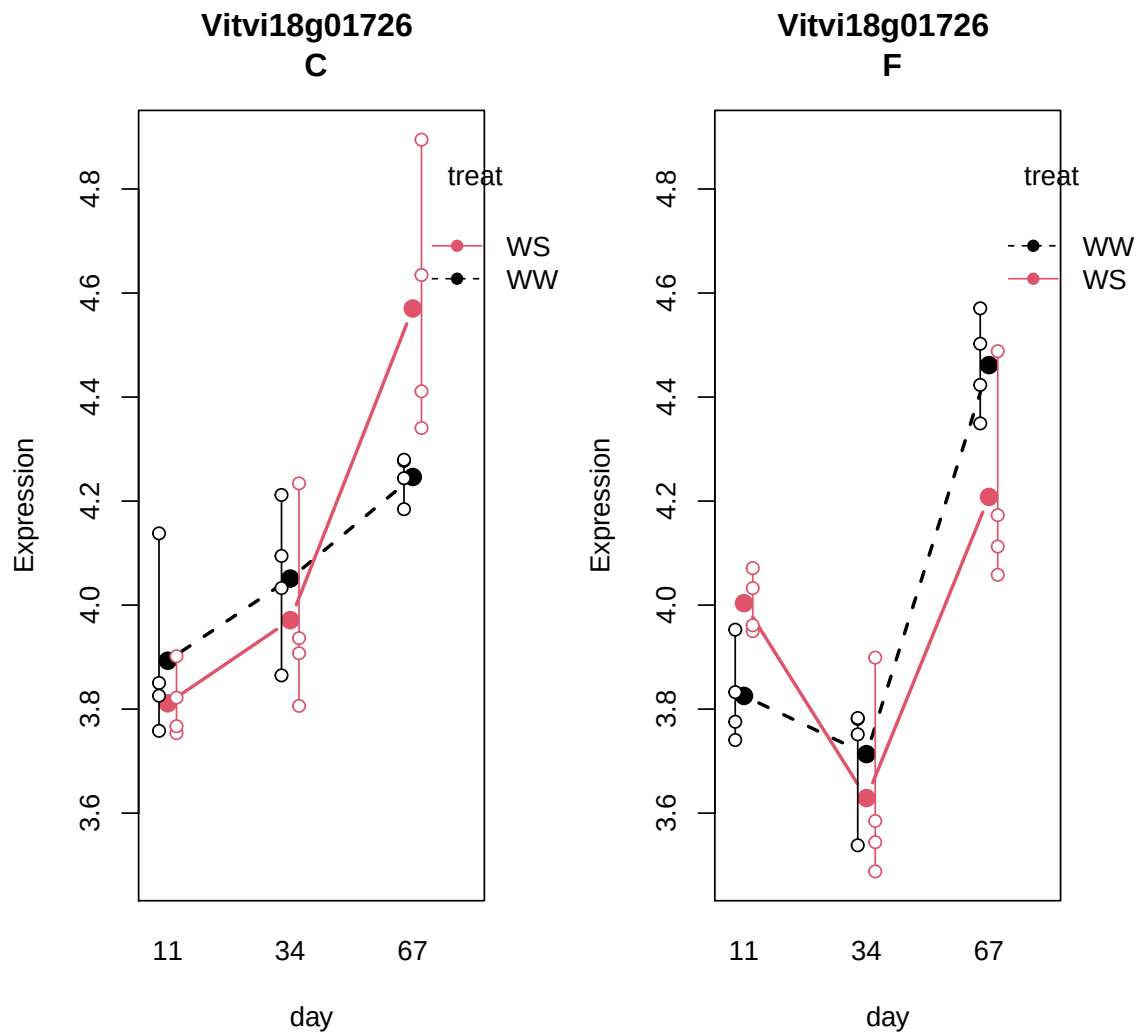


6.12.111 Vitvi18g01726

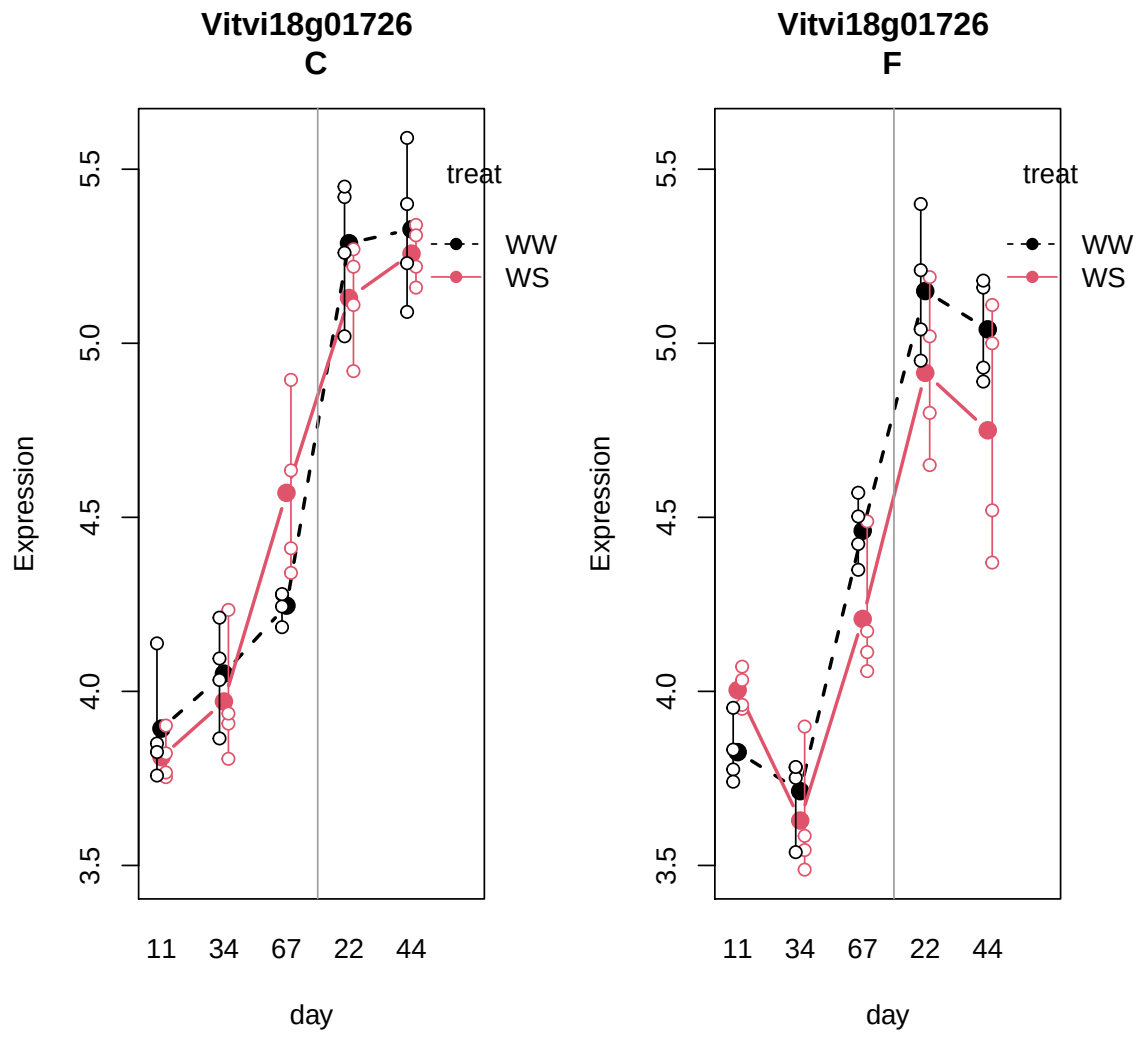
Coefficient varietyF:day67:treatWS for Vitvi18g01726.

```
> tt[varname,]
              logFC AveExpr          t      P.Value
Vitvi18g01726 -0.8376827  4.031966 -3.933158 0.0003368522
              adj.P.Val          B
Vitvi18g01726 0.04625497 0.2049007

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



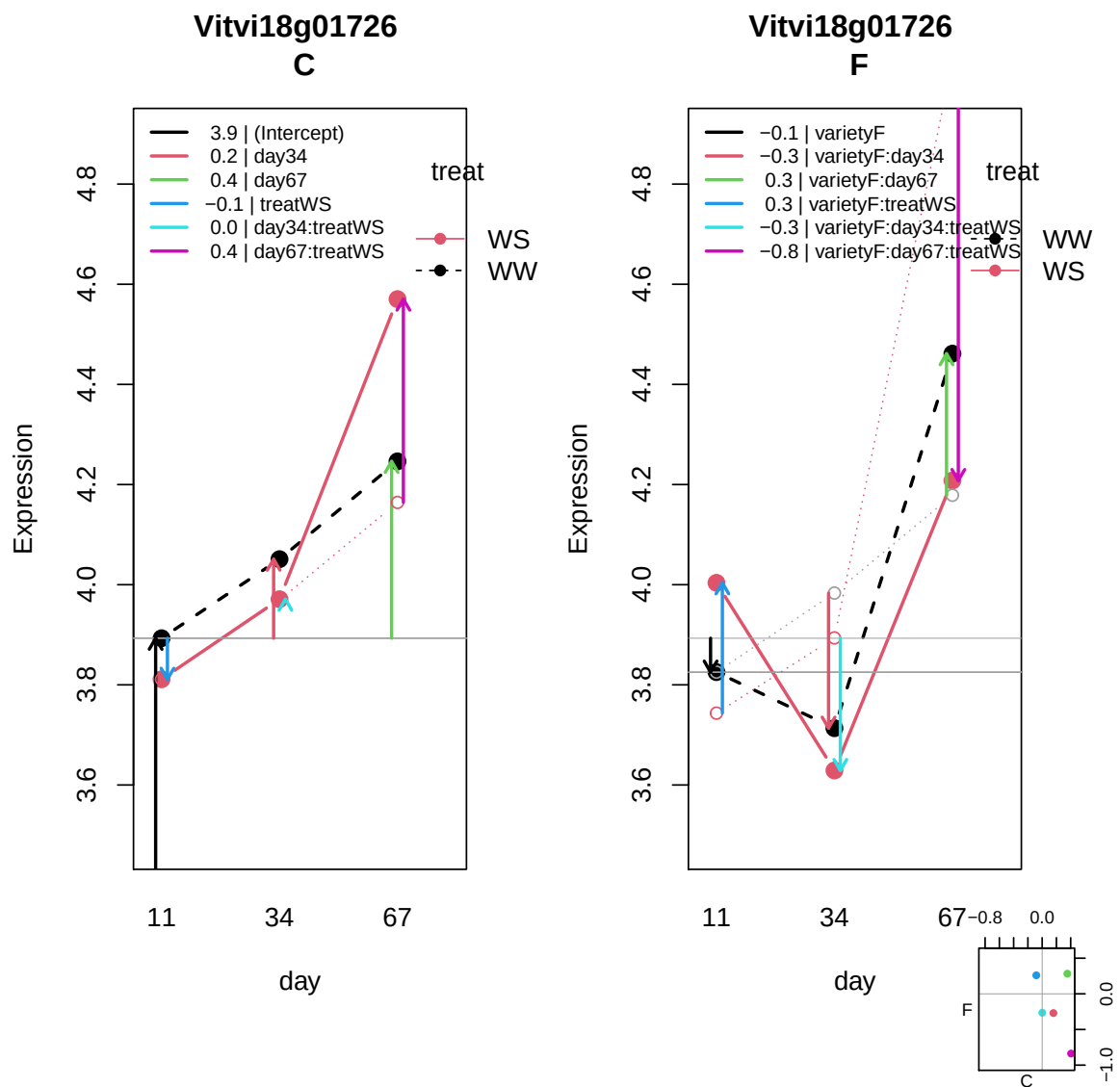
```

> fit1[varname,]$coefficients

              (Intercept)      varietyF      day34      day67
Vitvi18g01726      3.893044 -0.06764547 0.1579251 0.3532327
              treatWS varietyF:day34 varietyF:day67
Vitvi18g01726 -0.08194227      -0.2698934      0.2828066
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi18g01726      0.2602423      0.001980788      0.4059322
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi18g01726      -0.2647444      -0.8376827

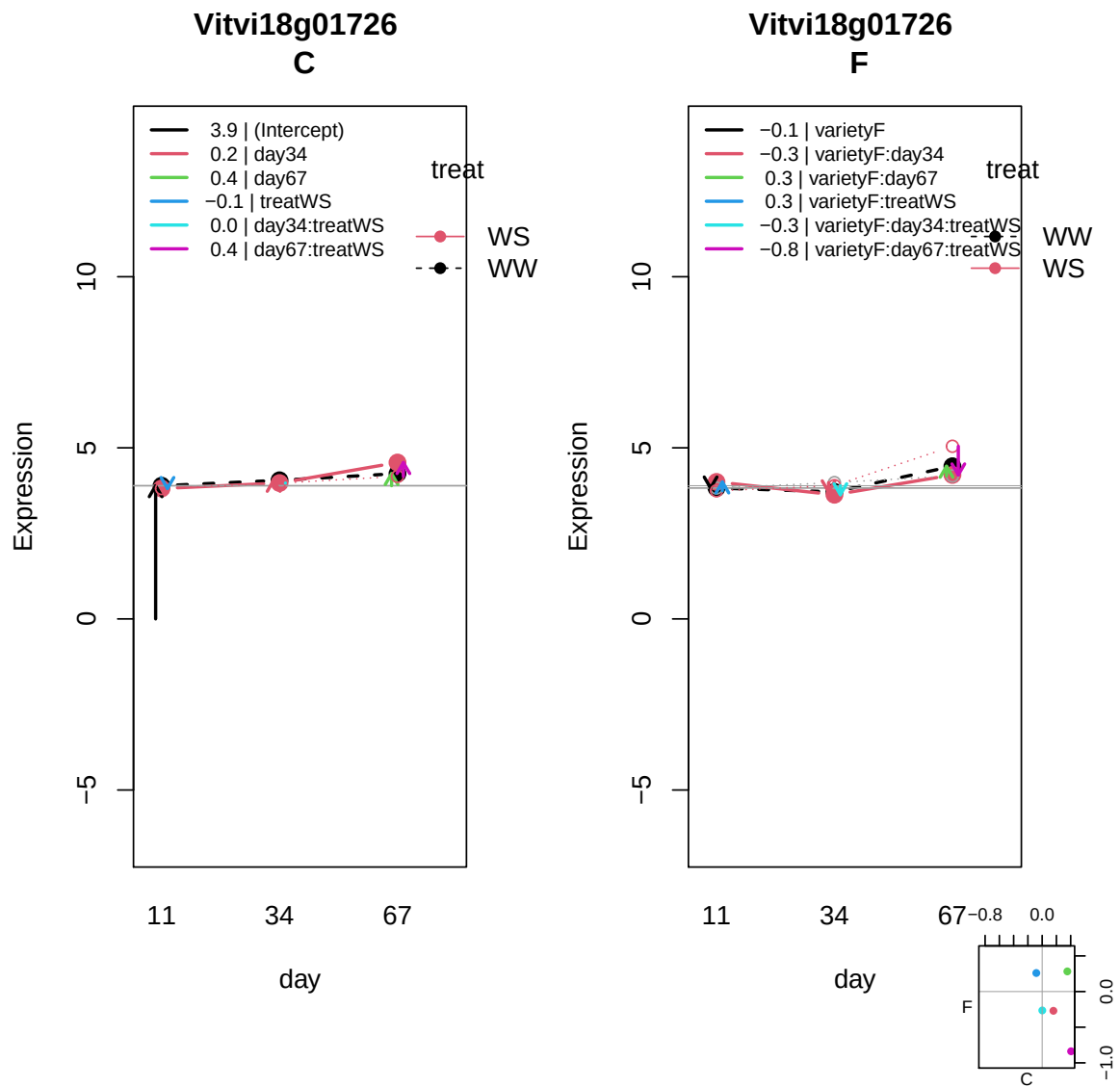
> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



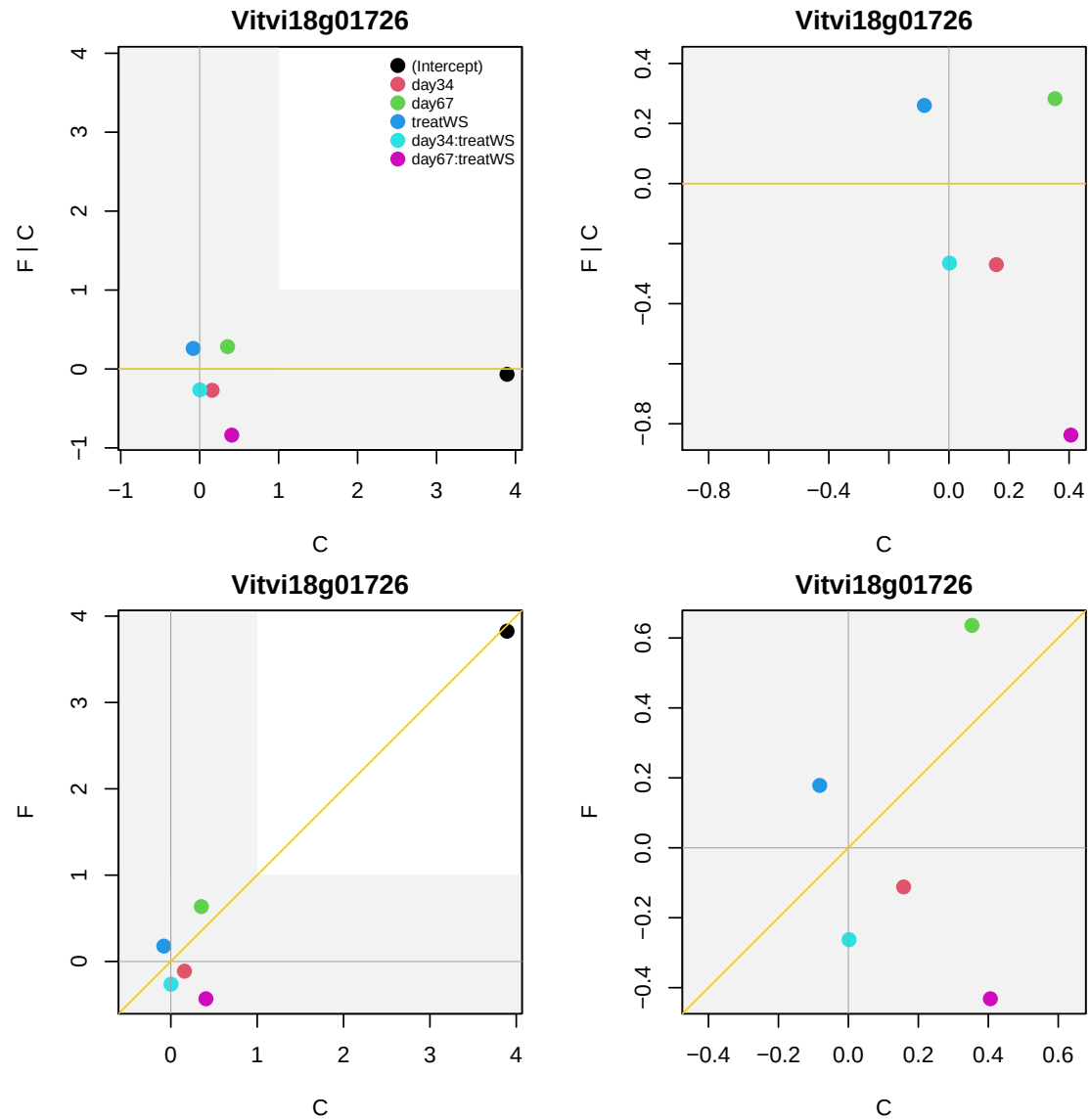
```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```

Warning in arrows(1:ndays + d, es, 1:ndays + d, esF, col = cl + 1:ndays, : zero



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



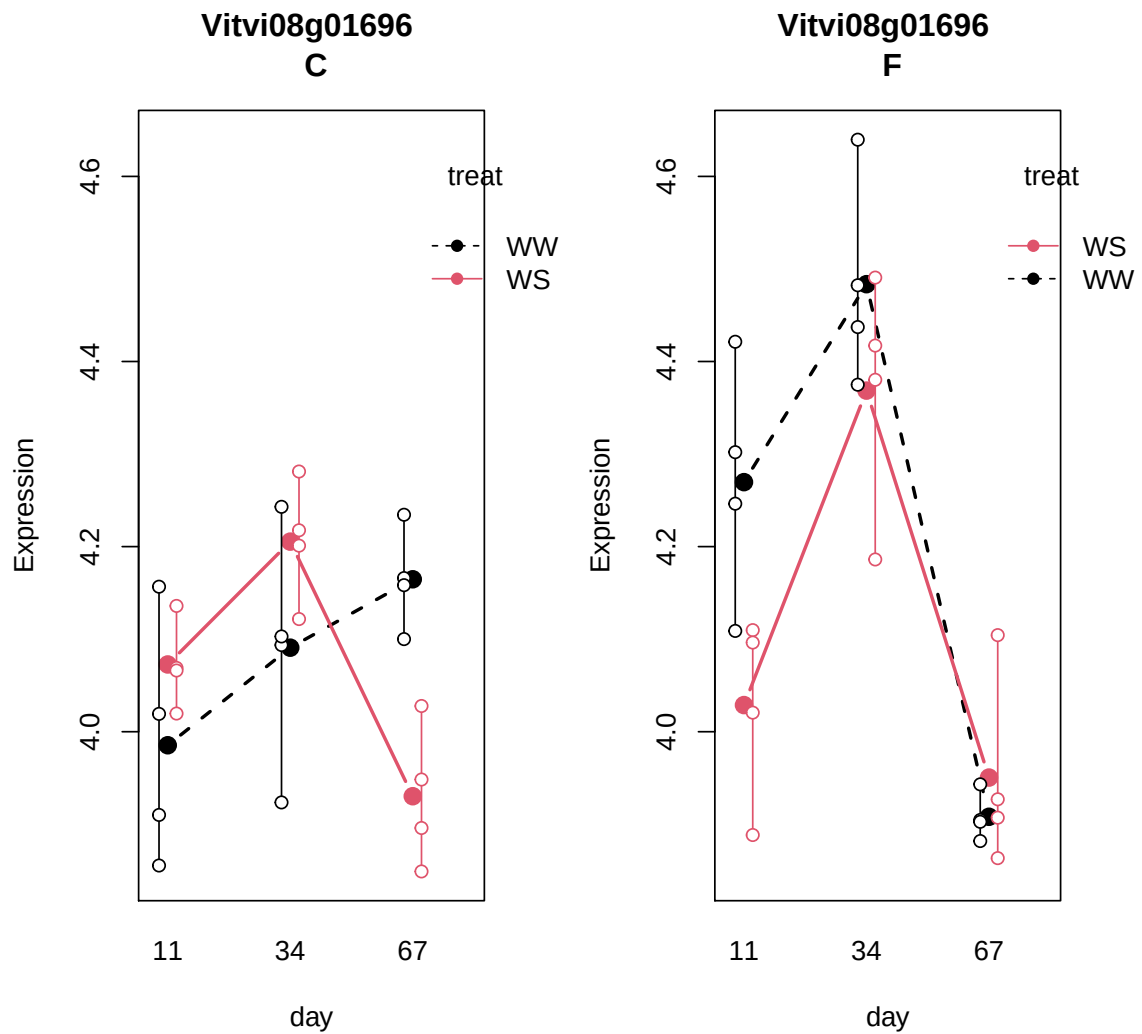
6.12.112 Vitvi08g01696

Coefficient varietyF:day67:treatWS for Vitvi08g01696.

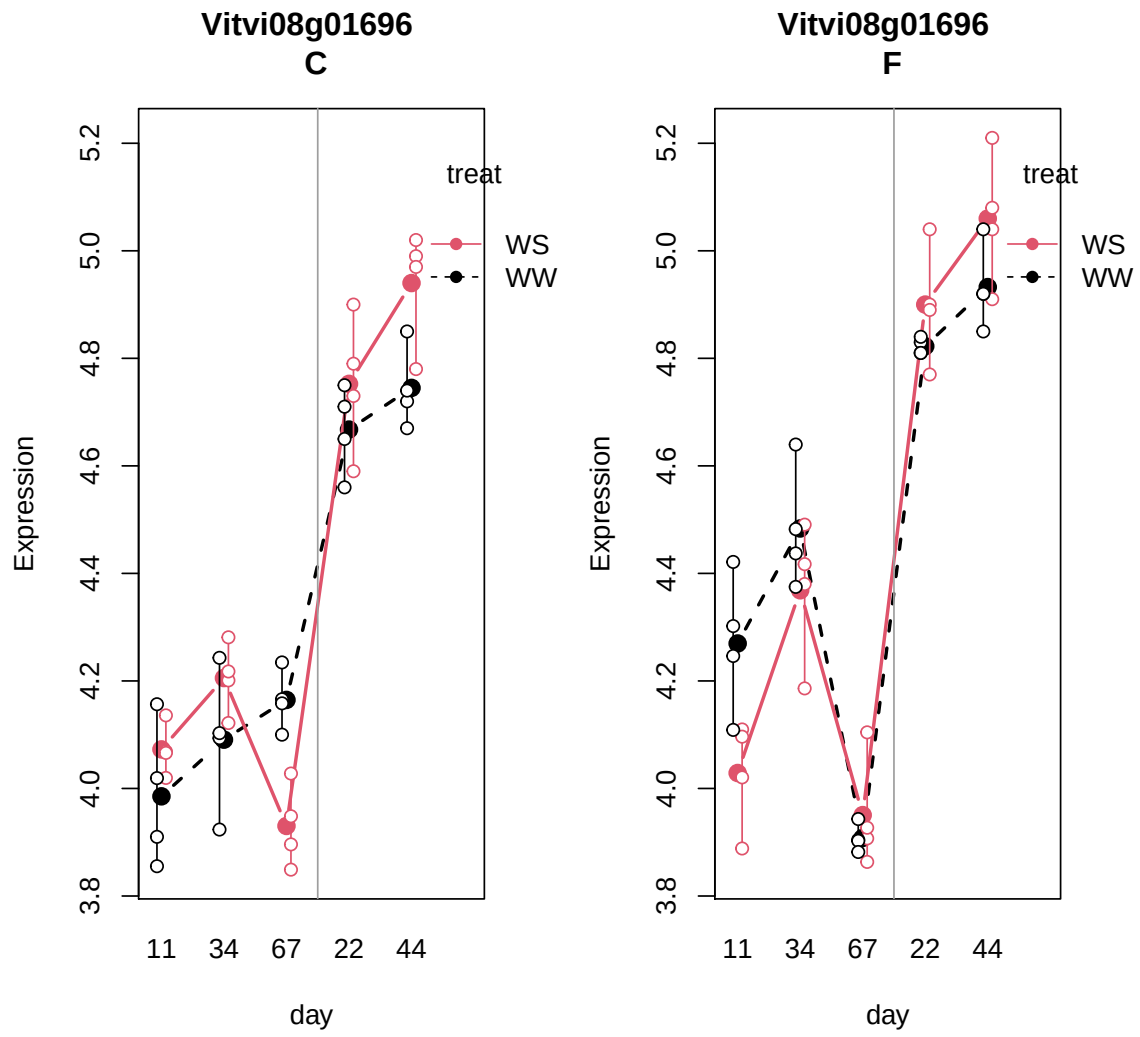
```
> tt[varname,]
```

	logFC	AveExpr	t	P.Value
Vitvi08g01696	0.6049903	4.121518	3.92189	0.0003483003
	adj.P.Val	B		
Vitvi08g01696	0.04739993	0.1752713		

```
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



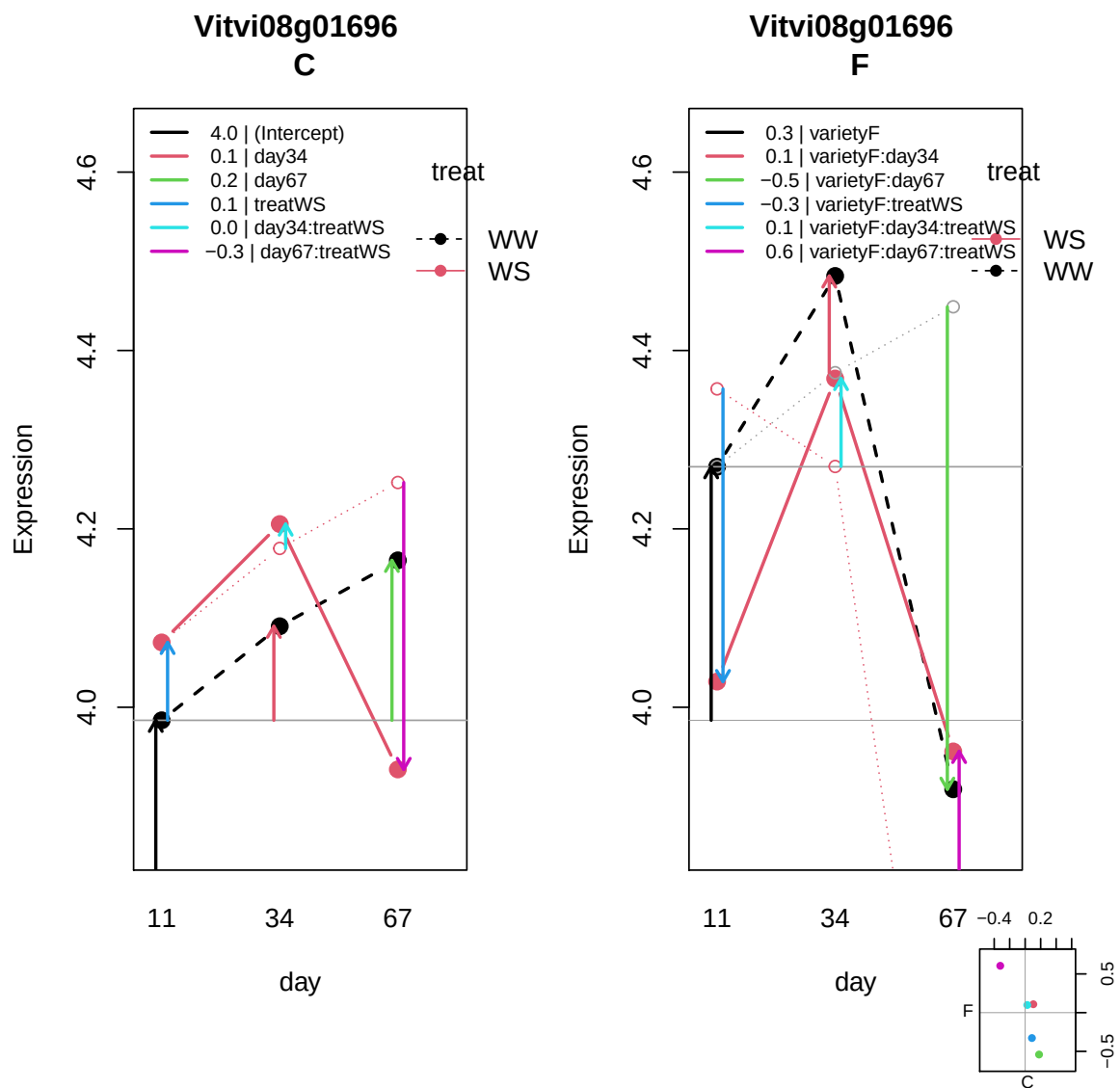

```

> fit1[varname,]$coefficients

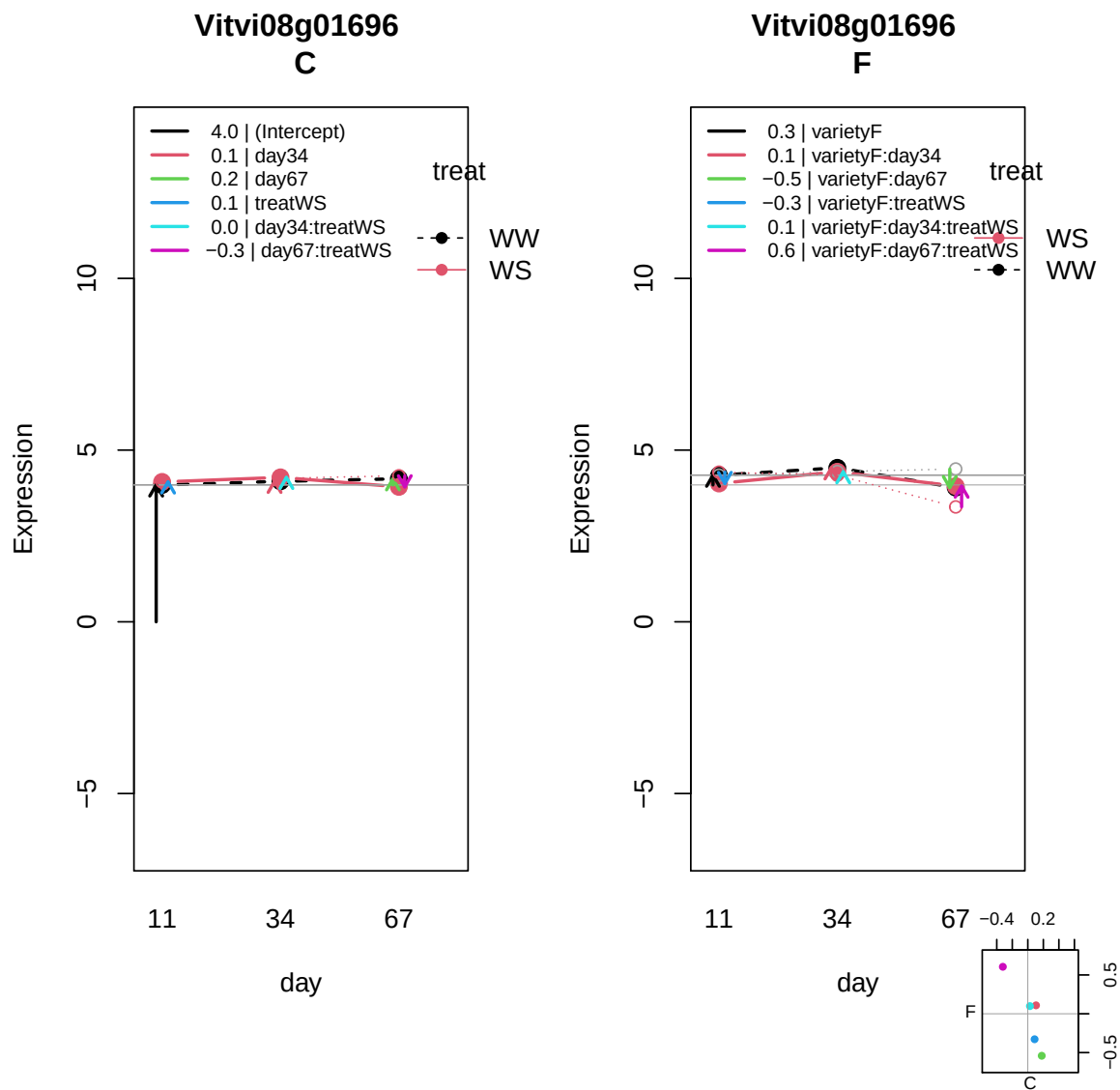
              (Intercept)  varietyF      day34      day67
Vitvi08g01696      3.985359 0.2842993 0.1054279 0.1793349
              treatWS varietyF:day34 varietyF:day67
Vitvi08g01696 0.08729379      0.108462      -0.5409247
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi08g01696      -0.3281874      0.02730453      -0.3217044
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi08g01696      0.09859877      0.6049903

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

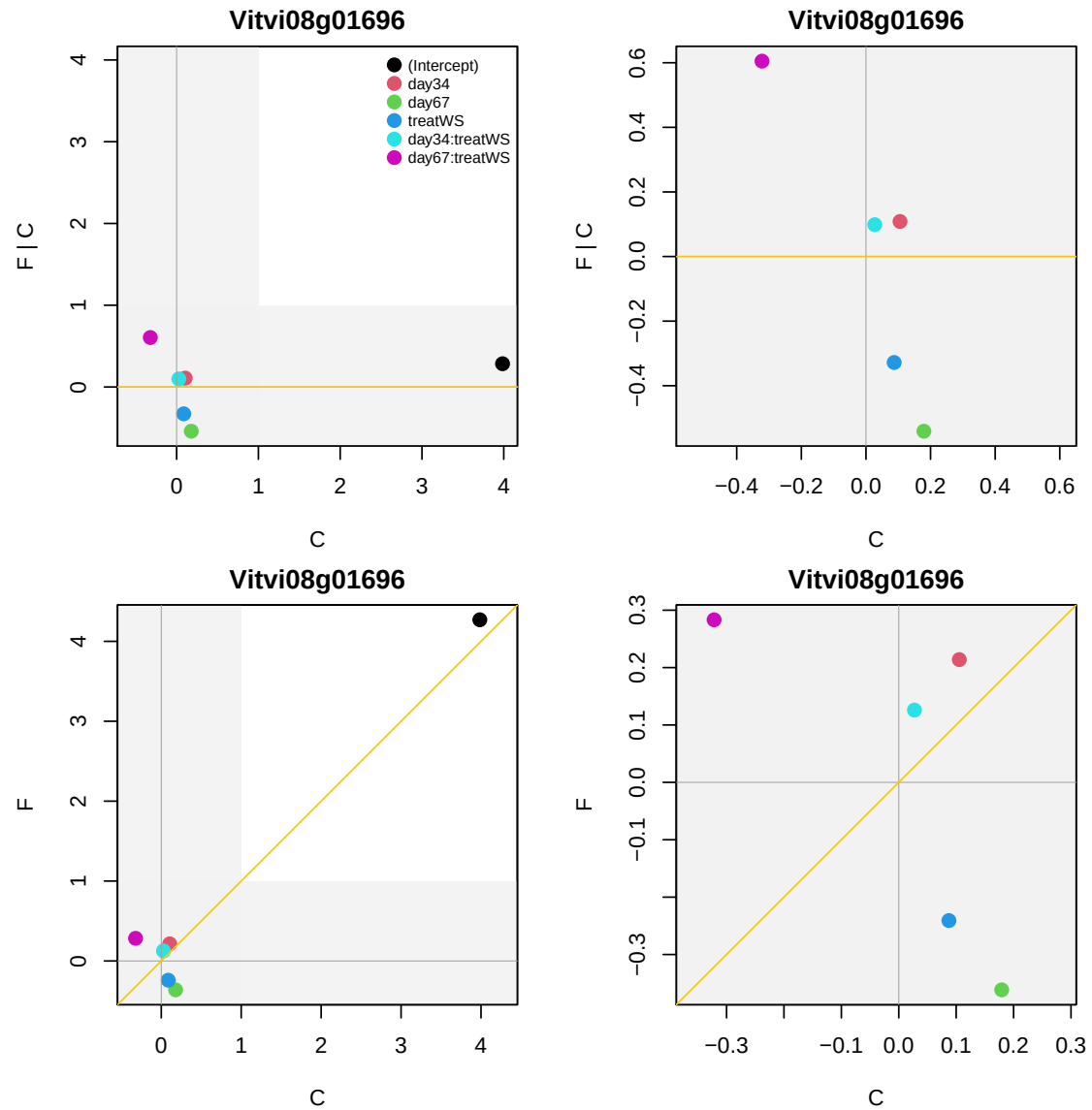


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



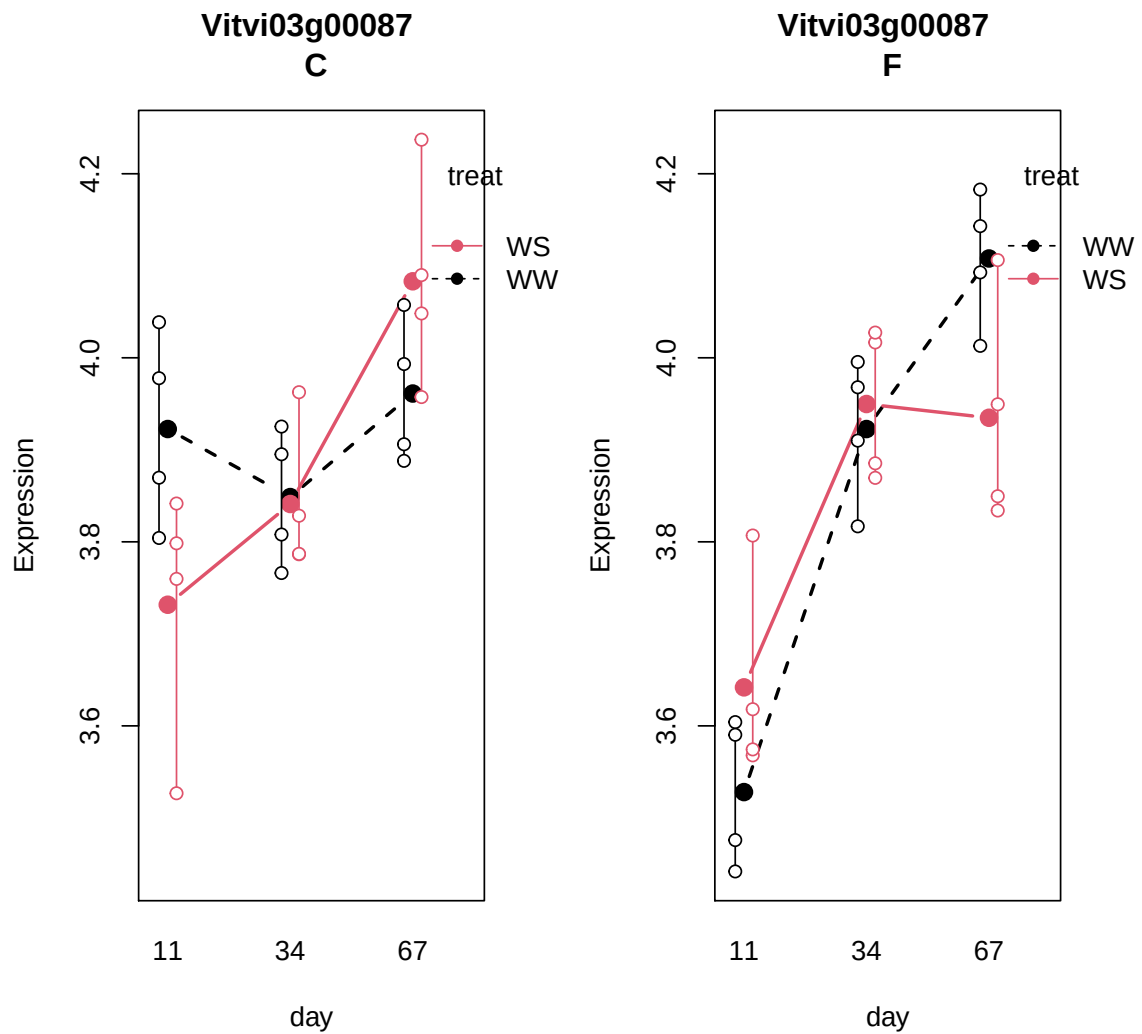
6.12.113 Vitvi03g00087

Coefficient varietyF:day67:treatWS for Vitvi03g00087.

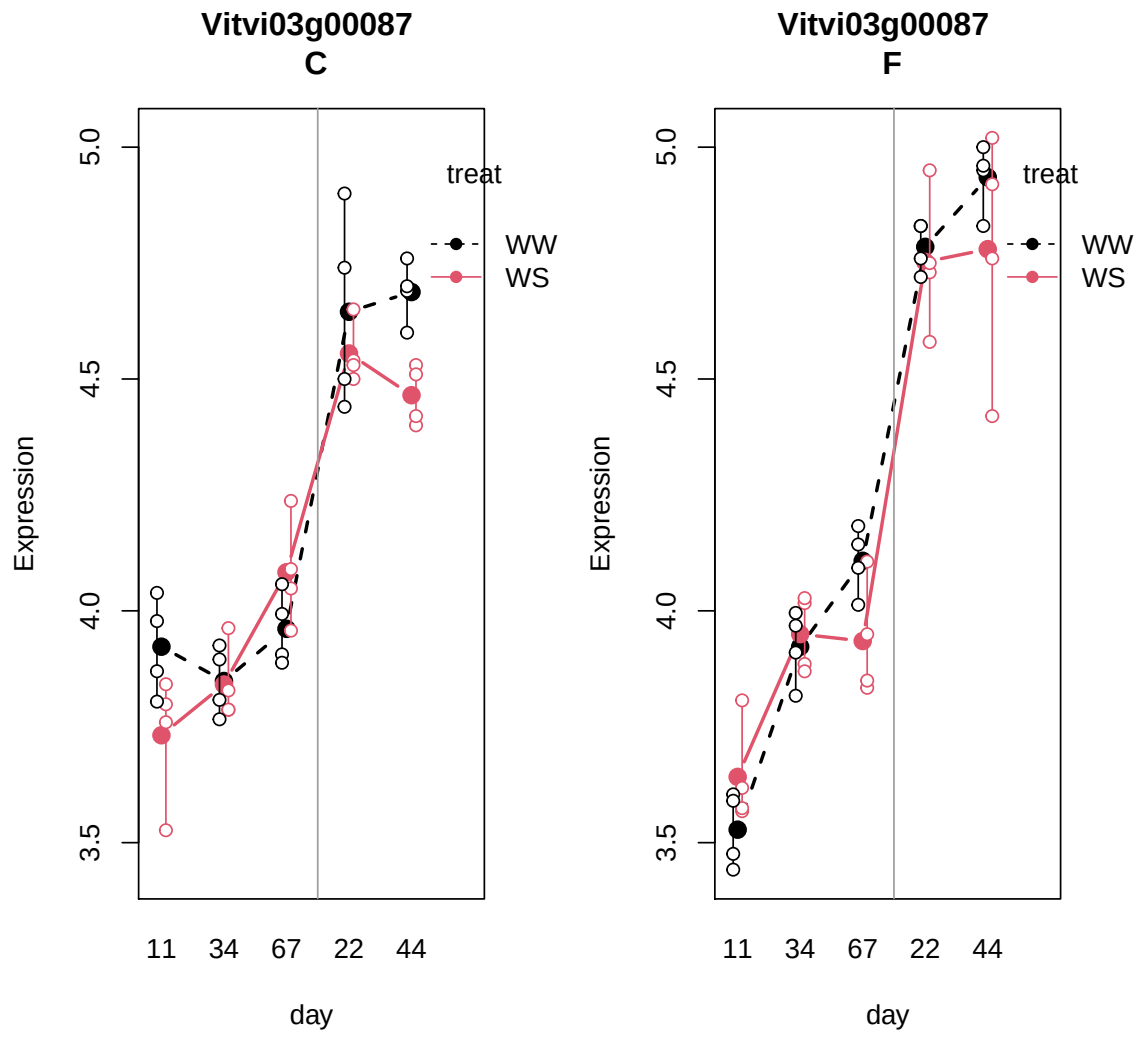
```
> tt[varname,]
```

	logFC	AveExpr	t	P.Value
Vitvi03g00087	-0.5998366	3.872762	-3.91766	0.0003526948
	adj.P.Val	B		
Vitvi03g00087	0.04757322	0.1641565		

```
> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

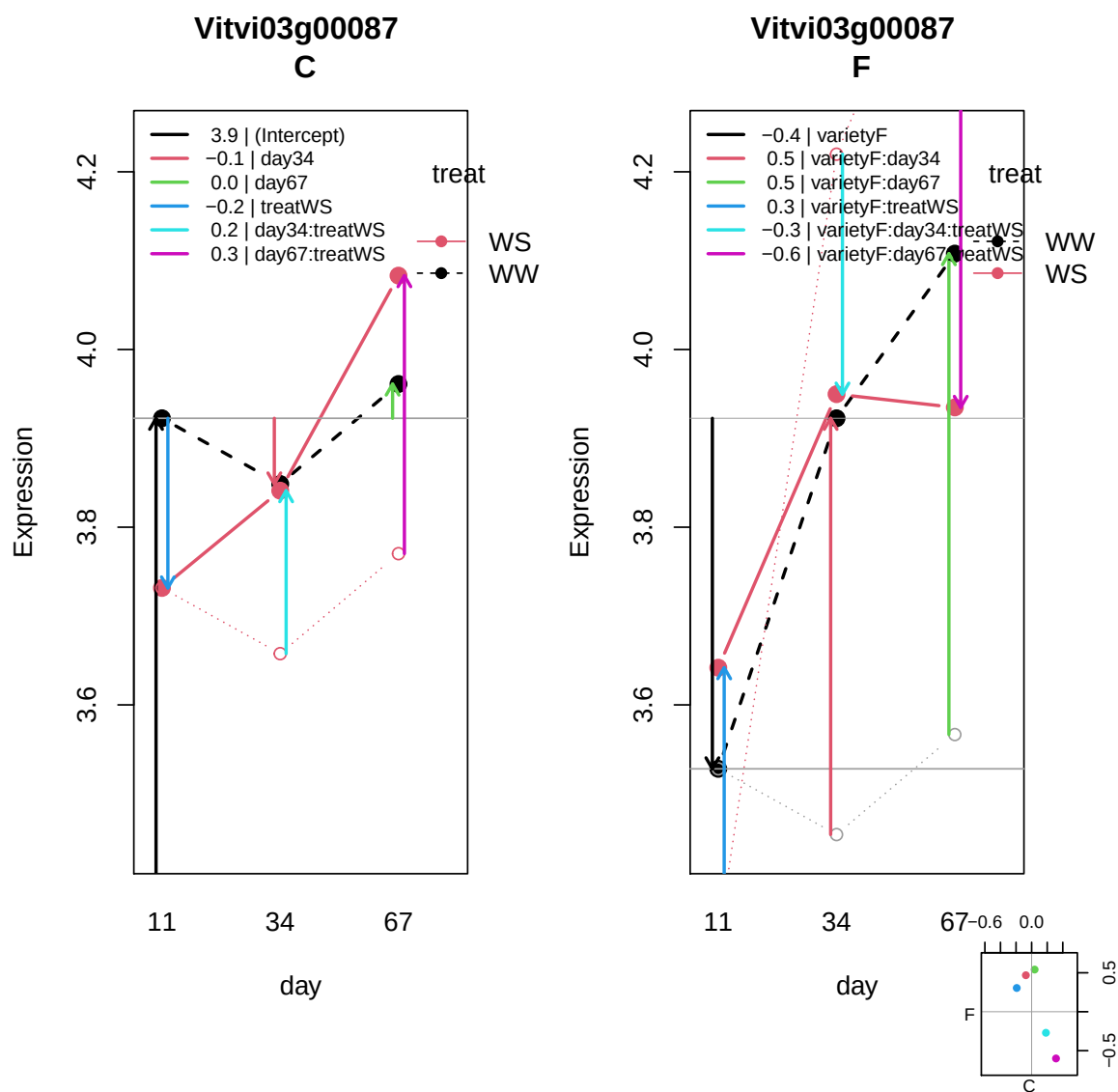
              (Intercept)    varietyF      day34      day67
Vitvi03g00087      3.922599 -0.3945759 -0.07397109 0.03856801
              treatWS varietyF:day34 varietyF:day67
Vitvi03g00087    -0.1909707      0.4685124      0.5413282
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi03g00087          0.3047874      0.1834394      0.31292
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi03g00087          -0.2700794          -0.5998366

```

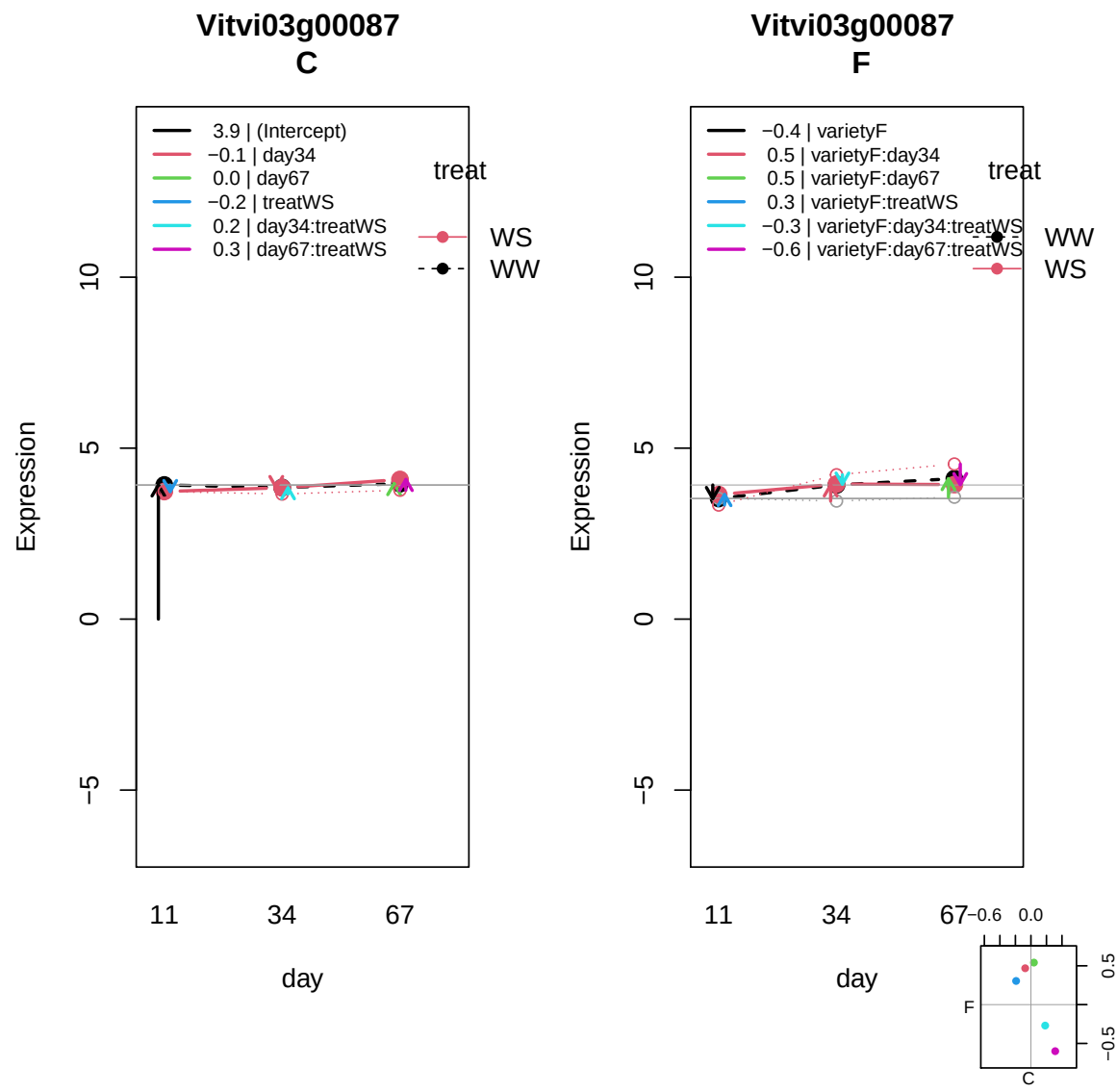
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

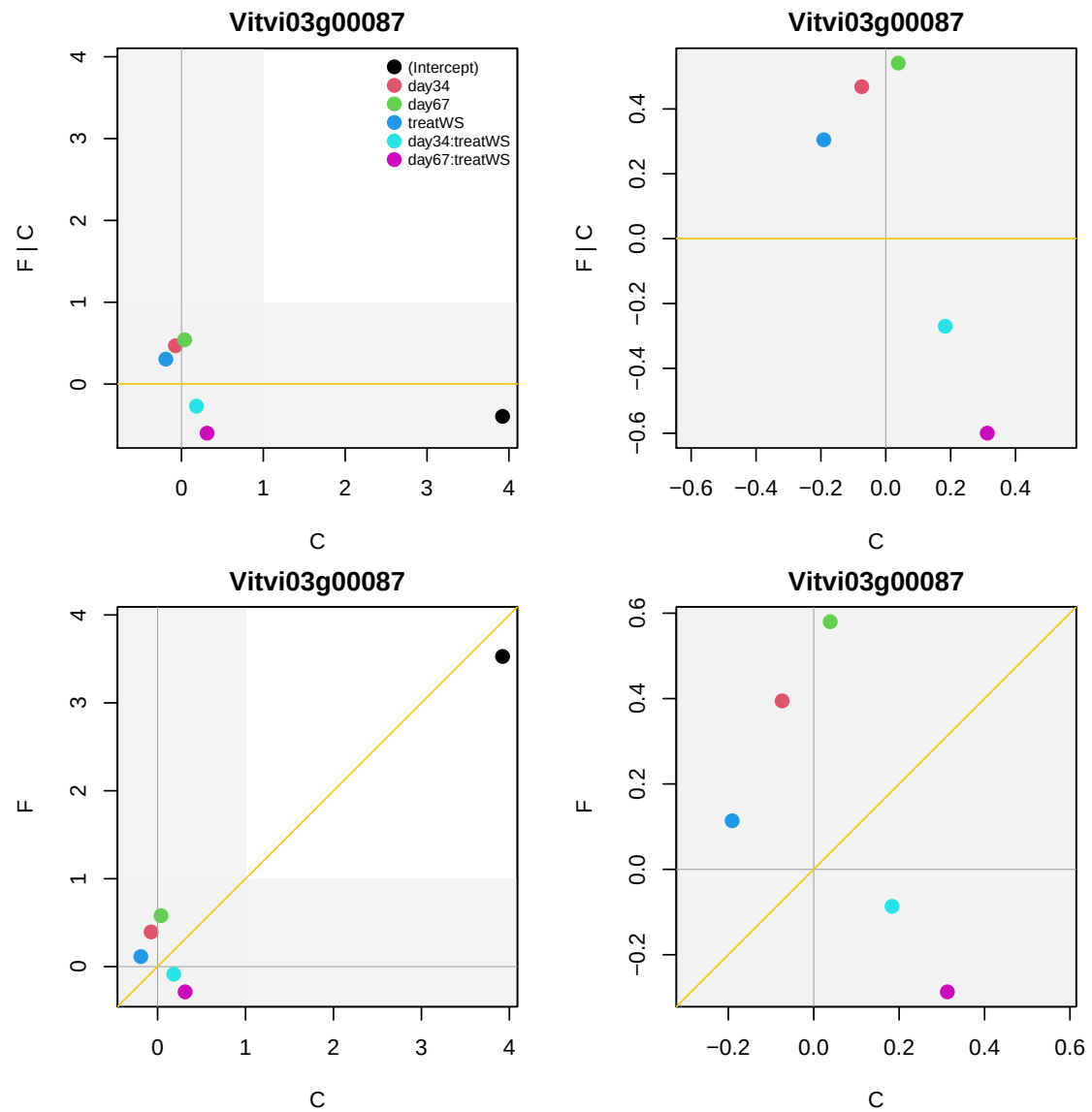


```
> coefs <- plot.interactions(varname,  
+ coef=fit1[varname,]$coefficients,  
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

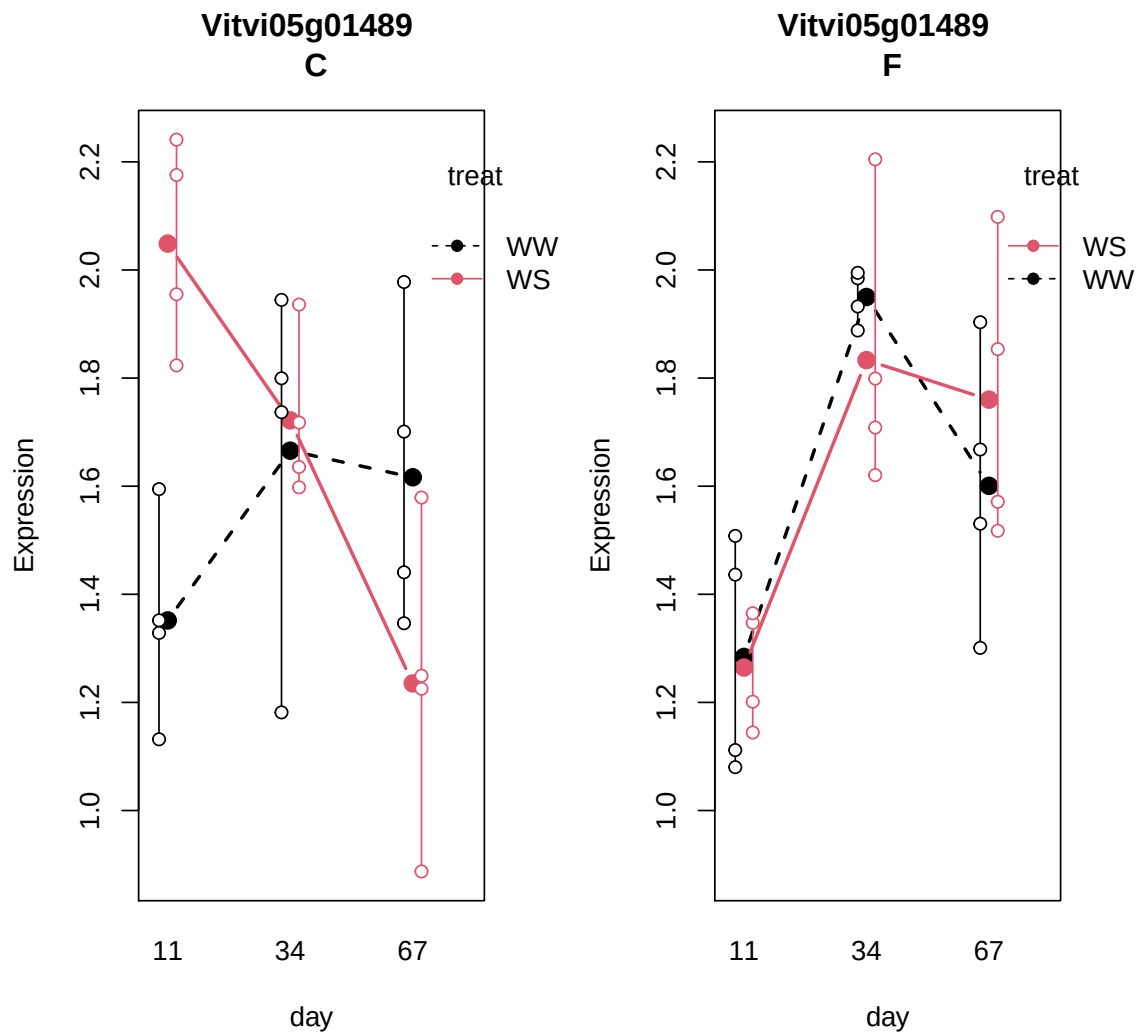


6.12.114 Vitvi05g01489

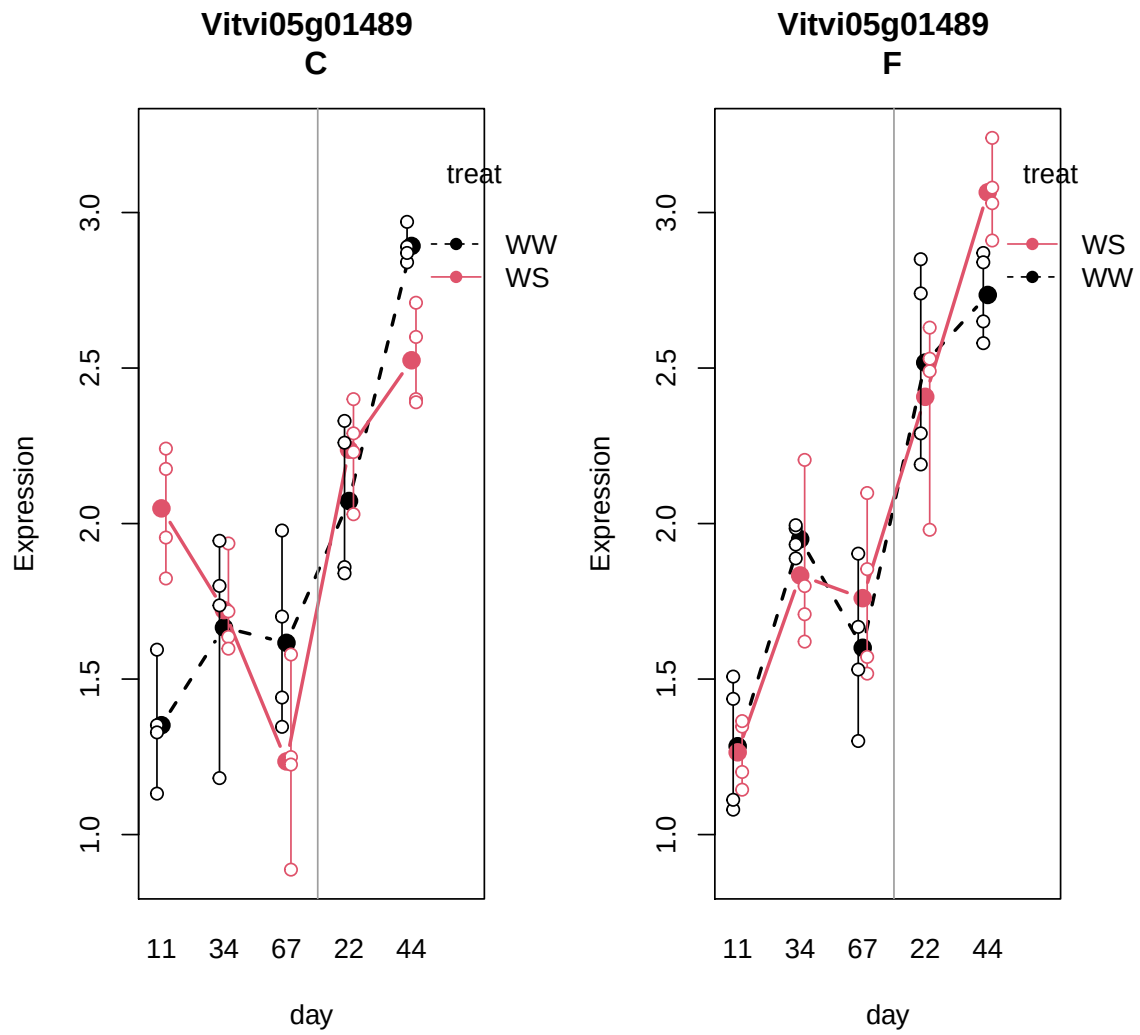
Coefficient varietyF:day67:treatWS for Vitvi05g01489.

```
> tt[varname,]
              logFC AveExpr      t      P.Value
Vitvi05g01489 1.257521 1.610992 3.908049 0.0003628814
              adj.P.Val      B
Vitvi05g01489 0.04764902 0.1389182

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

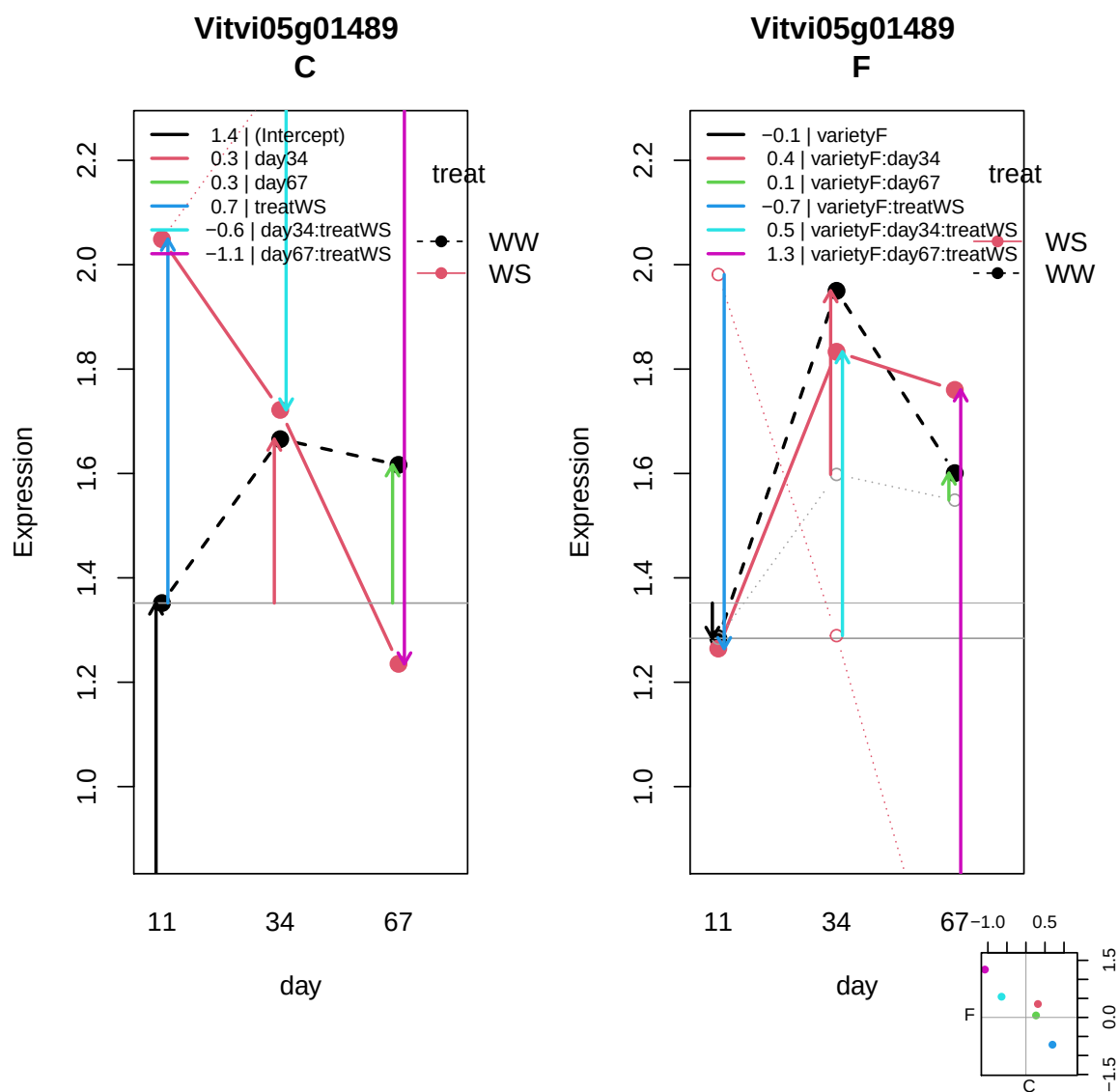
              (Intercept)      varietyF      day34      day67
Vitvi05g01489      1.351649 -0.06756087  0.3140203  0.2648149
              treatWS varietyF:day34 varietyF:day67
Vitvi05g01489  0.6971387      0.3518417      0.05173481
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi05g01489      -0.7167673      -0.6410533      -1.078417
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi05g01489      0.5438748      1.257521

```

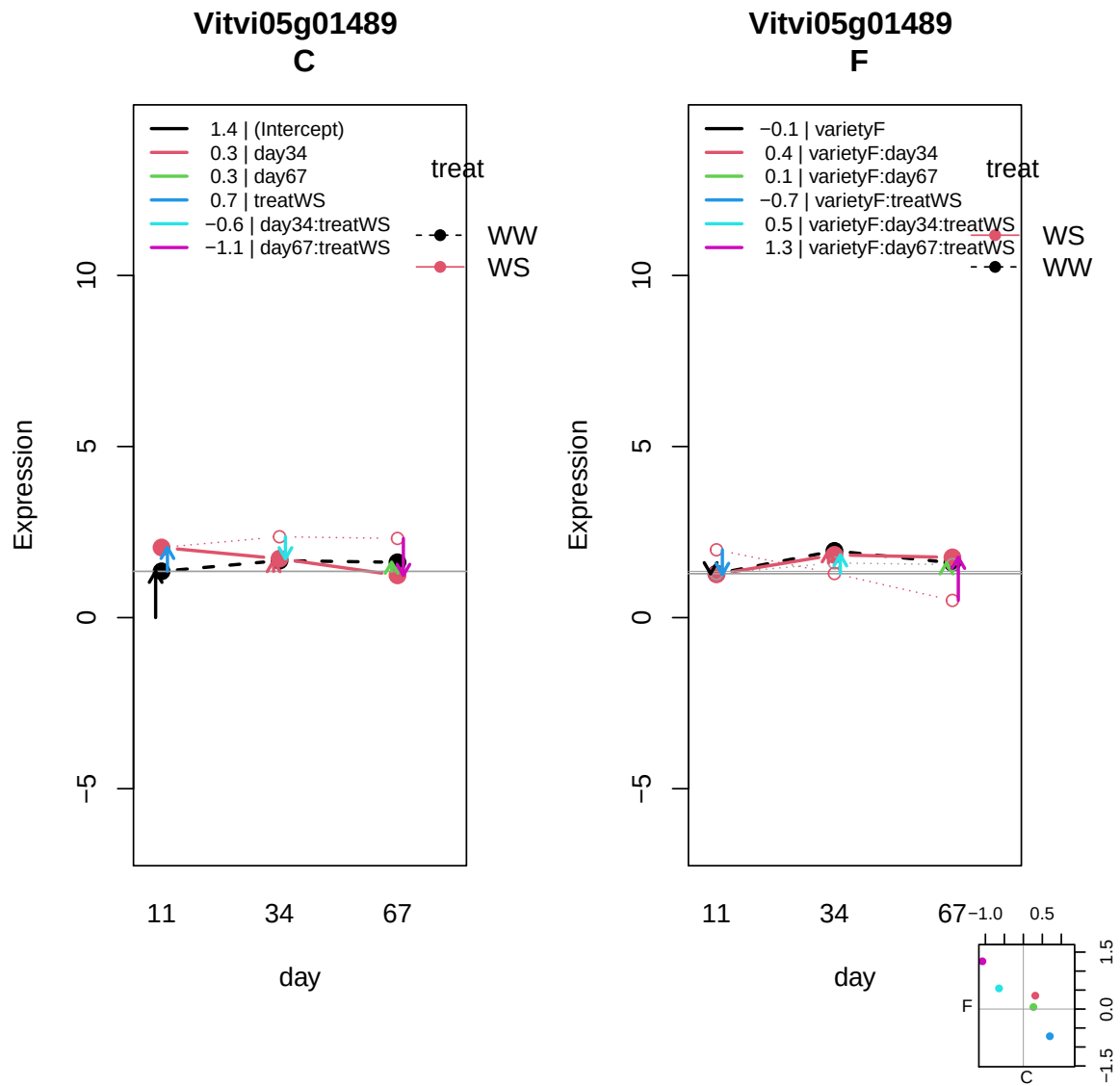
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

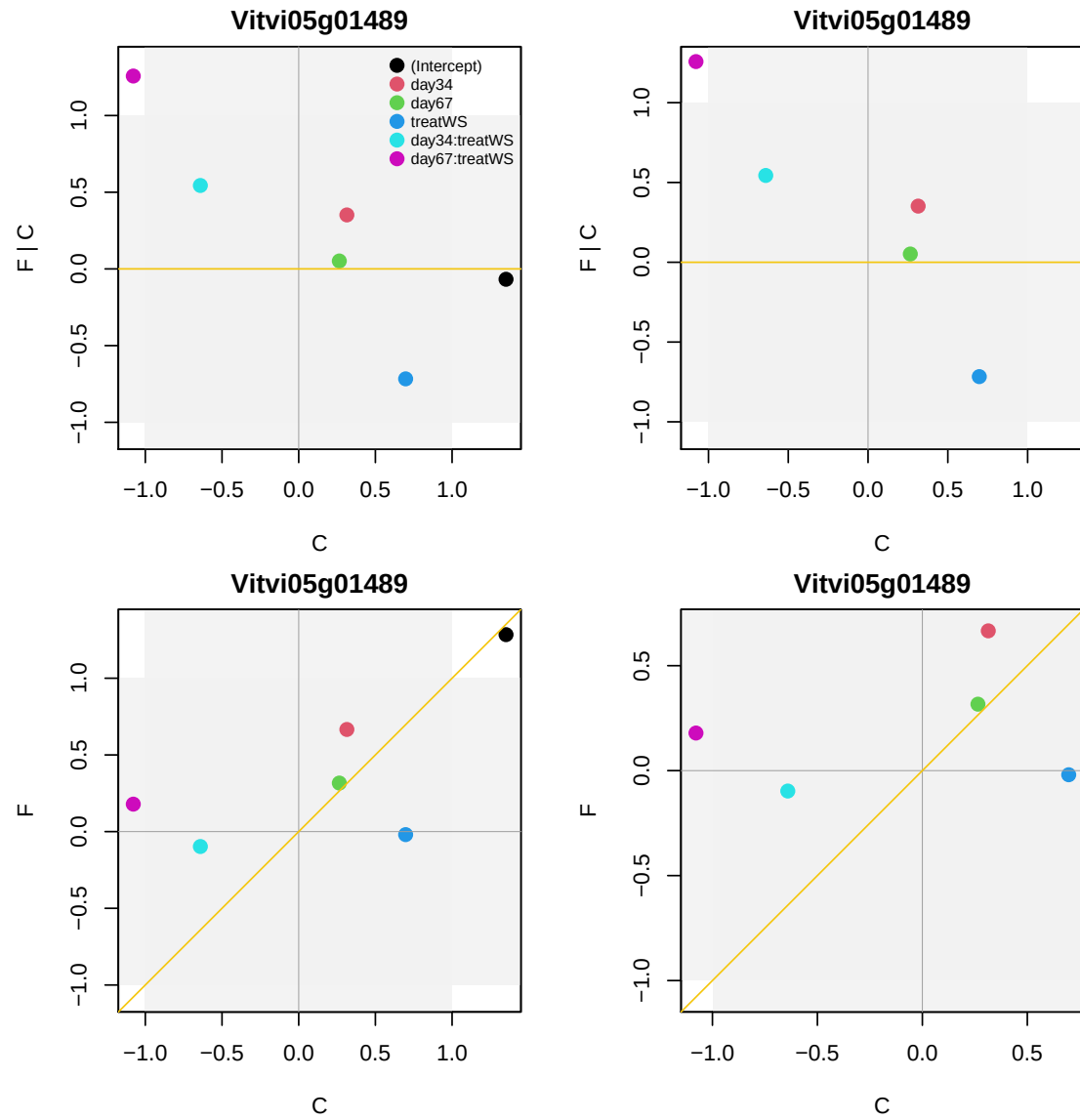


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

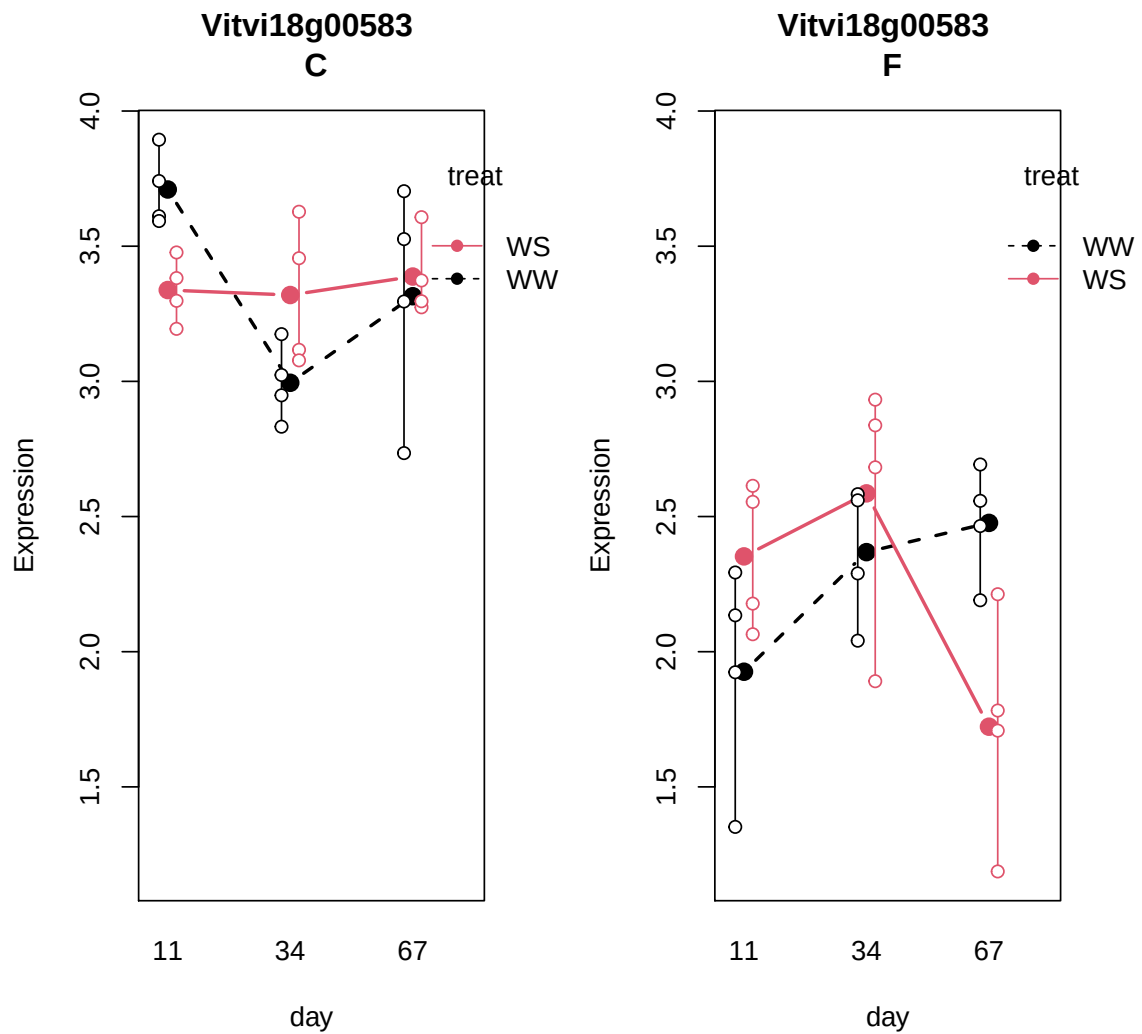


6.12.115 Vitvi18g00583

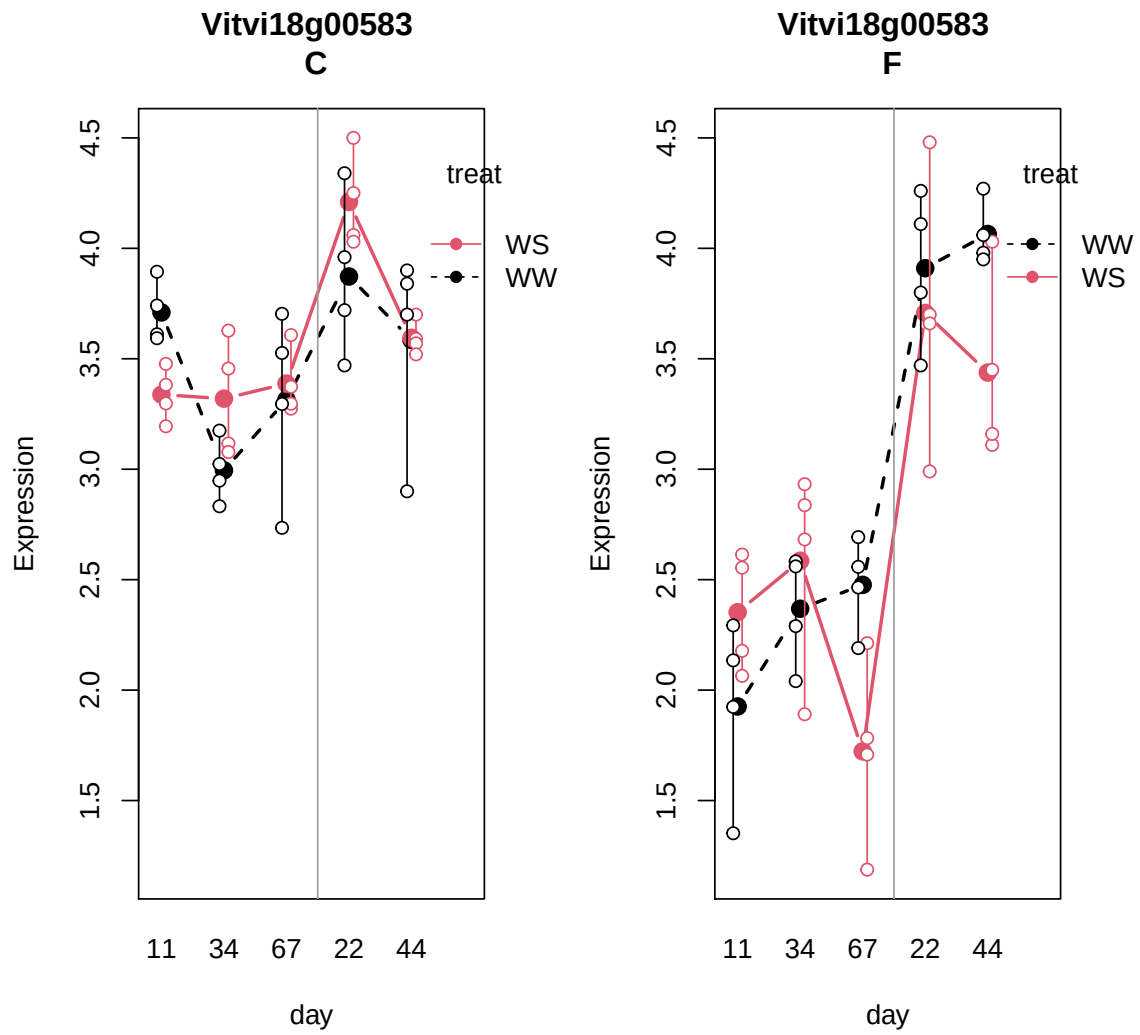
Coefficient varietyF:day67:treatWS for Vitvi18g00583.

```
> tt[varname,]
               logFC AveExpr      t      P.Value
Vitvi18g00583 -1.625355 2.791295 -3.907461 0.0003635134
               adj.P.Val      B
Vitvi18g00583 0.04764902 0.1373757

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

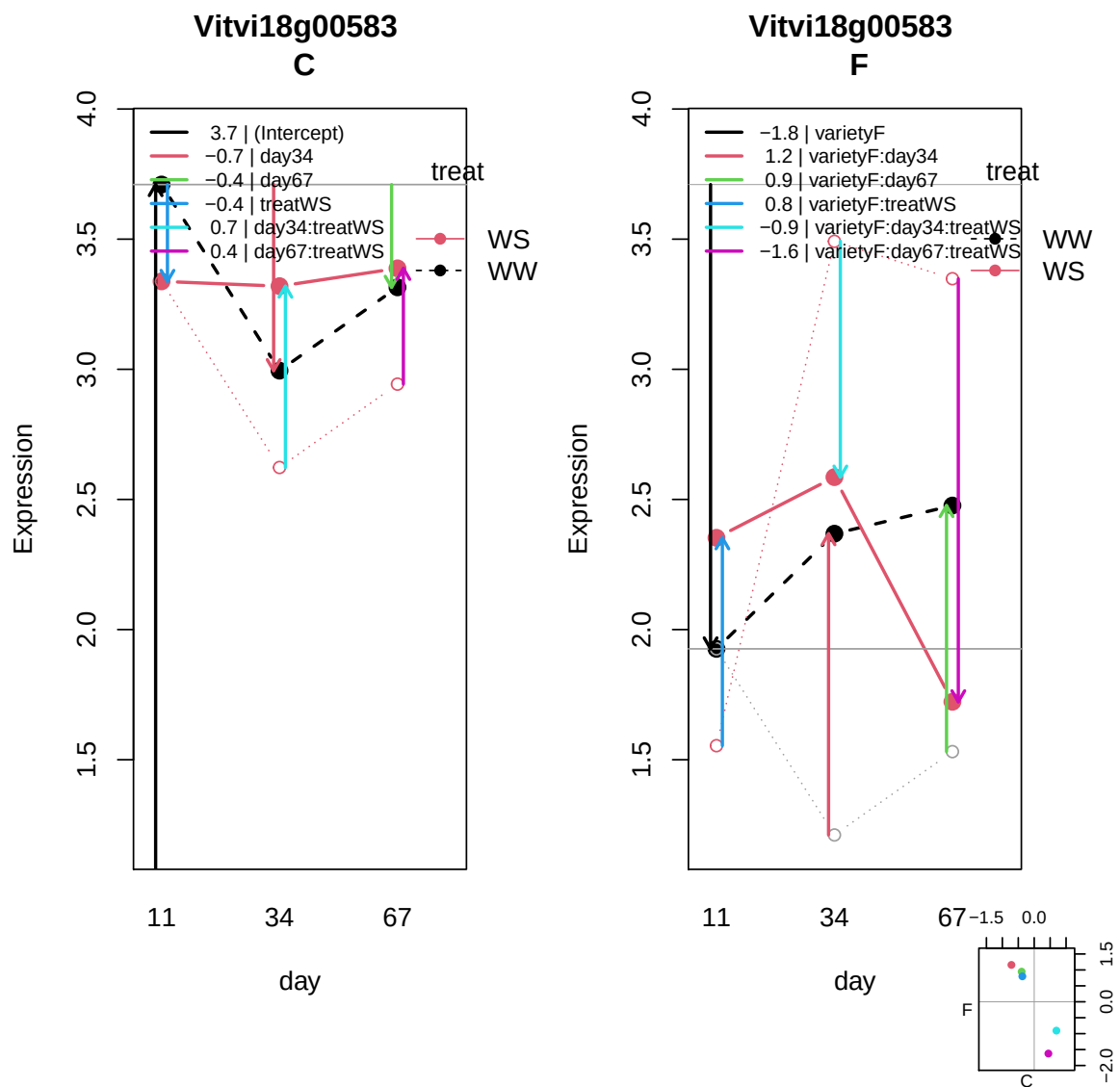
              (Intercept)  varietyF      day34      day67
Vitvi18g00583      3.709754 -1.783888 -0.7150496 -0.3948398
              treatWS varietyF:day34 varietyF:day67
Vitvi18g00583    -0.3719808      1.157439      0.945413
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi18g00583          0.7986665      0.6966365      0.4447938
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi18g00583          -0.9059495          -1.625355

```

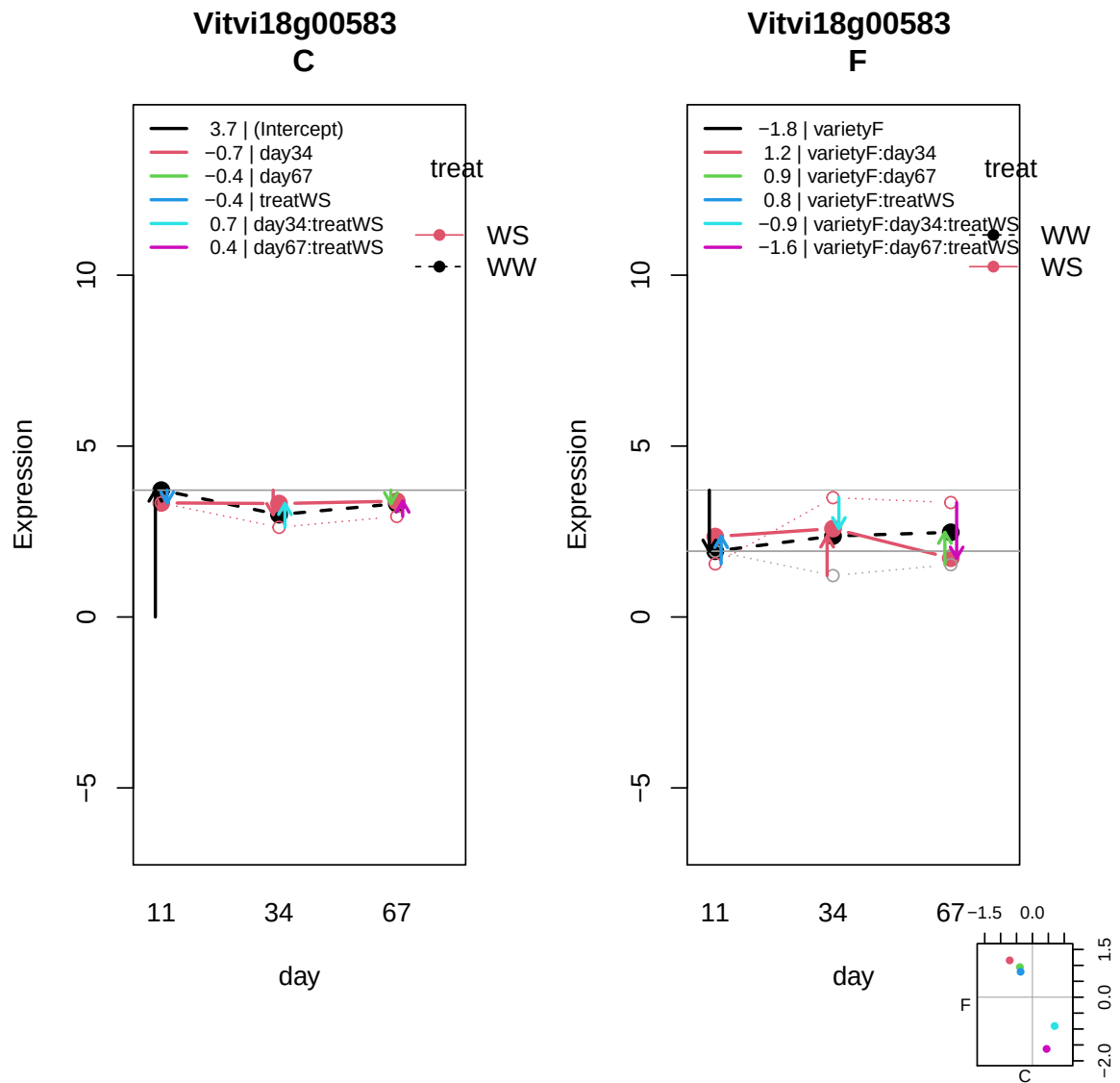
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

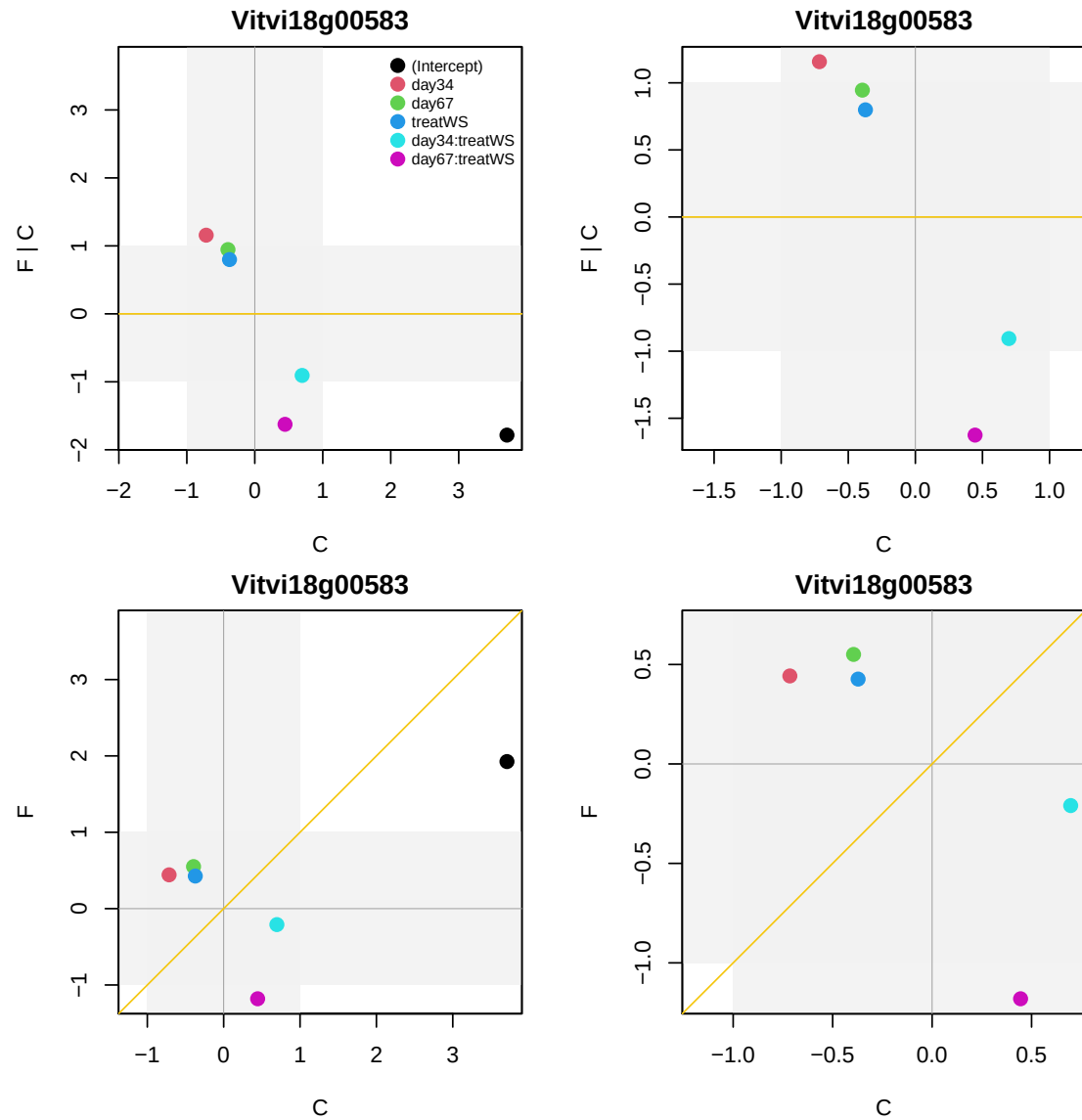



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



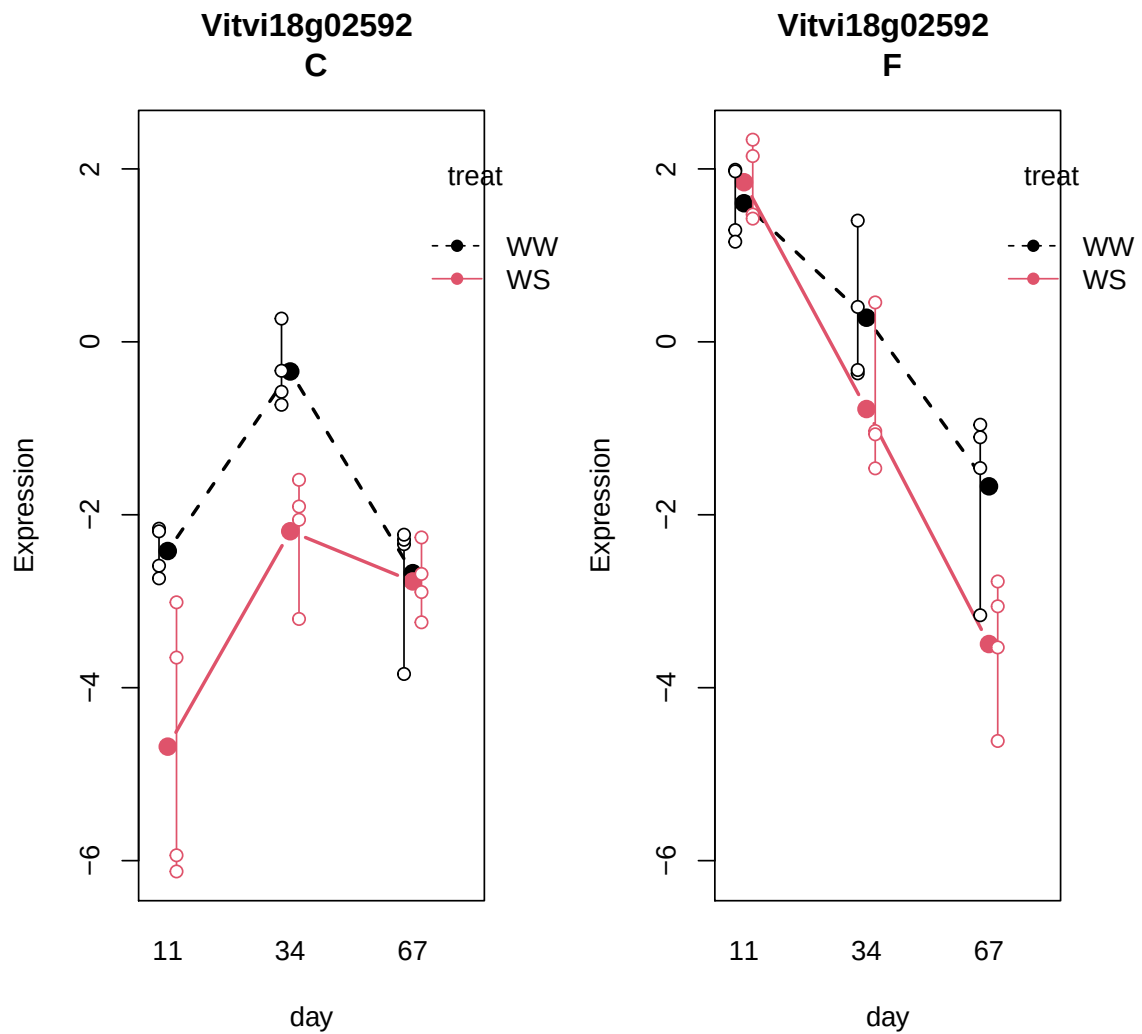
6.12.116 Vitvi18g02592

Coefficient varietyF:day67:treatWS for Vitvi18g02592.

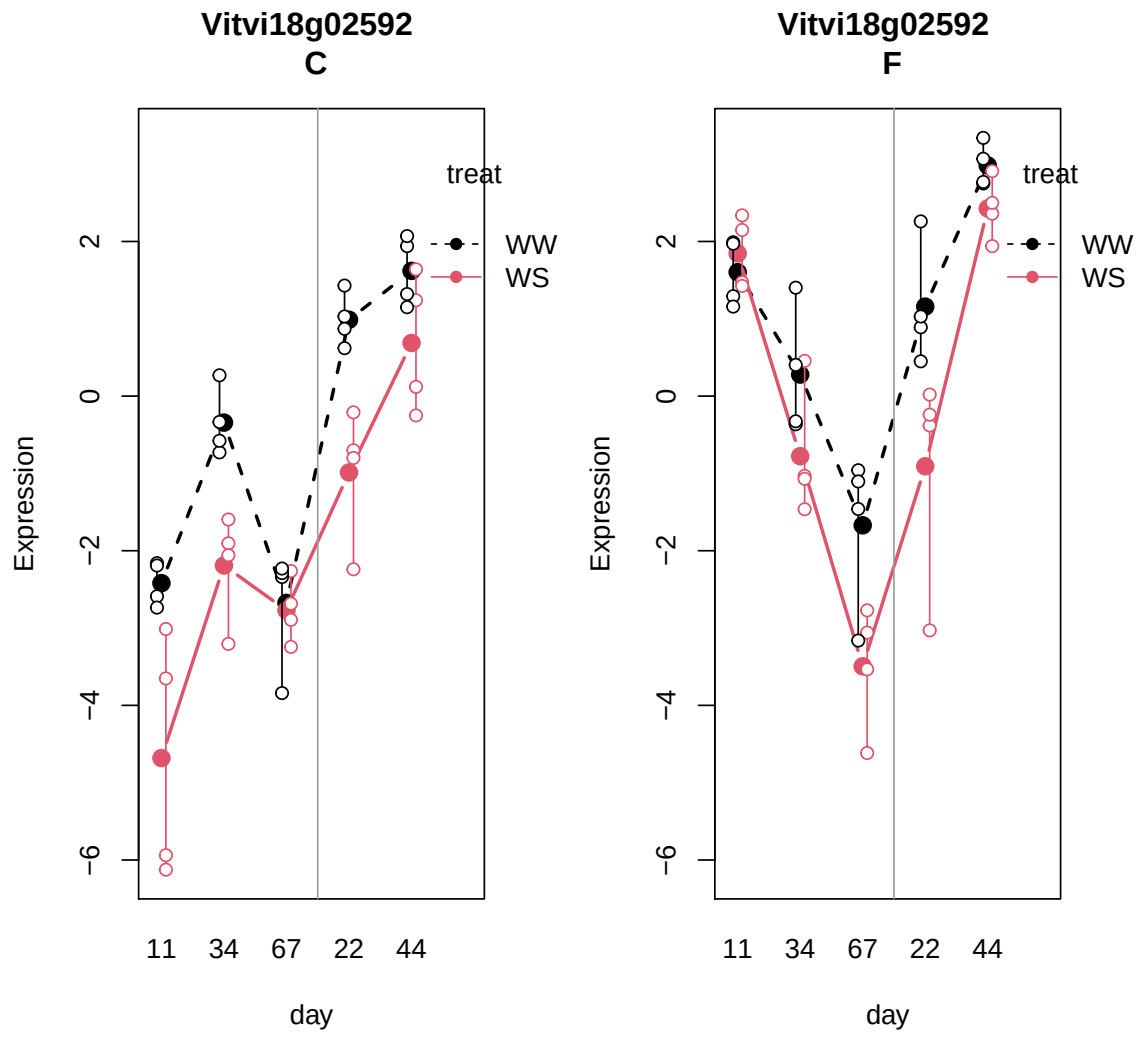
```
> tt[varname,]
```

	logFC	AveExpr	t	P.Value
Vitvi18g02592	-4.233491	-1.441353	-3.906419	0.0003646372
	adj.P.Val	B		
Vitvi18g02592	0.04764902	0.13464		

```
> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

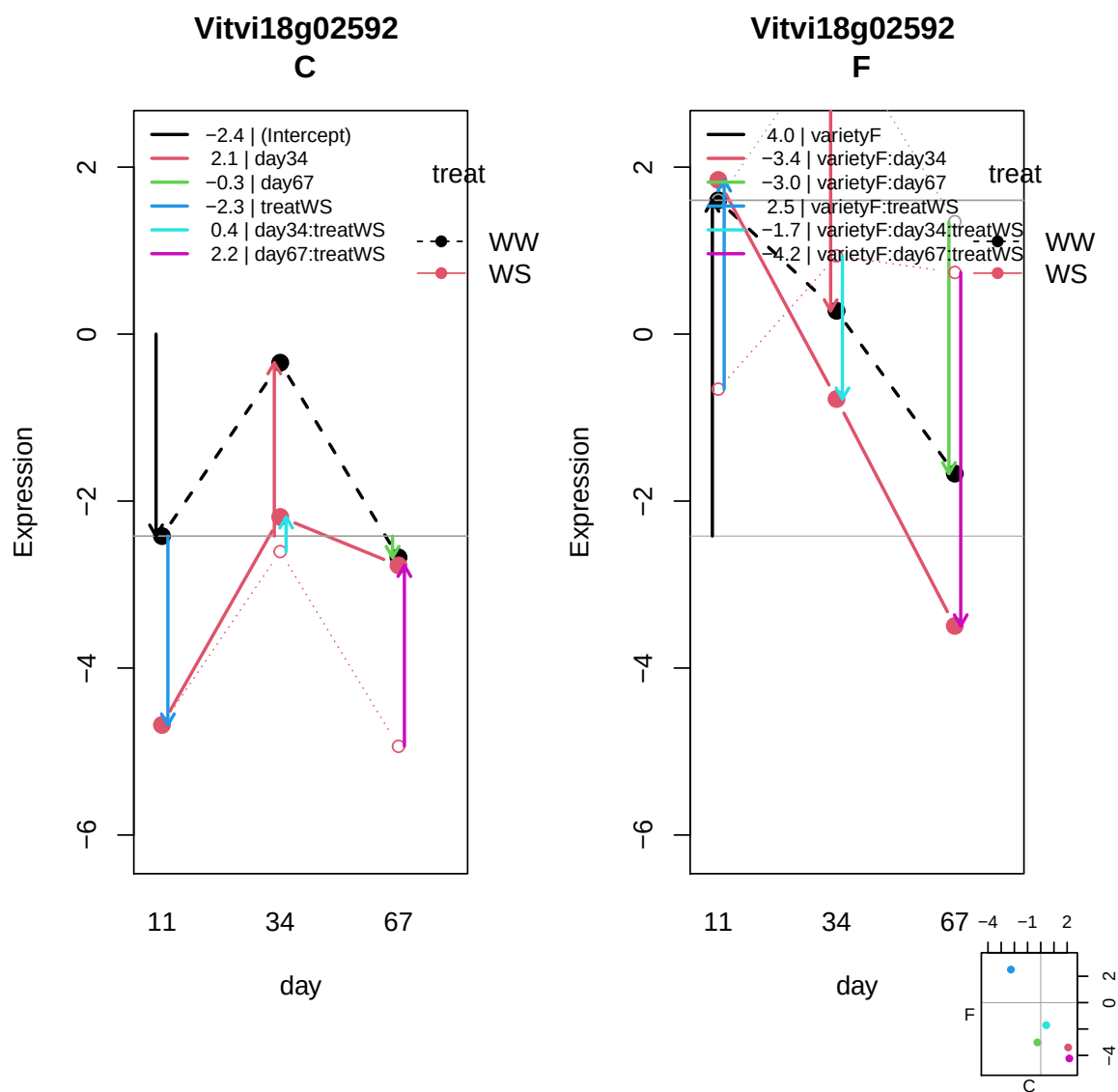


```

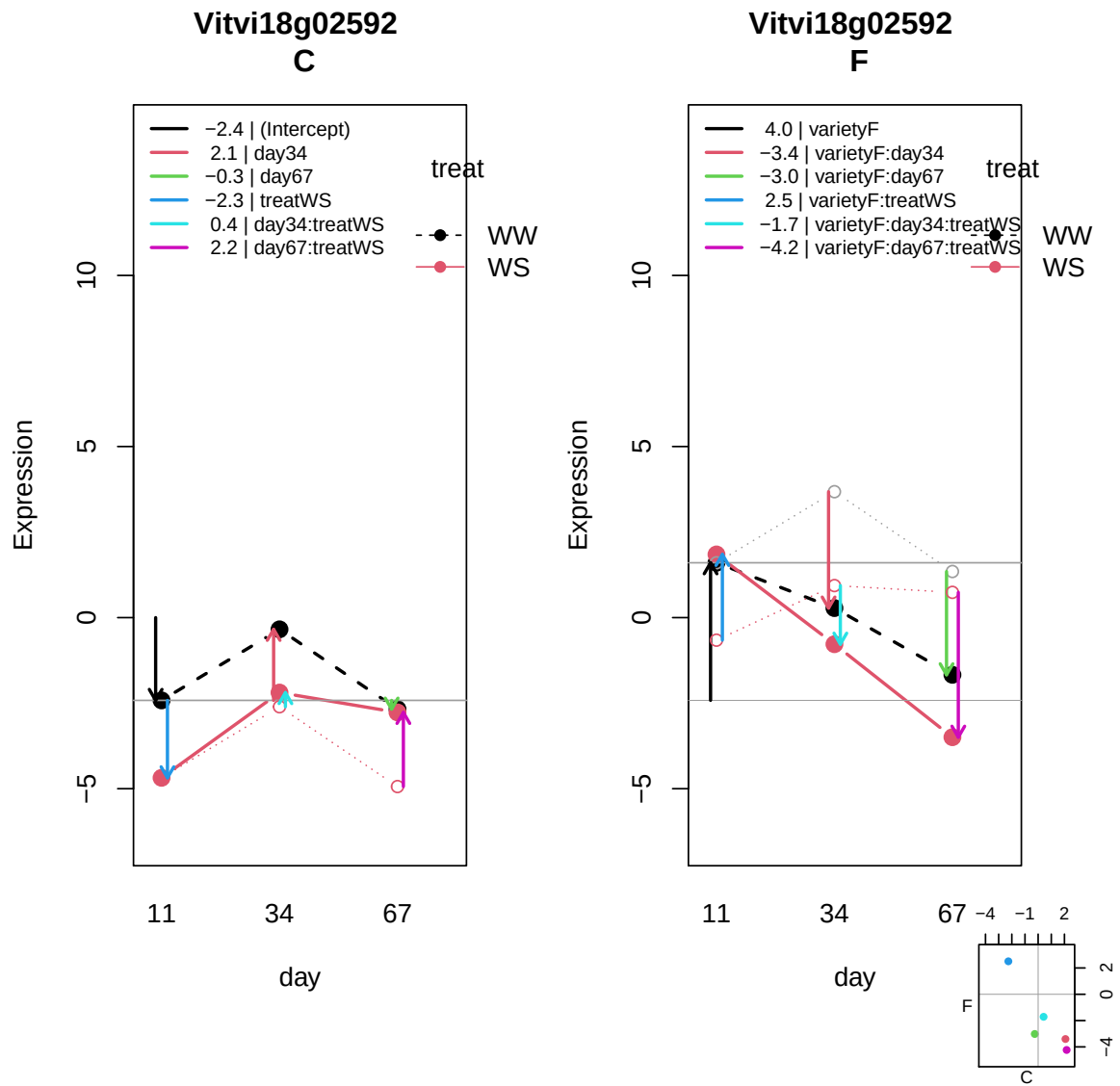
> fit1[varname,]$coefficients
              (Intercept)  varietyF    day34      day67
Vitvi18g02592    -2.419355  4.022327  2.076605 -0.2558296
              treatWS  varietyF:day34  varietyF:day67
Vitvi18g02592    -2.26234      -3.40073      -3.018228
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi18g02592          2.505271      0.4144061      2.166567
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi18g02592          -1.713352          -4.233491

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

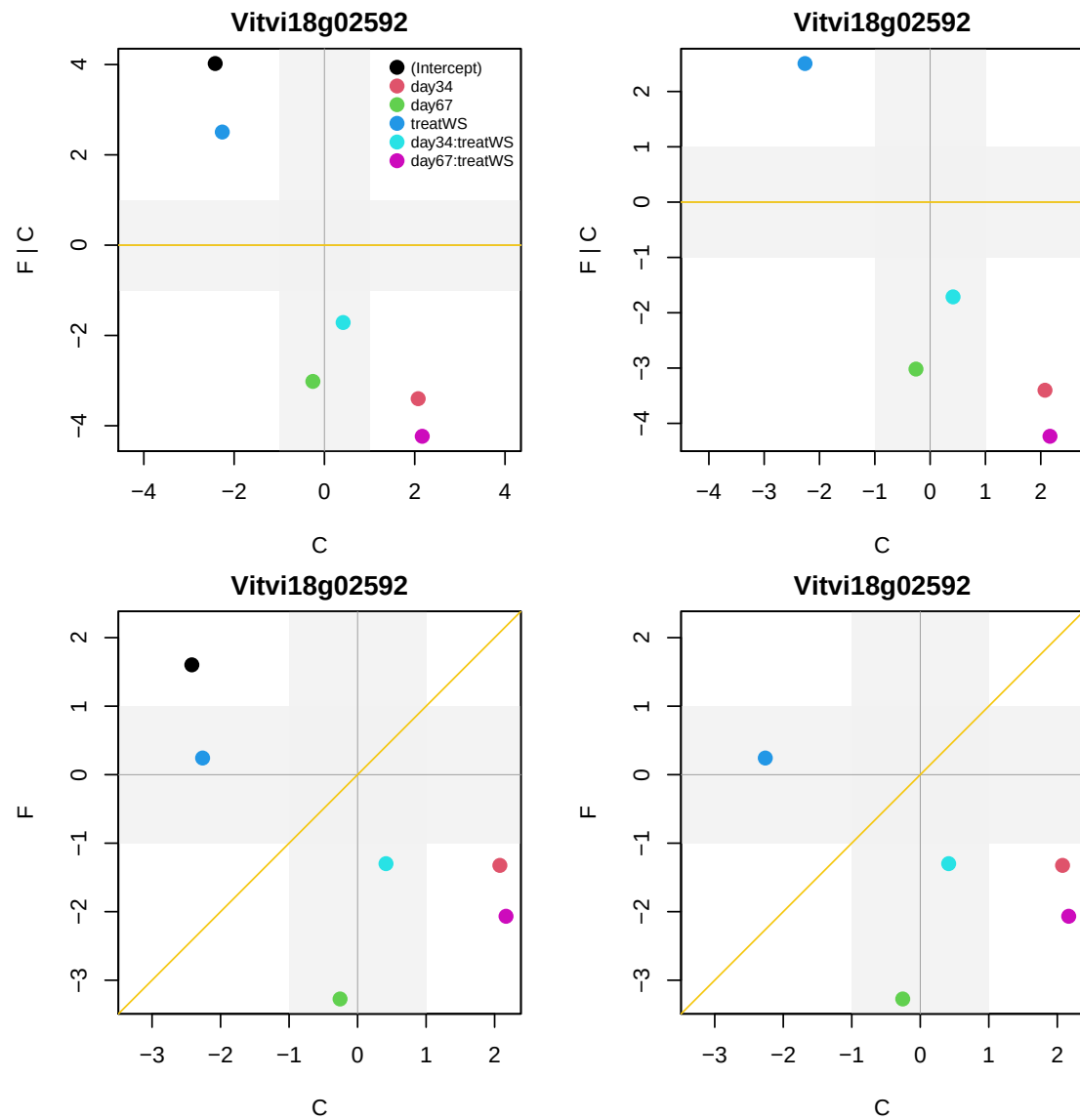


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

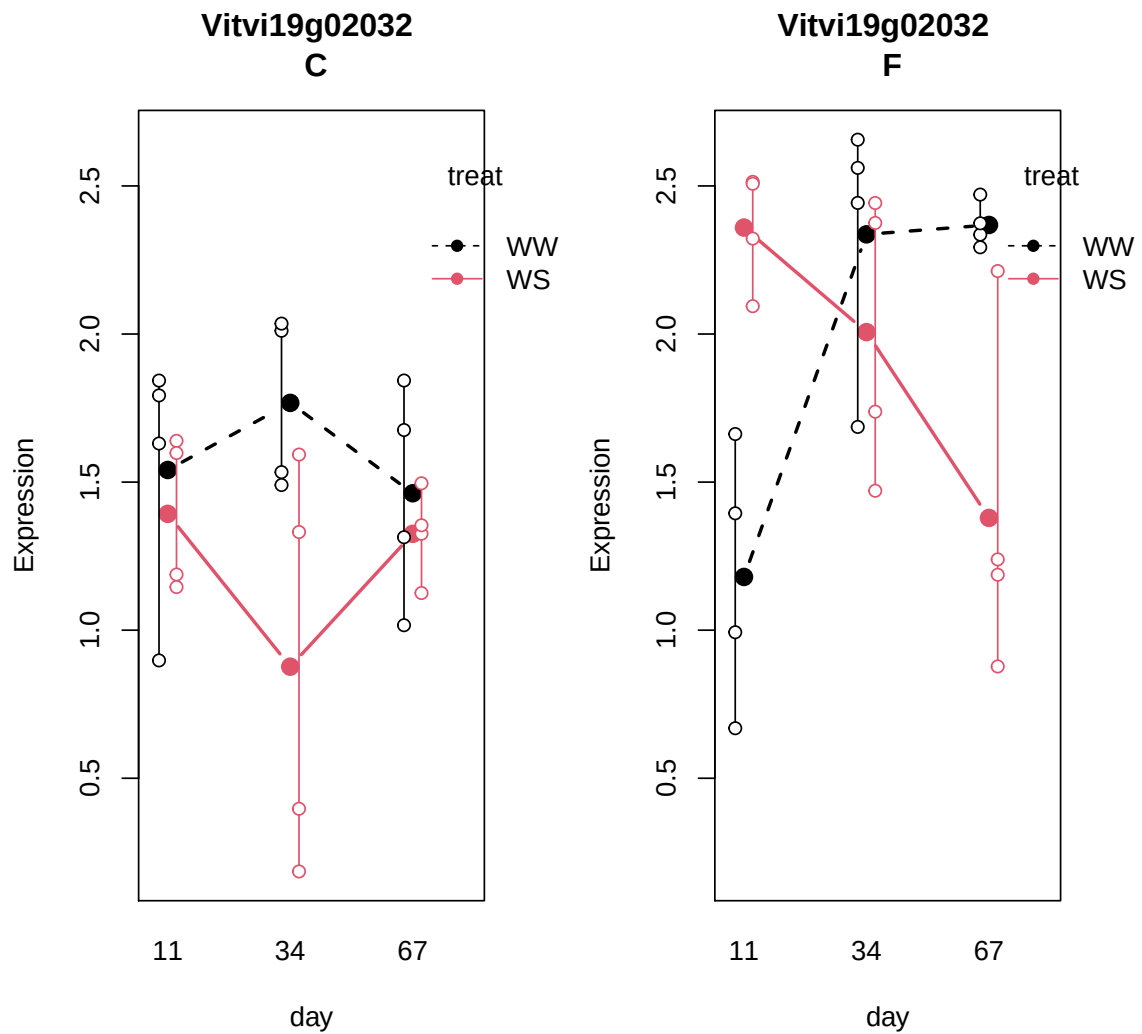


6.12.117 Vitvi19g02032

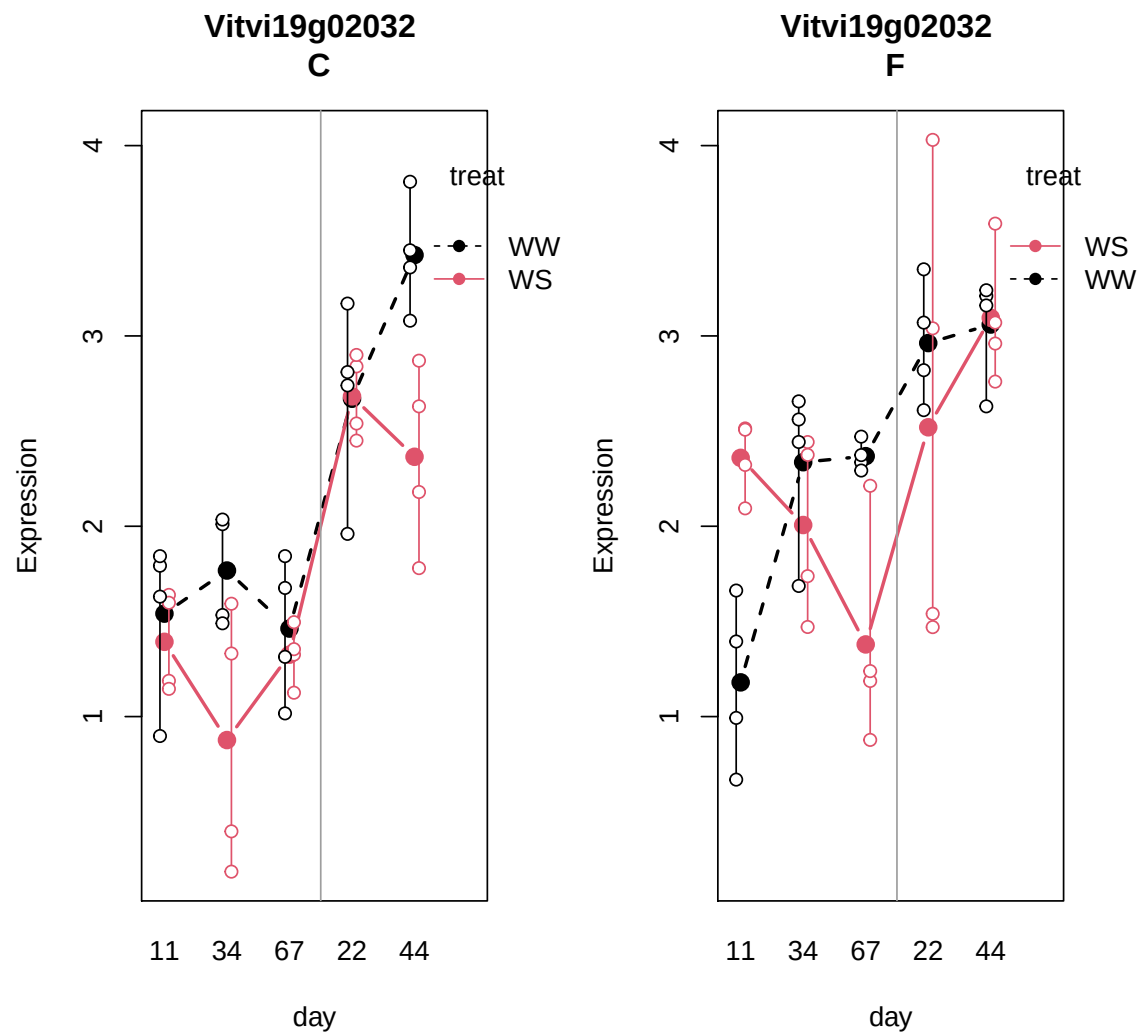
Coefficient varietyF:day67:treatWS for Vitvi19g02032.

```
> tt[varname,]
               logFC  AveExpr          t      P.Value
Vitvi19g02032 -2.180077 1.666261 -3.903033 0.0003683109
               adj.P.Val          B
Vitvi19g02032 0.04764902 0.125755

> plot.interactions(varname,phdata=pd,data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



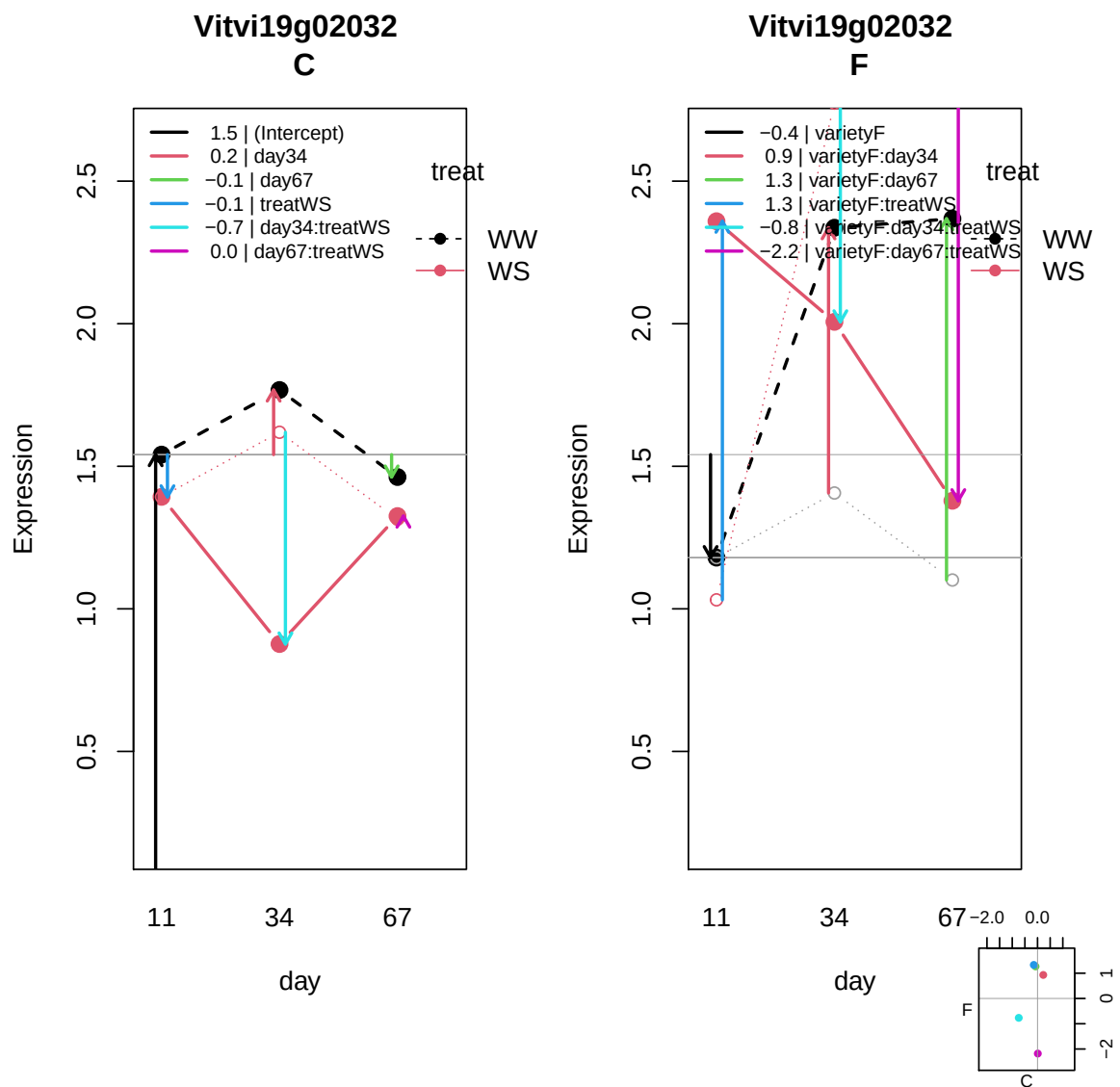
```

> fit1[varname,]$coefficients

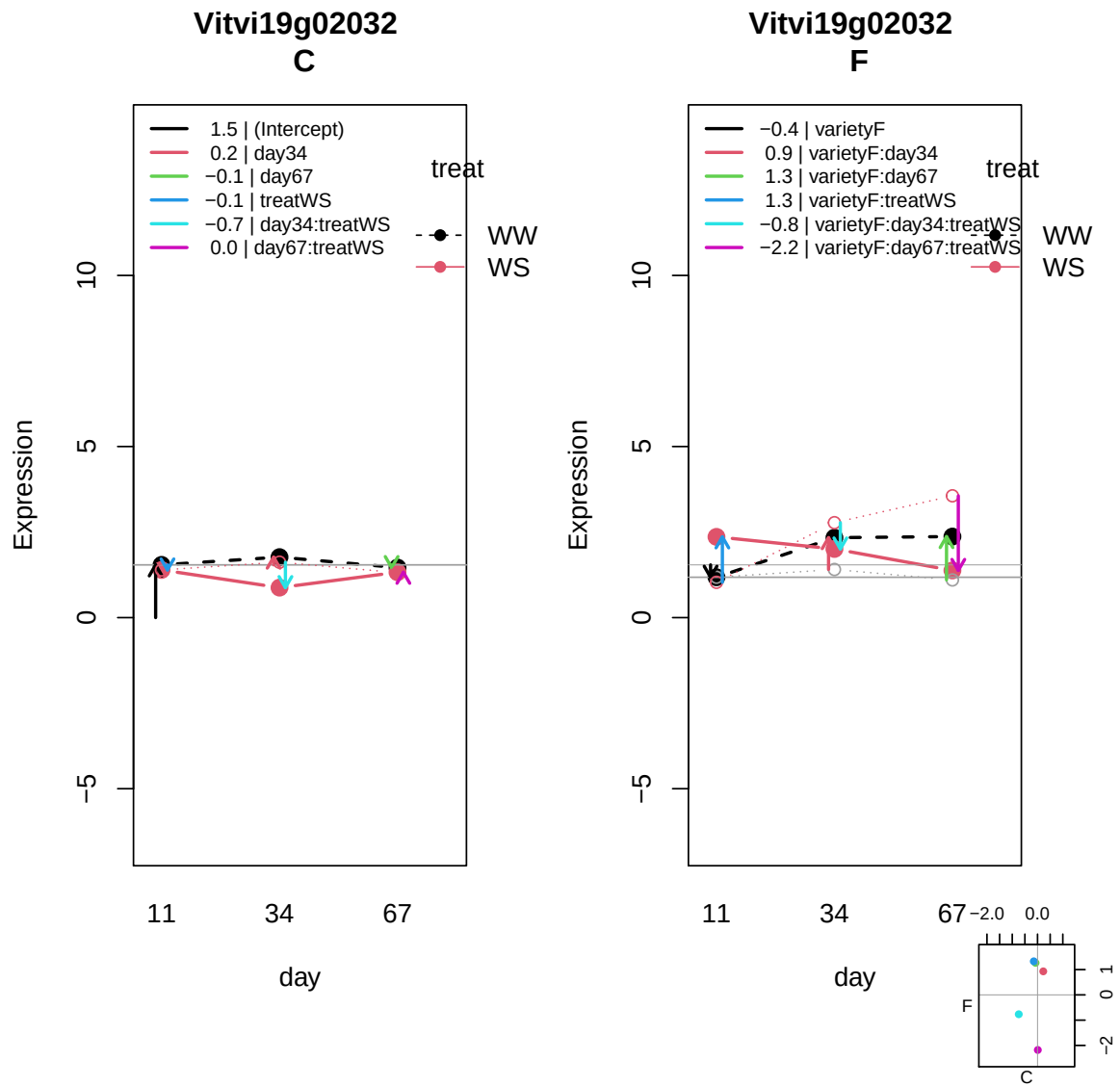
              (Intercept)  varietyF      day34      day67
Vitvi19g02032      1.540947 -0.3612236 0.2265225 -0.07859323
              treatWS varietyF:day34 varietyF:day67
Vitvi19g02032 -0.1481868      0.9303223      1.267174
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi19g02032      1.327856      -0.7426063      0.01117066
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi19g02032      -0.7670954      -2.180077

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

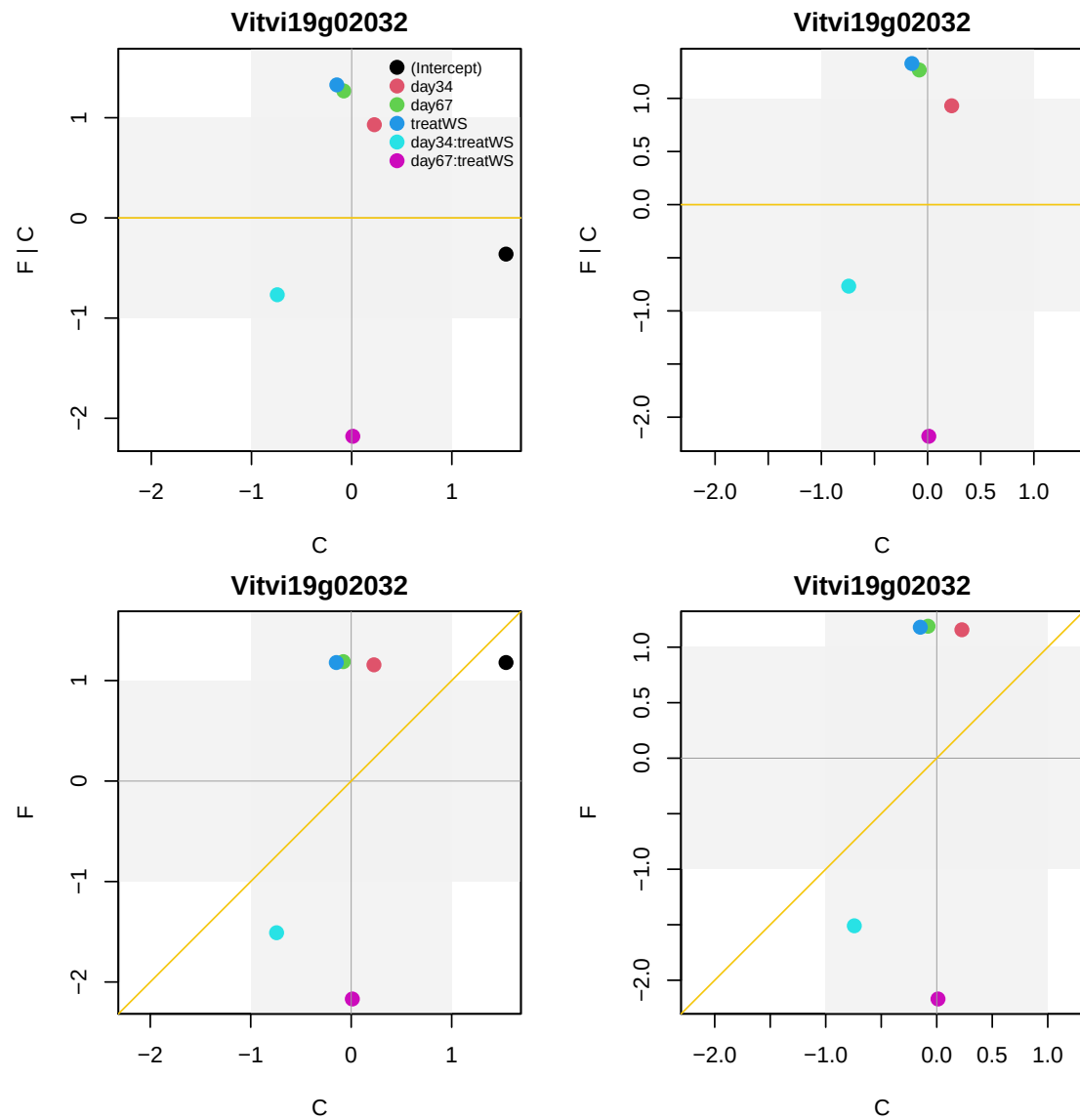


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

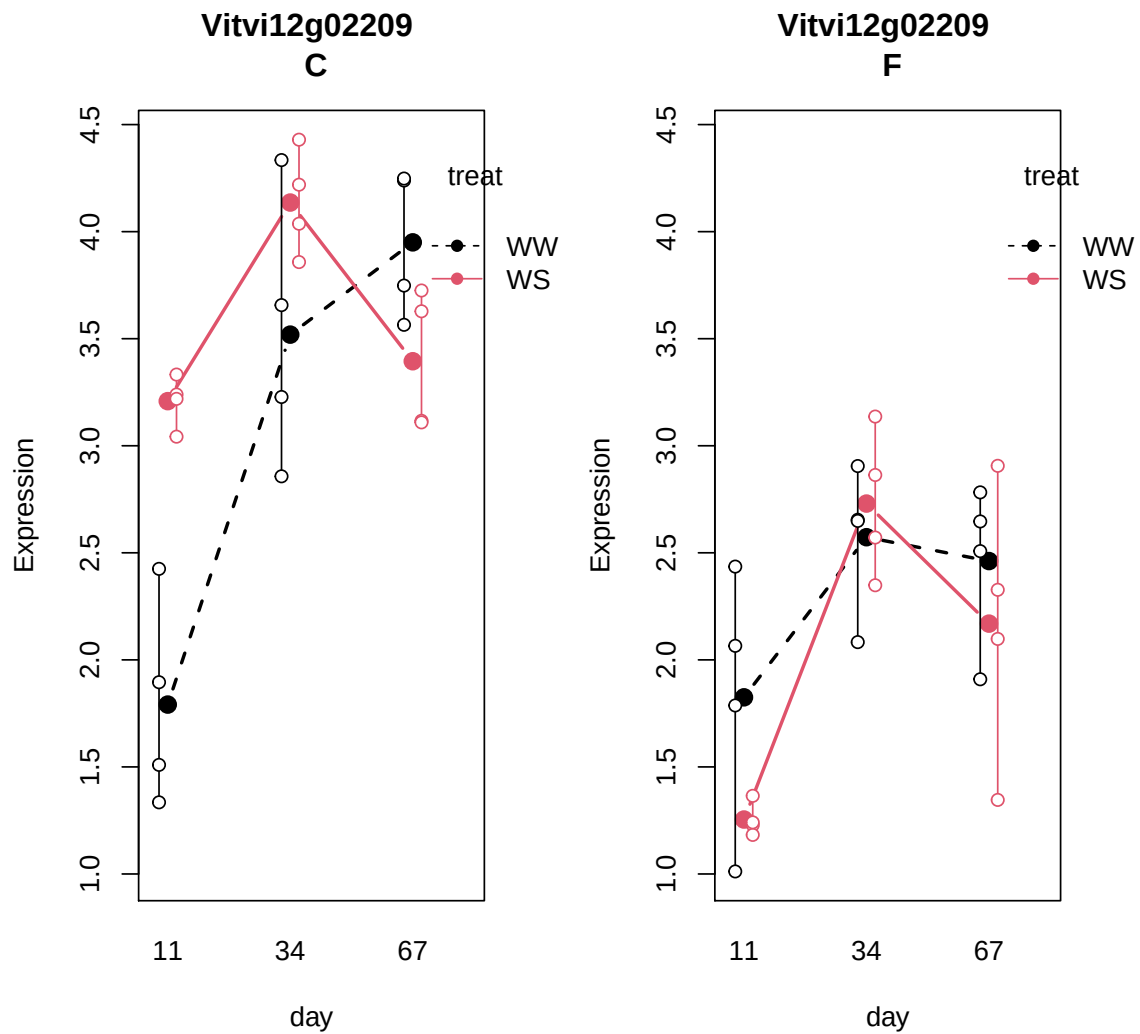


6.12.118 Vitvi12g02209

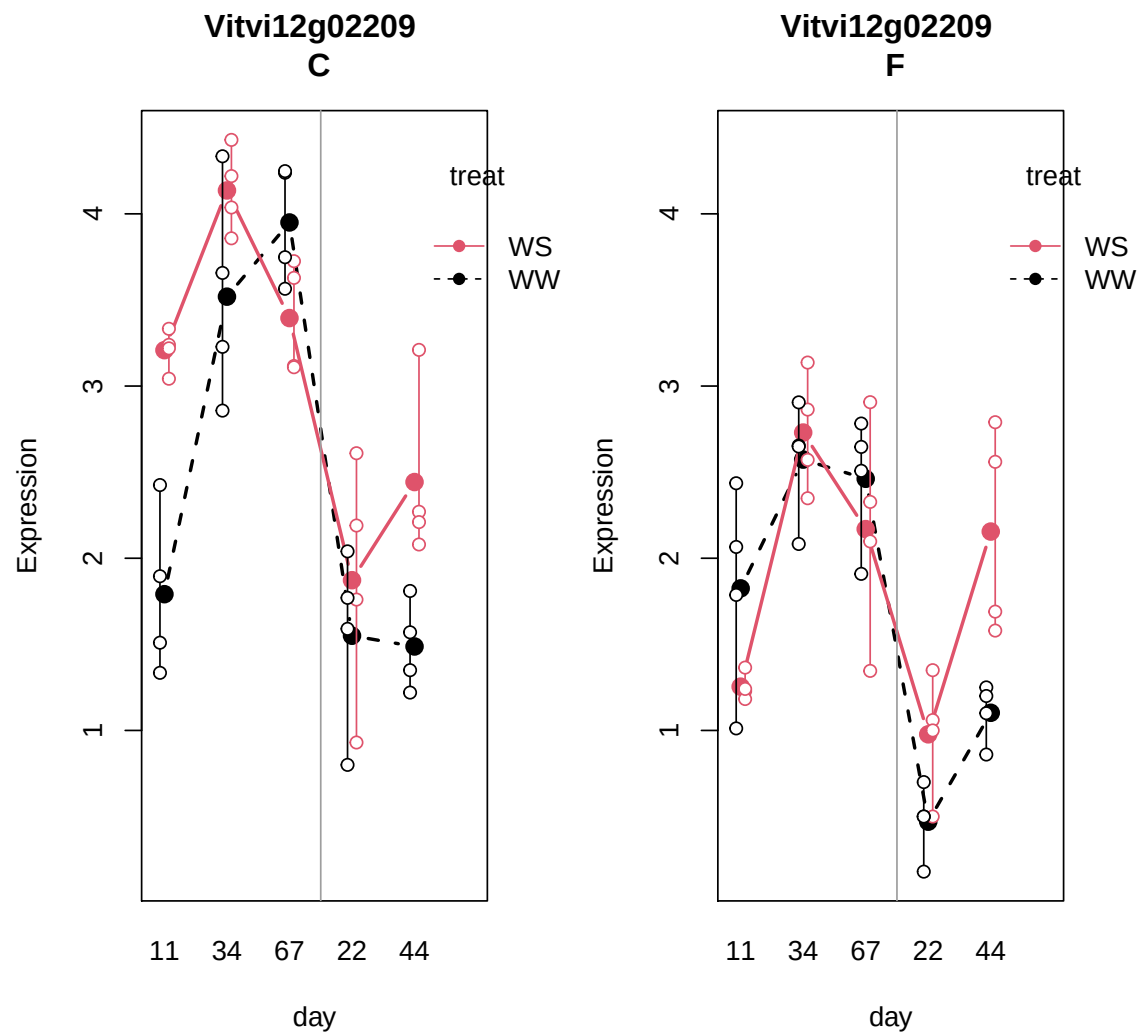
Coefficient varietyF:day67:treatWS for Vitvi12g02209.

```
> tt[varname,]
               logFC AveExpr      t      P.Value
Vitvi12g02209 2.250947 2.75101 3.902504 0.0003688876
               adj.P.Val      B
Vitvi12g02209 0.04764902 0.1243684

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

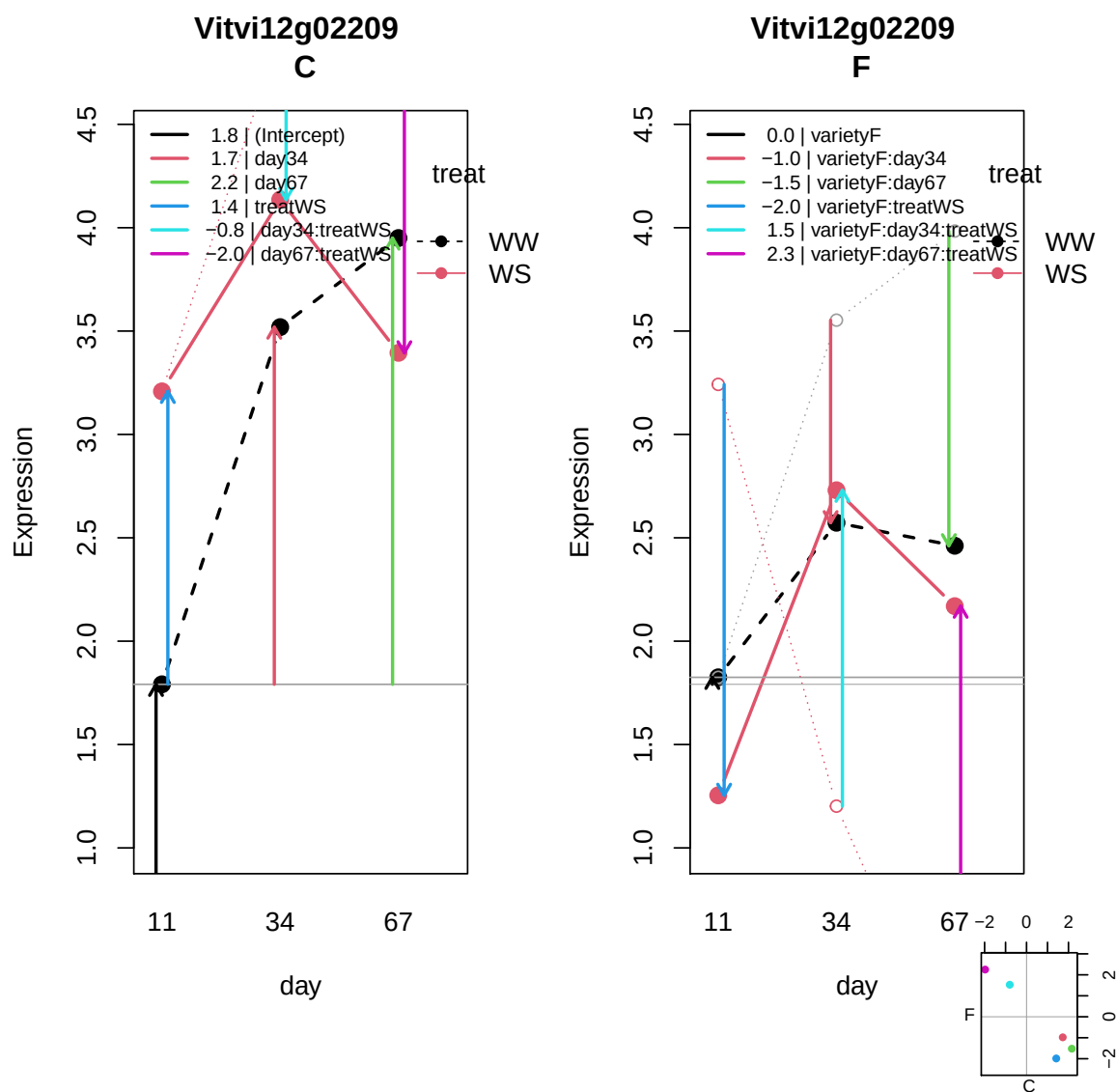
              (Intercept)  varietyF    day34    day67
Vitvi12g02209      1.791202 0.03380755 1.727877 2.158763
              treatWS varietyF:day34 varietyF:day67
Vitvi12g02209 1.417136      -0.9800107      -1.522301
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi12g02209      -1.987901      -0.8002611      -1.97235
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi12g02209              1.52808              2.250947

```

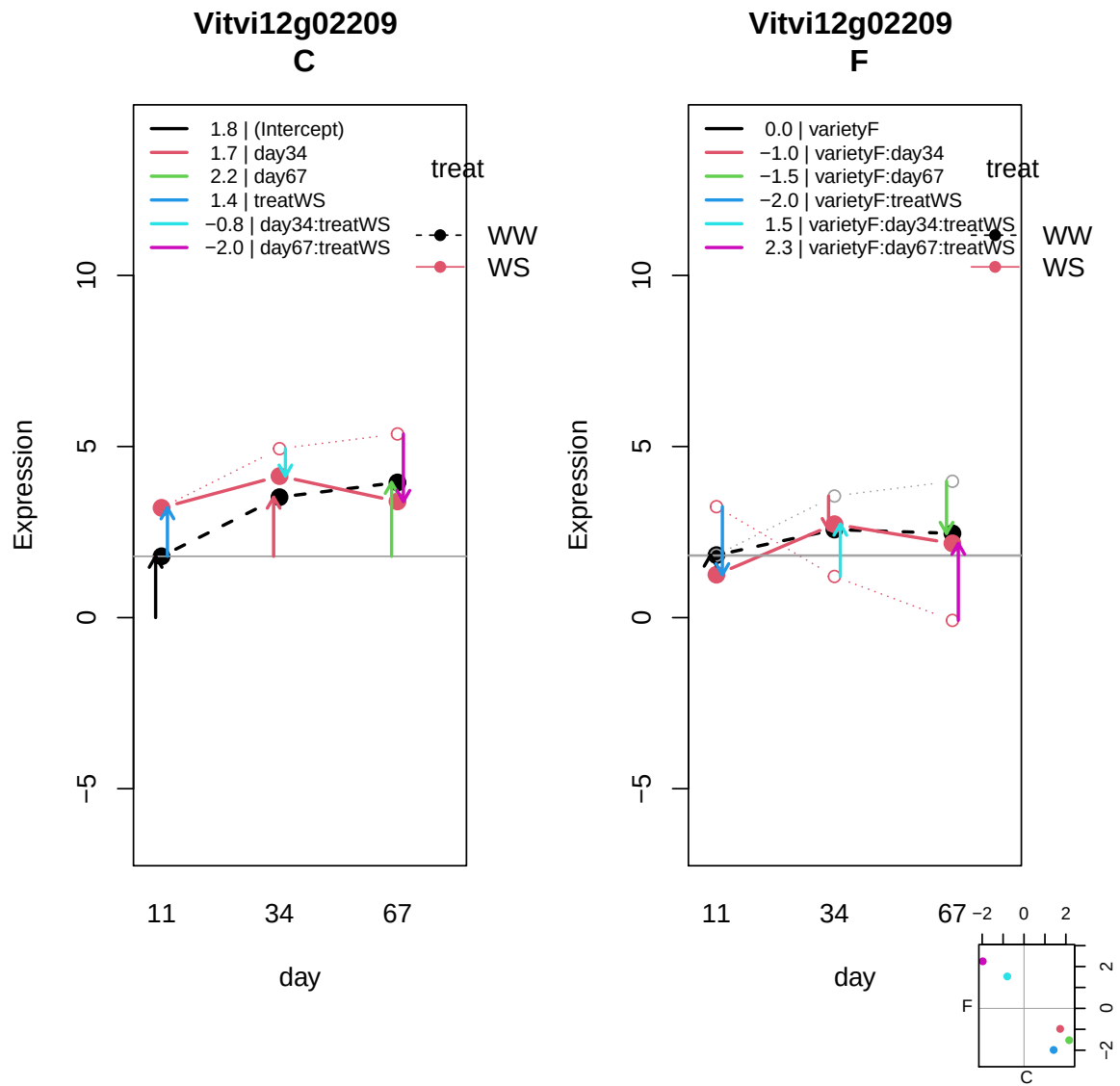
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

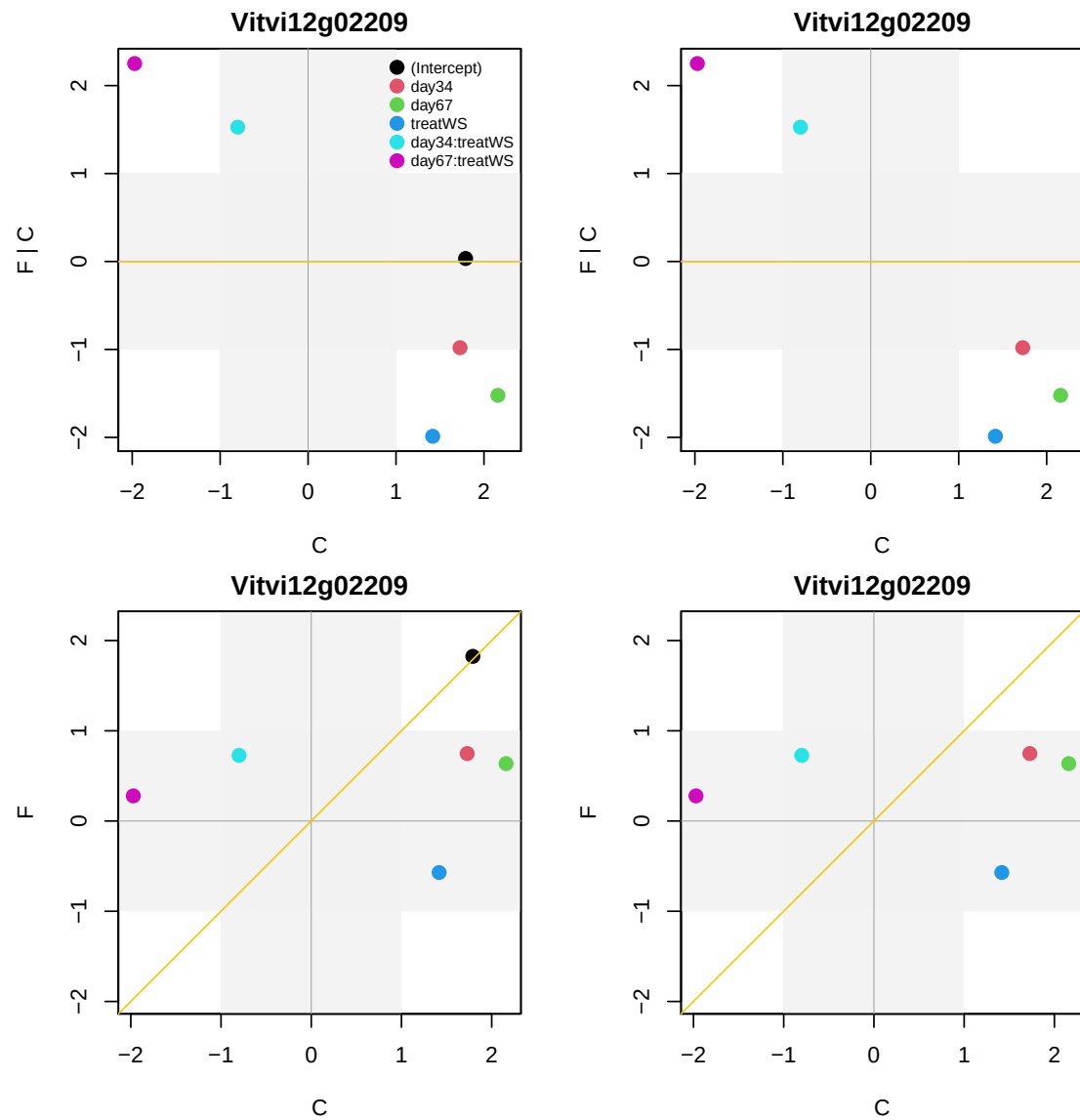


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

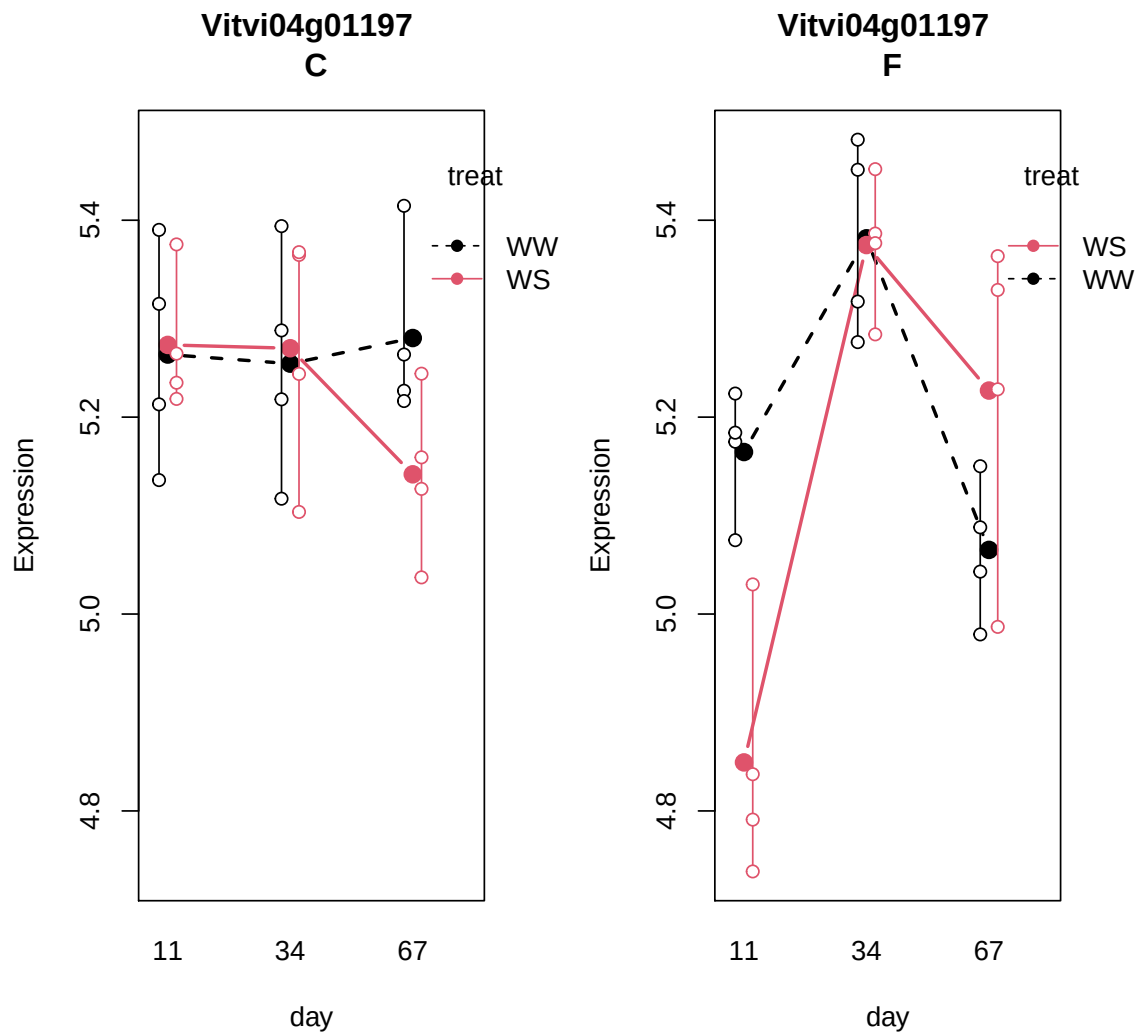


6.12.119 Vitvi04g01197

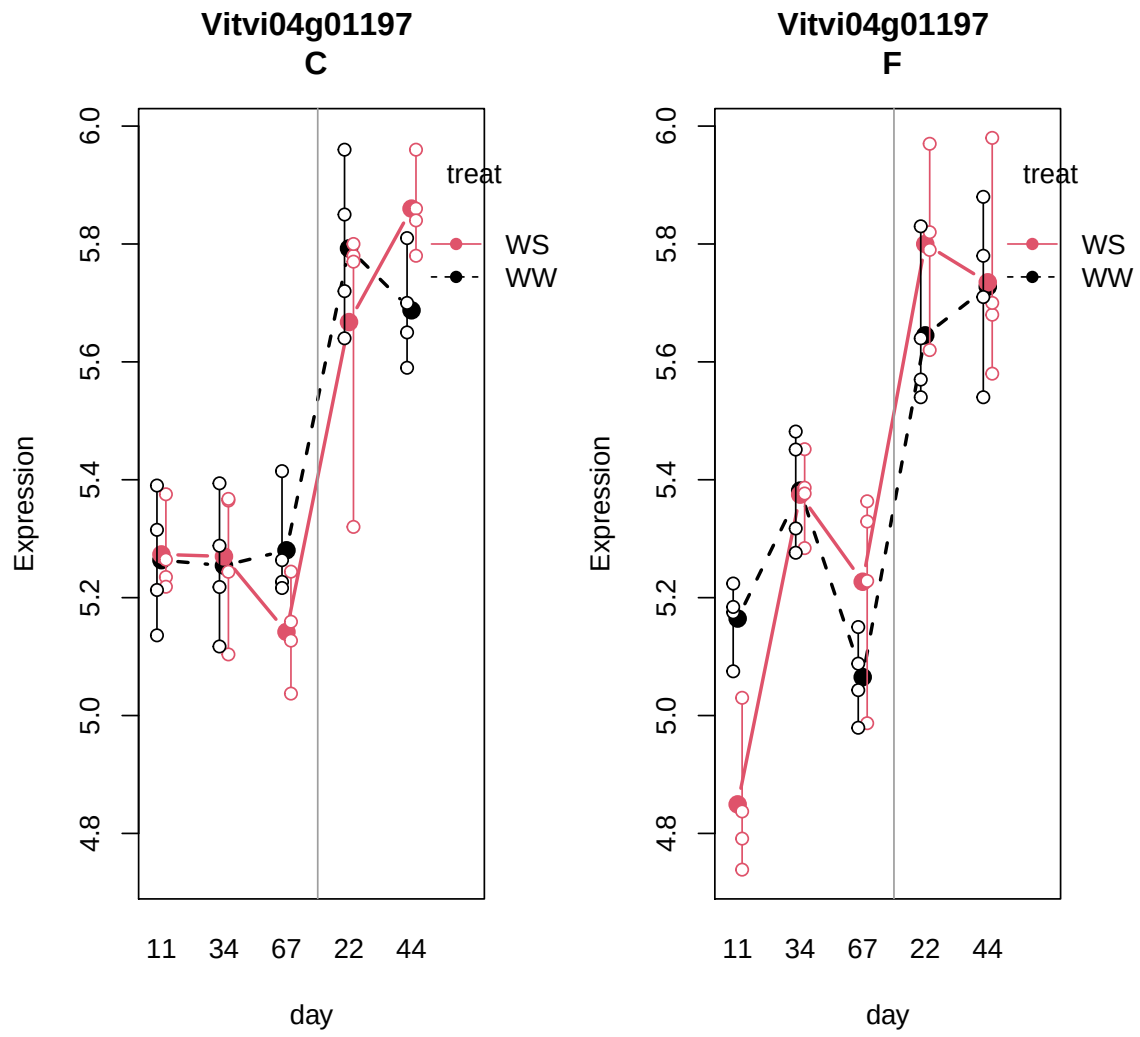
Coefficient varietyF:day67:treatWS for Vitvi04g01197.

```
> tt[varname,]
               logFC AveExpr      t      P.Value
Vitvi04g01197 0.6252867 5.212151 3.897026 0.0003749163
               adj.P.Val      B
Vitvi04g01197 0.04770549 0.1100014

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

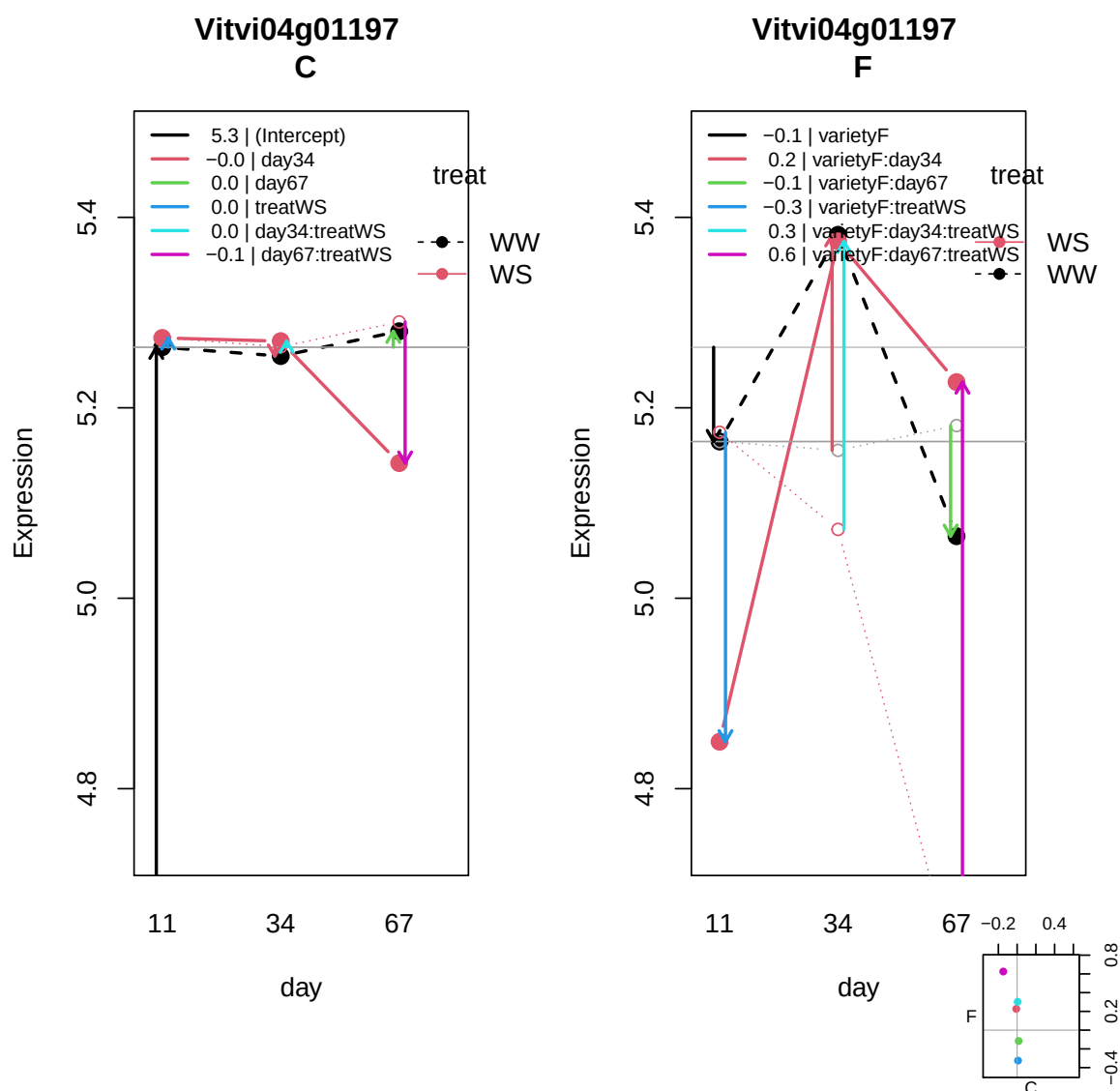
              (Intercept)      varietyF      day34
Vitvi04g01197      5.263573 -0.09903052 -0.009251506
              day67      treatWS varietyF:day34
Vitvi04g01197  0.01675936  0.009770679      0.2263635
              varietyF:day67 varietyF:treatWS day34:treatWS
Vitvi04g01197      -0.116157      -0.3250261      0.005875396
              day67:treatWS varietyF:day34:treatWS
Vitvi04g01197      -0.1481993      0.3024929
              varietyF:day67:treatWS
Vitvi04g01197      0.6252867

```

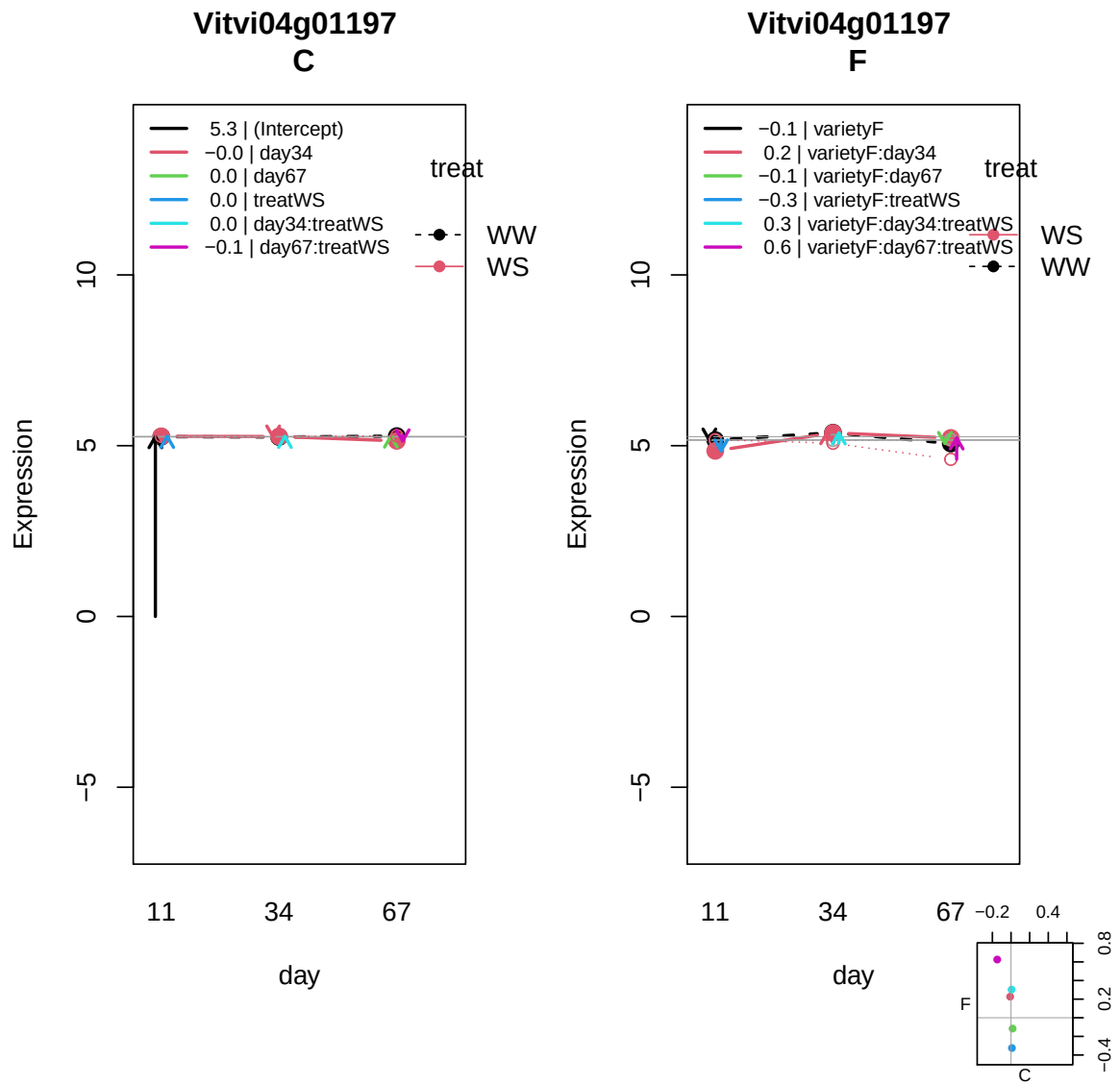
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

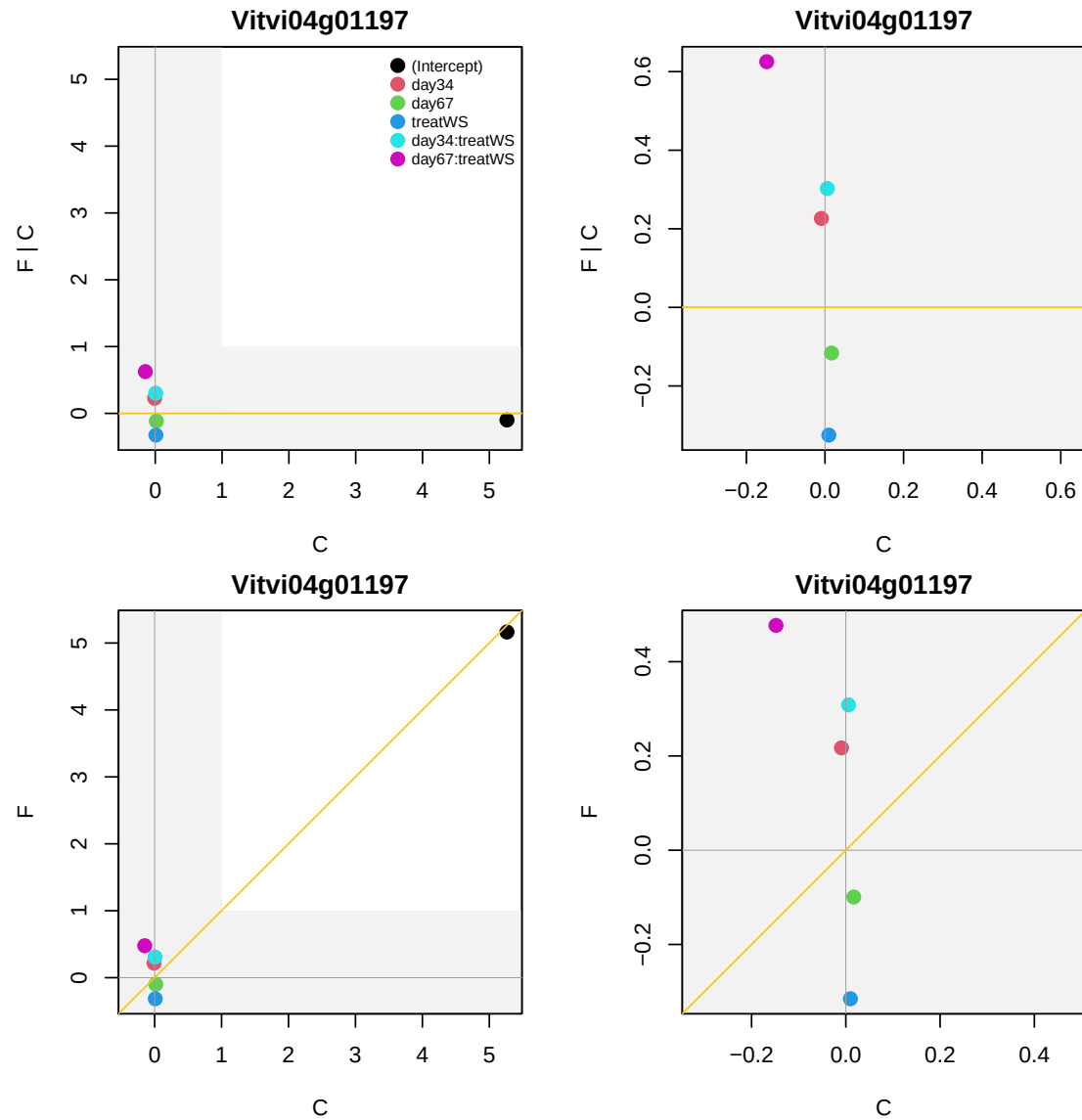


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

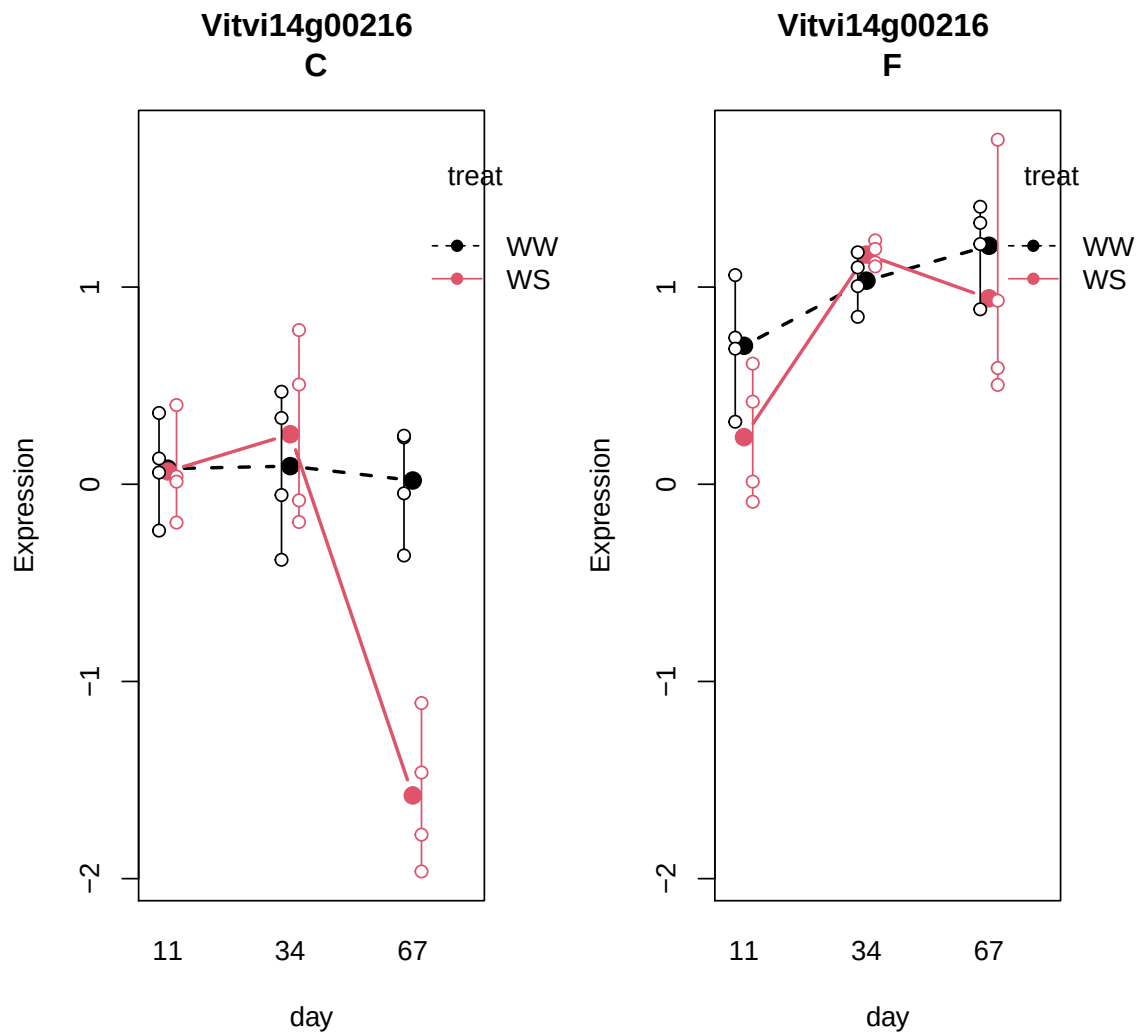


6.12.120 Vitvi14g00216

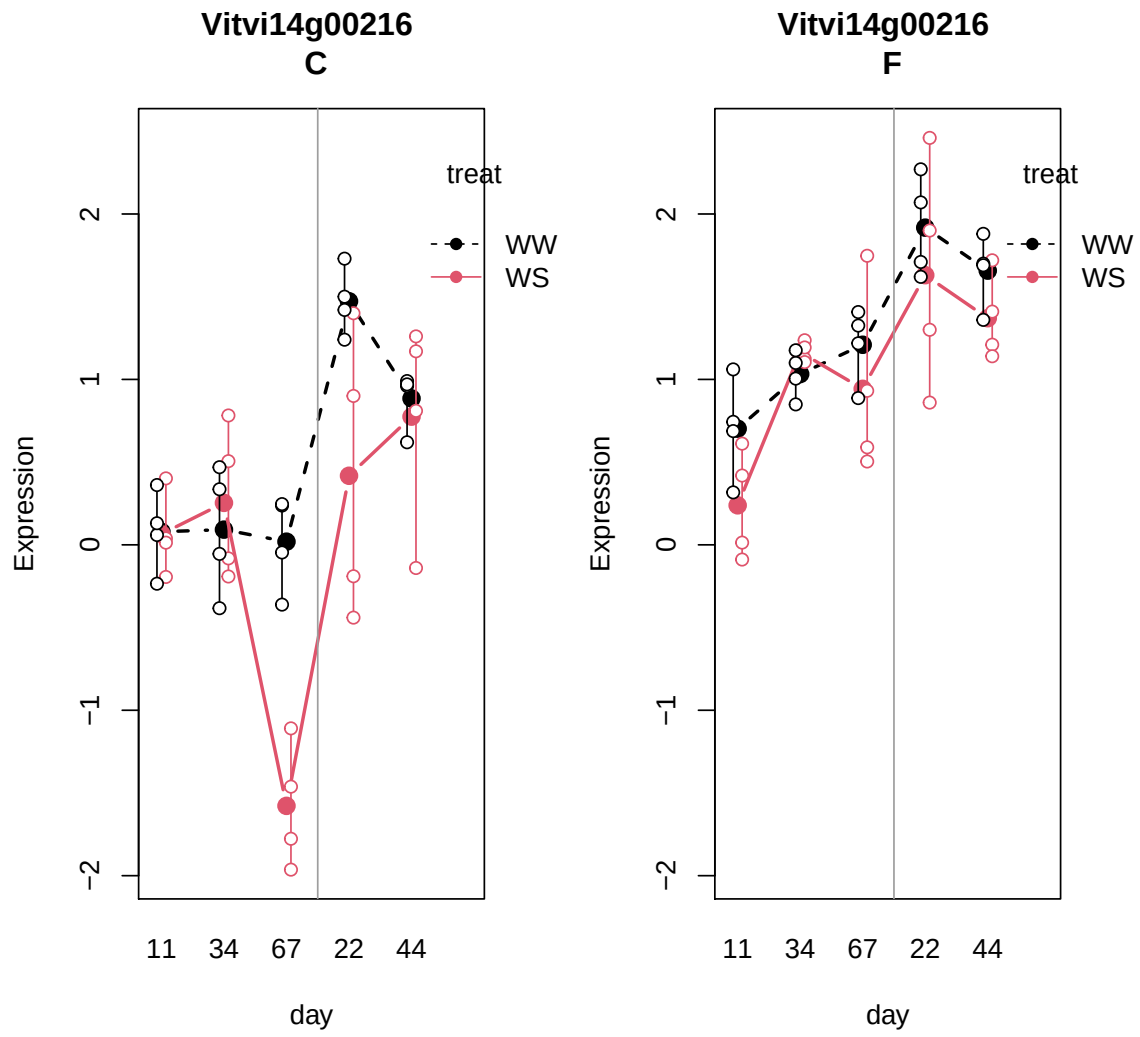
Coefficient varietyF:day67:treatWS for Vitvi14g00216.

```
> tt[varname,]
              logFC AveExpr      t      P.Value
Vitvi14g00216 1.779756 0.351784 3.895704 0.000376385
              adj.P.Val      B
Vitvi14g00216 0.04770549 0.1065366

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```




```
> fit1[varname,]$coefficients
```

```

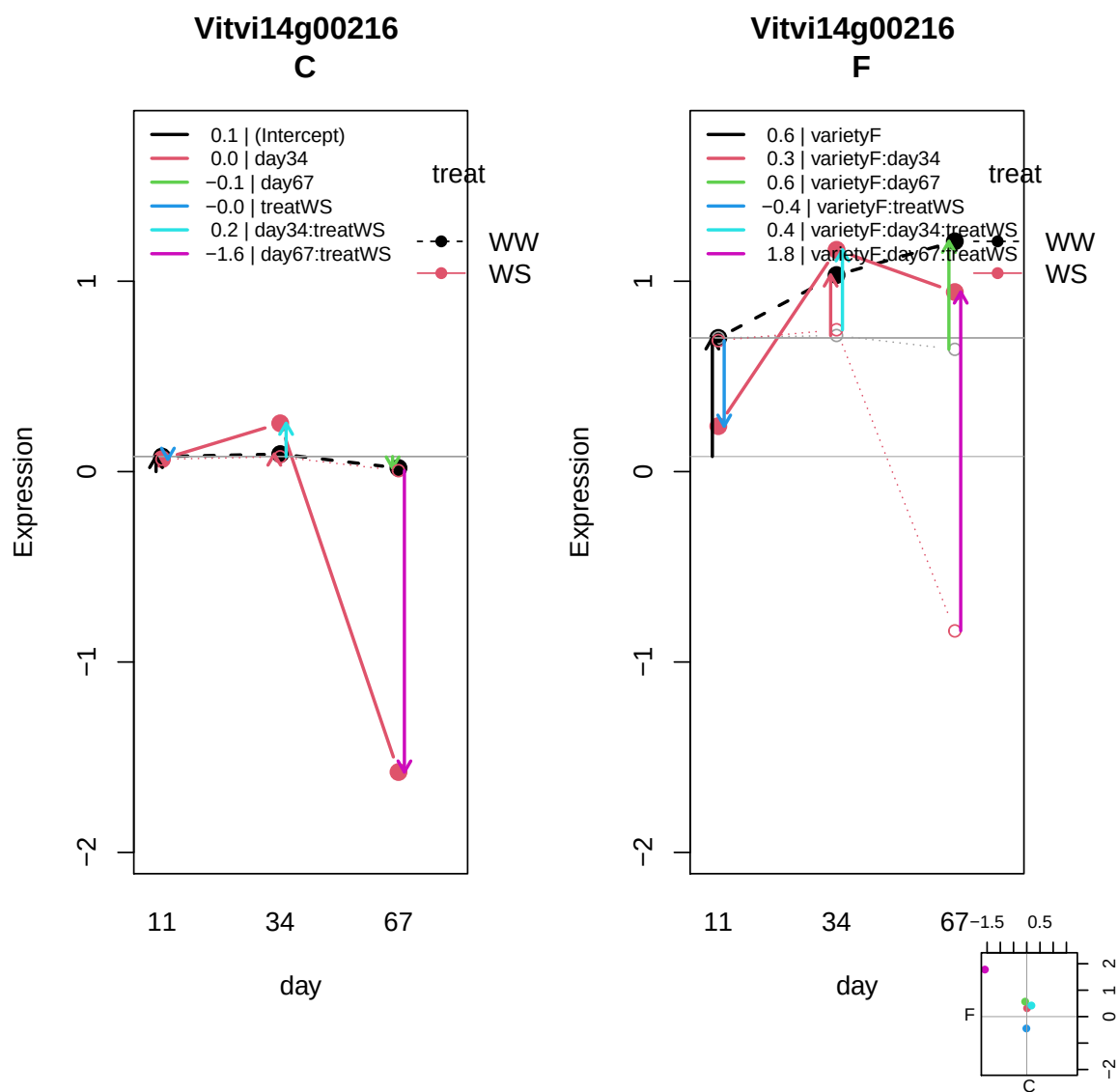
              (Intercept)  varietyF      day34      day67
Vitvi14g00216  0.07911537  0.6230706  0.01277356 -0.0600264
              treatWS  varietyF:day34  varietyF:day67
Vitvi14g00216 -0.01414456      0.3174245      0.5673015
              varietyF:treatWS  day34:treatWS  day67:treatWS
Vitvi14g00216      -0.4492405      0.1759436      -1.582852
              varietyF:day34:treatWS  varietyF:day67:treatWS
Vitvi14g00216              0.4198093              1.779756

```

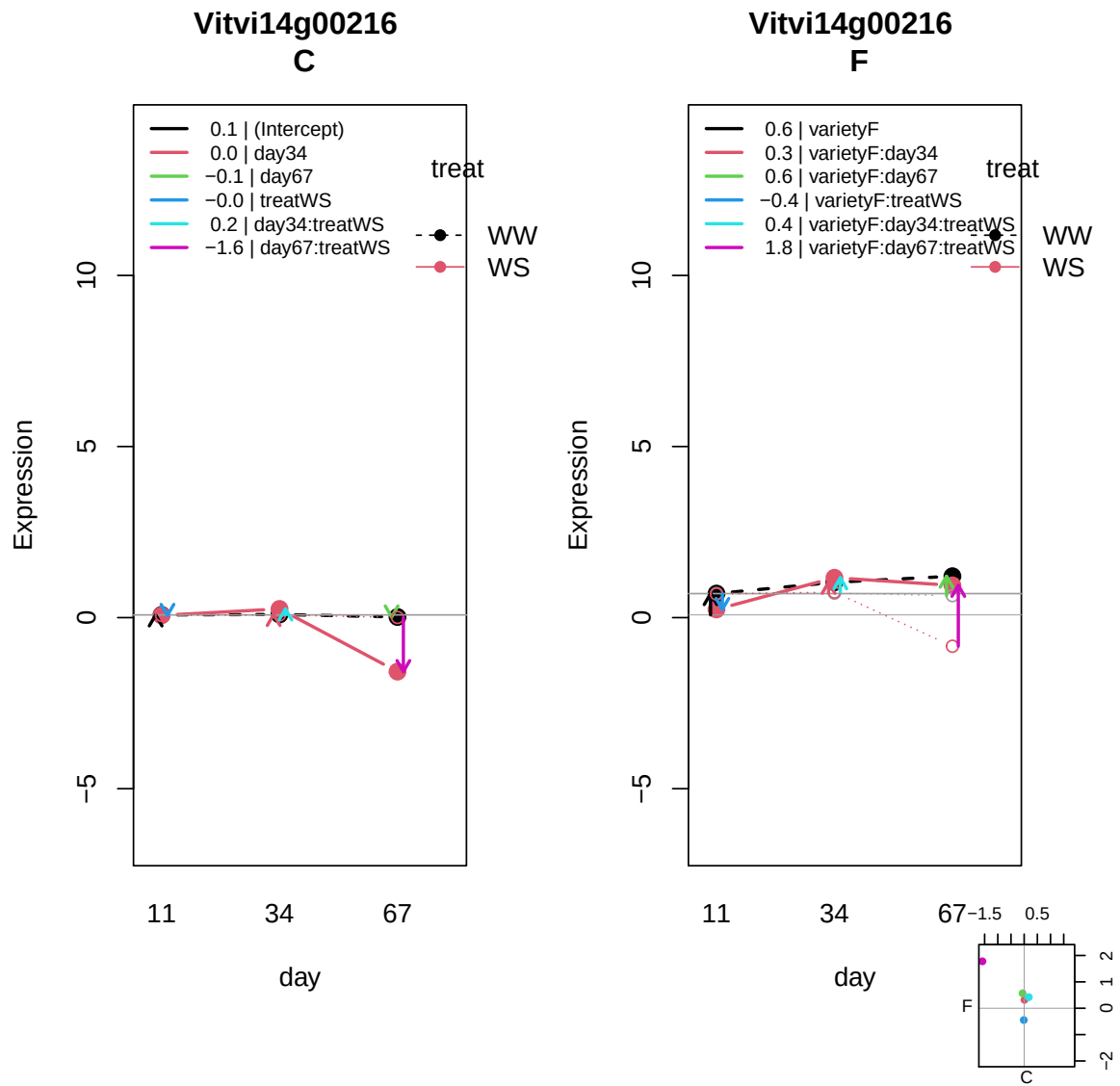
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

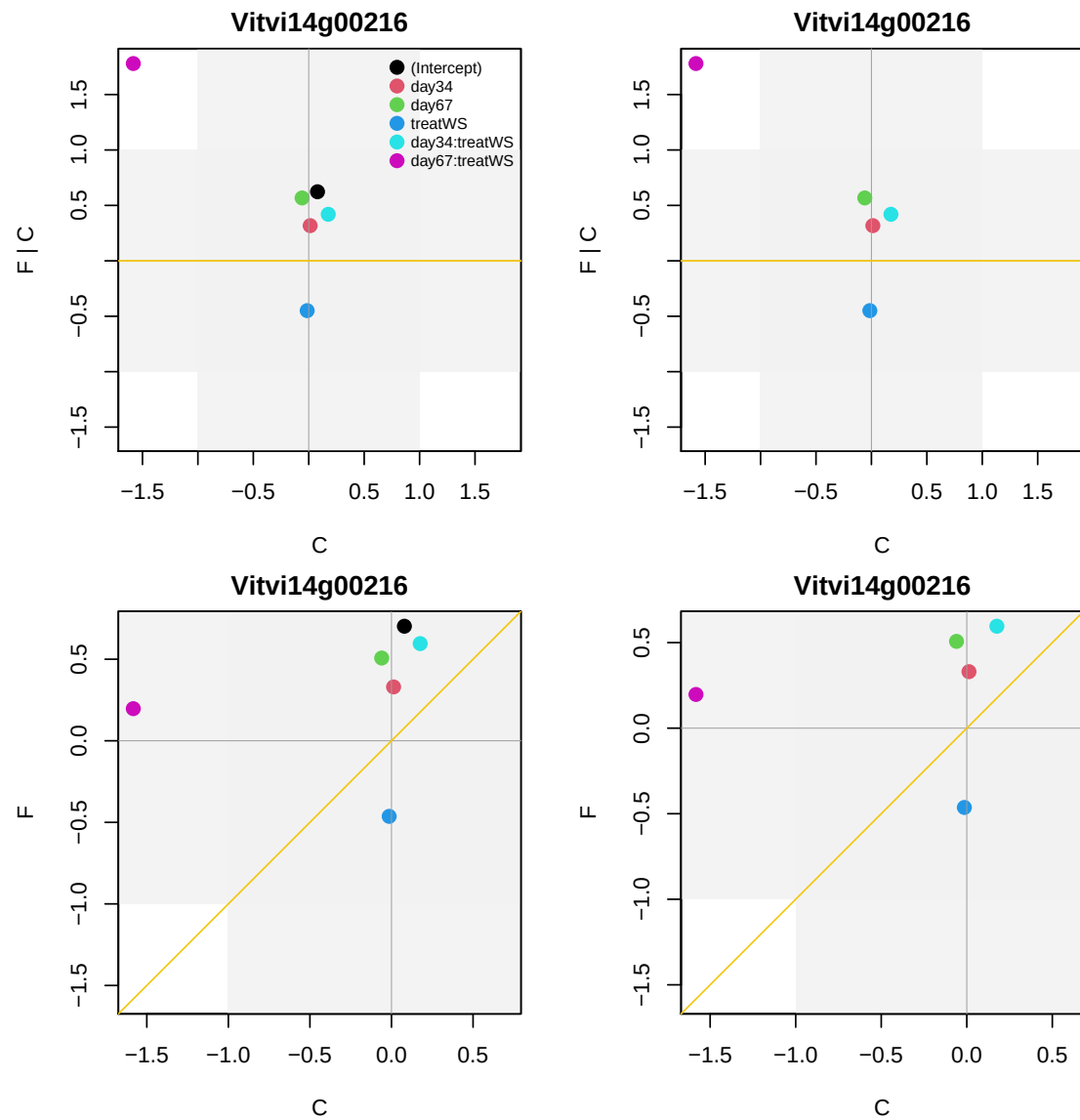


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

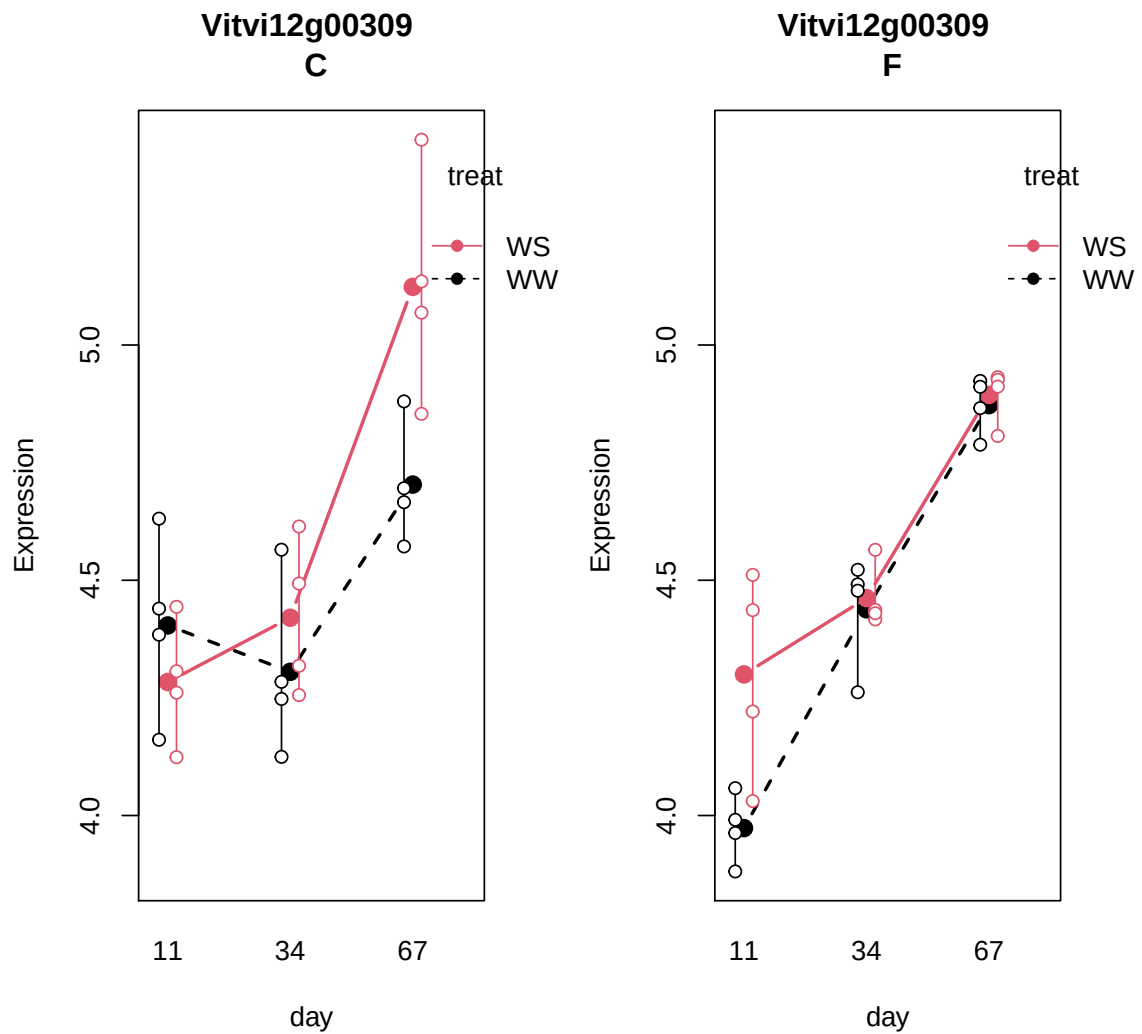


6.12.121 Vitvi12g00309

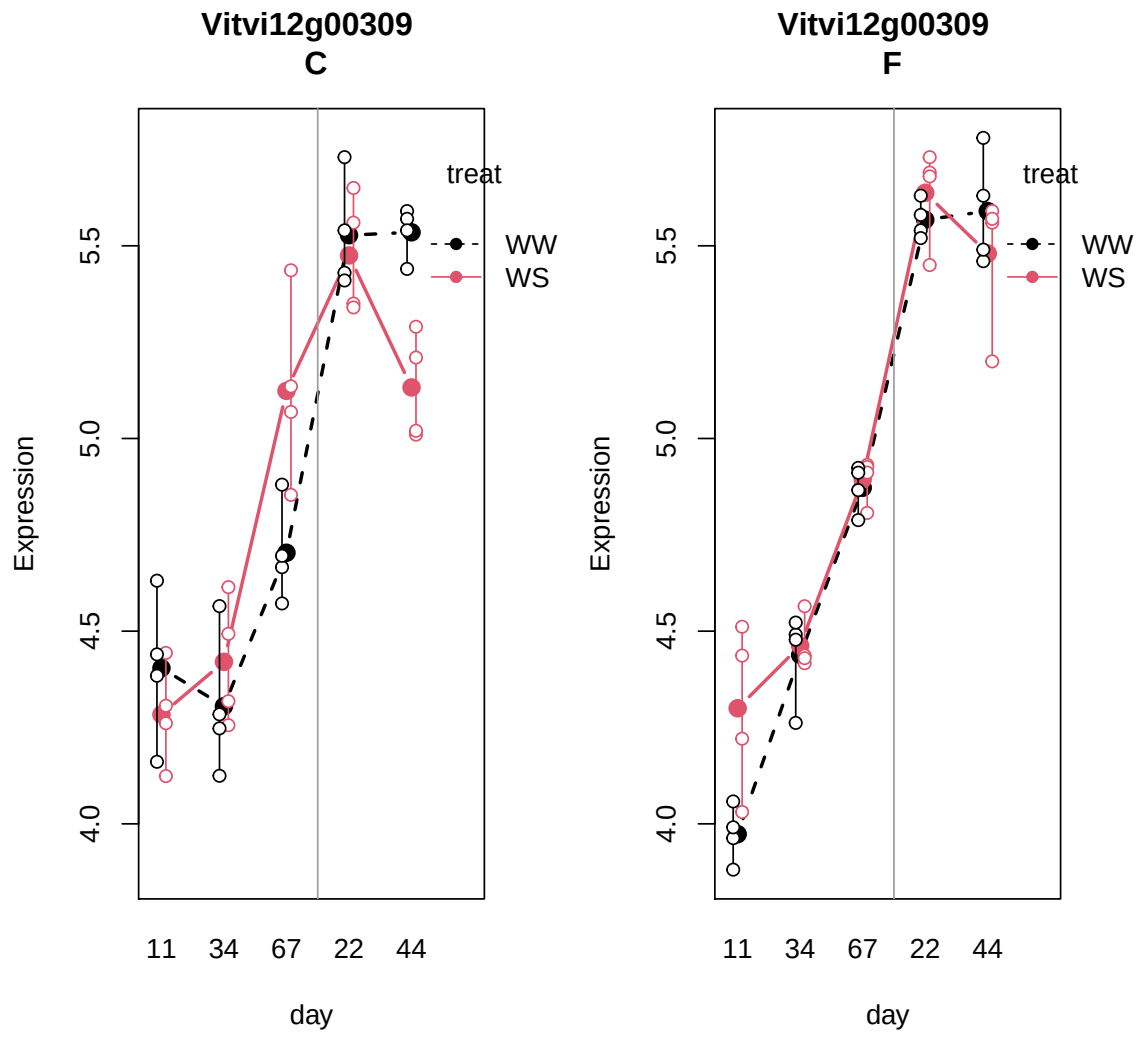
Coefficient varietyF:day67:treatWS for Vitvi12g00309.

```
> tt[varname,]
              logFC AveExpr      t      P.Value
Vitvi12g00309 -0.8453654 4.515008 -3.893618 0.0003787144
              adj.P.Val      B
Vitvi12g00309 0.04770549 0.1010689

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

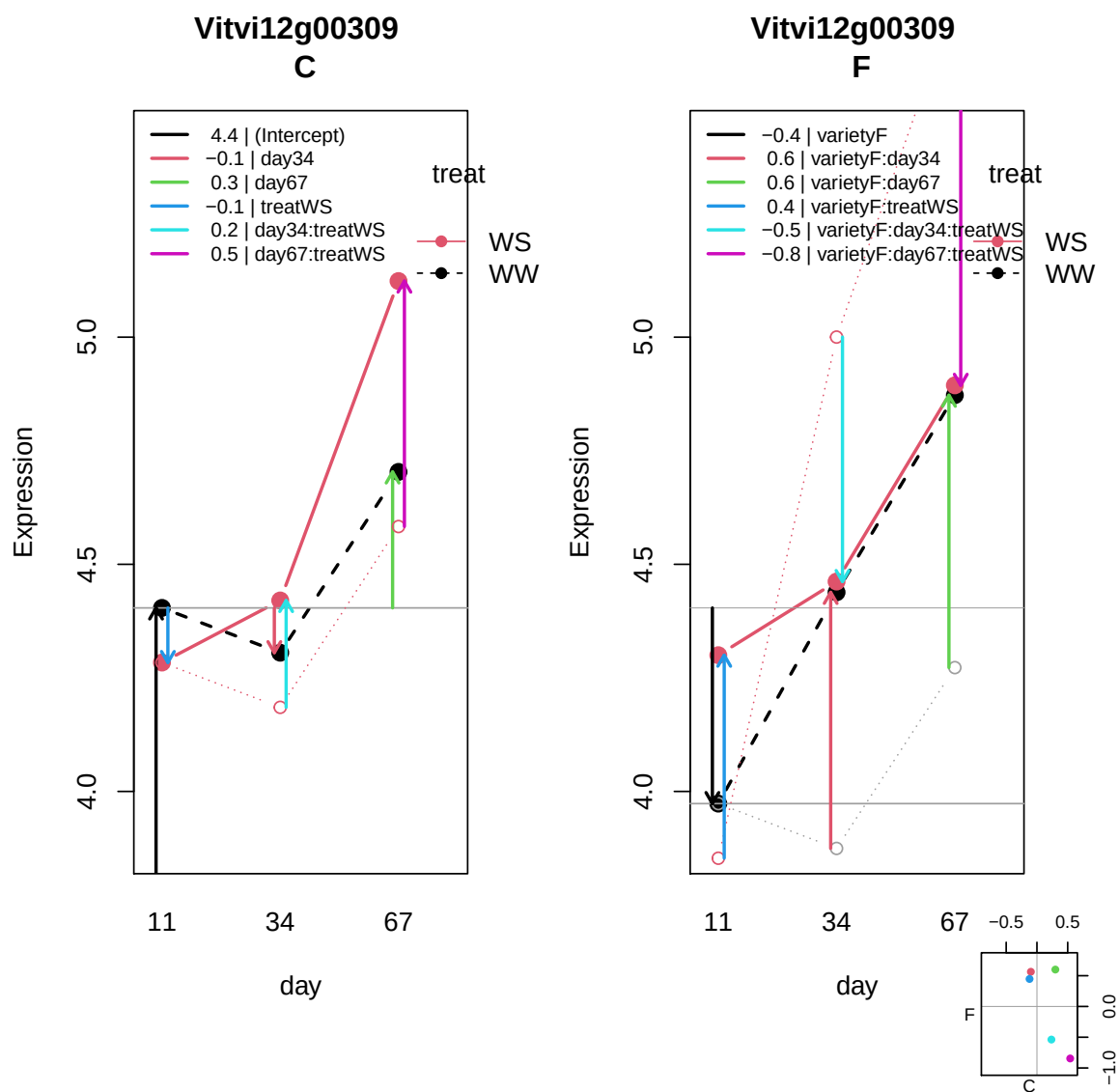
              (Intercept)    varietyF      day34      day67
Vitvi12g00309      4.404008 -0.4307951 -0.09863579 0.2993691
              treatWS varietyF:day34 varietyF:day67
Vitvi12g00309 -0.1202345      0.5637095      0.5996561
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi12g00309      0.4469304      0.2352271      0.540396
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi12g00309      -0.5381652      -0.8453654

```

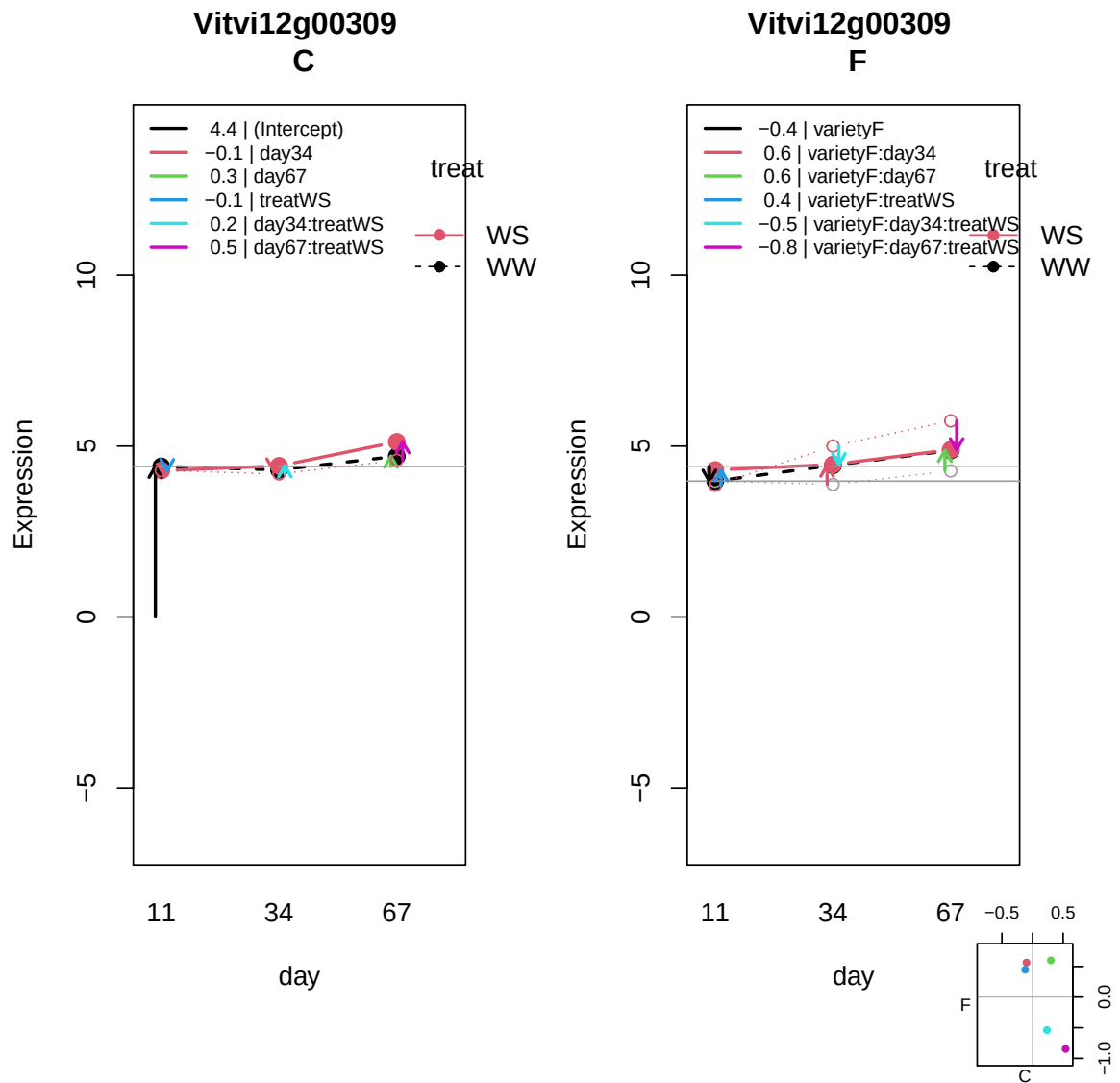
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

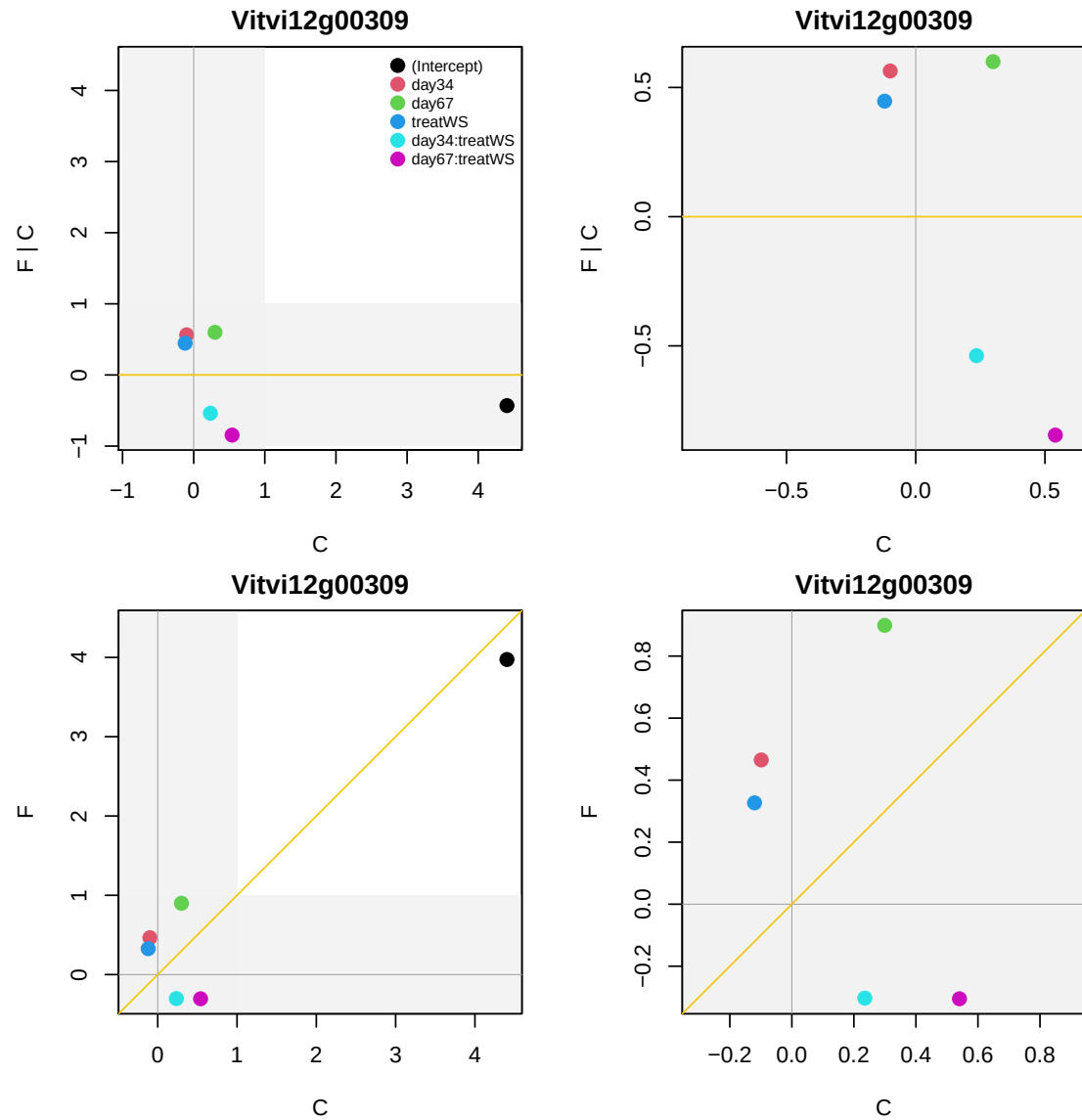


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

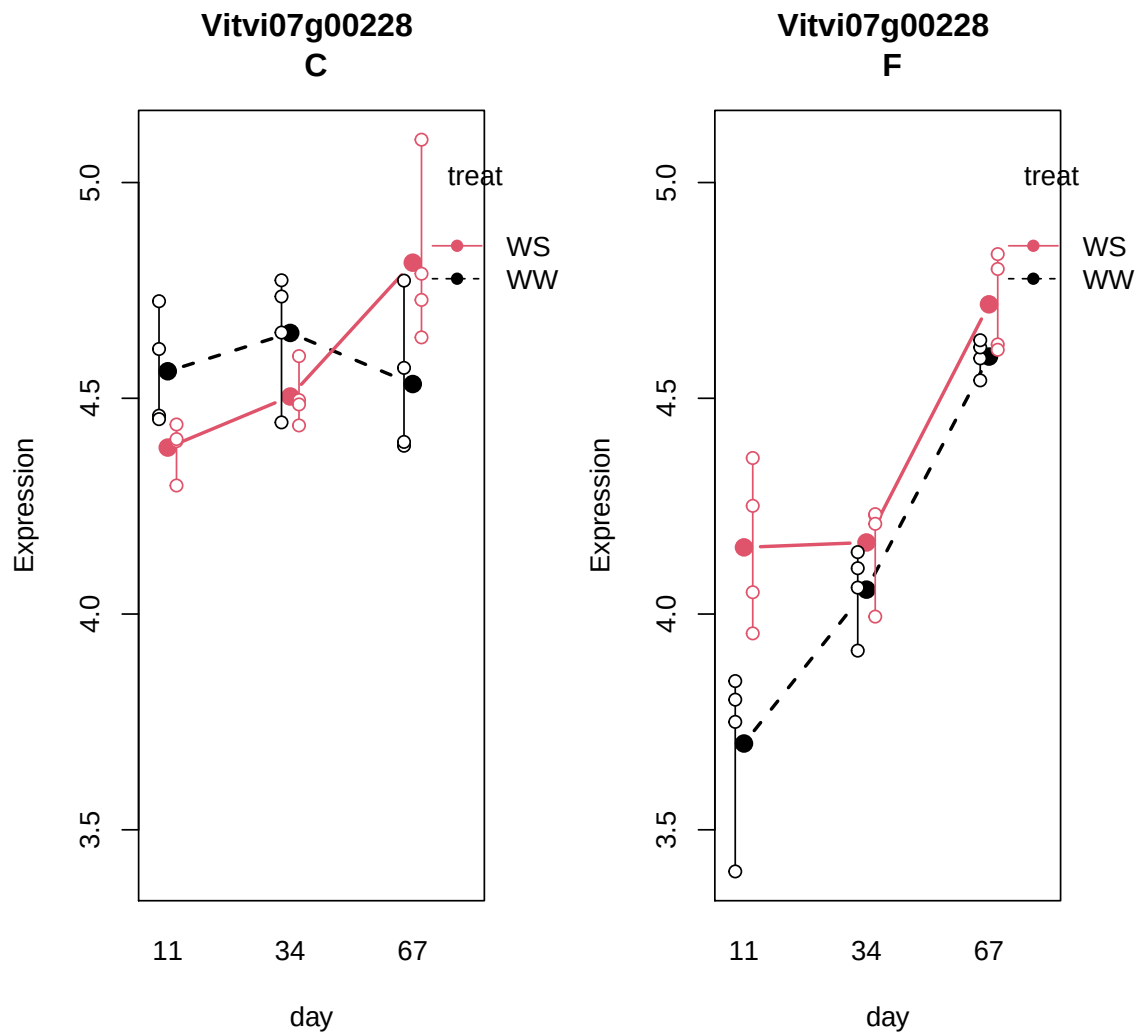


6.12.122 Vitvi07g00228

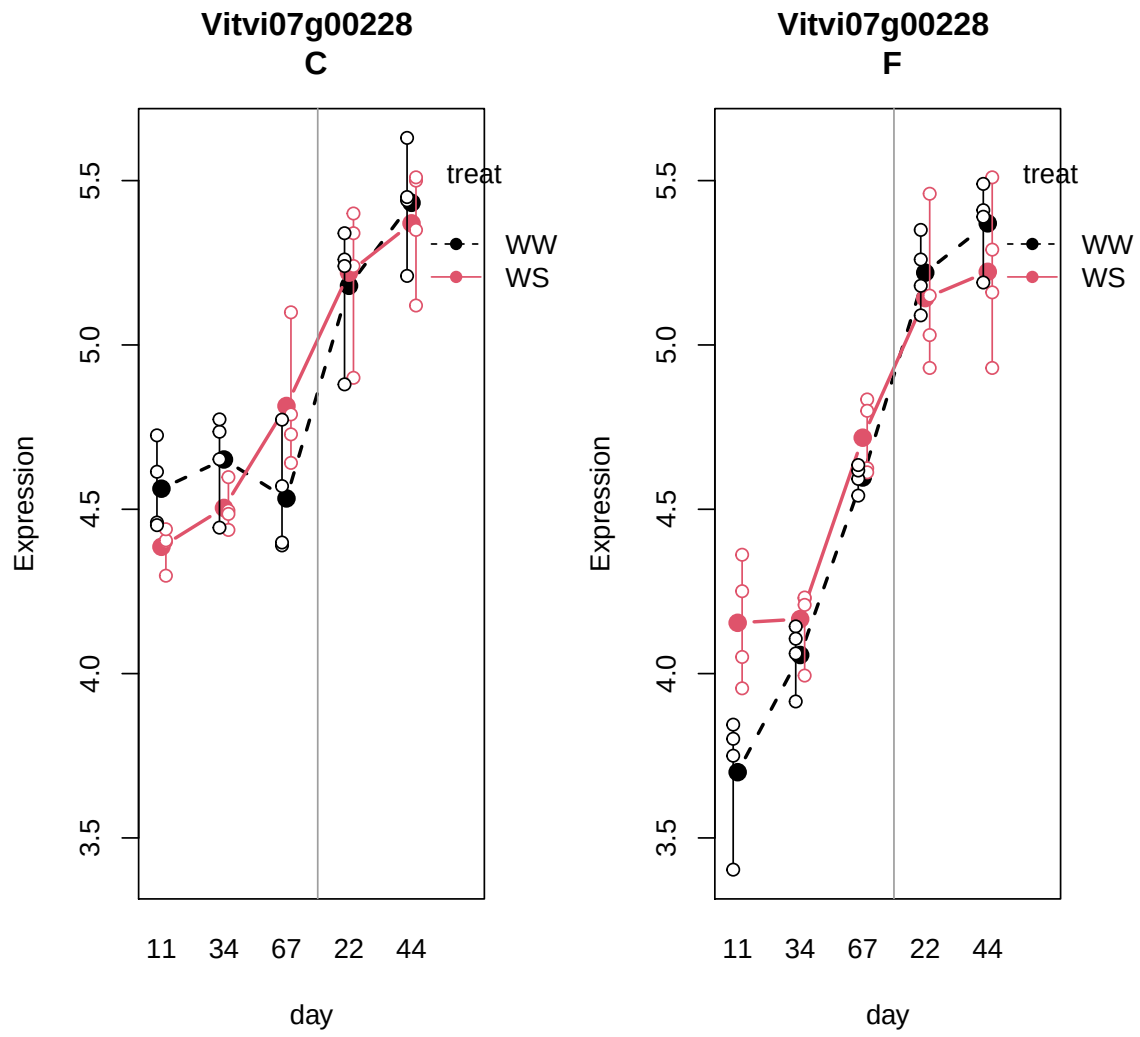
Coefficient varietyF:day67:treatWS for Vitvi07g00228.

```
> tt[varname,]
              logFC AveExpr          t      P.Value
Vitvi07g00228 -0.7914808 4.403559 -3.890703 0.0003819936
              adj.P.Val          B
Vitvi07g00228 0.04772415 0.09342882

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

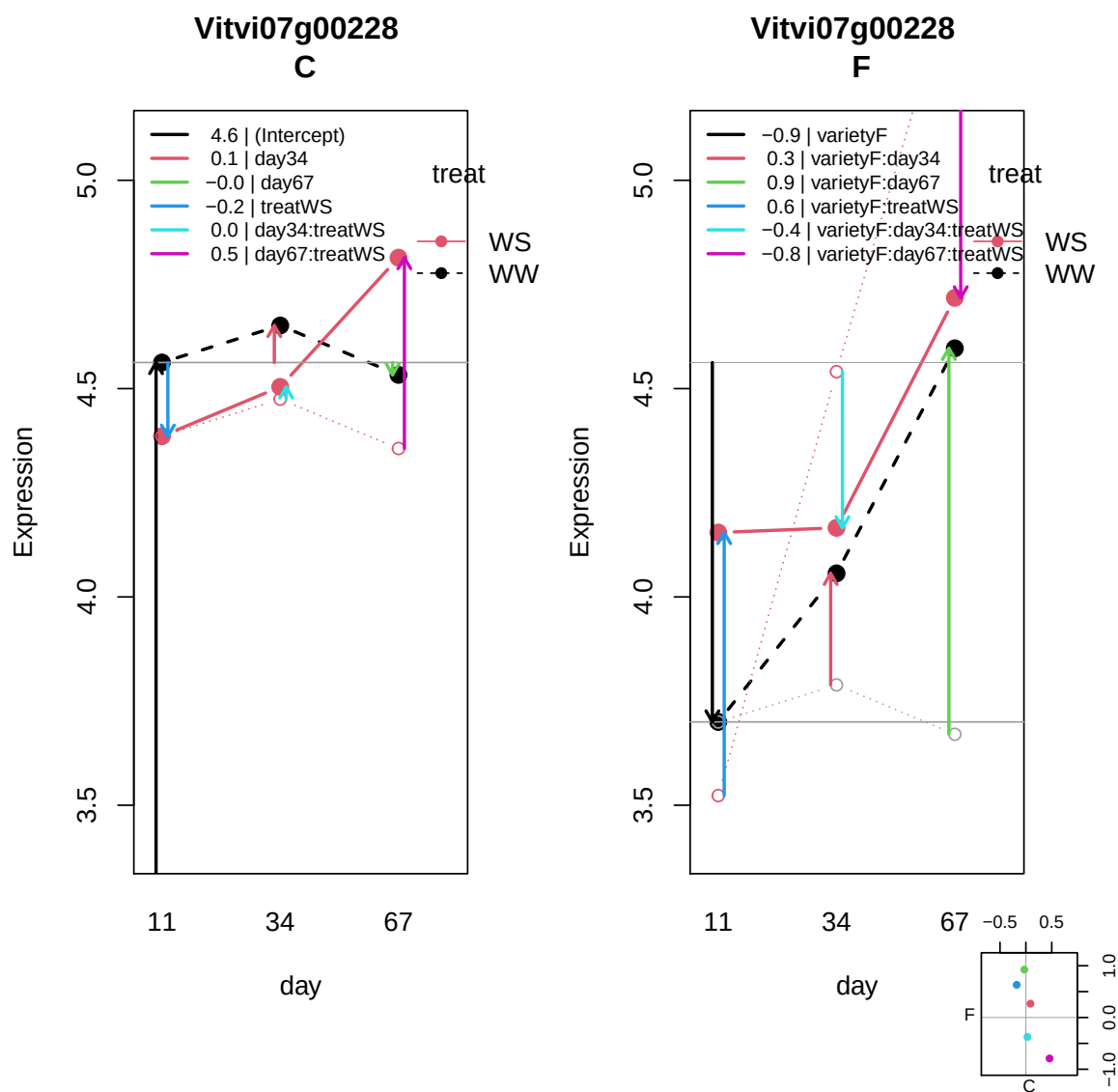
              (Intercept)    varietyF      day34      day67
Vitvi07g00228    4.562627 -0.8626372 0.08885213 -0.02962101
              treatWS varietyF:day34 varietyF:day67
Vitvi07g00228 -0.1768041    0.2677247    0.9262649
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi07g00228    0.6313633    0.02945137    0.4580575
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi07g00228          -0.3747045          -0.7914808

```

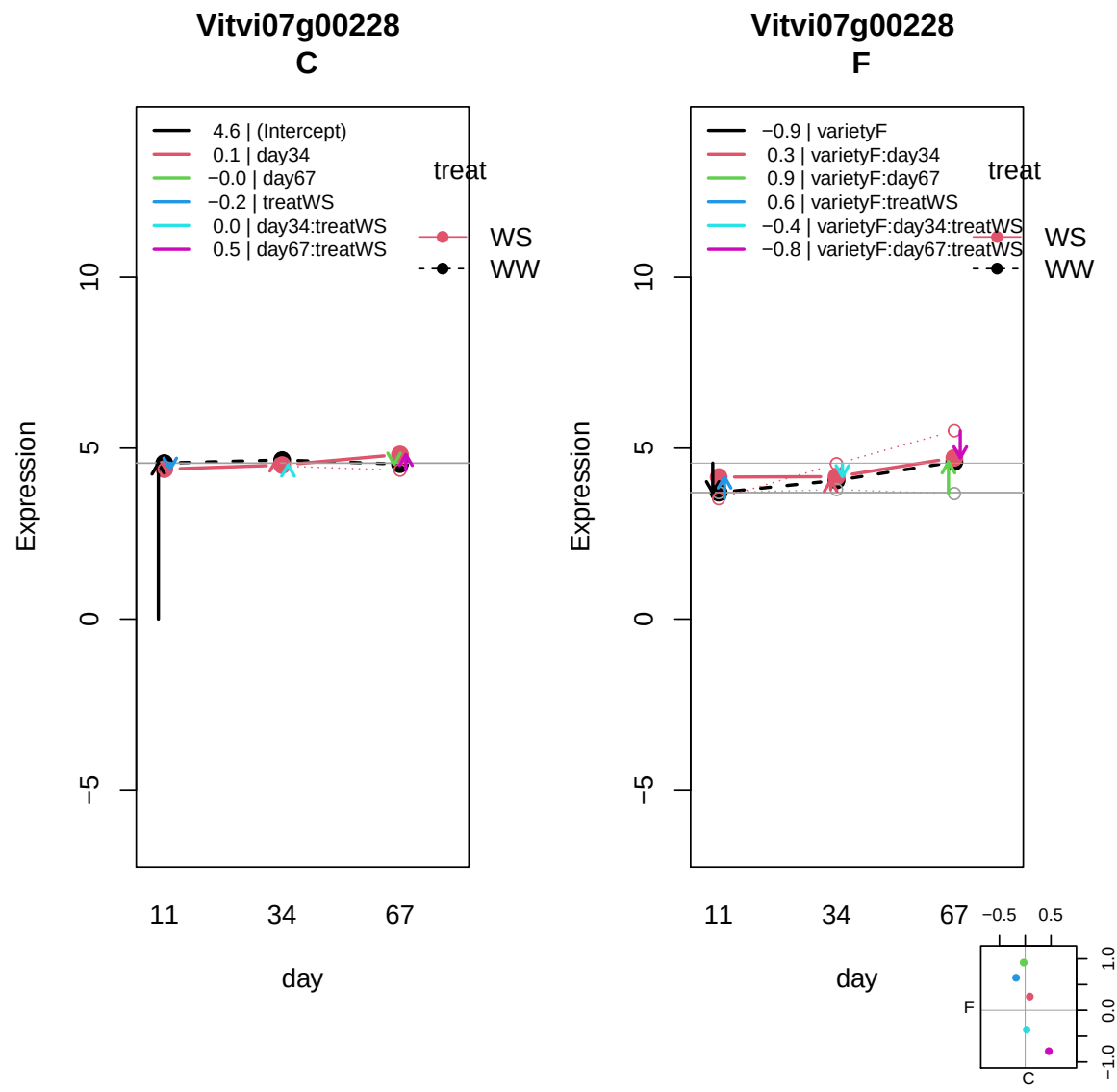
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

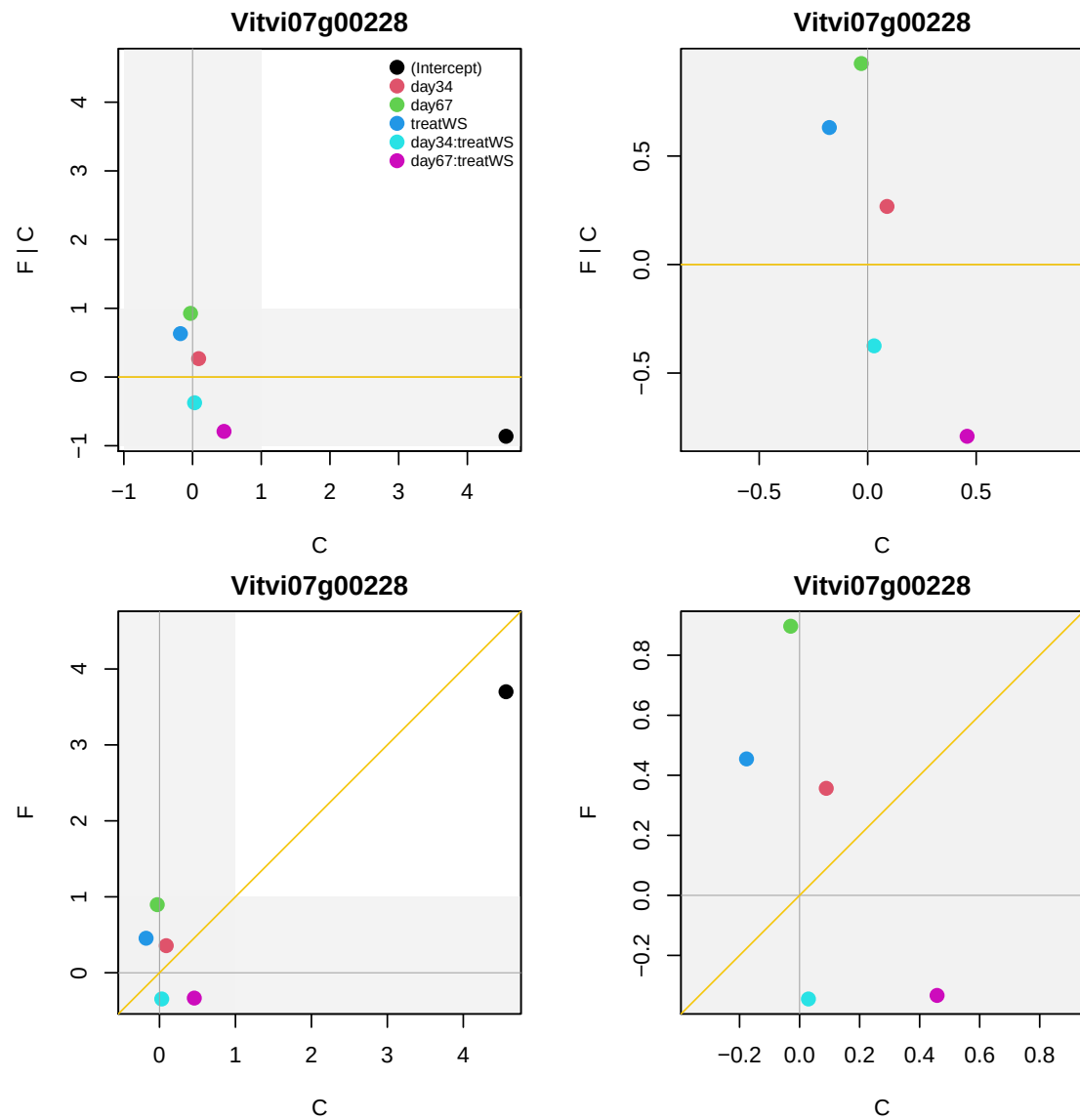


```
> coefs <- plot.interactions(varname,  
+ coef=fit1[varname,]$coefficients,  
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

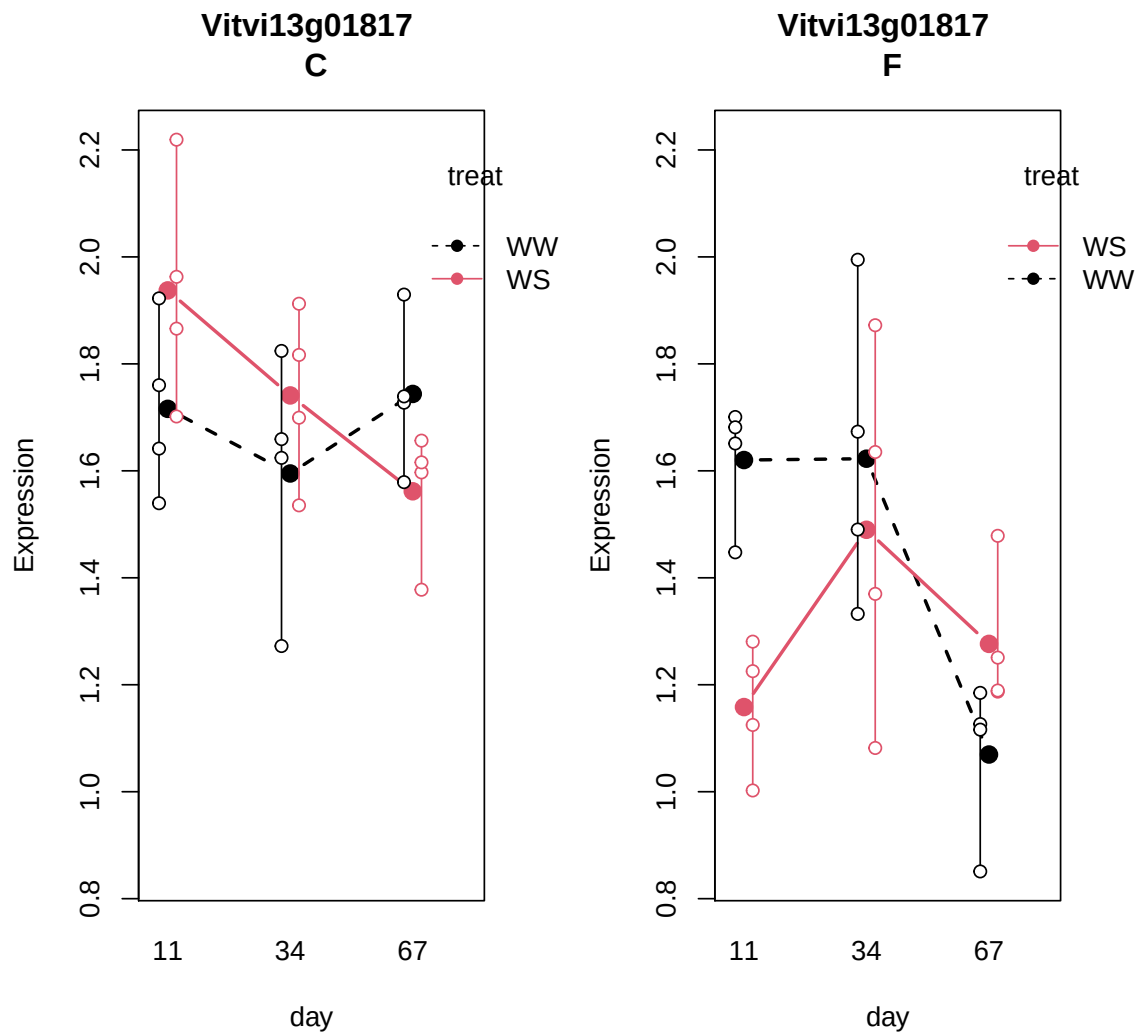


6.12.123 Vitvi13g01817

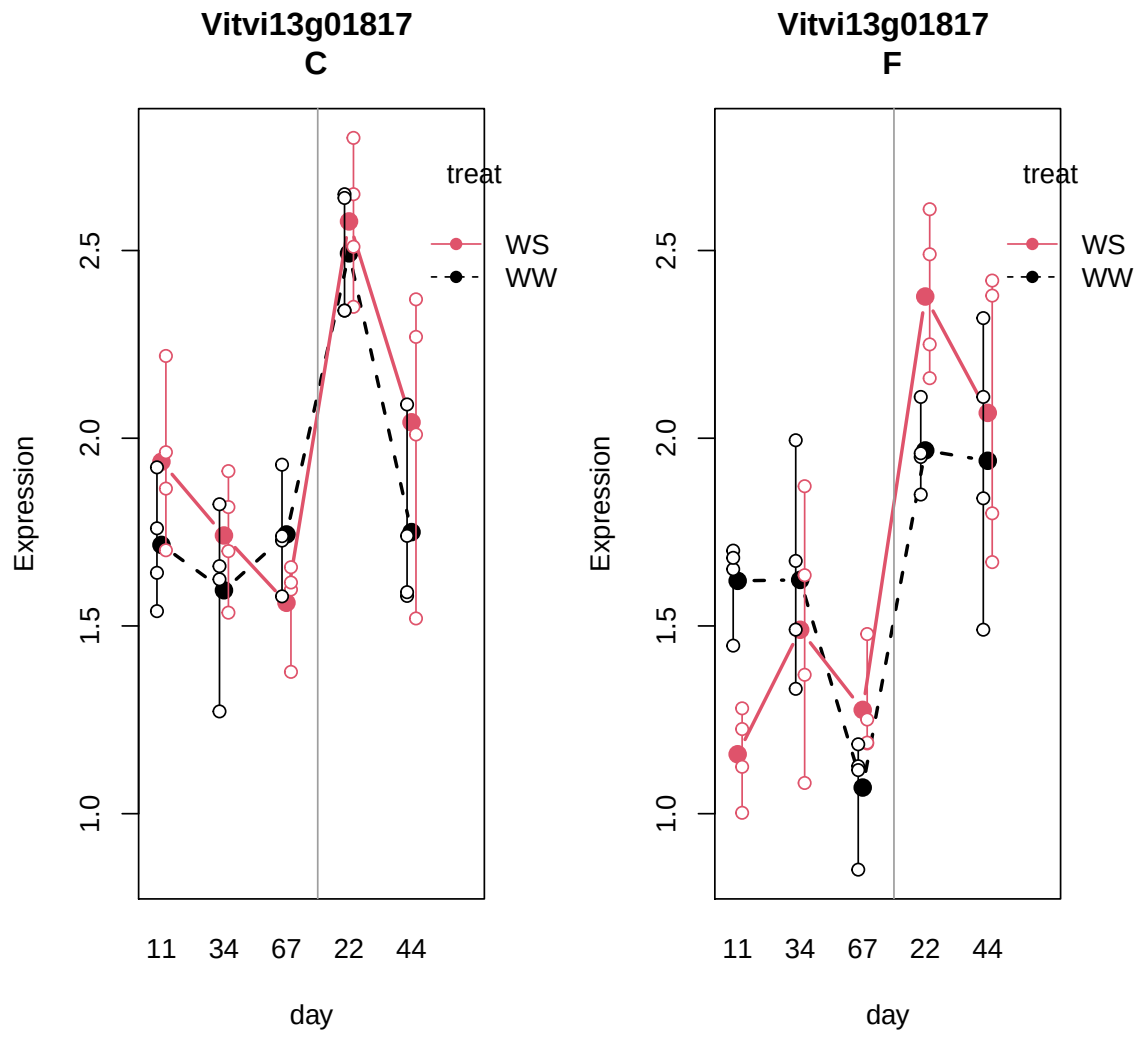
Coefficient varietyF:day67:treatWS for Vitvi13g01817.

```
> tt[varname,]
              logFC AveExpr      t      P.Value
Vitvi13g01817 1.072224 1.544306 3.883704 0.0003899787
              adj.P.Val      B
Vitvi13g01817 0.04832566 0.07509656

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

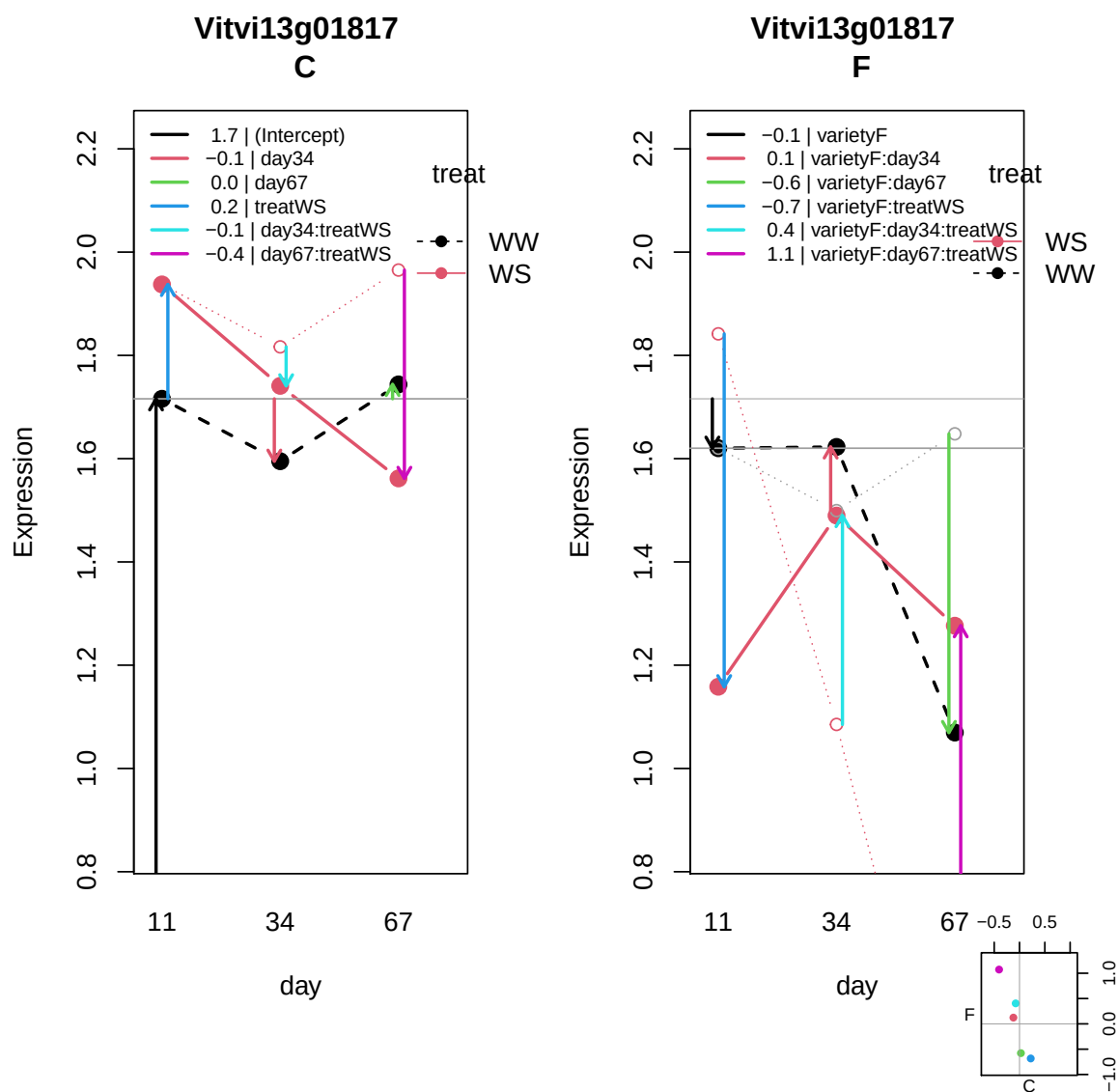
              (Intercept)      varietyF      day34      day67
Vitvi13g01817      1.715889 -0.09569272 -0.120865 0.0278529
              treatWS varietyF:day34 varietyF:day67
Vitvi13g01817 0.2214794      0.1233369      -0.5784876
              varietyF:treatWS day34:treatWS day67:treatWS
Vitvi13g01817      -0.6833852      -0.07553318      -0.4034666
              varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi13g01817              0.4045568              1.072224

```

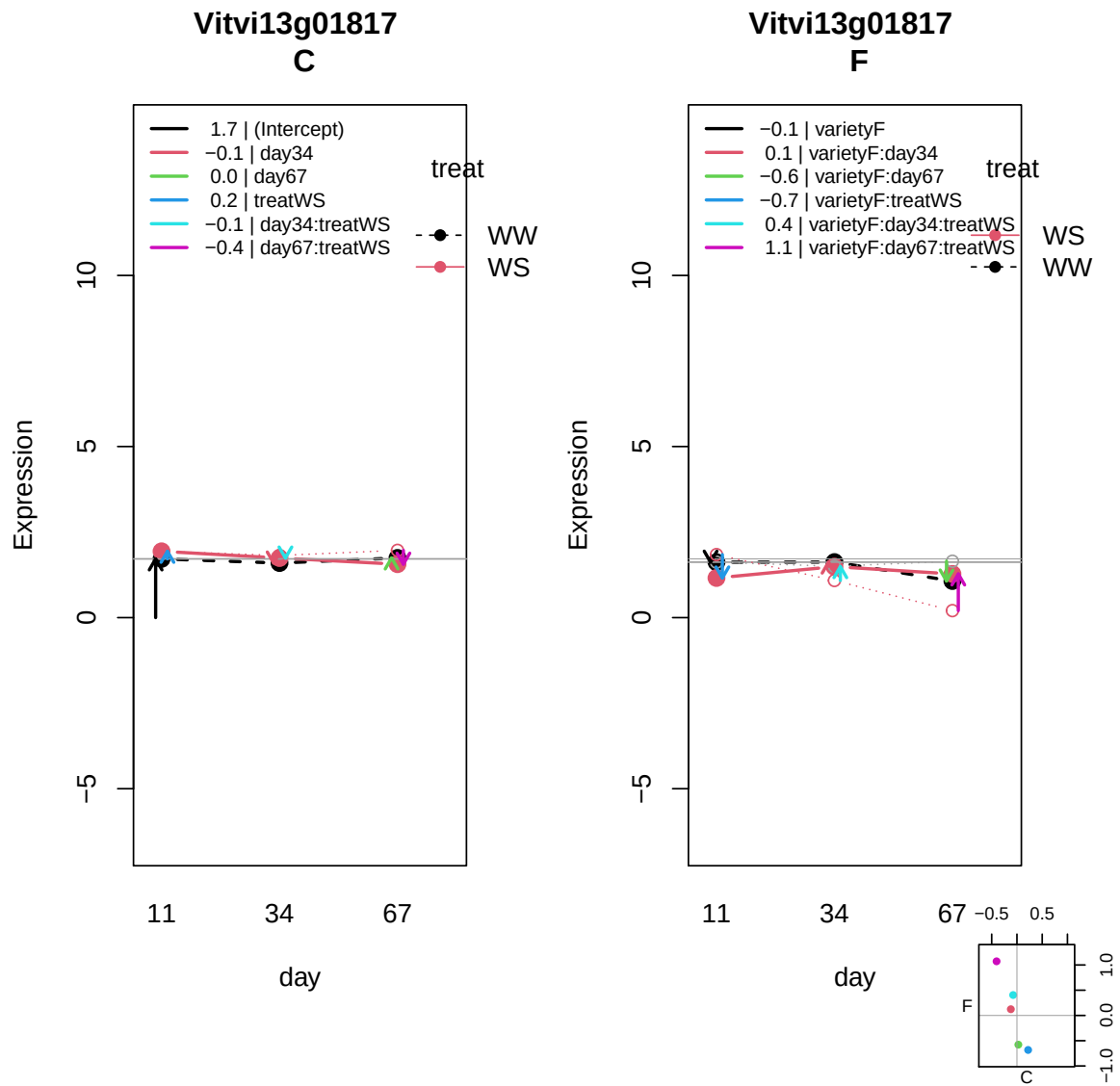
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

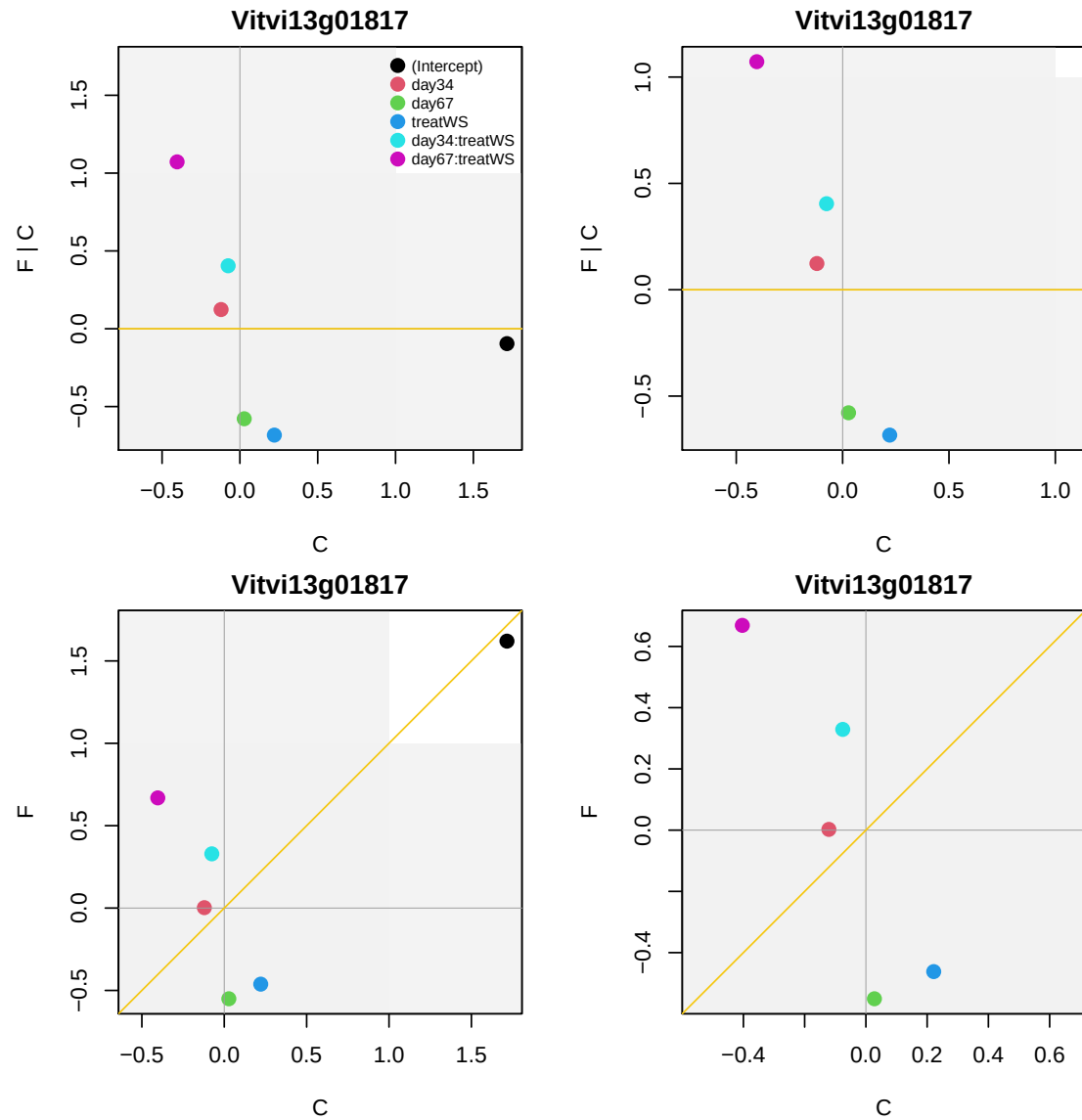



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```

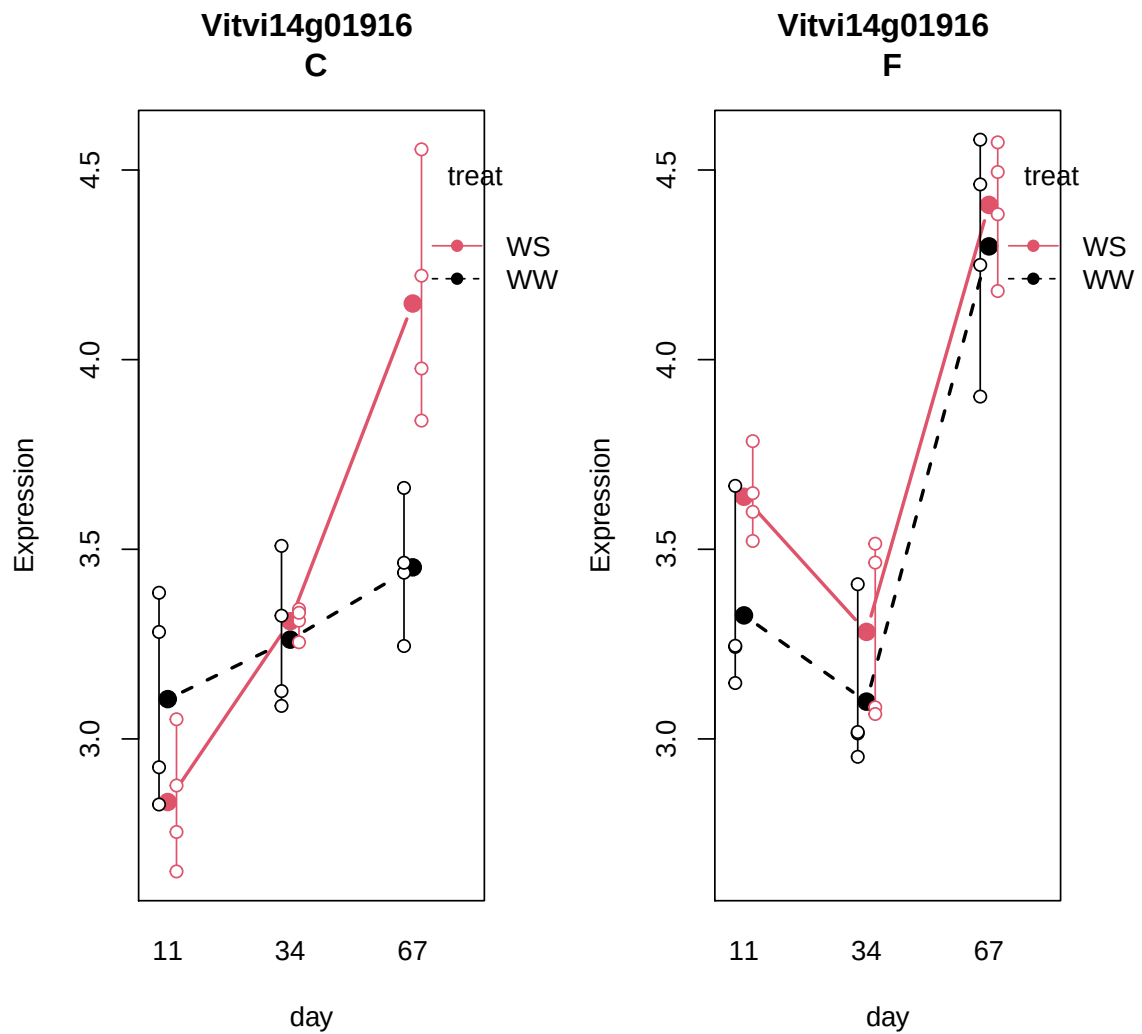


6.12.124 Vitvi14g01916

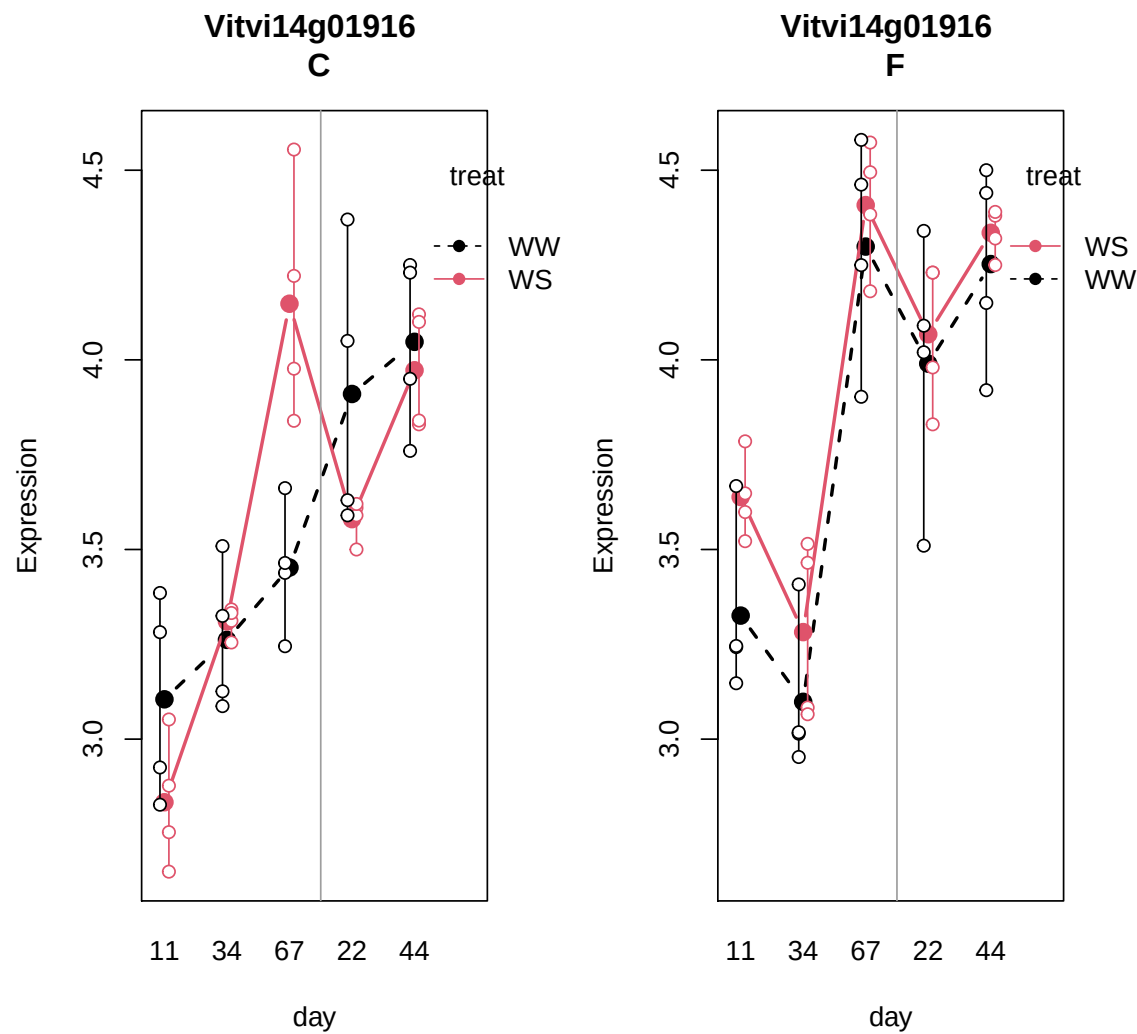
Coefficient varietyF:day67:treatWS for Vitvi14g01916.

```
> tt[varname,]
      logFC AveExpr      t    P.Value
Vitvi14g01916 -1.170303 3.513503 -3.87253 0.0004030627
      adj.P.Val      B
Vitvi14g01916 0.04954421 0.04585835

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

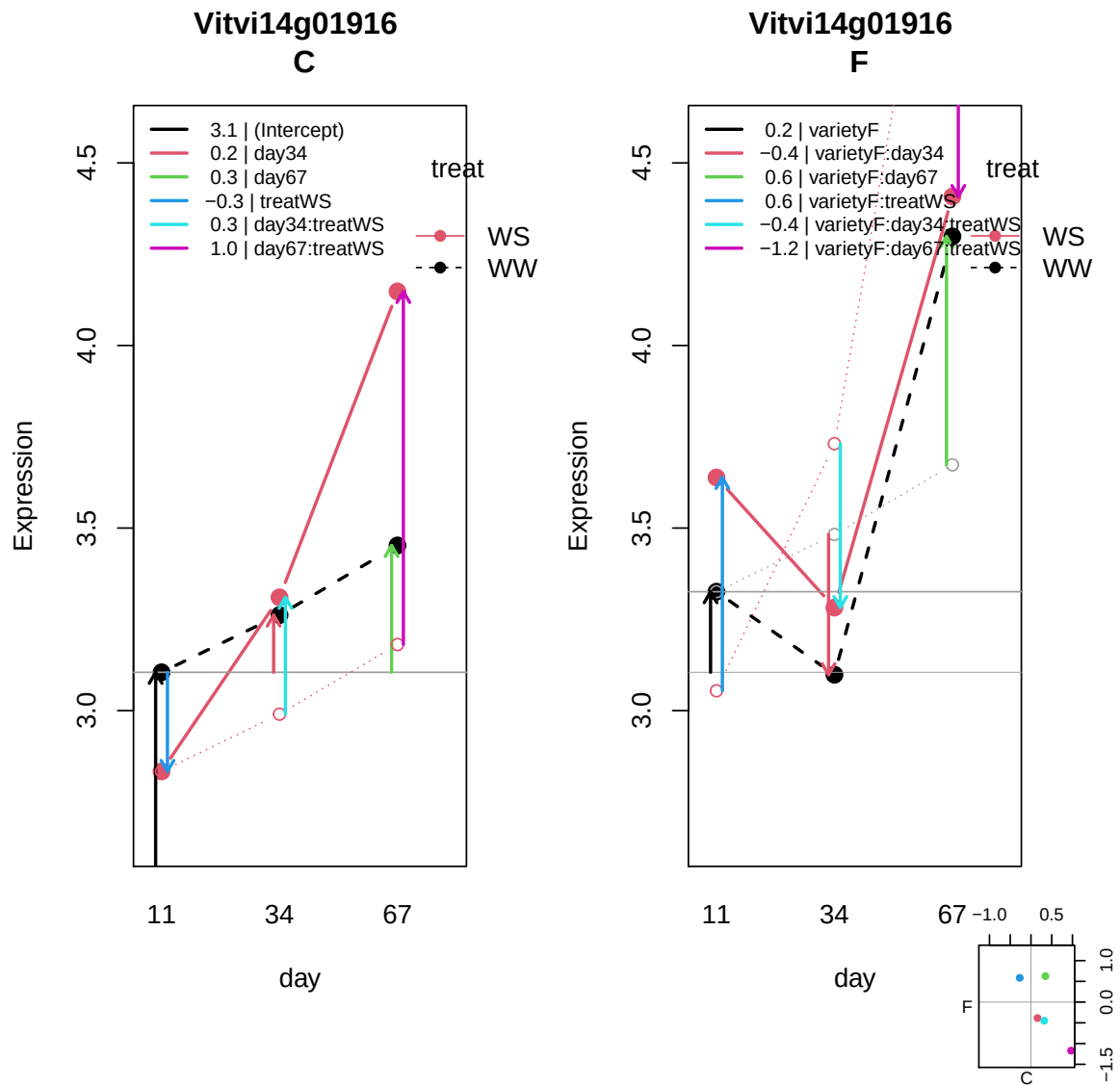
      (Intercept)  varietyF    day34    day67
Vitvi14g01916    3.104954 0.2207374 0.1567834 0.3474015
      treatWS varietyF:day34 varietyF:day67
Vitvi14g01916 -0.2713685    -0.3841441    0.6255012
      varietyF:treatWS day34:treatWS day67:treatWS
Vitvi14g01916    0.5840898    0.3199144    0.9669554
      varietyF:day34:treatWS varietyF:day67:treatWS
Vitvi14g01916    -0.4487785                -1.170303

```

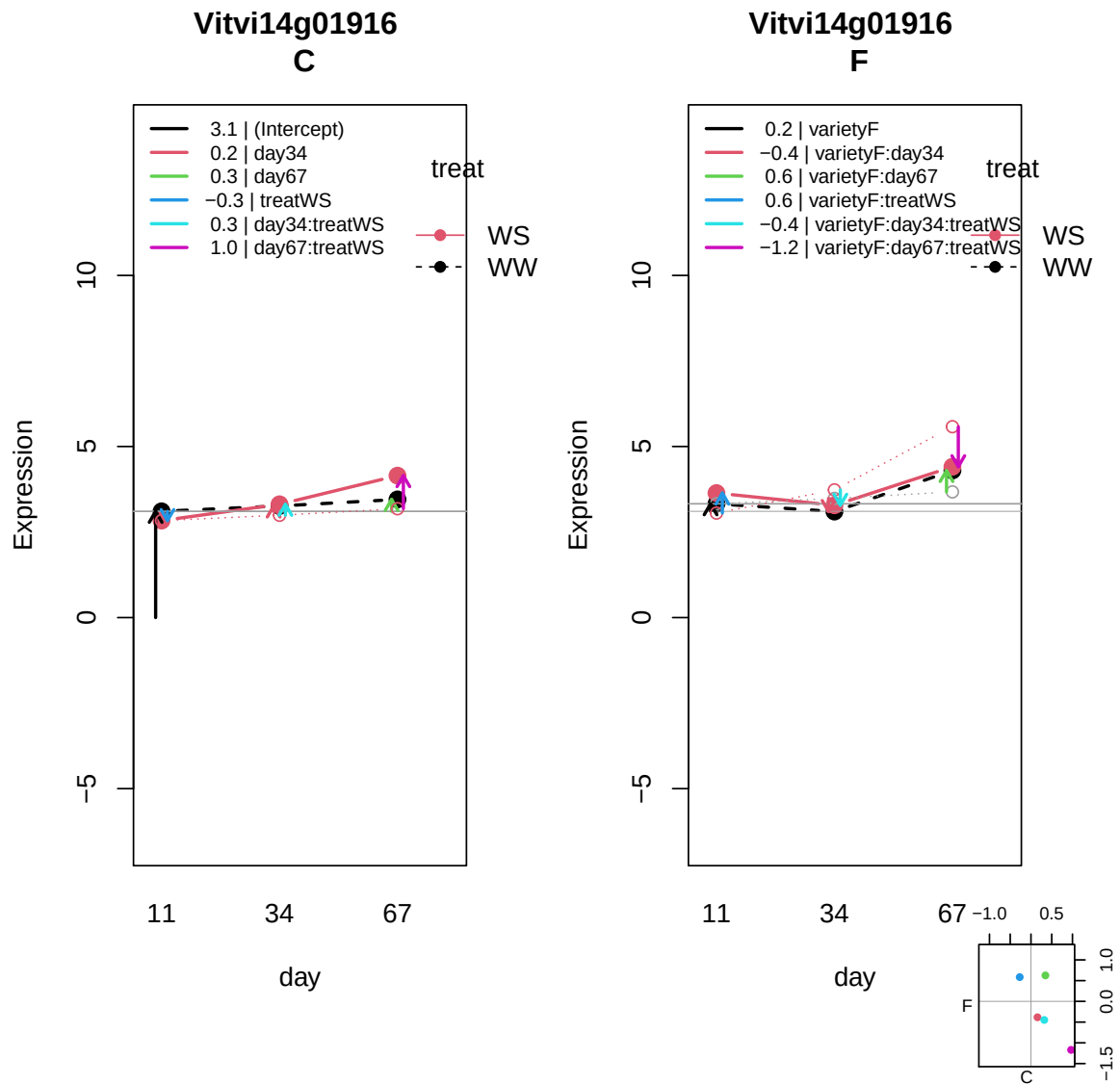
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```

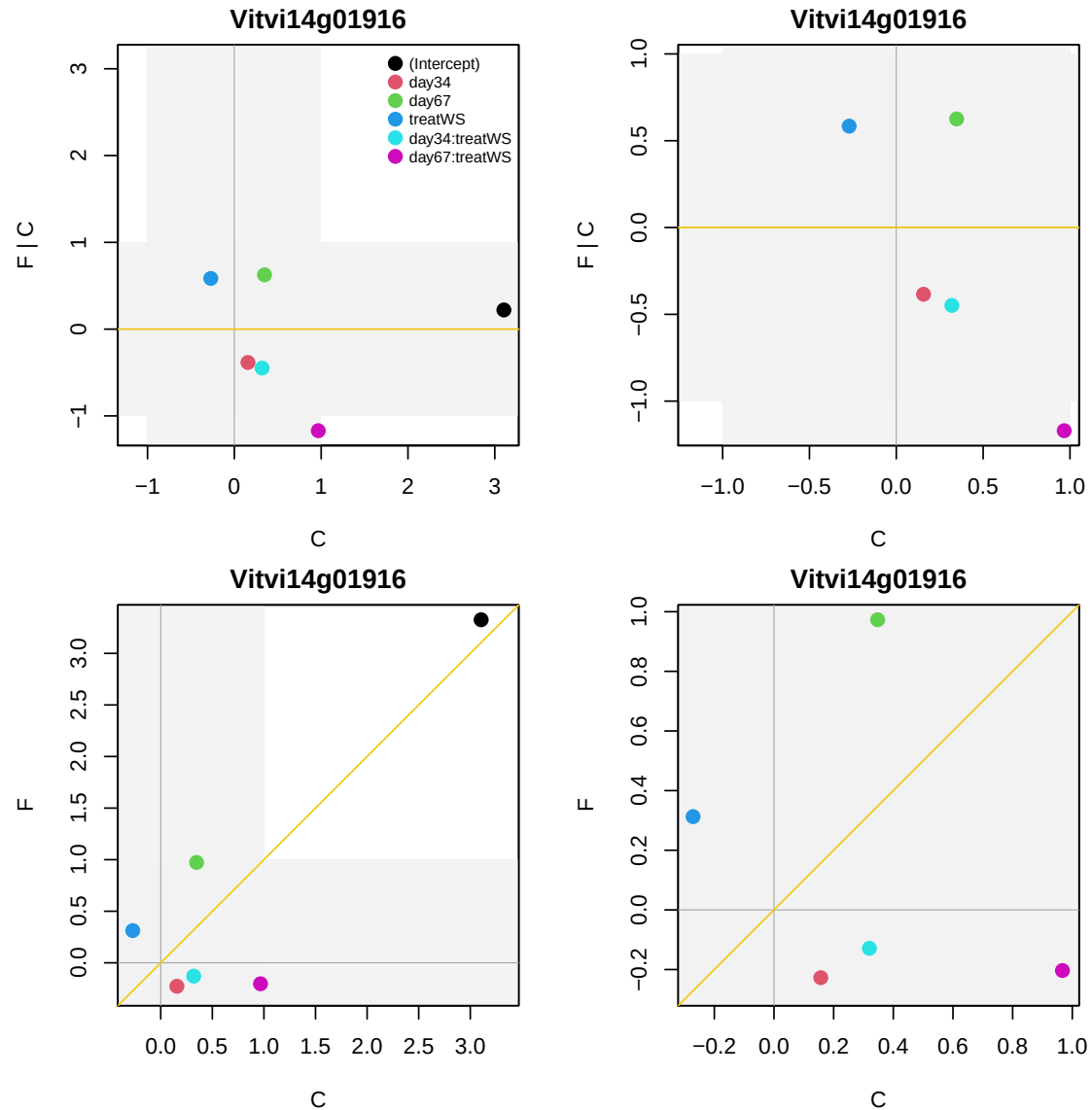


```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
> plot.coefficients(2:6)
> plot.coefficients(1:6, add=TRUE)
> plot.coefficients(2:6, add=TRUE)
```



7 Linear models 2019

```
> library(limma)

> exprs <- t19
> pd <- pdata19
> cat(knit_child(file.path(".", "20a_limma-fit.Rnw"), quiet=TRUE))
```

Warning in doTryCatch(return(expr), name, parentenv, handler): zero-length arrow is of indeterminate angle and so skipped

7.1 Data

```
> exprs[1:5,1:5] # expression data
      C19_22d_WS1 C19_22d_WS2 C19_22d_WS3
Vitvi15g01736      3.18      3.50      3.19
Vitvi07g02832     -5.05     -3.02     -0.80
Vitvi07g02830     -5.05     -5.35     -2.39
Vitvi07g02812     -1.35     -0.95     -0.15
Vitvi07g02811      2.09      2.29      2.34
      C19_22d_WS4 C19_22d_WW1
Vitvi15g01736      3.61      5.42
Vitvi07g02832     -0.02     -1.36
Vitvi07g02830     -3.99     -2.28
Vitvi07g02812      0.26     -1.36
Vitvi07g02811      2.63      2.85
> pd[1:5,1:5] # phenodata
      ID Variety Date variety
C19_22d_WS1 C19_22d_WS1 Cabernet Volos 26.06.2019 C
C19_22d_WS2 C19_22d_WS2 Cabernet Volos 26.06.2019 C
C19_22d_WS3 C19_22d_WS3 Cabernet Volos 26.06.2019 C
C19_22d_WS4 C19_22d_WS4 Cabernet Volos 26.06.2019 C
C19_22d_WW1 C19_22d_WW1 Cabernet Volos 26.06.2019 C
      year
C19_22d_WS1 19
C19_22d_WS2 19
C19_22d_WS3 19
C19_22d_WS4 19
C19_22d_WW1 19
> pd <- pd[,c("variety", "year", "day", "treat", "rep")]
> pd[1:5,1:5]
      variety year day treat rep
C19_22d_WS1      C    19  22    WS    1
C19_22d_WS2      C    19  22    WS    2
C19_22d_WS3      C    19  22    WS    3
C19_22d_WS4      C    19  22    WS    4
C19_22d_WW1      C    19  22    WW    1
> y <- t(as.matrix(exprs))

> dim(exprs)
[1] 15242 32
> dim(pd)
[1] 32 5
> pd <- pd[colnames(exprs),]
> dim(pd)
[1] 32 5
> all(rownames(pd) == colnames(exprs))
[1] TRUE
```

Factors:

```
> names(pd)
[1] "variety" "year" "day" "treat" "rep"
> str(pd)
'data.frame': 32 obs. of 5 variables:
 $ variety: Factor w/ 2 levels "C","F": 1 1 1 1 1 1 1 1 1 1 1 ...
 $ year : Factor w/ 1 level "19": 1 1 1 1 1 1 1 1 1 1 1 ...
 $ day : Factor w/ 2 levels "22","44": 1 1 1 1 1 1 1 1 2 2 ...
 $ treat : Factor w/ 2 levels "WW","WS": 2 2 2 2 1 1 1 1 2 2 ...
 $ rep : Factor w/ 4 levels "1","2","3","4": 1 2 3 4 1 2 3 4 1 2 ...
> summary(pd)
variety year day treat rep
C:16 19:32 22:16 WW:16 1:8
F:16 44:16 WS:16 2:8
3:8
4:8
```


7.2 Model design

```
> design <- with(pd, model.matrix(~ variety * day * treat))
> head(design)
```

	(Intercept)	varietyF	day44	treatWS	varietyF:day44
1	1	0	0	1	0
2	1	0	0	1	0
3	1	0	0	1	0
4	1	0	0	1	0
5	1	0	0	0	0
6	1	0	0	0	0

	varietyF:treatWS	day44:treatWS	varietyF:day44:treatWS
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0
5	0	0	0
6	0	0	0

Explanation of coefficients

```
> colnames(design)
[1] "(Intercept) " "varietyF"
[3] "day44" "treatWS"
[5] "varietyF:day44" "varietyF:treatWS"
[7] "day44:treatWS" "varietyF:day44:treatWS"
```

```
> comp <- c(
+ "C-WW-11vs0",
+ "F-WW-11vsC-WW-11",
+ "C-WW-34vsC-WW-11",
+ "C-WW-67vsC-WW-11",
+ "C-WS-11vsC-WW-11",
+ "(F-WW-34vsF-WW-11) vs (C-WW-34vsC-WW-11)",
+ "(F-WW-67vsF-WW-11) vs (C-WW-67vsC-WW-11)",
+ "(F-WS-11vsF-WW-11) vs (C-WS-11vsC-WW-11)",
+ "C-WS-34vsEC-34|S",
+ "C-WS-67vsEC-67|S",
+ "(F-WS-34vsF-WW-34) vs (C-WS-34vsC-WW-34)",
+ "(F-WS-67vsF-WW-67) vs (C-WS-67vsC-WW-67)"
+ )
> cbind(colnames(design), comp)
```

Warning in cbind(...): number of rows of result is not a multiple of vector le

```
[1,] "(Intercept) "
[2,] "varietyF"
[3,] "day44"
[4,] "treatWS"
[5,] "varietyF:day44"
[6,] "varietyF:treatWS"
[7,] "day44:treatWS"
[8,] "varietyF:day44:treatWS"
[9,] "(Intercept) "
[10,] "varietyF"
```

```

[11,] "day44"
[12,] "treatWS"
      comp
[1,] "C-WW-11vs0"
[2,] "F-WW-11vsC-WW-11"
[3,] "C-WW-34vsC-WW-11"
[4,] "C-WW-67vsC-WW-11"
[5,] "C-WS-11vsC-WW-11"
[6,] "(F-WW-34vsF-WW-11) vs (C-WW-34vsC-WW-11)"
[7,] "(F-WW-67vsF-WW-11) vs (C-WW-67vsC-WW-11)"
[8,] "(F-WS-11vsF-WW-11) vs (C-WS-11vsC-WW-11)"
[9,] "C-WS-34vsEC-34|S"
[10,] "C-WS-67vsEC-67|S"
[11,] "(F-WS-34vsF-WW-34) vs (C-WS-34vsC-WW-34)"
[12,] "(F-WS-67vsF-WW-67) vs (C-WS-67vsC-WW-67)"

```

```

> comp <- gsub("-", "", comp)
> comp <- gsub("\\\\)vs\\\\(", " - (", comp)
> comp <- gsub("vs", ":", comp)
> comps <- data.frame(colnames(design), comp)

```

Error in data.frame(colnames(design), comp): arguments imply differing number

```
> comps
```

	colnames.design.	comp
1	(Intercept)	CWW11:0
2	varietyF	FWW11:CWW11
3	day34	CWW34:CWW11
4	day67	CWW67:CWW11
5	treatWS	CWS11:CWW11
6	varietyF:day34	(FWW34:FWW11) - (CWW34:CWW11)
7	varietyF:day67	(FWW67:FWW11) - (CWW67:CWW11)
8	varietyF:treatWS	(FWS11:FWW11) - (CWS11:CWW11)
9	day34:treatWS	CWS34:EC34 S
10	day67:treatWS	CWS67:EC67 S
11	varietyF:day34:treatWS	(FWS34:FWW34) - (CWS34:CWW34)
12	varietyF:day67:treatWS	(FWS67:FWW67) - (CWS67:CWW67)

```

> fit1 <- lmFit(exprs, design)
> fit1 <- eBayes(fit1)
> head(fit1[1:6,]$coefficients)

```

	(Intercept)	varietyF	day44	treatWS
Vitvi15g01736	5.0925	-0.1050	0.8125	-1.7225
Vitvi07g02832	-2.1050	5.1250	-1.9925	-0.1175
Vitvi07g02830	-2.1875	4.3550	-1.3900	-2.0075
Vitvi07g02812	-0.5600	1.9525	-0.1050	0.0125
Vitvi07g02811	2.9975	0.4500	-0.7700	-0.6600
Vitvi09g02033	-3.6800	5.5475	0.2175	0.1900
	varietyF:day44	varietyF:treatWS	day44:treatWS	
Vitvi15g01736	0.1225	0.2475	1.1475	
Vitvi07g02832	2.6725	0.2425	1.7450	
Vitvi07g02830	2.0500	1.7825	1.2875	
Vitvi07g02812	-0.1025	0.0150	0.2925	
Vitvi07g02811	0.5275	0.7125	0.6125	

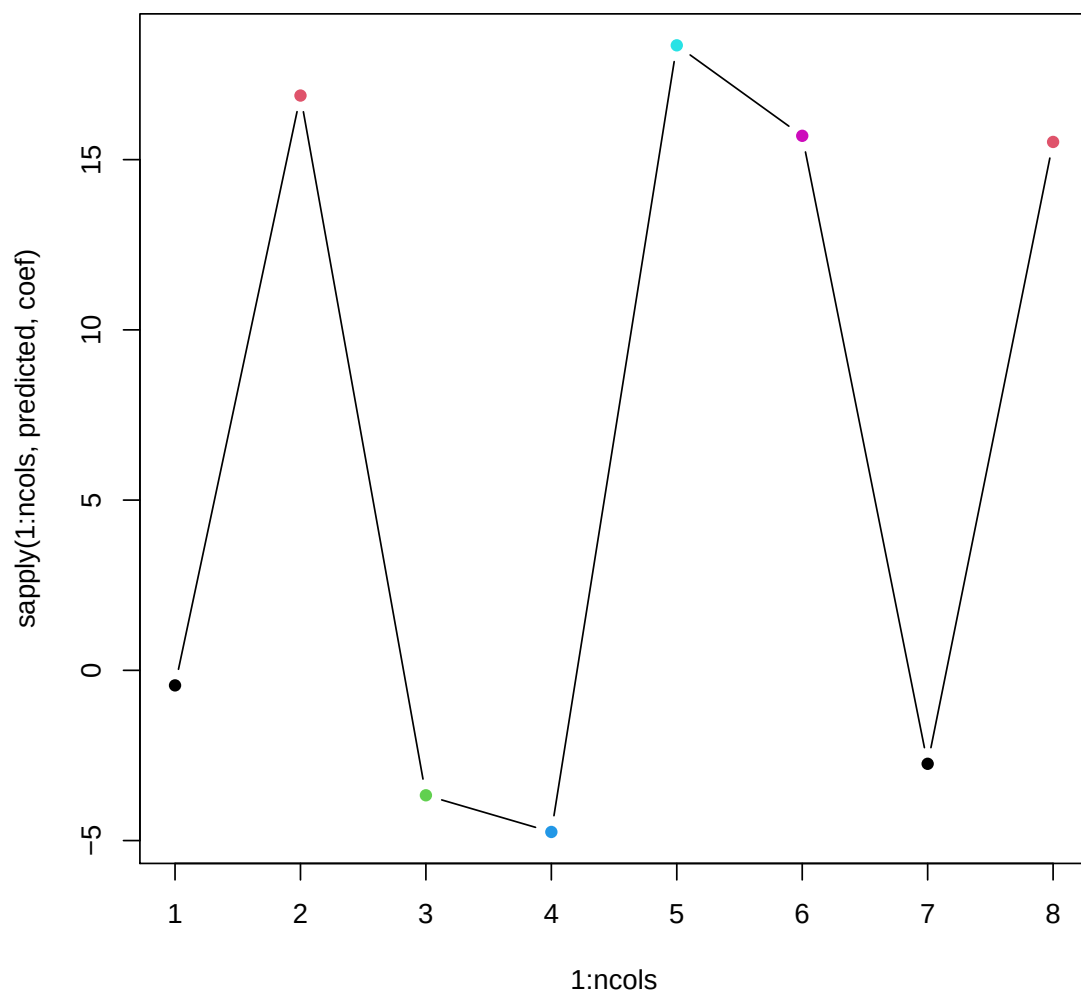
Vitvi09g02033	-0.5675	0.1225	0.1450
	varietyF:day44:treatWS		
Vitvi15g01736	-0.2300		
Vitvi07g02832	-2.8575		
Vitvi07g02830	-2.0250		
Vitvi07g02812	-0.7800		
Vitvi07g02811	-0.9200		
Vitvi09g02033	-0.0725		

7.2.1 Interaction plot

```
> predicted <- function(i, coef){
+ #tst(i)
+ #tst(coef)
+ nm <- colnames(coef)
+ if(length(i)==1) {
+ ( nm0=nm[i])
+ ( nm1=strsplit(nm0,":")[[1]])
+ ( nm2=outer(nm1,nm1,paste,sep=":") )
+ ( nm2=nm2[upper.tri(nm2)])
+ ( nm3 <- c("(Intercept)",nm1,nm2,nm0) )
+ ( nm3 <- unique(nm3) )
+ ( coef[,nm3])
+ nm3
+ value <- sum(coef[,nm3])
+ names(value) <- colnames(coef)[i]
+ } else { value=sapply(i, predicted, coef=coef) }
+ return(value)
+ }
> coef <- fit1[1:6,]$coefficients
> ncols <- ncol(coef)
> for( i in 1:ncols) print(predicted(i,coef))

(Intercept)
-0.4425
varietyF
16.8825
day44
-3.67
treatWS
-4.7475
varietyF:day44
18.3575
varietyF:treatWS
15.7
day44:treatWS
-2.745
varietyF:day44:treatWS
15.52

> plot(1:ncols, sapply(1:ncols, predicted, coef), type="b", col=1:6, pch=16)
```



```
> predicted(1:3,coef)
```

```
(Intercept)    varietyF      day44
      -0.4425      16.8825      -3.6700
```

```
> .testing <- TRUE
```

```
> tst <- function(x) {
```

```
+ if(.testing) {
```

```
+   cat("-->", deparse(substitute(x)), "\n")
```

```
+   print(x)
```

```
+ }
```

```
+ invisible(x)
```

```
+ }
```

```
> coef <- fit1[1:6,]$coefficients[1:2,]
```

```
> tst(coef)
```

```
--> coef
```

```

      (Intercept) varietyF    day44 treatWS
Vitvi15g01736    5.0925  -0.105  0.8125 -1.7225
Vitvi07g02832   -2.1050   5.125 -1.9925 -0.1175
      varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi15g01736    0.1225          0.2475      1.1475
Vitvi07g02832    2.6725          0.2425      1.7450
```

```

                                varietyF:day44:treatWS
Vitvi15g01736                    -0.2300
Vitvi07g02832                    -2.8575

> .testing <- FALSE

> # ver 6
> .testing <- !TRUE
> plot.interactions <- function(varname, phdata=pd, data=exprs, coef=NULL, coe
+ tst(dim(phdata))
+ tst(dim(data))
+ phdata <- phdata[colnames(data), ]
+ days <- levels(factor(phdata$day))
+ ndays <- length(days)
+ ntreat <- length(levels(phdata$treat))
+ lv <- levels(phdata$variety)
+ nvar <- length(lv)
+ d <- 0.05
+ par(mfrow=c(1, length(lv)), mar=c(7, 4, 4, 3))
+ # Factors
+ #
+ fct <- data.frame(f1=phdata$day,
+                   f2=phdata$treat,
+                   f3=phdata$variety,
+                   row.names=rownames(phdata)
+                   )
+ head(fct)
+ #
+ #for(i in 1:ncol(y)){
+ #  varname <- colnames(y)[i]
+ #  y <- as.numeric(data[varname, ])
+ #  if(is.null(ylim)) ylim <- range(y, na.rm=TRUE) else
+ #  if(is.na(ylim)[1]) ylim <- range(data, na.rm=TRUE)
+ #  for(var in levels(phdata$variety)){
+ #    sel <- phdata$variety %in% var
+ #    with(phdata[sel, ], {
+ #      interaction.plot(day, treat, y[sel], ylim=ylim, type="b", col=1:2, lty=2
+ #      tst(aggregate(y[sel], list(day, treat), mean))
+ #      if(is.null(coef)) {
+ #        rng <- (by(y[sel], list(treat, day), range))
+ #        x0 <- as.numeric(day) + (as.numeric(treat) - 1.5) / 7
+ #        for(va in 1:nrow(rng))
+ #          for(dy in 1:ncol(rng))
+ #            segments(dy + (va - 1.5) / 7, rng[[va, dy]][1],
+ #                    dy + (va - 1.5) / 7, rng[[va, dy]][2],
+ #                    lwd=1,
+ #                    col=va)
+ #        points(x0, y[sel], pch=21, bg="white", col=as.numeric(treat))
+ #      }
+ #      if(any(diff(as.numeric(levels(day))) < 0)) {
+ #        abline(v=which(diff(as.numeric(levels(day))) < 0) + 0.5, col=8)
+ #      }
+ #    }
+ #  }

```

```

+     title(paste(varname, "\n", var))
+   })
+ # coefficients plot
+   if(!is.null(coef)){
+     ind <- grep(lv[2], colnames(coef))
+     tst(predicted((1:length(colnames(coef)))[-ind], coef))
+     tst(predicted(ind, coef))
+     tst(c((1:length(colnames(coef)))[-ind], ind))
+     grind <- array(c((1:length(colnames(coef)))[-ind], ind), dim=c(ndays, ntrt),
+       dimnames <- list(days, levels(phdata$treat), levels(phdata$var))
+     )
+     tst(grind)
+     tst(with(fct,
+       grind[levels(f1)[1], levels(f2)[1], levels(f3)[1]]))
+     #ind <- grep(lv[2], colnames(coef))
+     if(var!=lv[2]) ind <- -ind
+     #abline(h=sum(cf[c(1)]), xpd=NA, col=1)
+     #abline(h=sum(cf[c(1, 3)]), xpd=NA, col=2)
+     #tst(ind)
+     cf <- coef[, ind]
+     cF <- cf
+     cc <- coef[-ind]
+     if(var==lv[2]) { cf <- coef[, ind]+coef[, -ind]
+     #tst(colnames(coef)[ind])
+     #tst(colnames(coef)[-ind])
+     names(cf) <- colnames(coef)[ind]
+     coefs <- data.frame(cC=coef[-ind], cF.model=coef[ind], cF.plus.C =
+     rownames(coefs) <- colnames(coef)[-ind]
+     }
+     abline(h=cf[1], col=8, lwd=1)
+     lwda <- 2
+   ##
+   ### First level
+   #
+     if(var!=lv[2]) {
+   if(FALSE){
+
+     arrows(0.95, min(exprs), 0.95, cf[1], col=1, length=0.08, lwd=3)
+     for(ii in 2:ndays){
+       e <- cf[1]
+     #         points(ii-d, e, col=ii)
+     arrows(ii-d, e, ii-d, e+cf[ii], col=ii, length=0.08, lwd=lwda)
+     #abline(h=sum(cf[c(1, 4)]), xpd=NA, col=3)
+     #       e <- cf[1]
+     #         points(3, e, col=3)
+     #       arrows(3, e, 3, e+cf[3], col=3, length=0.08, lwd=lwda)
+     #       #abline(h=sum(cf[c(1, 5)]), xpd=NA, col=4)
+     }
+     ii <- ndays+1
+     e <- cf[1]
+     points(1, e, col=ii)
+     arrows(1, e, 1, e+cf[ii], col=ii, length=0.08, lwd=lwda)
+     lines(1:ndays, cf[1]+cf[ii]+c(0, cf[2:ndays]), col=2, type="b", lwd=1, lty=

```

```

+       #abline(h=sum(cf[c(1,3,5,9)]),xpd=NA, col=5)
+       for(jj in 2:ndays){
+       e <- sum(cf[c(1,jj,(ndays+1))])
+       arrows(jj+d,e,jj+d,e + cf[ndays+jj],col=ndays+jj,length=0.08, lwd=lwda)
+       }
+       #
+   }
+       eind <- grind[ ,1,1] #c(1,3,4)
+       tst(eind)
+       cl <- 0
+       esF <- predicted(eind,coef)
+       es <- esF-coef[,eind]
+       #       lines(1:ndays,es,col=7,lwd=3)
+       #       lines(1:ndays,esF,col=7,lwd=3)
+       #       lines(1:ndays,es,col=8,type="b",lwd=1,lty=3)
+       #
+       arrows(1:ndays-d,es,1:ndays-d,esF,col=cl+1:ndays,length=0.08, lwd=1)
+       #
+       eind <- grind[ ,2,1] #c(5,9,10)
+       tst(eind)
+       cl <- ndays
+       esF <- predicted(eind,coef)
+       es <- esF-coef[,eind]
+       #       lines(1:ndays,es,col=7,lwd=3)
+       #       lines(1:ndays,esF,col=7,lwd=3)
+       delta <- c(coef[,eind[1]],rep(0,length(eind)-1))
+       lines(1:ndays,delta+es,col=2,type="b",lwd=1,lty=3)
+       #
+       arrows(1:ndays+d,es,1:ndays+d,esF,col=cl+1:ndays,length=0.08, lwd=1)
+       cfs <- 1:(ndays*ntreat)
+       ltext <- paste(sprintf("% .1f",cf[cfs]),"|",names(cf)[cfs])
+       legend("topleft",col=cfs,lwd=2,legend=ltext, bty="n",cex=0.75)
+       } else {
+       #
+       ### second level
+       #
+       if(FALSE){
+       cF <- coef[,ind]
+       abline(h=cc[1], col=8)
+       # expected for C
+       #       lines(1:ndays,cc[1]+cF[1]+c(0,cc[2:ndays]),col=8,type="b",lwd=1,lty=3)
+       #
+       e <- cc[1]
+       points(0.95,e,col=1)
+       arrows(0.95,e,0.95,e+cF[1],col=1,length=0.08, lwd=lwda)
+       for(ii in 2:ndays){
+       e <- sum(cc[c(1,ii)])+cF[1]
+       #       points(ii-d,e,col=ii)
+       #       arrows(ii-d,e,ii-d,e+cF[ii],col=ii,length=0.08, lwd=lwda)
+       #       e <- sum(cc[c(1,3)])+cF[1]
+       #       points(3,e,col=3)
+       #       arrows(3,e,3,e+cF[3],col=3,length=0.08, lwd=lwda)
+       }

```



```

+      eind <- grind[ ,1,2] #c(2,6,7)
+      tst(eind)
+      esF <- predicted(eind,coef)
+      es <- esF-coef[,eind]
+      lines(1:ndays,es,col=7,lwd=3)
+      lines(1:ndays,esF,col=7,lwd=3)
+      lines(1:ndays,es,col=8,type="b",lwd=1,lty=3)
+ #
+      arrows(1:ndays,es,1:ndays,esF,col=1:ndays,length=0.08, lwd=lwda)
+ #
+
+      ii <- ndays+1
+      e <- cc[1]+cF[1]
+ #      points(1,e,col=ii,cex=2)
+ #      arrows(1,e,1,e+cf[ii],col=ii,length=0.08, lwd=lwda)
+      es <- predicted(8,coef)-coef[,8]+c(0,coef[,c(9,10)])
+      es <- predicted(2,coef)+coef[,5]+c(0,coef[,c(3,4)])
+      lines(1:ndays,es,col=7,lwd=1,lty=4,type="b")
+      es <- es+c(0,coef[,c(9,10)])
+      lines(1:ndays,es,col=7+1,lwd=1,lty=4,type="b")
+      es <- es+c(0,coef[,c(6,7)])
+      lines(1:ndays,es,col=7+1+1,lwd=1,lty=4,type="b")
+      es <- es+c(0,coef[,c(9,10)])
+      lines(1:ndays,es,col=7+1+1+1,lwd=2,lty=4,type="b")
+      esF <- predicted(c(8,11,12),coef)
+      es <- esF-coef[c(8,11,12)]
+ #      lines(1:ndays,cf[1]+cf[ii]+c(0,cf[2:ndays]),col=2,lwd=1,lty=2)
+      lines(1:ndays,es,col=2,lwd=1,lty=3,type="b")
+ #      lines(1:ndays,esF,col=7,lwd=1,lty=4,type="b")
+
+ #      eC <- predicted(c(5,9,10),coef)
+ #      lines(1:ndays,eC-eC[1]+es[1],col=8,lwd=1,lty=2,type="b")
+ #      es <- eC-eC[1]+es[1]
+      for(jj in 1:ndays){
+          tst(jj)
+ #          e <- sum(cf[c(1,jj,(ndays+1))])
+          e <- predicted(abs(ind[ndays+jj]),coef)
+      tst(e)
+          arrows(jj+d,es[jj],jj+d,e,col=ndays+jj,length=0.08, lwd=lwda)
+      }
+
+
+      eind <- grind[ ,1,2] # c(2,6,7)
+      tst(eind)
+      cl <- 0
+      esF <- predicted(eind,coef)
+      es <- esF-coef[,eind]
+ #      lines(1:ndays,es,col=7,lwd=3)
+ #      lines(1:ndays,esF,col=7,lwd=3)
+      abline(h=predicted(1,coef),lwd=0.5,col=8)
+      delta <- c(coef[,eind[1]],rep(0,length(eind)-1))
+      lines(1:ndays,delta+es,col=8,type="b",lwd=1,lty=3)
+ #

```

```

+         arrows(1:ndays-d, es, 1:ndays-d, esF, col=c1+1:ndays, length=0.08, lwd=1
+             #
+         eind <- grind[ ,2,2] #c(8,11,12)
+         c1 <- ndays
+         esF <- predicted(eind,coef)
+         es <- esF-coef[,eind]
+ #         lines(1:ndays, es, col=7, lwd=3)
+ #         lines(1:ndays, esF, col=7, lwd=3)
+         lines(1:ndays, es, col=2, type="b", lwd=1, lty=3)
+ #
+         arrows(1:ndays+d, es, 1:ndays+d, esF, col=c1+1:ndays, length=0.08, lwd=1
+             #
+         cfs <- 1:(ndays*ntreat)
+         ltext <- paste(sprintf("% .1f", cF[cfs]), "|", names(cF)[cfs])
+         legend("topleft", col=cfs, lwd=2, legend=ltext, bty="n", cex=0.75)
+     }
+     #abline(h=sum(cf[c(1,4,5,10)]), xpd=NA, col=6)
+ #     e <- sum(cf[c(1,3,4)])
+ #     points(3,e, col=6)
+ #     arrows(3,e, 3,e+cf[6], col=6, length=0.08, lwd=lwda)
+
+ }
+ }
+ #
+ #####          arrows(3+2*d, predicted(12,coef)-coef[12], 3+2*d, predi
+ #ind <- c(8,11,12)
+ #indc <- c(5,9,10)
+ #for(i in 1:3){
+ #     tst(predicted(ind[i],coef))
+ #     tst(predicted(indc[i],coef))
+ #     arrows(i+2*d, predicted(ind[i],coef)-coef[ind[i]],
+ #         i+2*d, predicted(ind[i],coef), lwd=4, col=7)
+ # }
+ #####
+ #abline(h=c(4,4.06))
+     if(coef.plt) {
+         par(mfrow=c(6,7), mar=c(1,1,2,2), new=TRUE)
+         with(coefs, {
+             xlim <- range(c(cC[-1], cF[-1]))
+             plot(cC[-1], cF[-1], col=2:nrow(coefs),
+                 xlim = xlim,
+                 ylim = xlim,
+                 pty = "s",
+                 pch=16, new=TRUE, axes=FALSE, asp=1)
+             axis(3)
+             axis(4)
+             mtext("C", side=1, cex=0.7, line=0)
+             mtext("F", side=2, cex=0.7, las = 2, line=0.3)
+             abline(h=0, v=0, lwd=0.5, col=8)
+             box()
+             #abline(c(0,1), col=8)
+         }
+     )

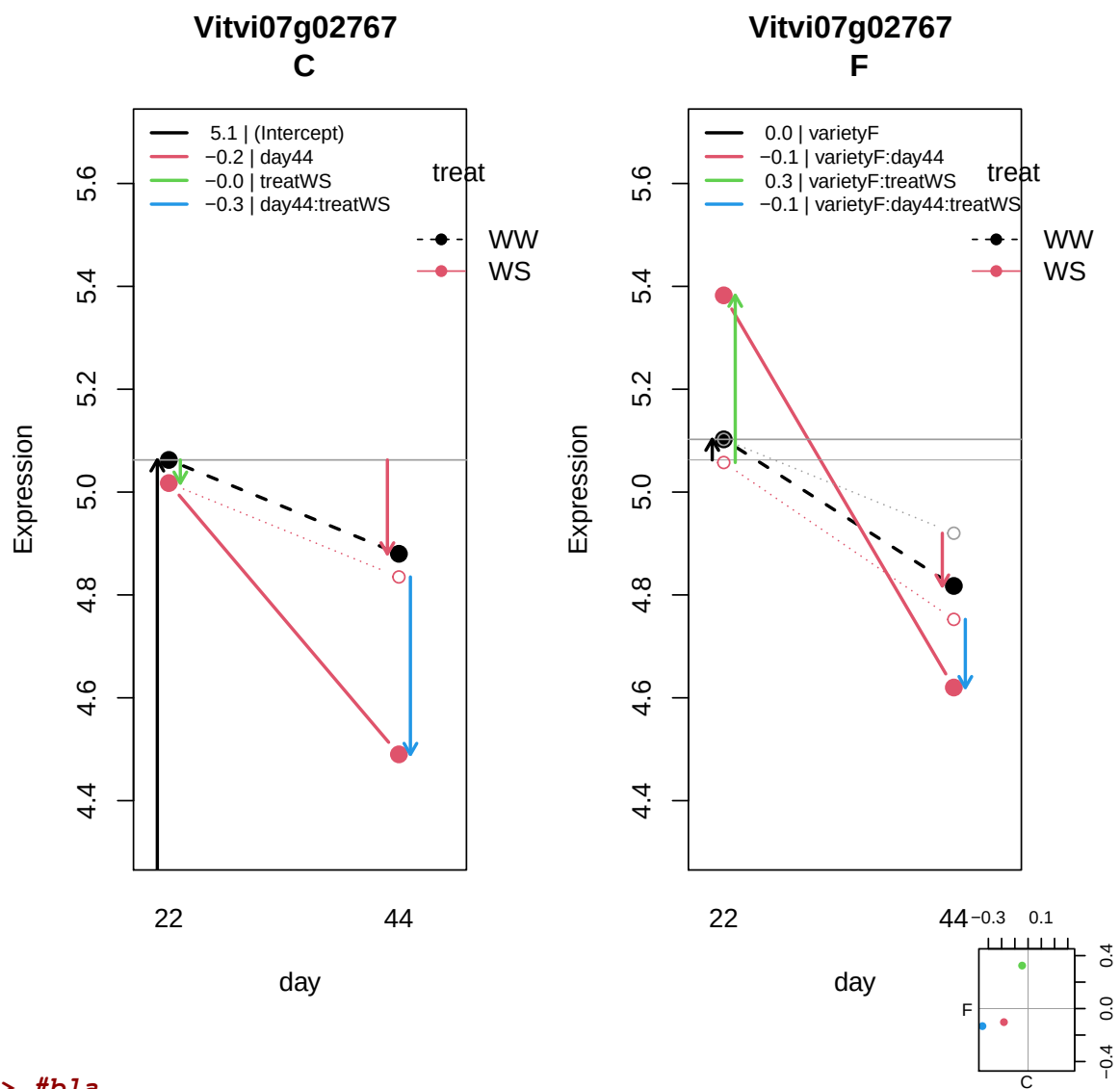
```

```

+      }
+      invisible(coefs)
+    }
> varname <- rownames(exprs)[10]#[13]
> t(fit1[varname,]$coefficients)

               Vitvi07g02767
(Intercept)      5.0625
varietyF          0.0400
day44            -0.1825
treatWS          -0.0450
varietyF:day44   -0.1025
varietyF:treatWS  0.3250
day44:treatWS    -0.3450
varietyF:day44:treatWS -0.1325
> coef=fit1[varname,]$coefficients
> bla <- plot.interactions(varname, coef=fit1[varname,]$coefficients,
+   coef.plt=TRUE)

```



```

> #bla
> #predicted(1, coef)
> #predicted(1:12, coef)
> cbind(t(coef), 1:ncol(coef))

```

```

                                Vitvi07g02767
(Intercept)                    5.0625 1
varietyF                        0.0400 2
day44                          -0.1825 3
treatWS                        -0.0450 4
varietyF:day44                 -0.1025 5
varietyF:treatWS               0.3250 6
day44:treatWS                 -0.3450 7
varietyF:day44:treatWS        -0.1325 8

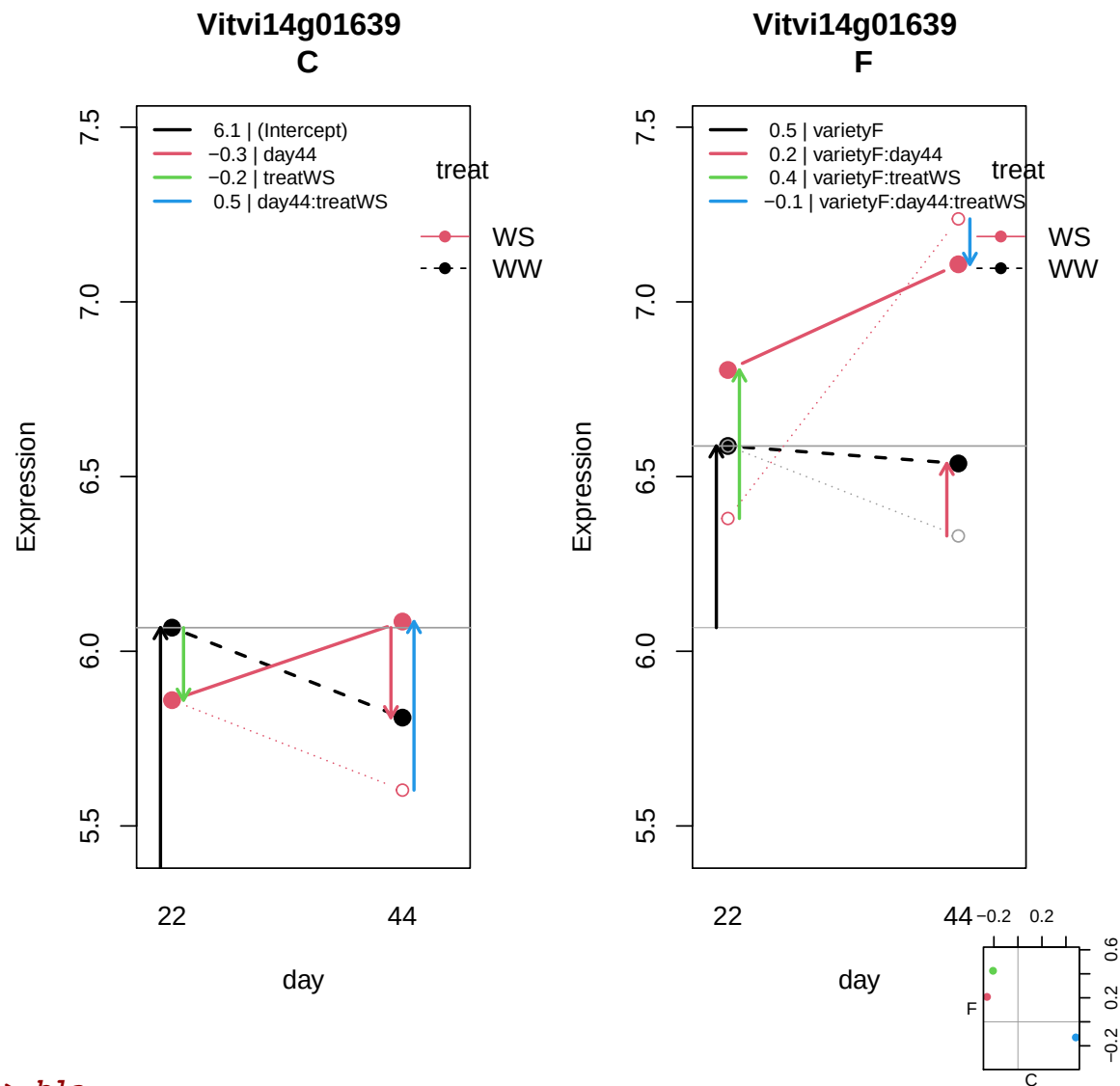
```

Inspect the varietyF:day67

```

> varname <- "Vitvi14g01639"
> bla <- plot.interactions(varname, coef=fit1[varname,]$coefficients,
+   coef.plt=TRUE)

```



```

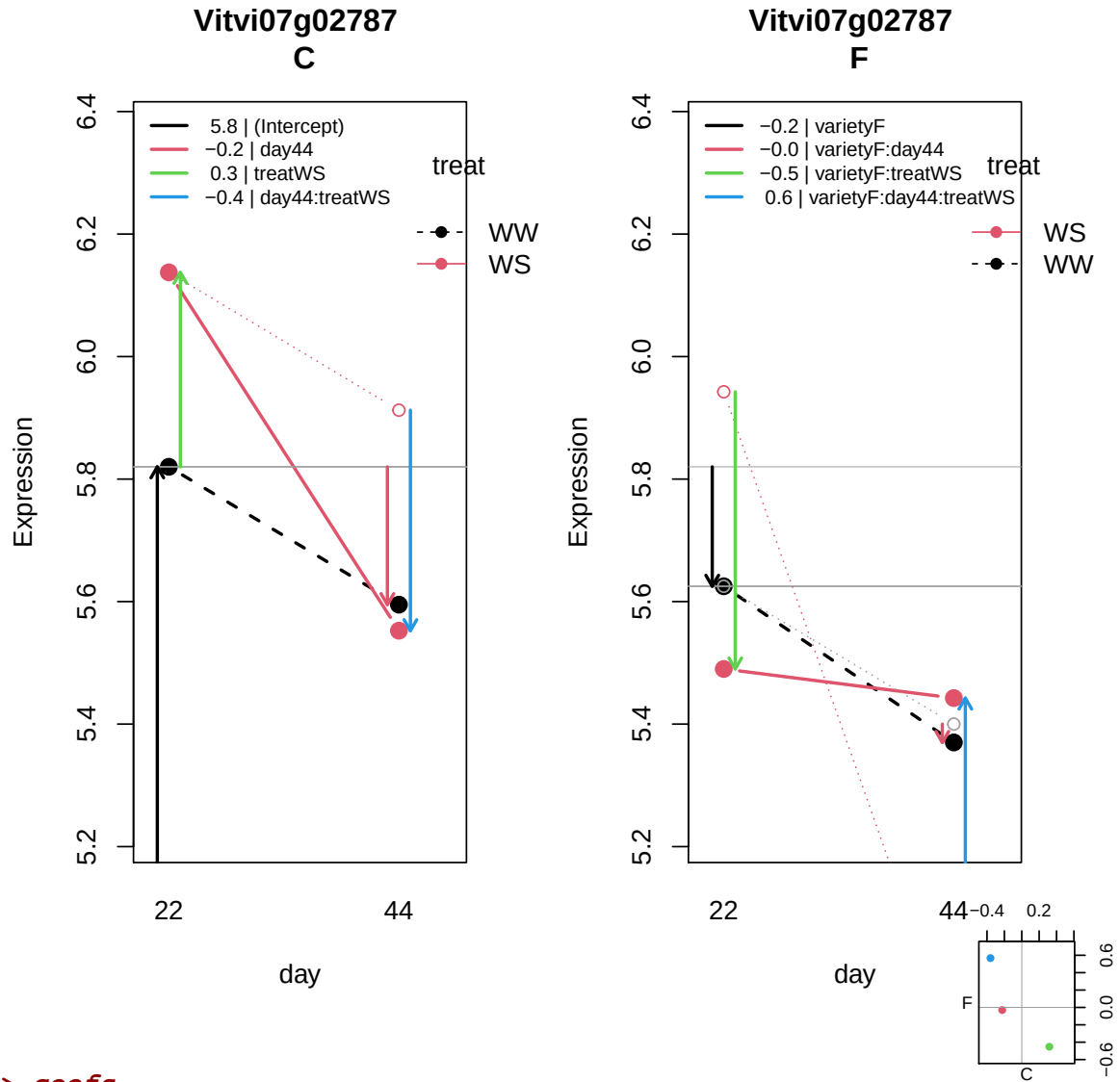
> bla

```

	cC	cF.model	cF.plus.C
(Intercept)	6.0675	0.5200	6.5875
day44	-0.2575	0.2075	-0.0500
treatWS	-0.2075	0.4250	0.2175
day44:treatWS	0.4825	-0.1300	0.3525

Graphical interpretation of coefficients:

```
> varname <- rownames(exprs)[13]
> coef=fit1[varname,]$coefficients
> coefs <- plot.interactions(varname, coef=fit1[varname,]$coefficients,
+   coef.plt=TRUE)
```

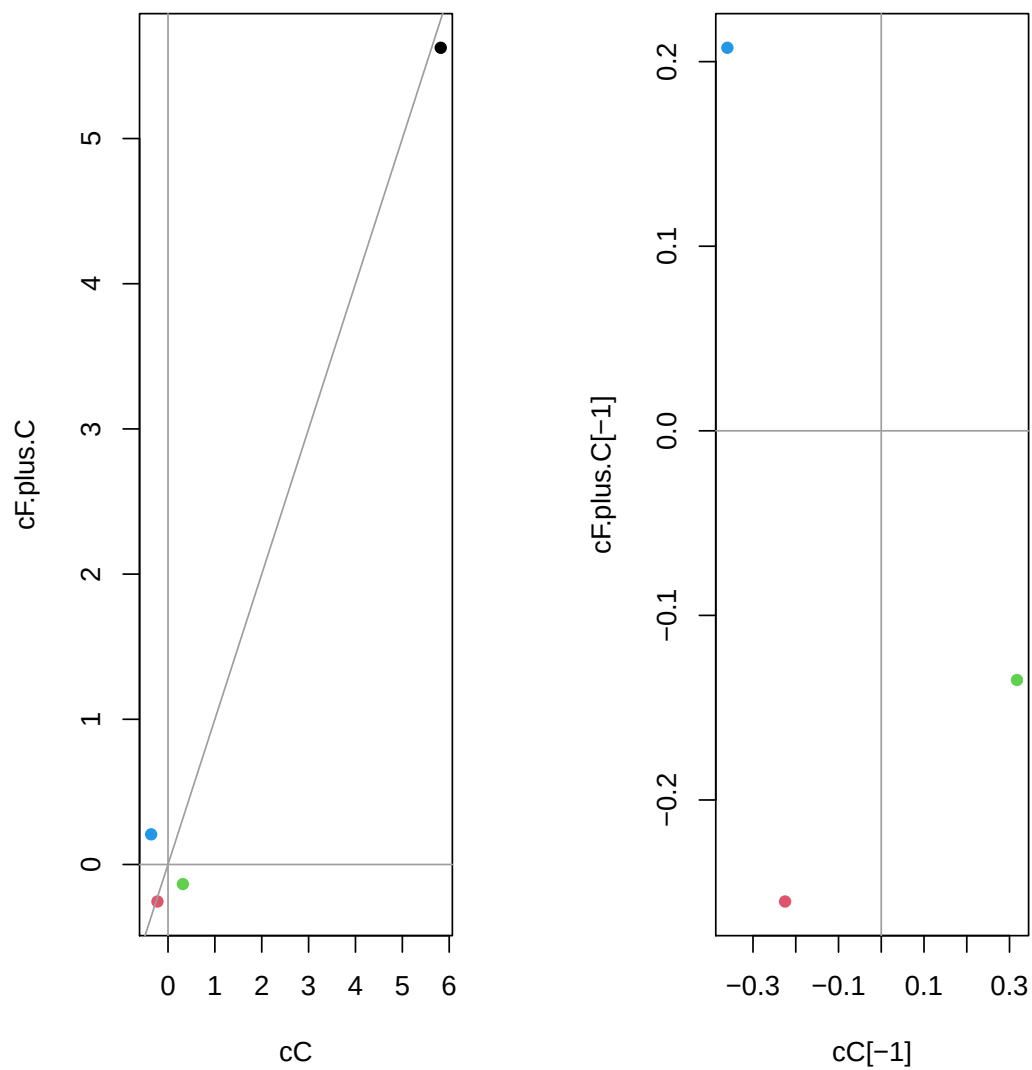


```
> coefs
```

	cC	cF.model	cF.plus.C
(Intercept)	5.8200	-0.1950	5.6250
day44	-0.2250	-0.0300	-0.2550
treatWS	0.3175	-0.4525	-0.1350
day44:treatWS	-0.3600	0.5675	0.2075

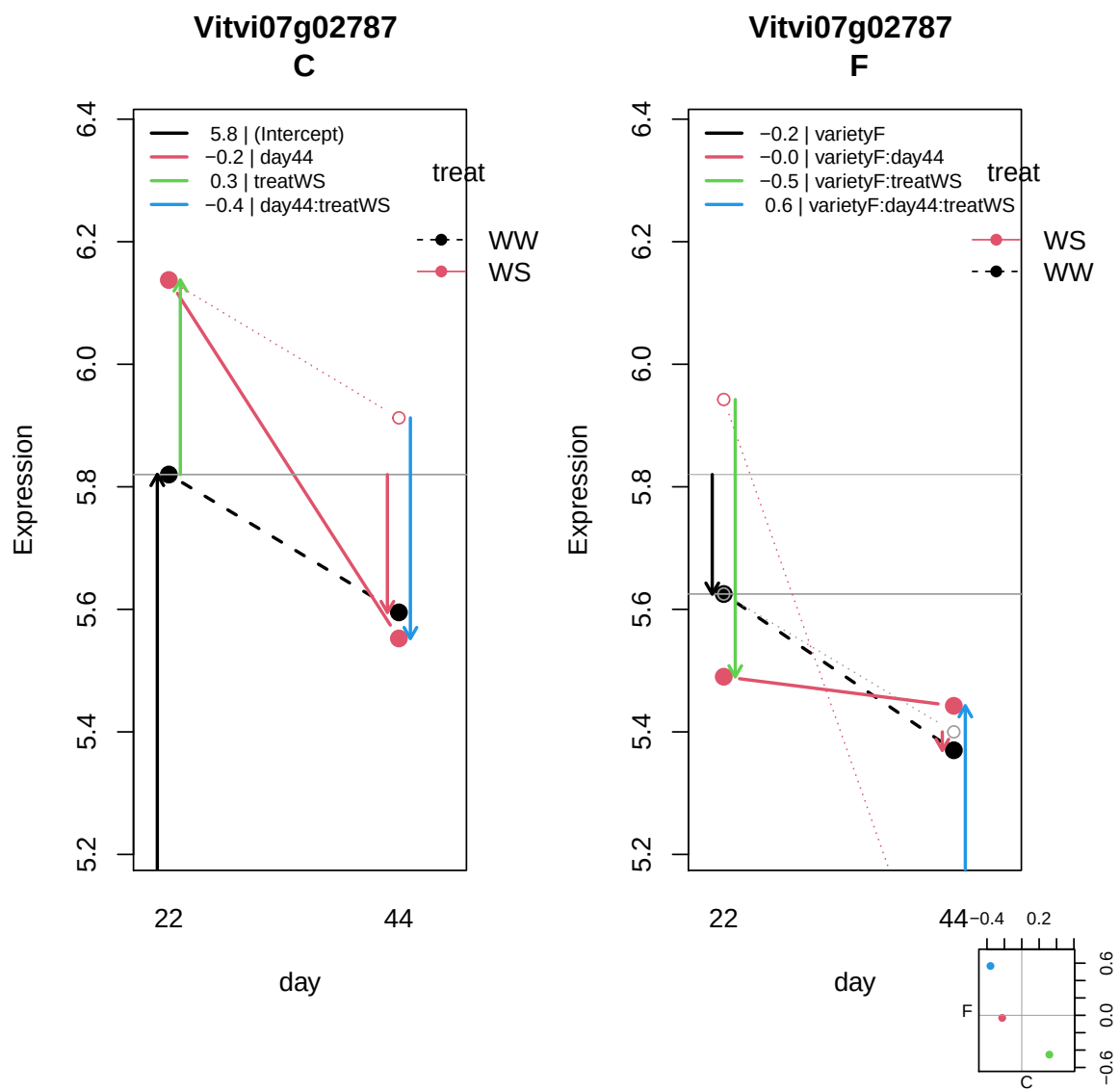
Plot coefficients

```
> par(mfrow=c(1,2),mar=c(4,5,3,3))
> with(coefs, plot(cC, cF.plus.C, col=1:nrow(coefs), pch=16))
> abline(h=0,v=0,col=8)
> abline(c(0,1),col=8)
> with(coefs, plot(cC[-1], cF.plus.C[-1], col=2:nrow(coefs), pch=16))
> abline(h=0,v=0,col=8)
```

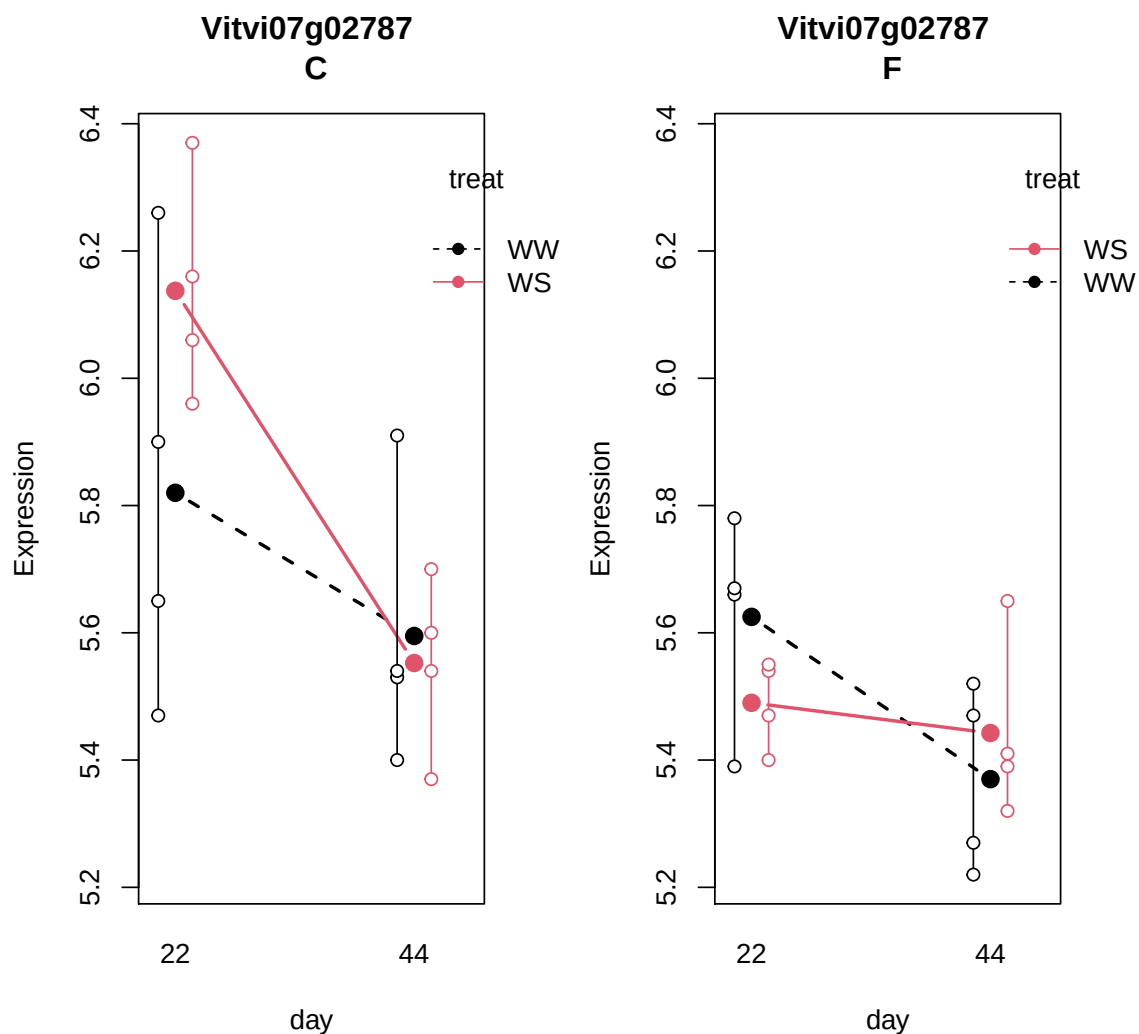


Combined plot

```
> plot.interactions(varname, coef=fit1[varname,]$coefficients,
+ coef.plt = TRUE )
```



`> plot.interactions(varname)`



7.3 Top tables

```
> tt <- topTable(fit1)
```

```
Removing intercept from test coefficients
```

```
> tt
```

	varietyF	day44	treatWS	varietyF.day44
Vitvi19g01991	-12.5200	-0.9125	-0.2350	0.8550
Vitvi19g01988	-10.7500	-0.6475	-0.1050	0.5900
Vitvi07g01569	-8.8750	-0.5300	0.1675	0.4725
Vitvi15g00172	9.0375	-0.0825	0.0475	0.1200
Vitvi19g01601	-7.4875	-0.5725	-0.0400	0.5150
Vitvi07g02615	-8.3350	0.2600	0.2025	-0.3175
Vitvi16g01449	8.5100	-0.0825	0.0475	0.0750
Vitvi19g00048	-9.1175	-0.4300	-0.0750	0.3725
Vitvi03g01127	-11.7750	0.2100	0.4400	-0.6625
Vitvi19g00049	-8.4150	-0.3425	-0.2025	0.2850
	varietyF.treatWS	day44.treatWS		
Vitvi19g01991		0.3725	3.350000e-01	

Vitvi19g01988	0.2425	-5.740651e-16	
Vitvi07g01569	-0.0300	3.025000e-01	
Vitvi15g00172	-0.4650	-1.125000e-01	
Vitvi19g01601	0.1775	5.300000e-01	
Vitvi07g02615	-0.0650	-6.175000e-01	
Vitvi16g01449	-0.1925	-1.125000e-01	
Vitvi19g00048	0.2125	7.000000e-02	
Vitvi03g01127	-0.6975	-3.700000e-01	
Vitvi19g00049	0.3400	-5.750000e-02	
	varietyF.day44.treatWS	AveExpr	F
Vitvi19g01991	-3.925000e-01	0.5428125	7607.259
Vitvi19g01988	-5.750000e-02	-0.2853125	6319.223
Vitvi07g01569	-3.600000e-01	-1.0875000	4792.921
Vitvi15g00172	2.750000e-01	-0.9162500	3818.887
Vitvi19g01601	-5.875000e-01	-1.8153125	2782.604
Vitvi07g02615	5.600000e-01	-1.2662500	2649.117
Vitvi16g01449	1.100000e-01	-1.1437500	2440.172
Vitvi19g00048	-1.275000e-01	-1.0309375	2278.657
Vitvi03g01127	7.075000e-01	0.7784375	1930.645
Vitvi19g00049	-1.373831e-15	-1.4081250	1820.417
	P.Value	adj.P.Val	
Vitvi19g01991	3.468308e-42	5.286395e-38	
Vitvi19g01988	4.074072e-41	3.104850e-37	
Vitvi07g01569	1.600380e-39	8.130995e-36	
Vitvi15g00172	3.265617e-38	1.244363e-34	
Vitvi19g01601	2.180043e-36	6.645644e-33	
Vitvi07g02615	4.185207e-36	1.063182e-32	
Vitvi16g01449	1.244621e-35	2.710074e-32	
Vitvi19g00048	3.086856e-35	5.881233e-32	
Vitvi03g01127	2.779466e-34	4.707180e-31	
Vitvi19g00049	6.059507e-34	8.697130e-31	

Top table for difference of variety reaction to stress in day 67

```
> comps[12,]
      colnames.design.      comp
12 varietyF:day67:treatWS (FWS67:FWW67) - (CWS67:CWW67)
> tt <- topTable(fit1,coef=12)
Error in fit$coefficients[, coef]: subscript out of bounds
> head(tt)
      varietyF    day44 treatWS varietyF.day44
Vitvi19g01991 -12.5200 -0.9125 -0.2350      0.8550
Vitvi19g01988 -10.7500 -0.6475 -0.1050      0.5900
Vitvi07g01569  -8.8750 -0.5300  0.1675      0.4725
Vitvi15g00172   9.0375 -0.0825  0.0475      0.1200
Vitvi19g01601  -7.4875 -0.5725 -0.0400      0.5150
Vitvi07g02615  -8.3350  0.2600  0.2025     -0.3175
      varietyF.treatWS day44.treatWS
Vitvi19g01991      0.3725 3.350000e-01
Vitvi19g01988      0.2425 -5.740651e-16
Vitvi07g01569     -0.0300 3.025000e-01
Vitvi15g00172     -0.4650 -1.125000e-01
```

Vitvi19g01601	0.1775	5.300000e-01		
Vitvi07g02615	-0.0650	-6.175000e-01		
	varietyF.day44.treatWS	AveExpr	F	
Vitvi19g01991	-0.3925	0.5428125	7607.259	
Vitvi19g01988	-0.0575	-0.2853125	6319.223	
Vitvi07g01569	-0.3600	-1.0875000	4792.921	
Vitvi15g00172	0.2750	-0.9162500	3818.887	
Vitvi19g01601	-0.5875	-1.8153125	2782.604	
Vitvi07g02615	0.5600	-1.2662500	2649.117	
	P.Value	adj.P.Val		
Vitvi19g01991	3.468308e-42	5.286395e-38		
Vitvi19g01988	4.074072e-41	3.104850e-37		
Vitvi07g01569	1.600380e-39	8.130995e-36		
Vitvi15g00172	3.265617e-38	1.244363e-34		
Vitvi19g01601	2.180043e-36	6.645644e-33		
Vitvi07g02615	4.185207e-36	1.063182e-32		

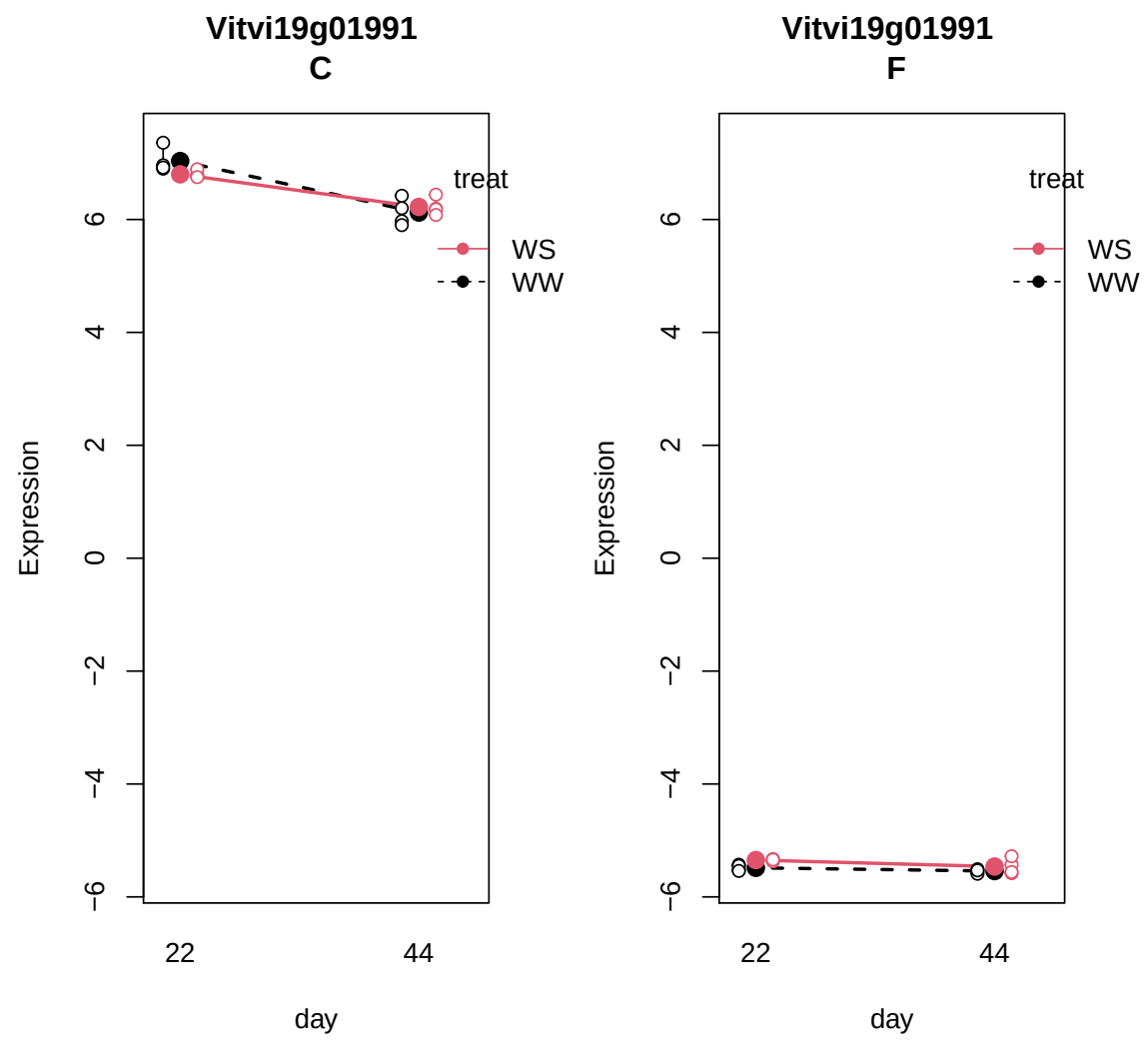
```

> varname <- rownames(tt)[1]
> fit1[varname,]$coefficients

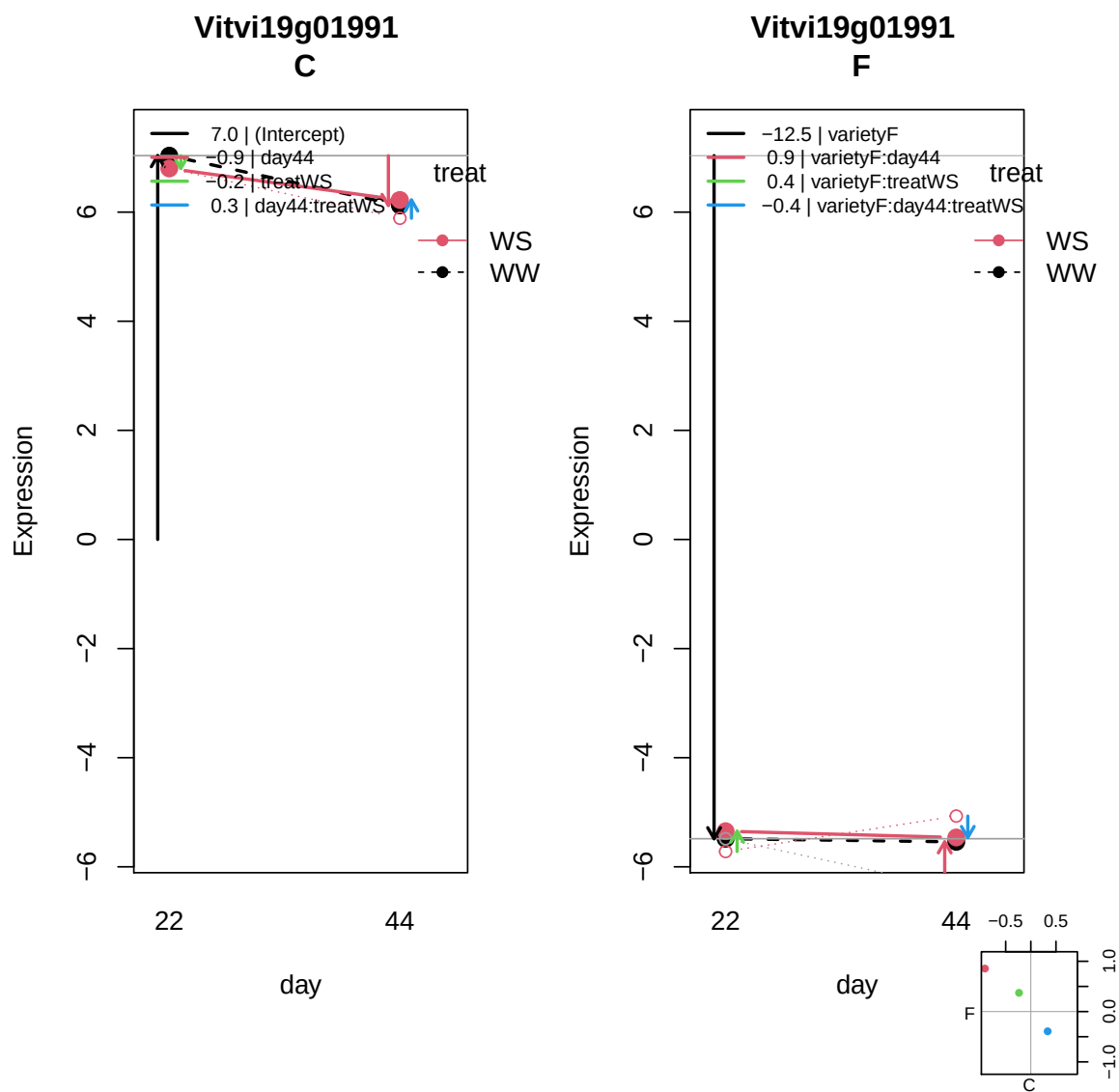
      (Intercept) varietyF    day44 treatWS
Vitvi19g01991    7.035   -12.52 -0.9125  -0.235
      varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi19g01991    0.855             0.3725      0.335
      varietyF:day44:treatWS
Vitvi19g01991           -0.3925

> plot.interactions(varname)

```



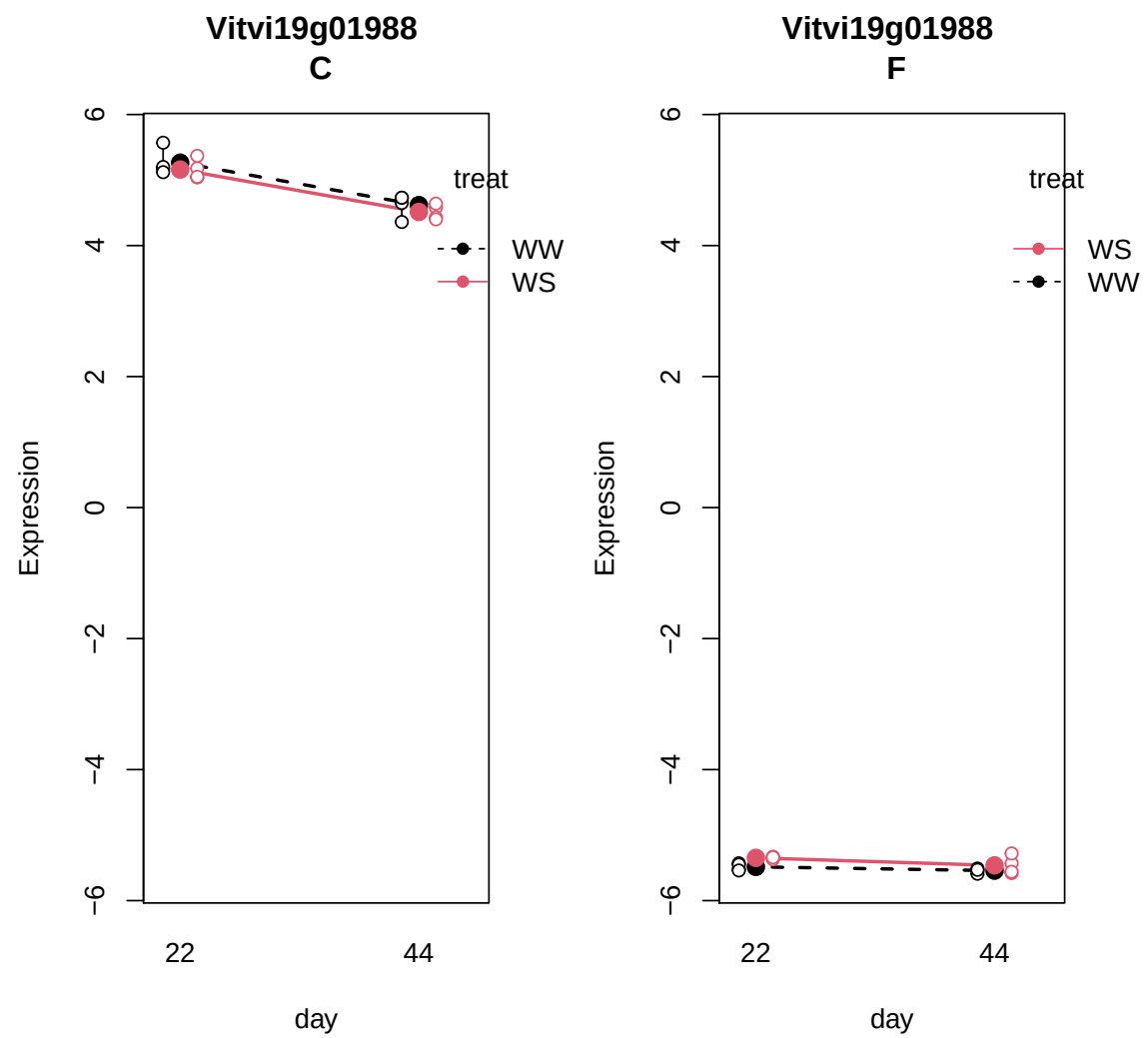
```
> plot.interactions(varname, coef=fit1[varname,]$coefficients, coef.plt=TRUE)
```



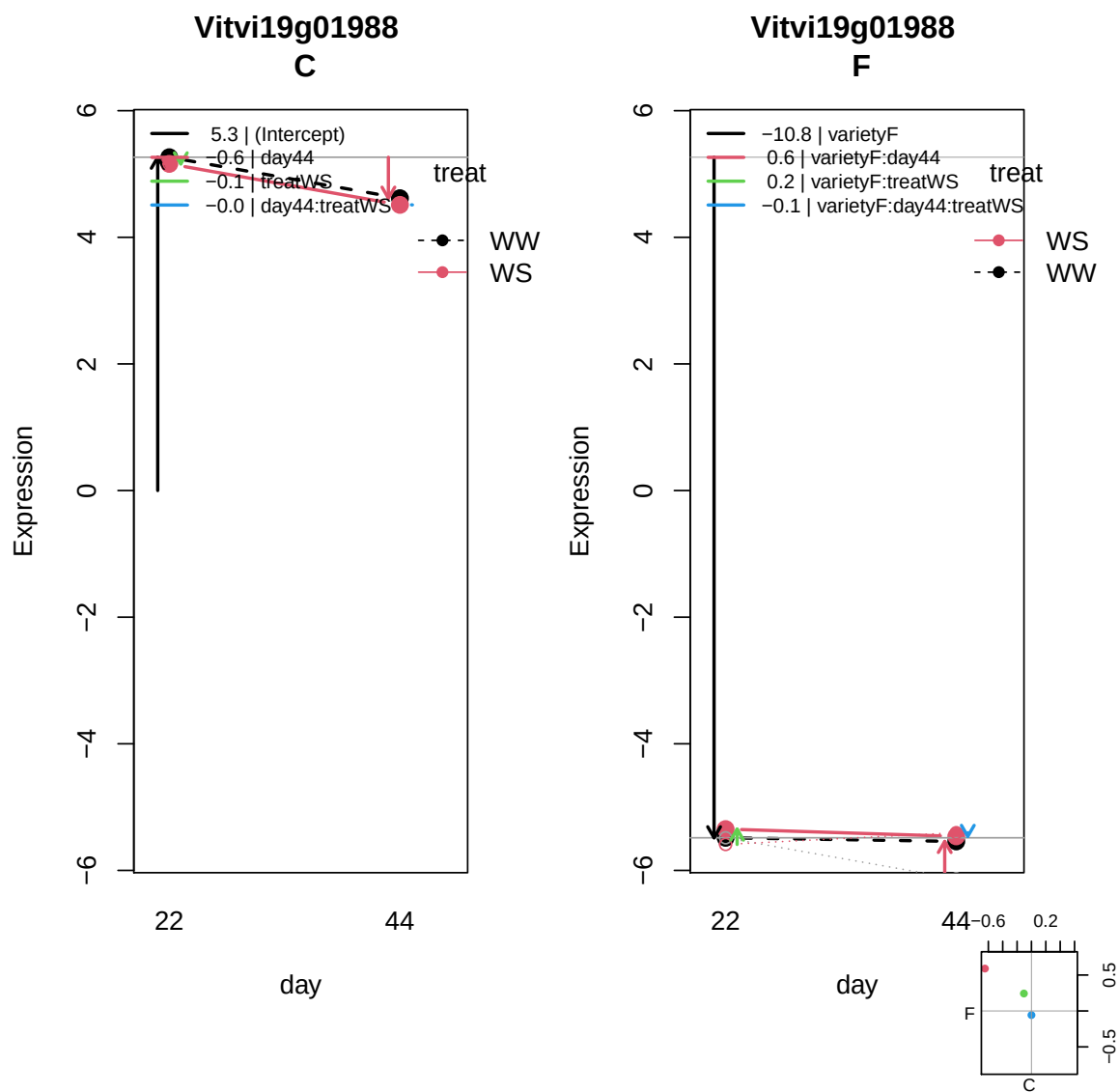
```
> varname <- rownames(tt)[2]
> fit1[varname,]$coefficients

              (Intercept)  varietyF   day44  treatWS
Vitvi19g01988      5.265    -10.75  -0.6475  -0.105
              varietyF:day44  varietyF:treatWS  day44:treatWS
Vitvi19g01988      0.59              0.2425  -5.740651e-16
              varietyF:day44:treatWS
Vitvi19g01988      -0.0575

> plot.interactions(varname)
```



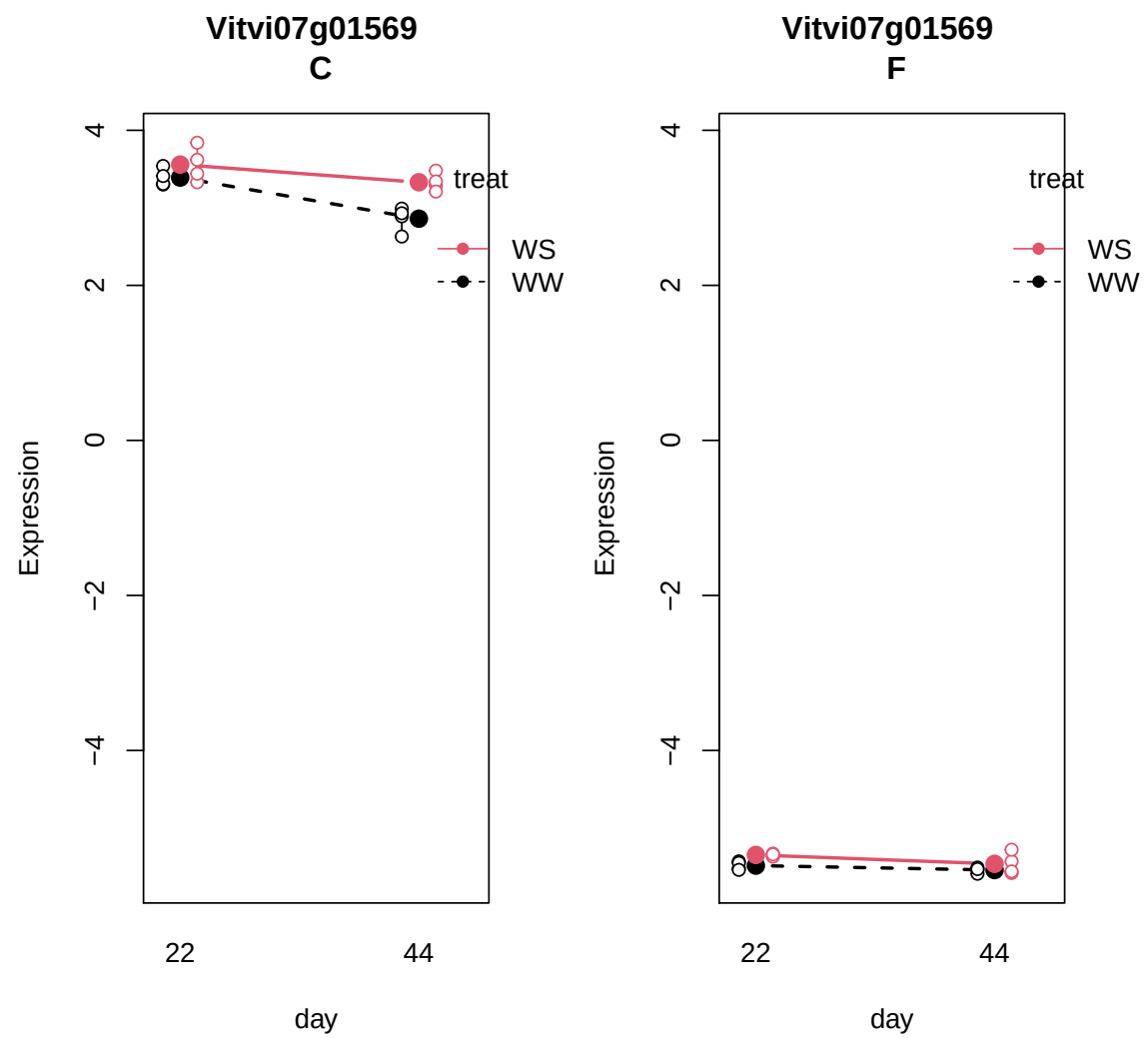
```
> plot.interactions(varname, coef=fit1[varname,]$coefficients, coef.plt=TRUE)
Warning in arrows(1:ndays + d, es, 1:ndays + d, esF, col = c1 + 1:ndays, : zer
```



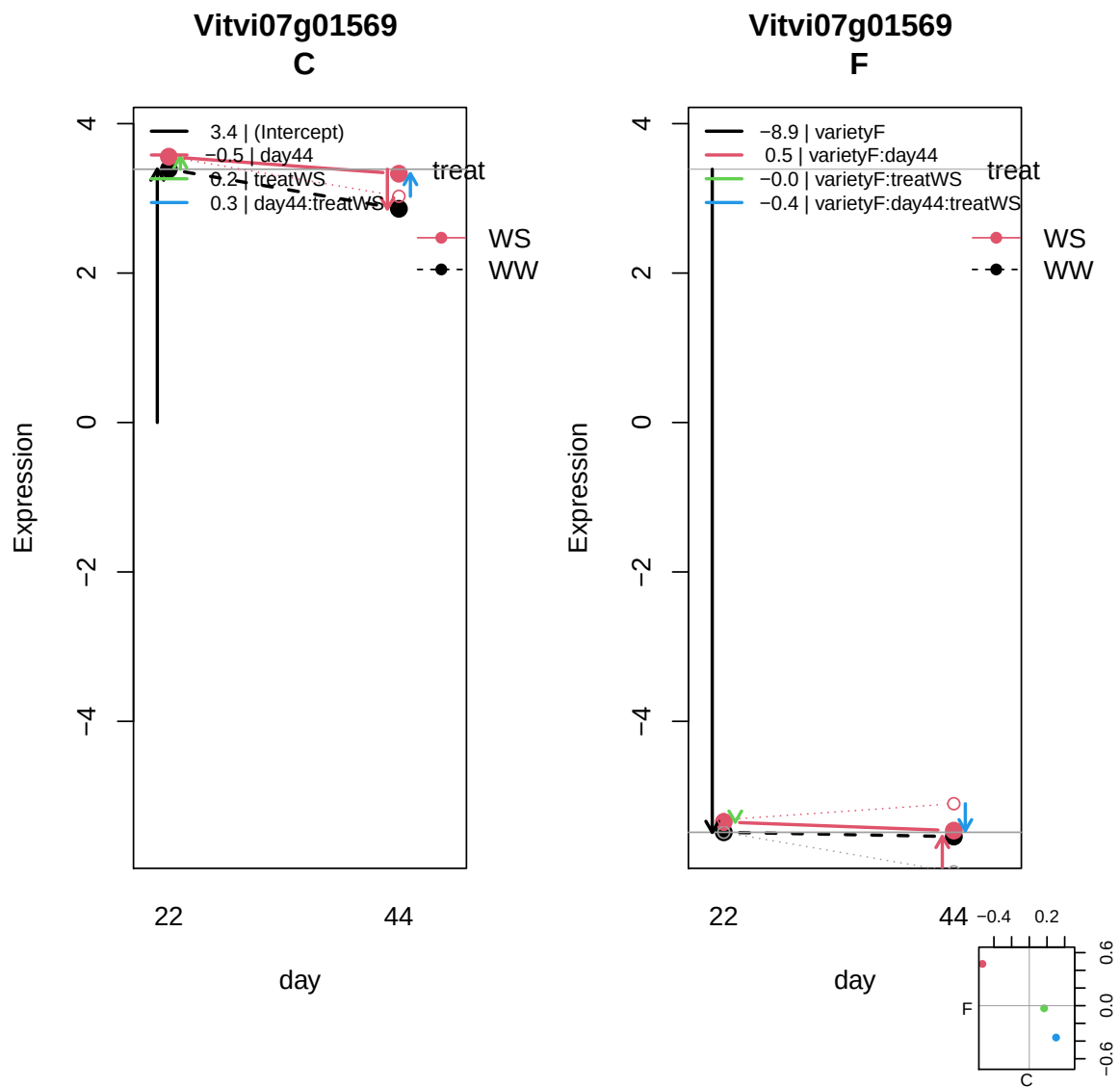
```
> varname <- rownames(tt)[3]
> fit1[varname,]$coefficients

(Intercept) varietyF day44 treatWS
Vitvi07g01569      3.39  -8.875 -0.53  0.1675
varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi07g01569      0.4725      -0.03      0.3025
varietyF:day44:treatWS
Vitvi07g01569      -0.36

> plot.interactions(varname)
```



```
> plot.interactions(varname, coef=fit1[varname,]$coefficients, coef.plt=TRUE)
```



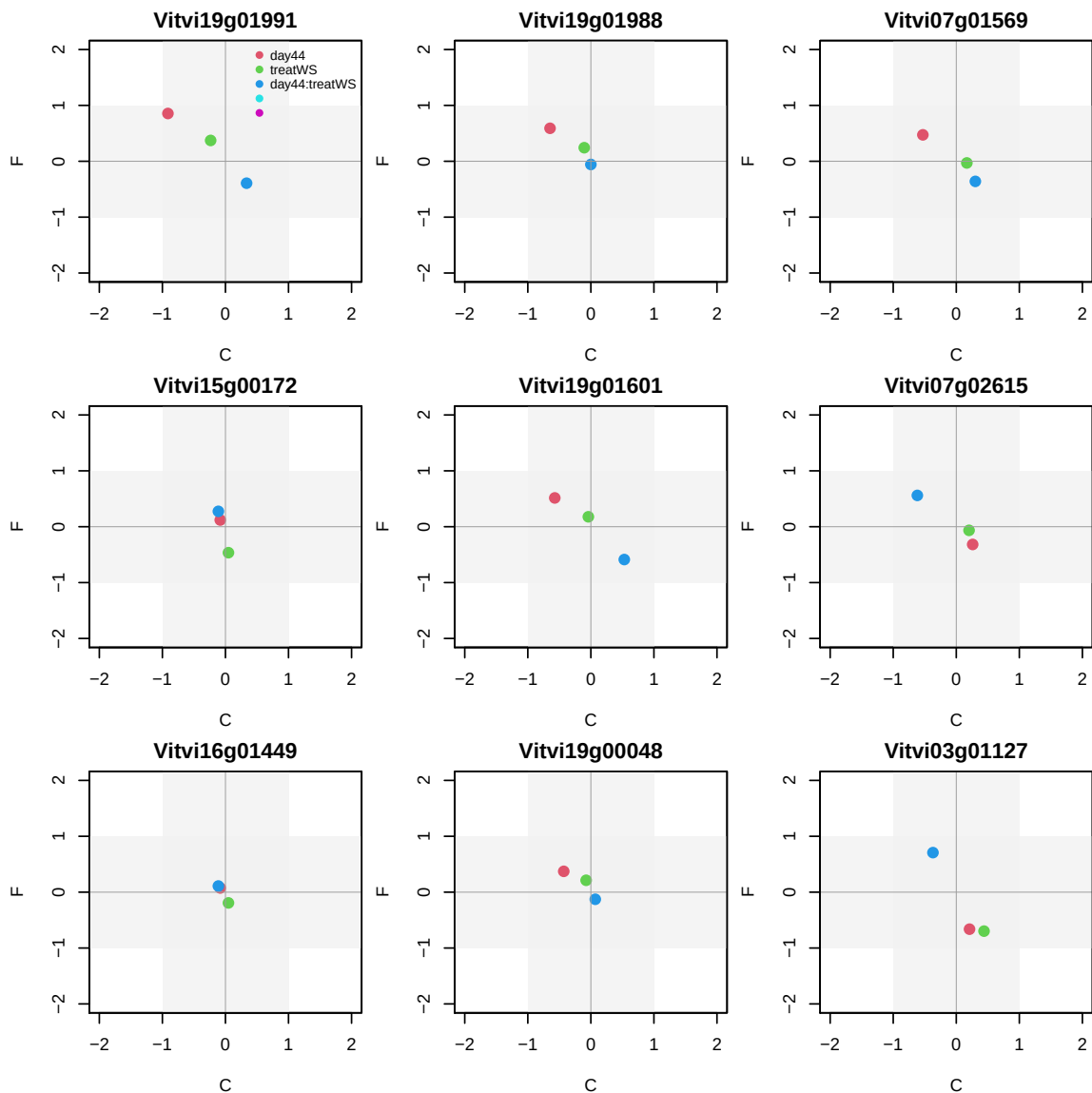
```
> par(mfrow=c(3, 3), mar=c(4, 4, 2, 0.5))
> select <- 2:6
> for(i in 1:9){
+ varname <- rownames(tt)[i]
+ coef <- fit1[varname,]$coefficients
+ ind <- grep("F", colnames(coef))
+ coef[-ind]
+ coef[ind]
+ plot(coef[-ind][select], coef[ind][select], col=select,
+      pch=16,
+      xlab="C", ylab="F",
+      ylim=c(-2, 2),
+      xlim=c(-2, 2),
+      type="n"
+ )
+ rect(-3, -1, 3, 1, col=rgb(.95, .95, .95, .80), border=NA)
+ rect(-1, -3, 1, 3, col=rgb(.95, .95, .95, .80), border=NA)
+
+ points(coef[-ind][select], coef[ind][select], col=select,
+        pch=16,
```



```

+       cex=c(1,1,1,1,2)*1.5
+     )
+ title(varname)
+ if(i==1) legend("topright", bty="n", col=select, pch=rep(16,5), legend=colnames(
+ abline(v=0, h=0, col=8, lwd=0.5)
+ box()
+ #polygon(c(-2,-1,-1, 1, 1, 2, 2, 1, 1,-1,-1,-2,-2),
+ #       c(-1,-1,-2,-2,-1,-1, 1, 1, 2, 2, 1, 1,-1),
+ #       col=rgb(.95, .95, .95, .50))
+
+
+ #abline(h=-1:1, v=-1:1, col=8)
+ #abline(h=0, v=0)
+ }

```



```

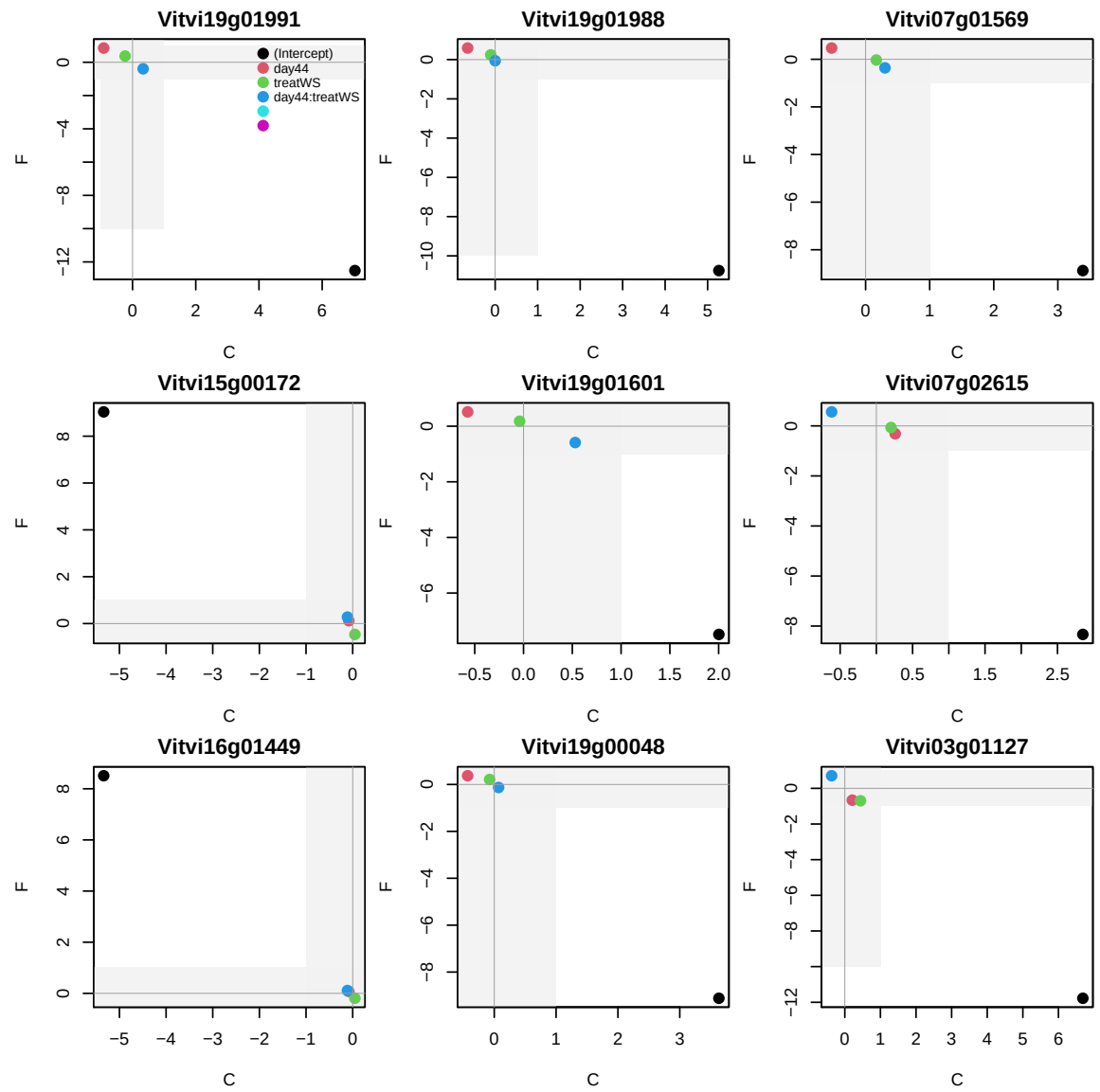
> par(mfrow=c(3,3), mar=c(4,4,2,0.5))
> select <- 1:6
> for(i in 1:9){
+   varname <- rownames(tt)[i]
+   coef <- fit1[varname,]$coefficients

```

```

+ ind <- grep("F", colnames(coef))
+ coef[-ind]
+ coef[ind]
+ plot(coef[-ind][select], coef[ind][select], col=select,
+      pch=16,
+      xlab="C", ylab="F",
+      # ylim=c(-2, 2),
+      # xlim=c(-2, 2),
+      type="n"
+      )
+ rect(-10, -1, 10, 1, col=rgb(.95, .95, .95, .90), border=NA)
+ rect(-1, -10, 1, 10, col=rgb(.95, .95, .95, .90), border=NA)
+ box()
+ points(coef[-ind][select], coef[ind][select], col=select,
+        pch=16,
+        cex=c(1, 1, 1, 1, 2) * 1.5
+        )
+ title(varname)
+ if(i==1) legend("topright", bty="n", col=select, pch=rep(16, 5) , legend=colnames (
+ abline(v=0, h=0, col=8, lwd=0.5)
+ #polygon(c(-2, -1, -1, 1, 1, 2, 2, 1, 1, -1, -1, -2, -2),
+ #        c(-1, -1, -2, -2, -1, -1, 1, 1, 2, 2, 1, 1, -1),
+ #        col=rgb(.95, .95, .95, .50))
+
+
+ #abline(h=-1:1, v=-1:1, col=8)
+ #abline(h=0, v=0)
+ }

```



8 Coefficients

Model design

```
> design <- with(pd, model.matrix(~ variety * day * treat))
> head(design)
      (Intercept) varietyF day44 treatWS varietyF:day44
1             1         0     0         1             0
2             1         0     0         1             0
3             1         0     0         1             0
4             1         0     0         1             0
5             1         0     0         0             0
6             1         0     0         0             0
      varietyF:treatWS day44:treatWS varietyF:day44:treatWS
1                 0                 0                 0
2                 0                 0                 0
3                 0                 0                 0
4                 0                 0                 0
5                 0                 0                 0
6                 0                 0                 0
```

Linear models

```
> fit1 <- lmFit(exprs, design)
> fit1 <- eBayes(fit1)
> head(fit1[1:6,]$coefficients)
      (Intercept) varietyF   day44 treatWS
Vitvi15g01736    5.0925 -0.1050  0.8125 -1.7225
Vitvi07g02832   -2.1050  5.1250 -1.9925 -0.1175
Vitvi07g02830   -2.1875  4.3550 -1.3900 -2.0075
Vitvi07g02812   -0.5600  1.9525 -0.1050  0.0125
Vitvi07g02811    2.9975  0.4500 -0.7700 -0.6600
Vitvi09g02033   -3.6800  5.5475  0.2175  0.1900
      varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi15g01736    0.1225    0.2475    1.1475
Vitvi07g02832    2.6725    0.2425    1.7450
Vitvi07g02830    2.0500    1.7825    1.2875
Vitvi07g02812   -0.1025    0.0150    0.2925
Vitvi07g02811    0.5275    0.7125    0.6125
Vitvi09g02033   -0.5675    0.1225    0.1450
      varietyF:day44:treatWS
Vitvi15g01736   -0.2300
Vitvi07g02832   -2.8575
Vitvi07g02830   -2.0250
Vitvi07g02812   -0.7800
Vitvi07g02811   -0.9200
Vitvi09g02033   -0.0725

> which <- ncol(fit1$coefficients)
> cname <- colnames(fit1$coefficients)[which]
> cnames <- colnames(fit1$coefficients)
> ind <- grep("varietyF", cnames)
> cname <- cnames[-ind]
```

Expressions in `exprs`, `phenodata` in `pd`.

```
> alpha <- 0.01
> maxnames <- 10
> out <- ""
> cnames <- colnames(fit1$coefficients)
> which <- 2
> for(which in 2:ncol(fit1[1:6,]$coefficients)){
+   cname <- cnames[which]
+   out <- paste(out,
+     "\\clearpage\\n\\subsection{",cname," }\n")
+   #comps[8,]
+   tt <- topTable(fit1,coef=which, number=Inf)
+   cat("\n----- ",cname, alpha,"\n")
+   filter <- tt$adj.P.Val < alpha
+   print(table(filter))
+   cat("\n\n")
+   head(tt)
+   varnames <- rownames(tt)[filter][1:min(maxnames,sum(filter))]
+   varnames
+   # varname <- varnames[1]
+   for (varname in varnames)
+     out <- paste(out,knit_child("20aa_interaction-plots.rnw",quiet=TRUE))
+ }
```

----- varietyF 0.01

filter

FALSE TRUE

13346 1896

Warning in doTryCatch(return(expr), name, parentenv, handler): zero-length ar

Warning in doTryCatch(return(expr), name, parentenv, handler): zero-length ar

Warning in doTryCatch(return(expr), name, parentenv, handler): zero-length ar

Warning in doTryCatch(return(expr), name, parentenv, handler): zero-length ar

----- day44 0.01

filter

FALSE TRUE

13818 1424

----- treatWS 0.01

filter

FALSE TRUE

14394 848

----- varietyF:day44 0.01

filter

FALSE TRUE

15239 3

```
----- varietyF:treatWS 0.01
filter
FALSE
15242
```

```
----- day44:treatWS 0.01
filter
FALSE TRUE
15159 83
```

```
Warning in doTryCatch(return(expr), name, parentenv, handler): zero-length ar
Warning in doTryCatch(return(expr), name, parentenv, handler): zero-length ar
```

```
----- varietyF:day44:treatWS 0.01
filter
FALSE
15242
```

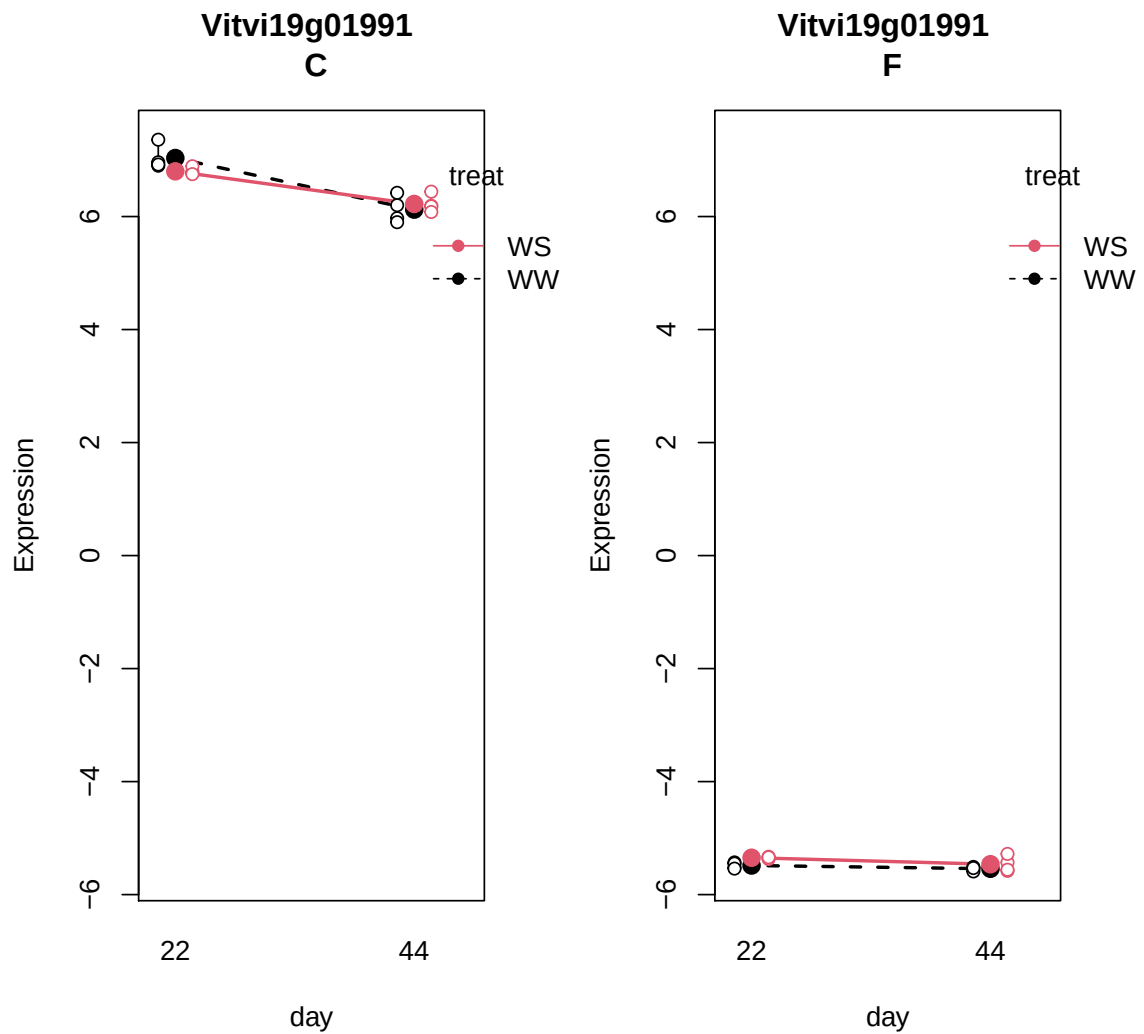
8.1 varietyF

8.1.1 Vitvi19g01991

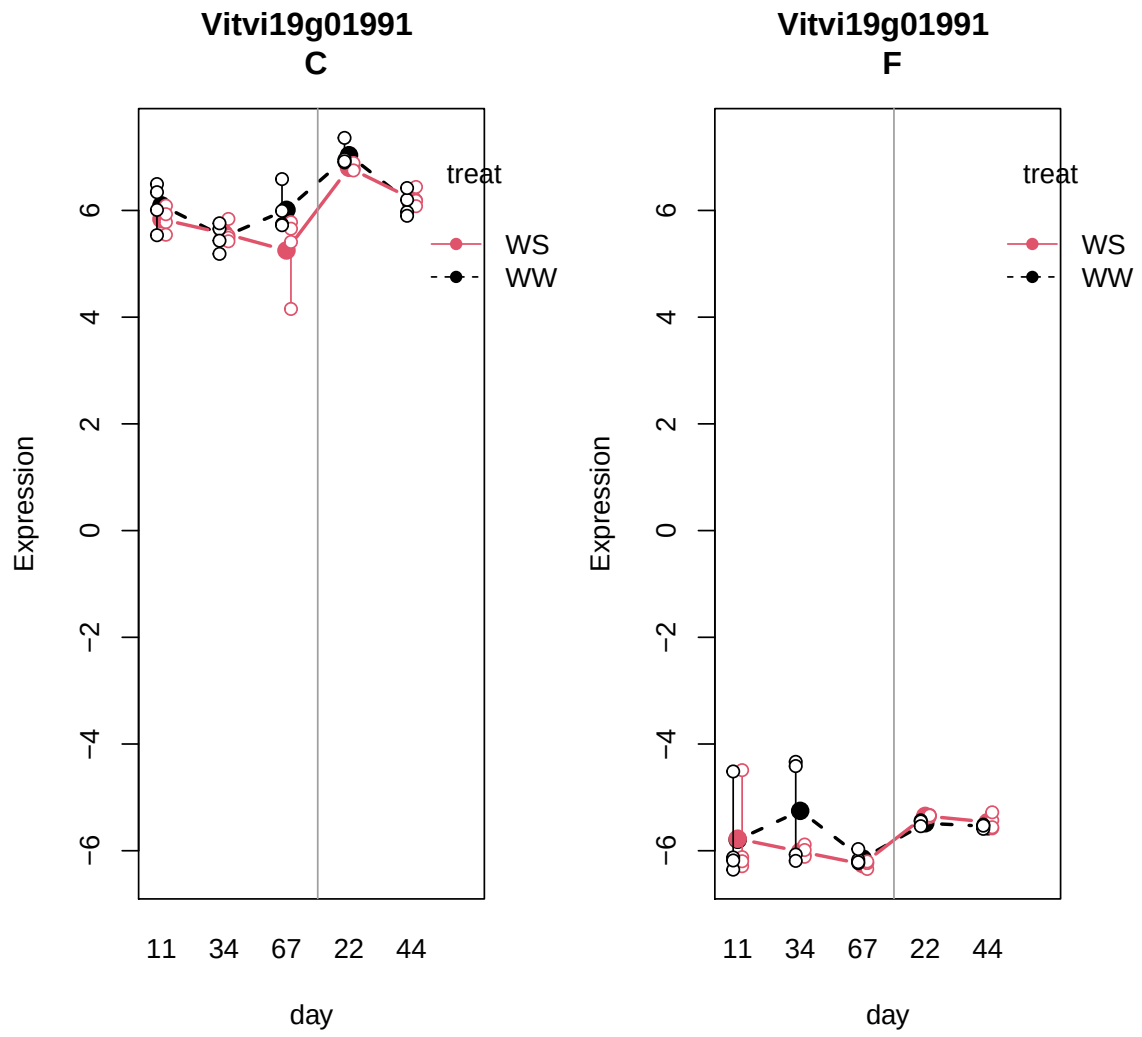
Coefficient varietyF for Vitvi19g01991.

```
> tt[varname,]
               logFC  AveExpr      t      P.Value
Vitvi19g01991 -12.52  0.5428125 -120.21 6.69583e-38
               adj.P.Val      B
Vitvi19g01991 1.020578e-33 70.32025

> plot.interactions(varname,phdata=pd,data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



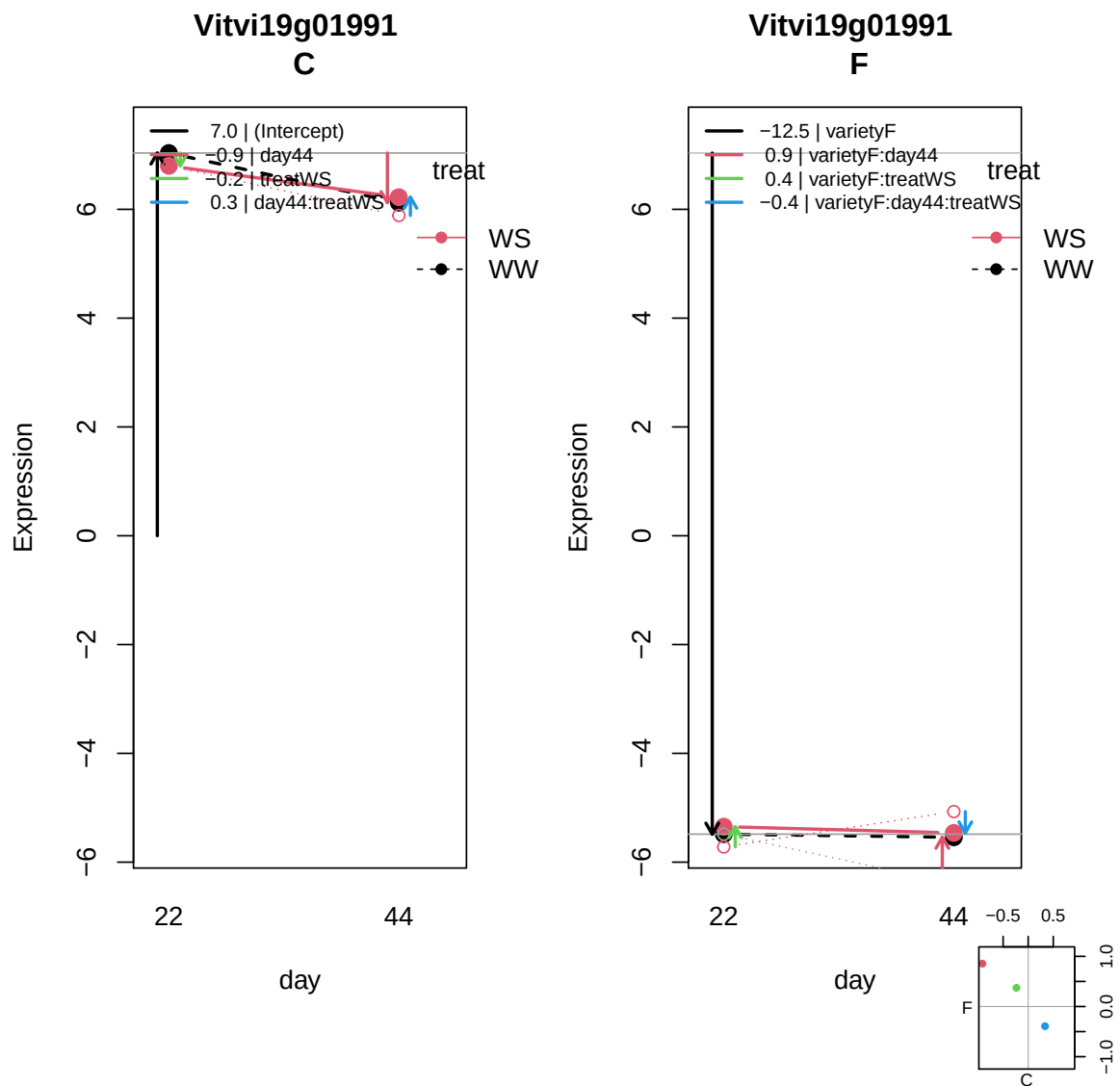
```

> fit1[varname,]$coefficients

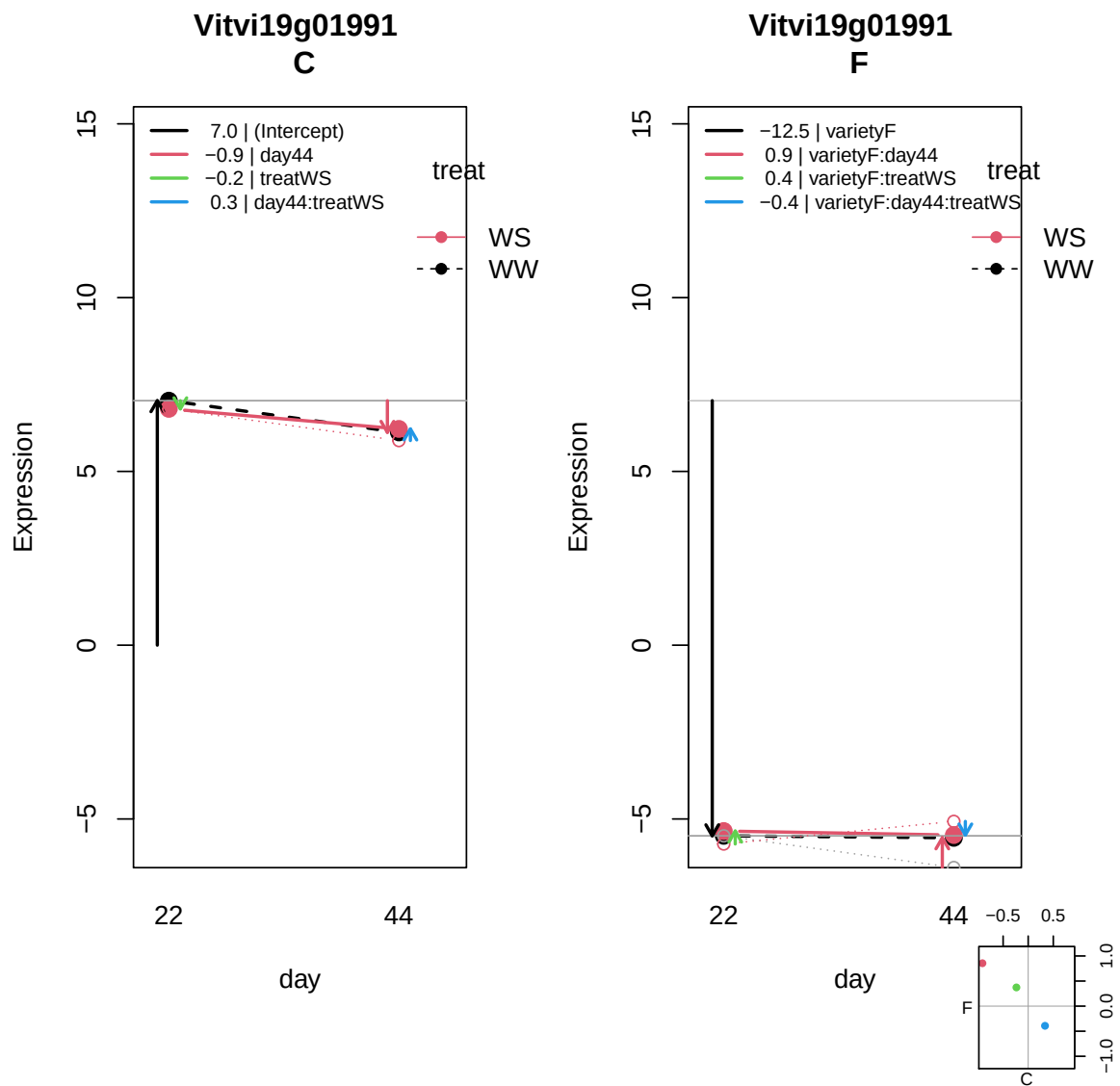
              (Intercept)  varietyF    day44  treatWS
Vitvi19g01991           7.035    -12.52 -0.9125  -0.235
              varietyF:day44  varietyF:treatWS  day44:treatWS
Vitvi19g01991           0.855              0.3725          0.335
              varietyF:day44:treatWS
Vitvi19g01991           -0.3925

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



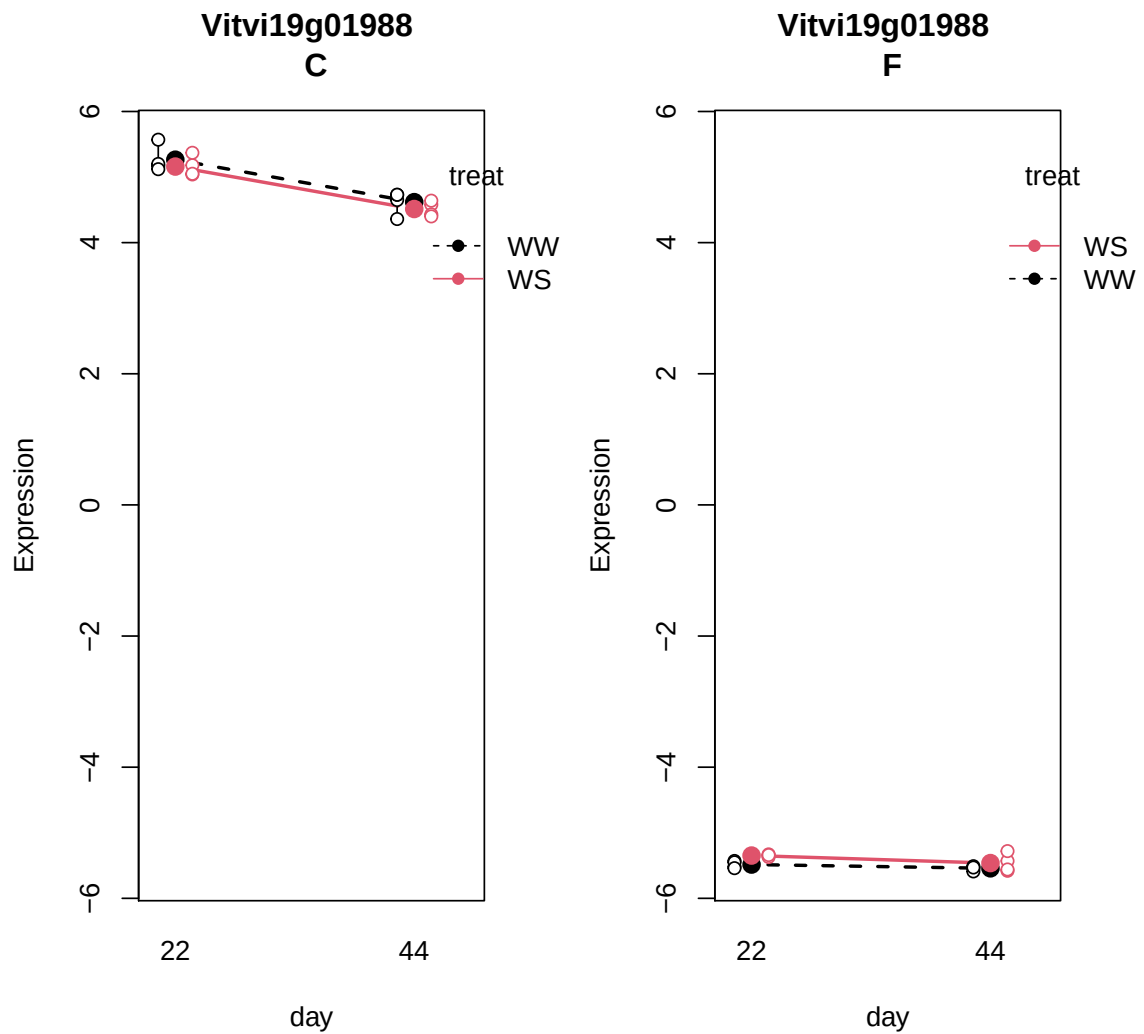
Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

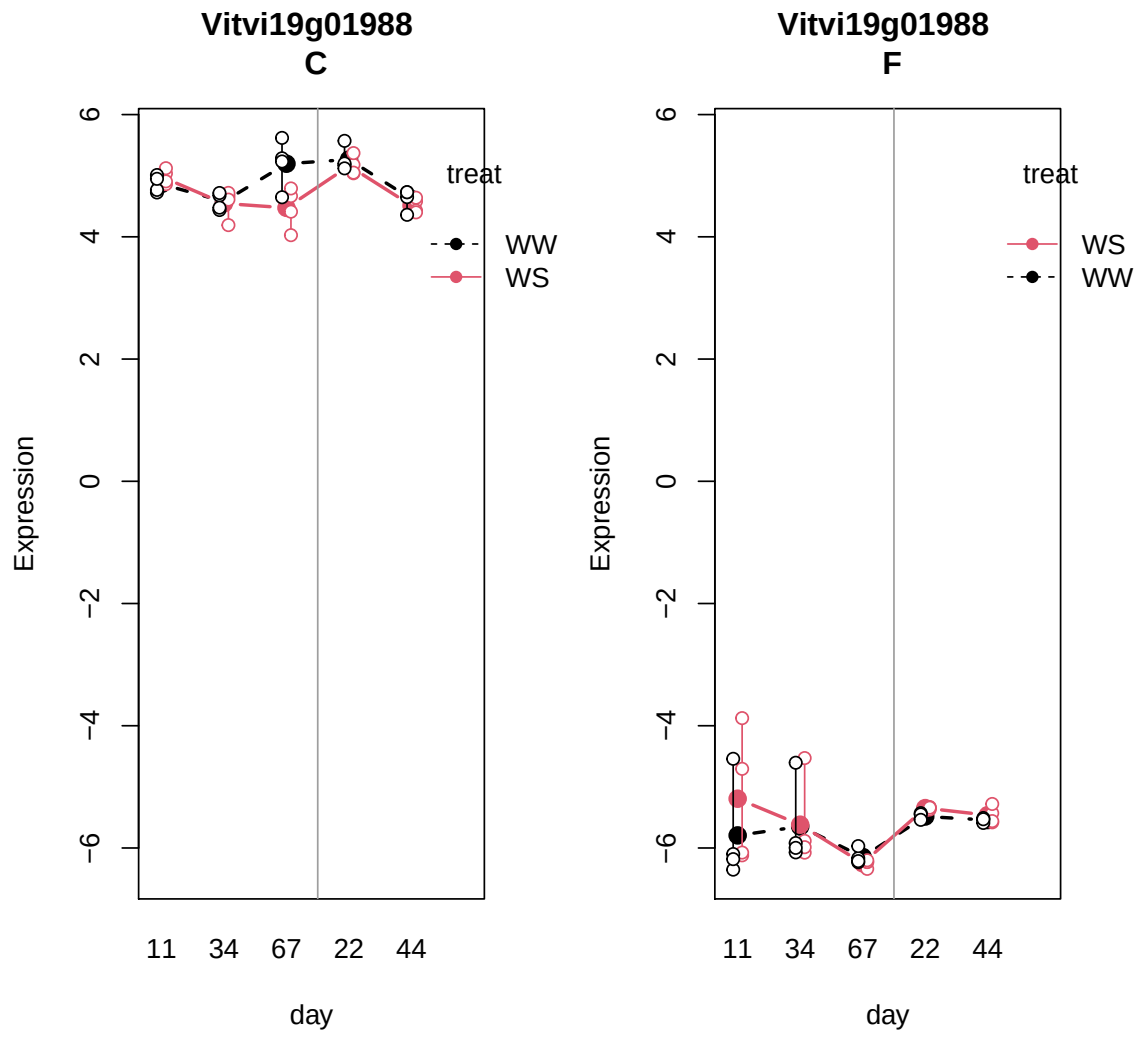
8.1.2 Vitvi19g01988

Coefficient varietyF for Vitvi19g01988.

```
> tt[varname,]
              logFC    AveExpr          t      P.Value
Vitvi19g01988 -10.75 -0.2853125 -109.1293 8.706629e-37
              adj.P.Val          B
Vitvi19g01988 6.635322e-33 68.84759
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

      (Intercept)  varietyF    day44  treatWS
Vitvi19g01988      5.265   -10.75 -0.6475  -0.105
      varietyF:day44  varietyF:treatWS  day44:treatWS
Vitvi19g01988      0.59                0.2425 -5.740651e-16
      varietyF:day44:treatWS
Vitvi19g01988      -0.0575

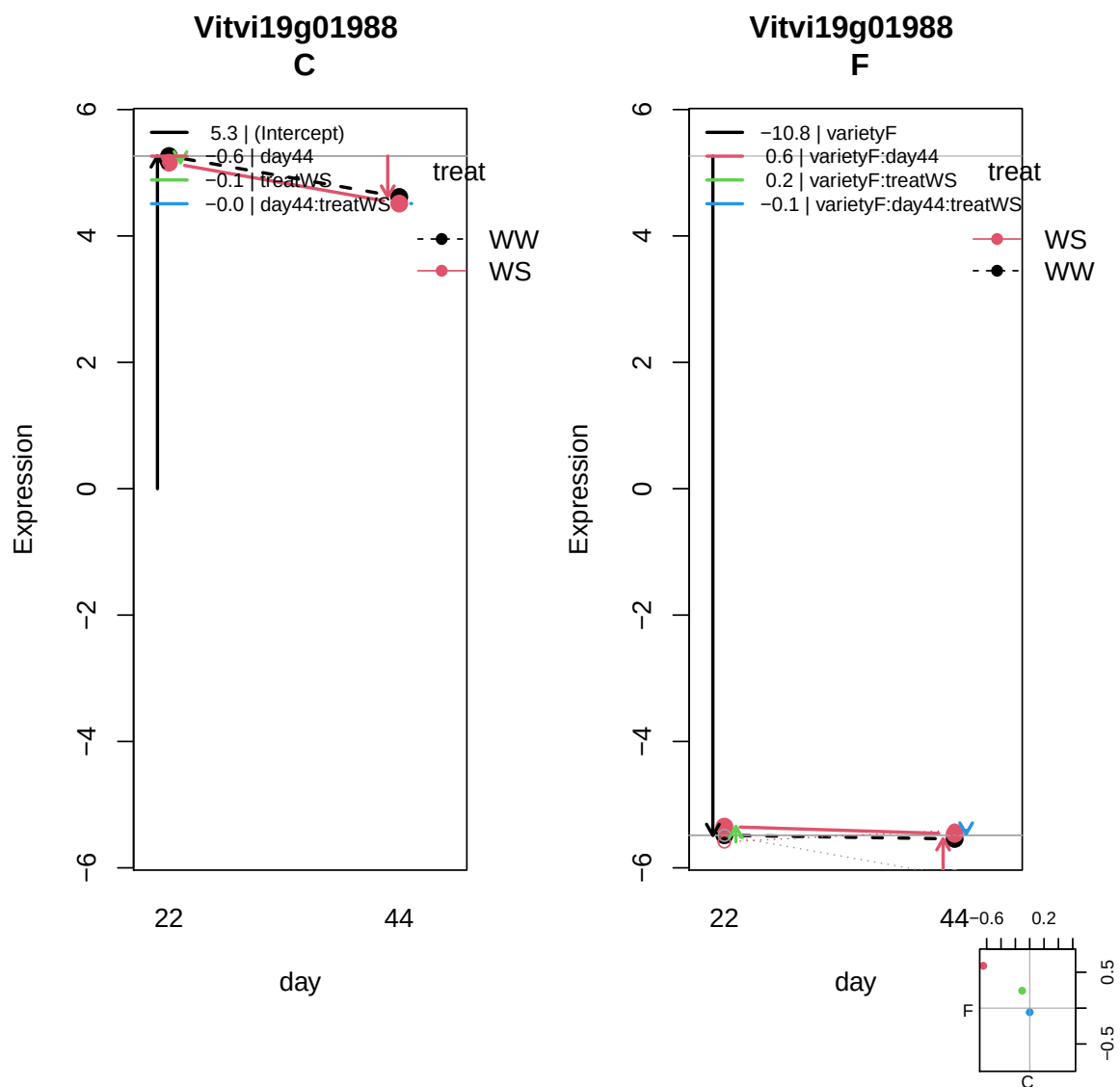
```

```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

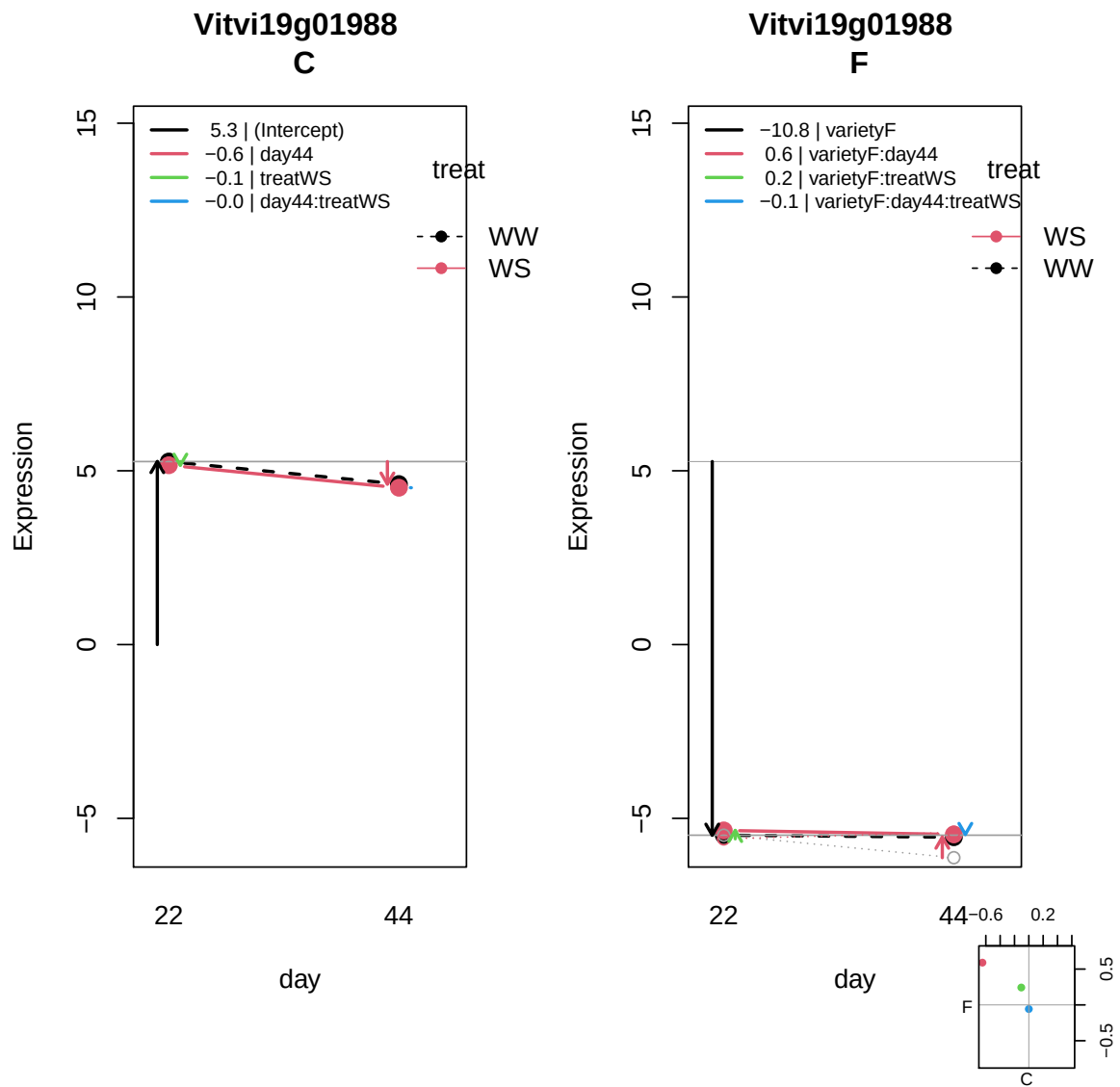
```

Warning in arrows(1:ndays + d, es, 1:ndays + d, esF, col = cl + 1:ndays, : zero



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```

Warning in arrows(1:ndays + d, es, 1:ndays + d, esF, col = c1 + 1:ndays, : zero



Coefficient plot

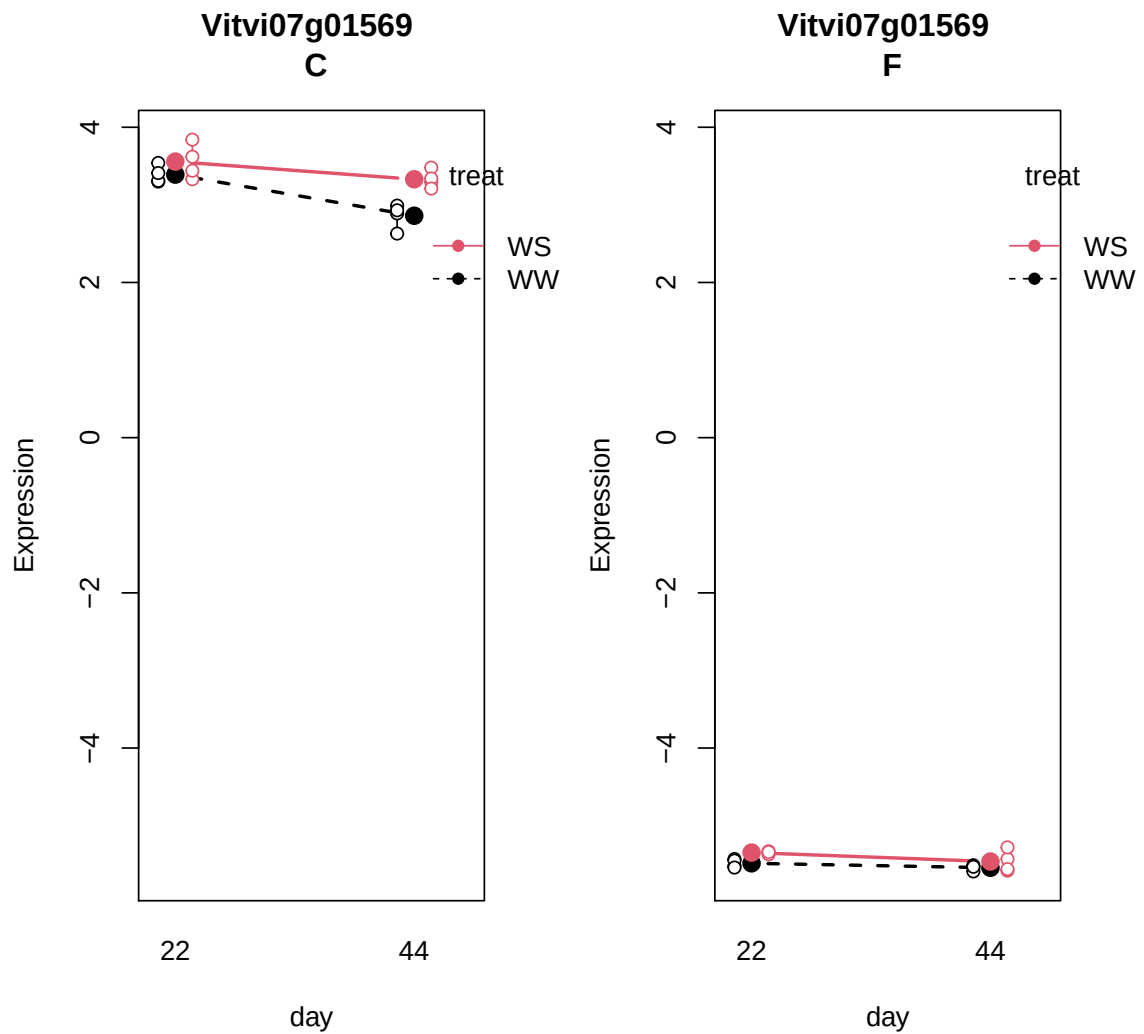
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

8.1.3 Vitvi07g01569

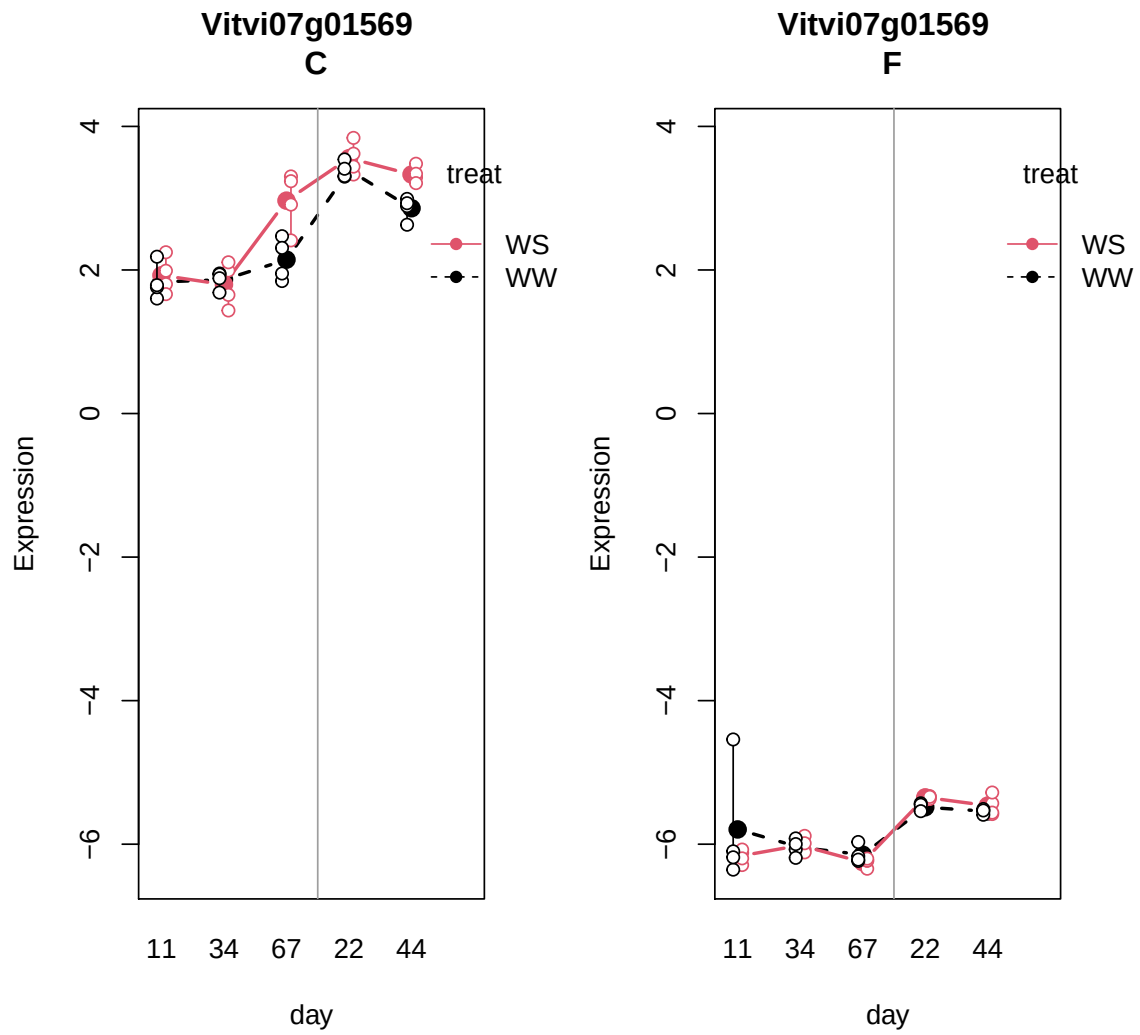
Coefficient varietyF for Vitvi07g01569.

```
> tt[varname,]
              logFC AveExpr          t      P.Value
Vitvi07g01569 -8.875 -1.0875 -92.87121 6.268404e-35
              adj.P.Val          B
Vitvi07g01569 3.184767e-31 66.11638

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

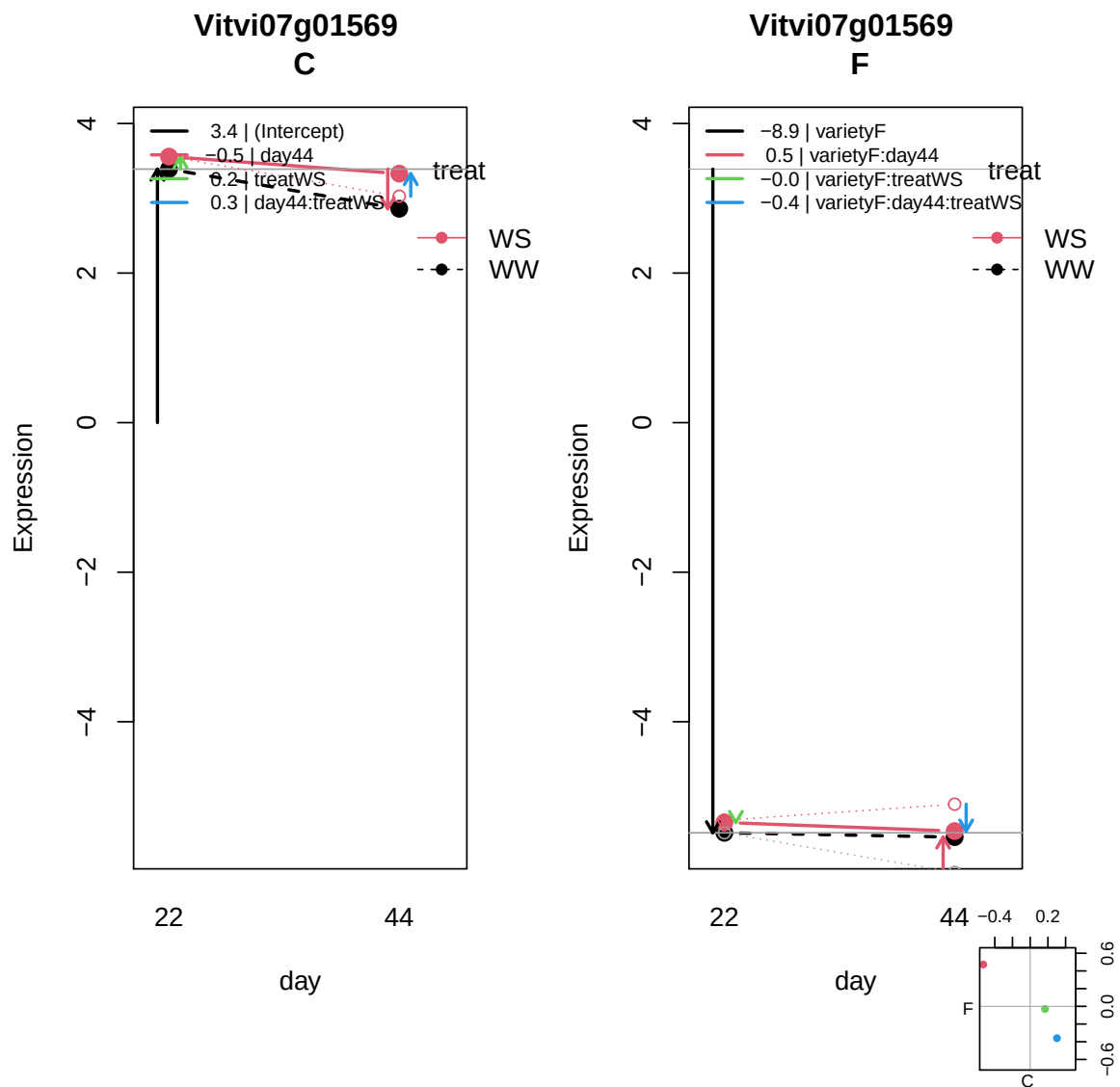


```

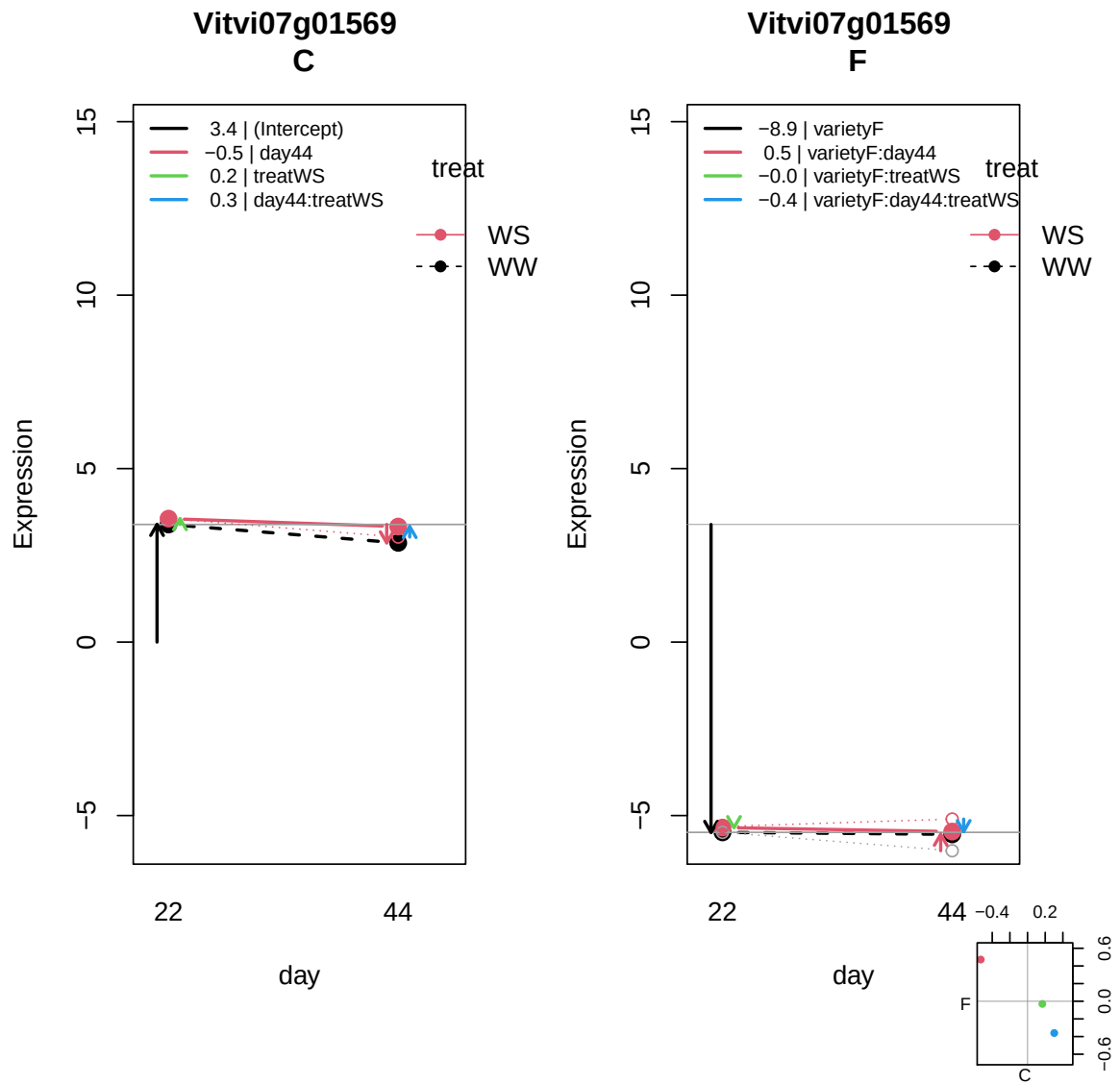
> fit1[varname,]$coefficients
              (Intercept) varietyF day44 treatWS
Vitvi07g01569           3.39   -8.875 -0.53  0.1675
              varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi07g01569           0.4725             -0.03           0.3025
              varietyF:day44:treatWS
Vitvi07g01569             -0.36

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

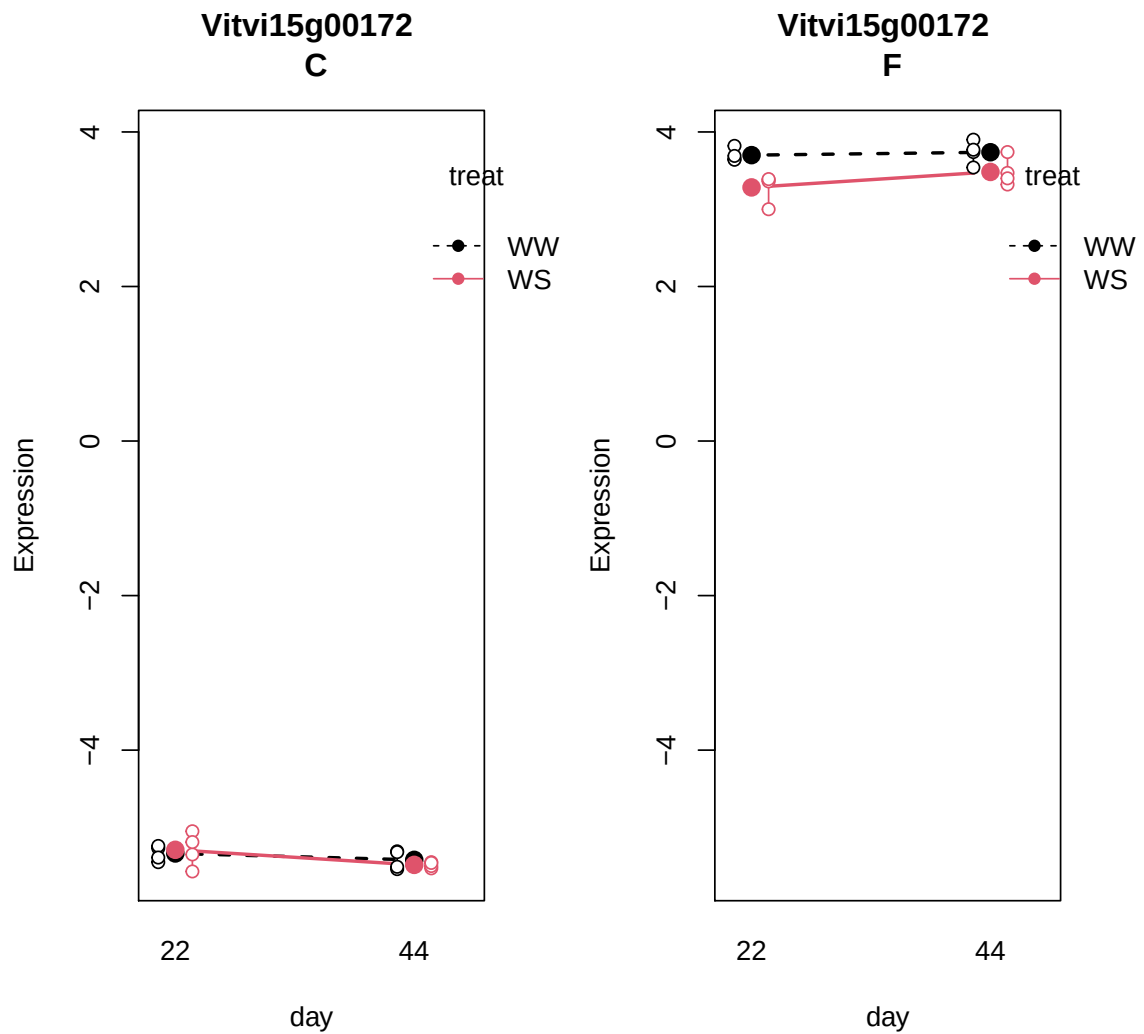
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

8.1.4 Vitvi15g00172

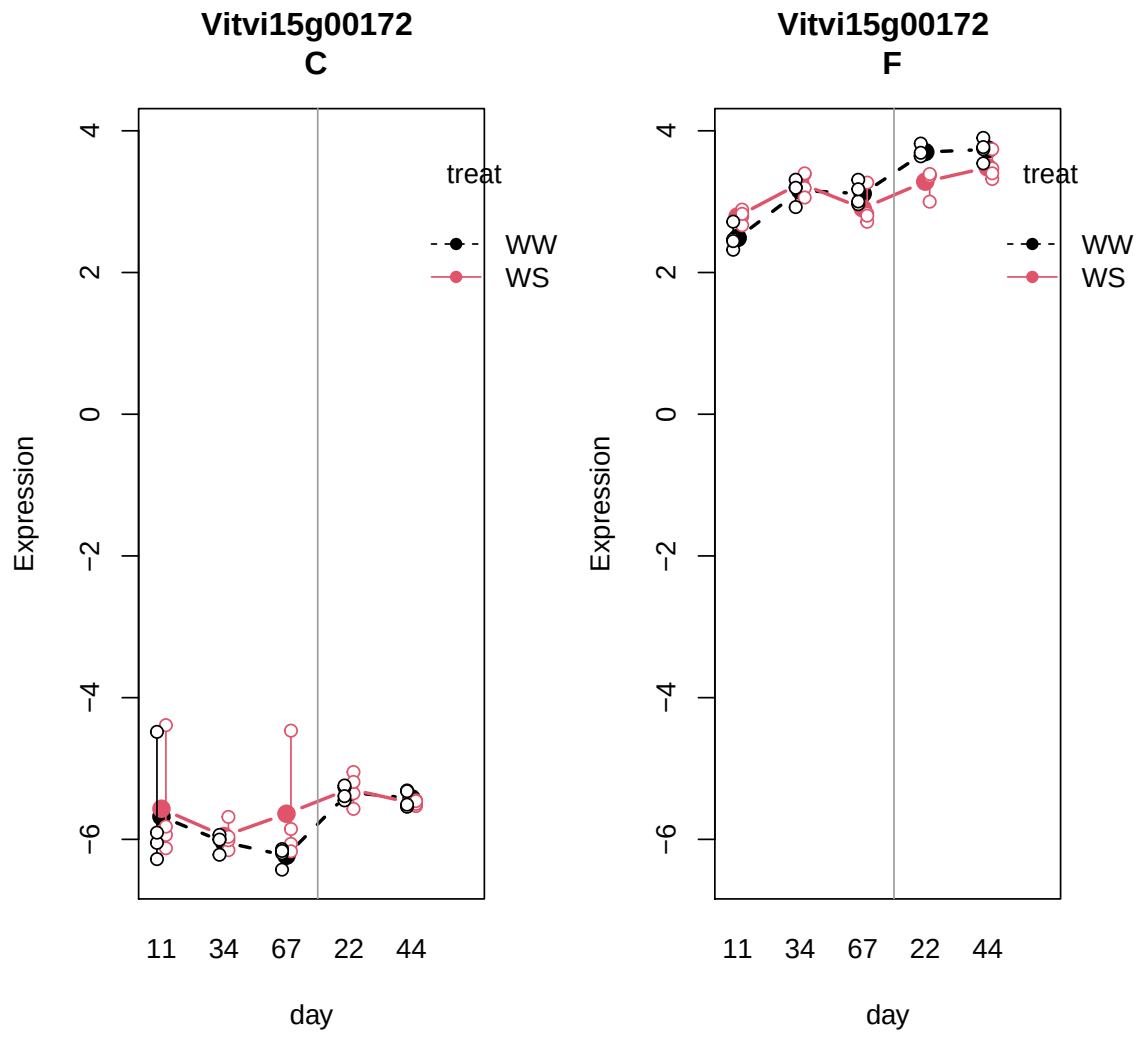
Coefficient varietyF for Vitvi15g00172.

```
> tt[varname,]
      logFC  AveExpr      t    P.Value
Vitvi15g00172 9.0375 -0.91625 82.65888 1.371725e-33
      adj.P.Val      B
Vitvi15g00172 5.226959e-30 63.94355

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

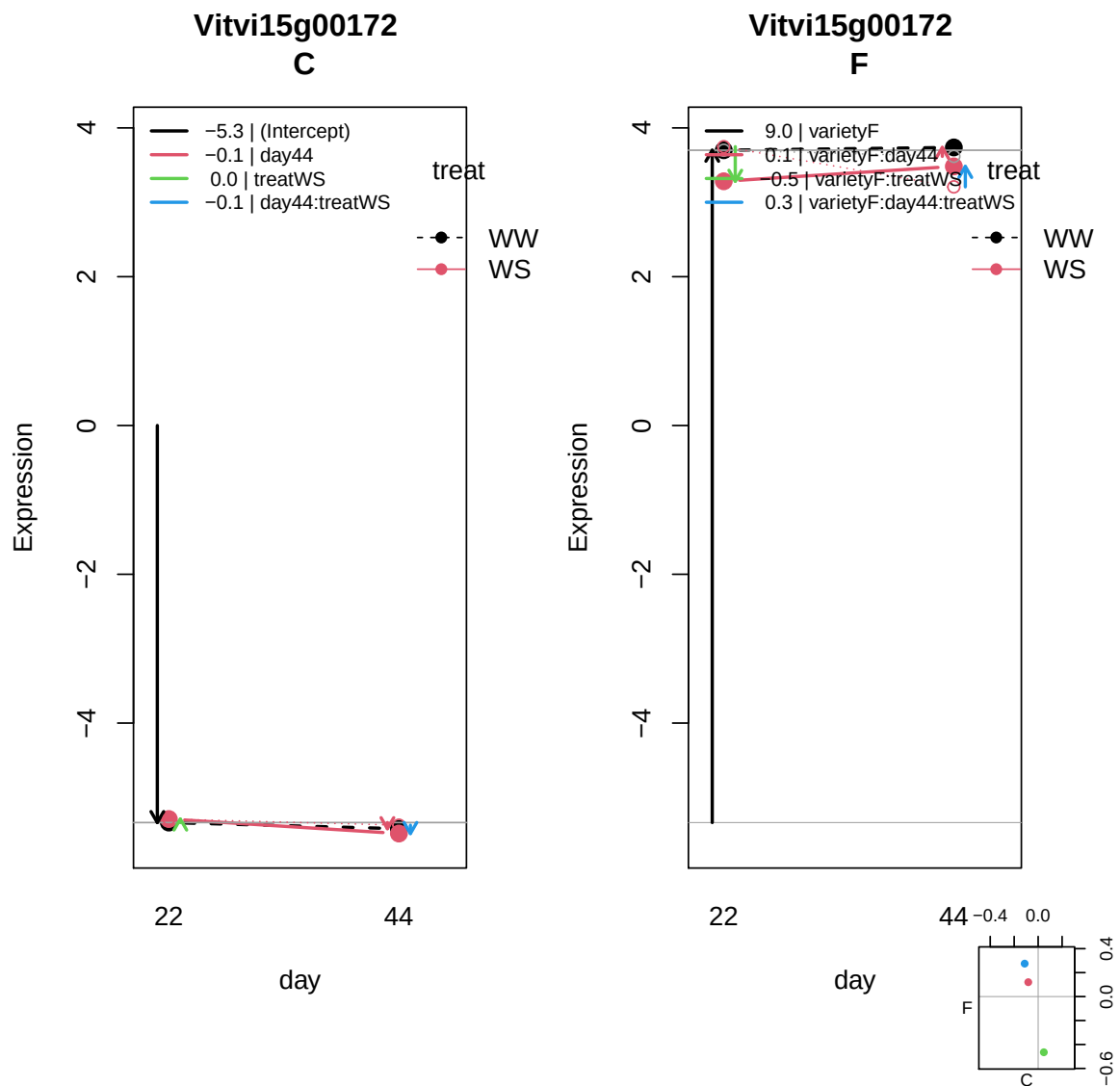



```

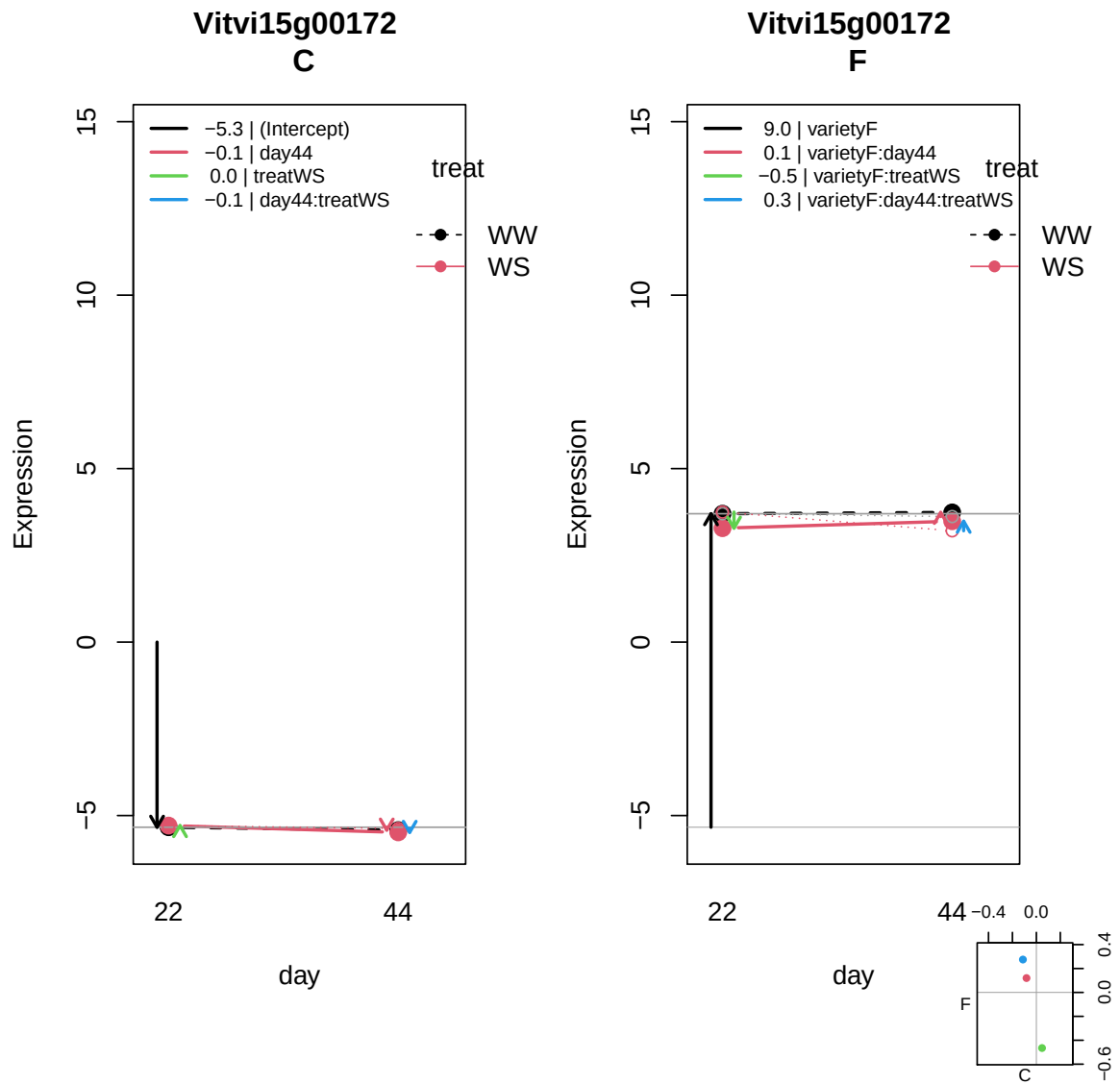
> fit1[varname,]$coefficients
              (Intercept)  varietyF    day44  treatWS
Vitvi15g00172      -5.3375    9.0375 -0.0825  0.0475
              varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi15g00172           0.12          -0.465        -0.1125
              varietyF:day44:treatWS
Vitvi15g00172           0.275

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

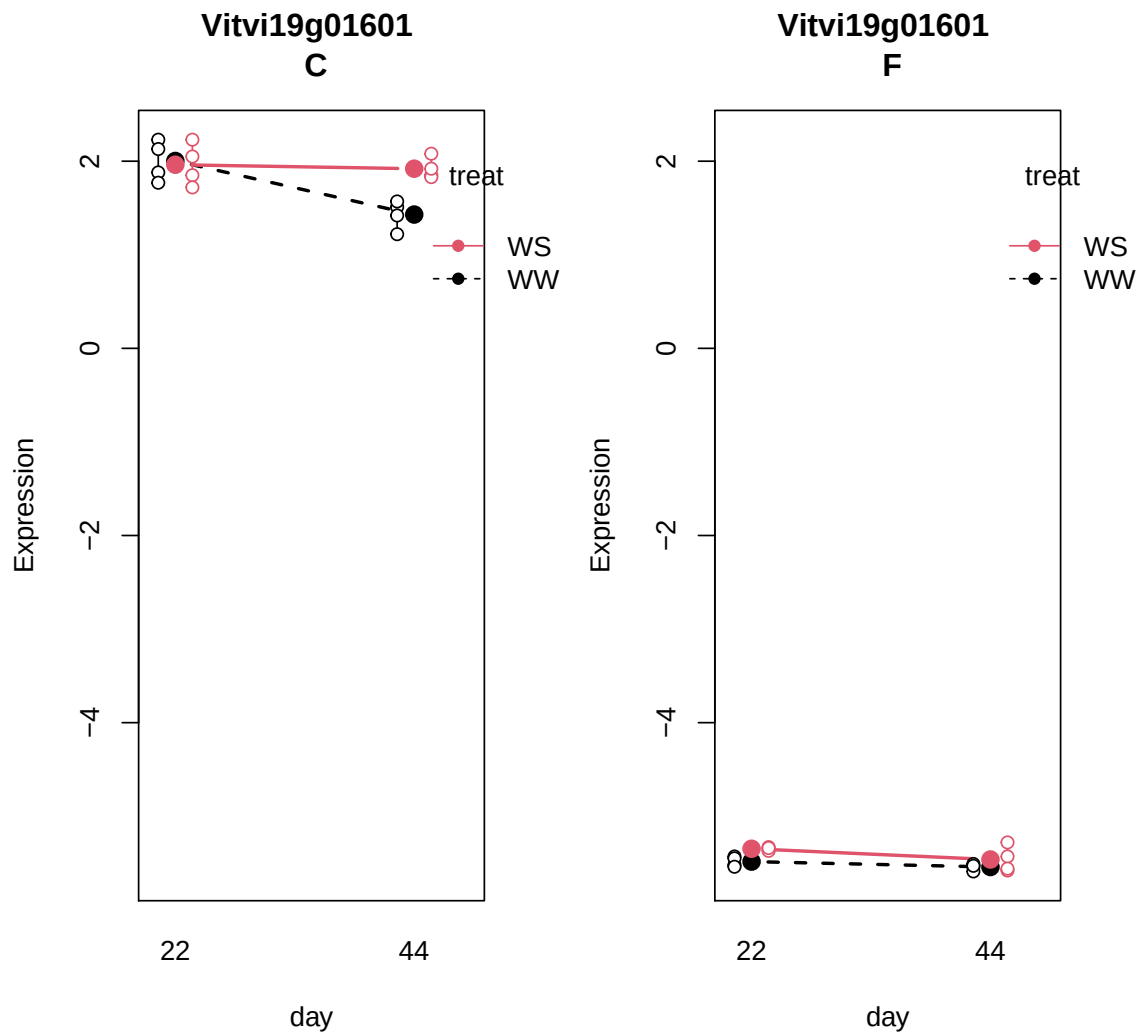
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

8.1.5 Vitvi19g01601

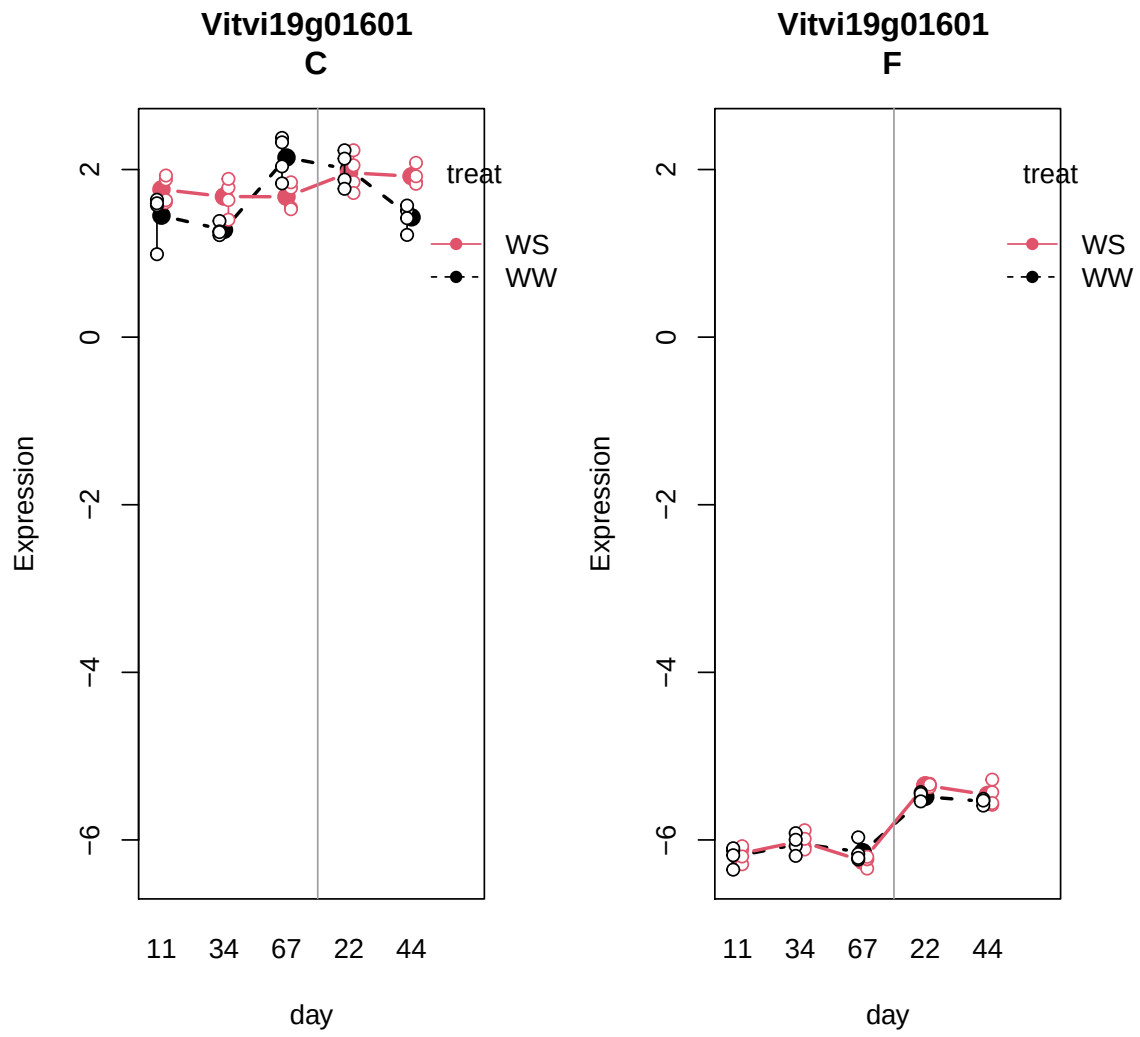
Coefficient varietyF for Vitvi19g01601.

```
> tt[varname,]
      logFC  AveExpr      t    P.Value
Vitvi19g01601 -7.4875 -1.815312 -71.61185 6.109401e-32
      adj.P.Val      B
Vitvi19g01601 1.86239e-28 61.05962

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



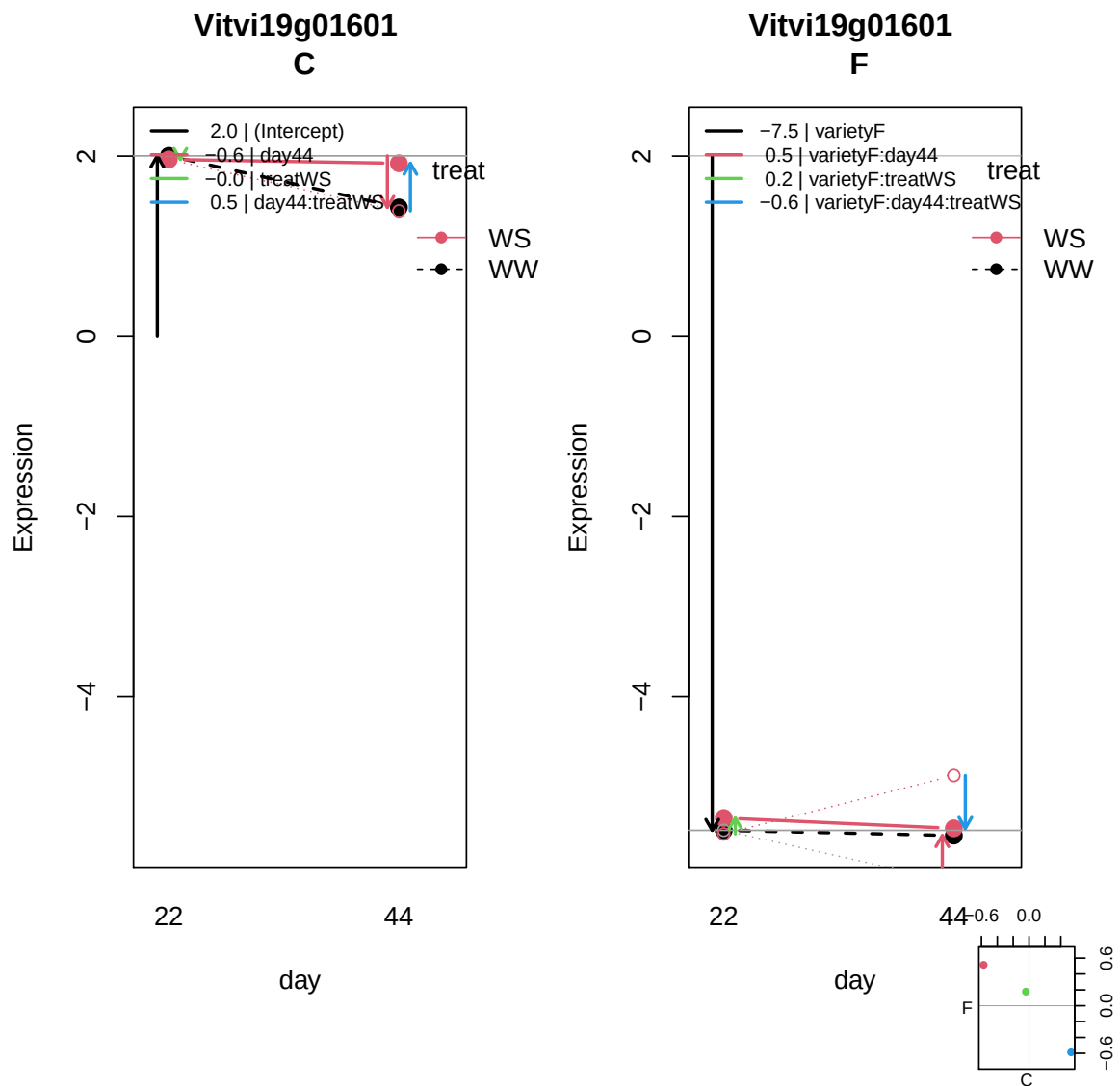
```

> fit1[varname,]$coefficients

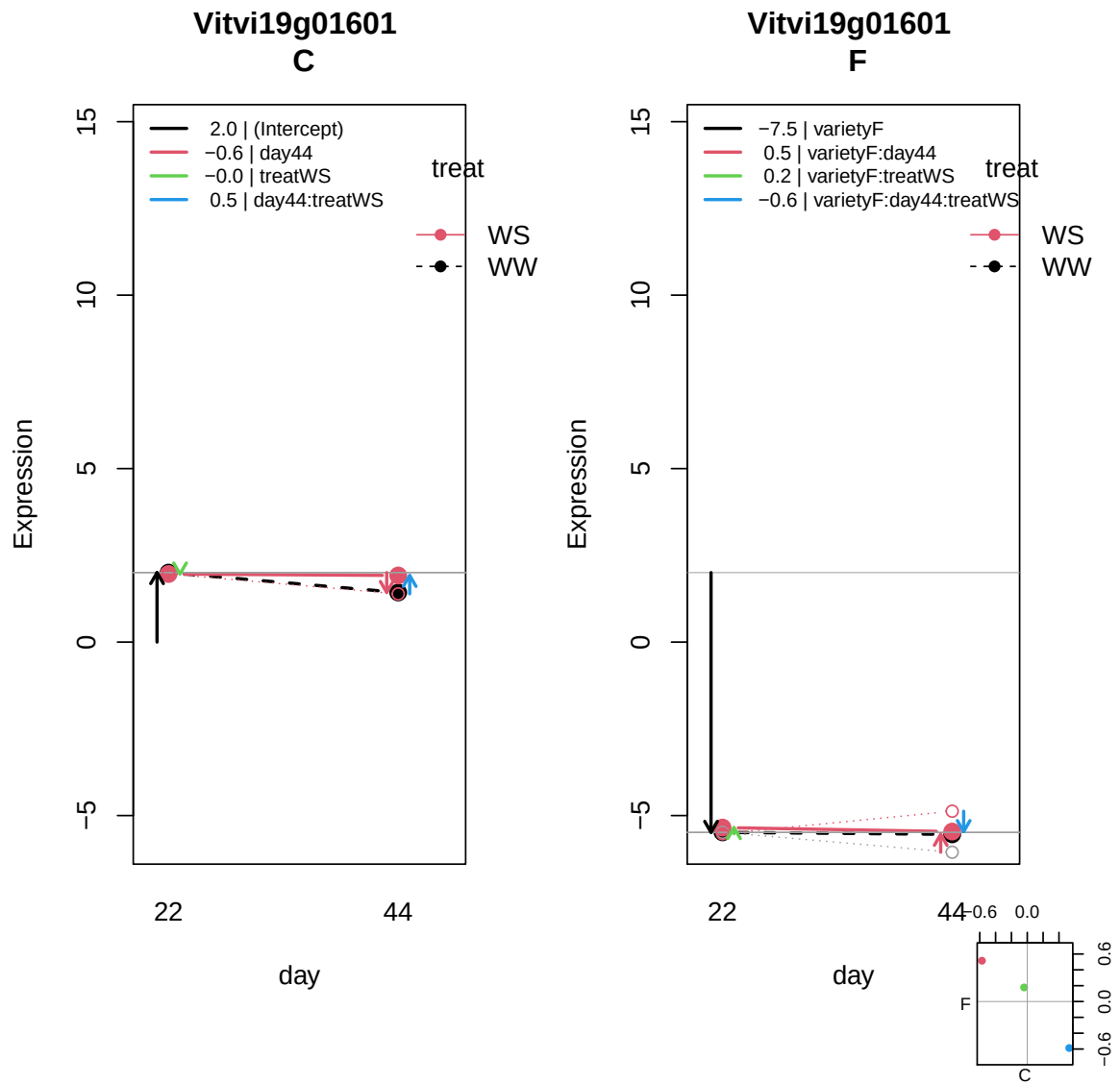
              (Intercept)  varietyF    day44  treatWS
Vitvi19g01601          2.0025   -7.4875  -0.5725   -0.04
              varietyF:day44  varietyF:treatWS  day44:treatWS
Vitvi19g01601          0.515          0.1775          0.53
              varietyF:day44:treatWS
Vitvi19g01601          -0.5875

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

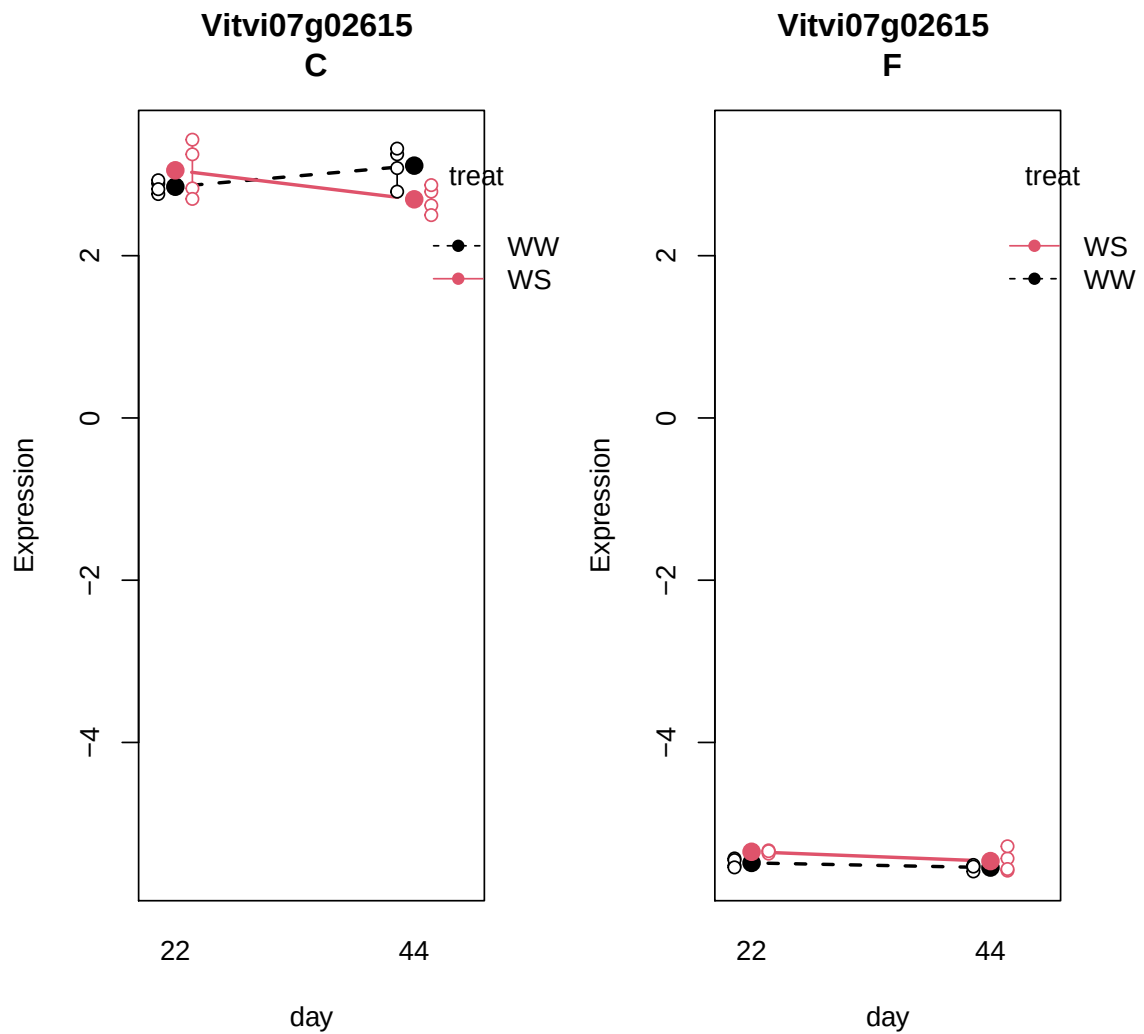
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```


8.1.6 Vitvi07g02615

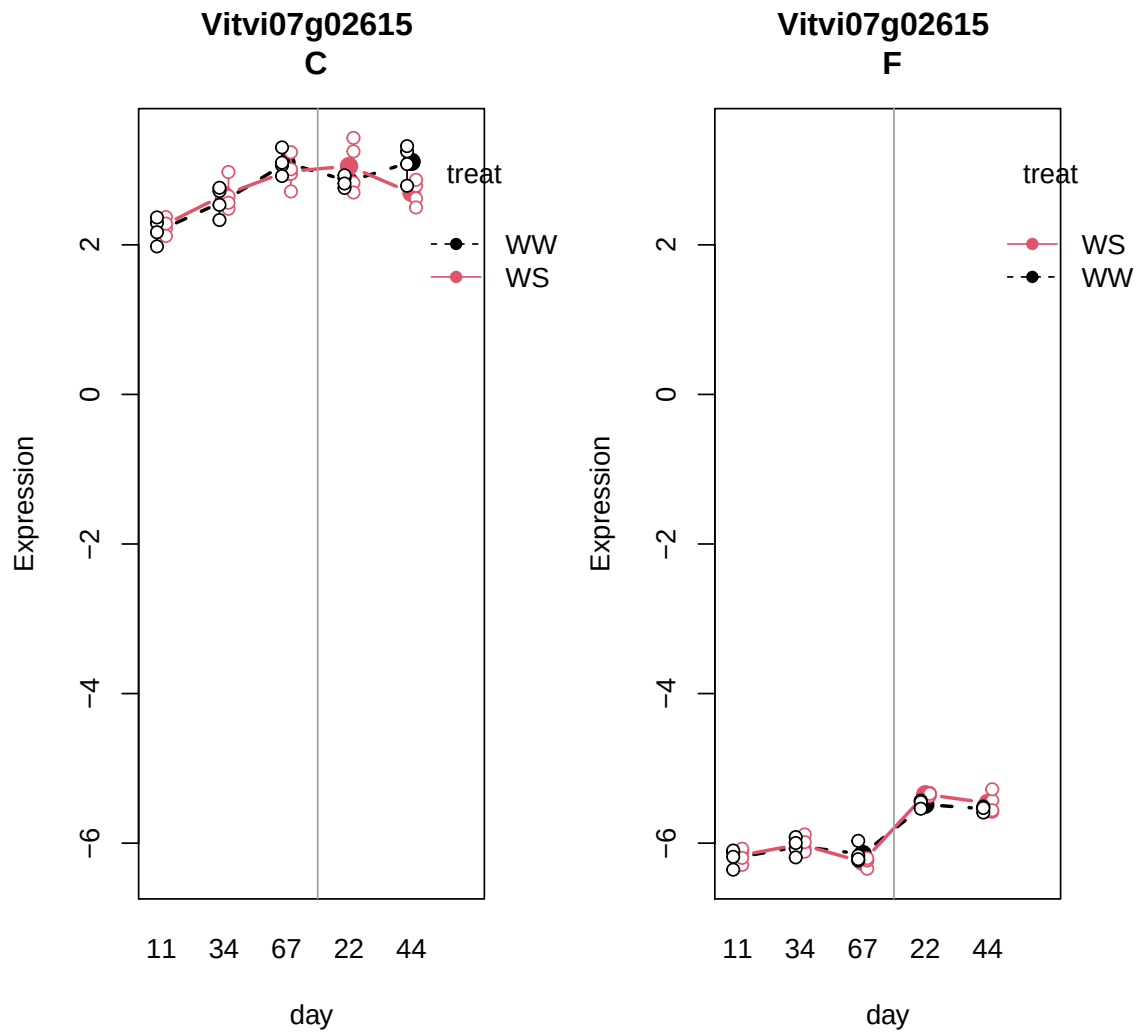
Coefficient varietyF for Vitvi07g02615.

```
> tt[varname,]
              logFC  AveExpr          t      P.Value
Vitvi07g02615 -8.335 -1.26625 -67.64072 2.760771e-31
              adj.P.Val          B
Vitvi07g02615 7.013279e-28 59.8552

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

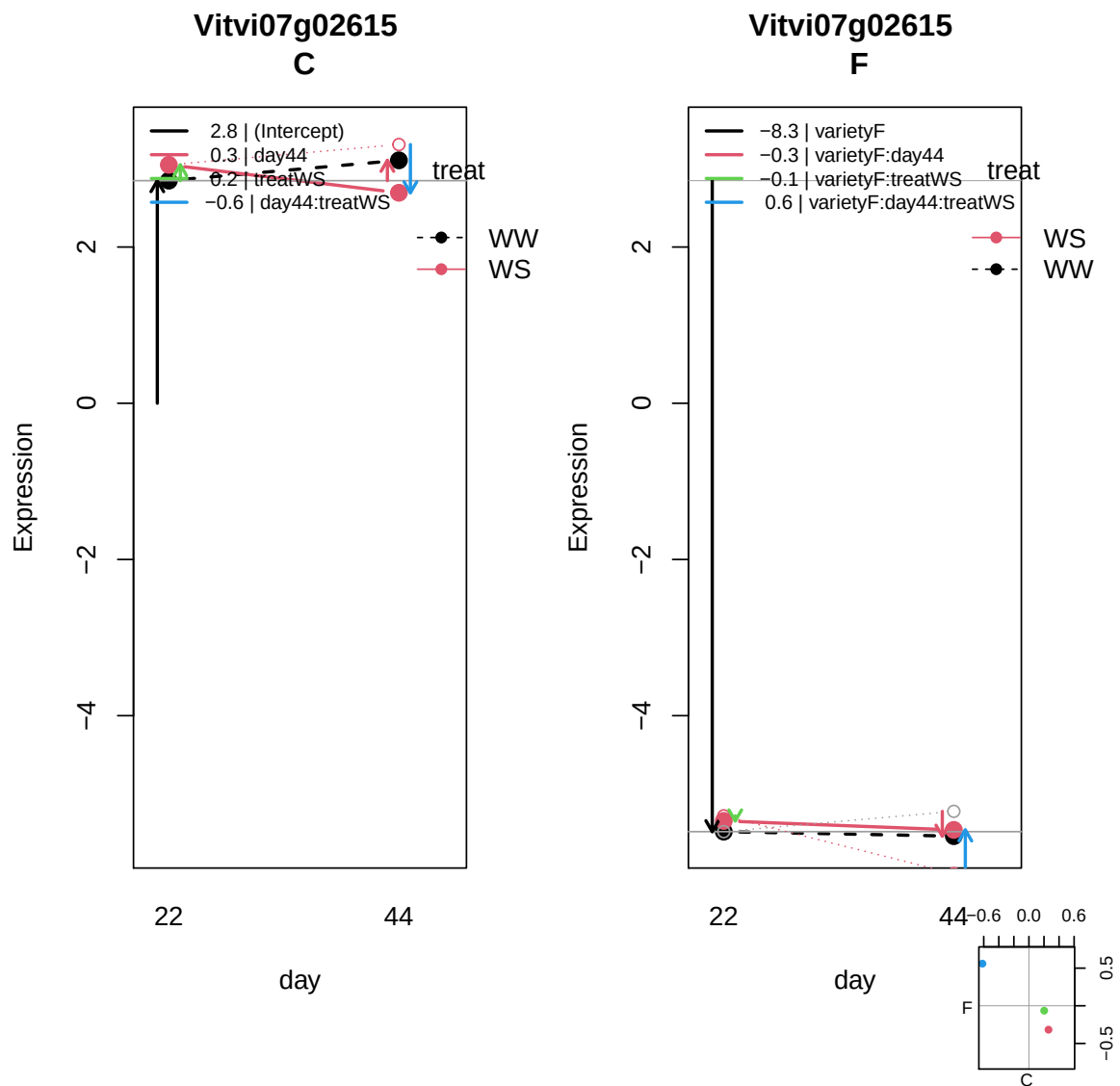


```

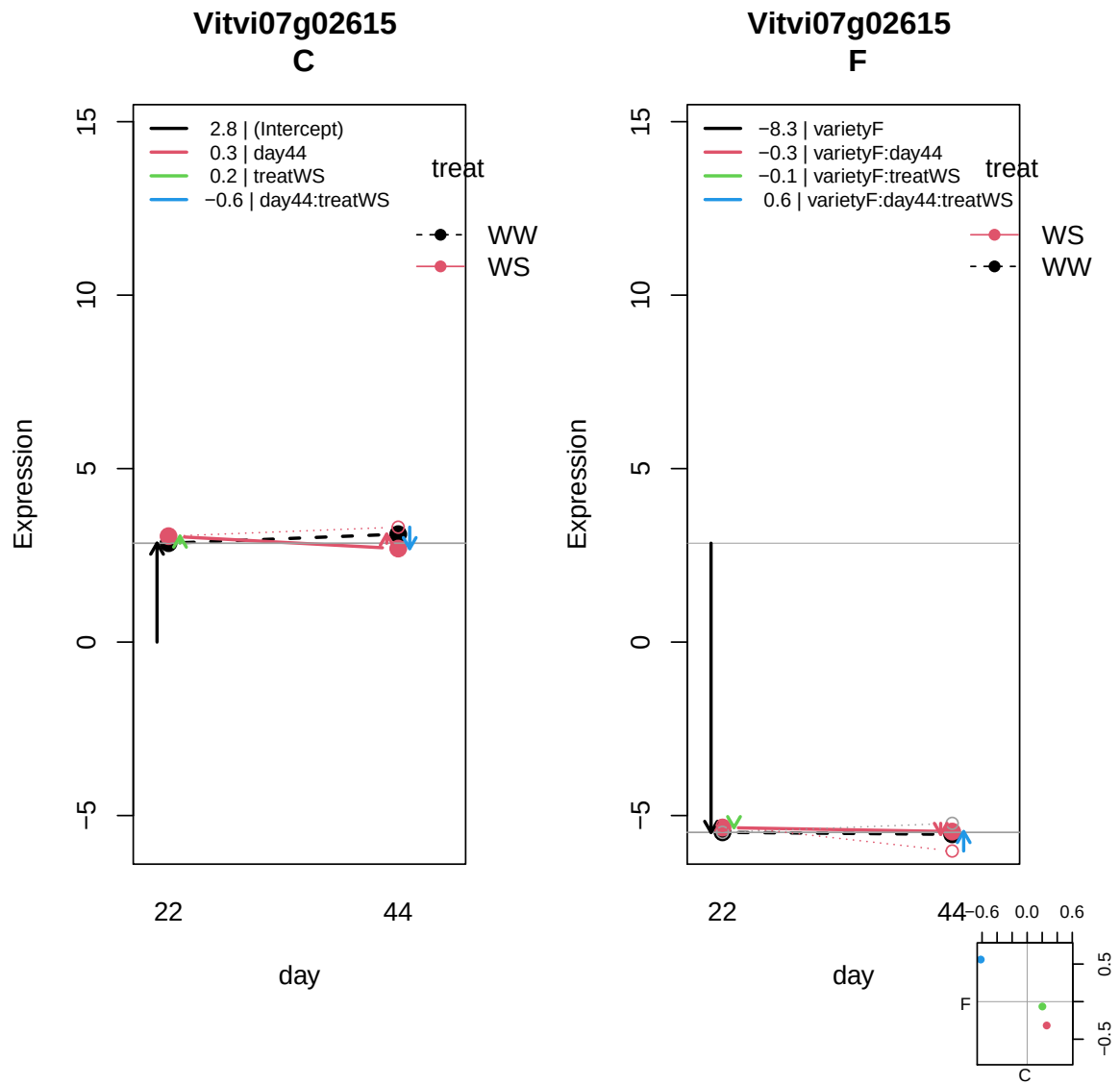
> fit1[varname,]$coefficients
              (Intercept) varietyF day44 treatWS
Vitvi07g02615           2.85   -8.335  0.26  0.2025
              varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi07g02615          -0.3175           -0.065          -0.6175
              varietyF:day44:treatWS
Vitvi07g02615                   0.56

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

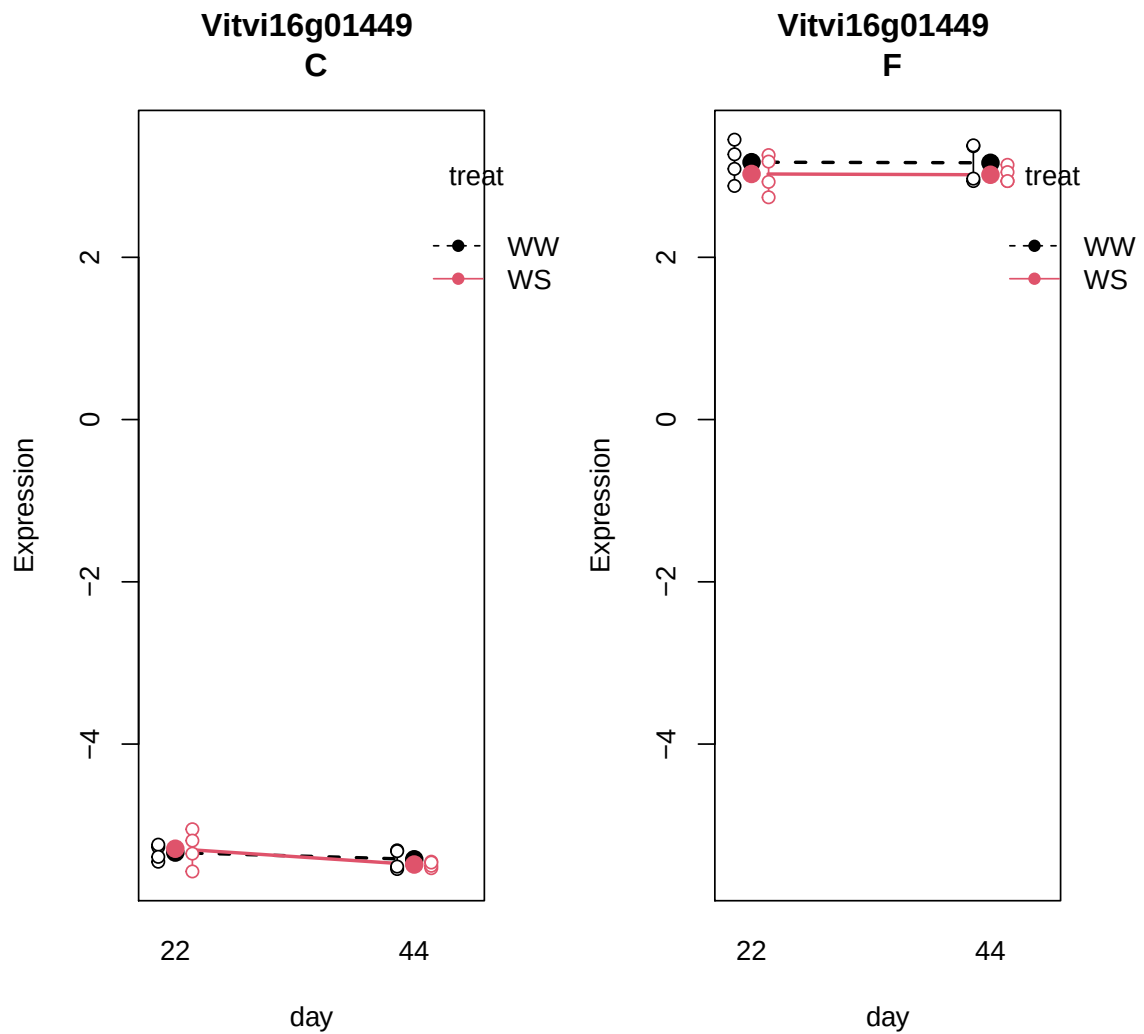
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

8.1.7 Vitvi16g01449

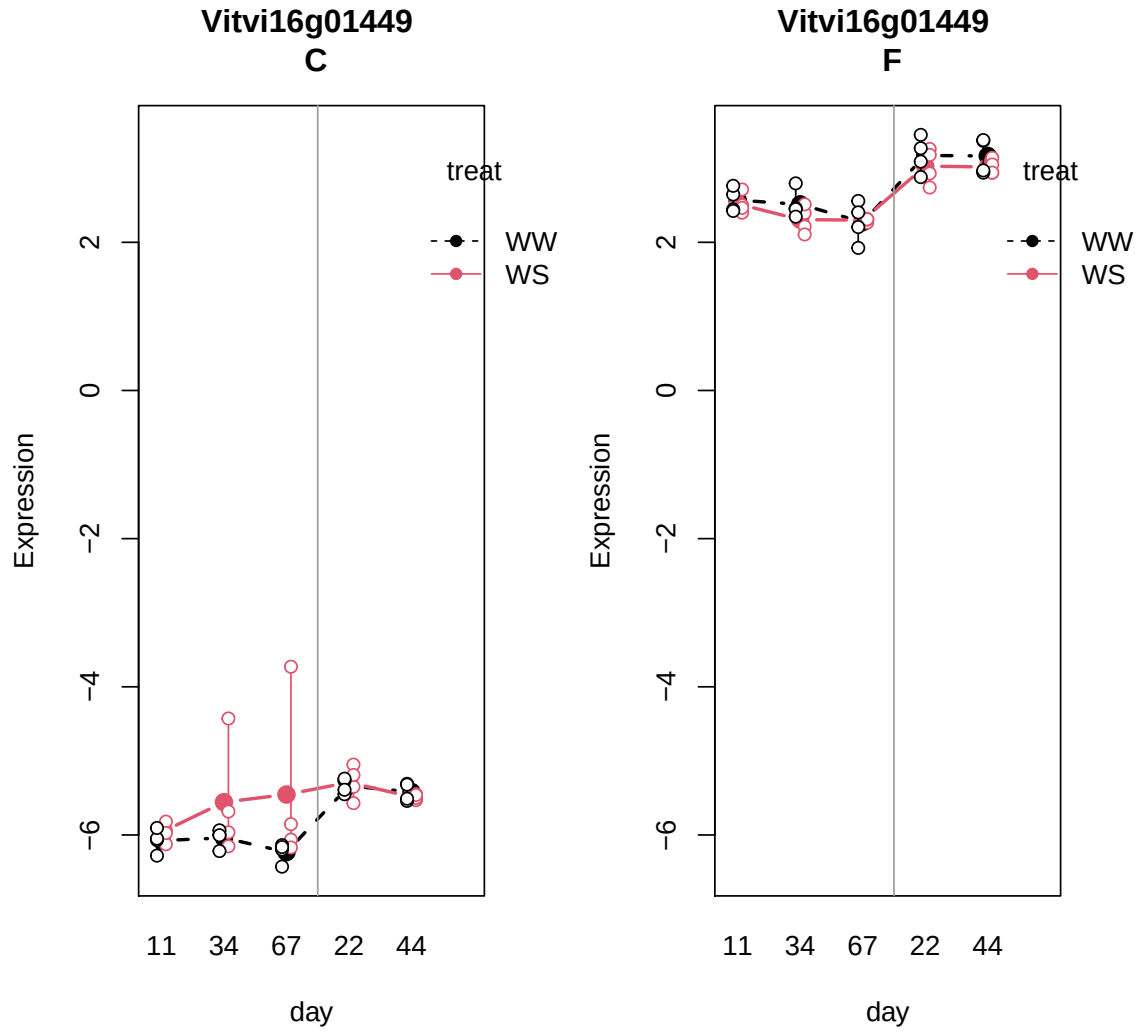
Coefficient varietyF for Vitvi16g01449.

```
> tt[varname,]
              logFC AveExpr      t      P.Value
Vitvi16g01449  8.51 -1.14375 65.57837 6.257189e-31
              adj.P.Val      B
Vitvi16g01449 1.362458e-27 59.18895

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

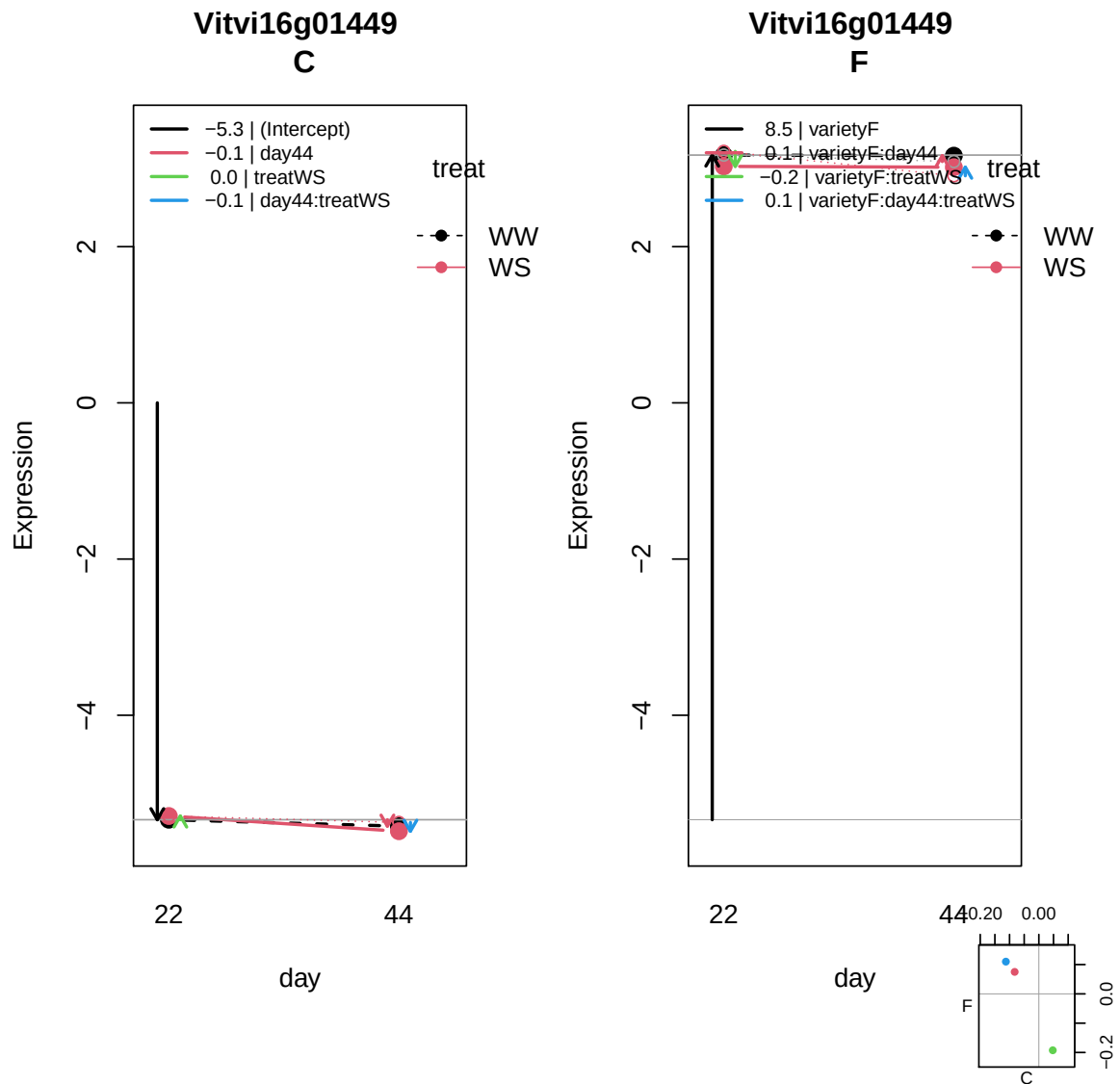


```

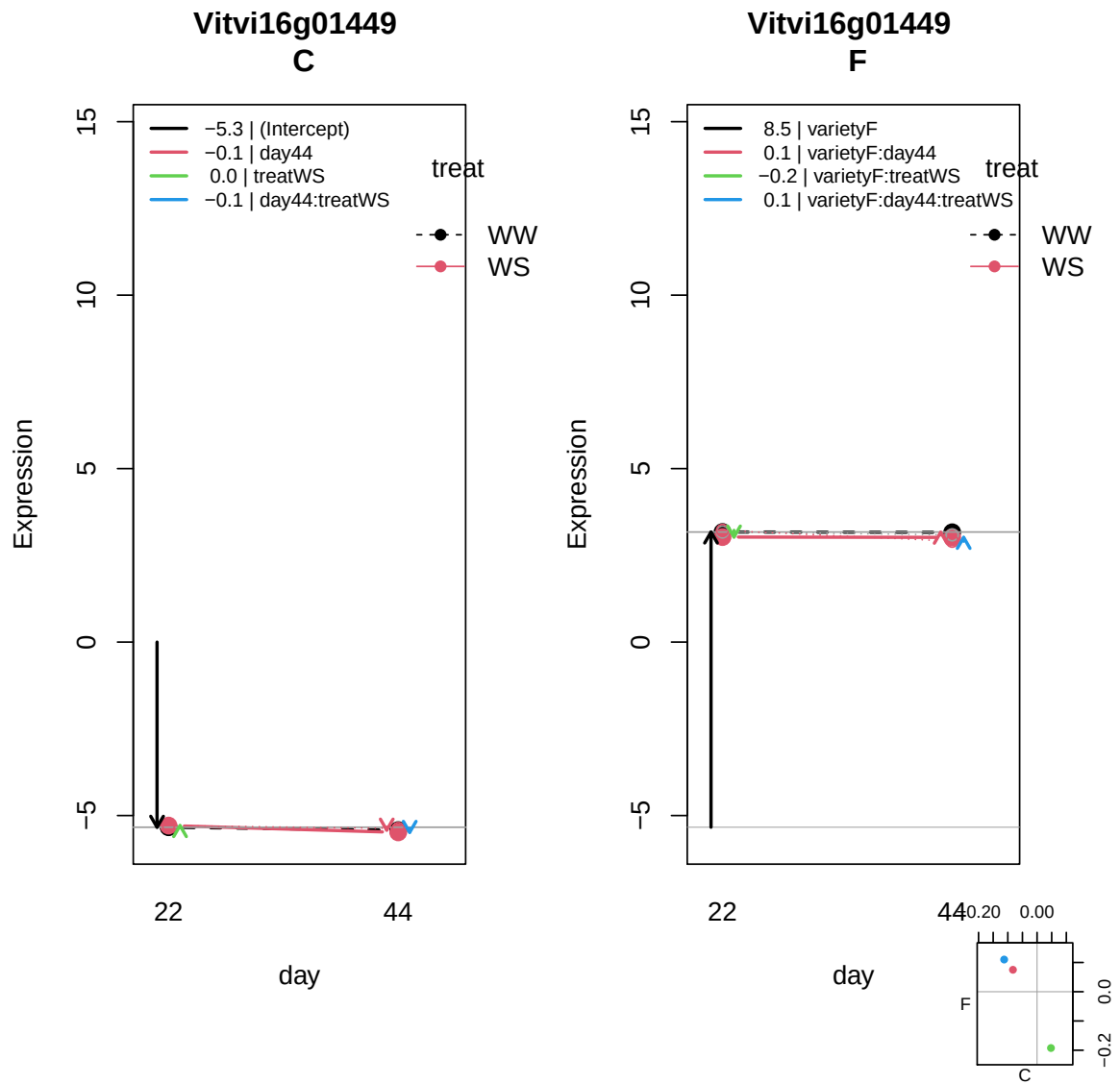
> fit1[varname,]$coefficients
              (Intercept)  varietyF    day44  treatWS
Vitvi16g01449      -5.3375      8.51 -0.0825  0.0475
              varietyF:day44  varietyF:treatWS  day44:treatWS
Vitvi16g01449              0.075              -0.1925              -0.1125
              varietyF:day44:treatWS
Vitvi16g01449              0.11

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```




```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

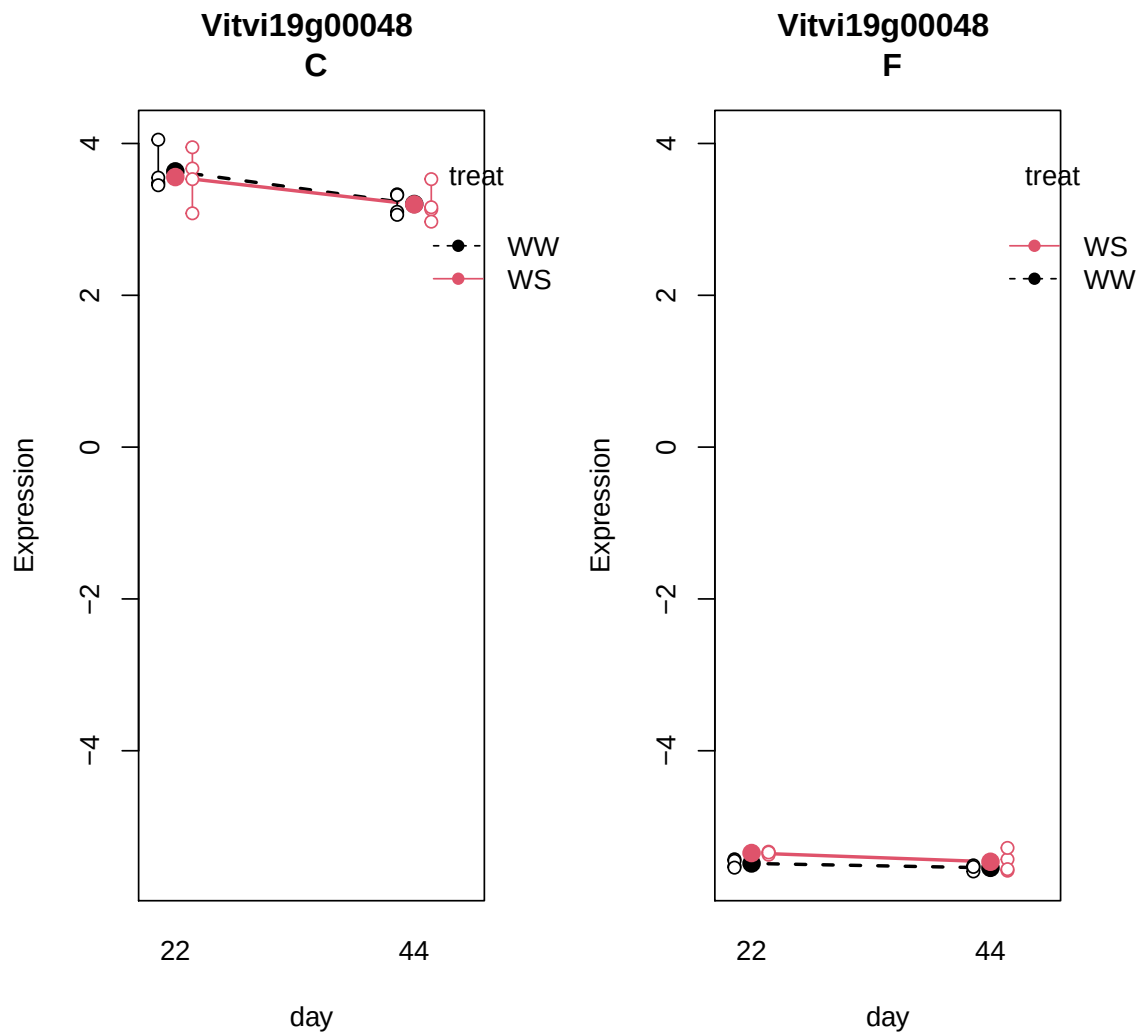
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

8.1.8 Vitvi19g00048

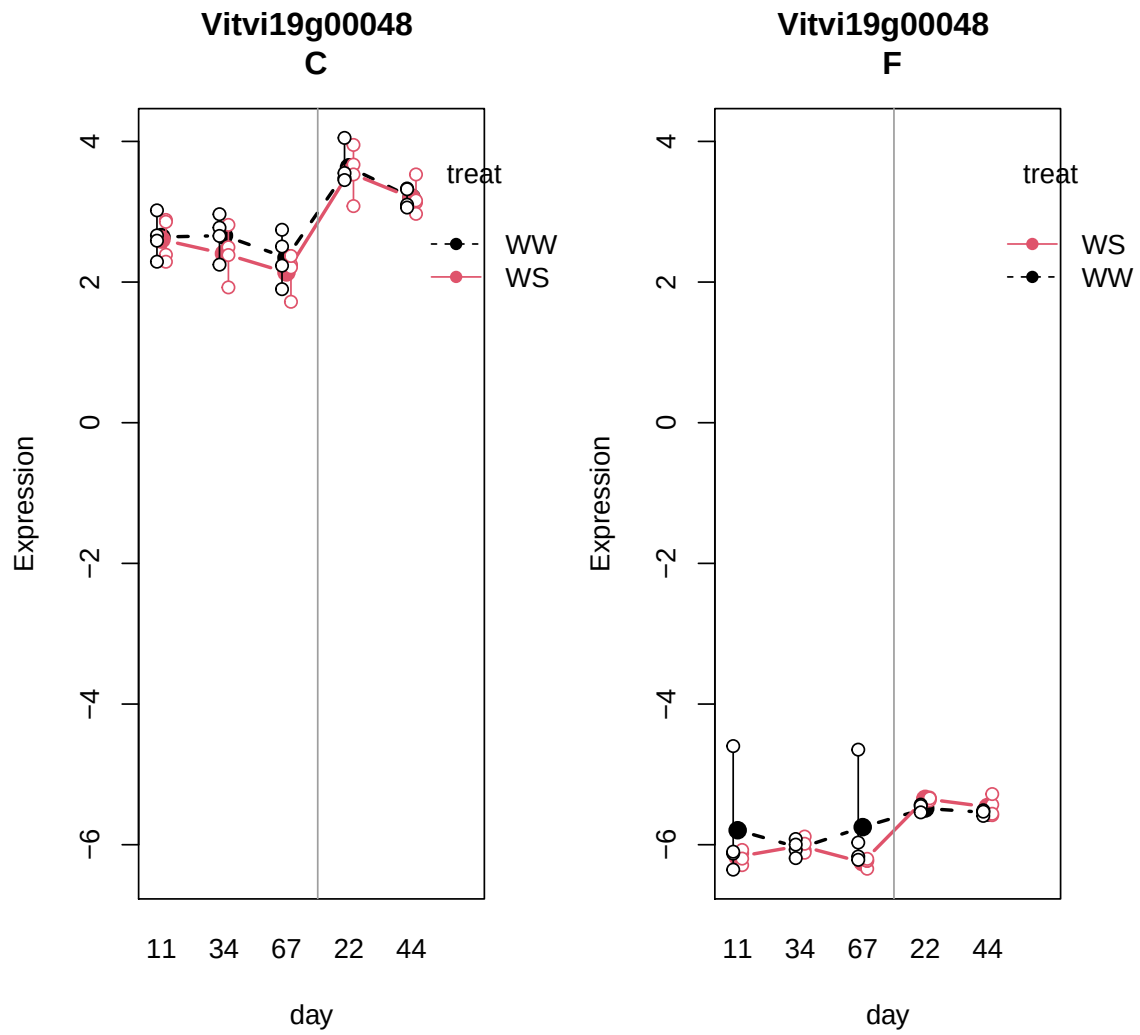
Coefficient varietyF for Vitvi19g00048.

```
> tt[varname,]
      logFC  AveExpr      t    P.Value
Vitvi19g00048 -9.1175 -1.030938 -64.96901 8.007347e-31
      adj.P.Val      B
Vitvi19g00048 1.5256e-27 58.98641

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

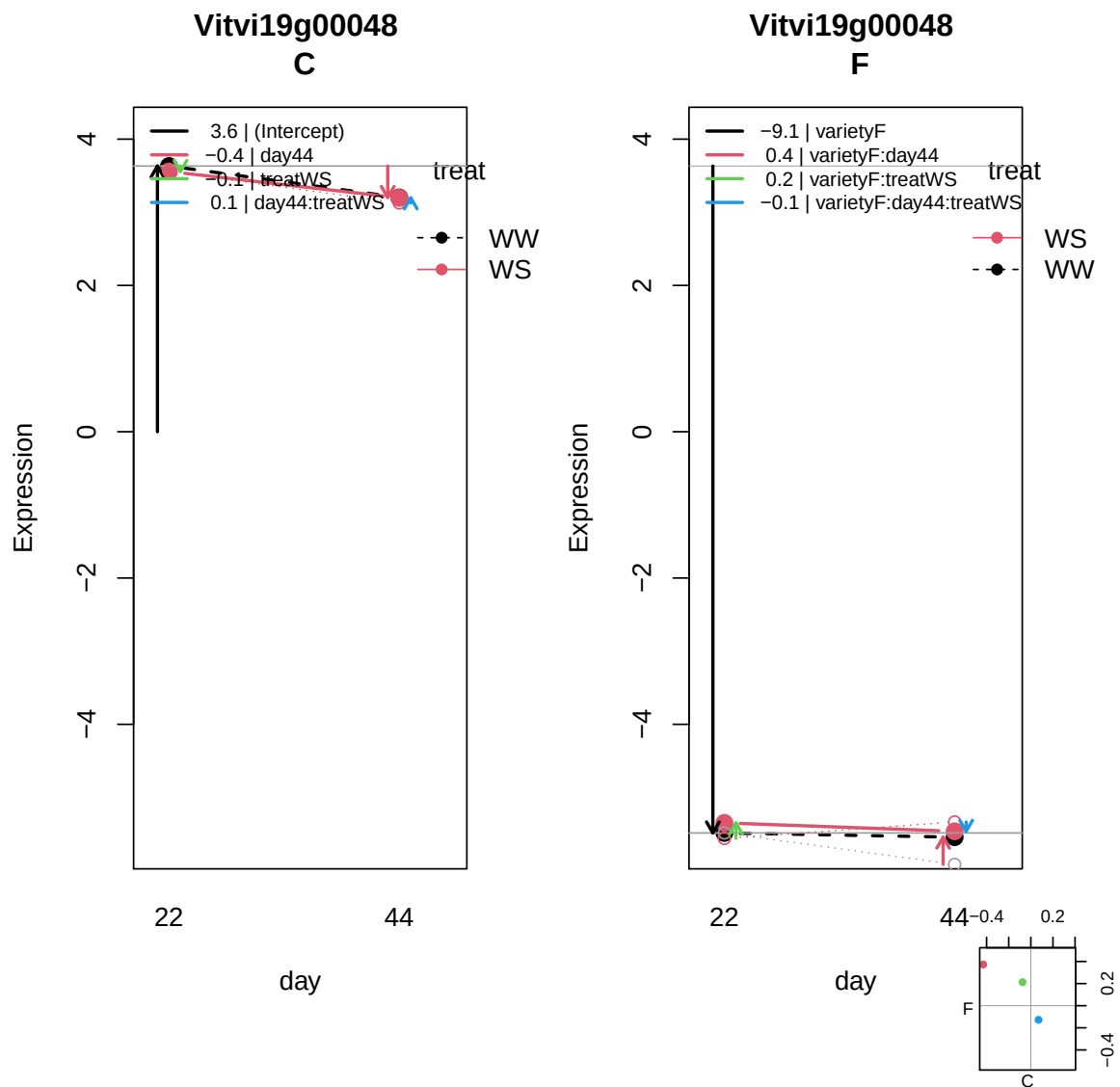


```

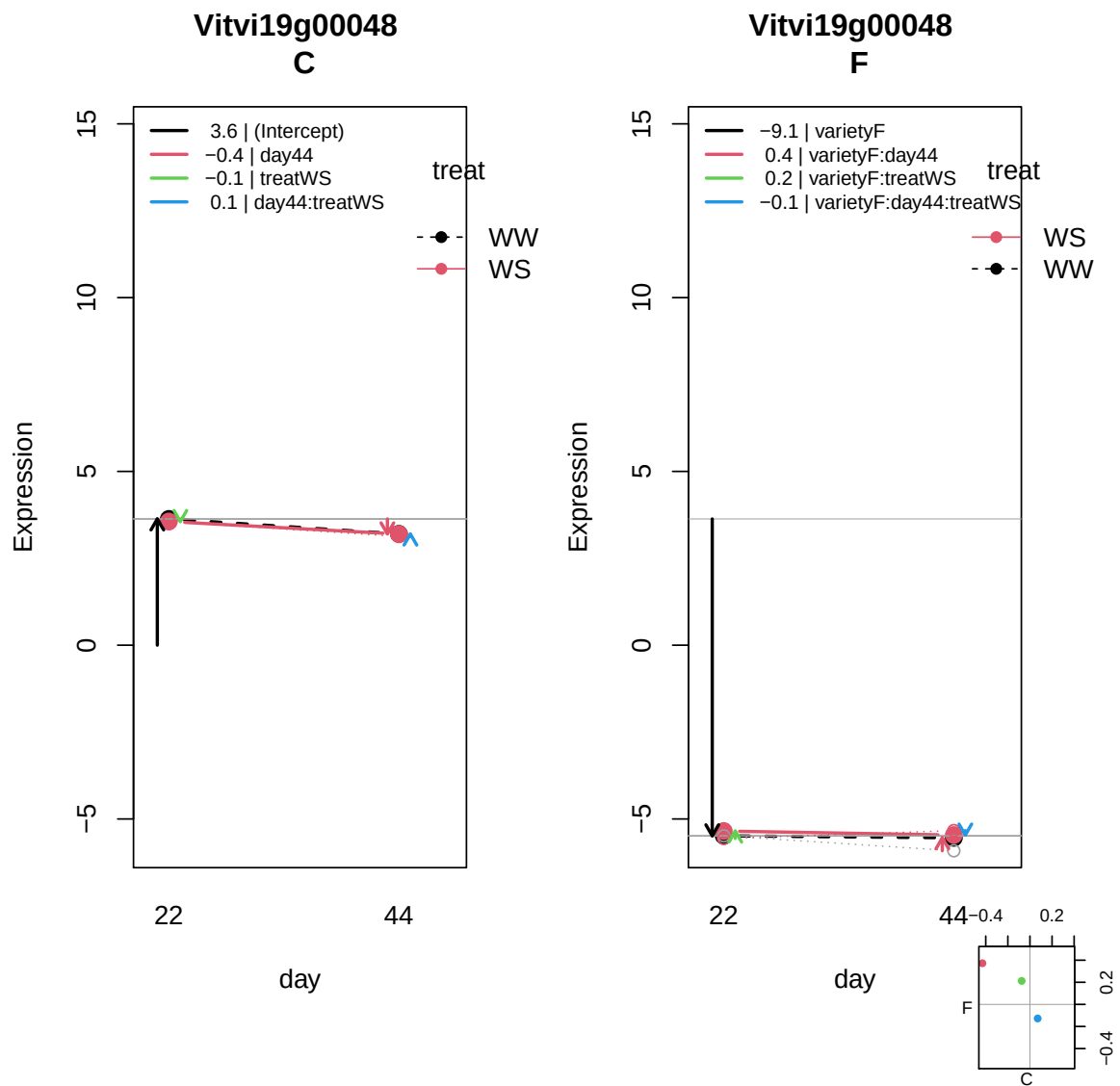
> fit1[varname,]$coefficients
               (Intercept) varietyF day44 treatWS
Vitvi19g00048      3.6325  -9.1175 -0.43  -0.075
               varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi19g00048      0.3725      0.2125      0.07
               varietyF:day44:treatWS
Vitvi19g00048      -0.1275

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

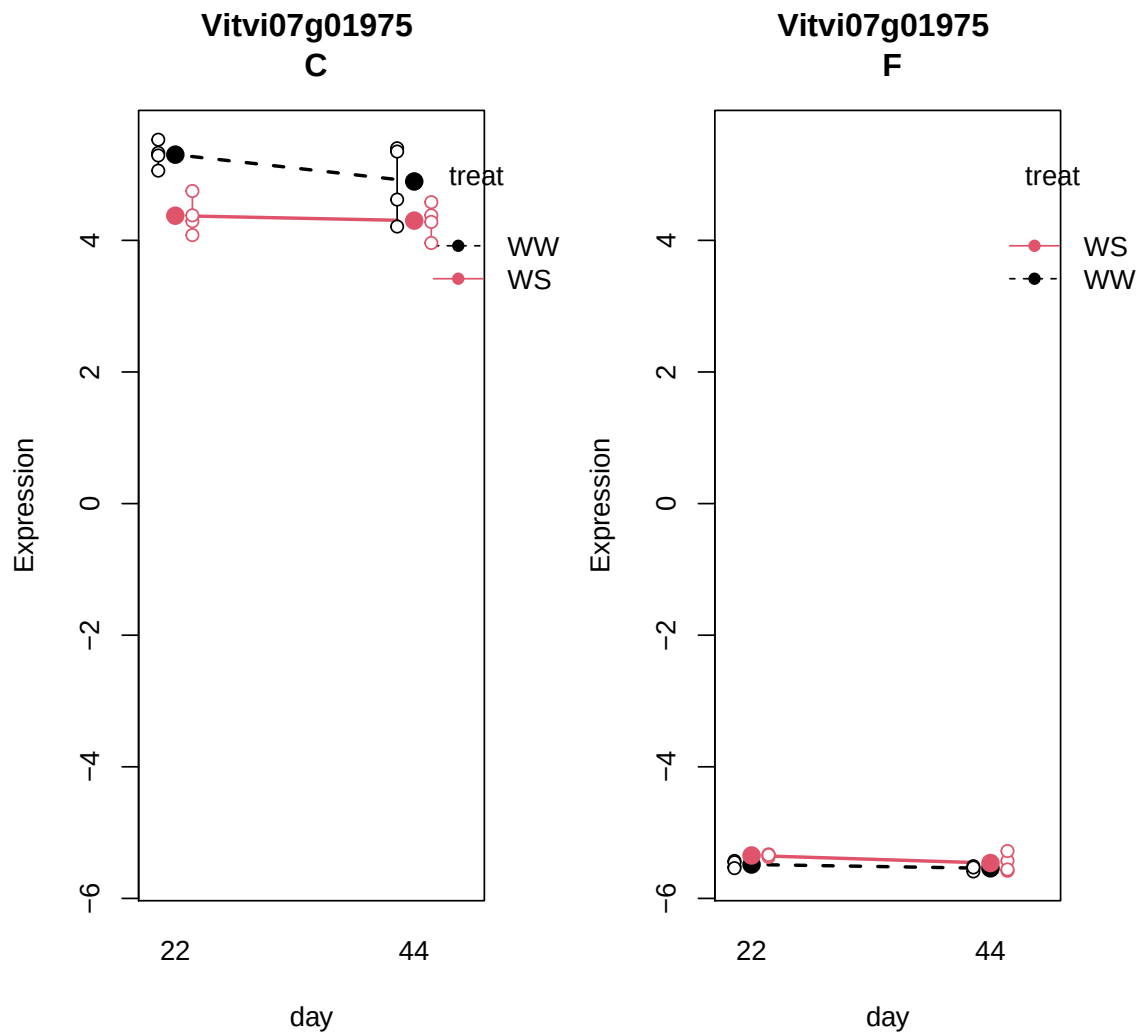
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

8.1.9 Vitvi07g01975

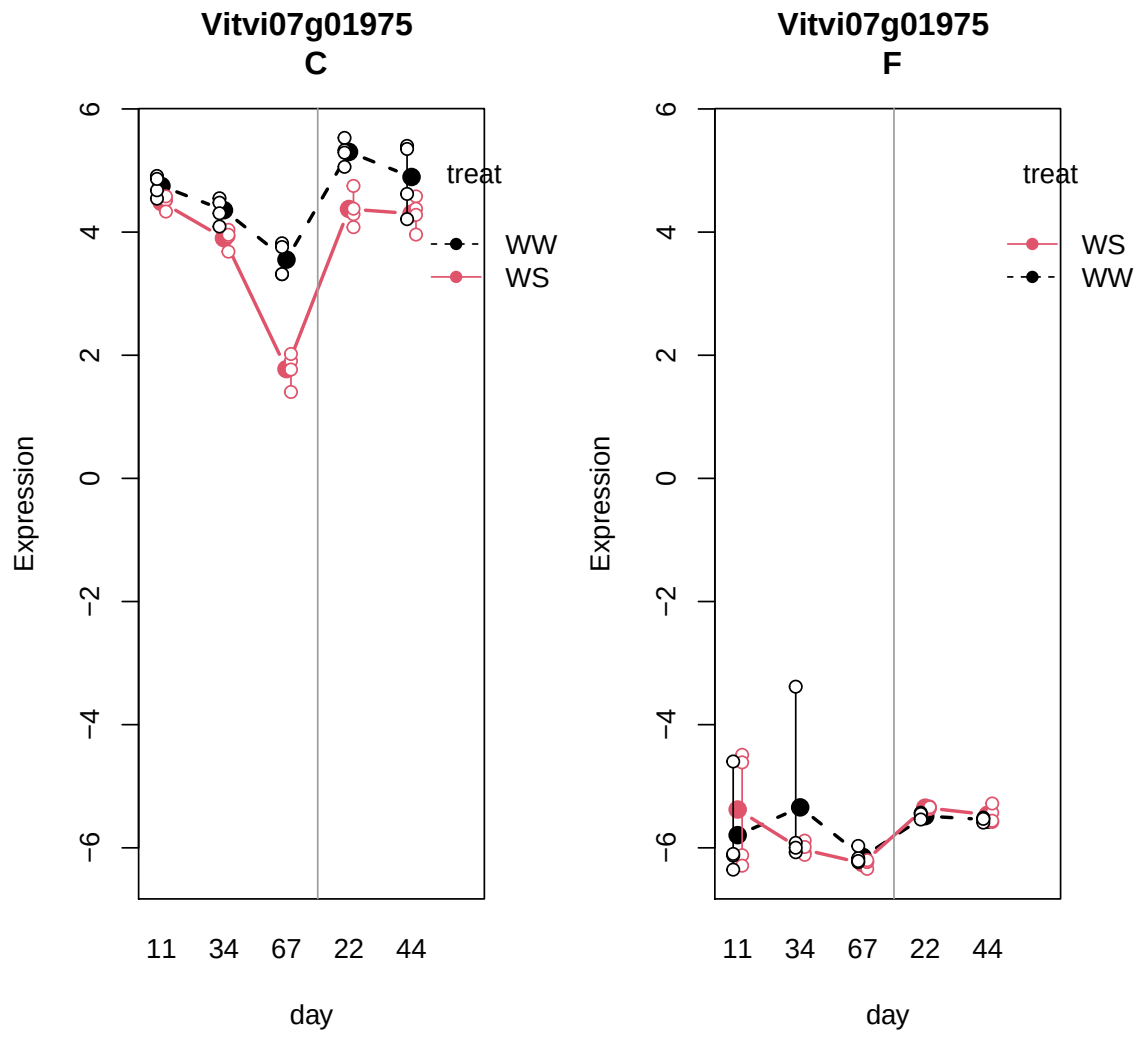
Coefficient varietyF for Vitvi07g01975.

```
> tt[varname,]
              logFC  AveExpr      t      P.Value
Vitvi07g01975 -10.7875 -0.370625 -59.64721 7.646238e-30
              adj.P.Val      B
Vitvi07g01975 1.294933e-26 57.09833

> plot.interactions(varname, phdata=pd, data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

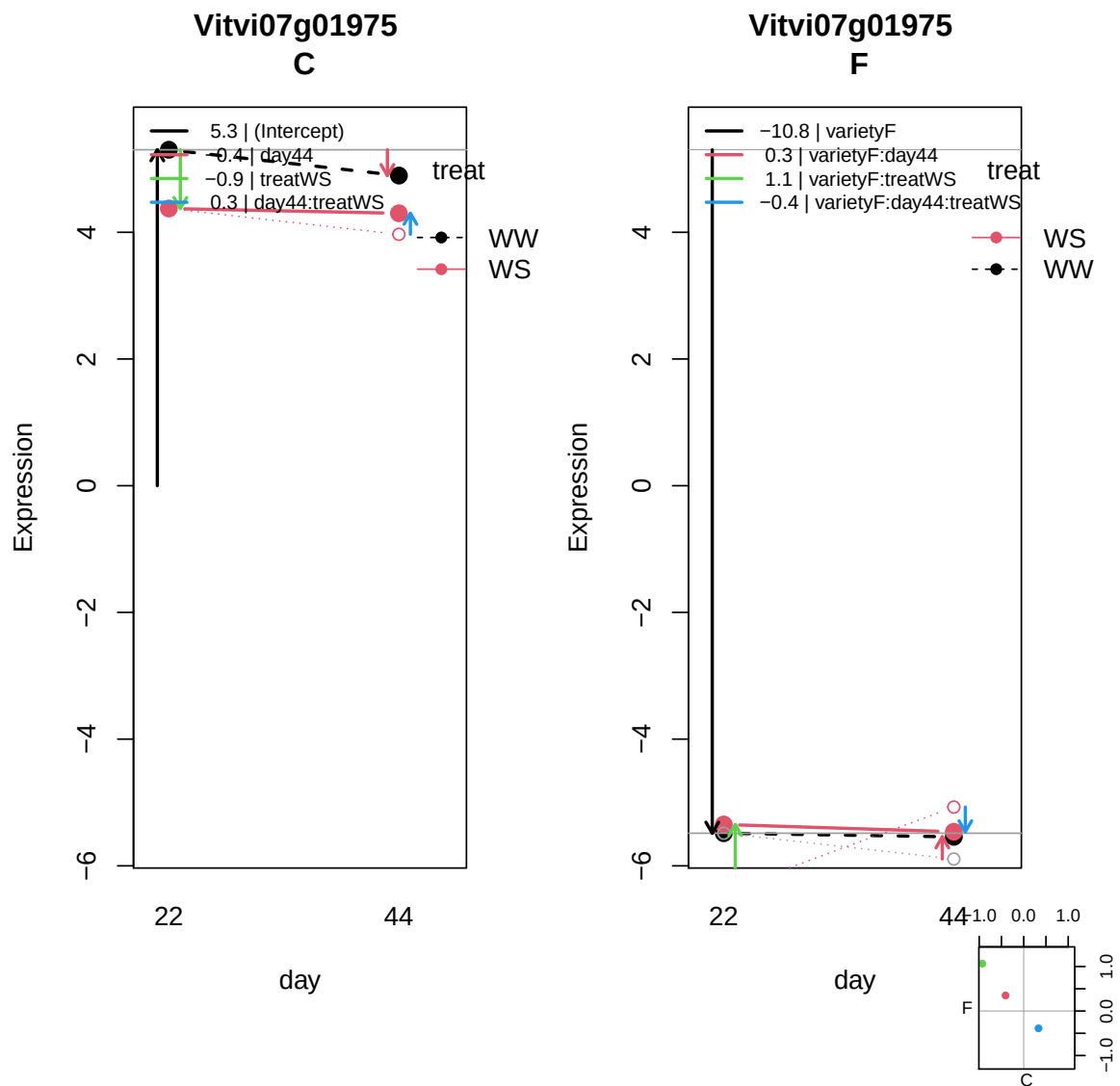


```

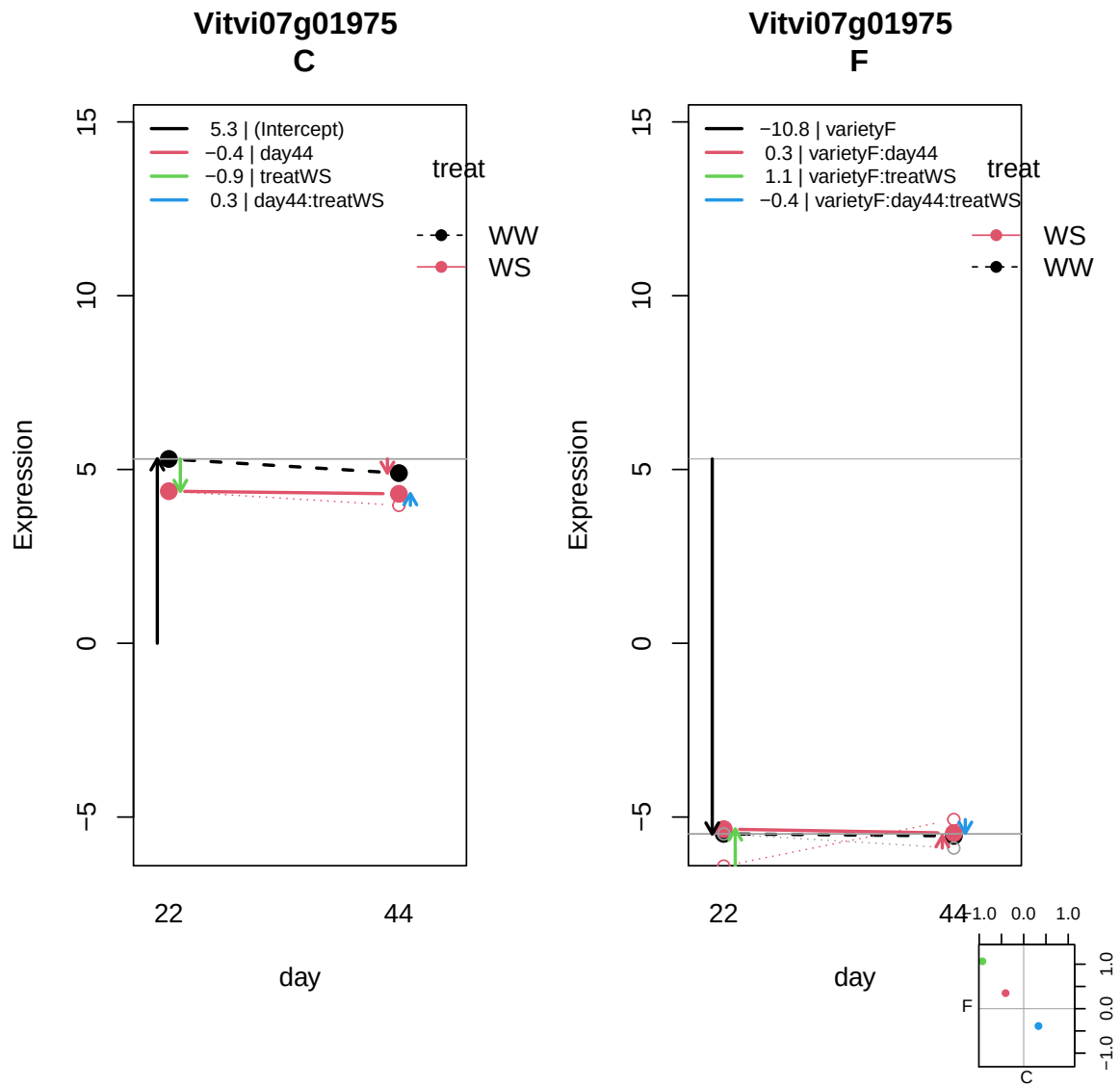
> fit1[varname,]$coefficients
              (Intercept)  varietyF    day44  treatWS
Vitvi07g01975      5.3025 -10.7875 -0.4075 -0.9275
              varietyF:day44  varietyF:treatWS  day44:treatWS
Vitvi07g01975              0.35              1.065              0.3325
              varietyF:day44:treatWS
Vitvi07g01975              -0.39

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

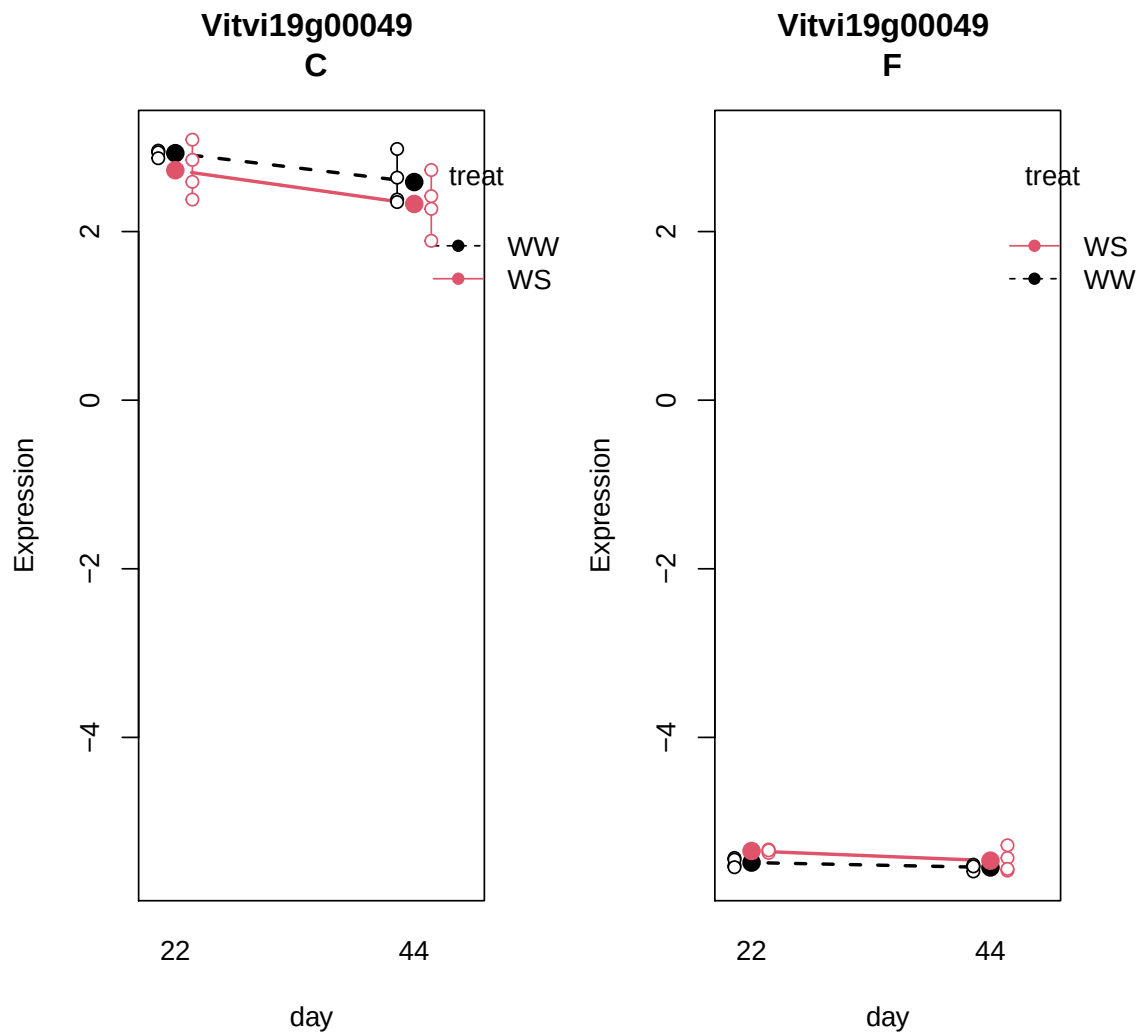
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

8.1.10 Vitvi19g00049

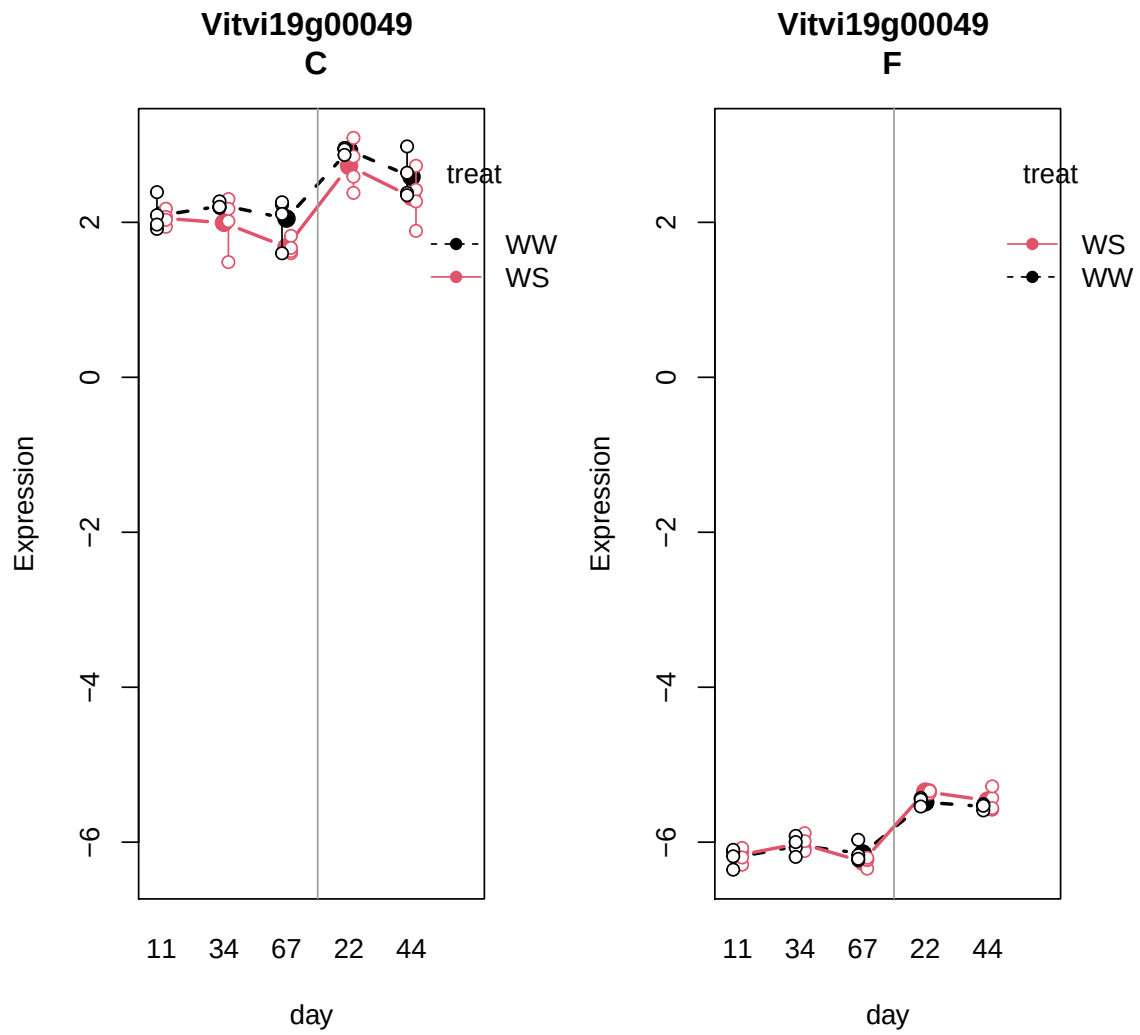
Coefficient varietyF for Vitvi19g00049.

```
> tt[varname,]
              logFC  AveExpr          t      P.Value
Vitvi19g00049 -8.415 -1.408125 -58.57184 1.235706e-29
              adj.P.Val          B
Vitvi19g00049 1.883463e-26 56.68889

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

      (Intercept)  varietyF    day44  treatWS
Vitvi19g00049      2.93   -8.415 -0.3425 -0.2025
      varietyF:day44  varietyF:treatWS  day44:treatWS
Vitvi19g00049      0.285              0.34      -0.0575
      varietyF:day44:treatWS
Vitvi19g00049     -1.373831e-15

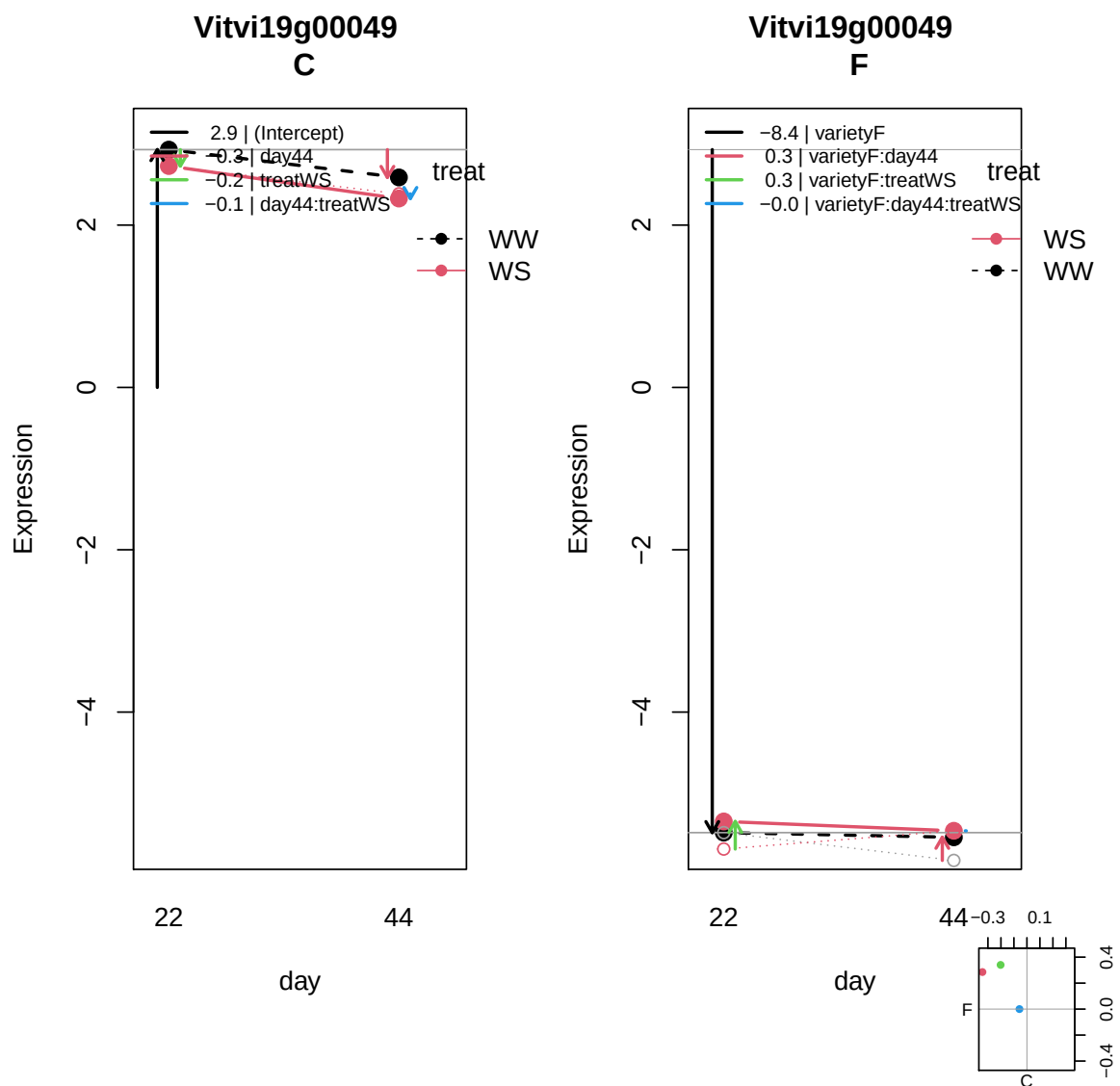
```

```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

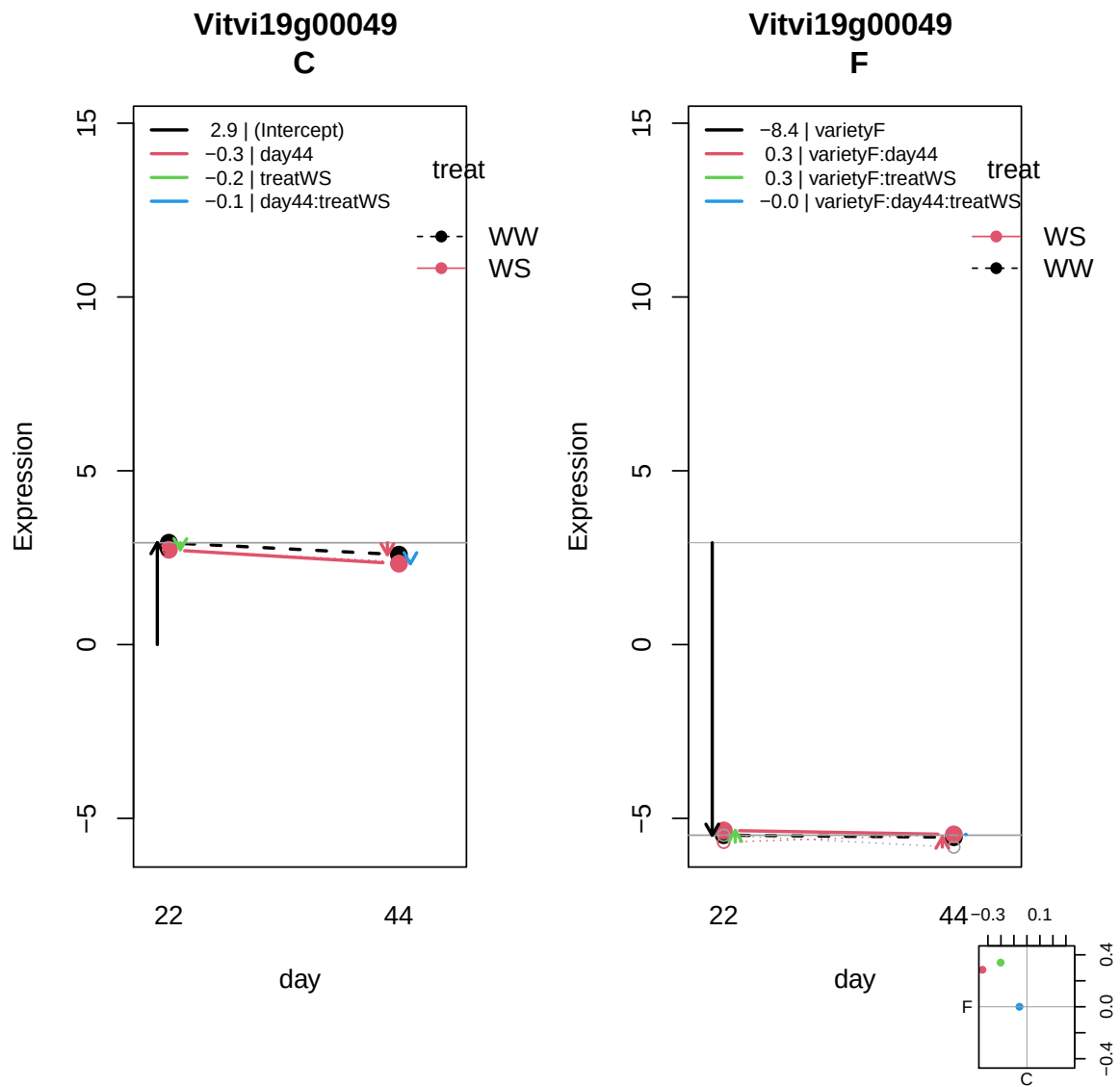
```

Warning in arrows(1:ndays + d, es, 1:ndays + d, esF, col = cl + 1:ndays, : zero



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```

Warning in arrows(1:ndays + d, es, 1:ndays + d, esF, col = cl + 1:ndays, : zero



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

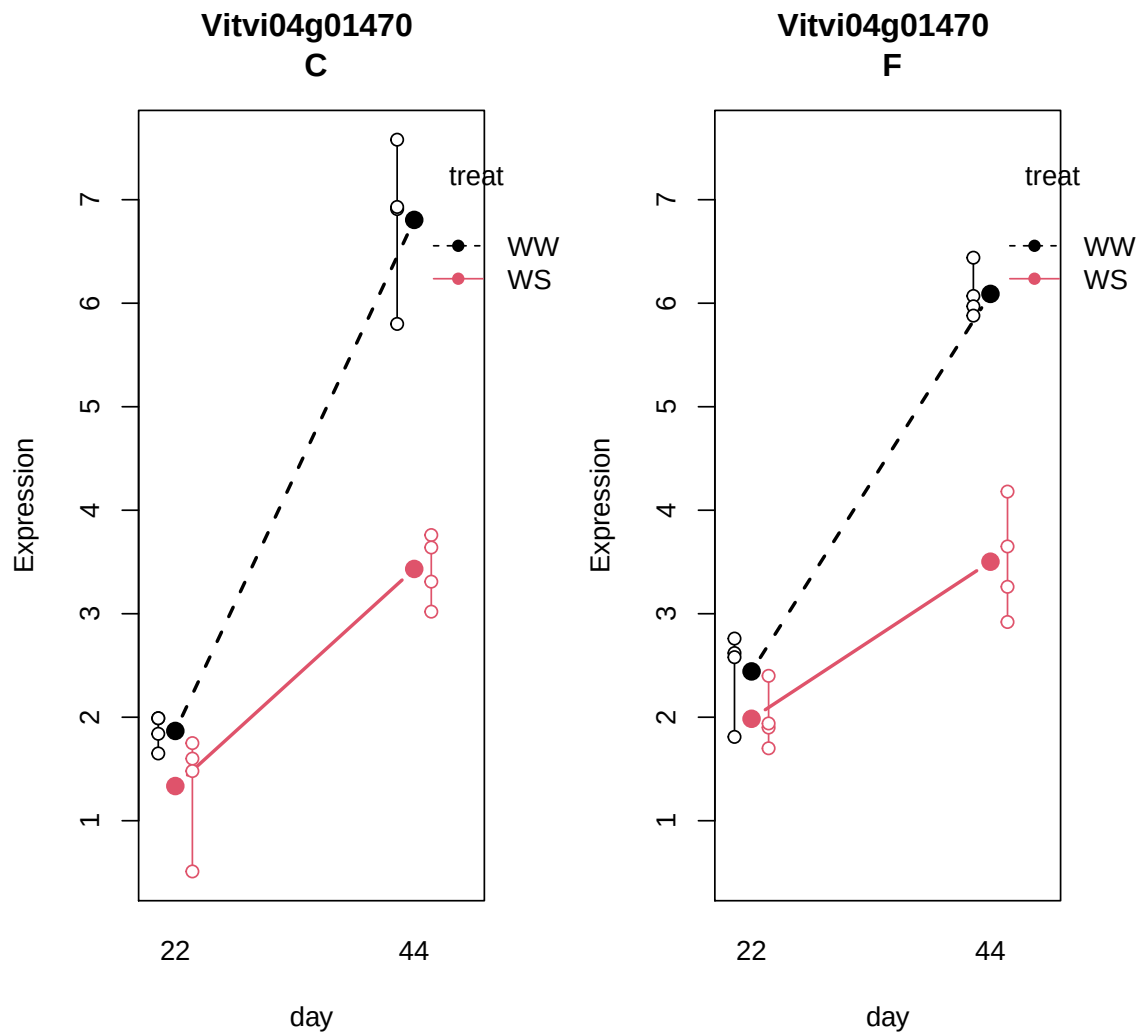
8.2 day44

8.2.1 Vitvi04g01470

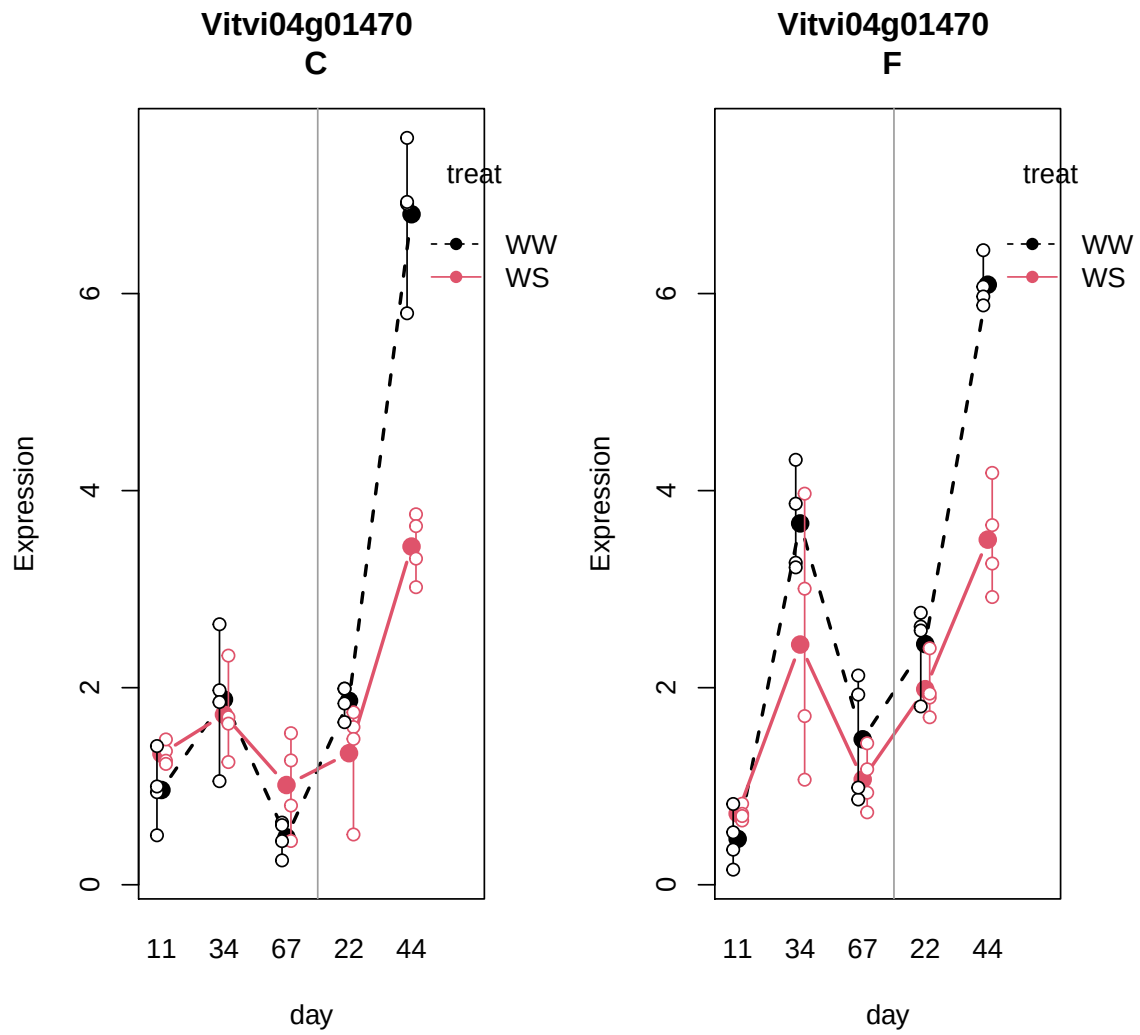
Coefficient day44 for Vitvi04g01470.

```
> tt[varname,]
              logFC AveExpr          t      P.Value
Vitvi04g01470  4.9375   3.4325 16.12589 3.024428e-15
              adj.P.Val          B
Vitvi04g01470 3.575749e-11 23.91531

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

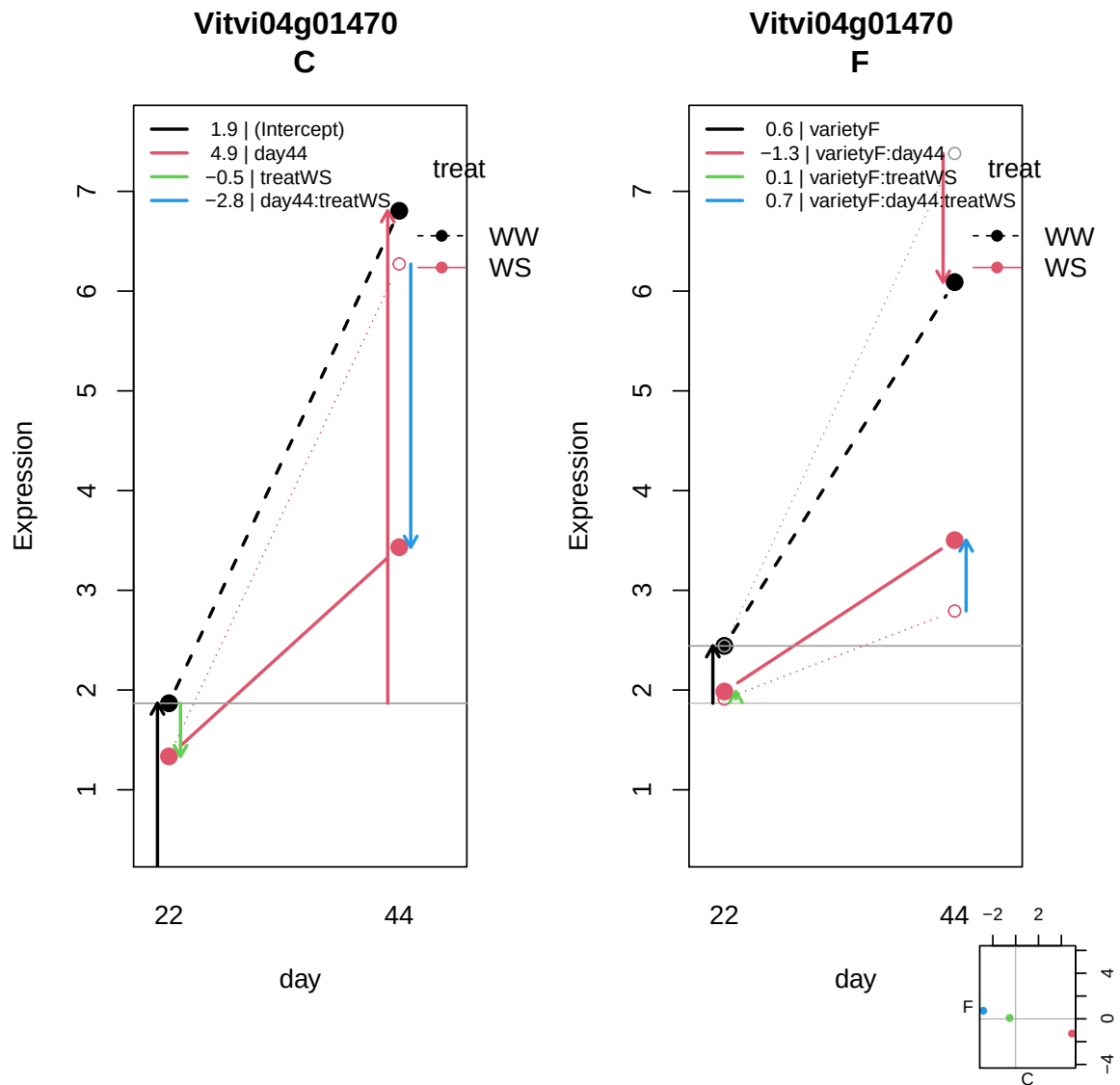


```

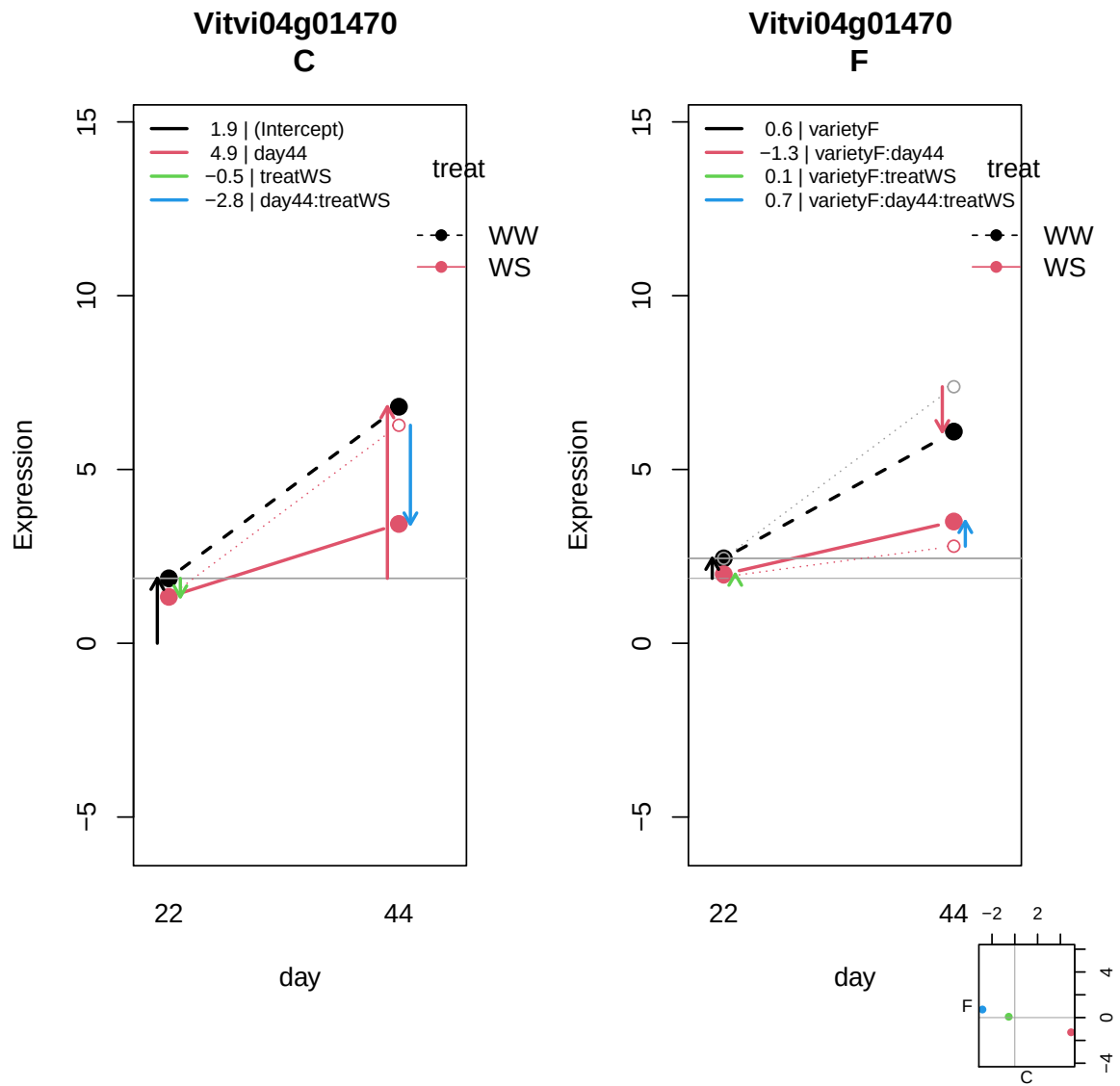
> fit1[varname,]$coefficients
               (Intercept) varietyF  day44 treatWS
Vitvi04g01470      1.8675      0.575 4.9375 -0.5325
               varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi04g01470      -1.29              0.075      -2.84
               varietyF:day44:treatWS
Vitvi04g01470              0.71

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

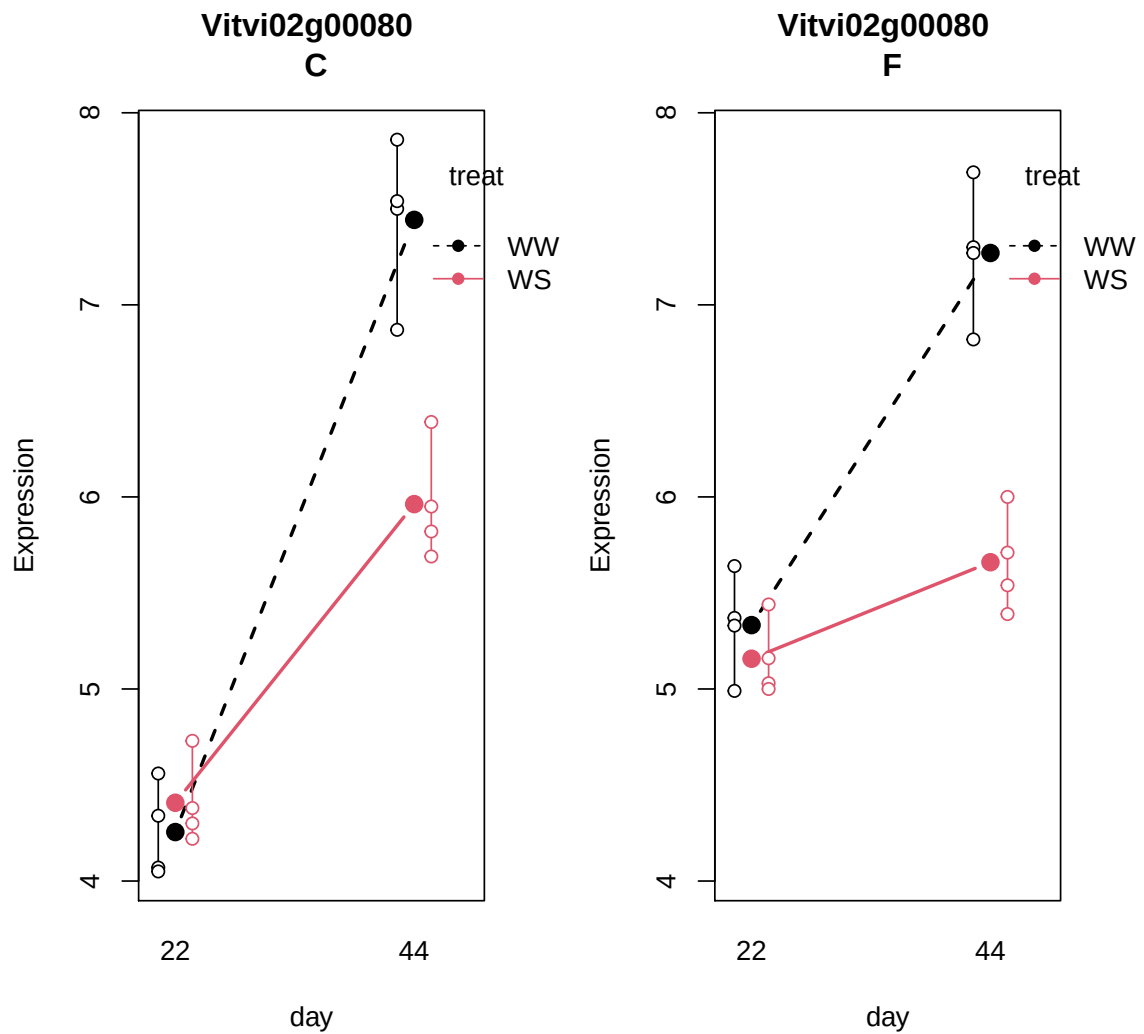
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

8.2.2 Vitvi02g00080

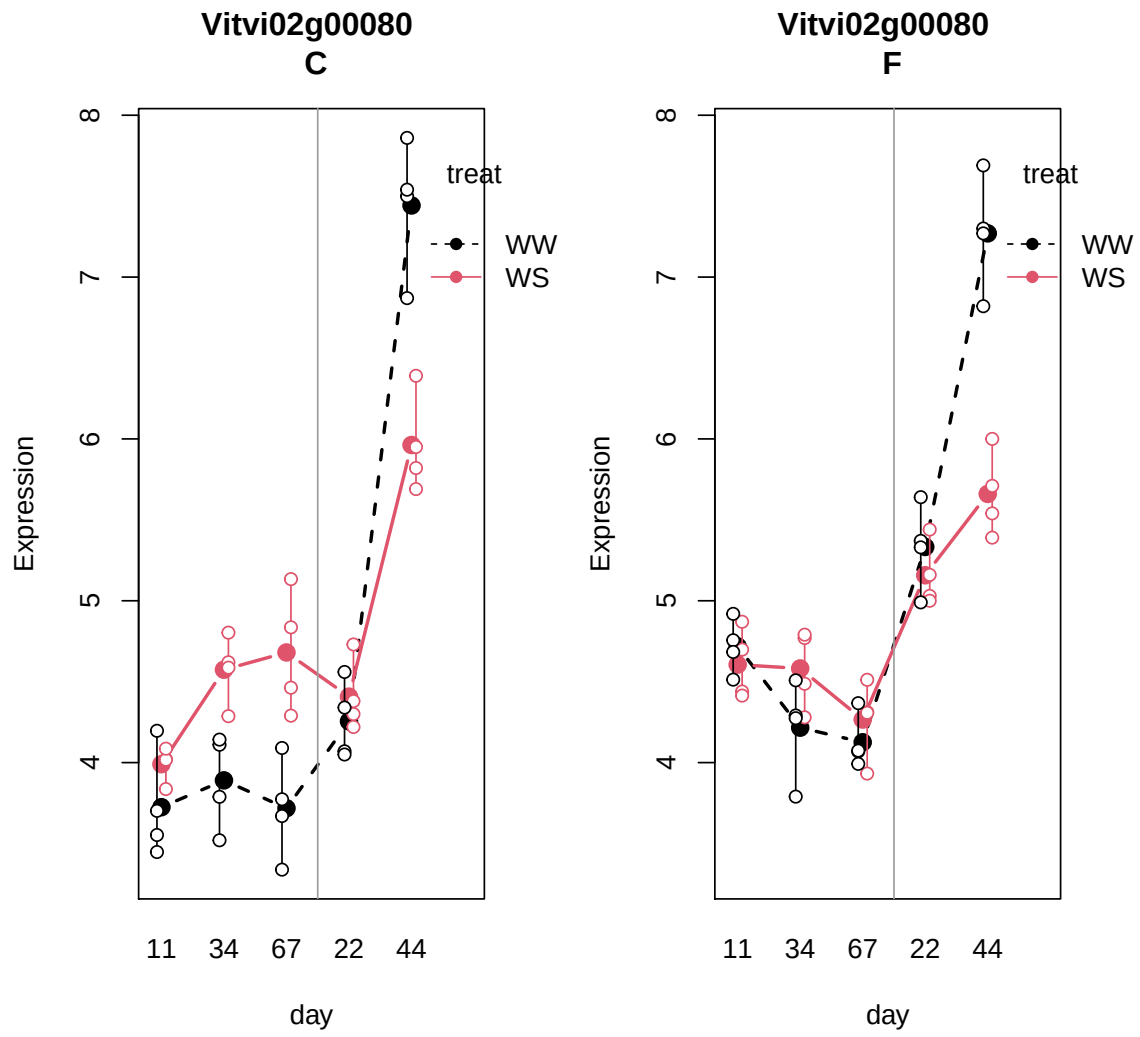
Coefficient day44 for Vitvi02g00080.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi02g00080 3.1875 5.685937 15.83543 4.691968e-15
      adj.P.Val      B
Vitvi02g00080 3.575749e-11 23.53662

> plot.interactions(varname,phdata=pd,data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

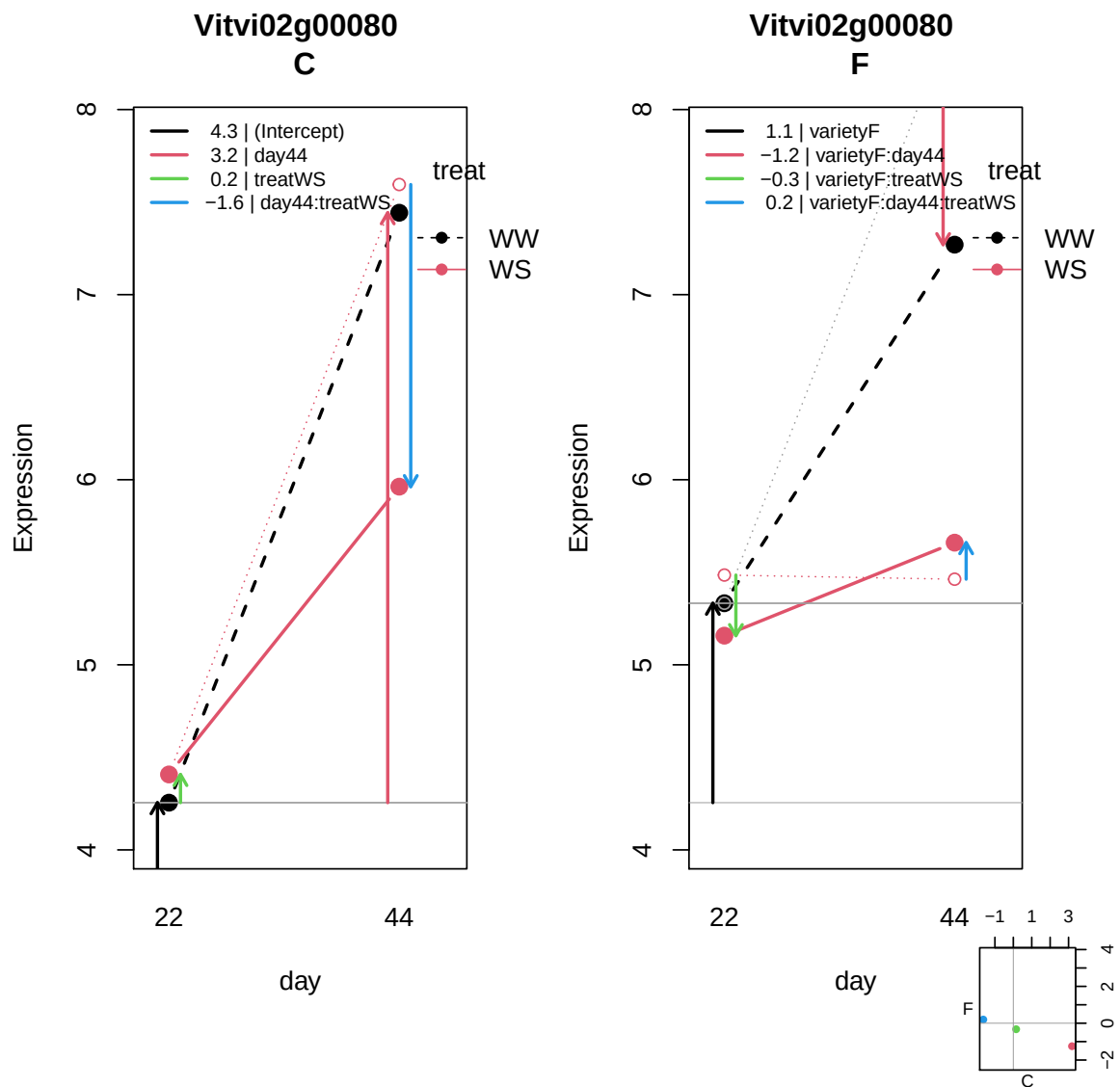


```

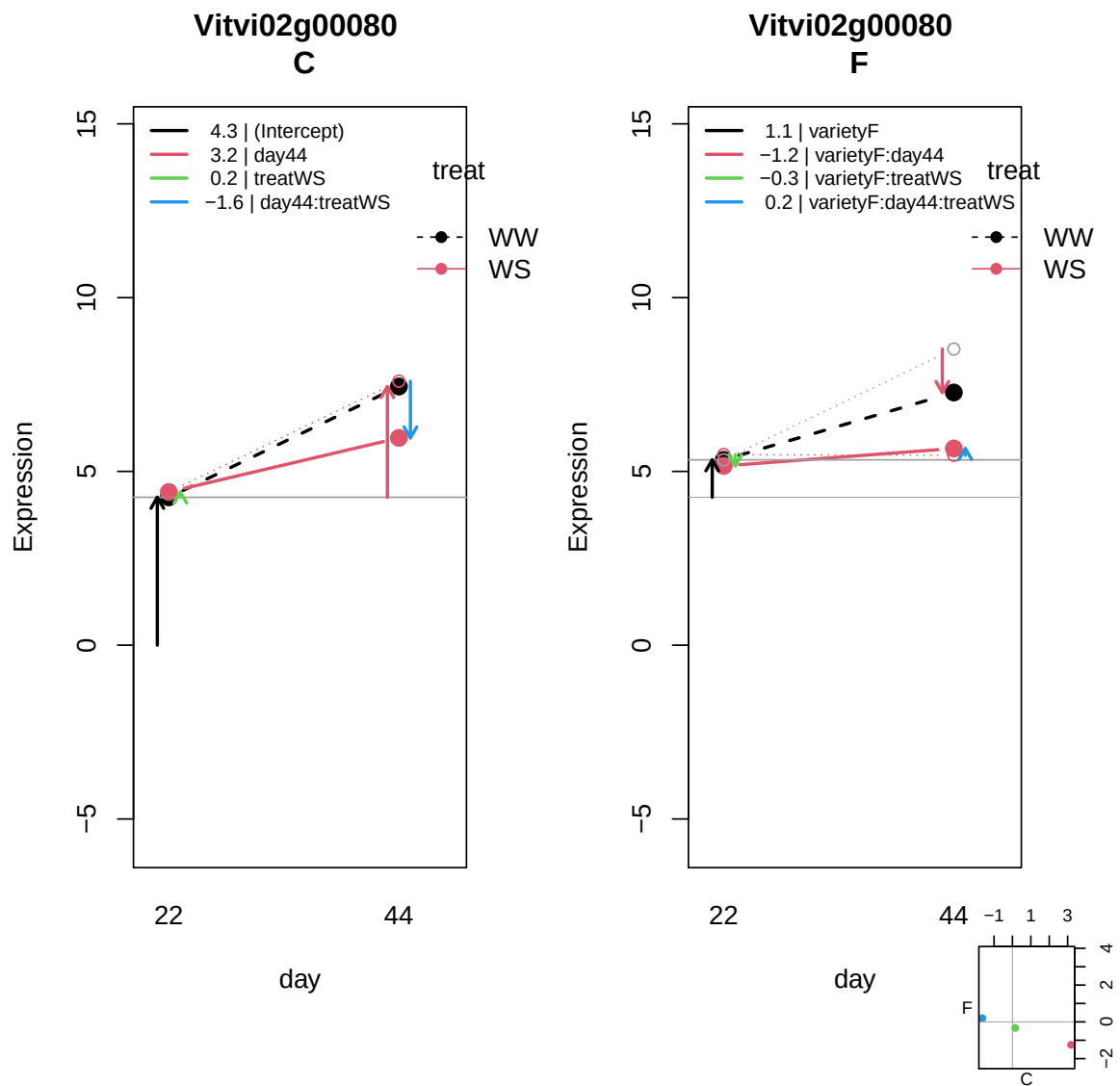
> fit1[varname,]$coefficients
              (Intercept) varietyF  day44 treatWS
Vitvi02g00080      4.255    1.0775 3.1875  0.1525
              varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi02g00080      -1.25         -0.3275      -1.6325
              varietyF:day44:treatWS
Vitvi02g00080              0.1975

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

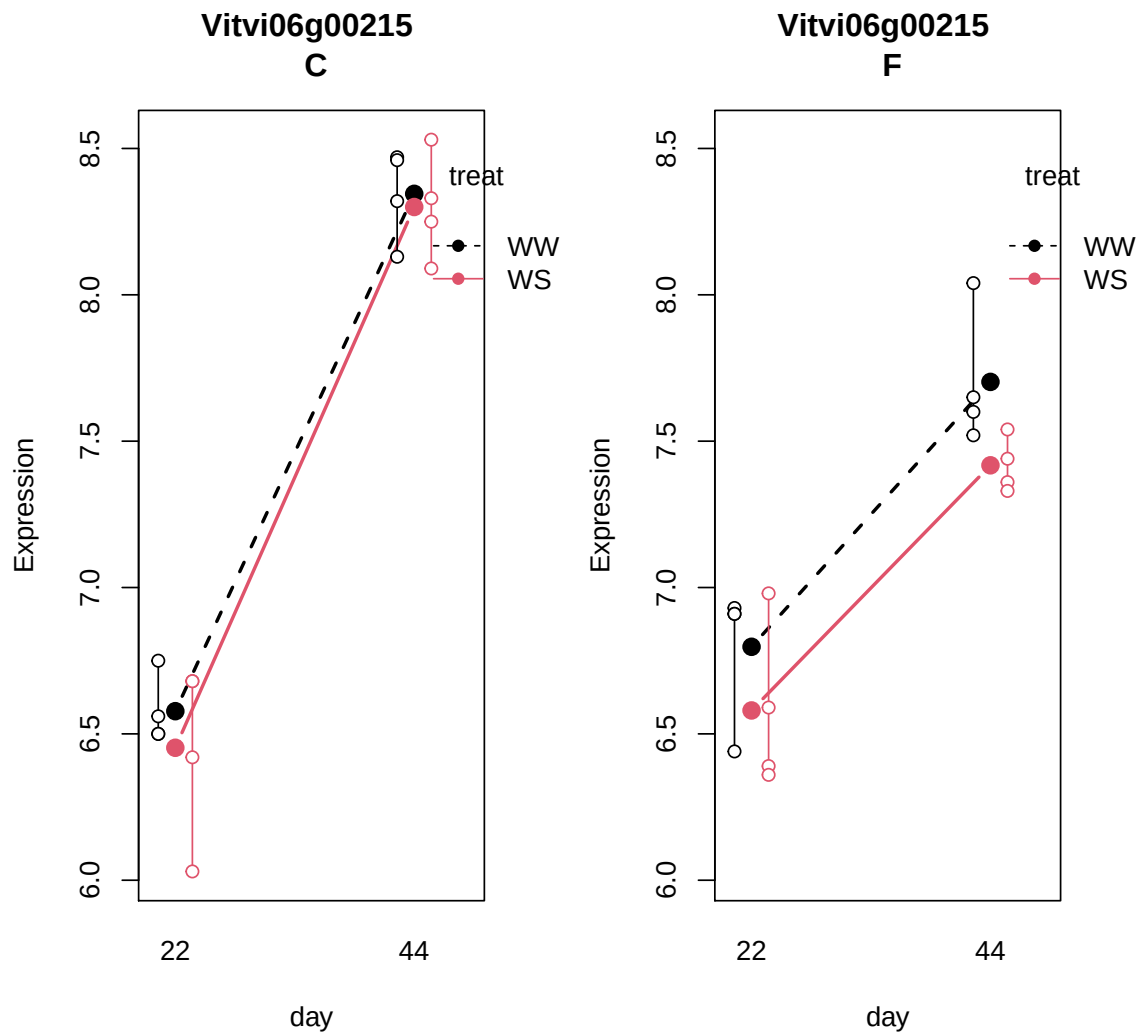
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

8.2.3 Vitvi06g00215

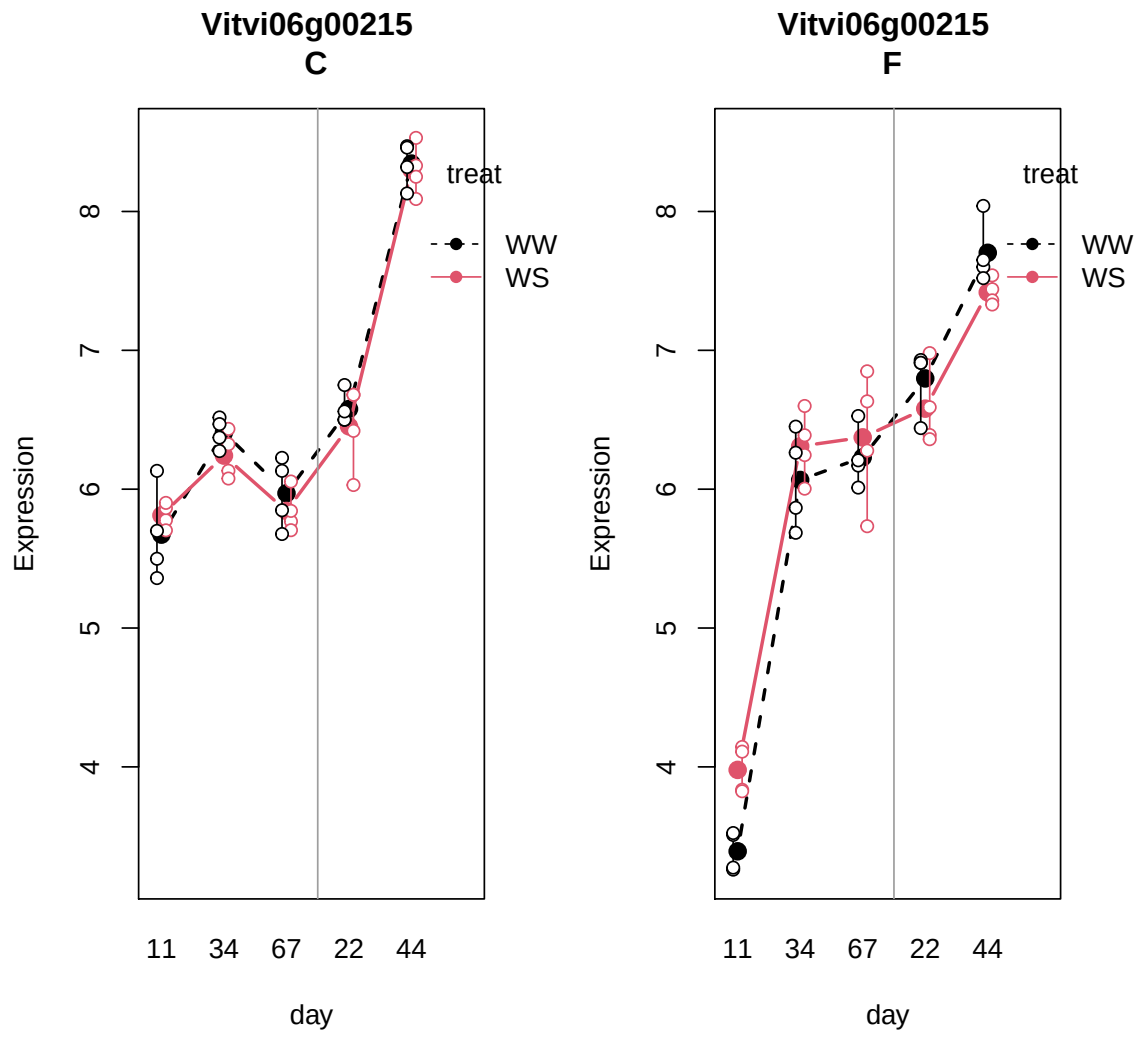
Coefficient day44 for Vitvi06g00215.

```
> tt[varname,]
              logFC  AveExpr      t      P.Value
Vitvi06g00215  1.7675  7.271562 11.67878 5.690699e-12
              adj.P.Val      B
Vitvi06g00215  2.891255e-08 17.16892

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

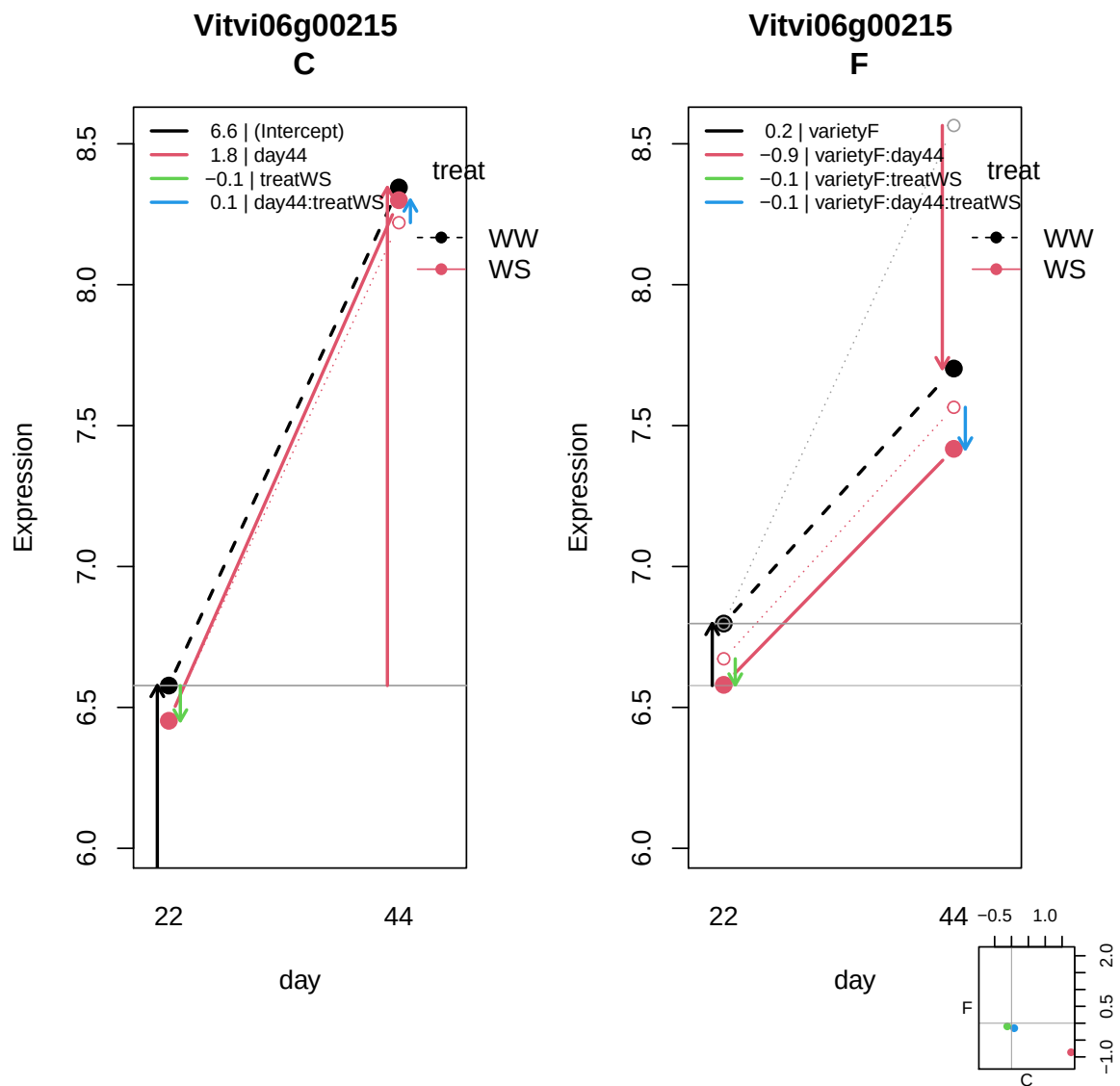


```

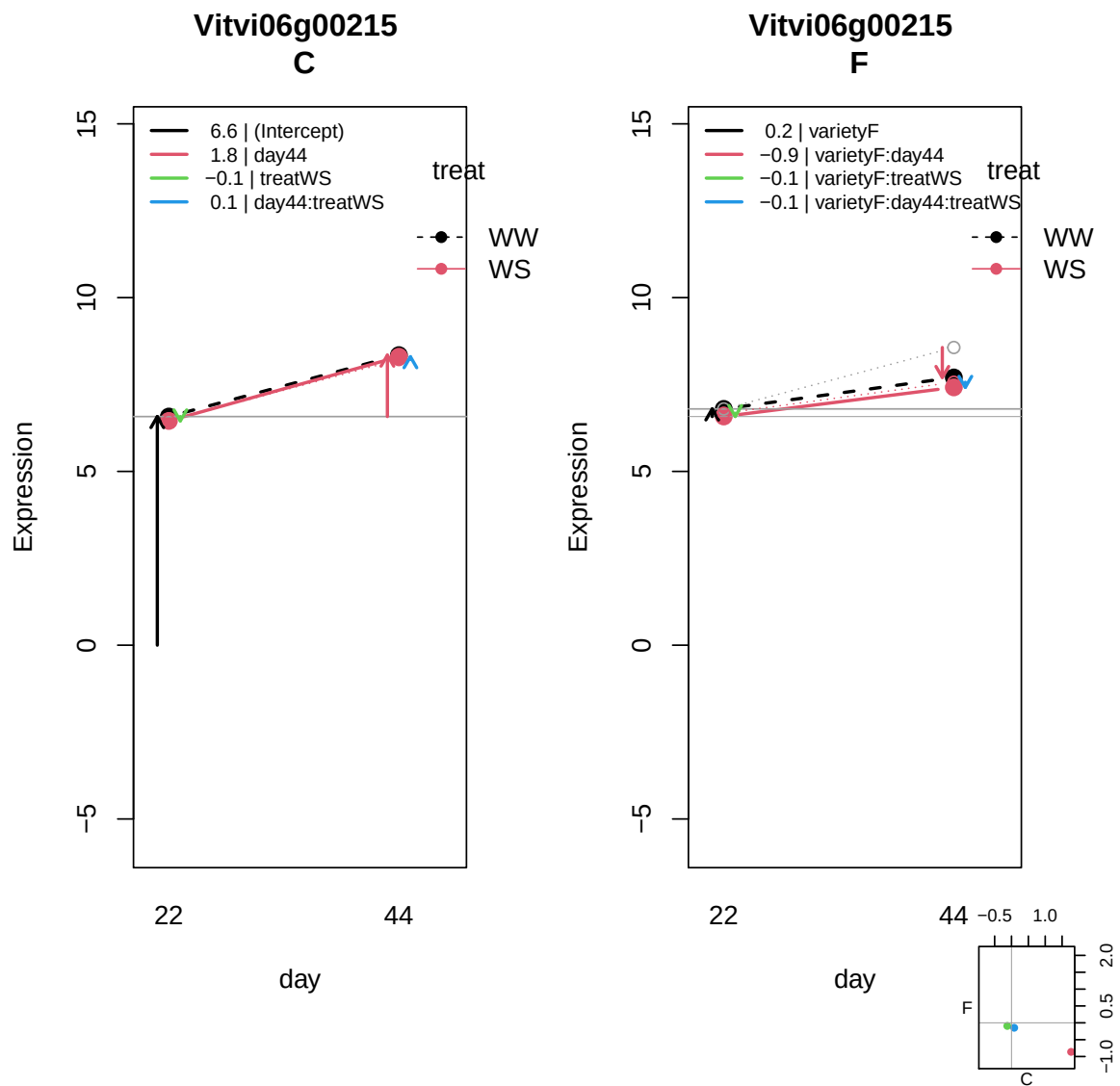
> fit1[varname,]$coefficients
              (Intercept) varietyF  day44 treatWS
Vitvi06g00215      6.5775      0.22 1.7675  -0.125
              varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi06g00215      -0.8625      -0.0925      0.08
              varietyF:day44:treatWS
Vitvi06g00215      -0.1475

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

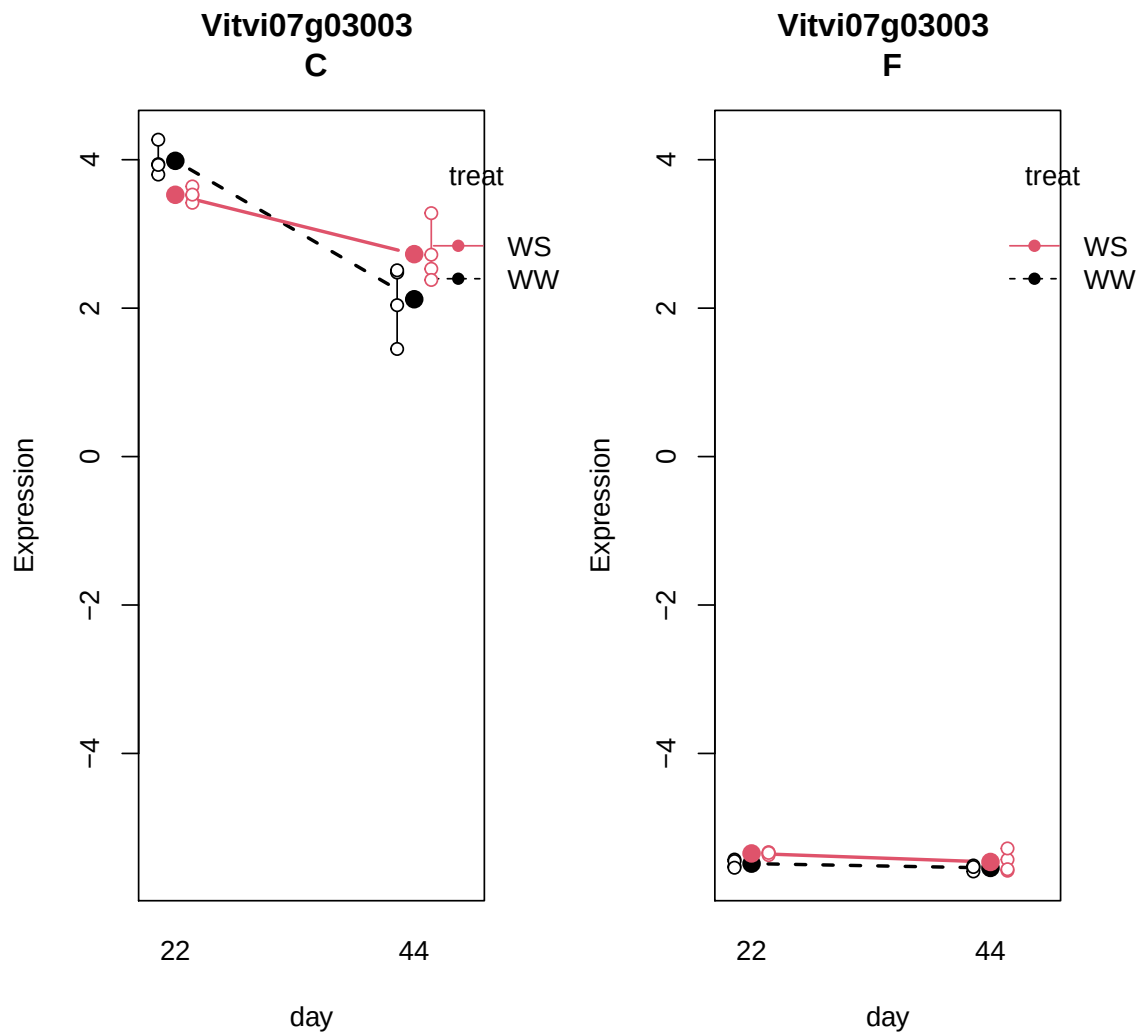
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

8.2.4 Vitvi07g03003

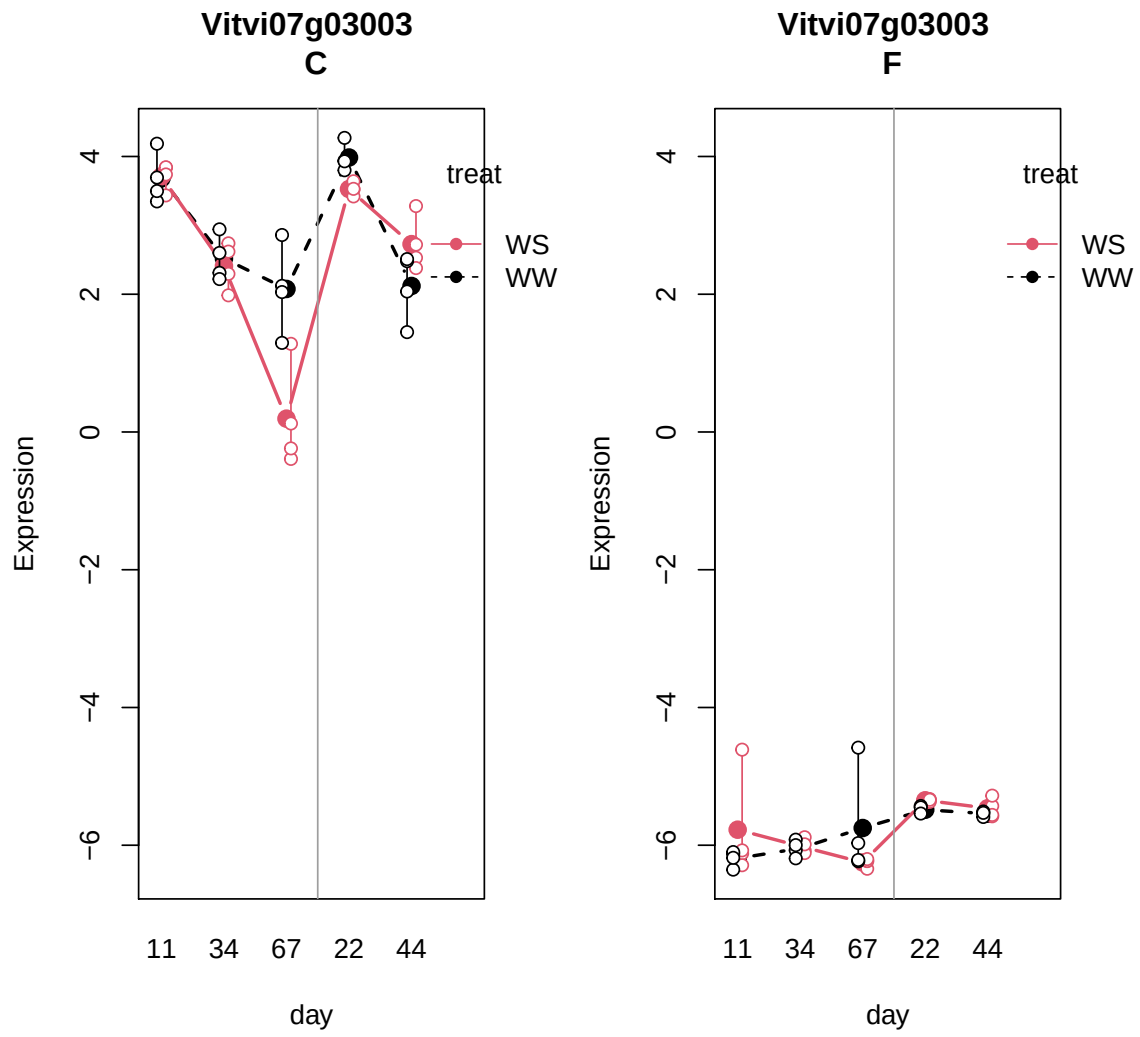
Coefficient day44 for Vitvi07g03003.

```
> tt[varname,]
              logFC  AveExpr      t      P.Value
Vitvi07g03003 -1.865 -1.184687 -10.9877 2.200659e-11
              adj.P.Val      B
Vitvi07g03003 8.385609e-08 15.91282

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



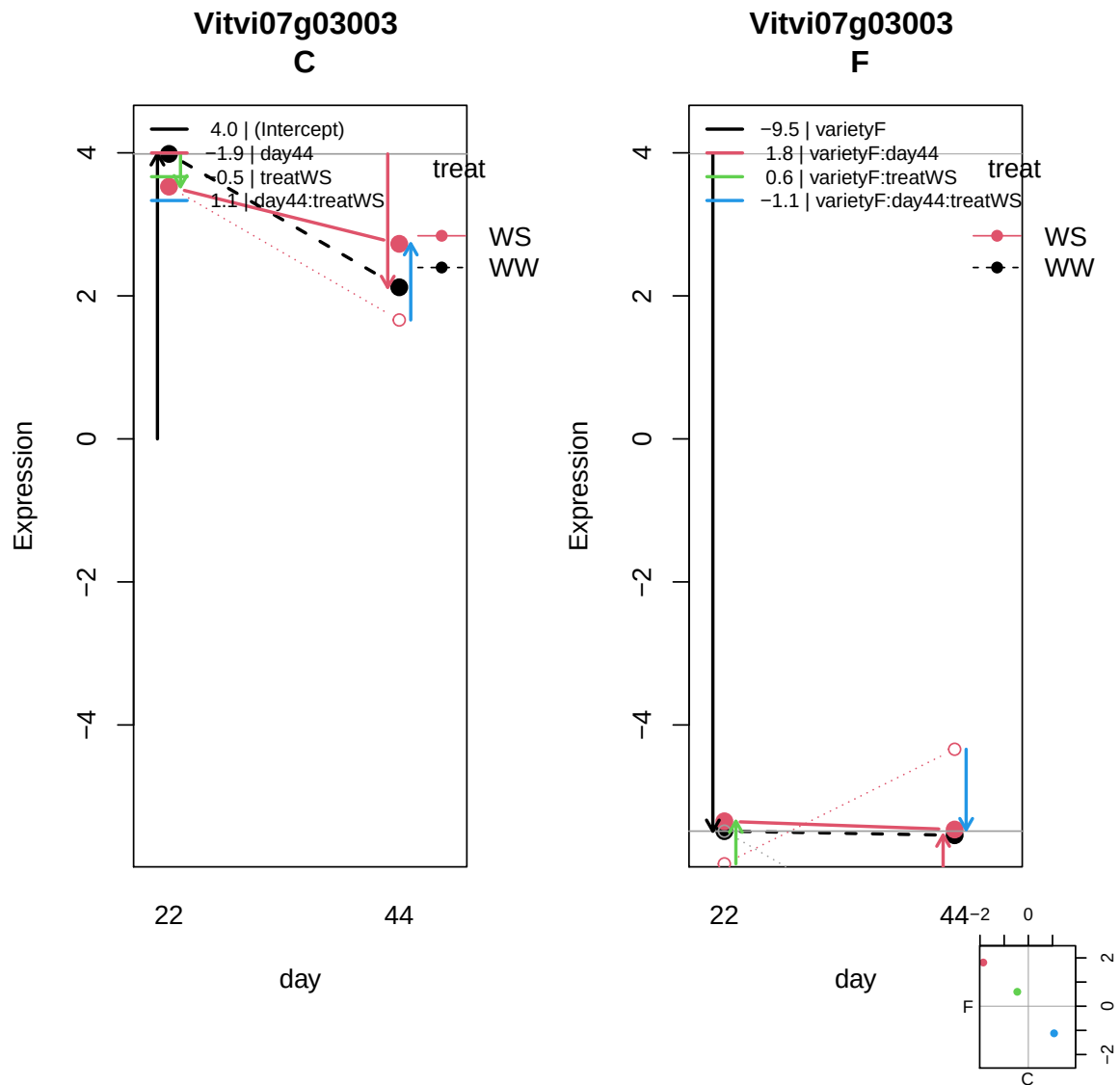
```

> fit1[varname,]$coefficients

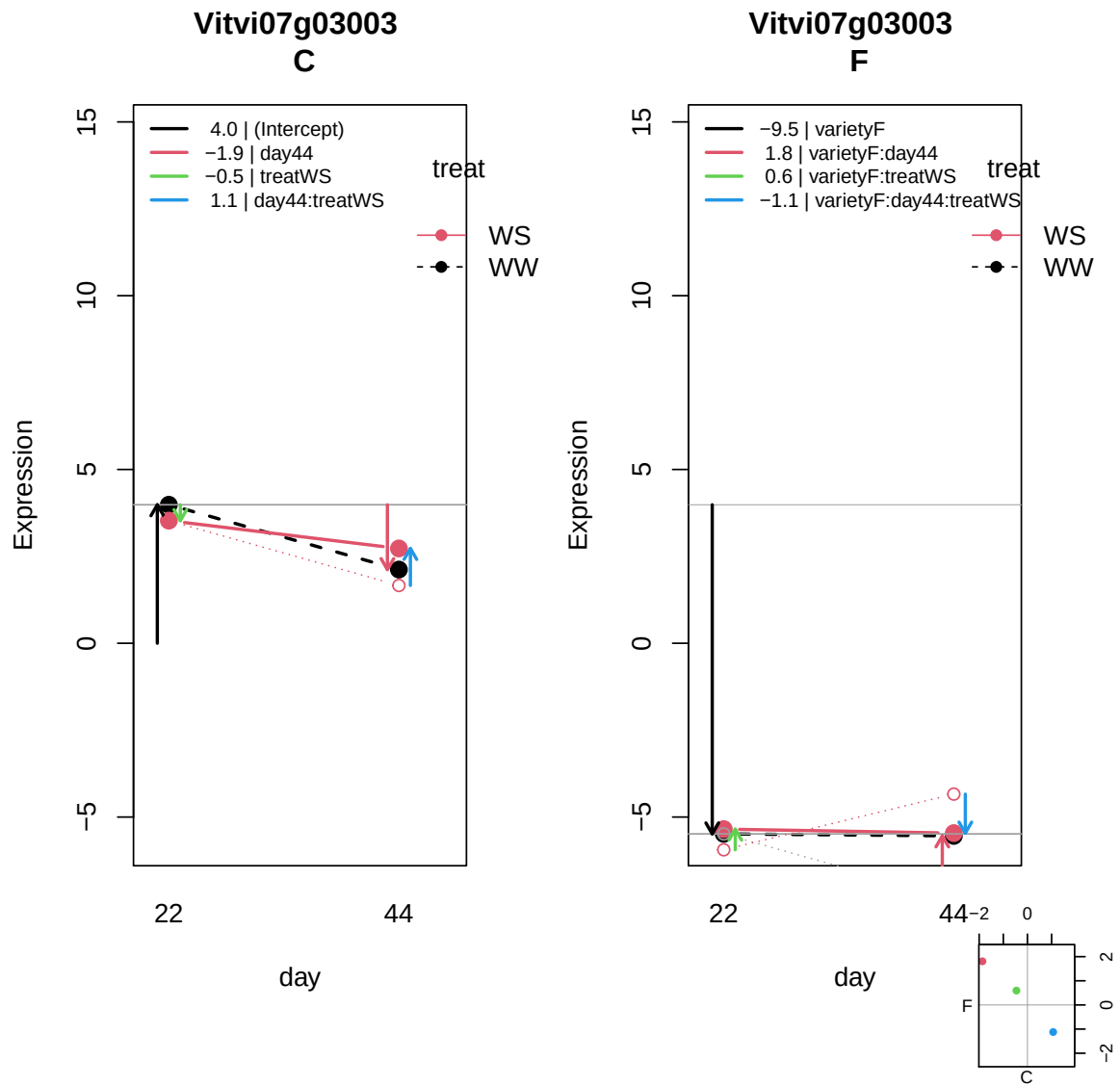
      (Intercept) varietyF  day44 treatWS
Vitvi07g03003      3.985    -9.47 -1.865 -0.4575
      varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi07g03003      1.8075              0.595        1.065
      varietyF:day44:treatWS
Vitvi07g03003      -1.1225

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

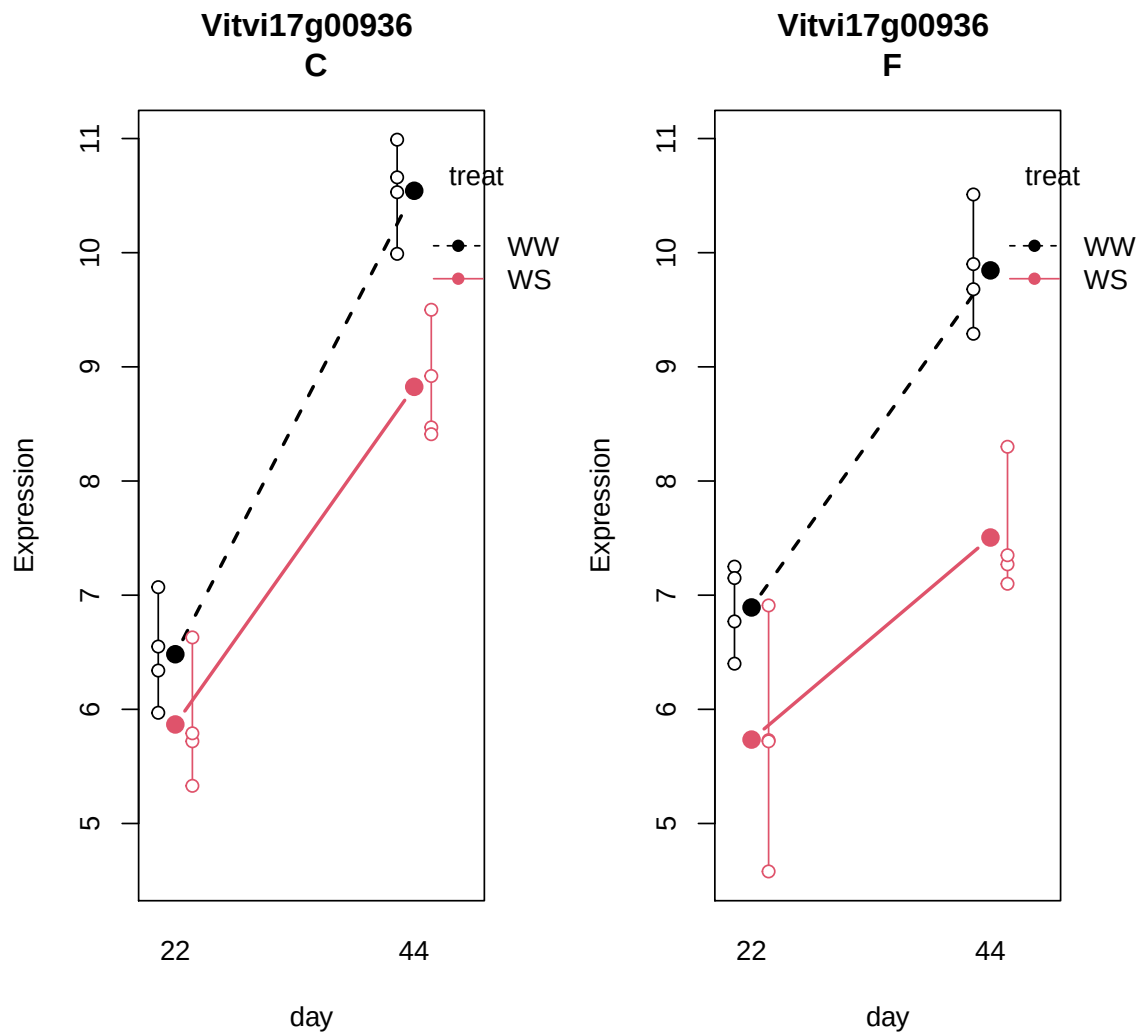
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

8.2.5 Vitvi17g00936

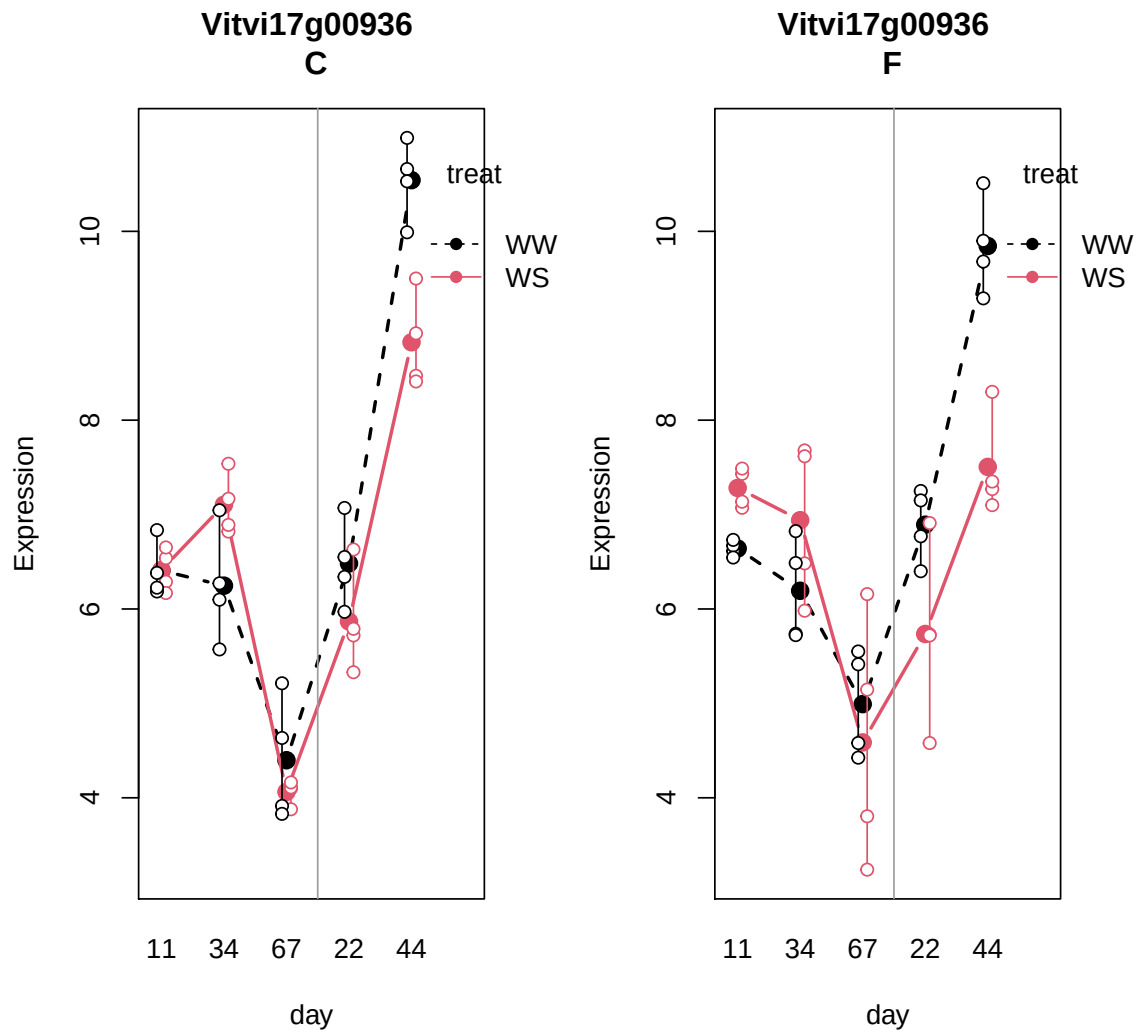
Coefficient day44 for Vitvi17g00936.

```
> tt[varname,]
               logFC AveExpr      t      P.Value
Vitvi17g00936  4.06 7.711875 10.63311 4.502301e-11
               adj.P.Val      B
Vitvi17g00936 1.372481e-07 15.24356

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

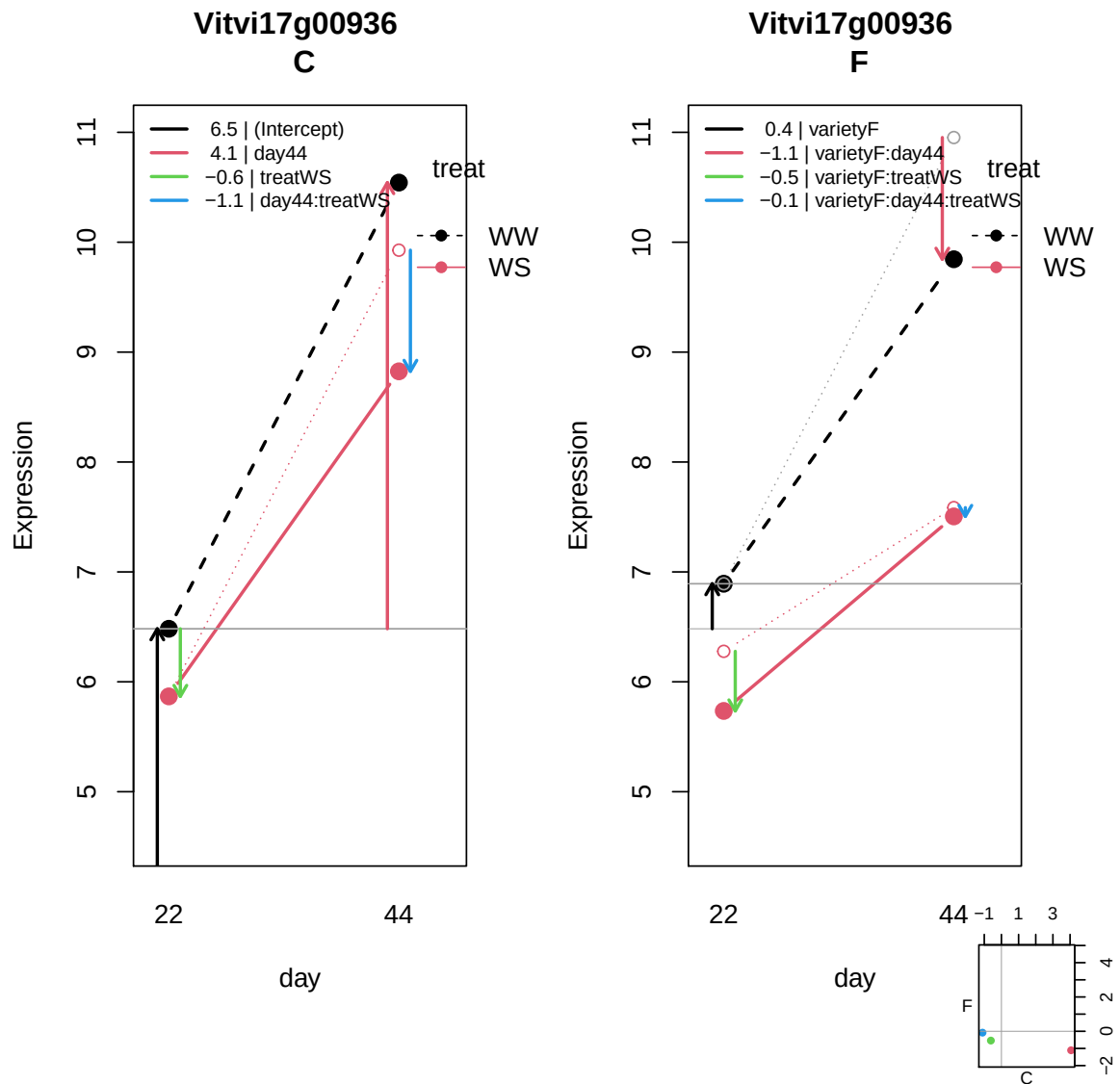



```

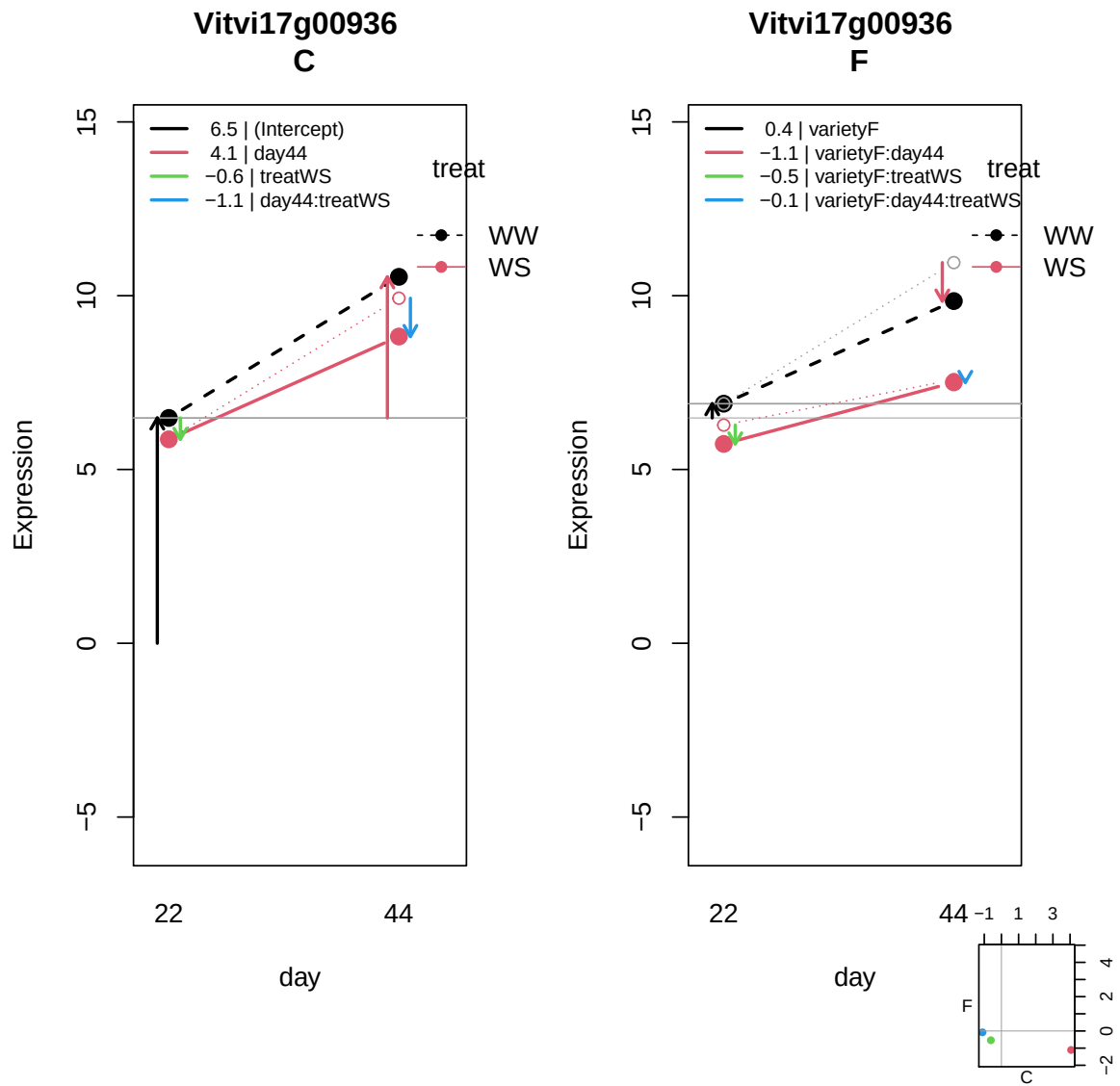
> fit1[varname,]$coefficients
               (Intercept) varietyF day44 treatWS
Vitvi17g00936      6.4825      0.41  4.06  -0.615
               varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi17g00936      -1.1075      -0.5425      -1.1025
               varietyF:day44:treatWS
Vitvi17g00936                -0.08

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



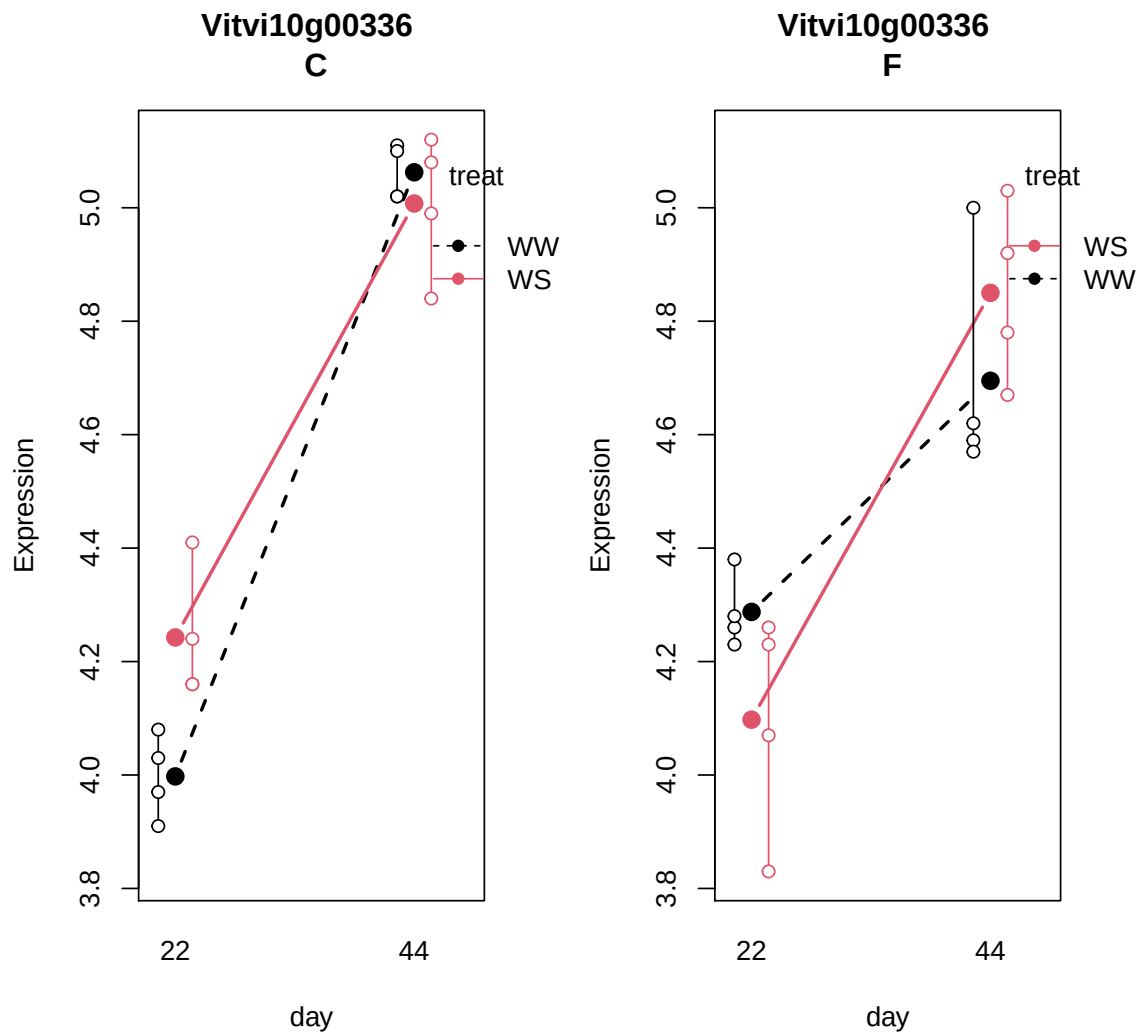
Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

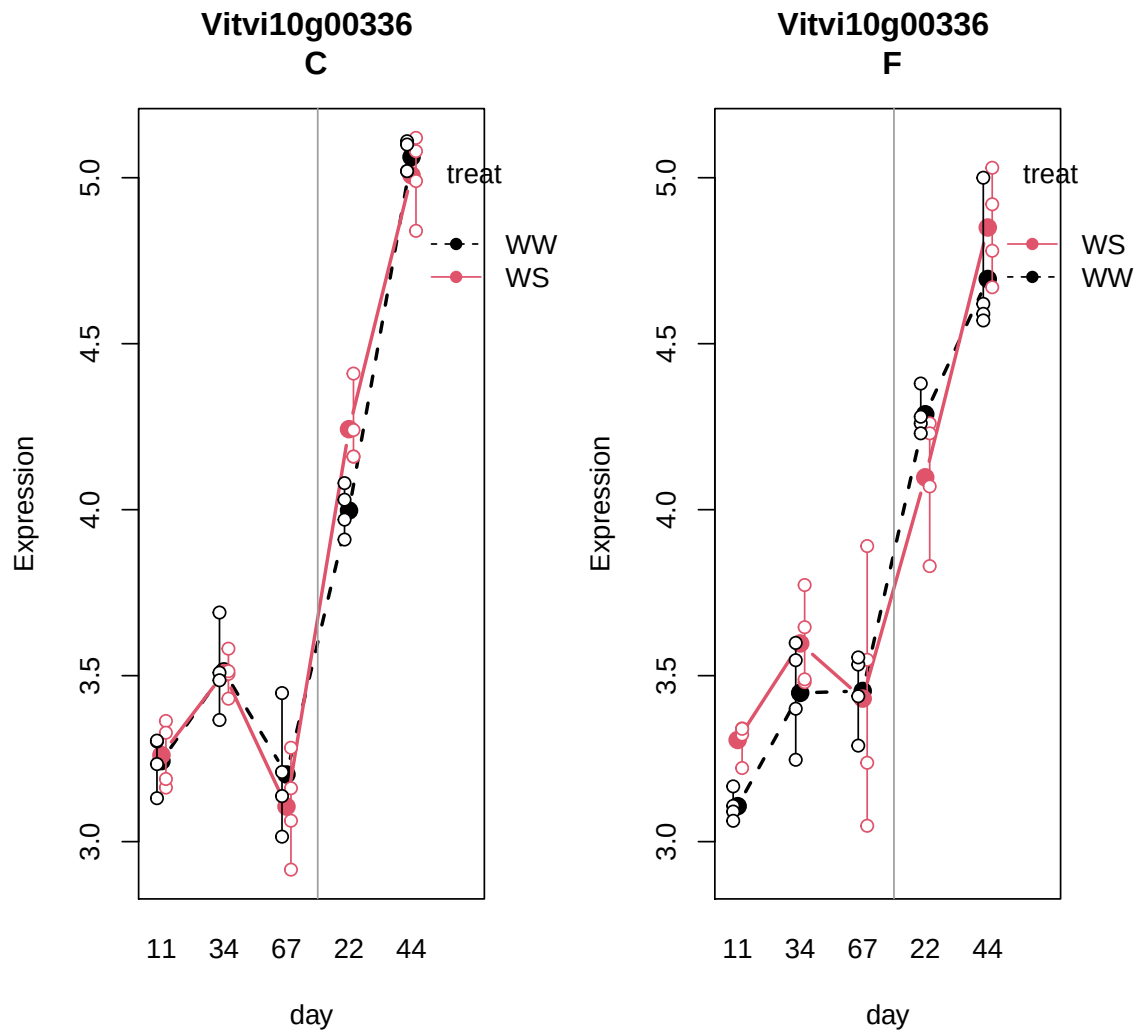
8.2.6 Vitvi10g00336

Coefficient day44 for Vitvi10g00336.

```
> tt[varname,]  
              logFC AveExpr      t      P.Value  
Vitvi10g00336 1.065      4.53 10.42849 6.852544e-11  
              adj.P.Val      B  
Vitvi10g00336 1.740775e-07 14.84951  
  
> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

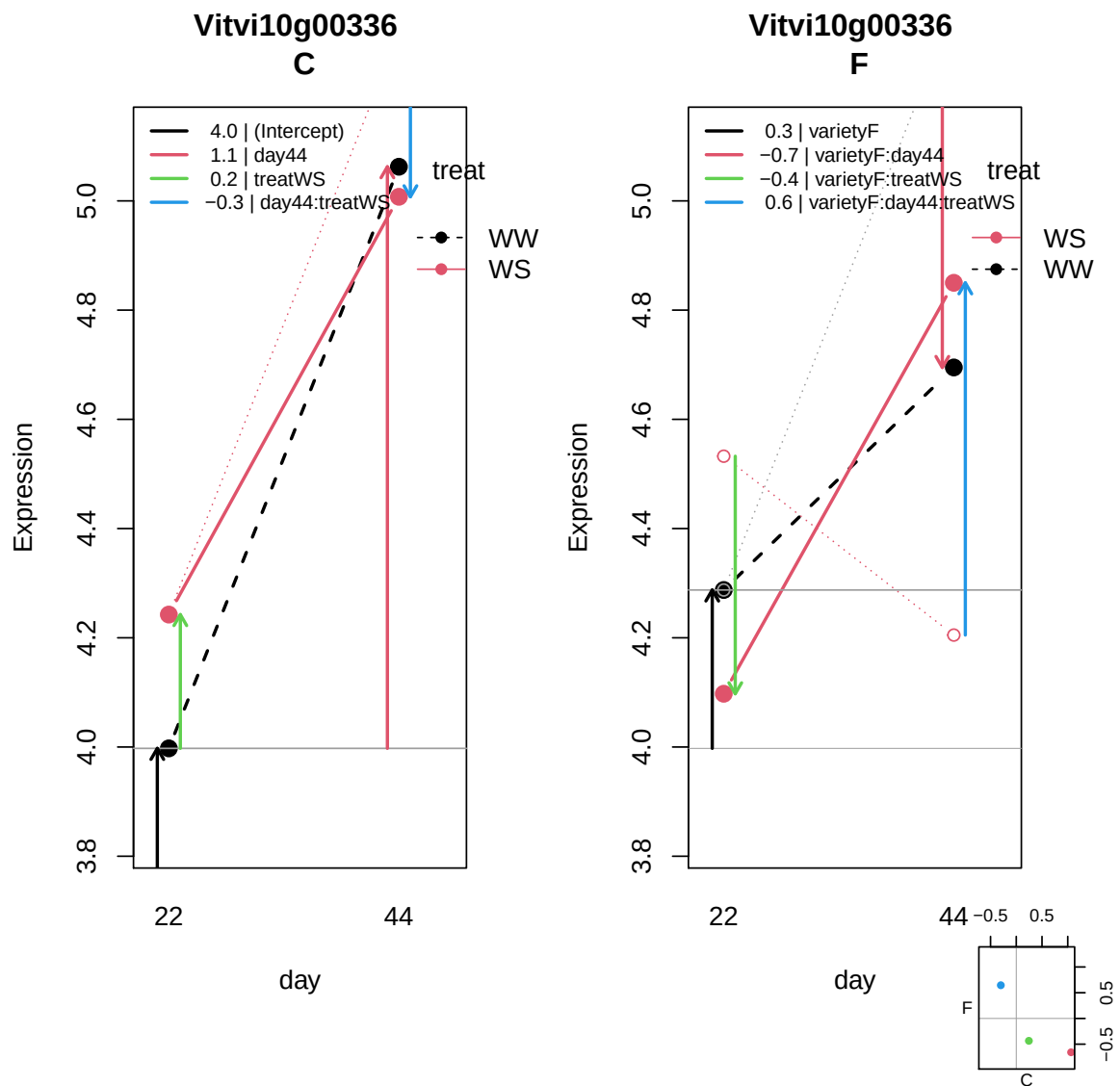


```

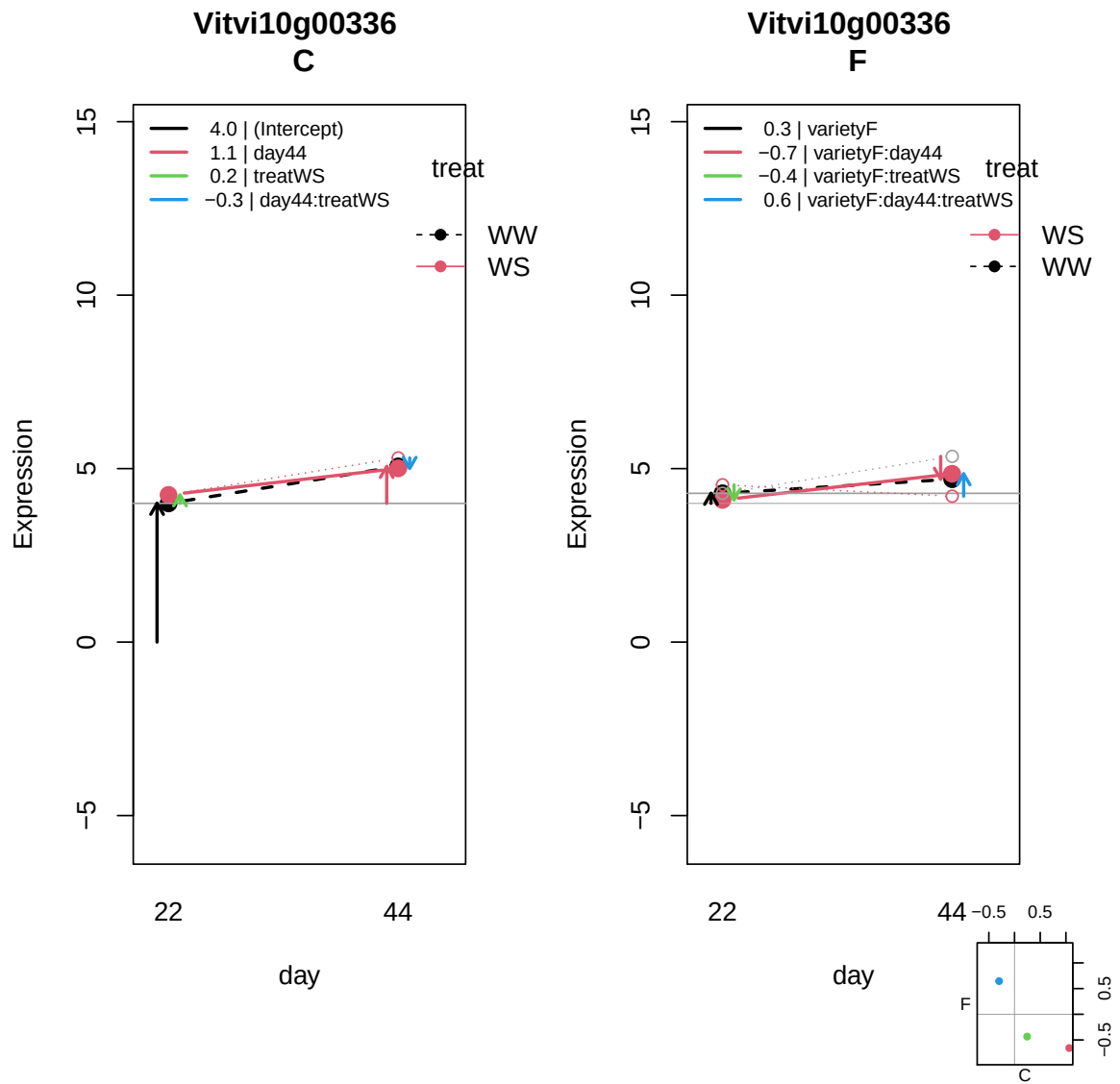
> fit1[varname,]$coefficients
               (Intercept) varietyF day44 treatWS
Vitvi10g00336      3.9975      0.29 1.065   0.245
               varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi10g00336      -0.6575             -0.435             -0.3
               varietyF:day44:treatWS
Vitvi10g00336              0.645

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

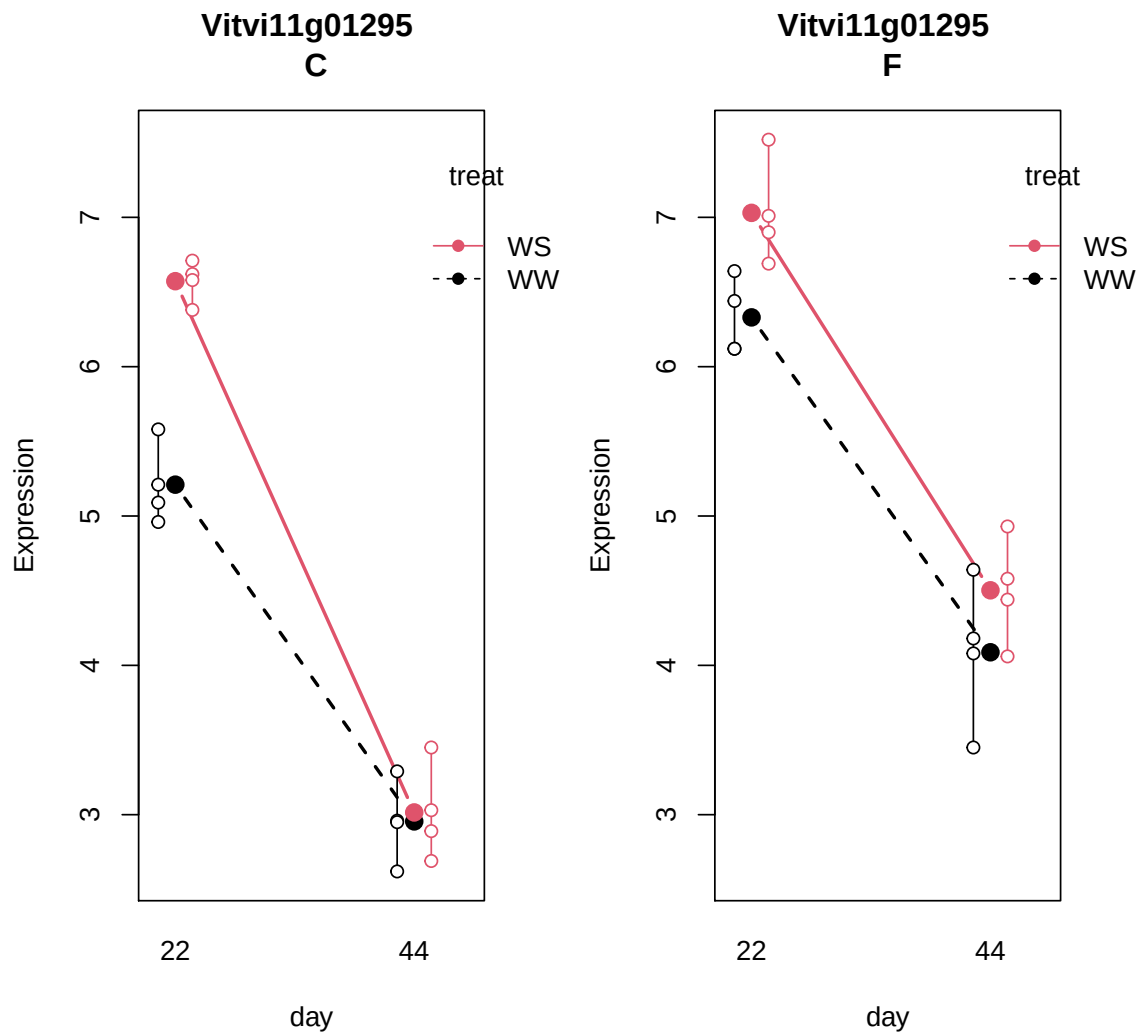
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```


8.2.7 Vitvi11g01295

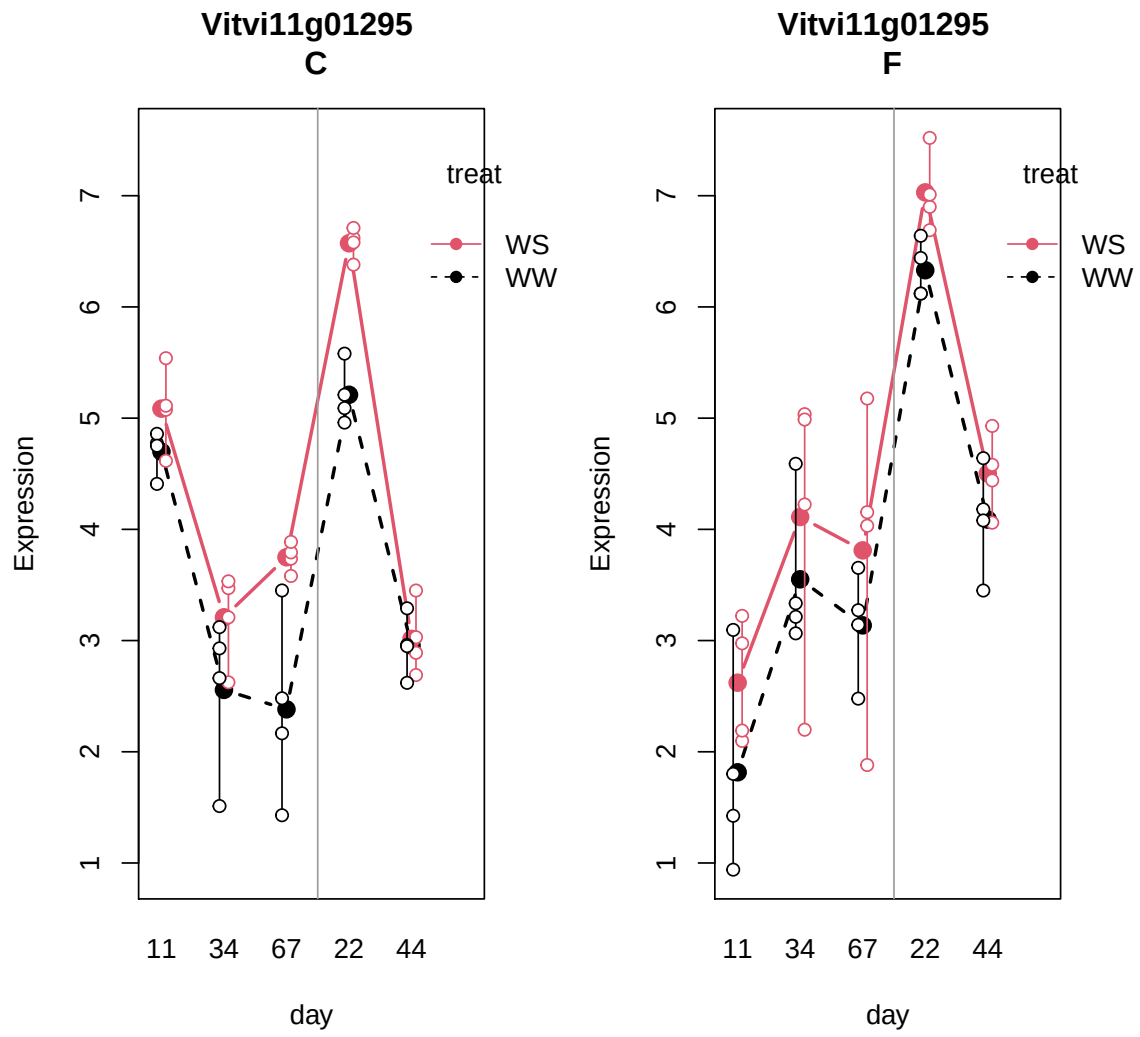
Coefficient day44 for Vitvi11g01295.

```
> tt[varname,]
              logFC  AveExpr          t      P.Value
Vitvi11g01295 -2.255  4.962813 -10.19713 1.108691e-10
              adj.P.Val          B
Vitvi11g01295 2.187007e-07 14.39696

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

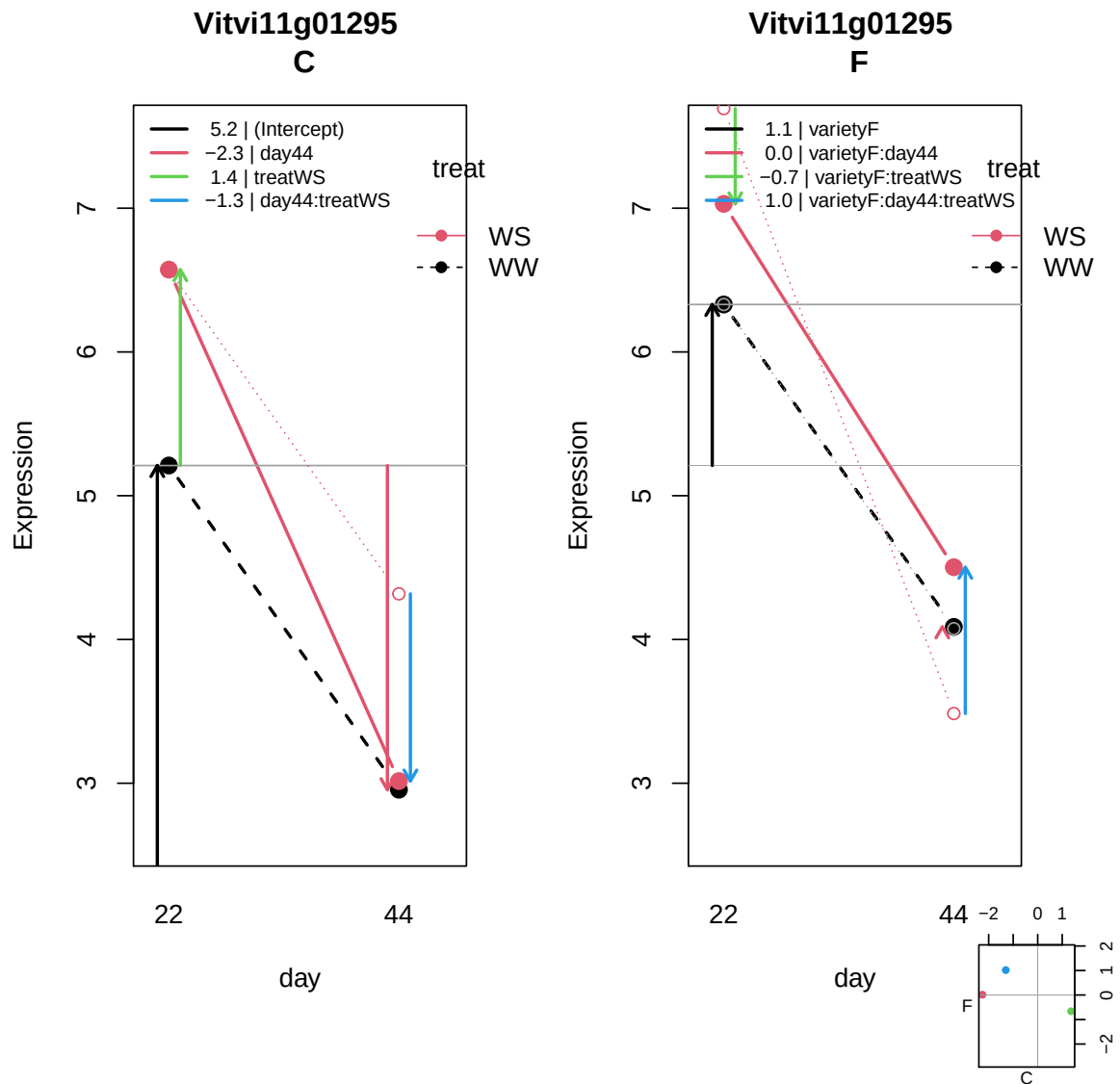


```

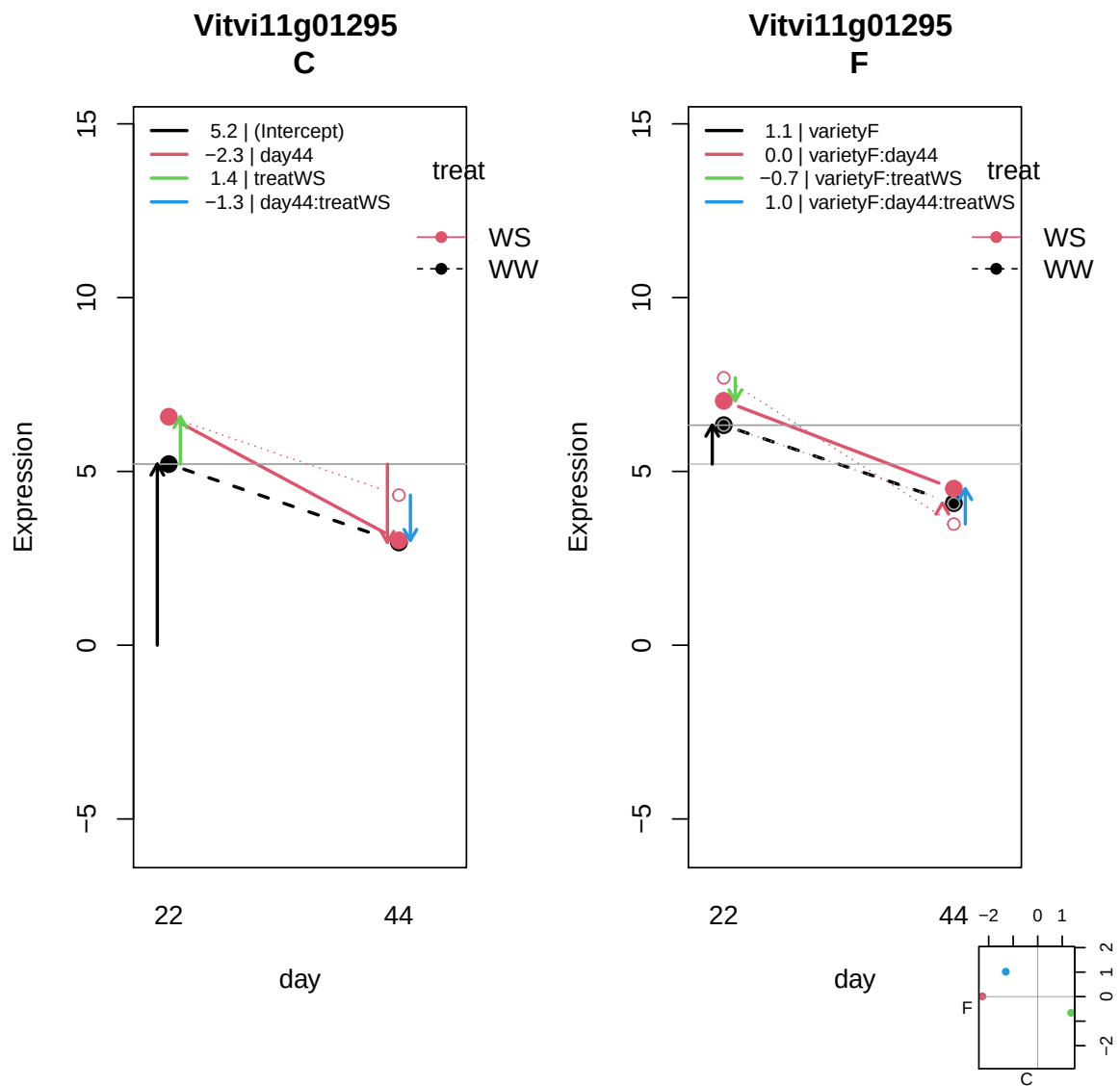
> fit1[varname,]$coefficients
              (Intercept) varietyF  day44 treatWS
Vitvi11g01295          5.21      1.12 -2.255  1.3625
              varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi11g01295          0.0125          -0.6625          -1.3025
              varietyF:day44:treatWS
Vitvi11g01295          1.0175

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

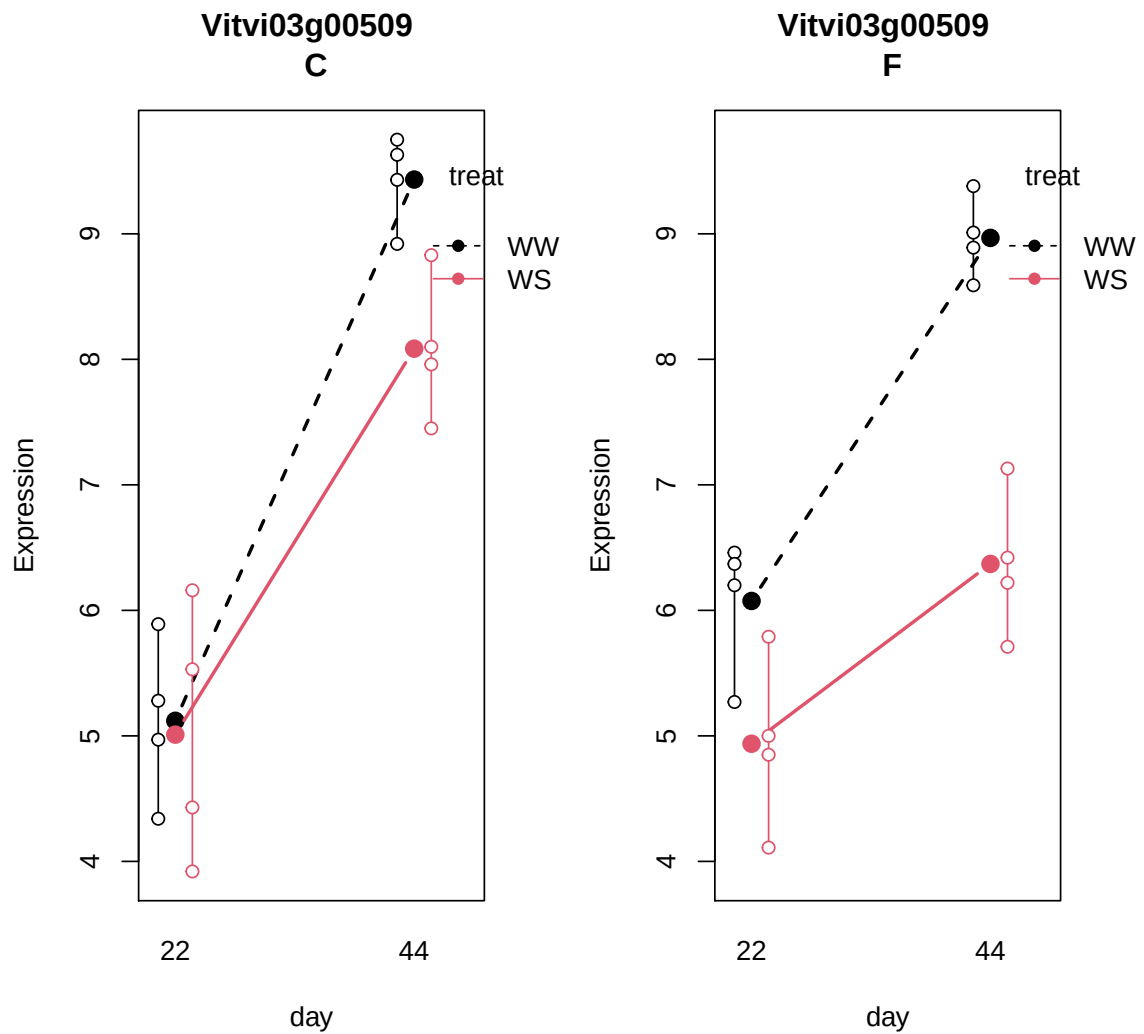
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

8.2.8 Vitvi03g00509

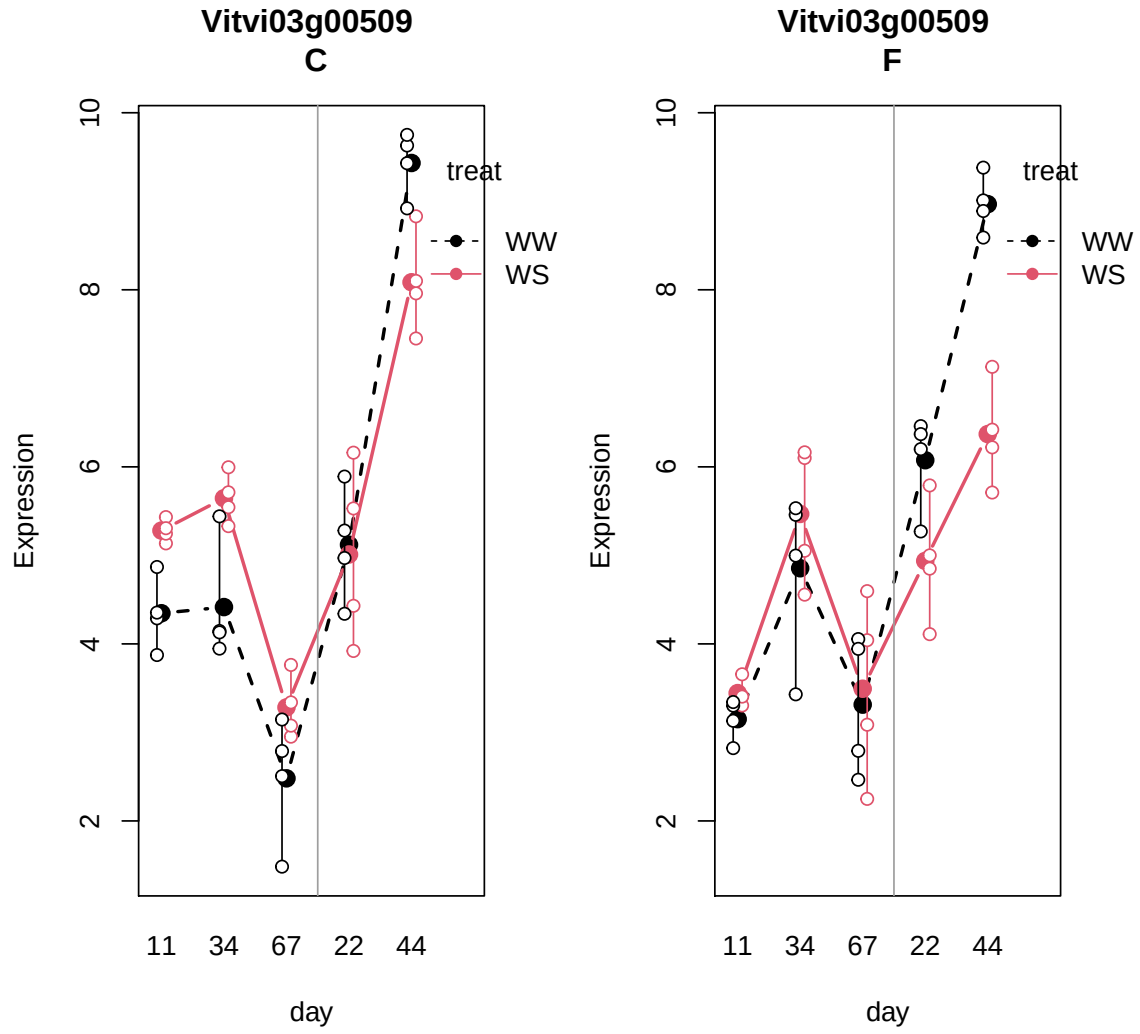
Coefficient day44 for Vitvi03g00509.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi03g00509 4.3125 6.749688 10.18055 1.147884e-10
      adj.P.Val      B
Vitvi03g00509 2.187007e-07 14.36424

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



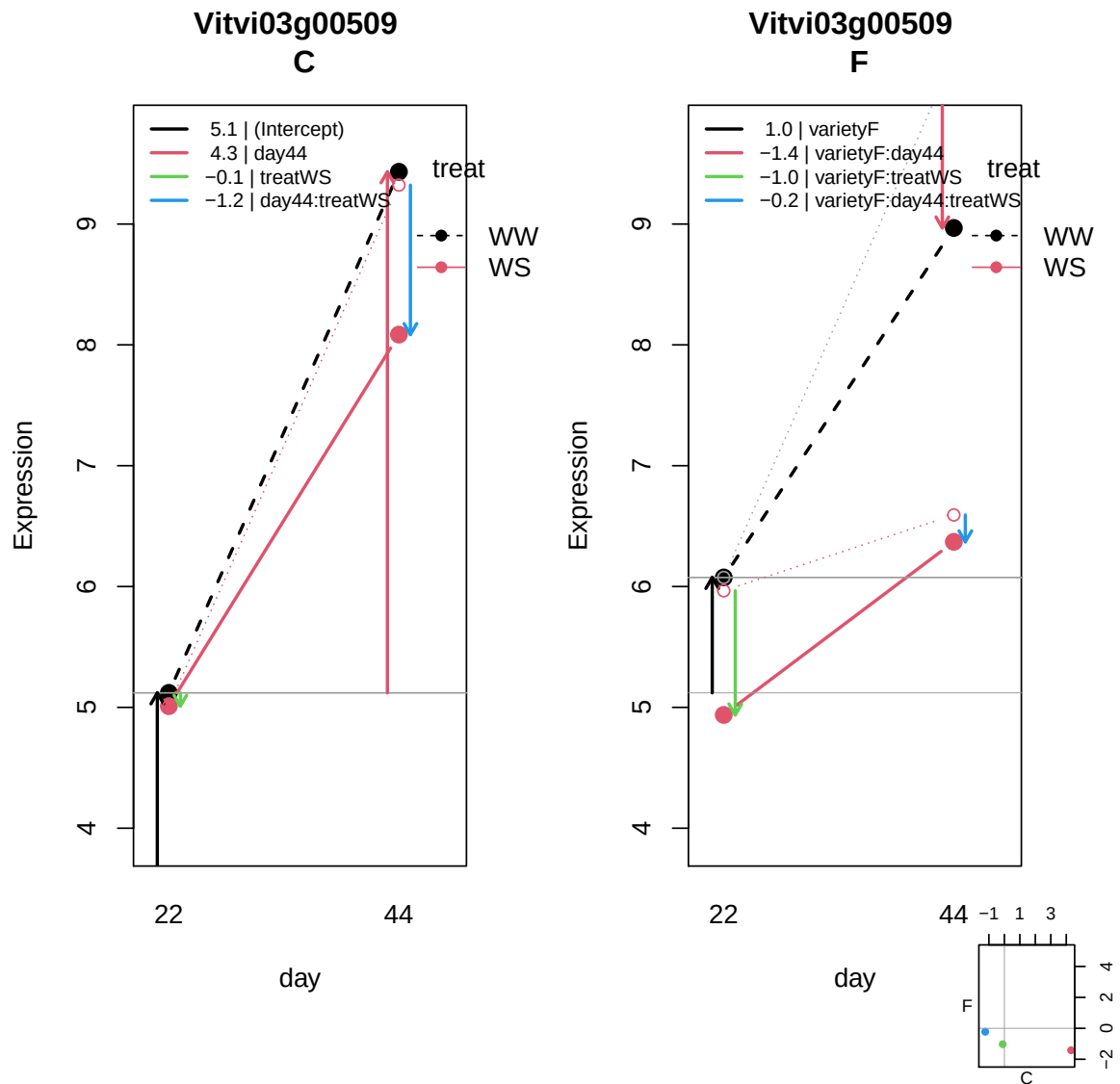
```

> fit1[varname,]$coefficients

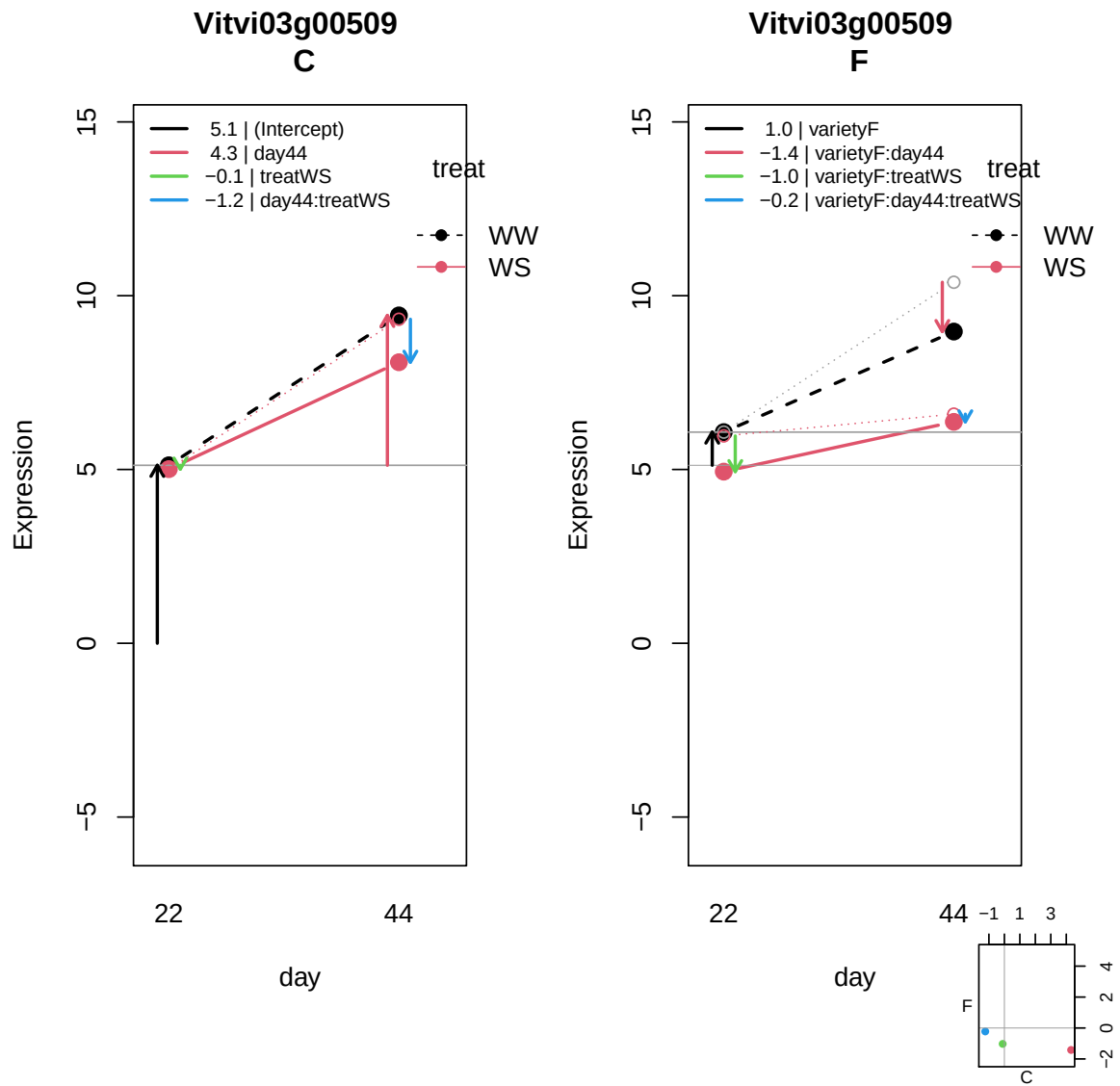
      (Intercept) varietyF  day44 treatWS
Vitvi03g00509      5.12    0.955 4.3125   -0.11
      varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi03g00509      -1.42          -1.0275      -1.2375
      varietyF:day44:treatWS
Vitvi03g00509          -0.2225

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```




```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

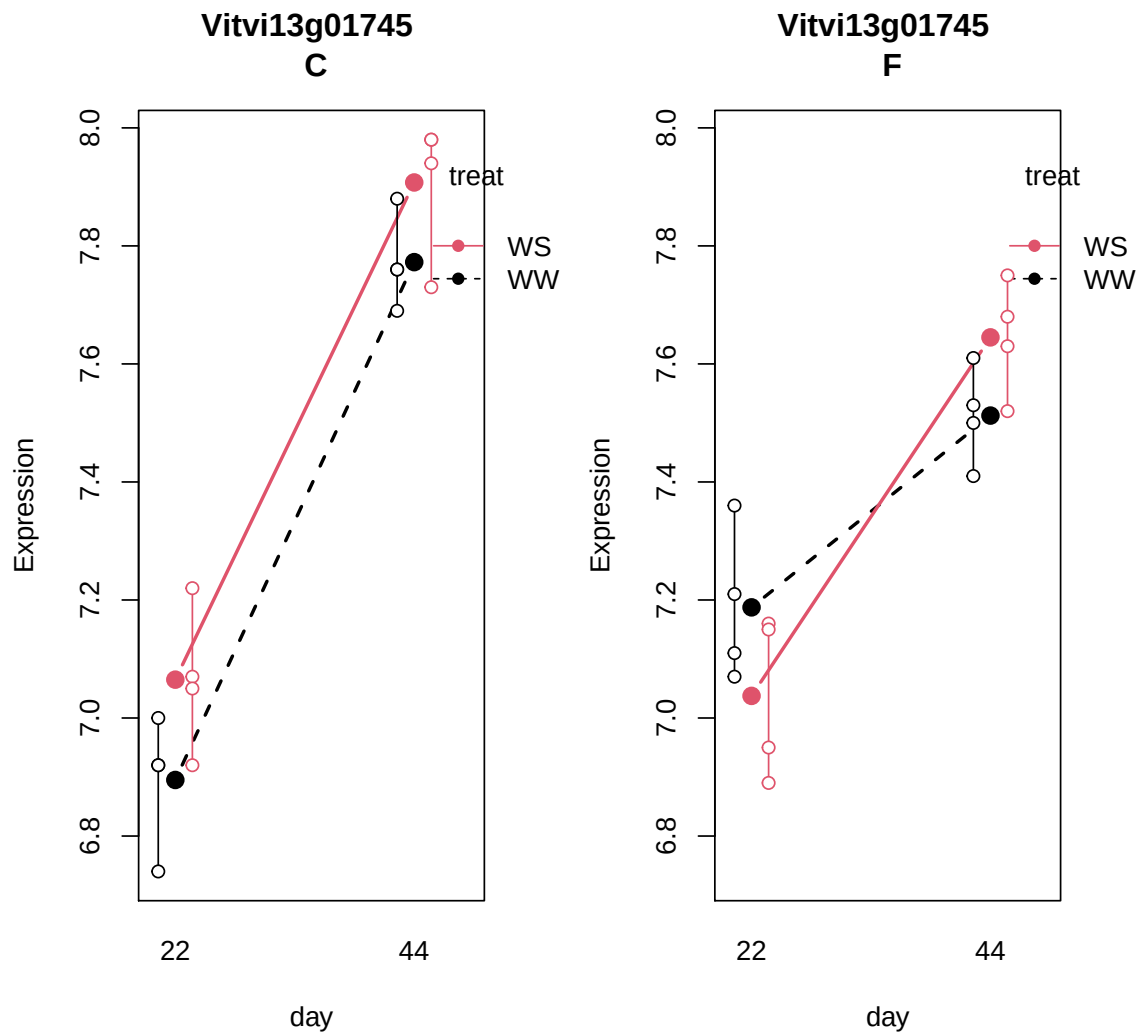
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

8.2.9 Vitvi13g01745

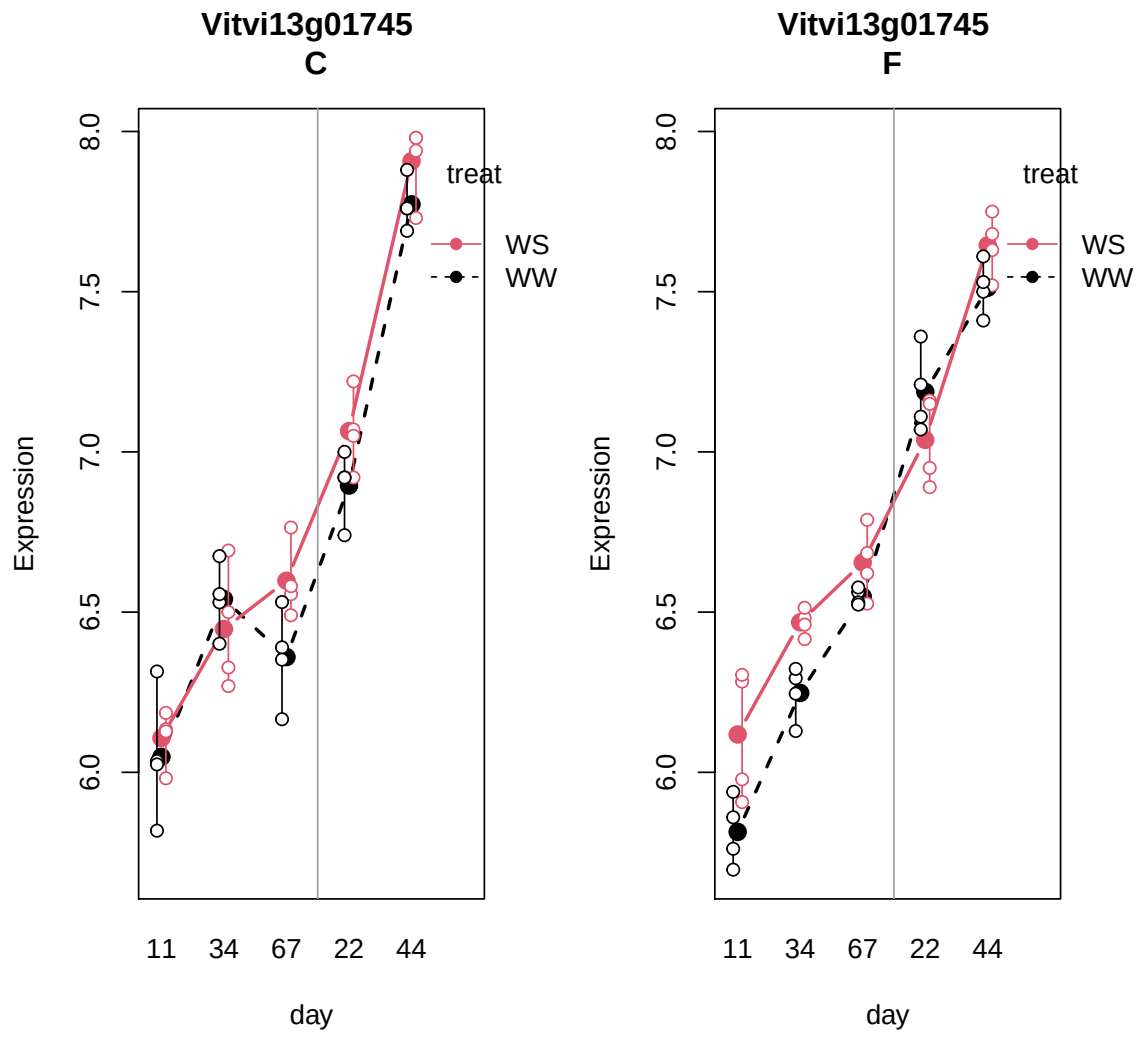
Coefficient day44 for Vitvi13g01745.

```
> tt[varname,]
              logFC  AveExpr      t      P.Value
Vitvi13g01745  0.8775  7.377813  9.95391  1.851918e-10
              adj.P.Val      B
Vitvi13g01745  2.787771e-07  13.91309

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

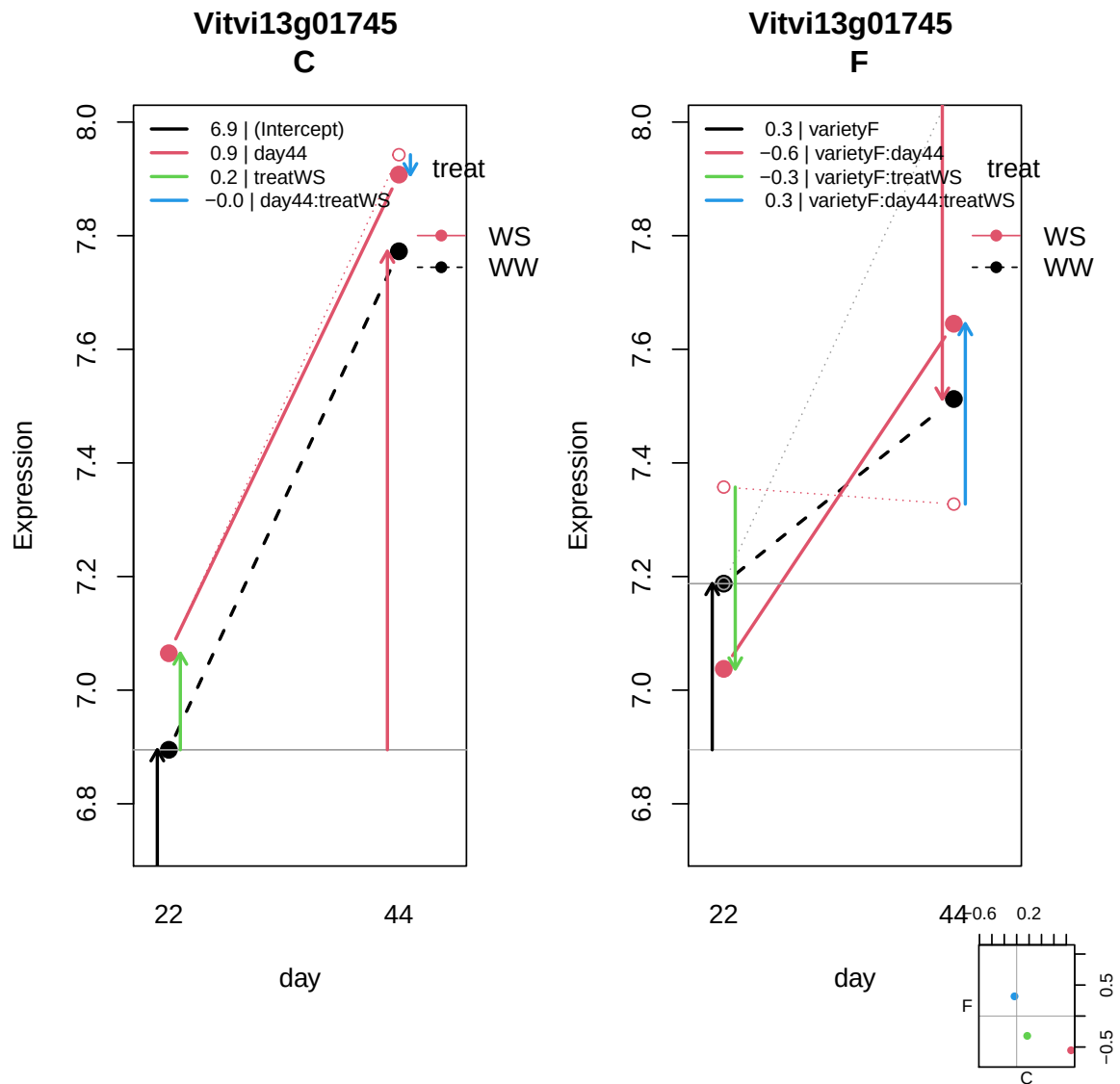


```

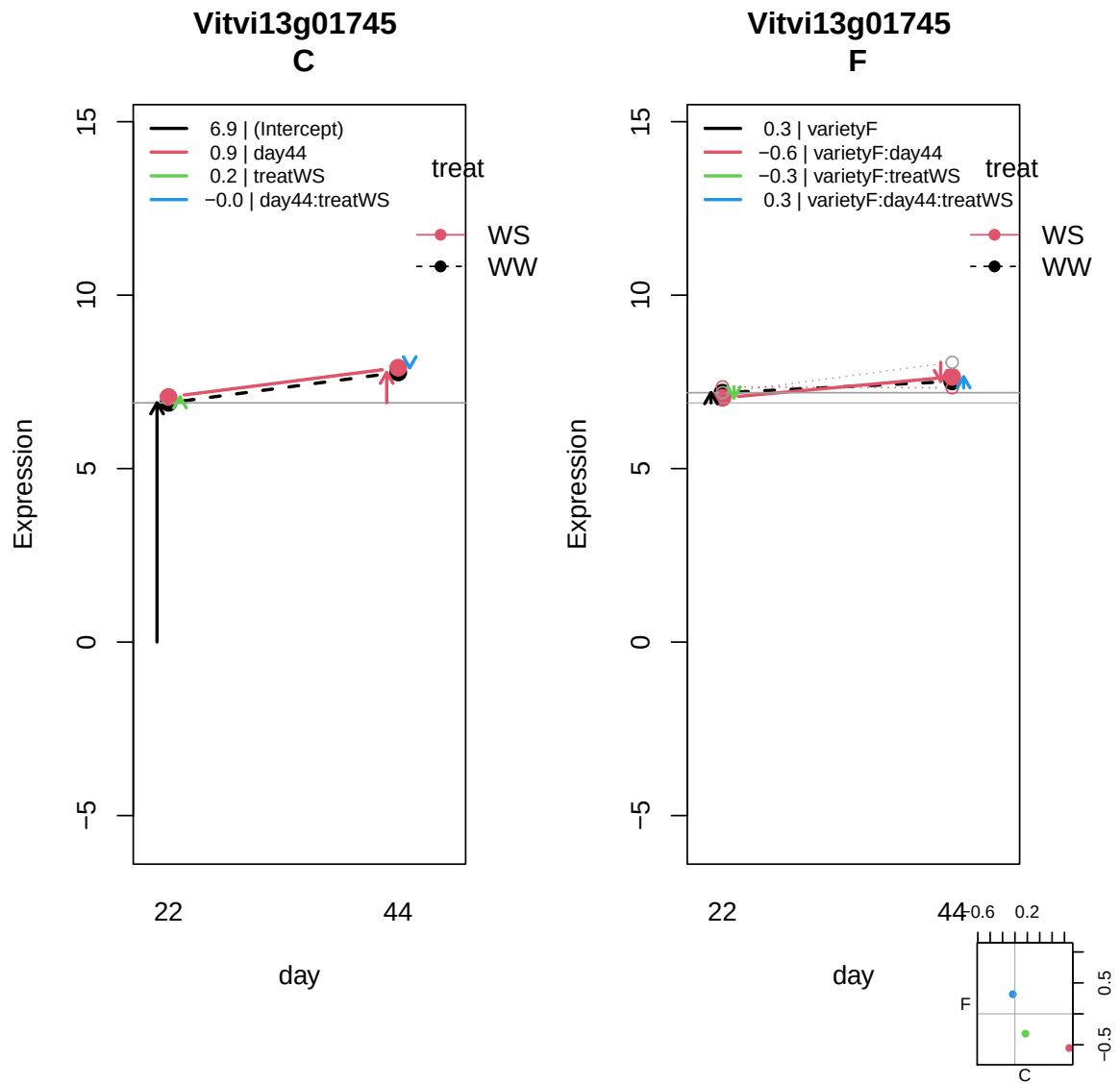
> fit1[varname,]$coefficients
              (Intercept) varietyF  day44 treatWS
Vitvi13g01745      6.895    0.2925 0.8775    0.17
              varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi13g01745      -0.5525              -0.32      -0.035
              varietyF:day44:treatWS
Vitvi13g01745              0.3175

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

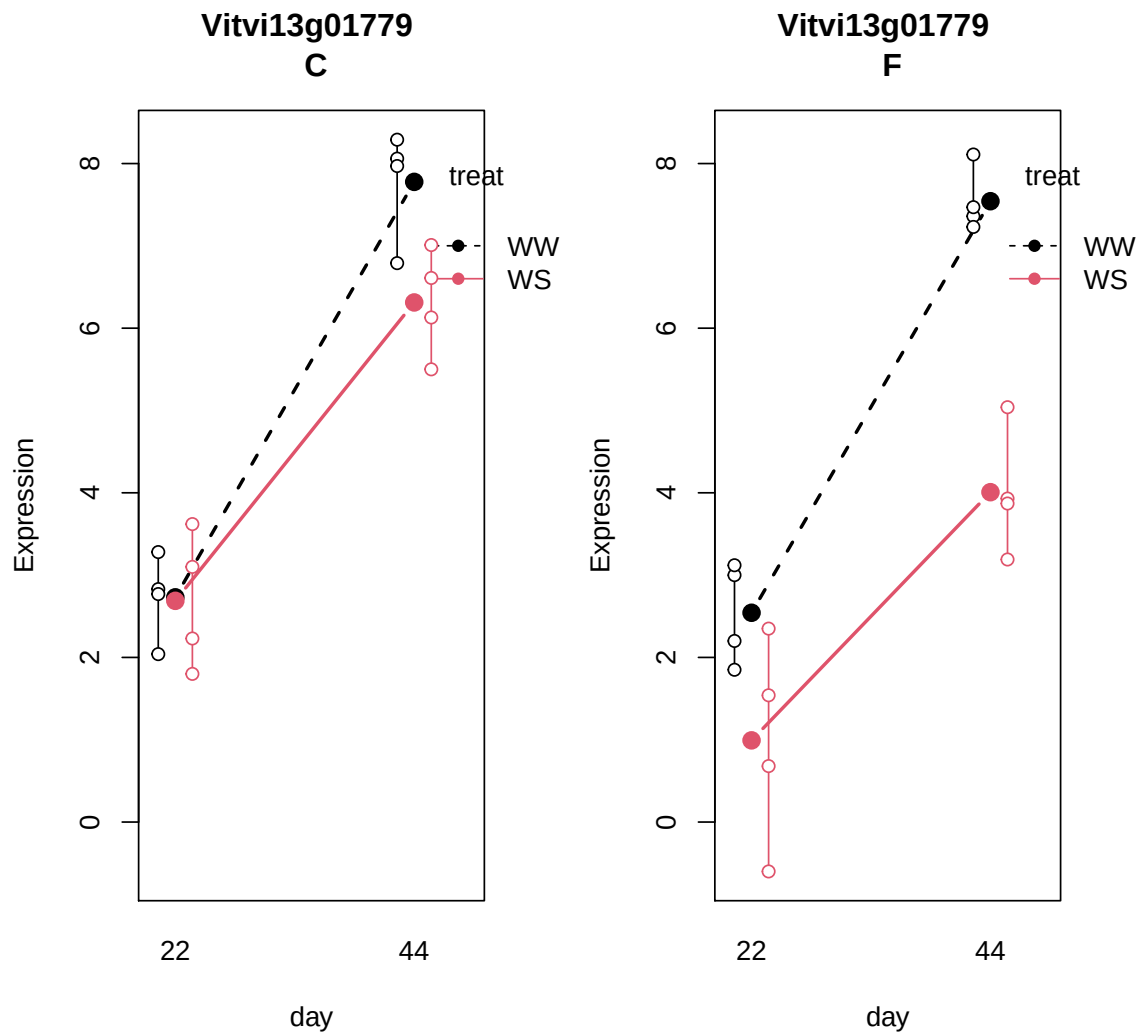
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

8.2.10 Vitvi13g01779

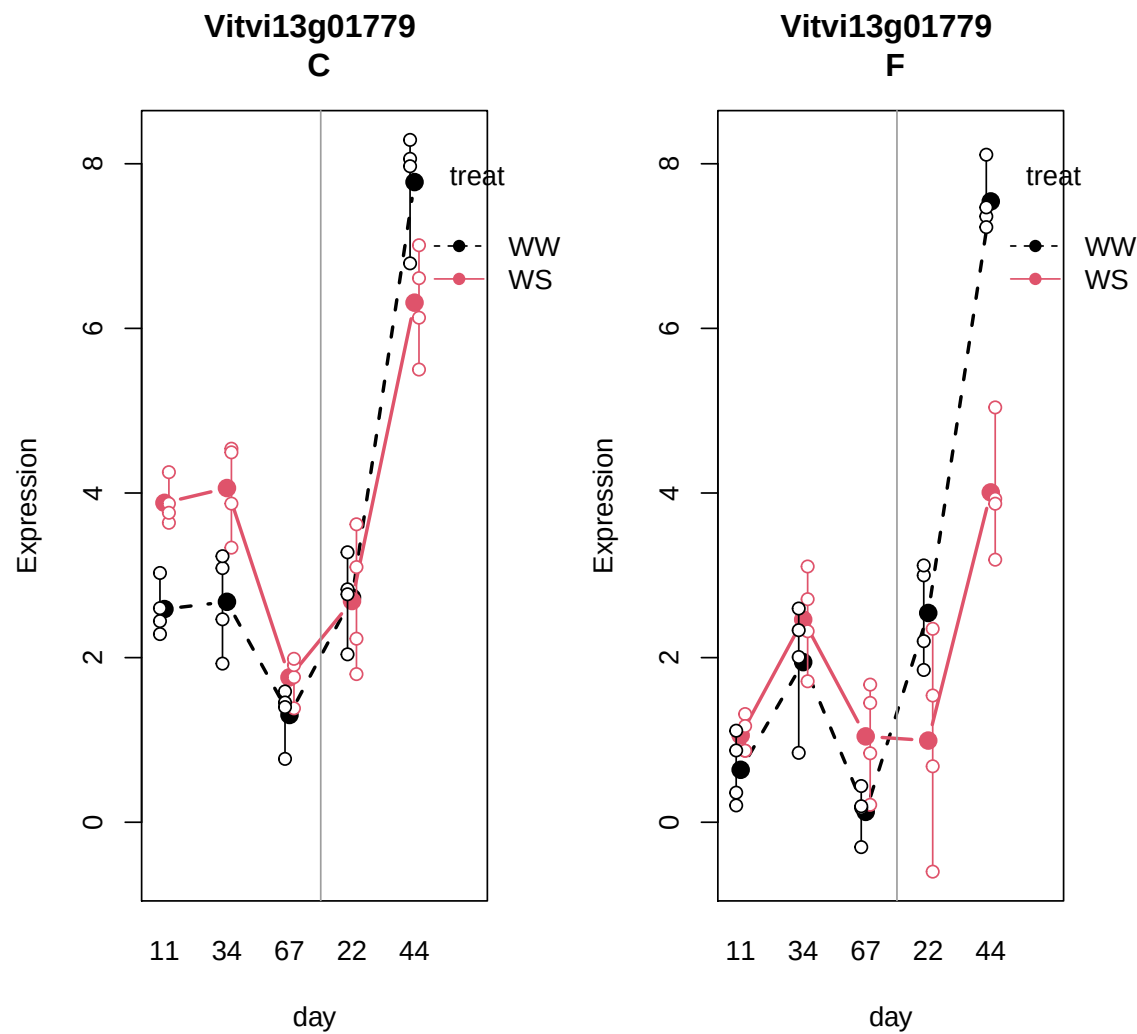
Coefficient day44 for Vitvi13g01779.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi13g01779 5.0475 4.324063 9.943212 1.894512e-10
      adj.P.Val      B
Vitvi13g01779 2.787771e-07 13.89161

> plot.interactions(varname,phdata=pd,data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

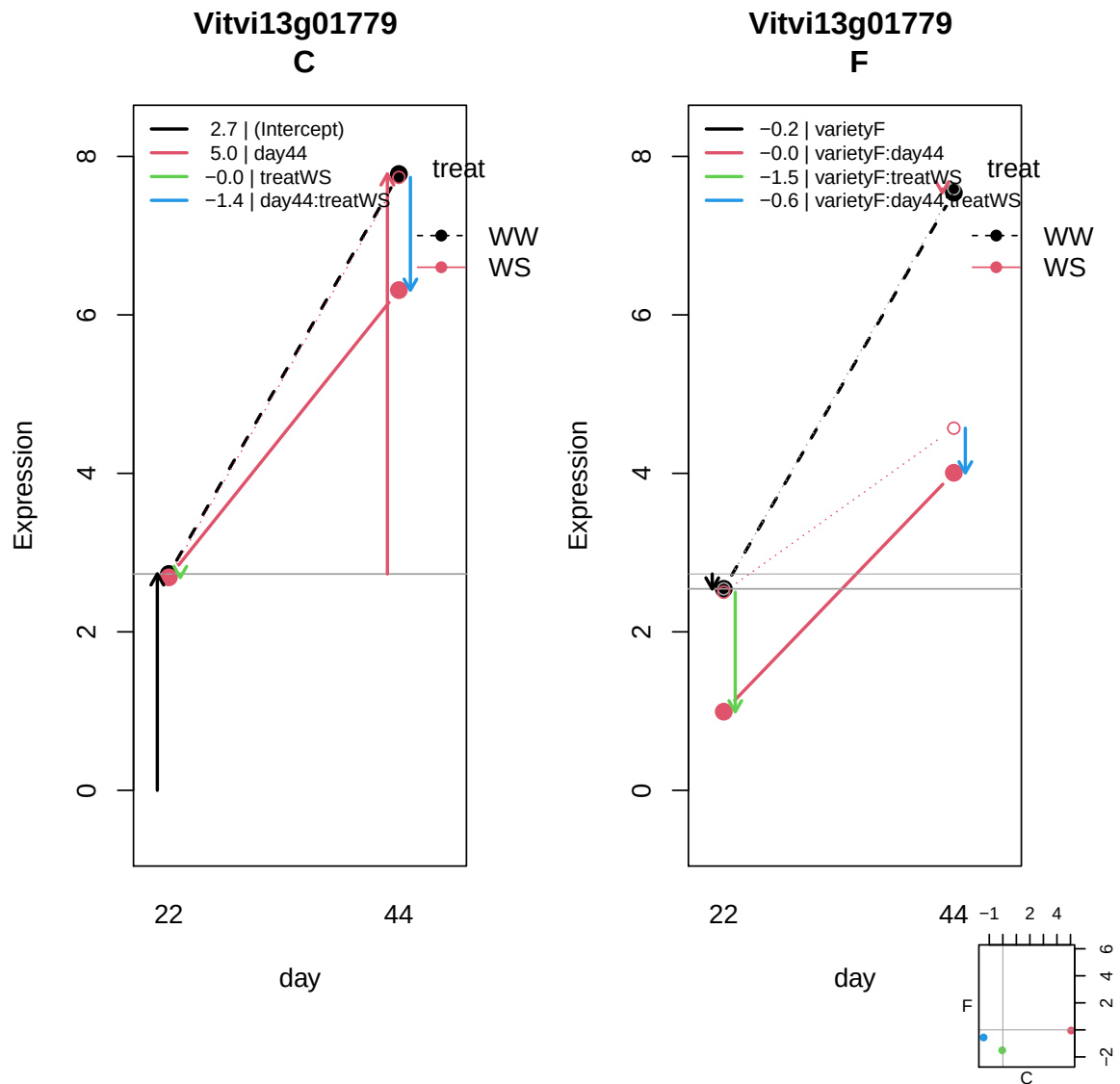


```

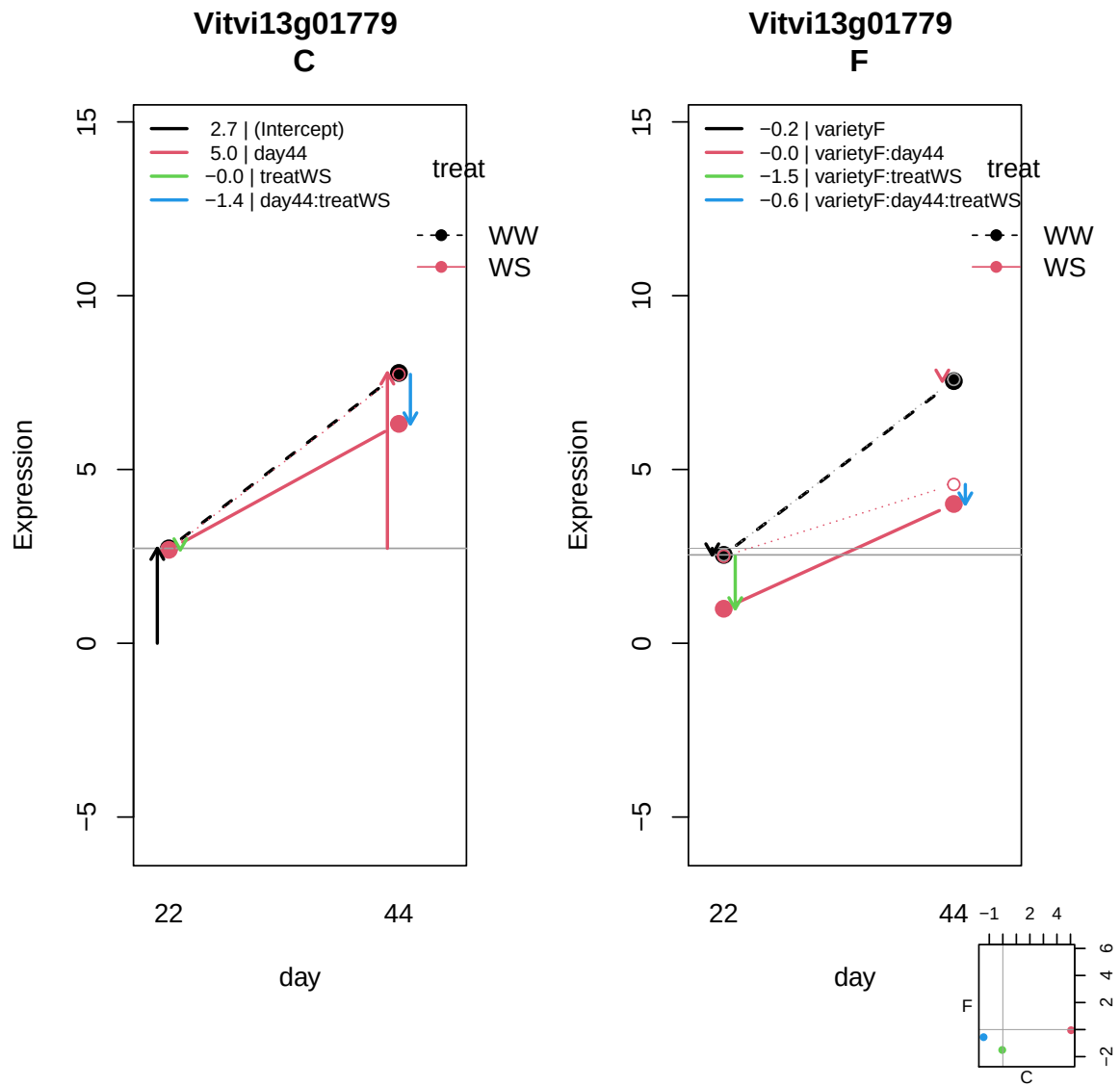
> fit1[varname,]$coefficients
              (Intercept)  varietyF  day44  treatWS
Vitvi13g01779           2.73   -0.1875 5.0475 -0.0425
              varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi13g01779          -0.0475          -1.5075          -1.4225
              varietyF:day44:treatWS
Vitvi13g01779          -0.5625

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

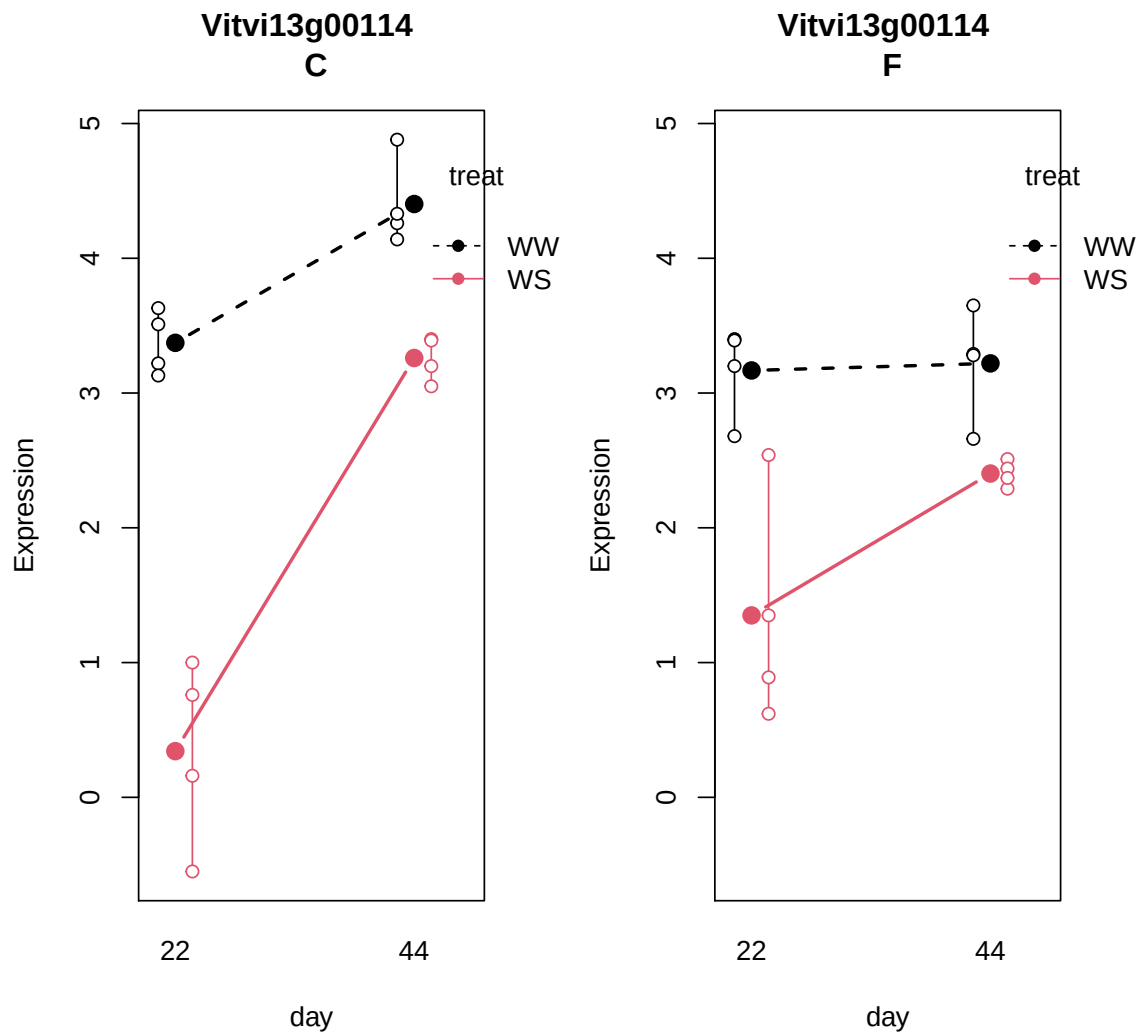
8.3 treatWS

8.3.1 Vitvi13g00114

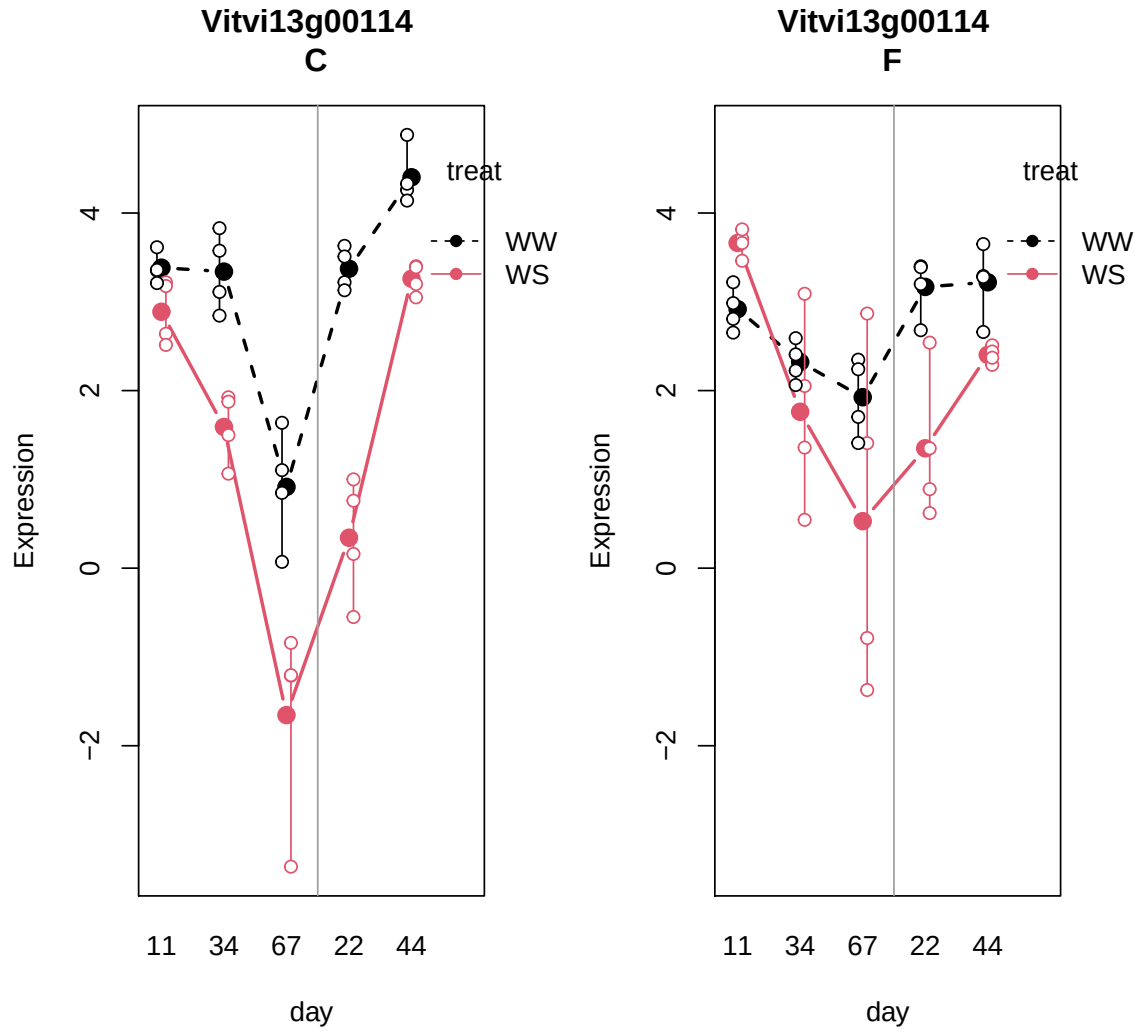
Coefficient treatWS for Vitvi13g00114.

```
> tt[varname,]
              logFC AveExpr          t      P.Value
Vitvi13g00114 -3.03  2.689687 -9.72406 3.028195e-10
              adj.P.Val          B
Vitvi13g00114 4.615575e-06 13.26487

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



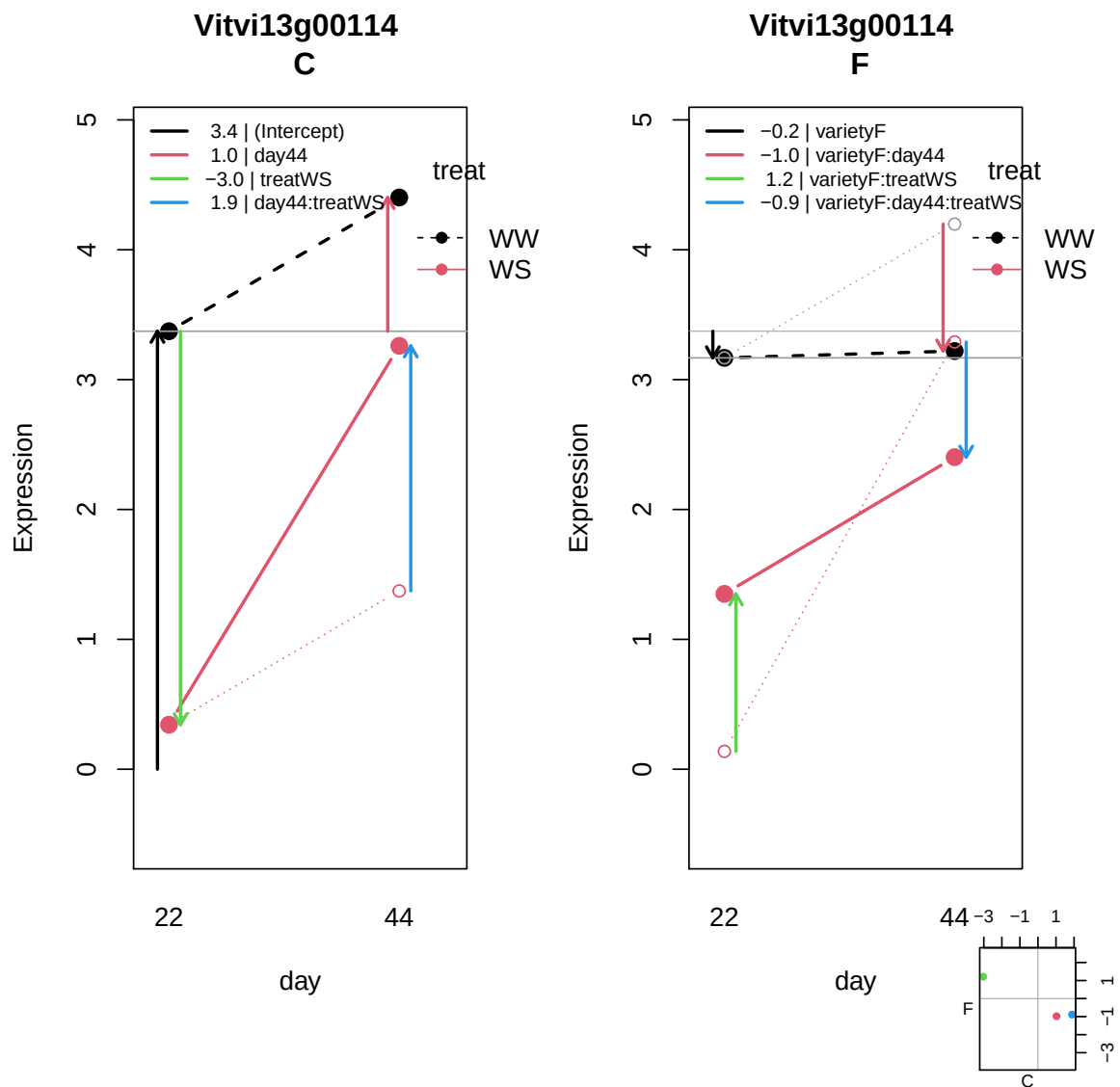
```

> fit1[varname,]$coefficients

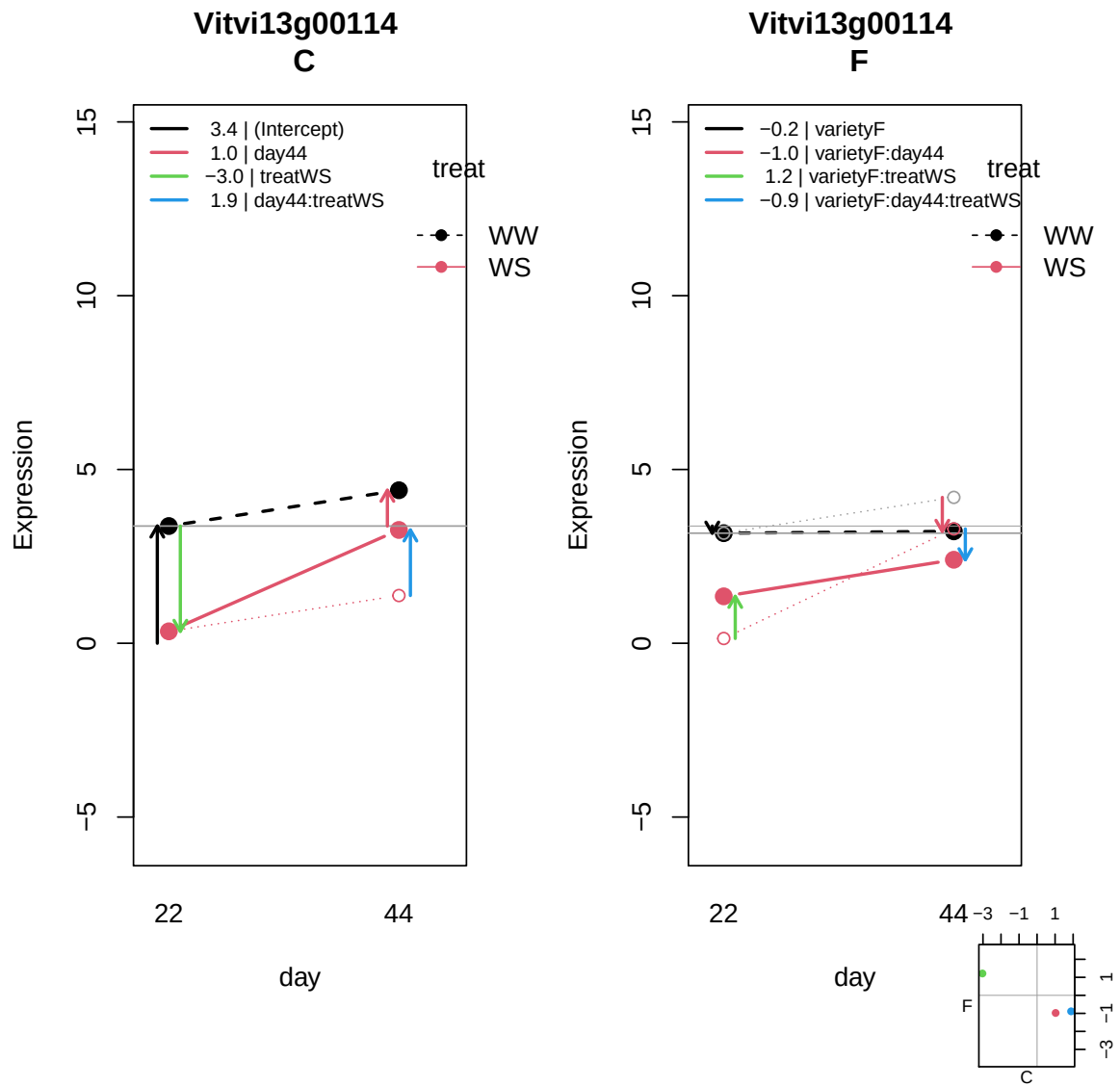
      (Intercept) varietyF day44 treatWS
Vitvi13g00114      3.3725   -0.205   1.03   -3.03
      varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi13g00114      -0.9775         1.2125         1.8875
      varietyF:day44:treatWS
Vitvi13g00114          -0.8875

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```




```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

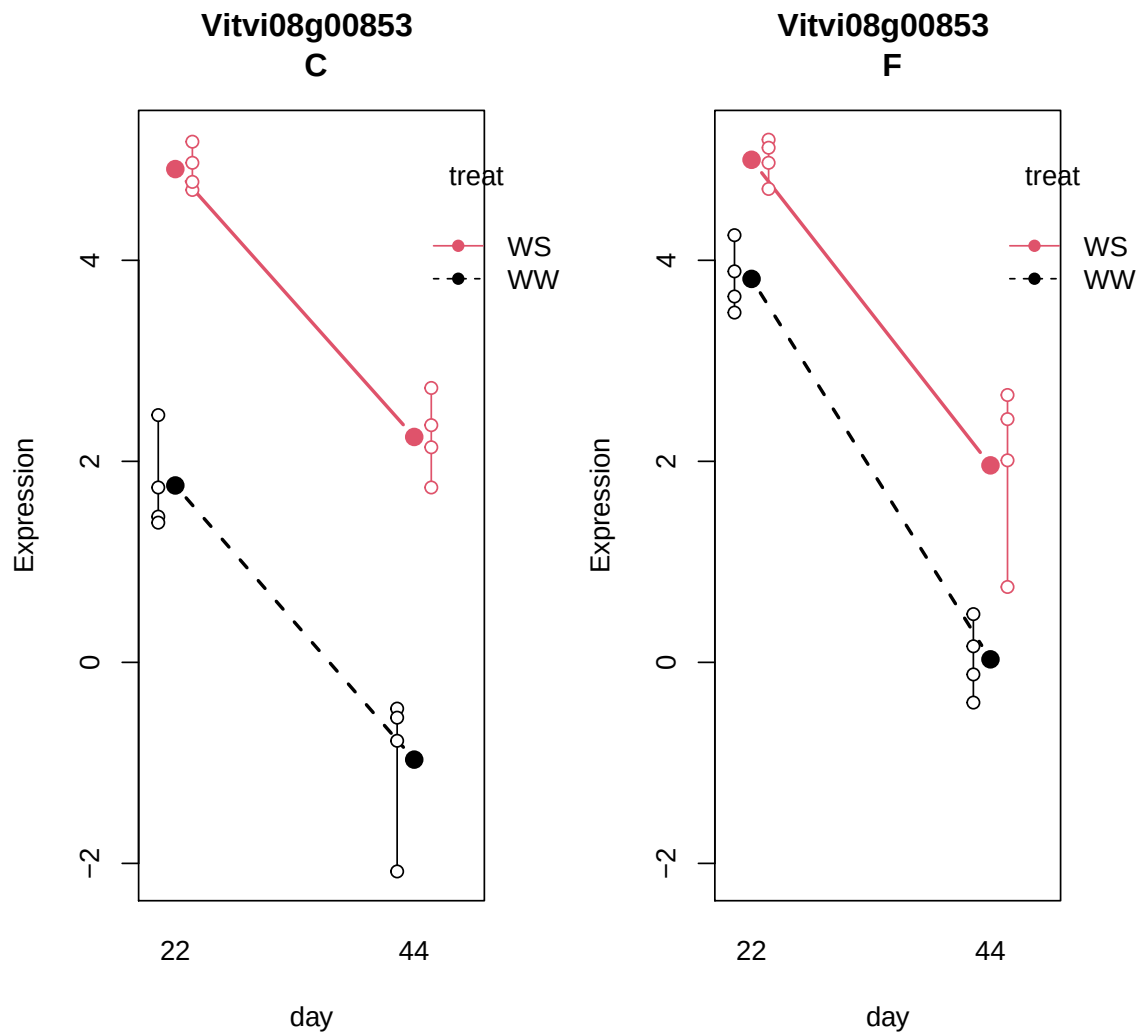
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

8.3.2 Vitvi08g00853

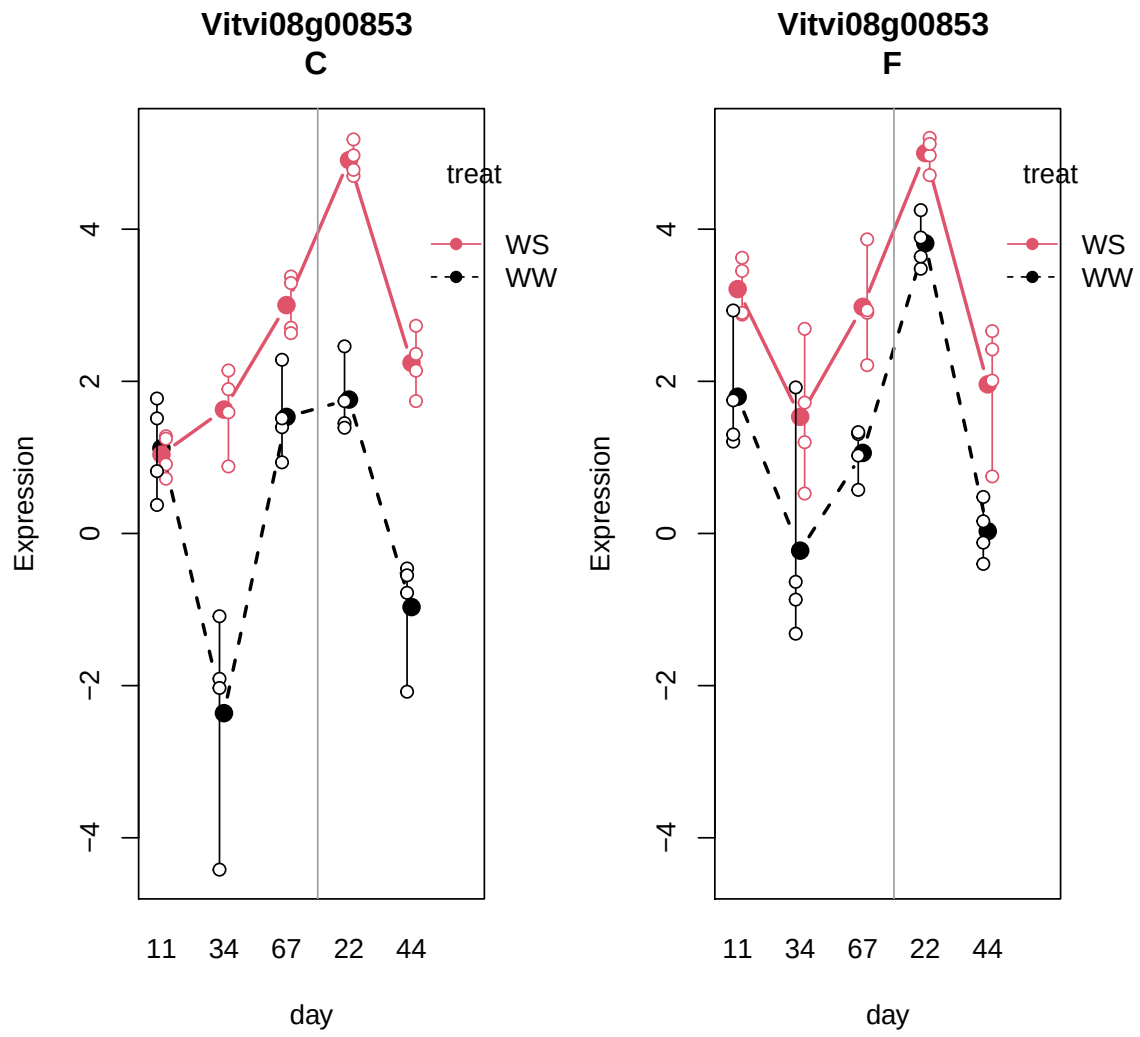
Coefficient treatWS for Vitvi08g00853.

```
> tt[varname,]
          logFC AveExpr      t      P.Value
Vitvi08g00853 3.1475 2.343437 9.167211 1.025299e-09
          adj.P.Val      B
Vitvi08g00853 7.390864e-06 12.14461

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

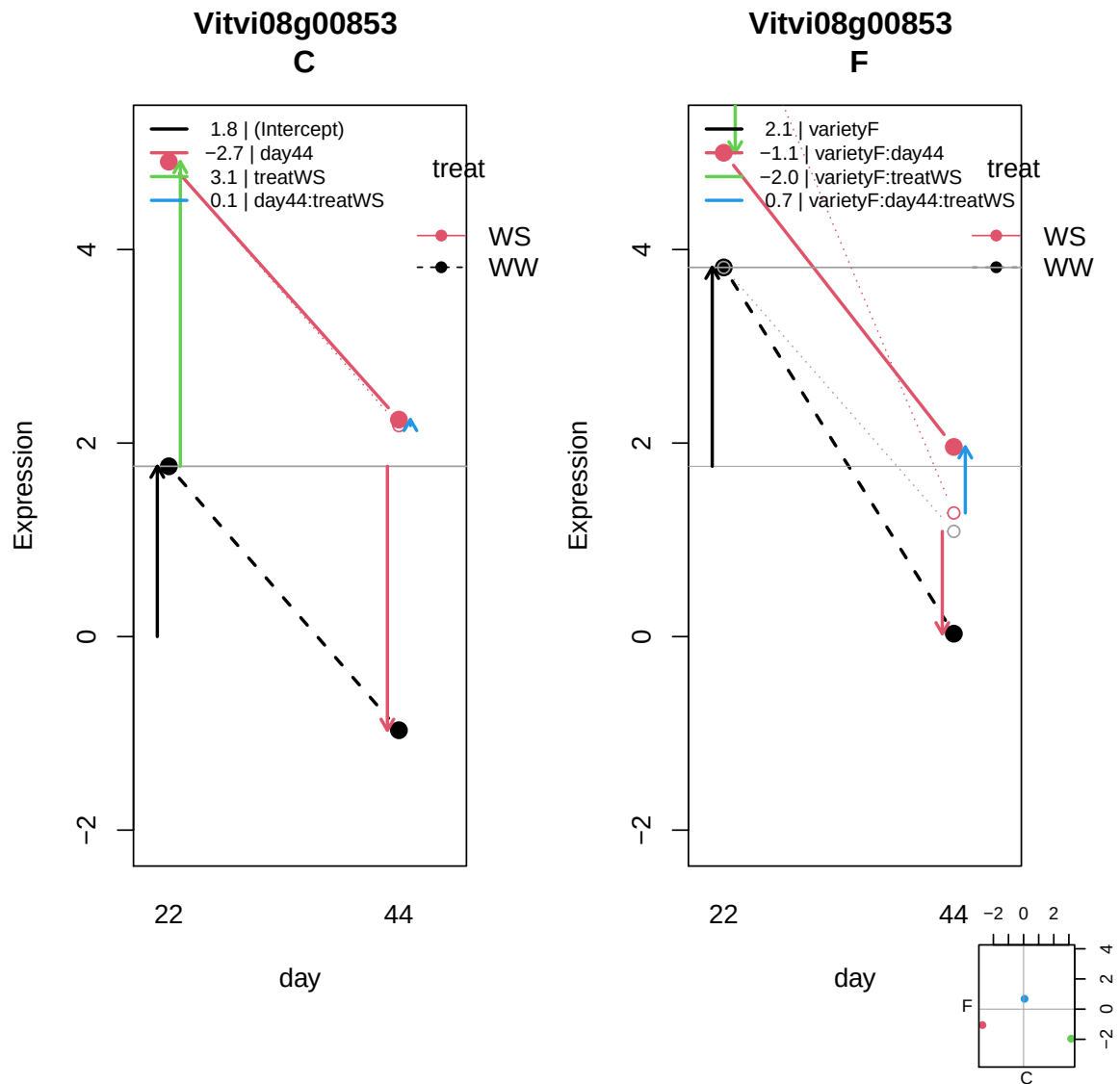


```

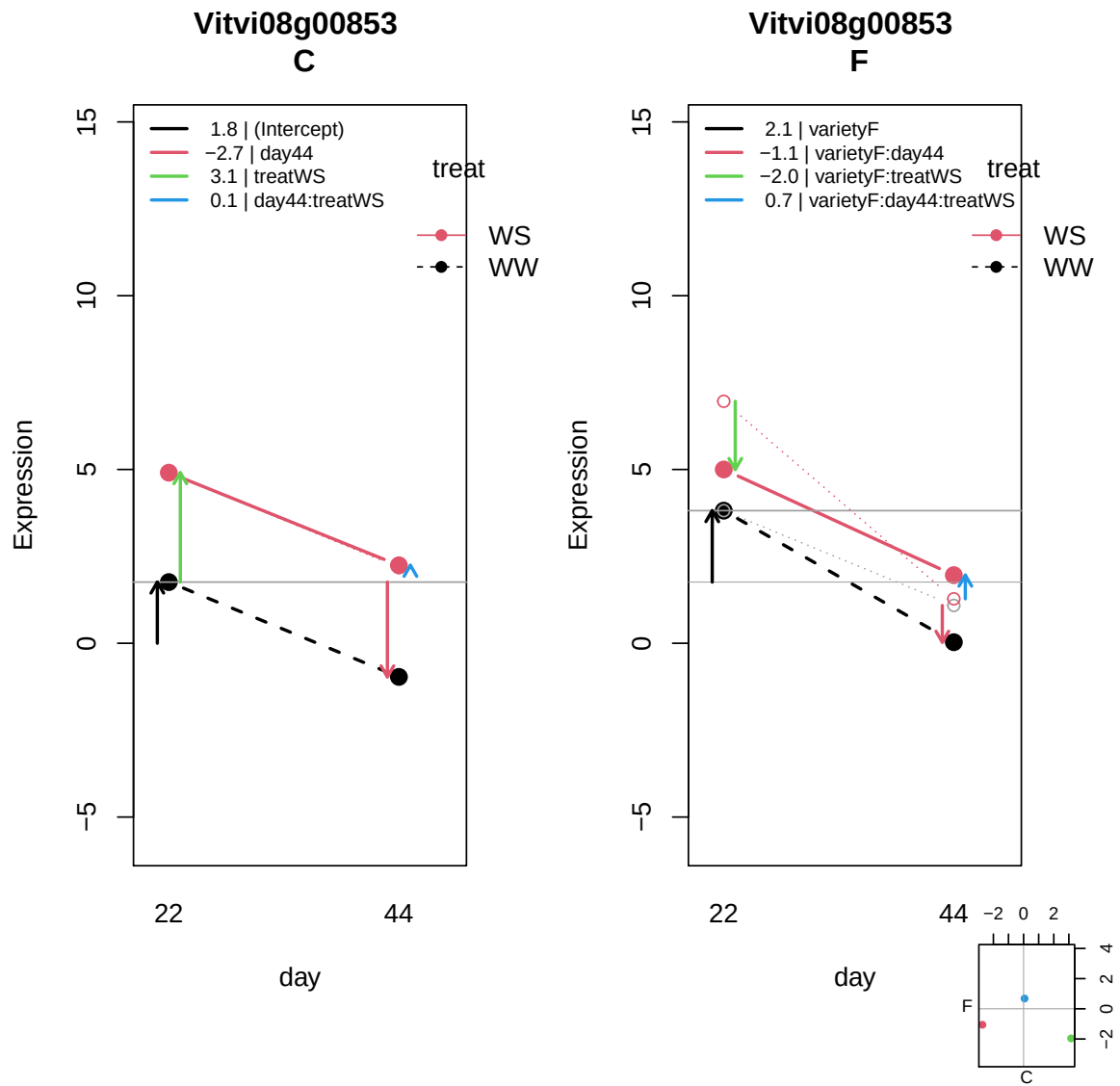
> fit1[varname,]$coefficients
              (Intercept)  varietyF    day44  treatWS
Vitvi08g00853           1.76    2.055 -2.7275  3.1475
              varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi08g00853          -1.0575          -1.9625          0.0625
              varietyF:day44:treatWS
Vitvi08g00853              0.6825

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

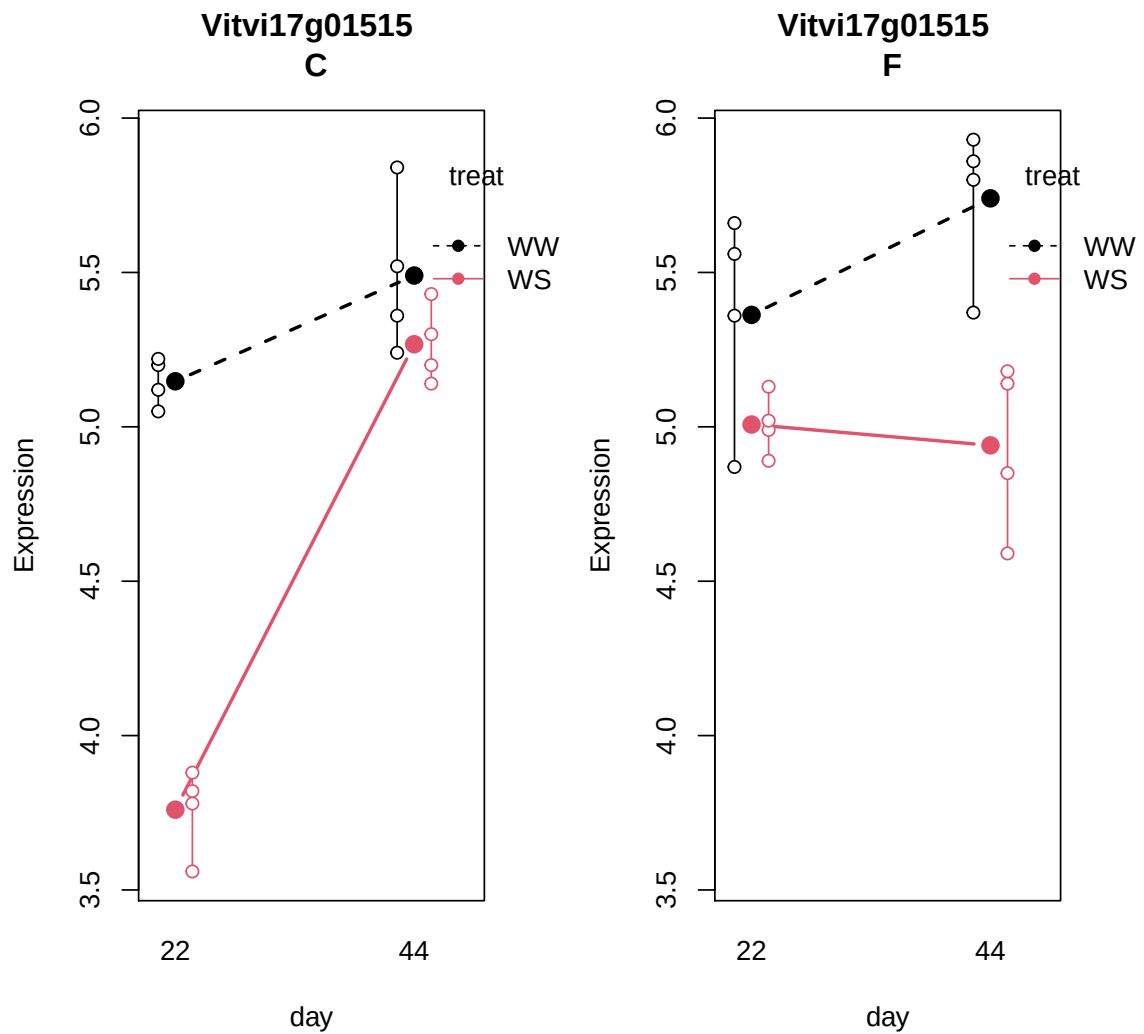
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

8.3.3 Vitvi17g01515

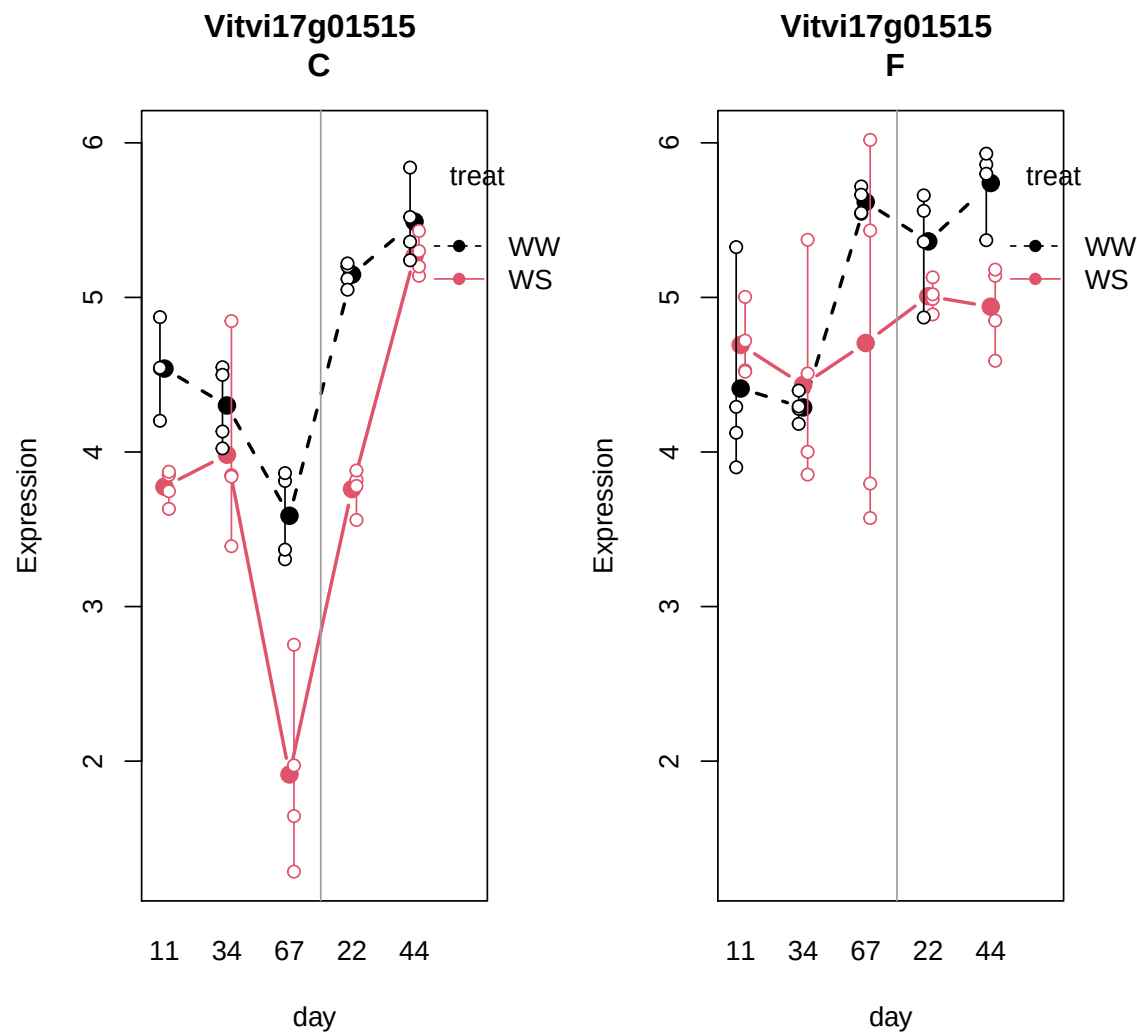
Coefficient treatWS for Vitvi17g01515.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi17g01515 -1.3875 5.089375 -9.010819 1.454704e-09
      adj.P.Val      B
Vitvi17g01515 7.390864e-06 11.82159

> plot.interactions(varname, phdata=pd, data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



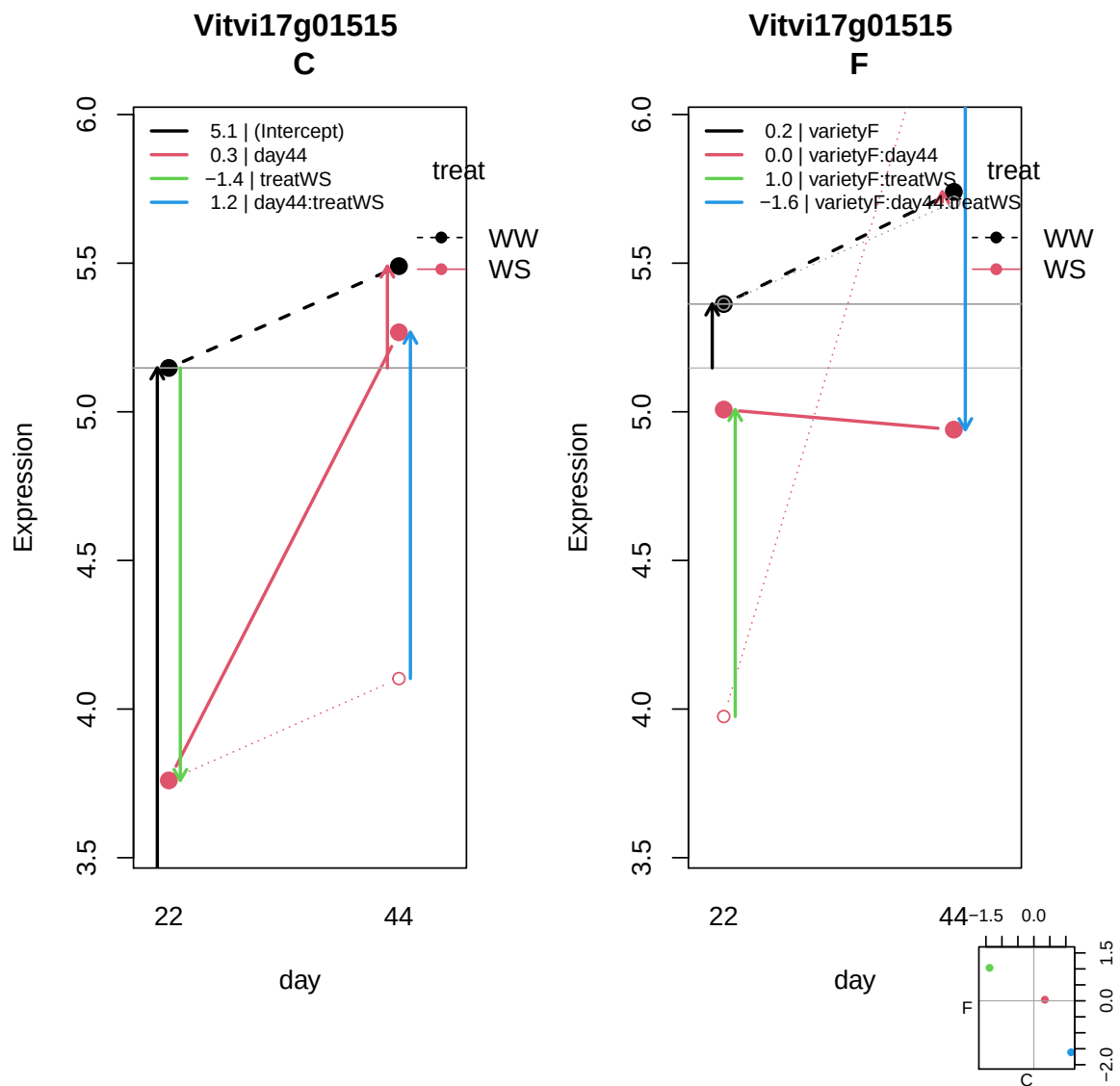
```

> fit1[varname,]$coefficients

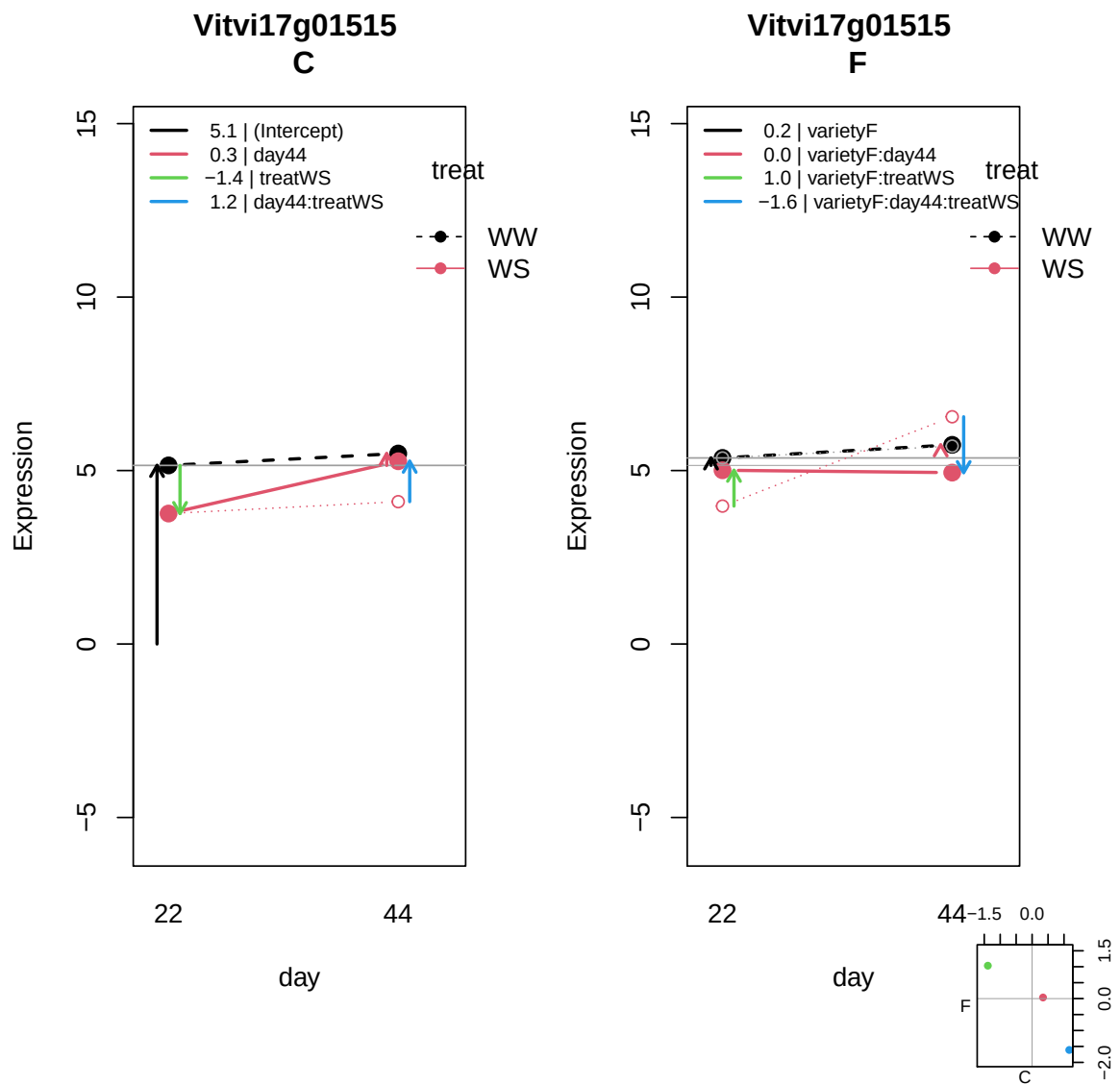
      (Intercept) varietyF  day44 treatWS
Vitvi17g01515      5.1475    0.215 0.3425 -1.3875
      varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi17g01515      0.035          1.0325          1.165
      varietyF:day44:treatWS
Vitvi17g01515          -1.61

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

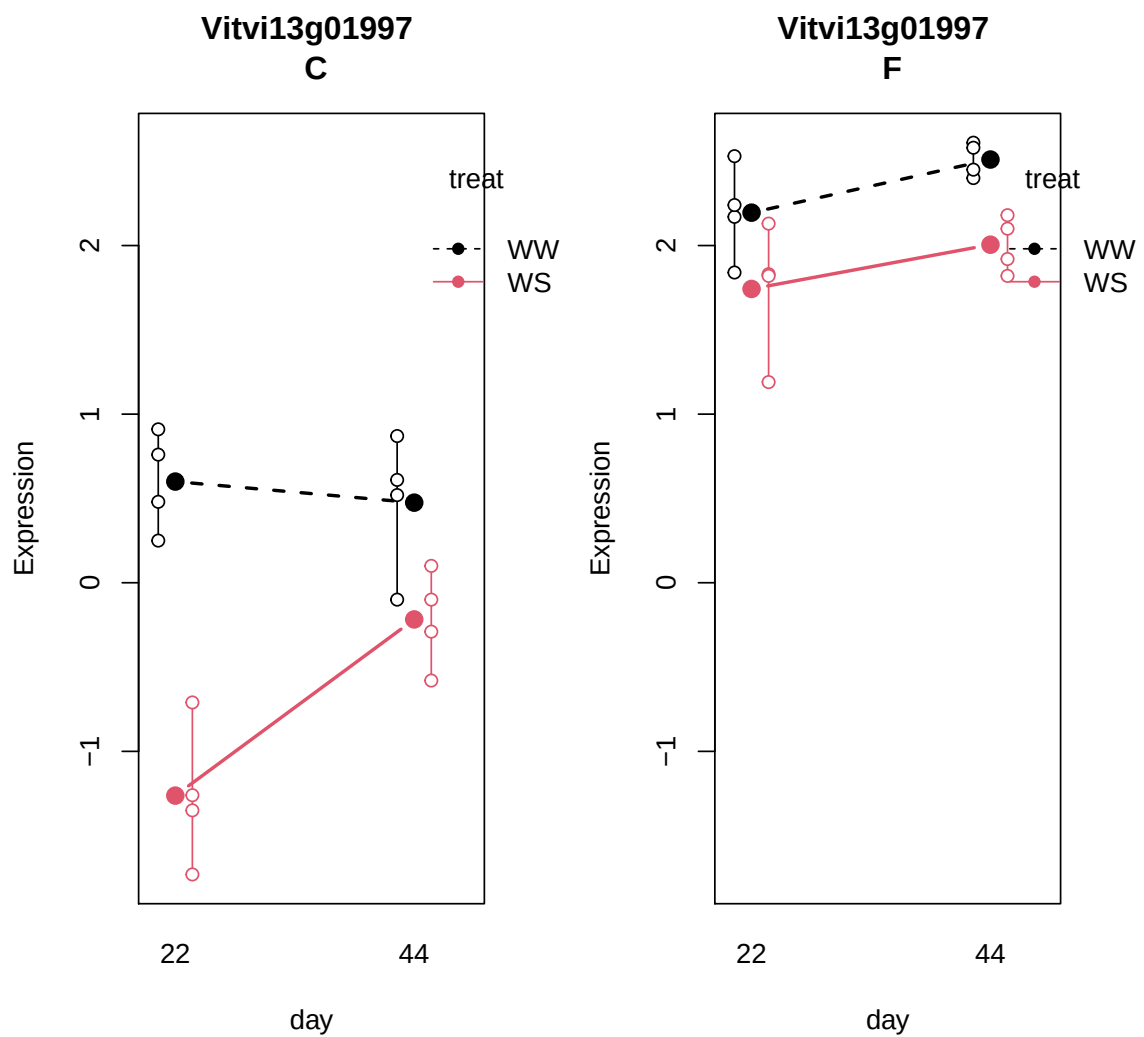
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

8.3.4 Vitvi13g01997

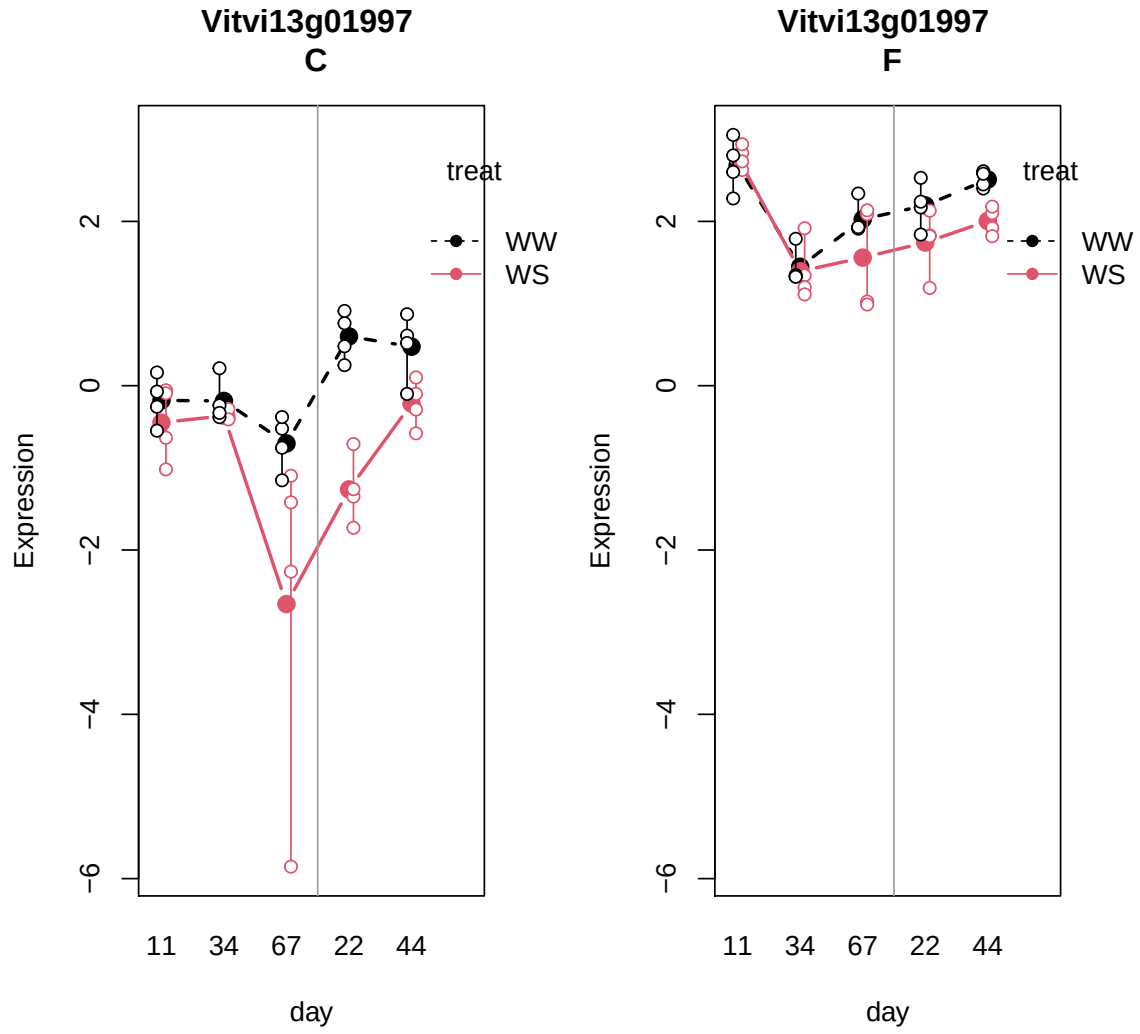
Coefficient treatWS for Vitvi13g01997.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi13g01997 -1.8625 1.005937 -8.615828 3.570437e-09
      adj.P.Val      B
Vitvi13g01997 1.136981e-05 10.98928

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

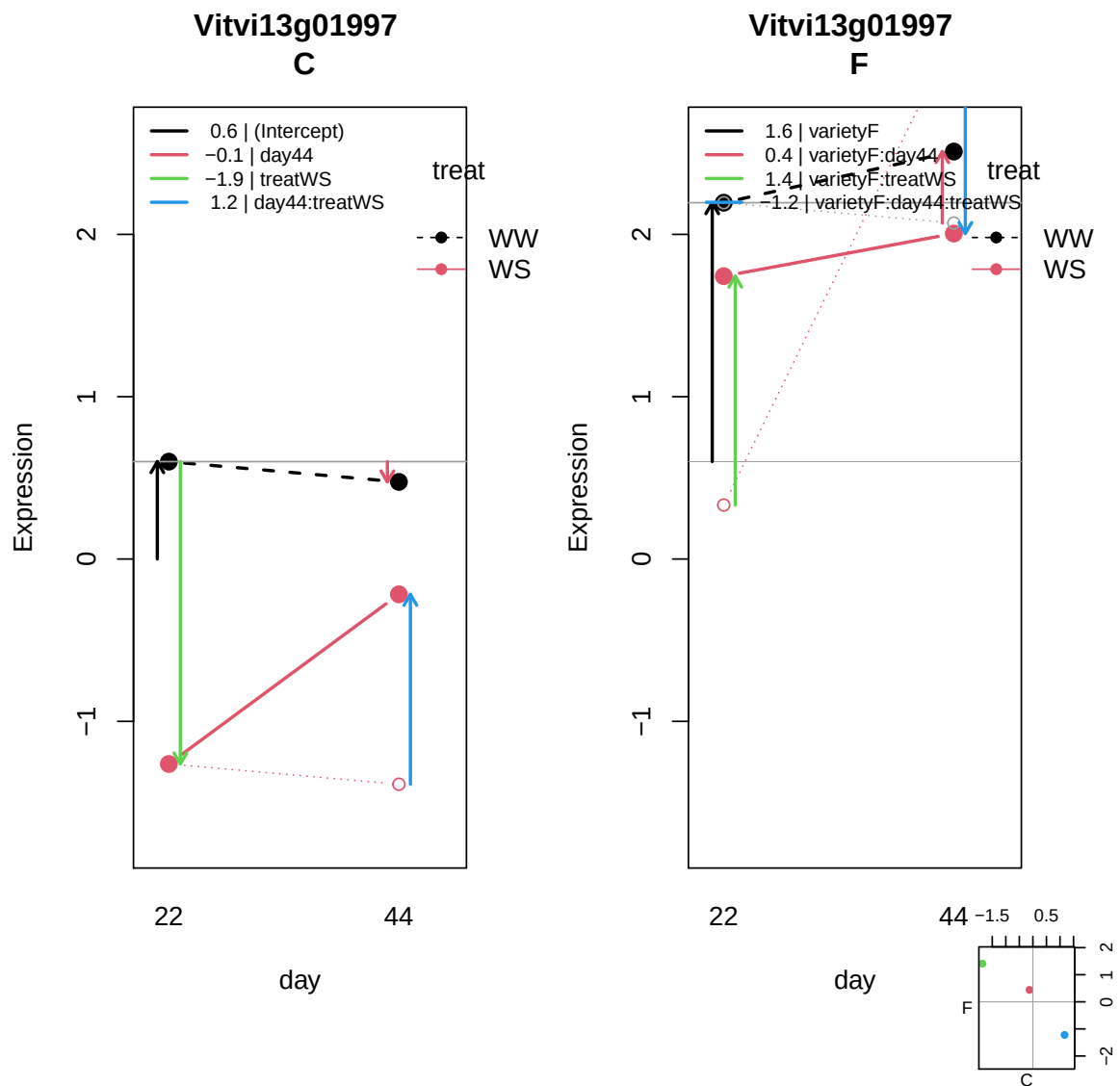


```

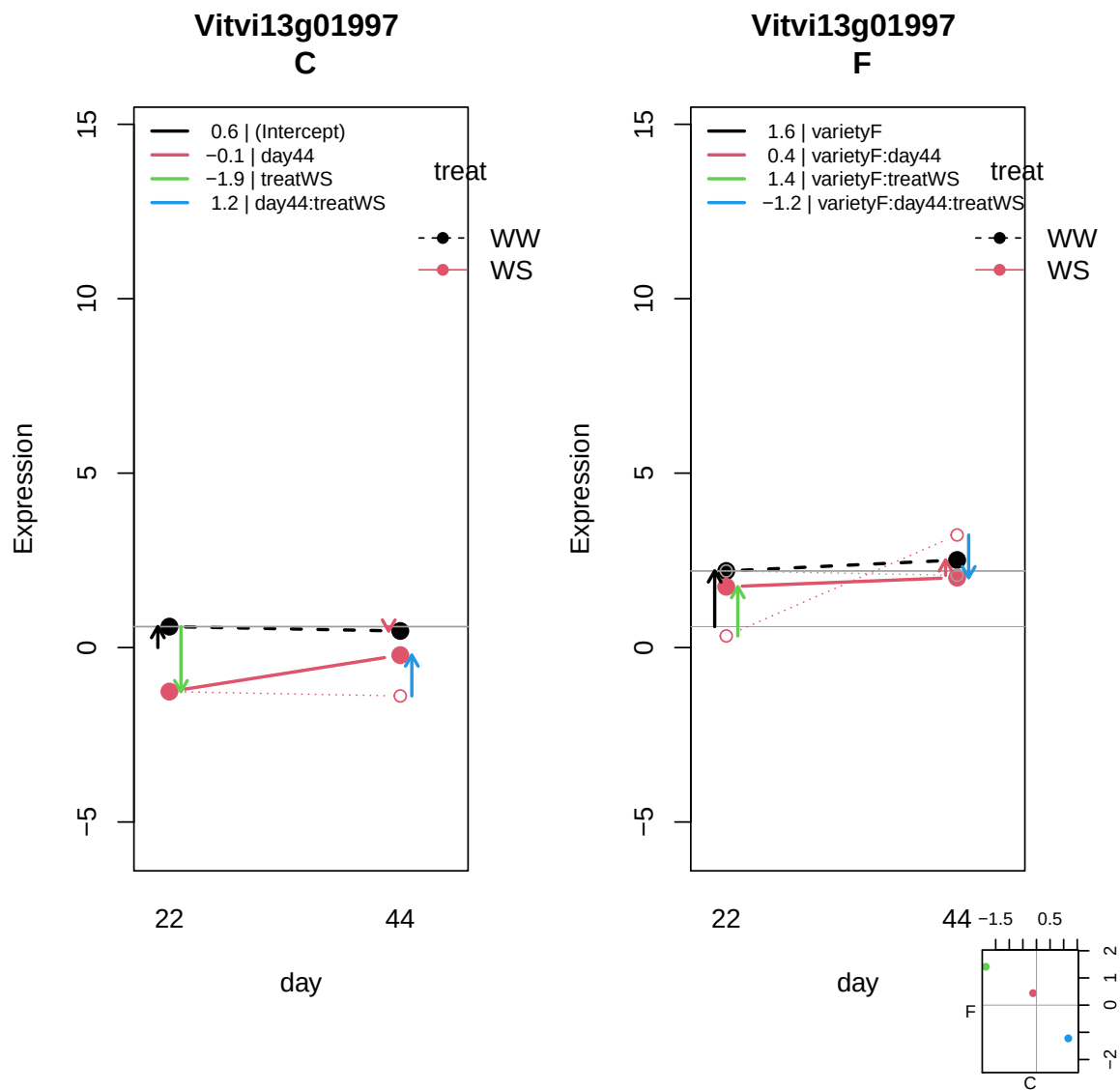
> fit1[varname,]$coefficients
              (Intercept) varietyF  day44 treatWS
Vitvi13g01997           0.6    1.595 -0.125 -1.8625
              varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi13g01997           0.44              1.41              1.17
              varietyF:day44:treatWS
Vitvi13g01997           -1.2225

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



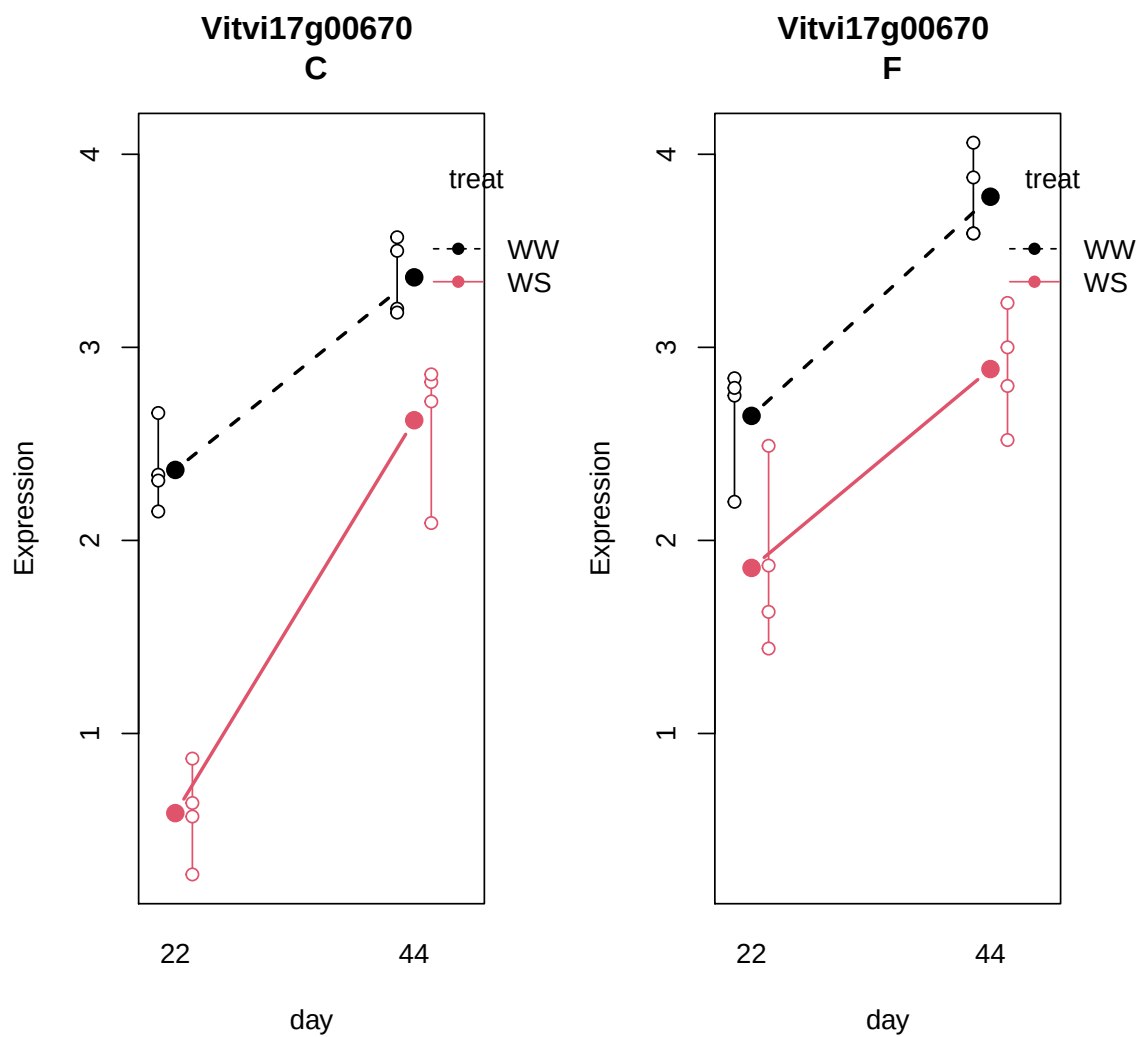
Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

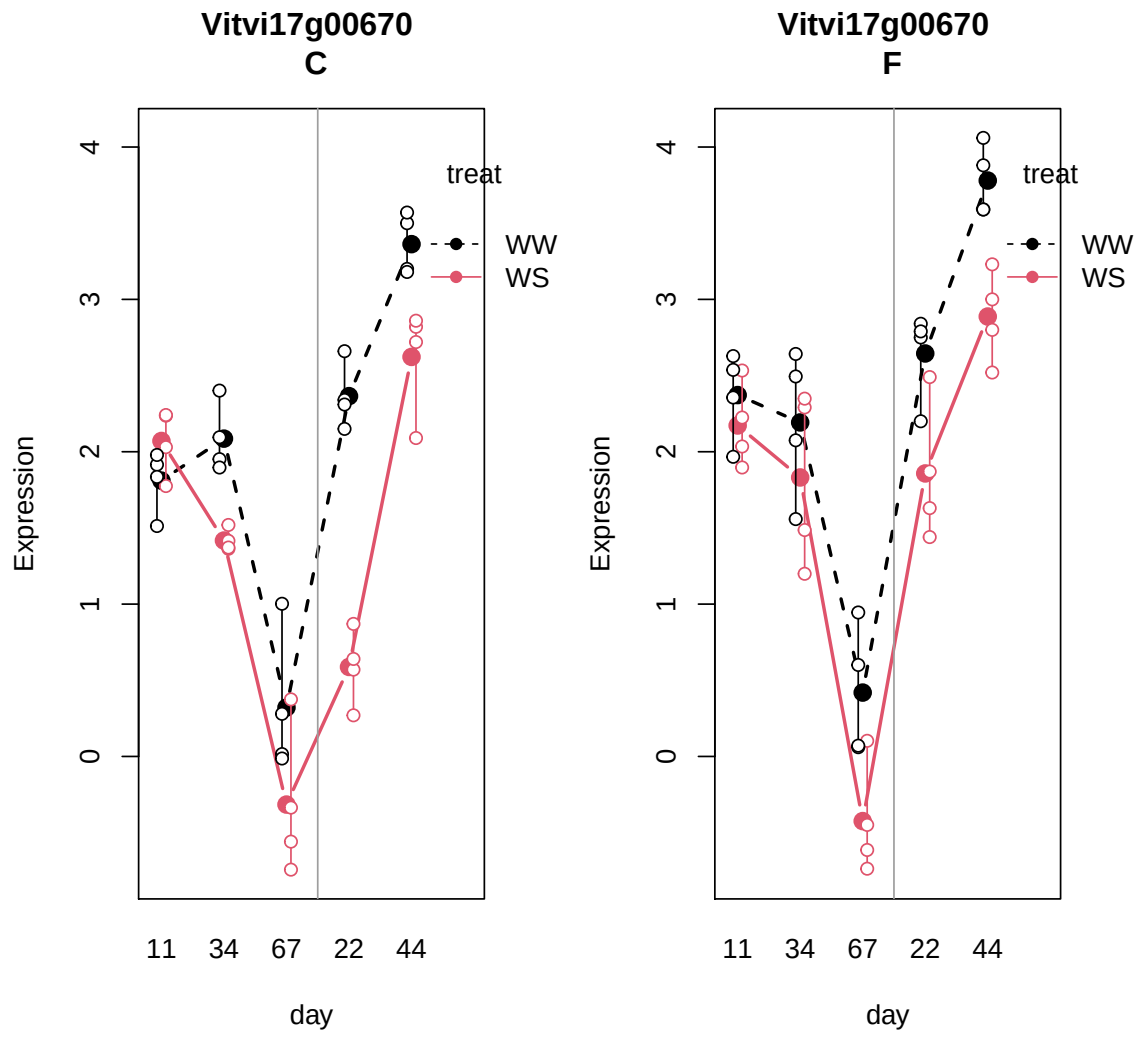
8.3.5 Vitvi17g00670

Coefficient treatWS for Vitvi17g00670.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi17g00670 -1.7775 2.513437 -8.596851 3.729764e-09
      adj.P.Val      B
Vitvi17g00670 1.136981e-05 10.9487
> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

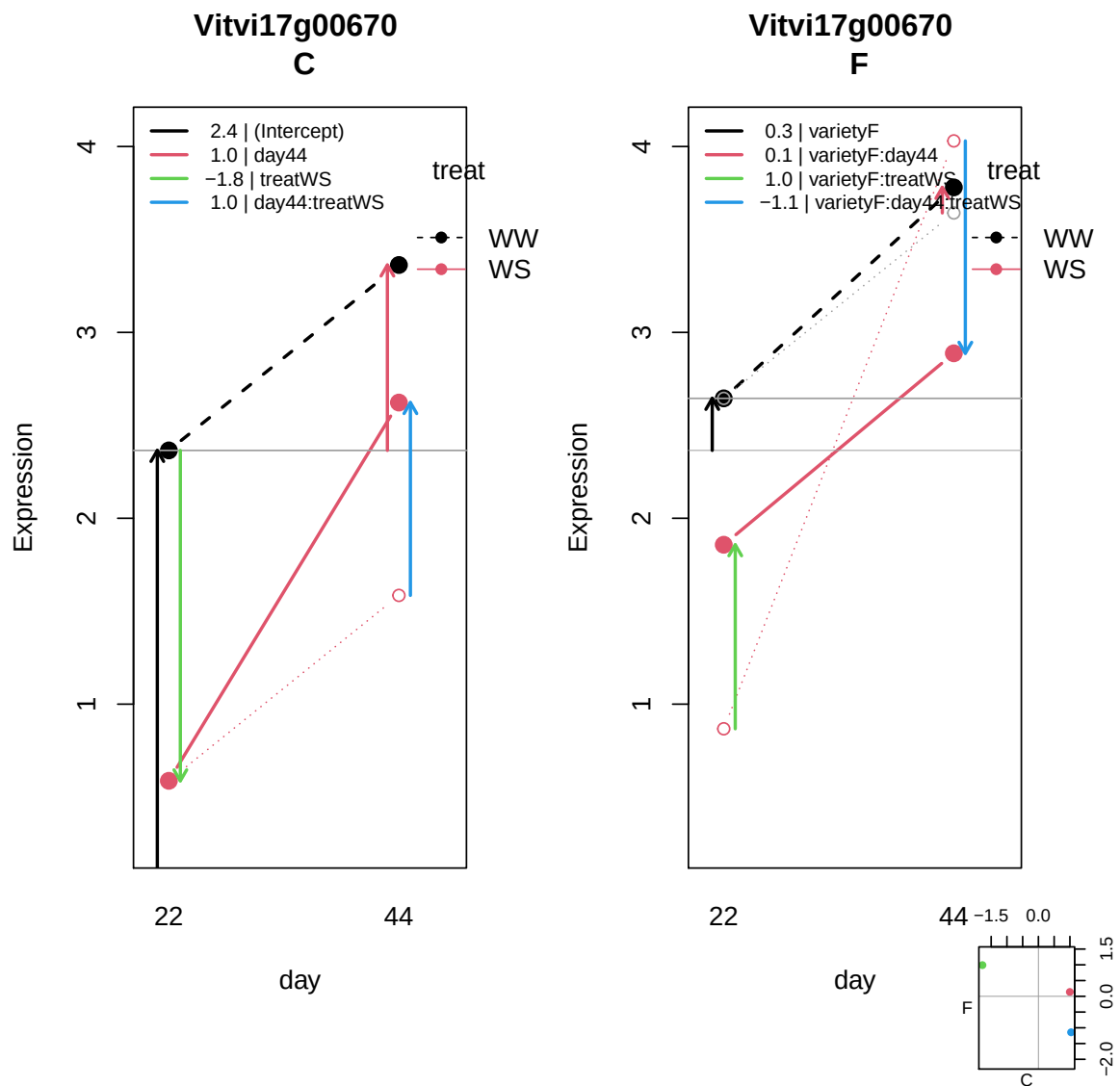


```

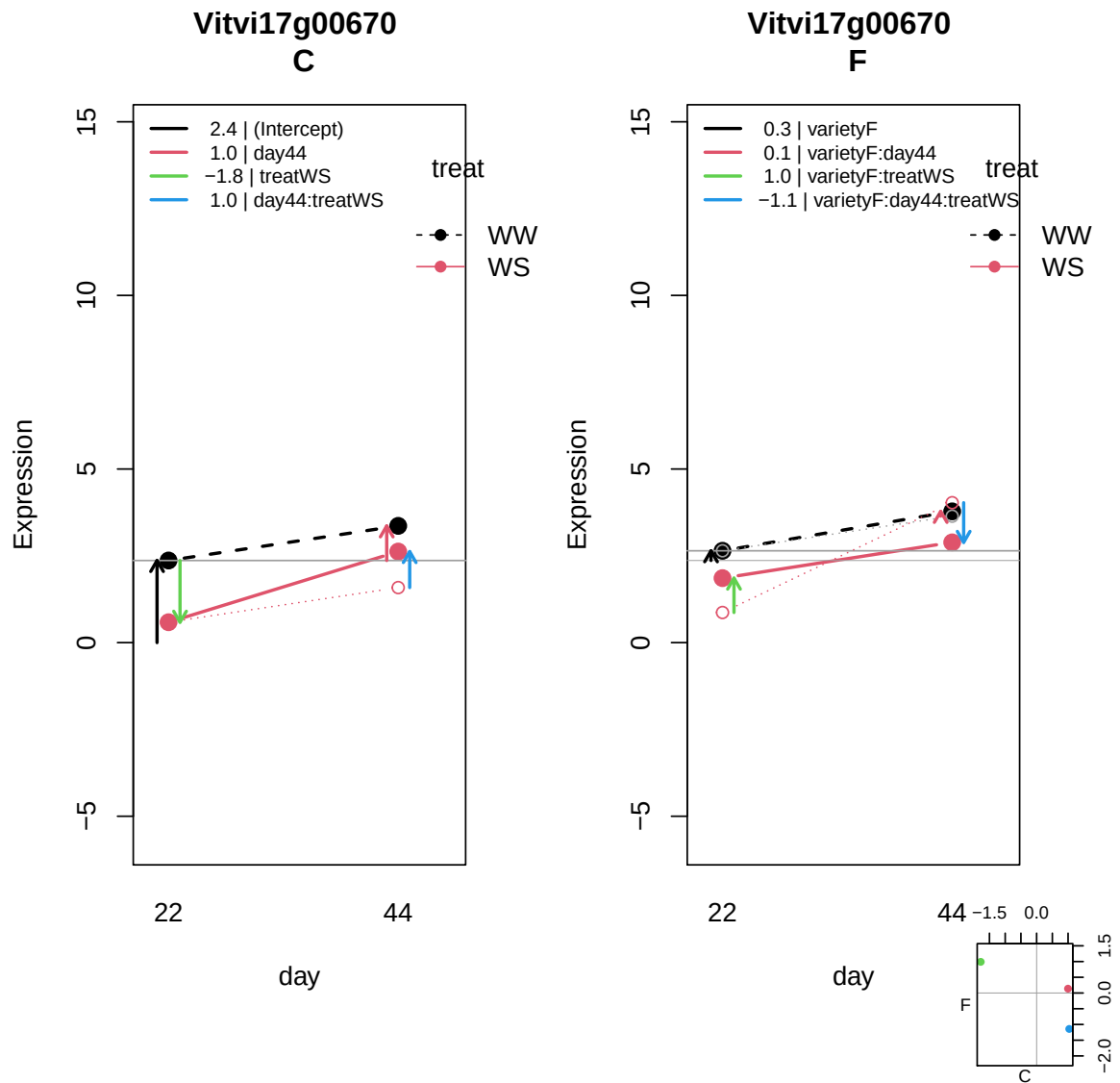
> fit1[varname,]$coefficients
              (Intercept) varietyF  day44 treatWS
Vitvi17g00670          2.365      0.28 0.9975 -1.7775
              varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi17g00670          0.1375              0.99          1.0375
              varietyF:day44:treatWS
Vitvi17g00670          -1.1425

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

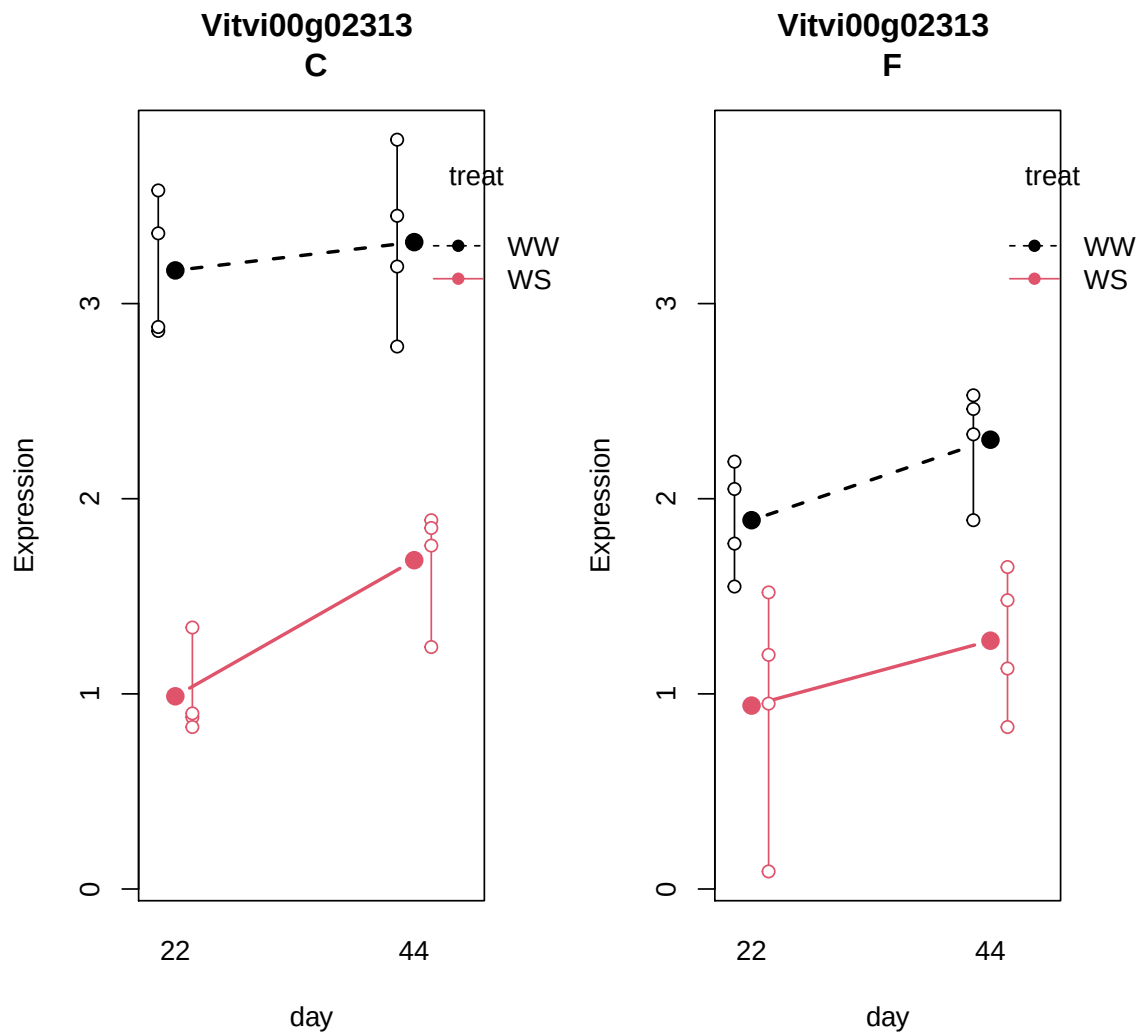
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

8.3.6 Vitvi00g02313

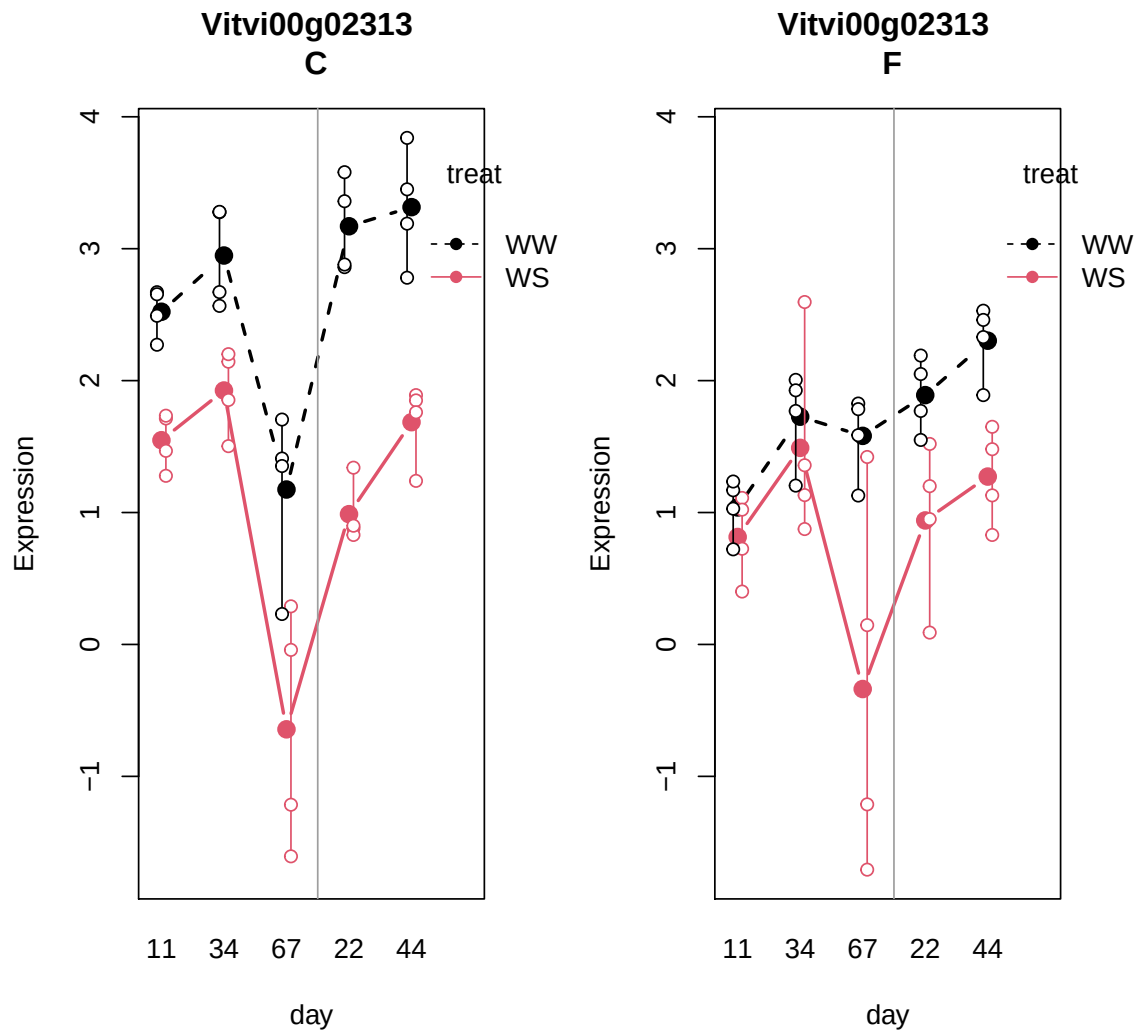
Coefficient treatWS for Vitvi00g02313.

```
> tt[varname,]
               logFC  AveExpr          t      P.Value
Vitvi00g02313 -2.1825  1.945312 -8.437343 5.393481e-09
               adj.P.Val          B
Vitvi00g02313 1.247788e-05 10.60545

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

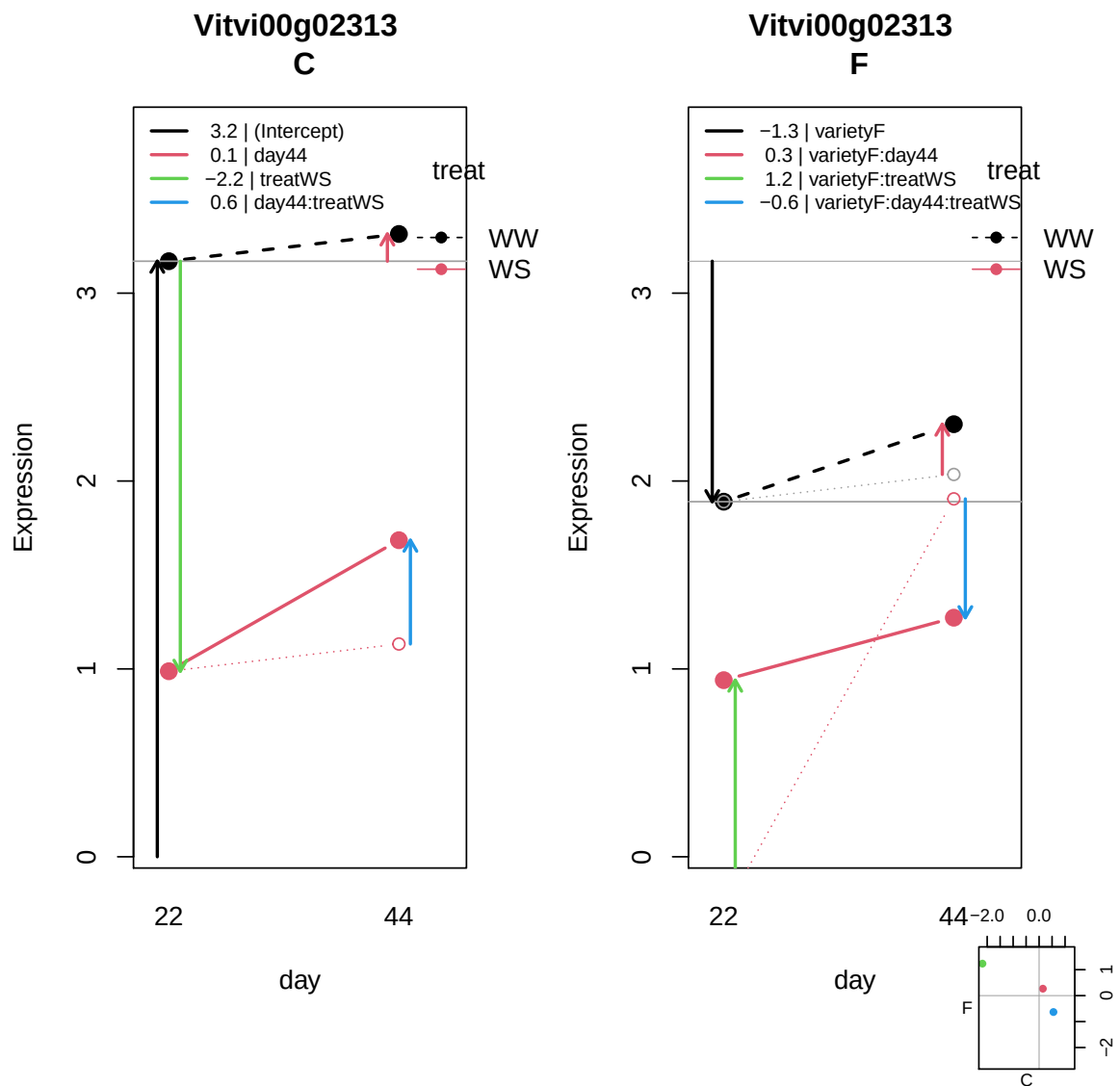



```

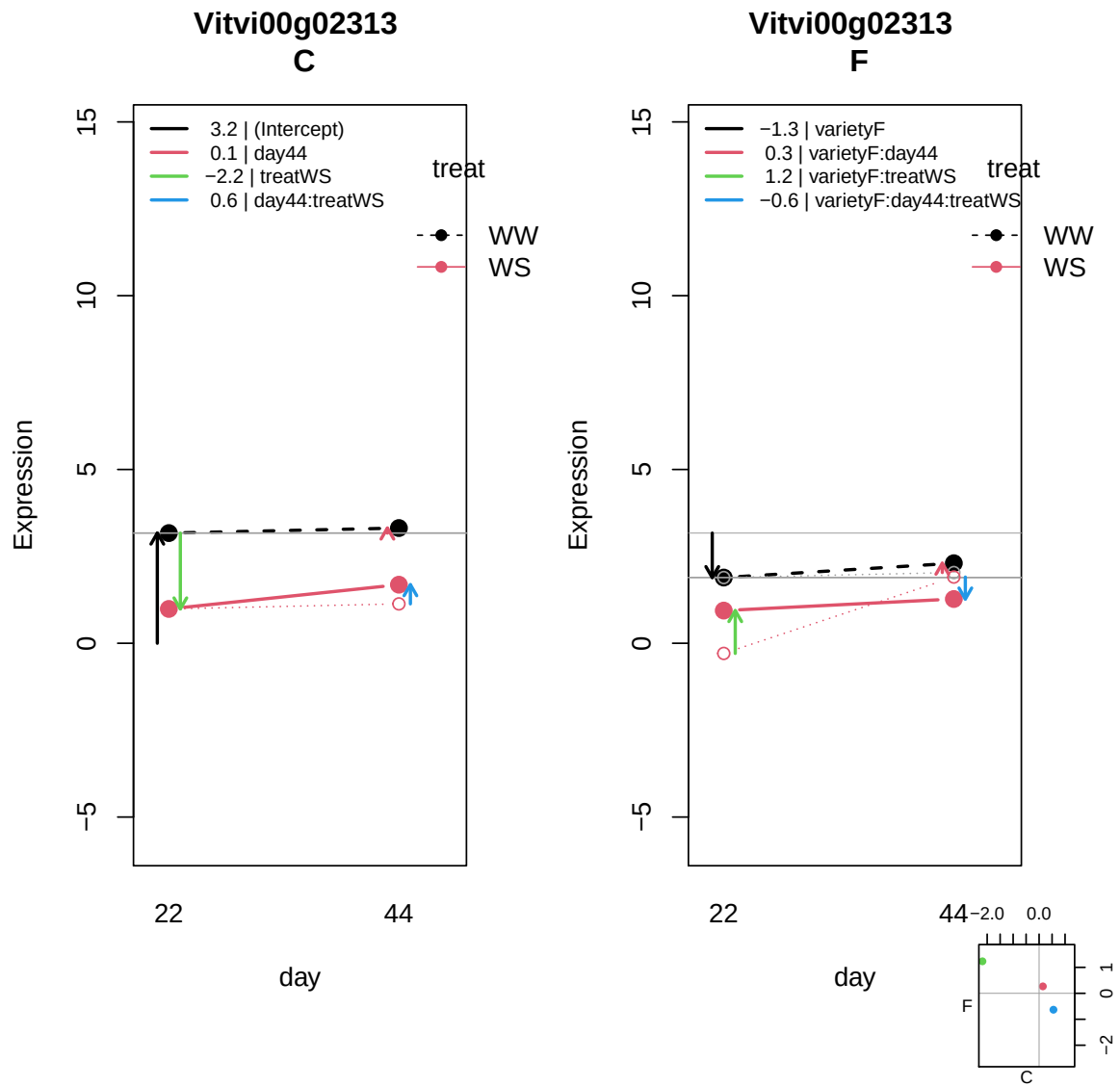
> fit1[varname,]$coefficients
              (Intercept) varietyF day44 treatWS
Vitvi00g02313           3.17    -1.28 0.145 -2.1825
              varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi00g02313           0.2675           1.2325           0.5525
              varietyF:day44:treatWS
Vitvi00g02313           -0.6325

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

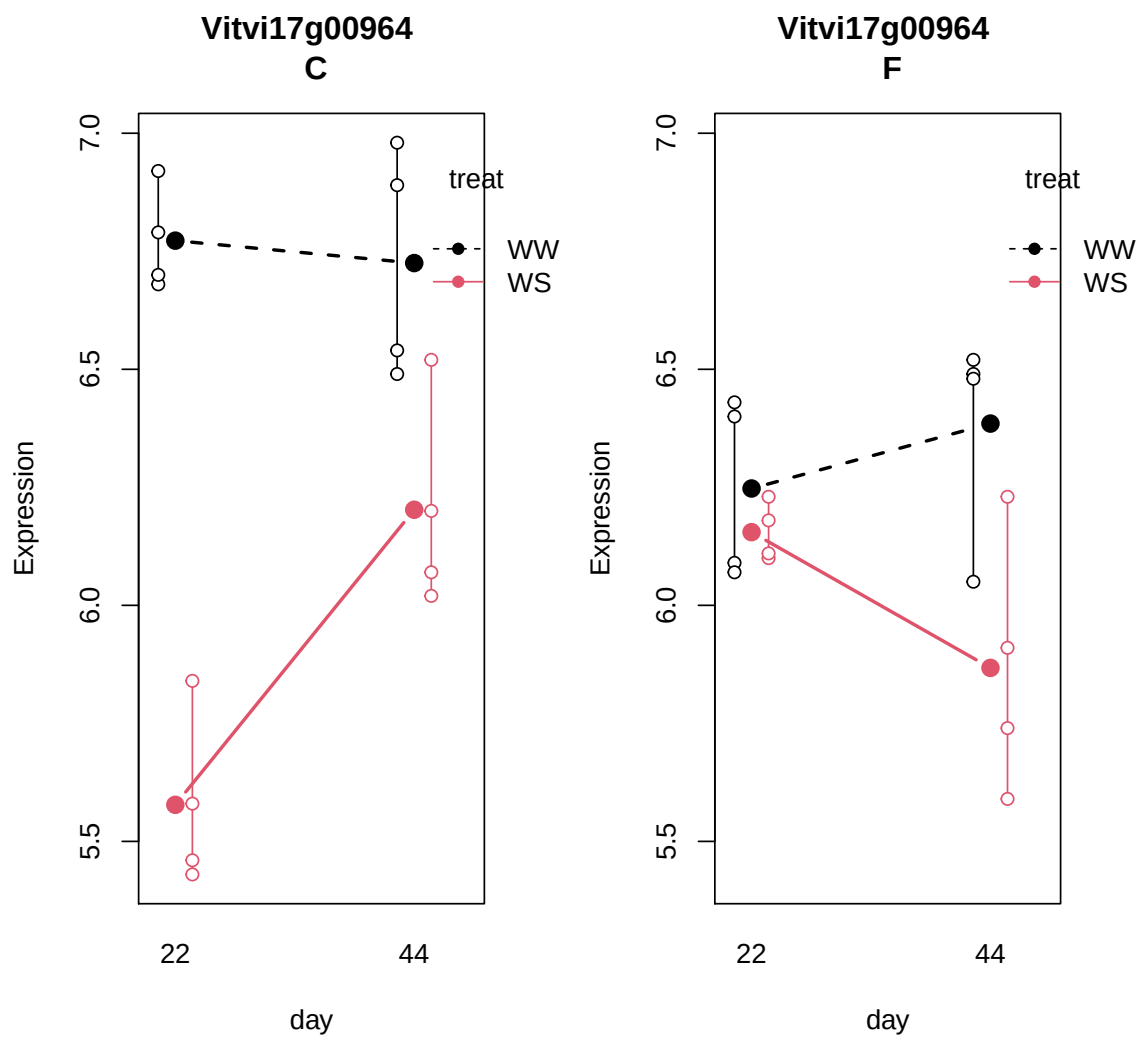
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

8.3.7 Vitvi17g00964

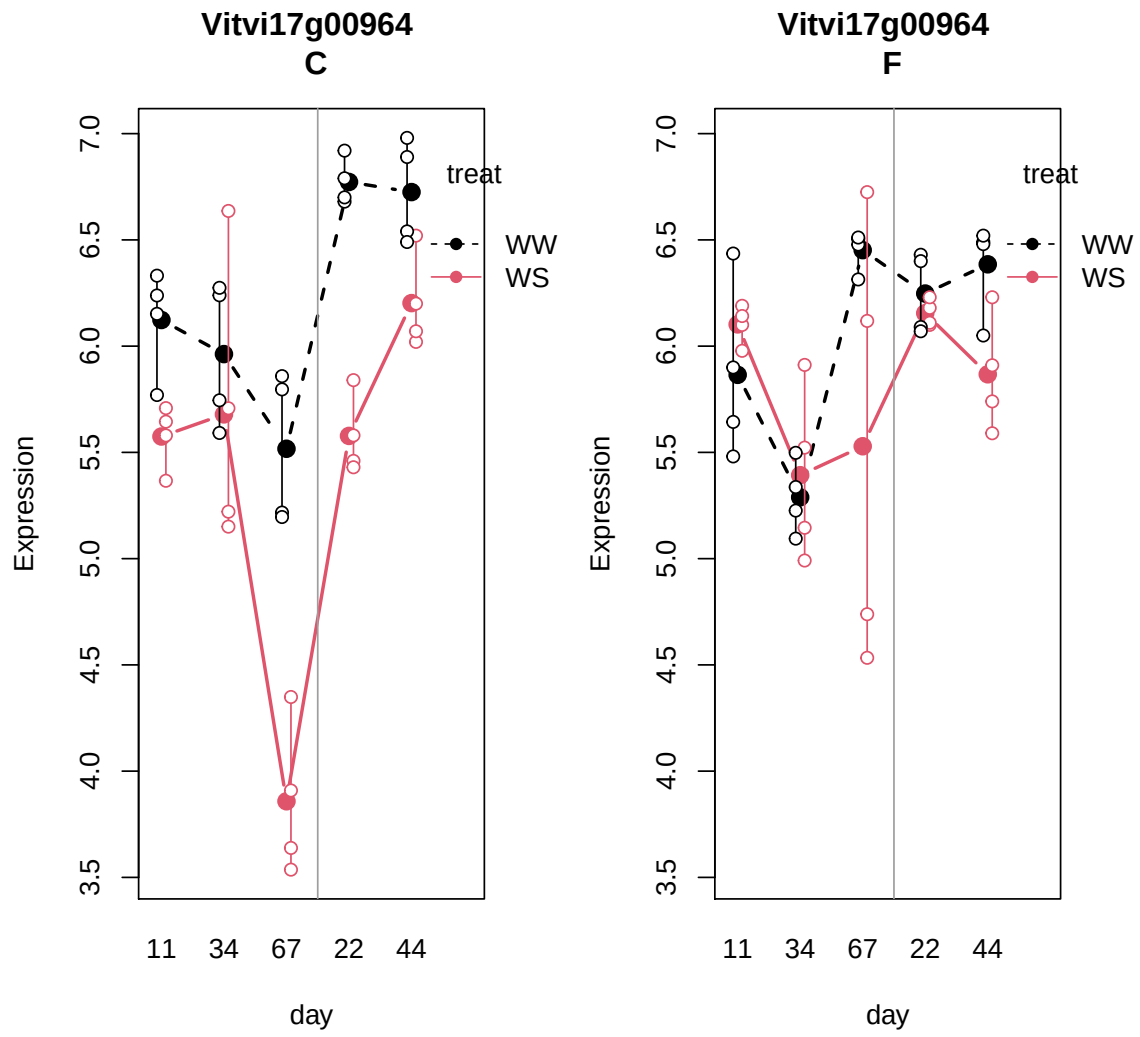
Coefficient treatWS for Vitvi17g00964.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi17g00964 -1.195 6.241562 -8.349233 6.621894e-09
      adj.P.Val      B
Vitvi17g00964 1.247788e-05 10.41419

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



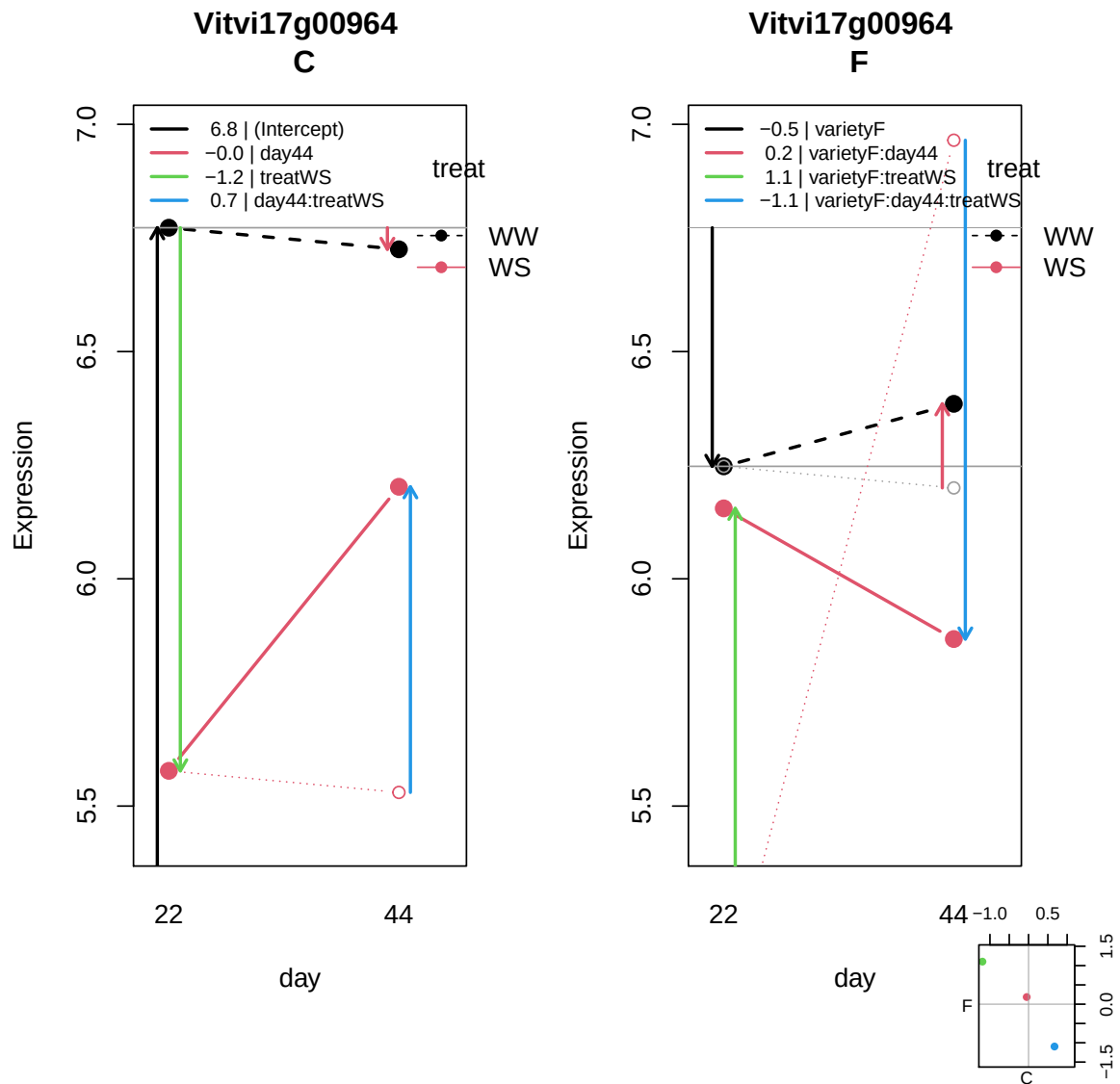
```

> fit1[varname,]$coefficients

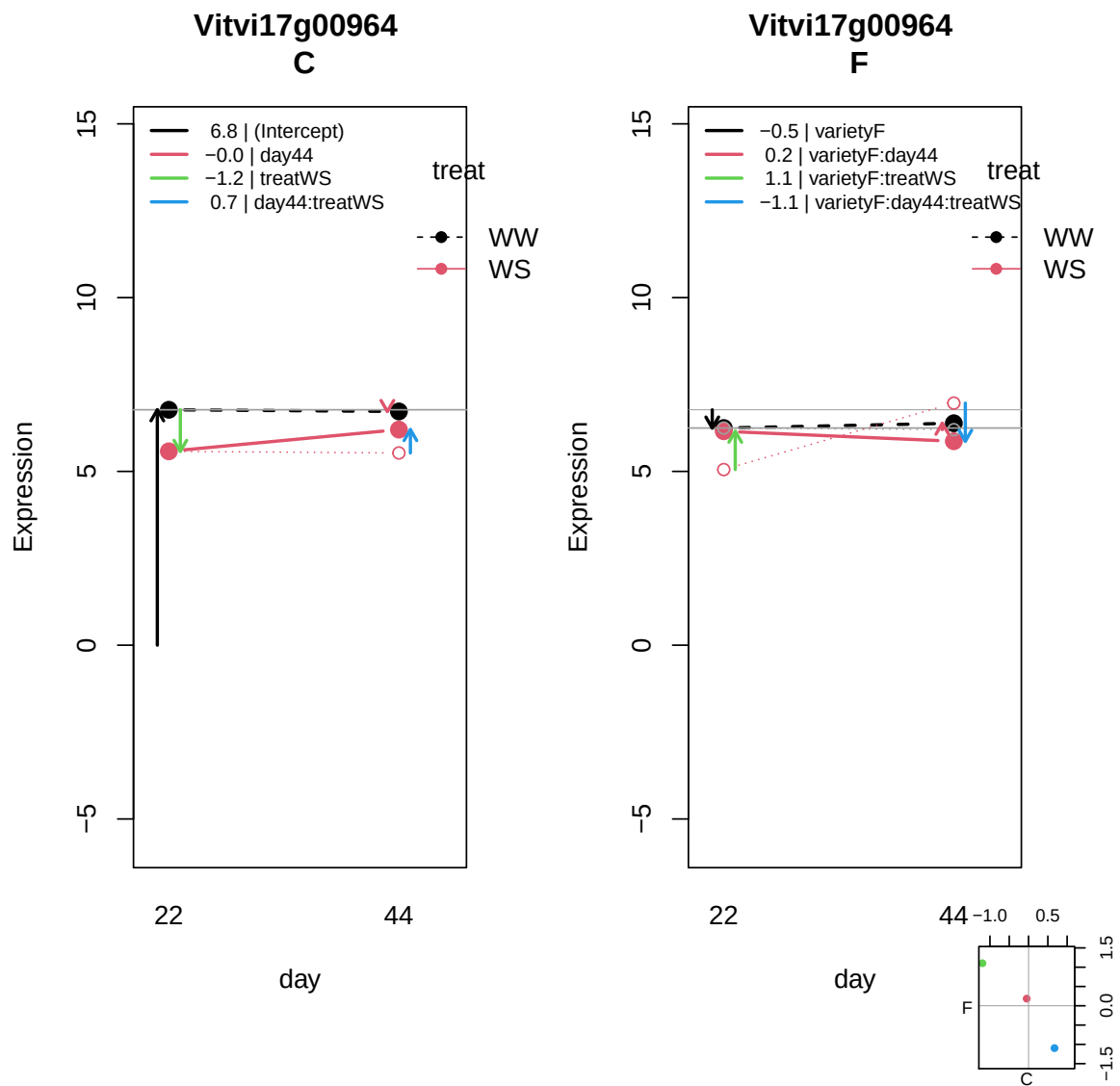
      (Intercept)  varietyF    day44  treatWS
Vitvi17g00964    6.7725   -0.525 -0.0475  -1.195
      varietyF:day44  varietyF:treatWS  day44:treatWS
Vitvi17g00964      0.185         1.1025         0.6725
      varietyF:day44:treatWS
Vitvi17g00964      -1.0975

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

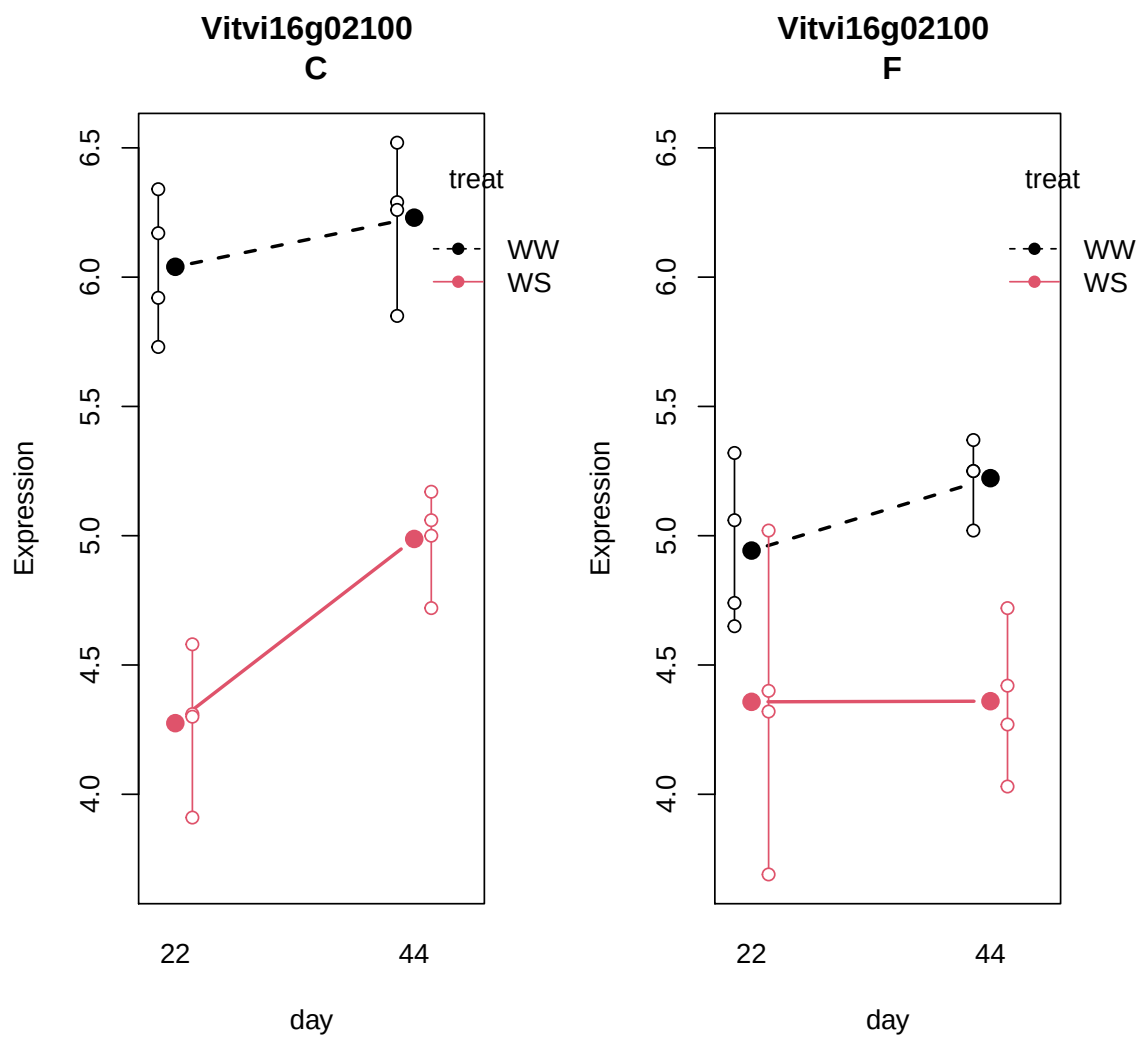
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```


8.3.8 Vitvi16g02100

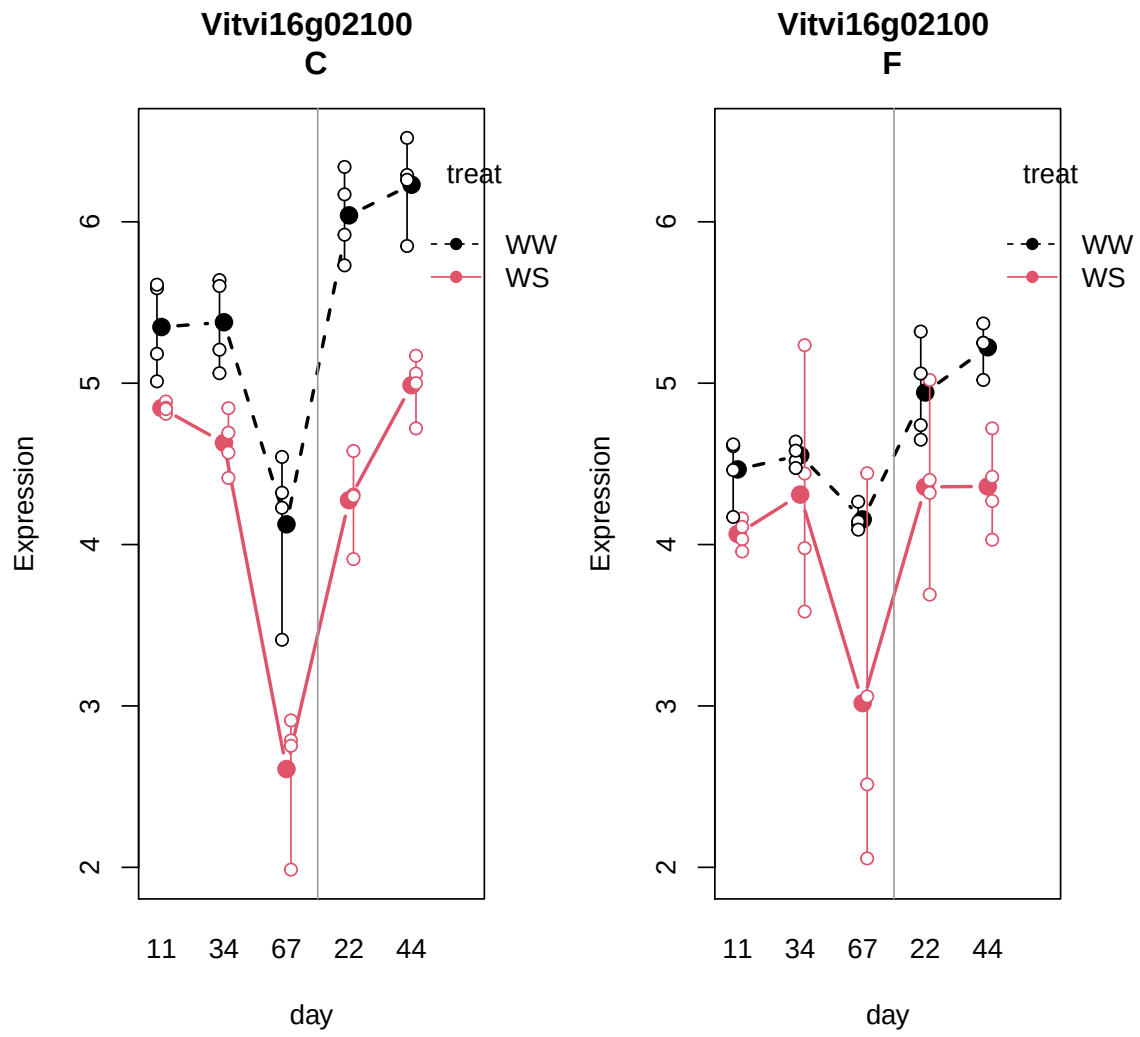
Coefficient treatWS for Vitvi16g02100.

```
> tt[varname,]
      logFC  AveExpr      t    P.Value
Vitvi16g02100 -1.765  5.051875 -8.327519 6.966457e-09
      adj.P.Val      B
Vitvi16g02100 1.247788e-05 10.36687

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

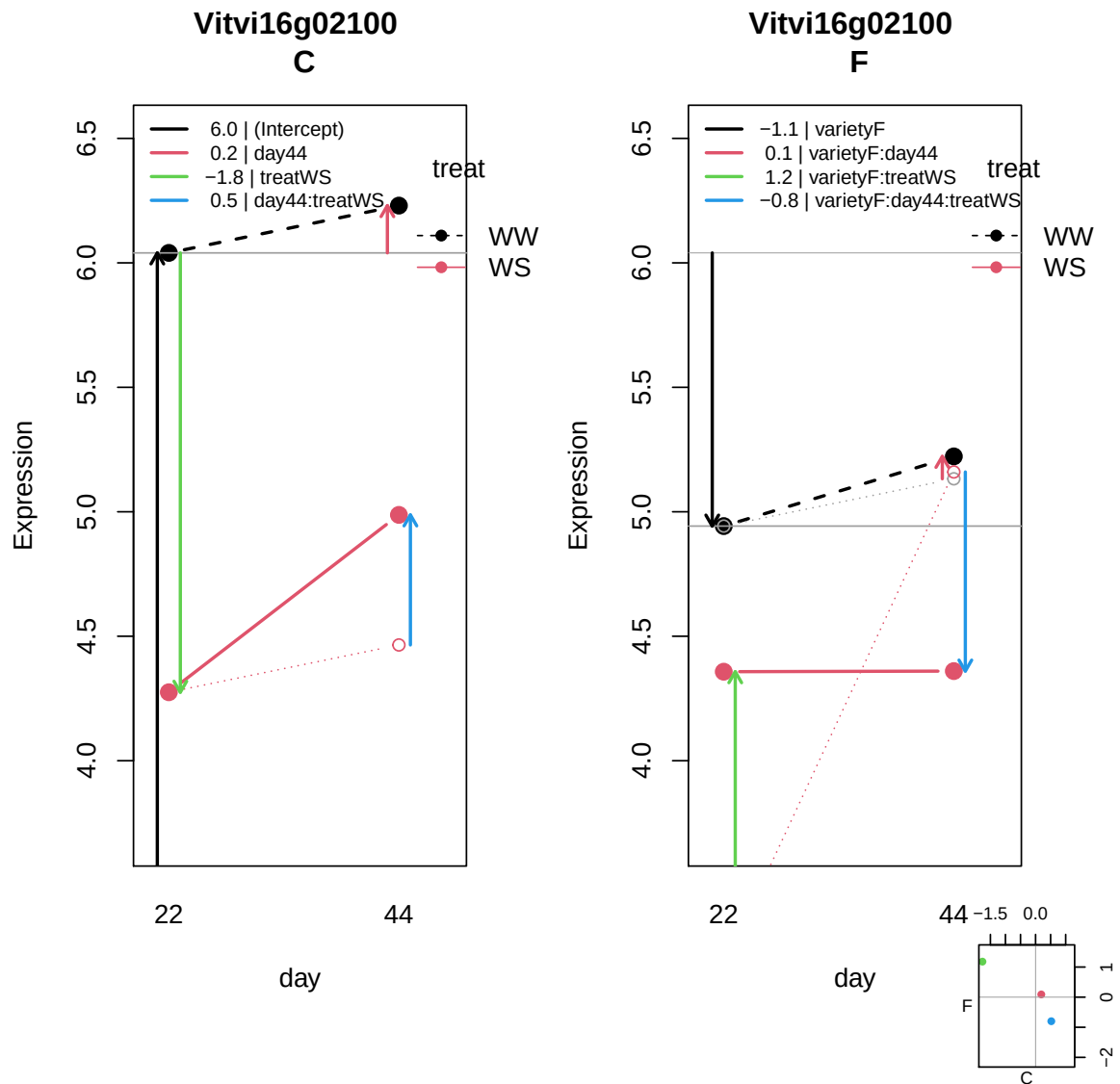


```

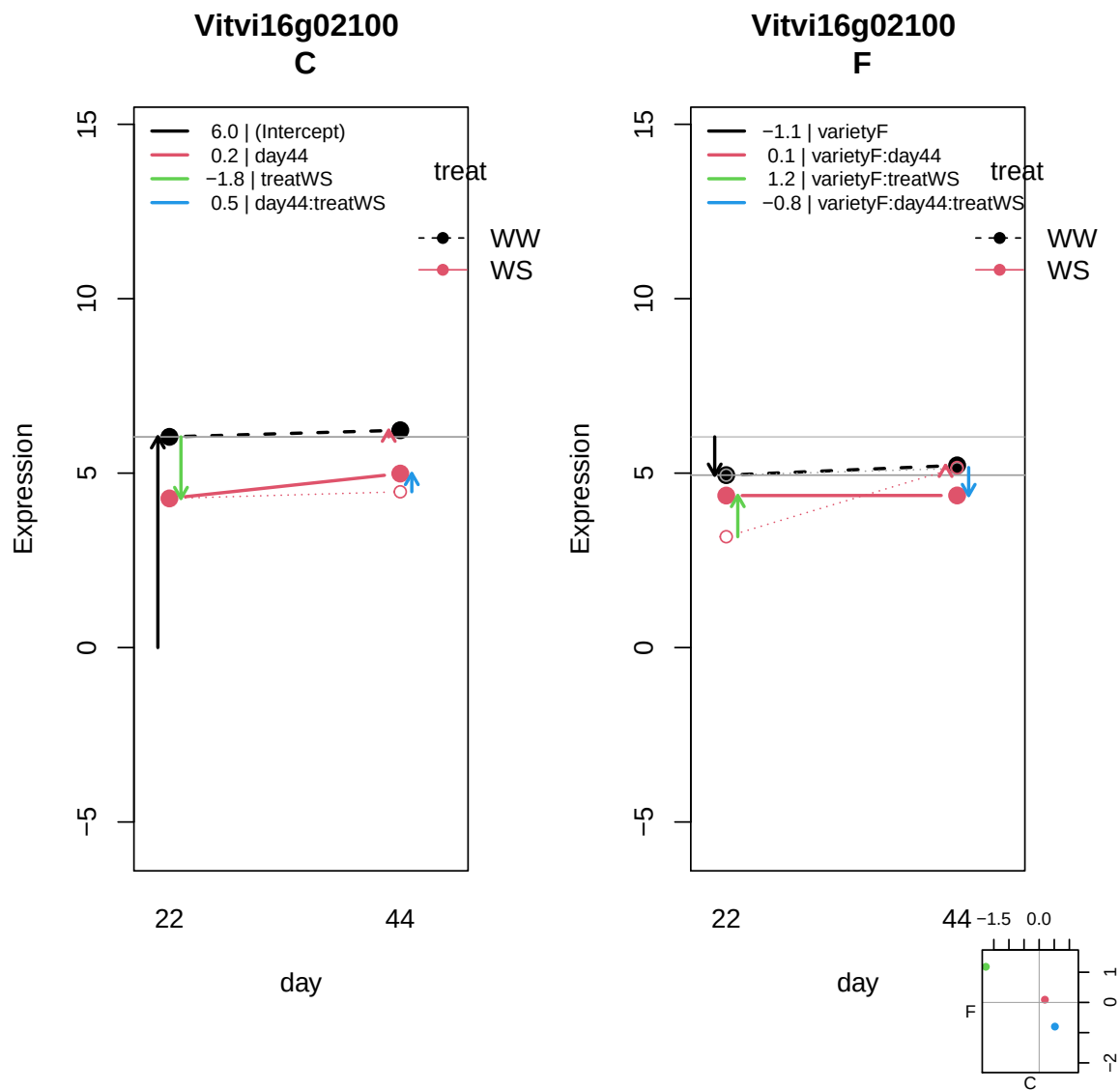
> fit1[varname,]$coefficients
              (Intercept) varietyF day44 treatWS
Vitvi16g02100          6.04  -1.0975  0.19  -1.765
              varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi16g02100          0.09              1.18          0.5225
              varietyF:day44:treatWS
Vitvi16g02100          -0.8

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

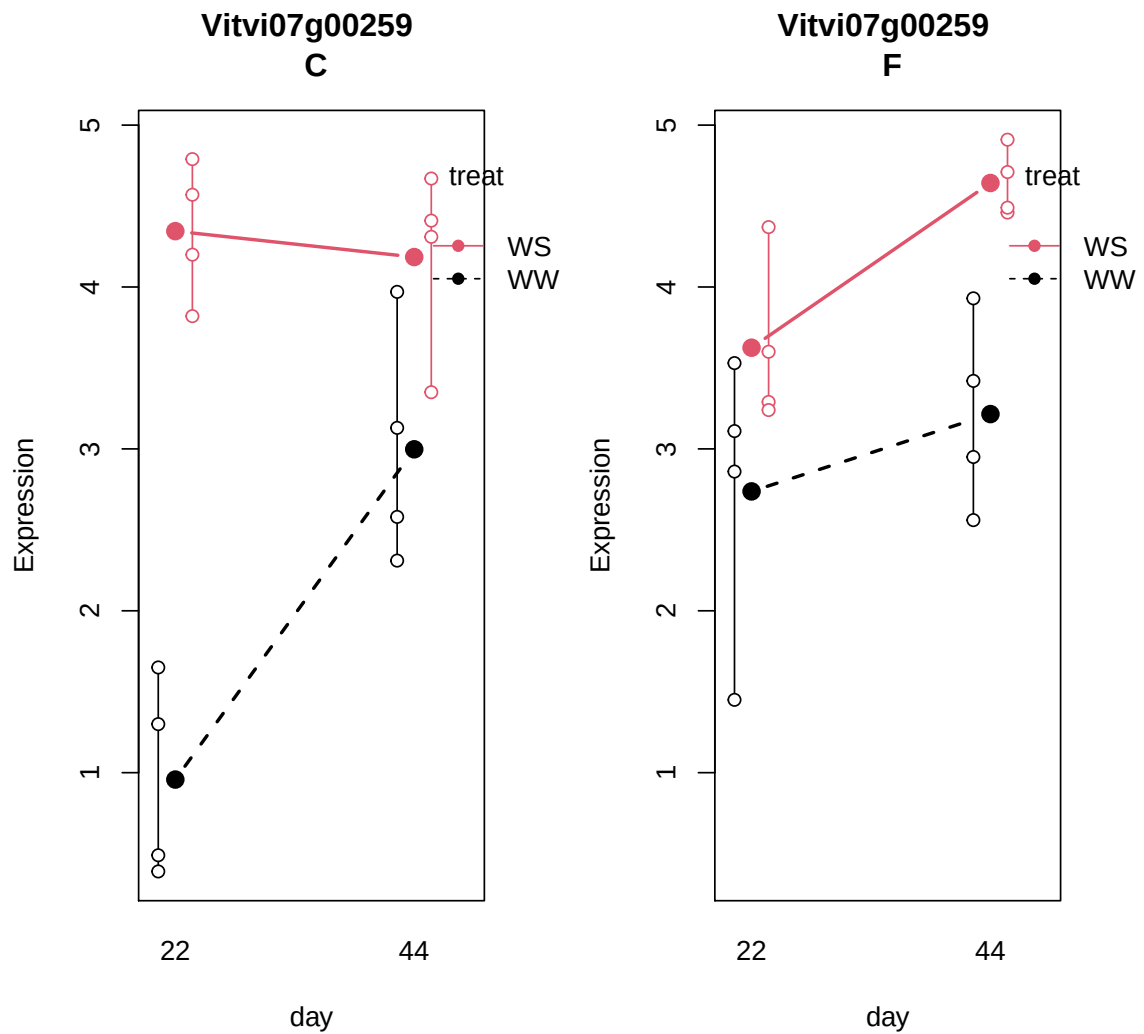
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

8.3.9 Vitvi07g00259

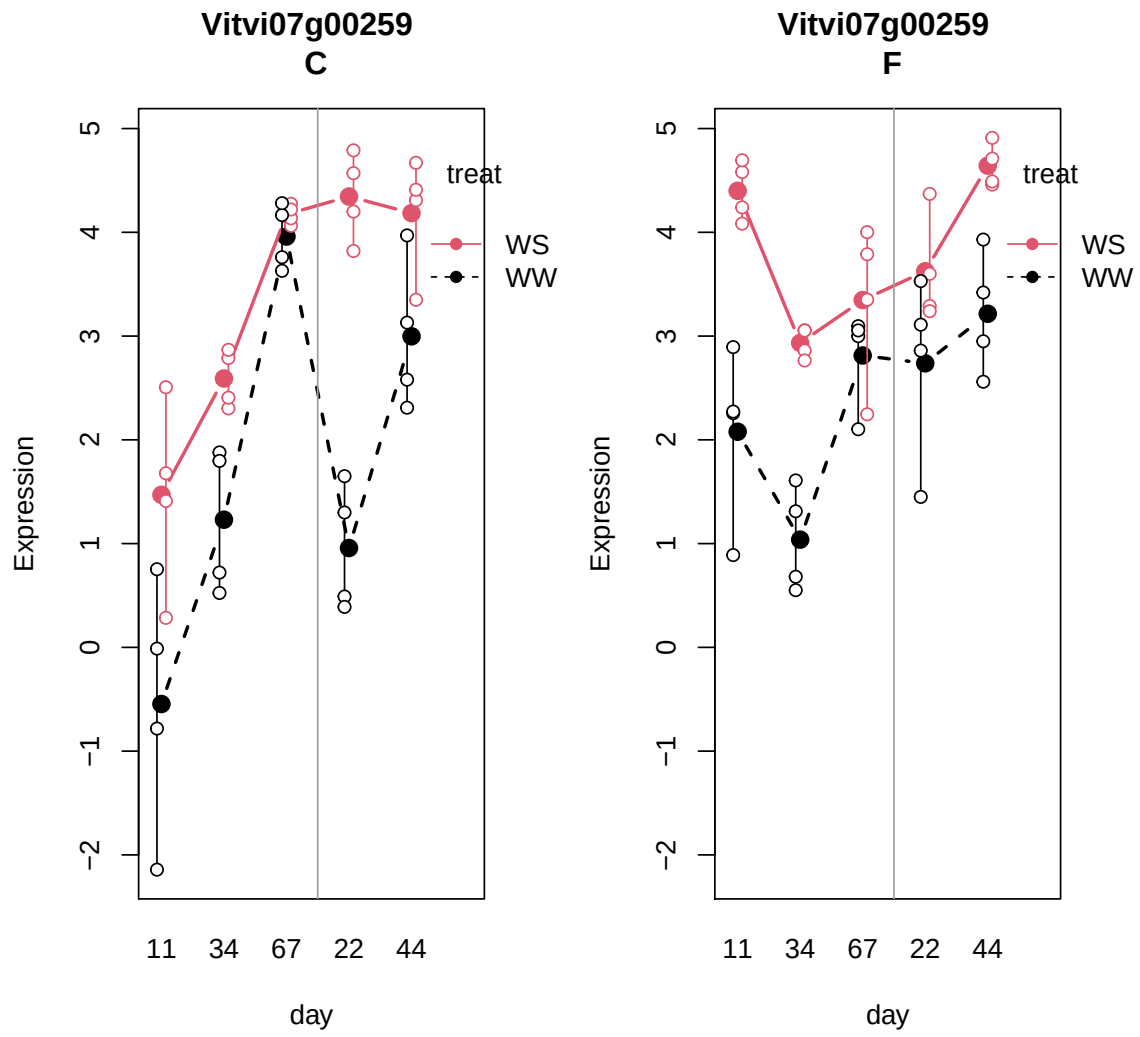
Coefficient treatWS for Vitvi07g00259.

```
> tt[varname,]
              logFC  AveExpr          t      P.Value
Vitvi07g00259  3.3875  3.338125  8.303569  7.367861e-09
              adj.P.Val          B
Vitvi07g00259  1.247788e-05  10.31461

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

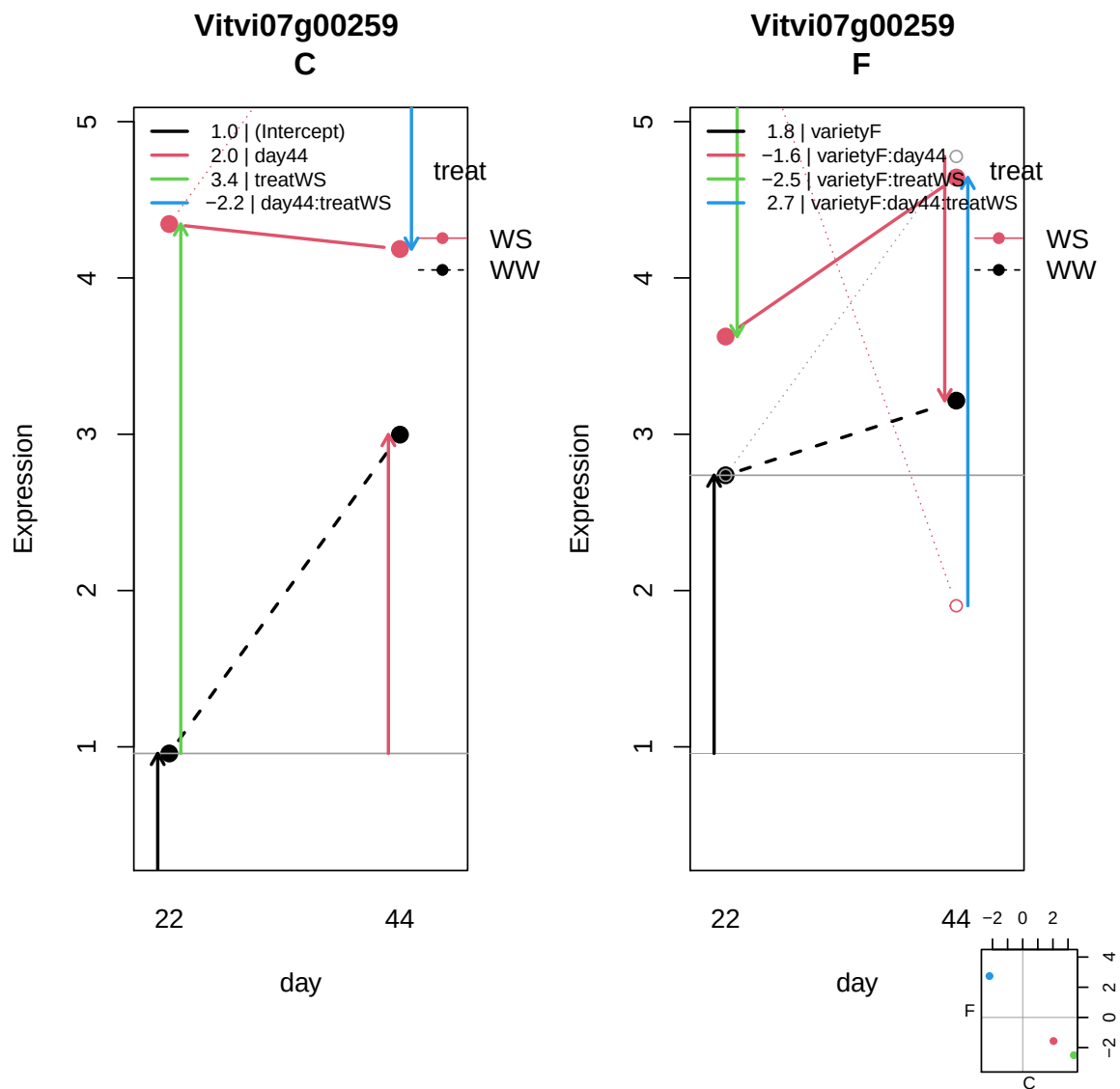


```

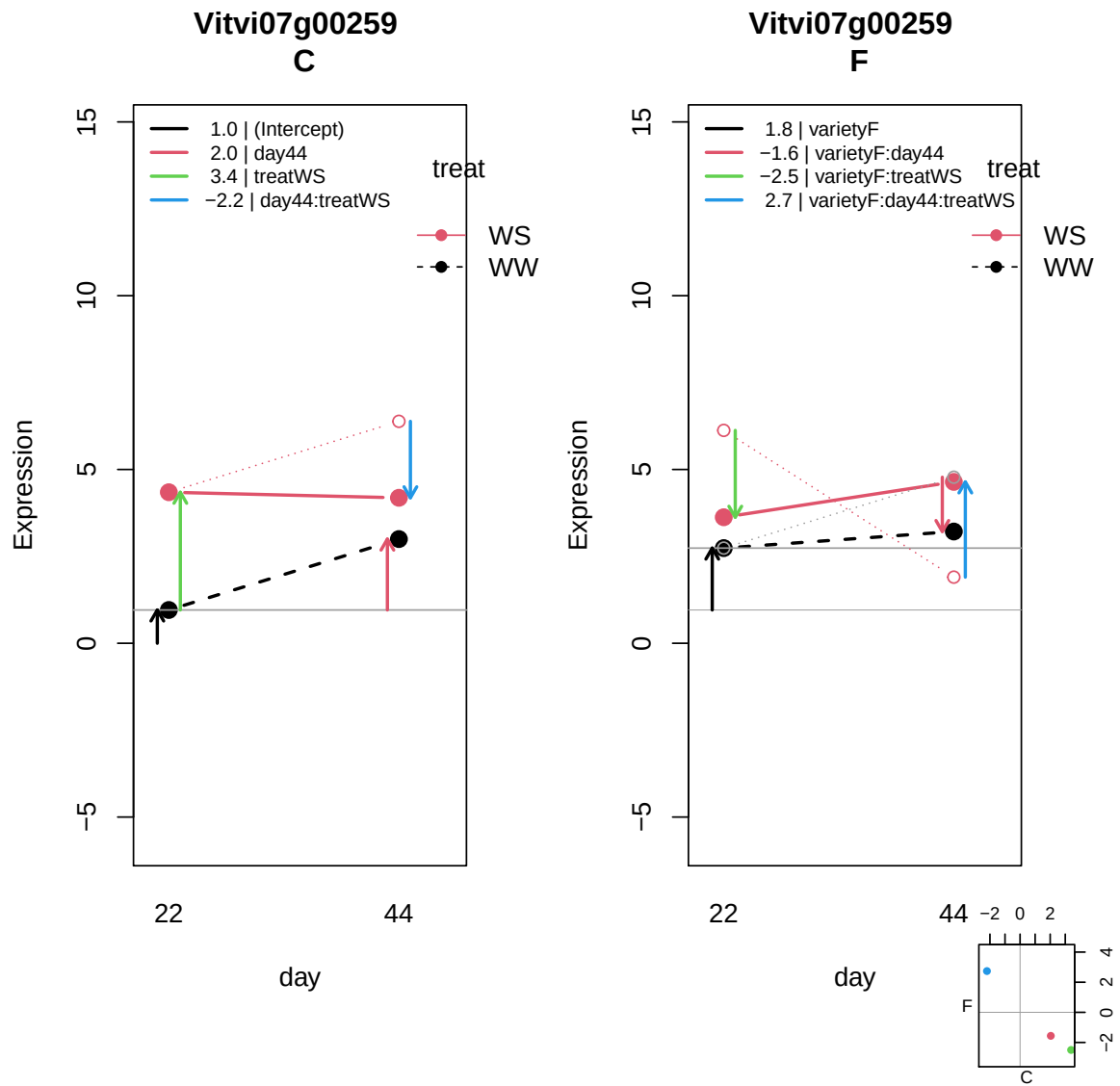
> fit1[varname,]$coefficients
              (Intercept) varietyF day44 treatWS
Vitvi07g00259      0.9575      1.78   2.04   3.3875
              varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi07g00259      -1.5625              -2.5              -2.2
              varietyF:day44:treatWS
Vitvi07g00259              2.74

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```




```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



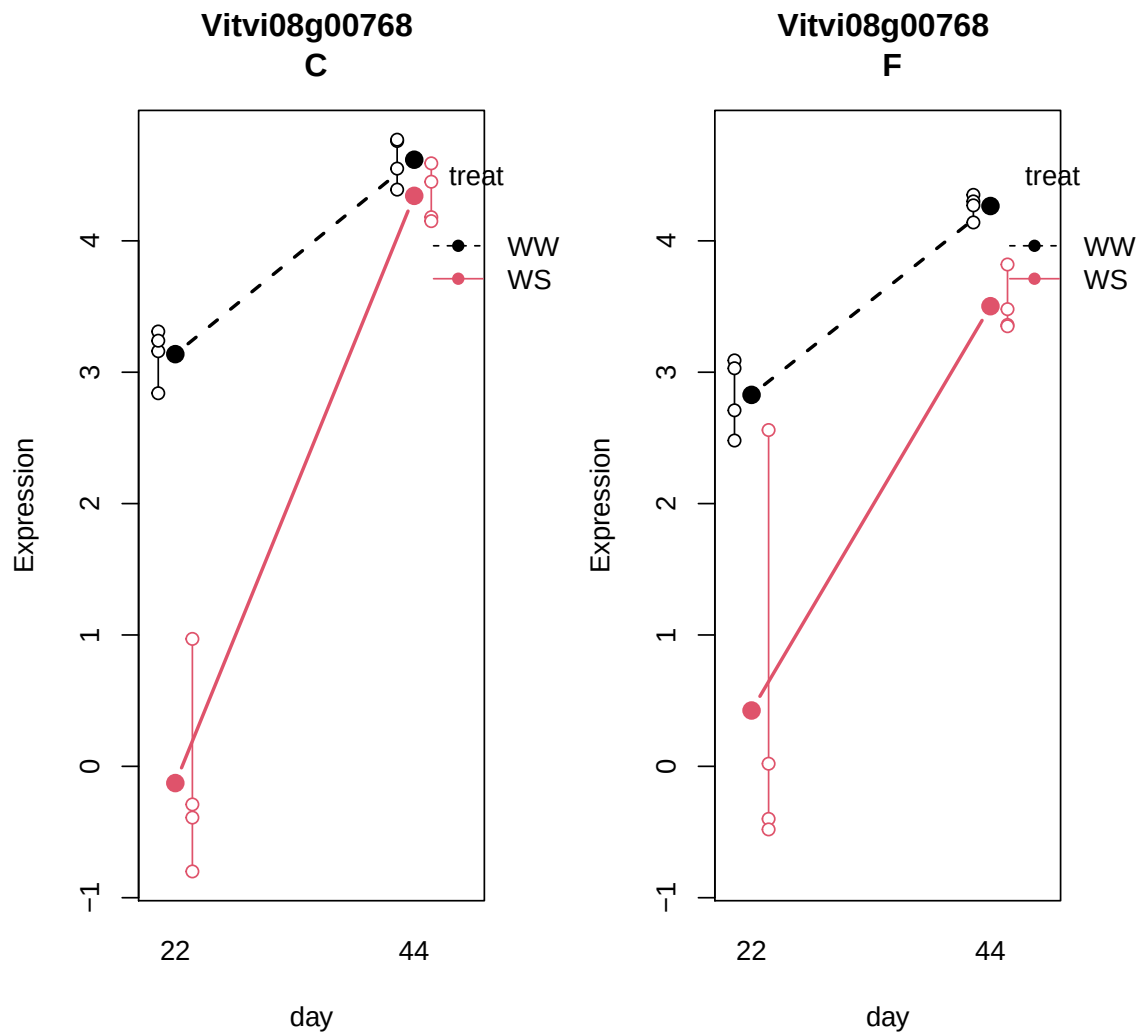
Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

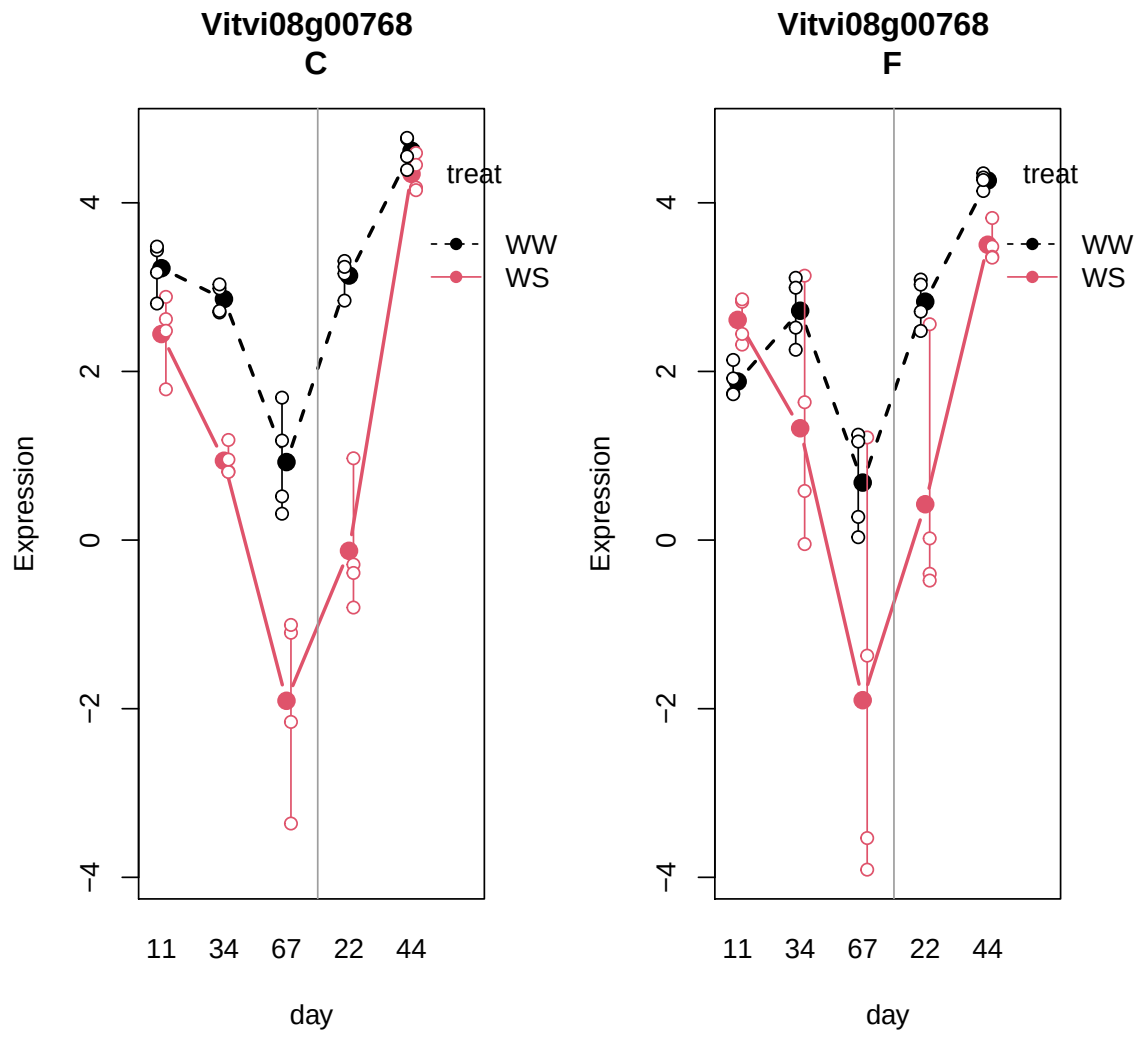
8.3.10 Vitvi08g00768

Coefficient treatWS for Vitvi08g00768.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi08g00768 -3.265 2.87375 -7.994103 1.529917e-08
      adj.P.Val      B
Vitvi08g00768 2.15843e-05 9.631499
> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

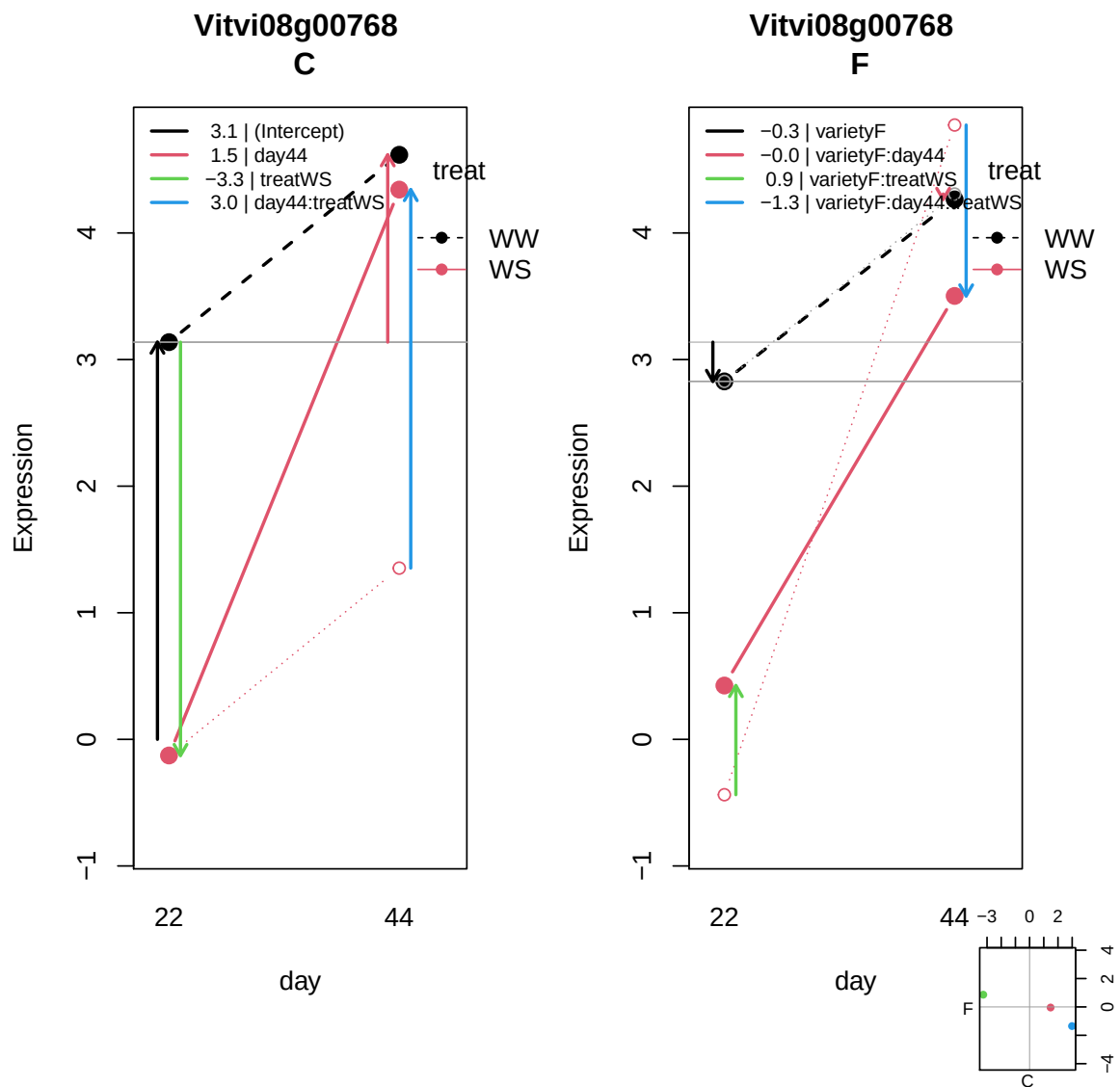


```

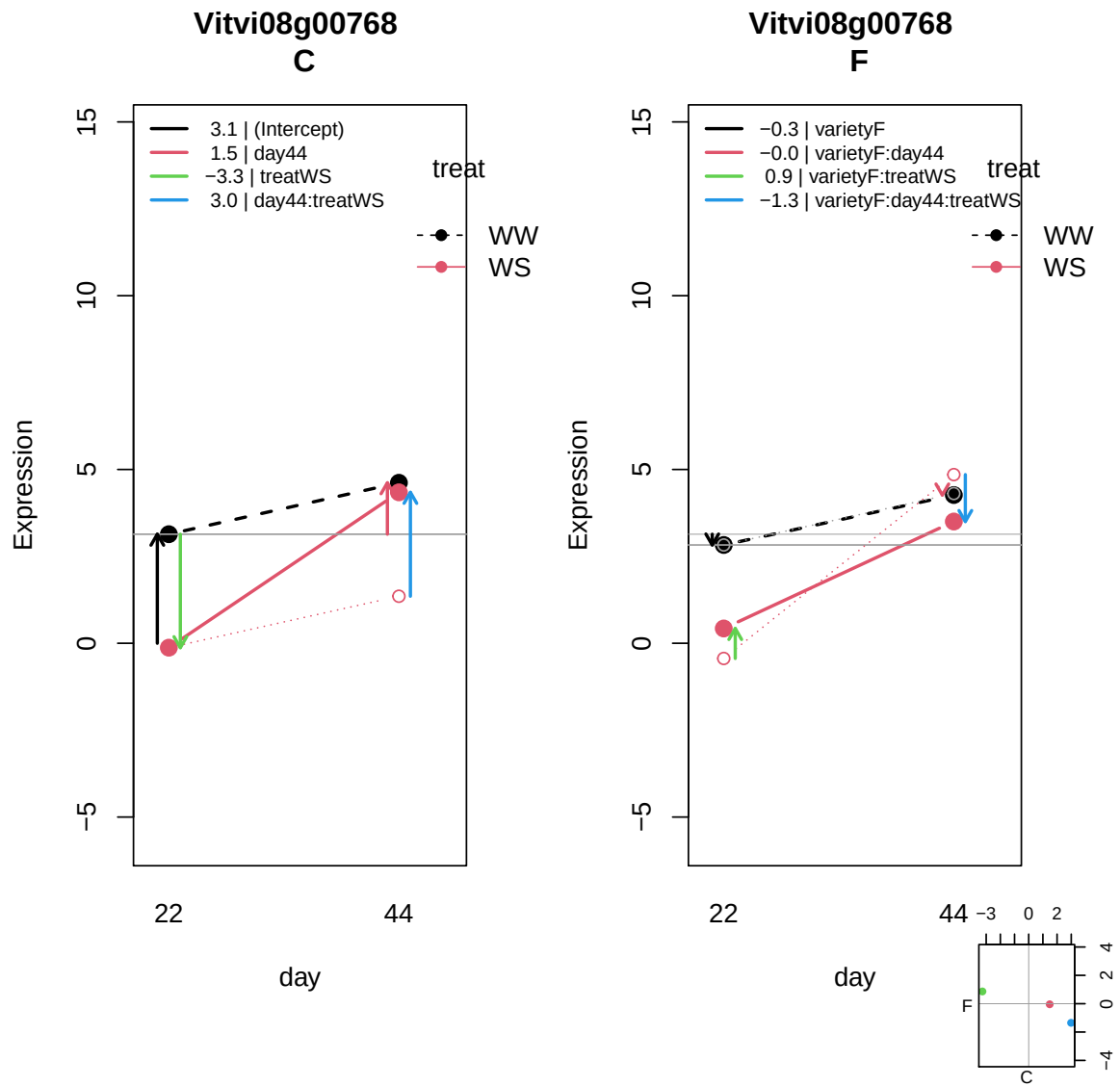
> fit1[varname,]$coefficients
               (Intercept) varietyF day44 treatWS
Vitvi08g00768      3.1375    -0.31  1.48  -3.265
               varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi08g00768      -0.0425             0.8625             2.99
               varietyF:day44:treatWS
Vitvi08g00768             -1.35

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

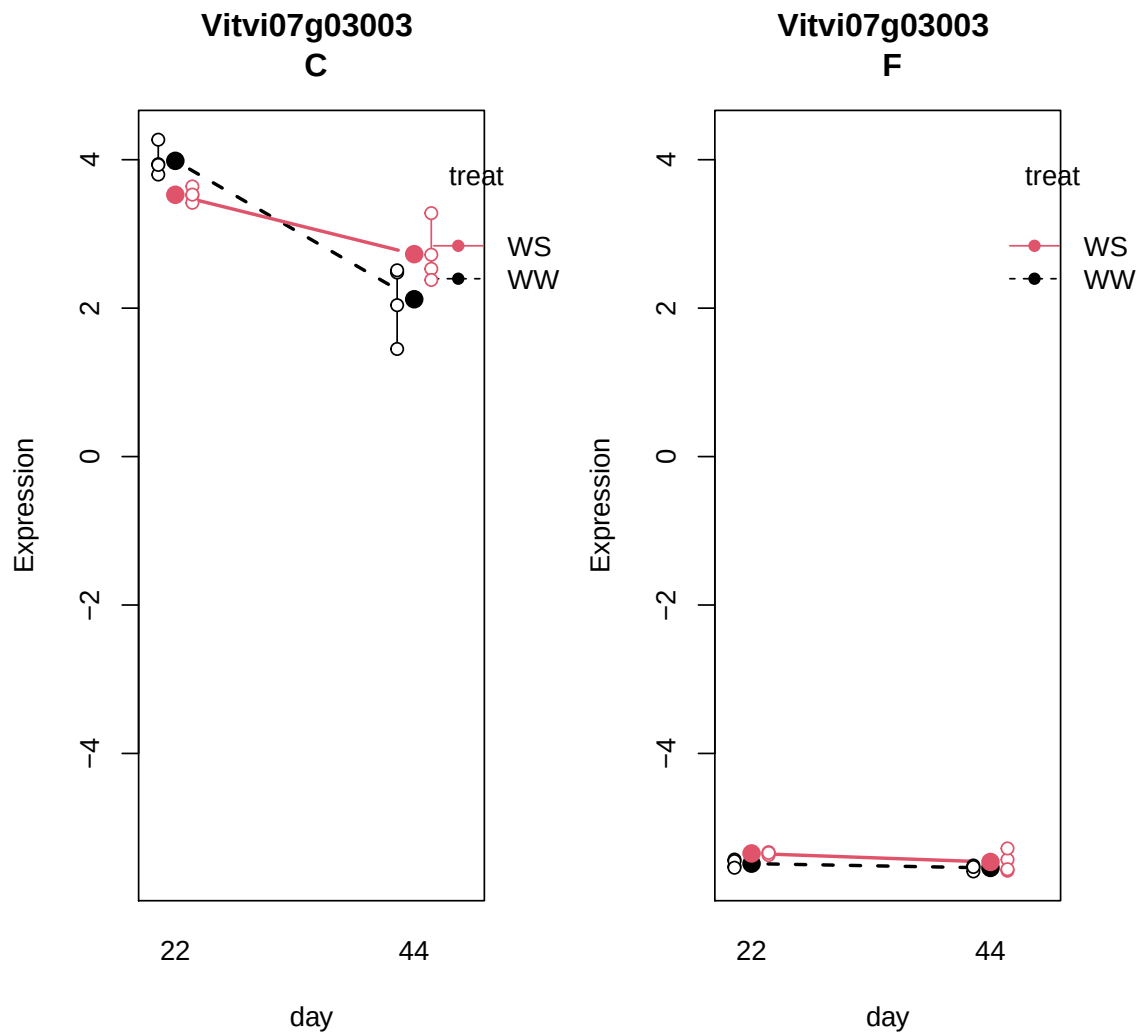
8.4 varietyF:day44

8.4.1 Vitvi07g03003

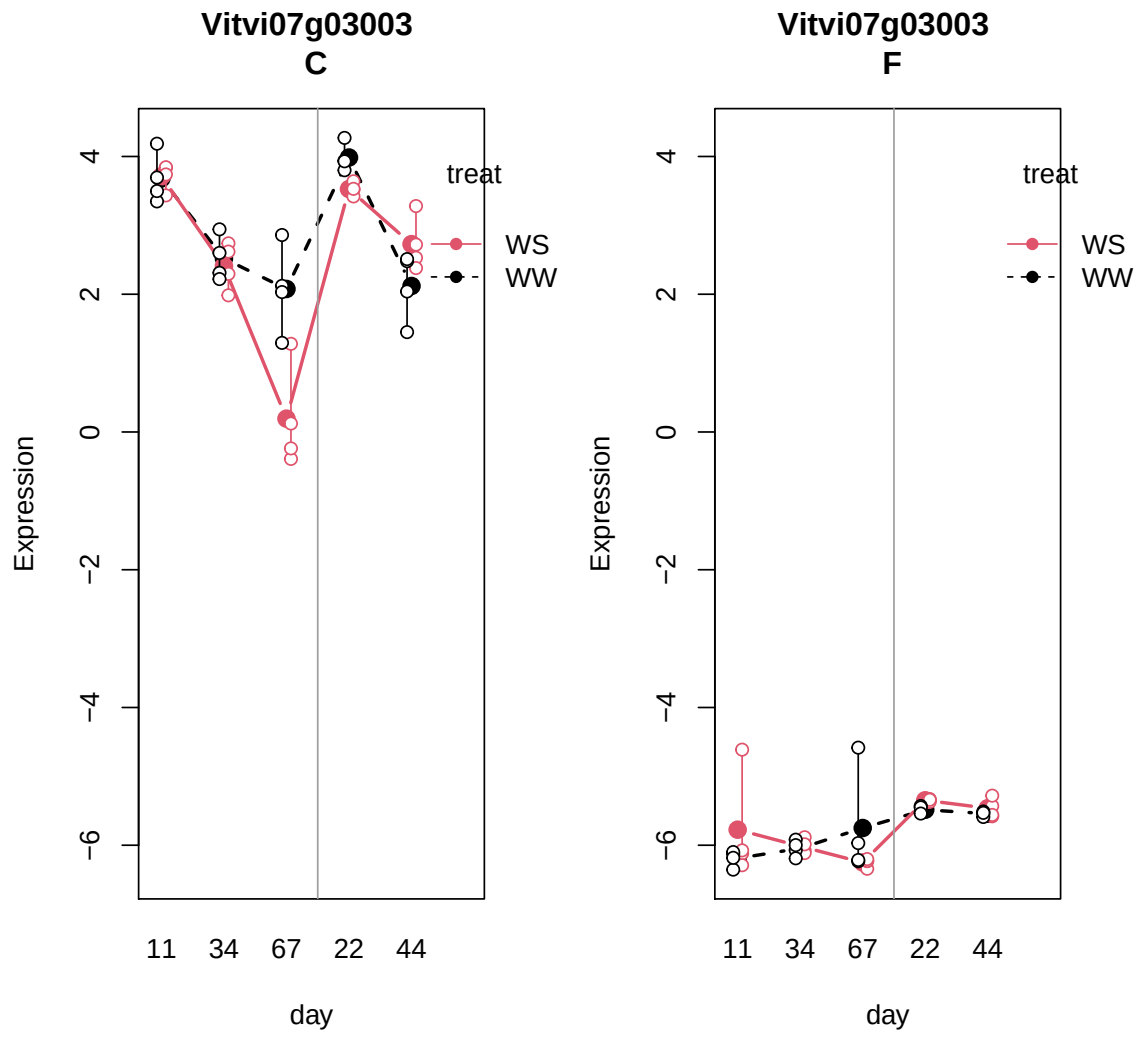
Coefficient varietyF:day44 for Vitvi07g03003.

```
> tt[varname,]
              logFC  AveExpr      t      P.Value
Vitvi07g03003 1.8075 -1.184687 7.529938 4.686044e-08
              adj.P.Val      B
Vitvi07g03003 0.0007142468 7.445221

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



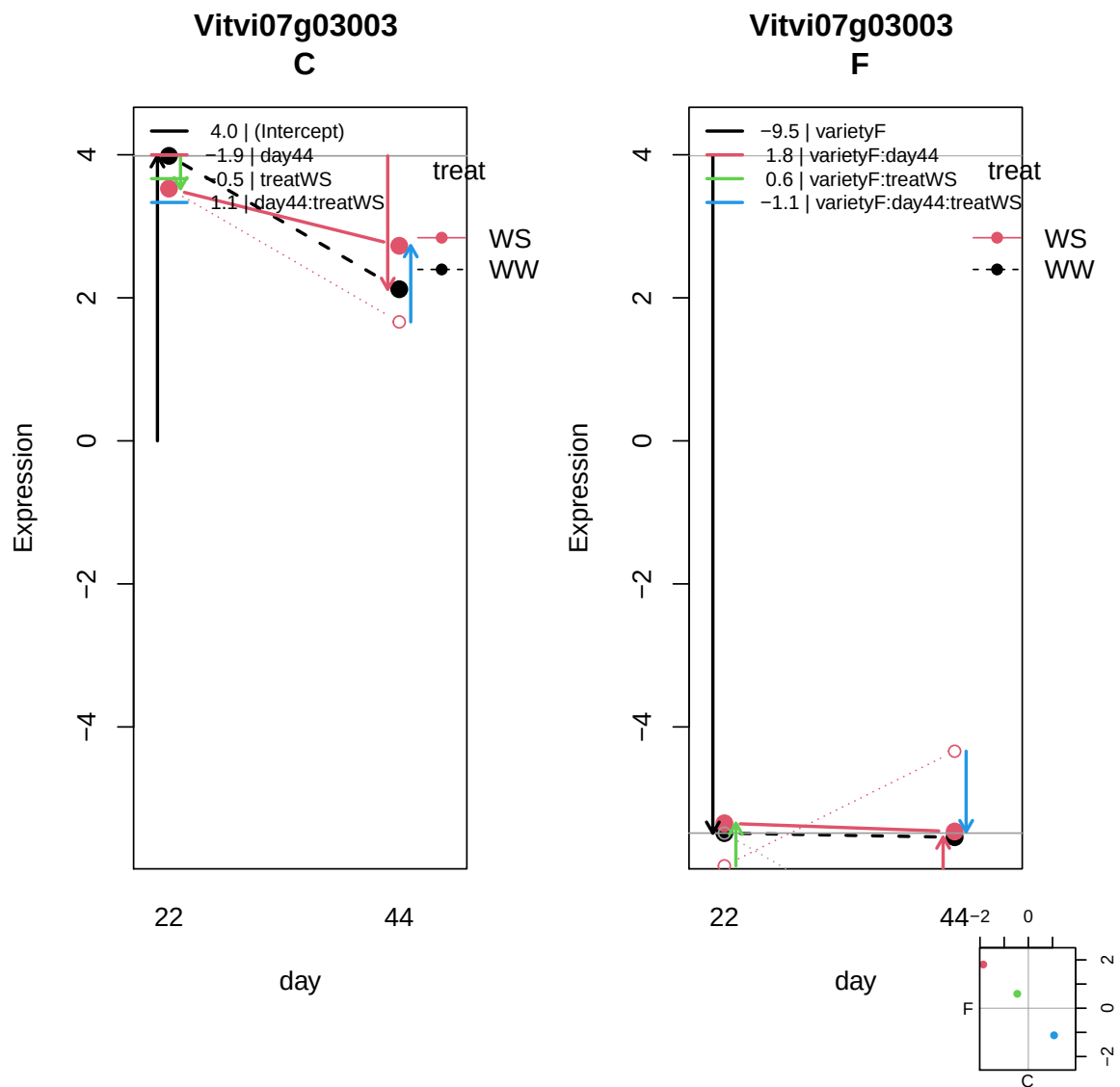
```

> fit1[varname,]$coefficients

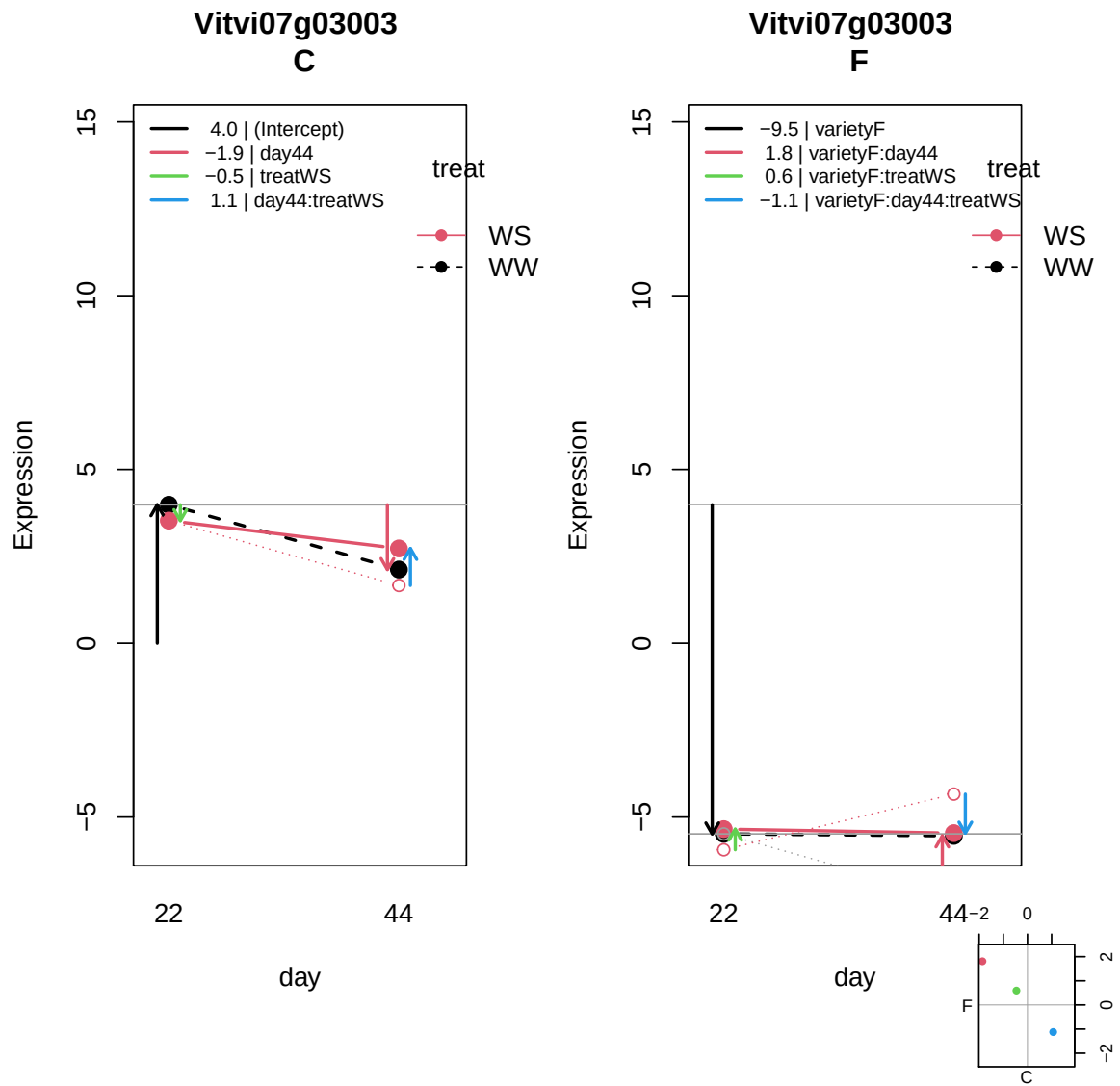
      (Intercept)  varietyF  day44  treatWS
Vitvi07g03003      3.985    -9.47 -1.865 -0.4575
      varietyF:day44  varietyF:treatWS  day44:treatWS
Vitvi07g03003      1.8075              0.595        1.065
      varietyF:day44:treatWS
Vitvi07g03003      -1.1225

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



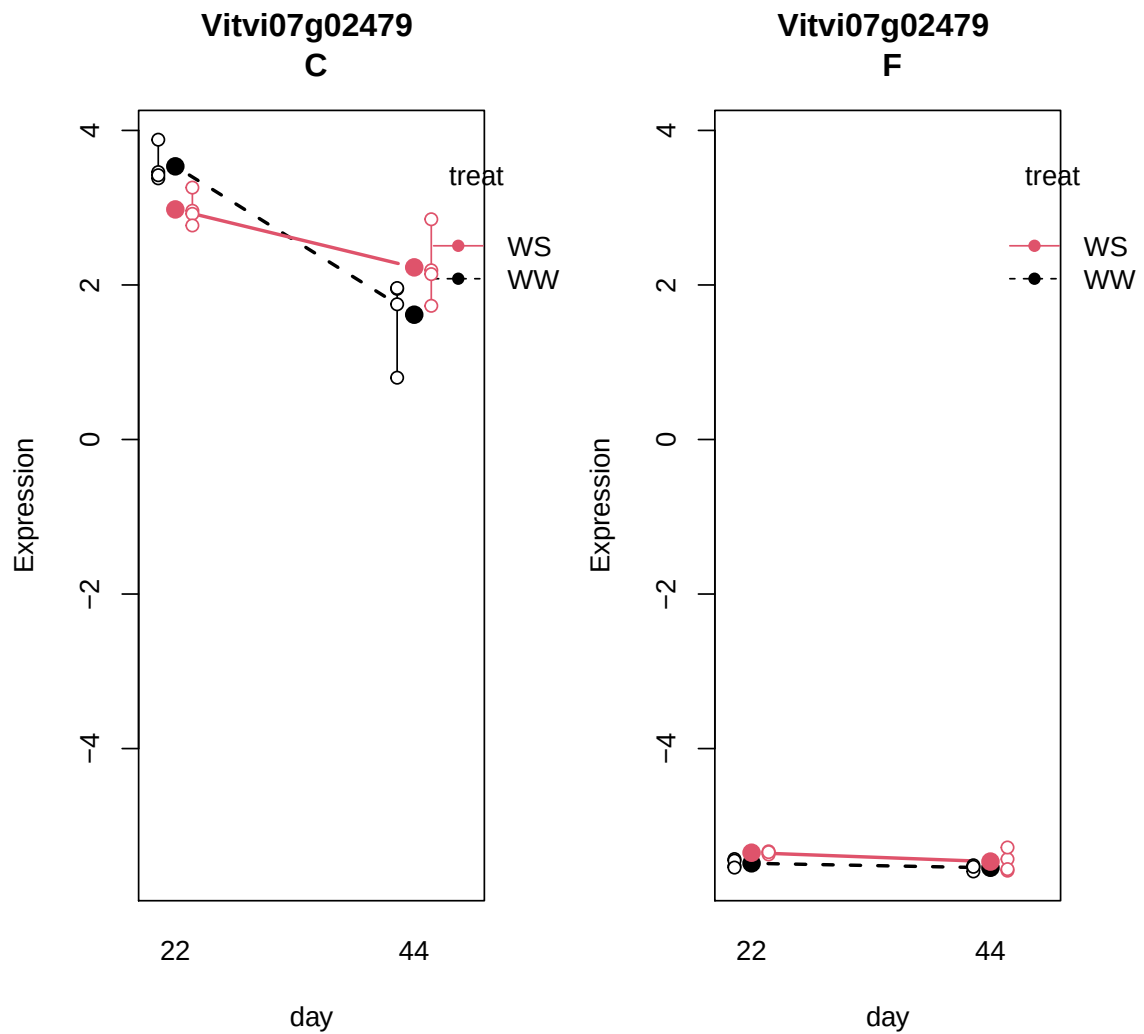
Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

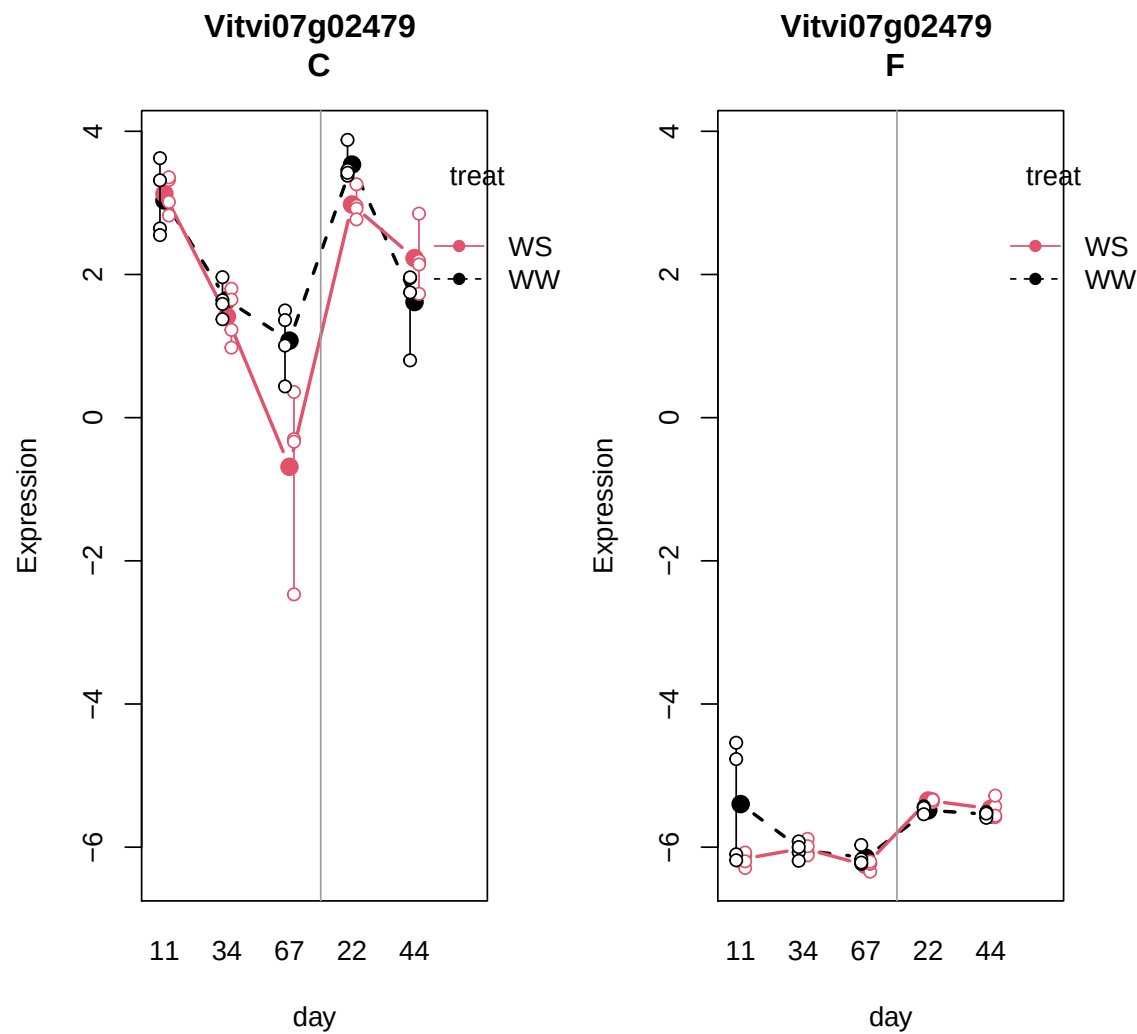
8.4.2 Vitvi07g02479

Coefficient varietyF:day44 for Vitvi07g02479.

```
> tt[varname,]
              logFC  AveExpr      t      P.Value
Vitvi07g02479 1.8625 -1.435312 6.737994 3.367484e-07
              adj.P.Val      B
Vitvi07g02479 0.002566359 5.902634
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

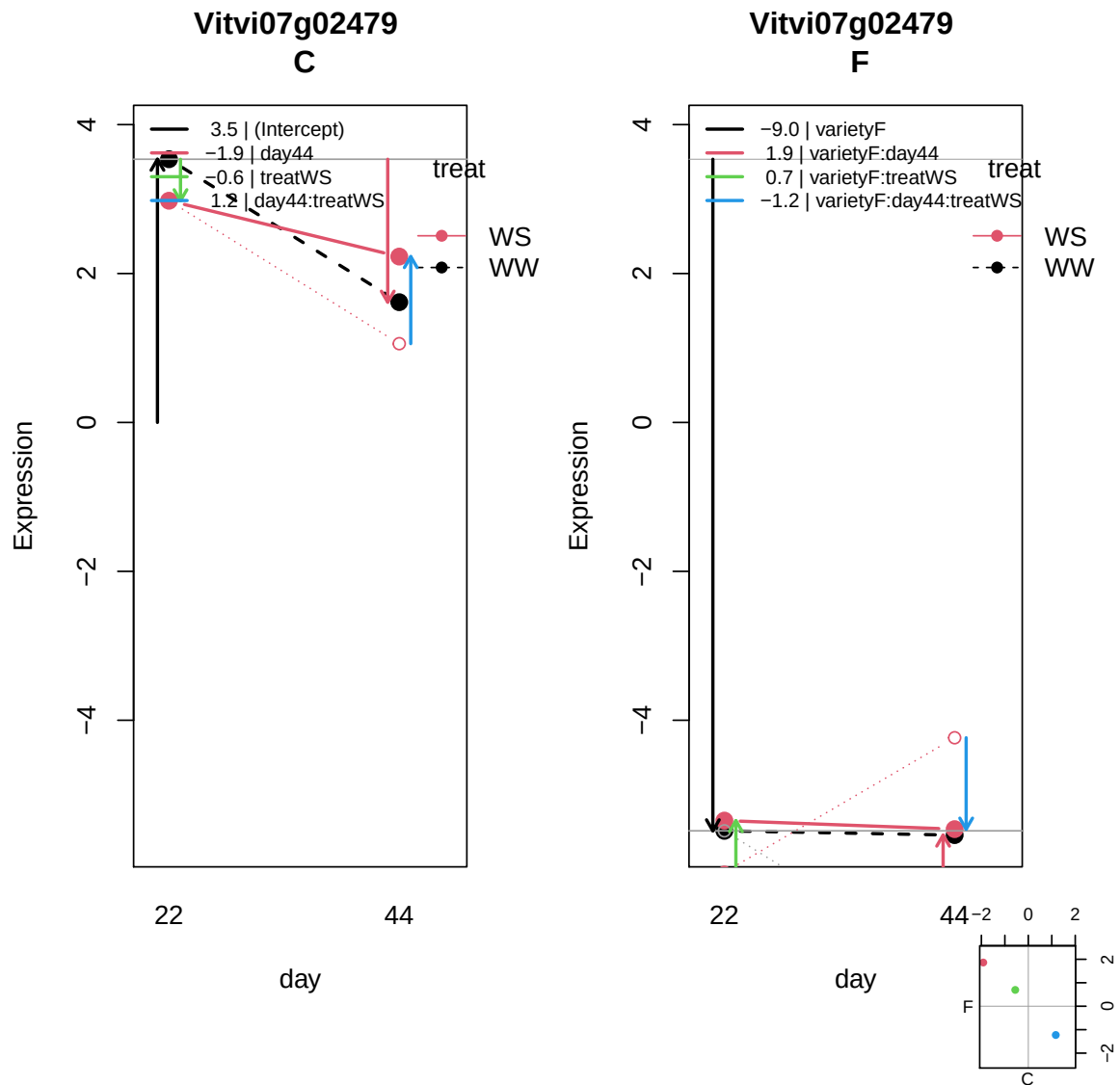


```

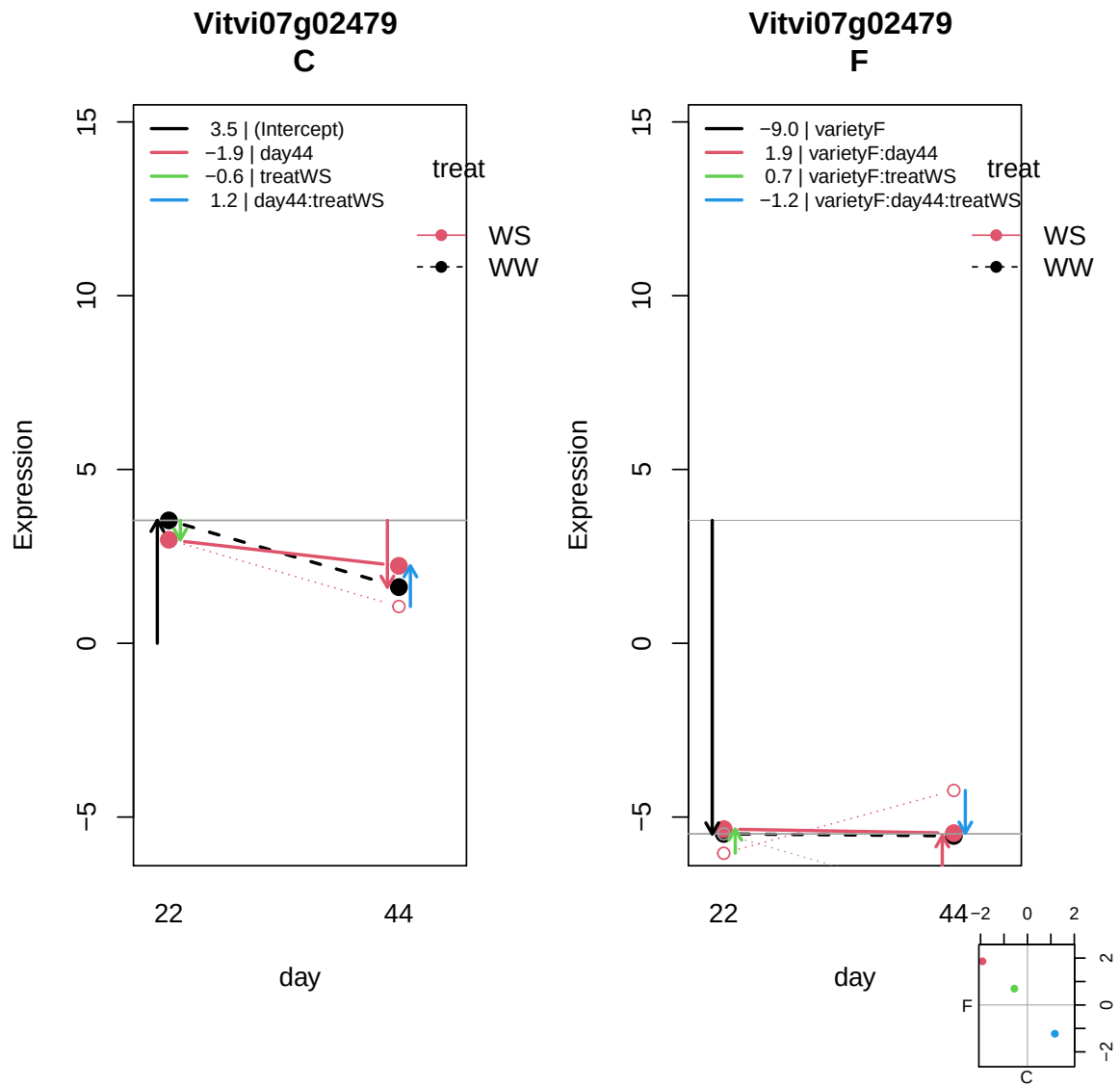
> fit1[varname,]$coefficients
               (Intercept) varietyF day44 treatWS
Vitvi07g02479      3.535      -9.02  -1.92  -0.5575
               varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi07g02479      1.8625              0.695              1.17
               varietyF:day44:treatWS
Vitvi07g02479      -1.2275

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```




```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



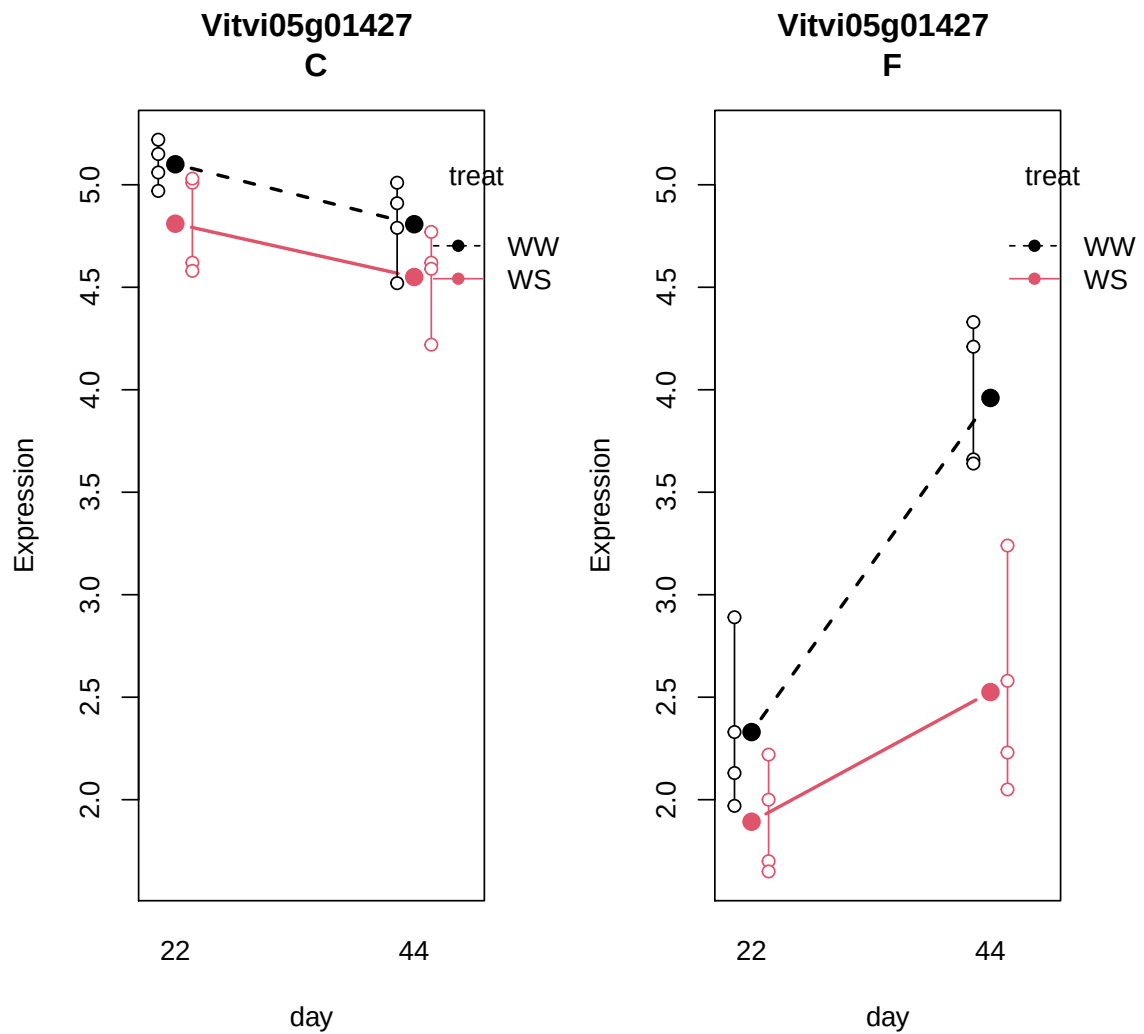
Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

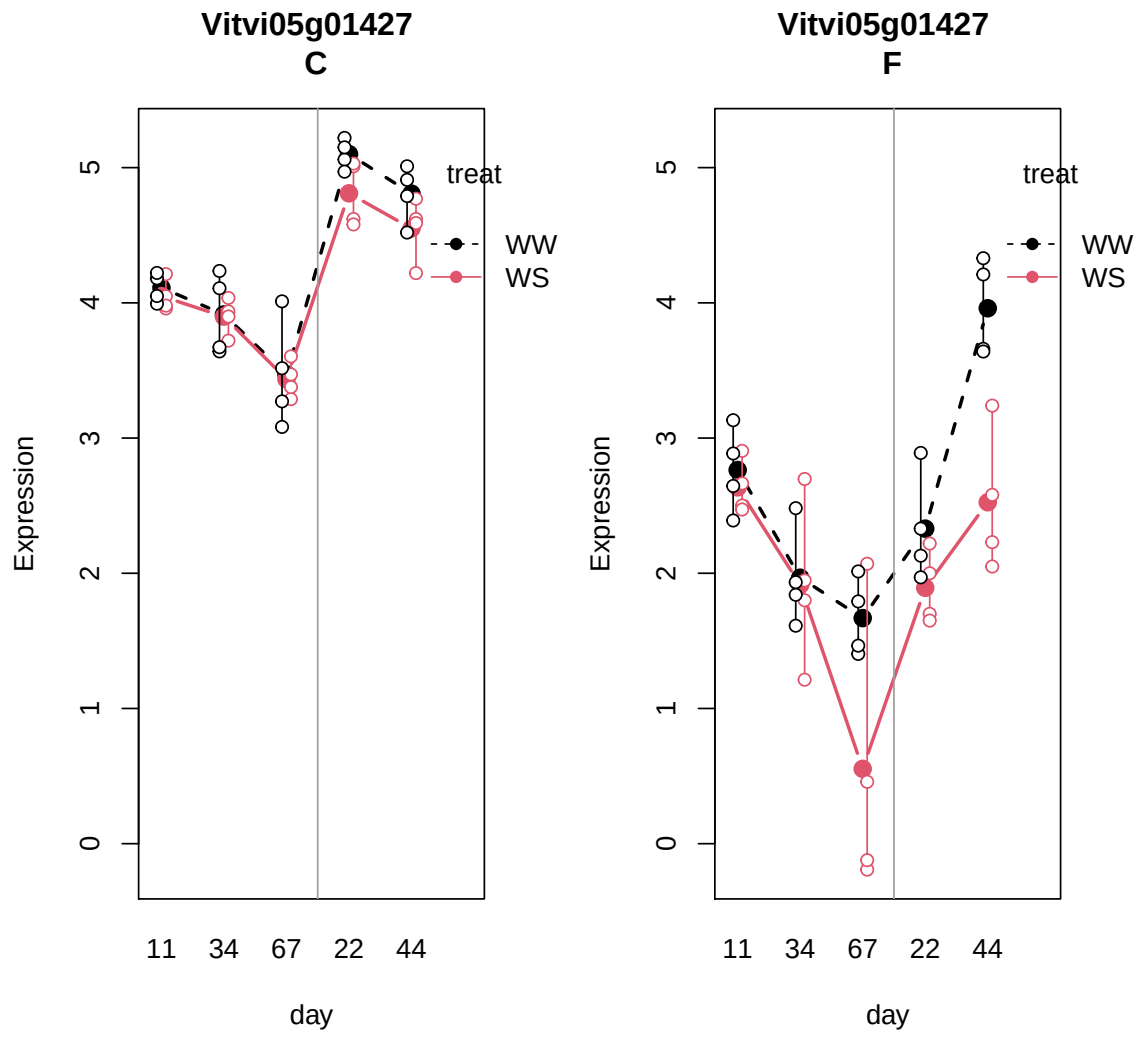
8.4.3 Vitvi05g01427

Coefficient varietyF:day44 for Vitvi05g01427.

```
> tt[varname,]
              logFC  AveExpr          t      P.Value
Vitvi05g01427  1.9225  3.746875  6.216751  1.28232e-06
              adj.P.Val          B
Vitvi05g01427  0.006515039  4.831771
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

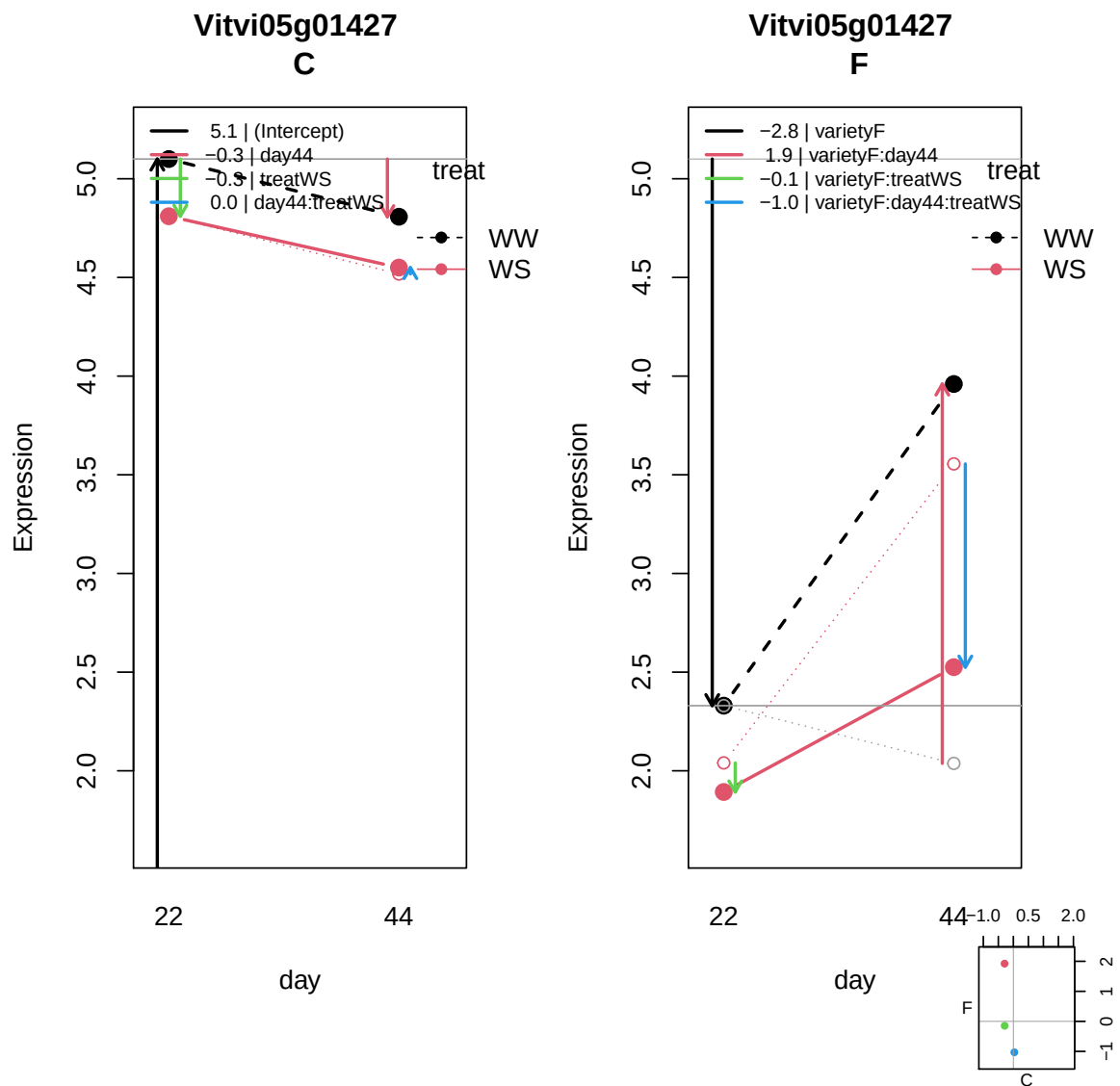


```

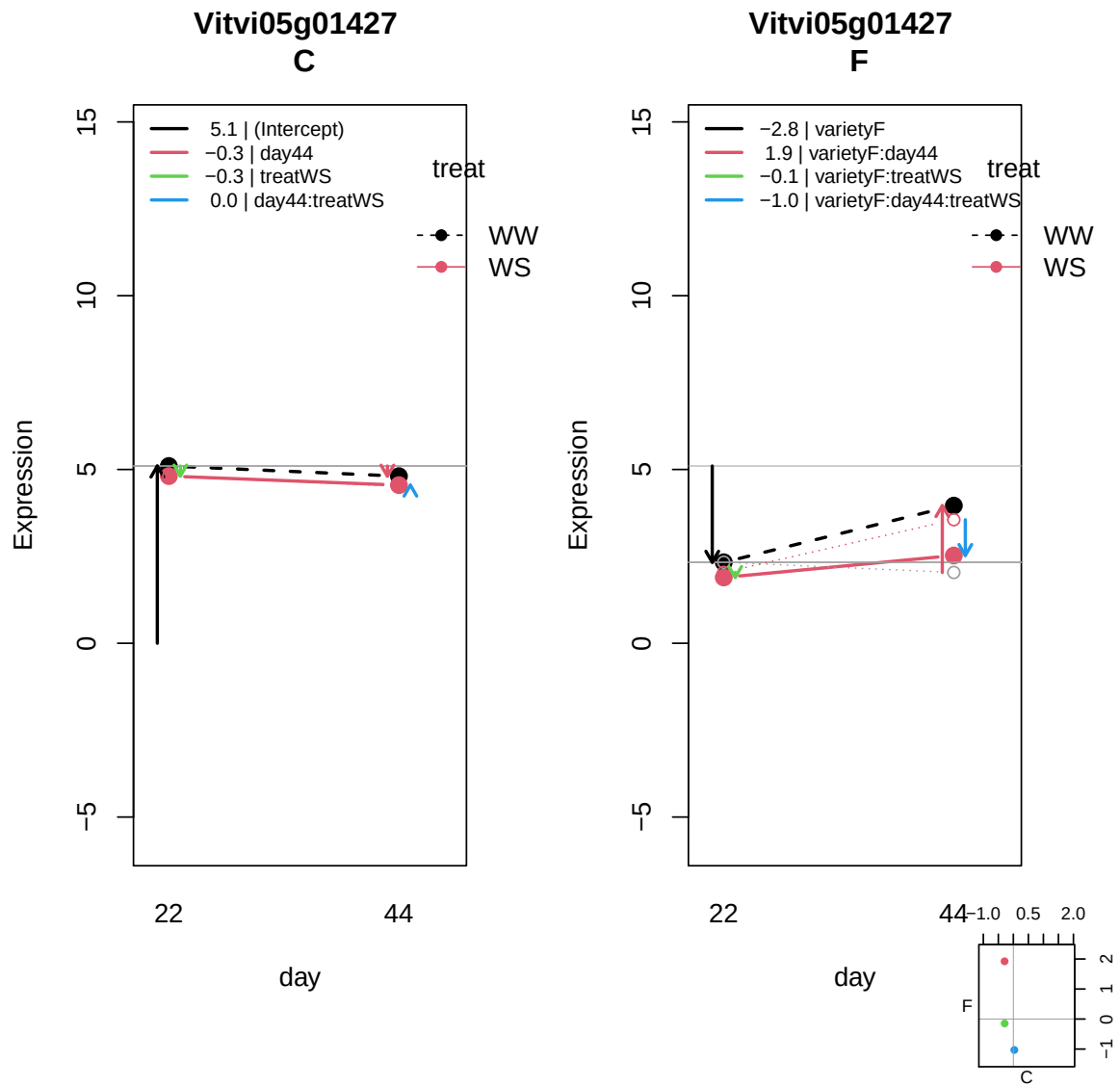
> fit1[varname,]$coefficients
              (Intercept)  varietyF    day44  treatWS
Vitvi05g01427           5.1    -2.77 -0.2925   -0.29
              varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi05g01427           1.9225          -0.1475          0.0325
              varietyF:day44:treatWS
Vitvi05g01427           -1.03

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

8.5 **varietyF:treatWS**

8.5.1 NA

Coefficient varietyF:treatWS for NA.

```
> tt[varname, ]
      logFC AveExpr  t P.Value adj.P.Val  B
NA      NA      NA NA      NA      NA NA
> plot.interactions(varname, phdata=pd, data=exprs)
Warning in min(x): no non-missing arguments to min; returning Inf
Warning in max(x): no non-missing arguments to max; returning -Inf
Error in plot.window(...): need finite 'ylim' values
```

```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
Warning in min(x): no non-missing arguments to min; returning Inf
Warning in max(x): no non-missing arguments to max; returning -Inf
Error in plot.window(...): need finite 'ylim' values
```

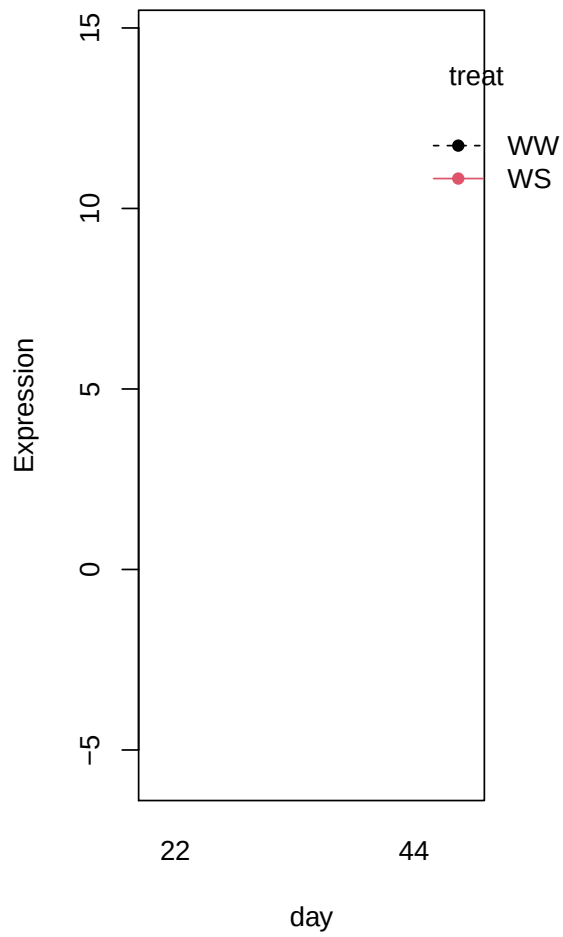
```

> fit1[varname,]$coefficients
Error in subsetListOfArrays(object, i, j, IJ = IJ, IX = IX, I = I, JX = JX): S
> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)
Warning in min(x): no non-missing arguments to min; returning Inf
Warning in max(x): no non-missing arguments to max; returning -Inf
Error in plot.window(...): need finite 'ylim' values

```

```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```

```
Error in subsetListOfArrays(object, i, j, IJ = IJ, IX = IX, I = I, JX = JX): S
```



Coefficient plot

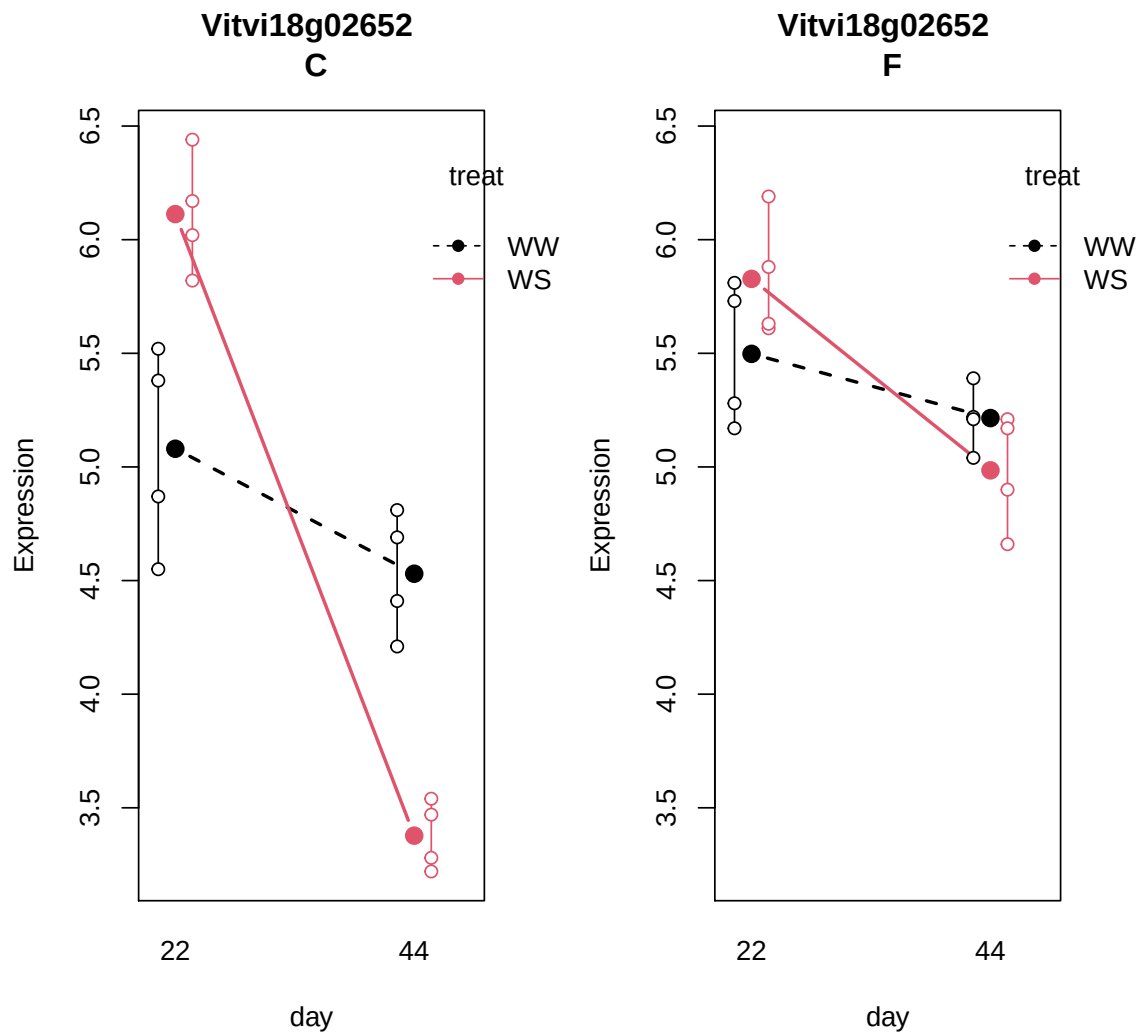
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
Error in subsetListOfArrays(object, i, j, IJ = IJ, IX = IX, I = I, JX = JX): S
> plot.coefficients(2:6)
Error in subsetListOfArrays(object, i, j, IJ = IJ, IX = IX, I = I, JX = JX): S
> plot.coefficients(1:6, add=TRUE)
Error in subsetListOfArrays(object, i, j, IJ = IJ, IX = IX, I = I, JX = JX): S
> plot.coefficients(2:6, add=TRUE)
Error in subsetListOfArrays(object, i, j, IJ = IJ, IX = IX, I = I, JX = JX): S
```

8.6 day44:treatWS

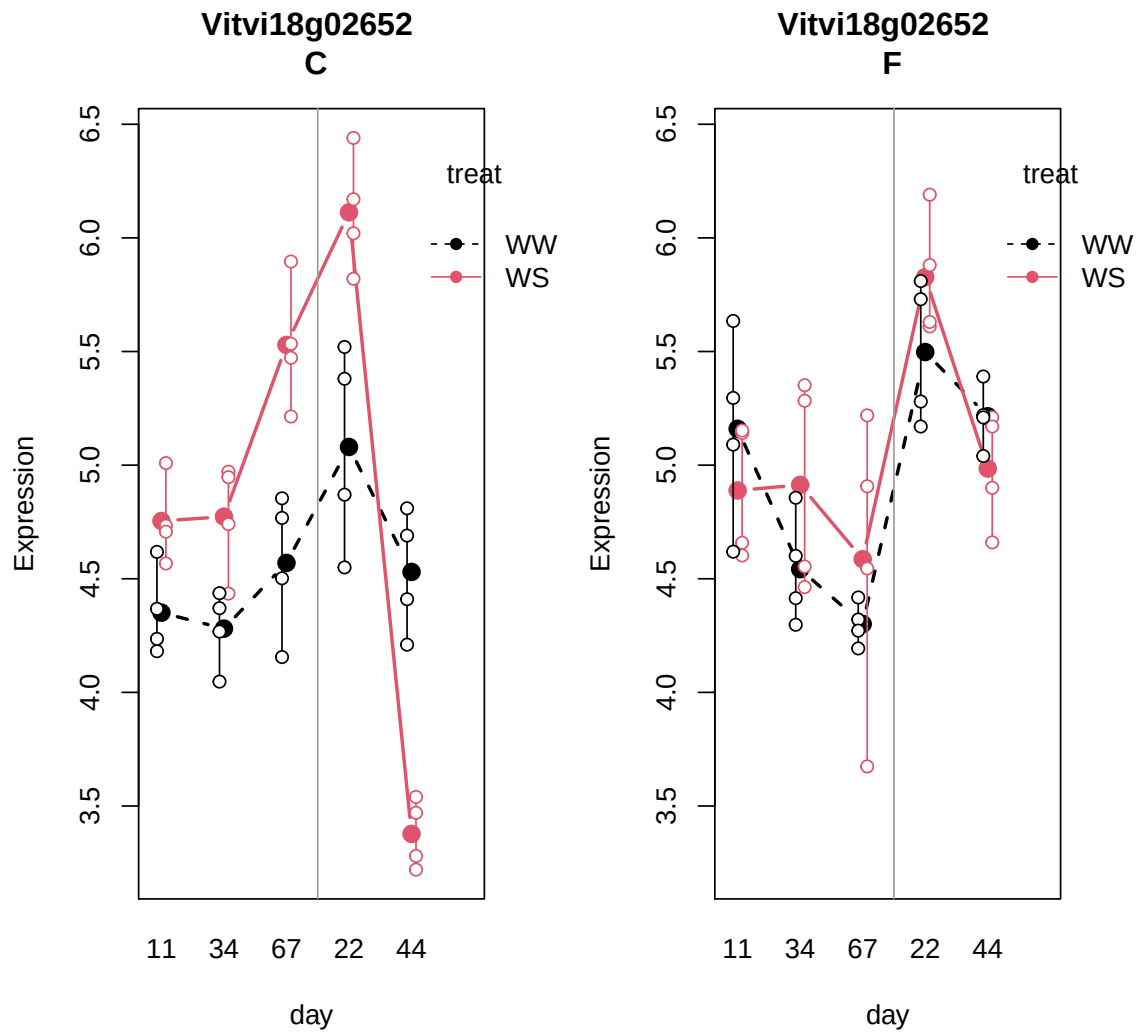
8.6.1 Vitvi18g02652

Coefficient day44:treatWS for Vitvi18g02652.

```
> tt[varname,]
              logFC  AveExpr          t      P.Value
Vitvi18g02652 -2.185  5.078125 -7.95893 1.663723e-08
              adj.P.Val          B
Vitvi18g02652 0.0002535846  9.296371
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

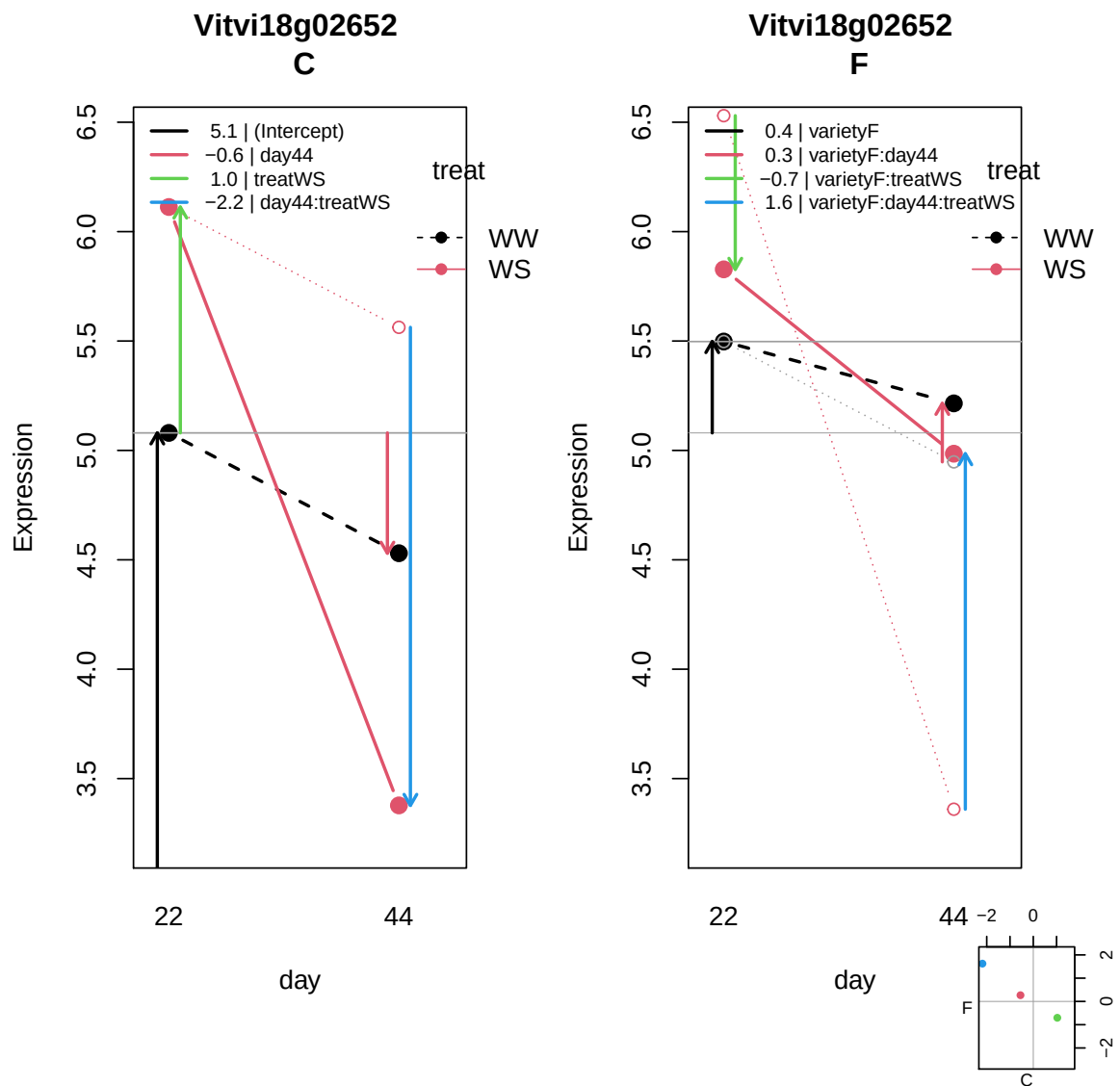



```

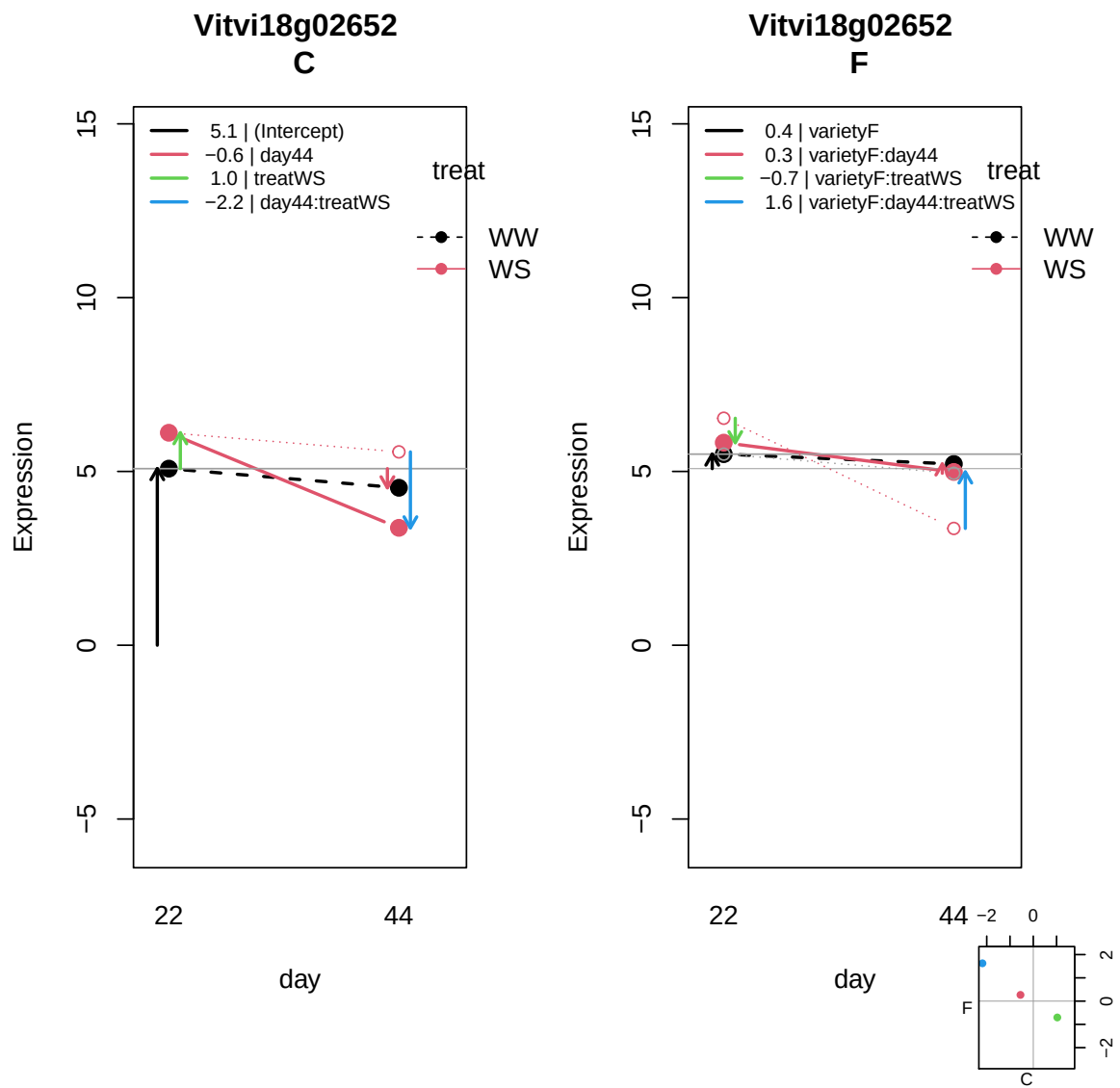
> fit1[varname,]$coefficients
               (Intercept) varietyF day44 treatWS
Vitvi18g02652          5.08   0.4175 -0.55   1.0325
               varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi18g02652          0.2675          -0.7025          -2.185
               varietyF:day44:treatWS
Vitvi18g02652          1.625

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

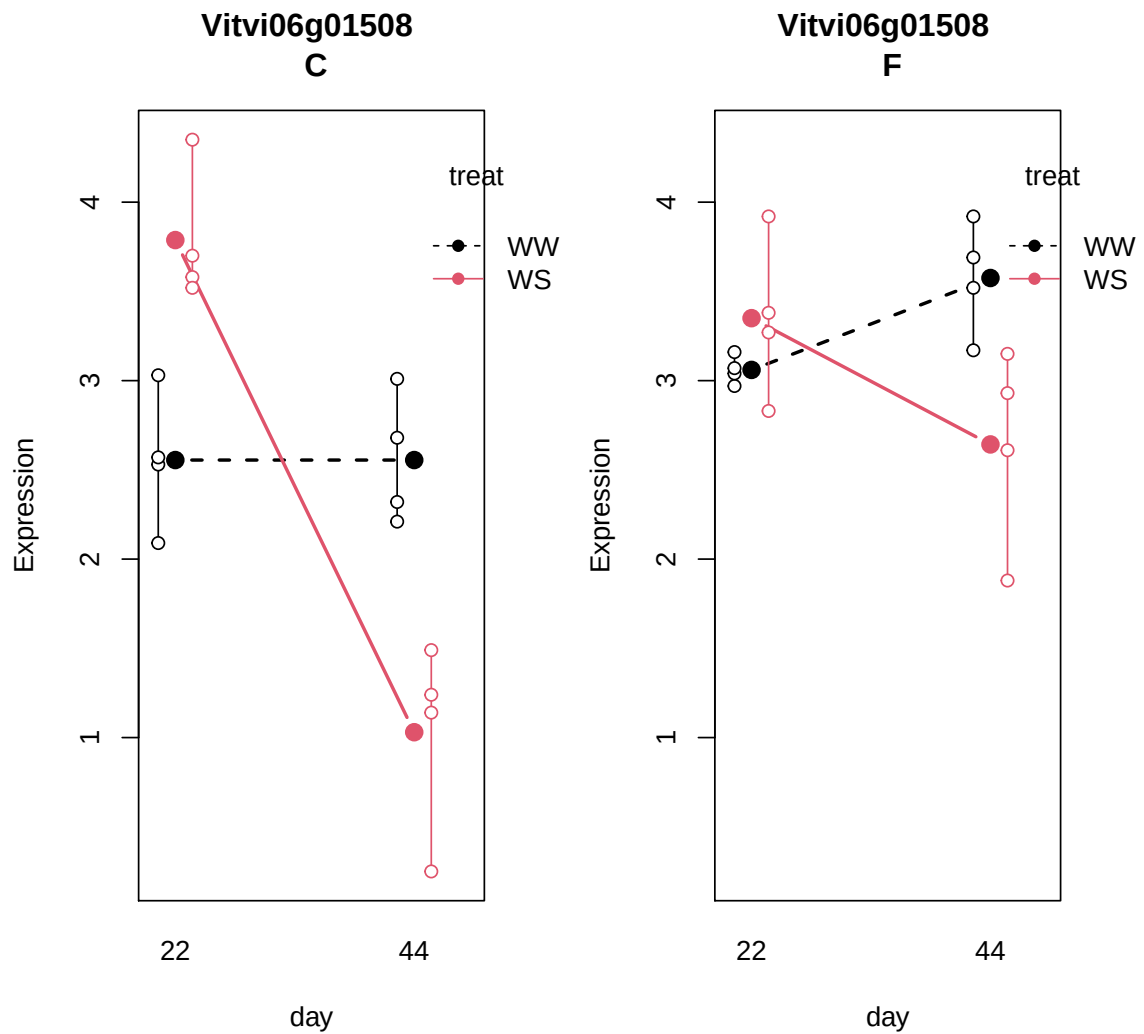
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

8.6.2 Vitvi06g01508

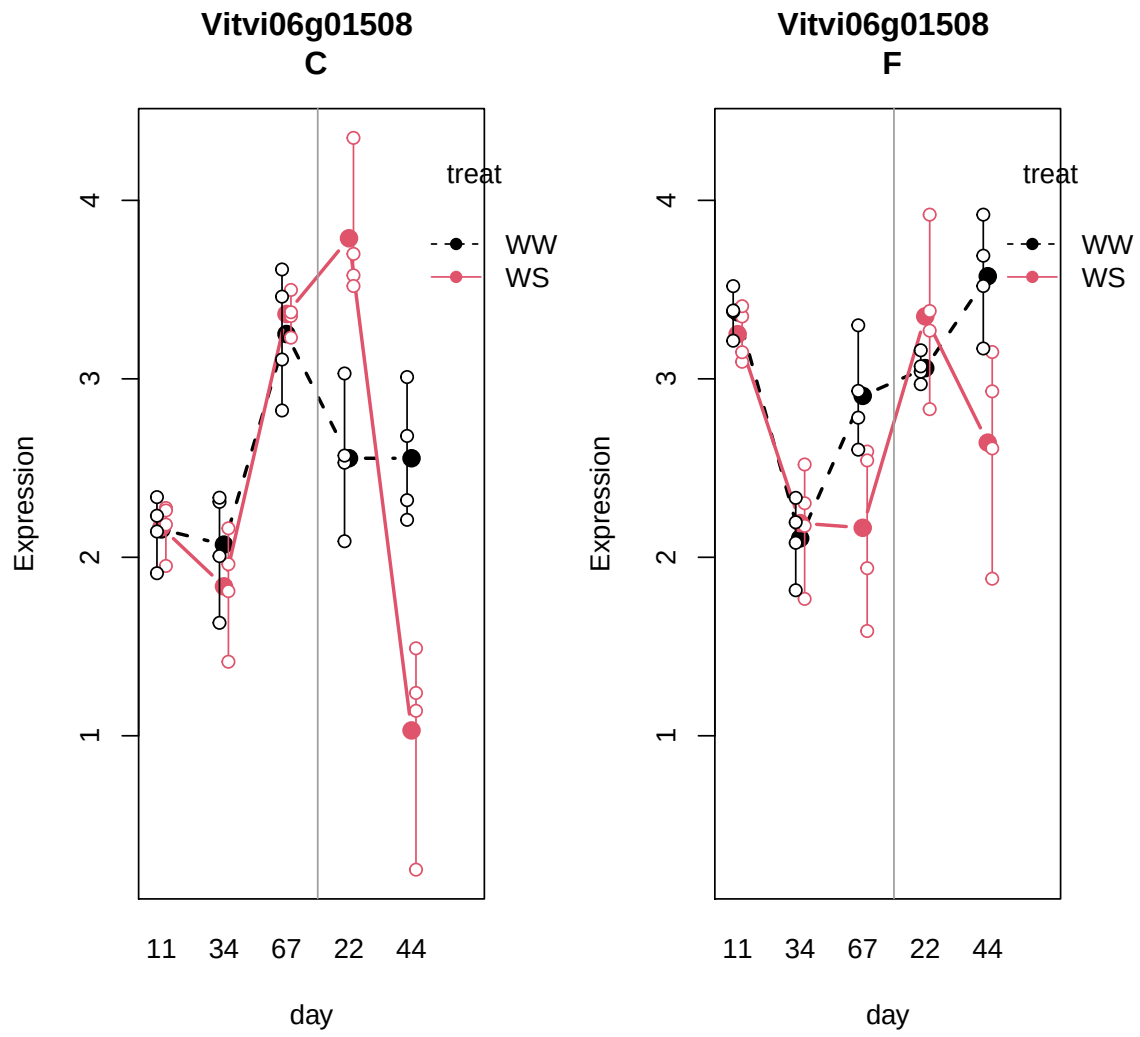
Coefficient day44:treatWS for Vitvi06g01508.

```
> tt[varname,]
               logFC  AveExpr          t      P.Value
Vitvi06g01508 -2.7575  2.819375 -7.010728 1.692929e-07
               adj.P.Val          B
Vitvi06g01508 0.0009302098  7.216626

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



```
> fit1[varname,]$coefficients
```

```

              (Intercept)  varietyF      day44  treatWS
Vitvi06g01508      2.555    0.505 1.506307e-17  1.2325
              varietyF:day44  varietyF:treatWS  day44:treatWS
Vitvi06g01508      0.515          -0.9425          -2.7575
              varietyF:day44:treatWS
Vitvi06g01508      1.535

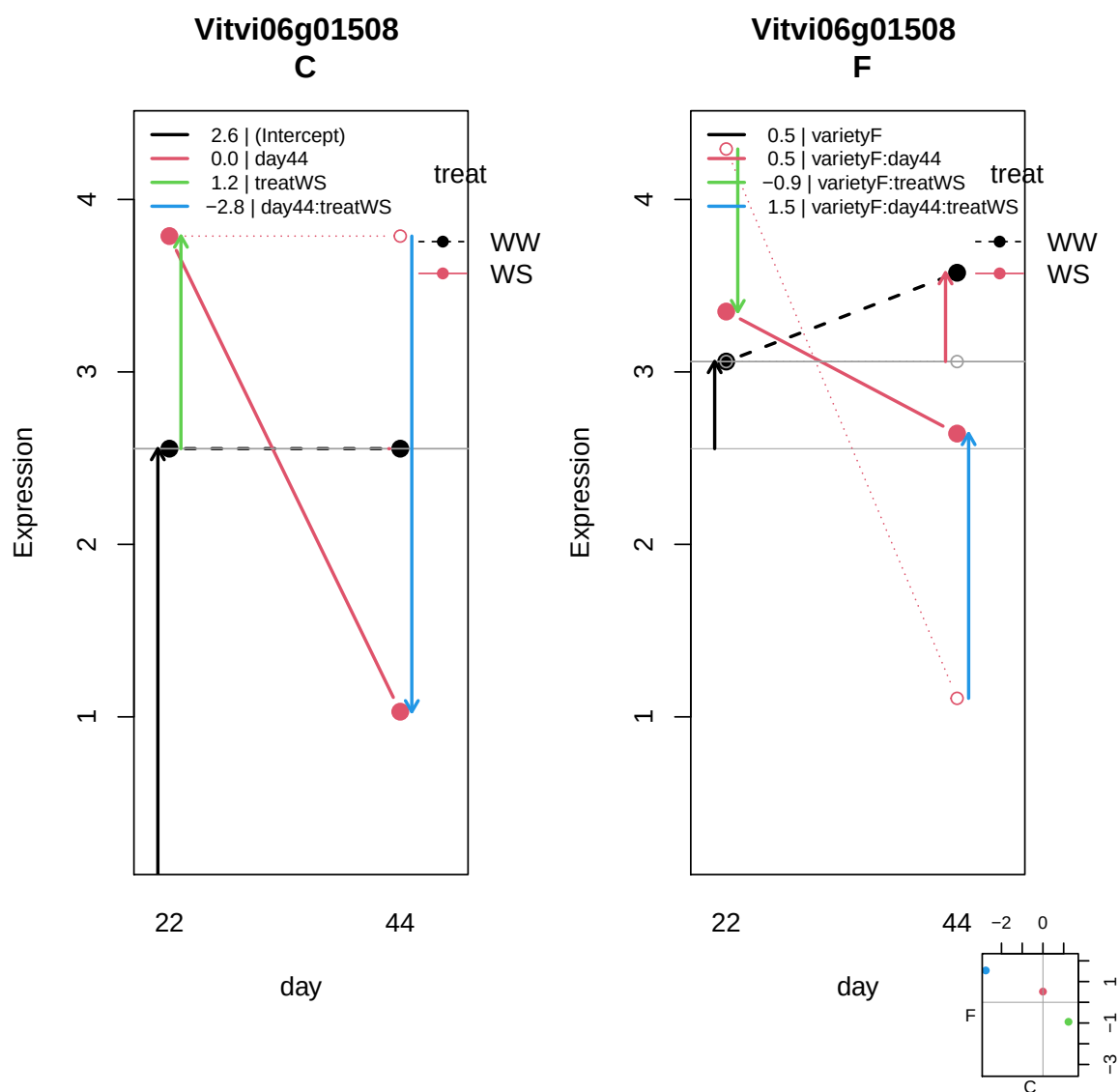
```

```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

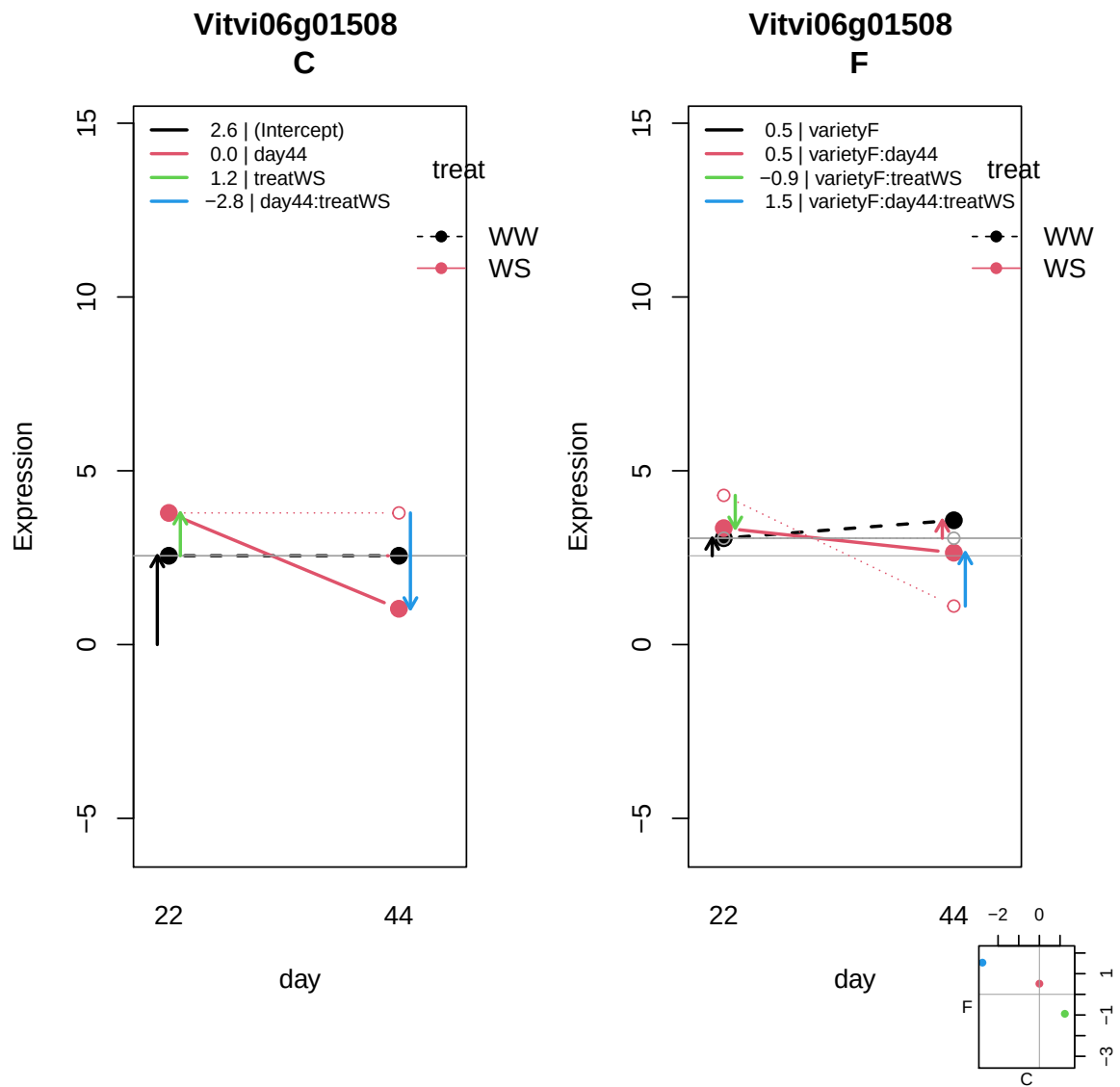
```

Warning in arrows(1:ndays - d, es, 1:ndays - d, esF, col = cl + 1:ndays, : zero



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```

Warning in arrows(1:ndays - d, es, 1:ndays - d, esF, col = cl + 1:ndays, : zero



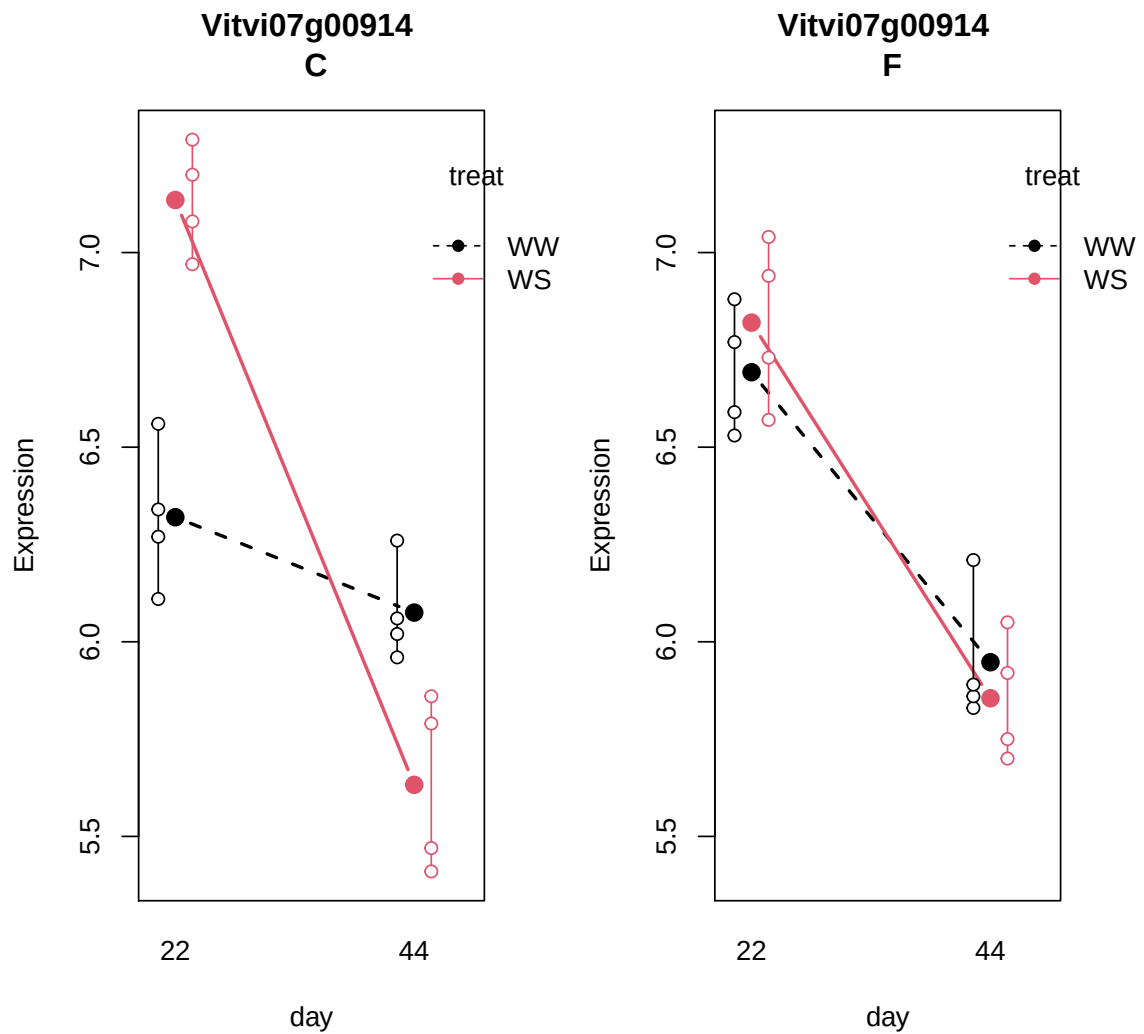
Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

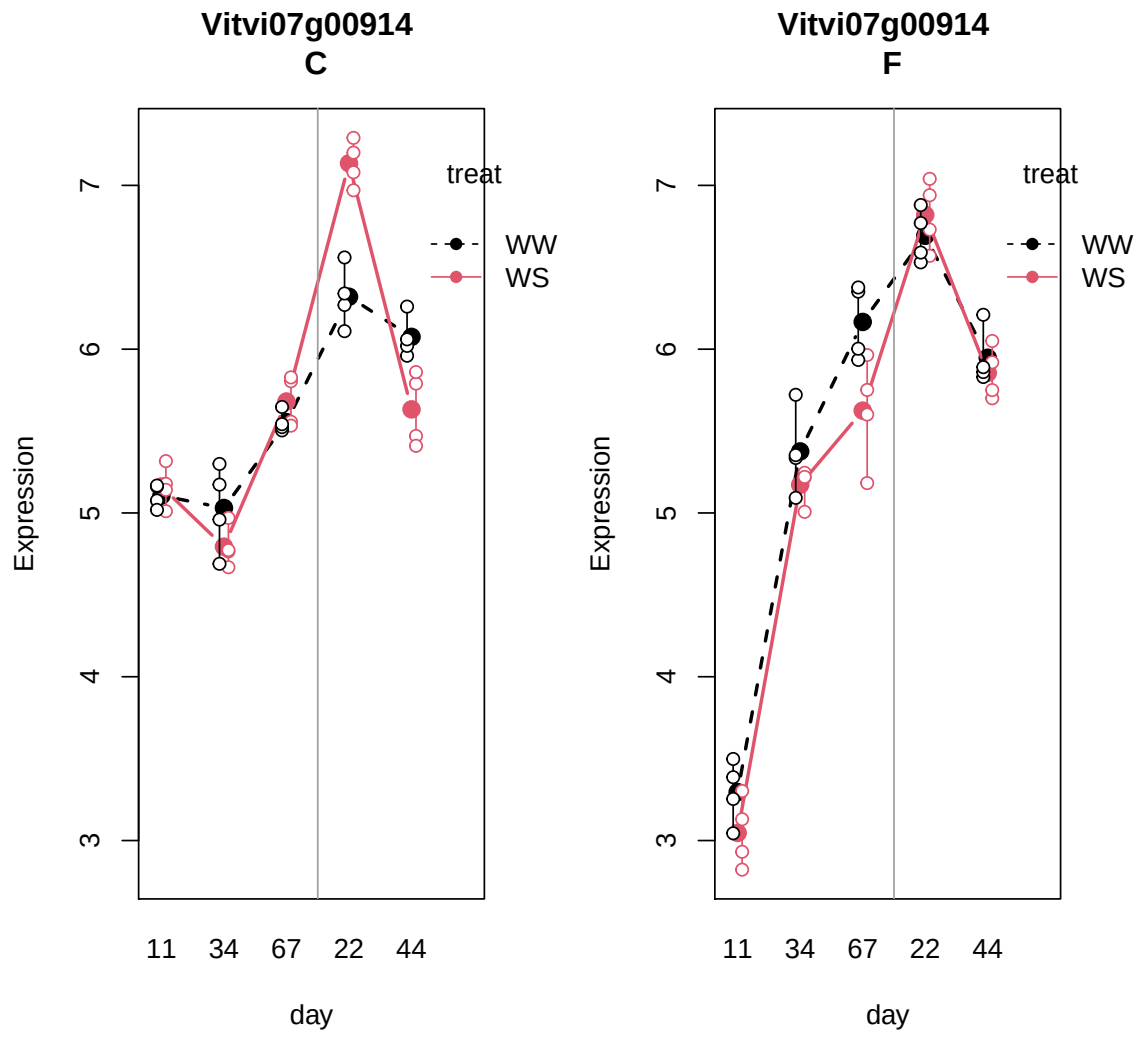

8.6.3 Vitvi07g00914

Coefficient day44:treatWS for Vitvi07g00914.

```
> tt[varname,]
              logFC  AveExpr          t      P.Value
Vitvi07g00914 -1.2575  6.309687 -6.979486 1.830881e-07
              adj.P.Val      B
Vitvi07g00914 0.0009302098 7.14581
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```



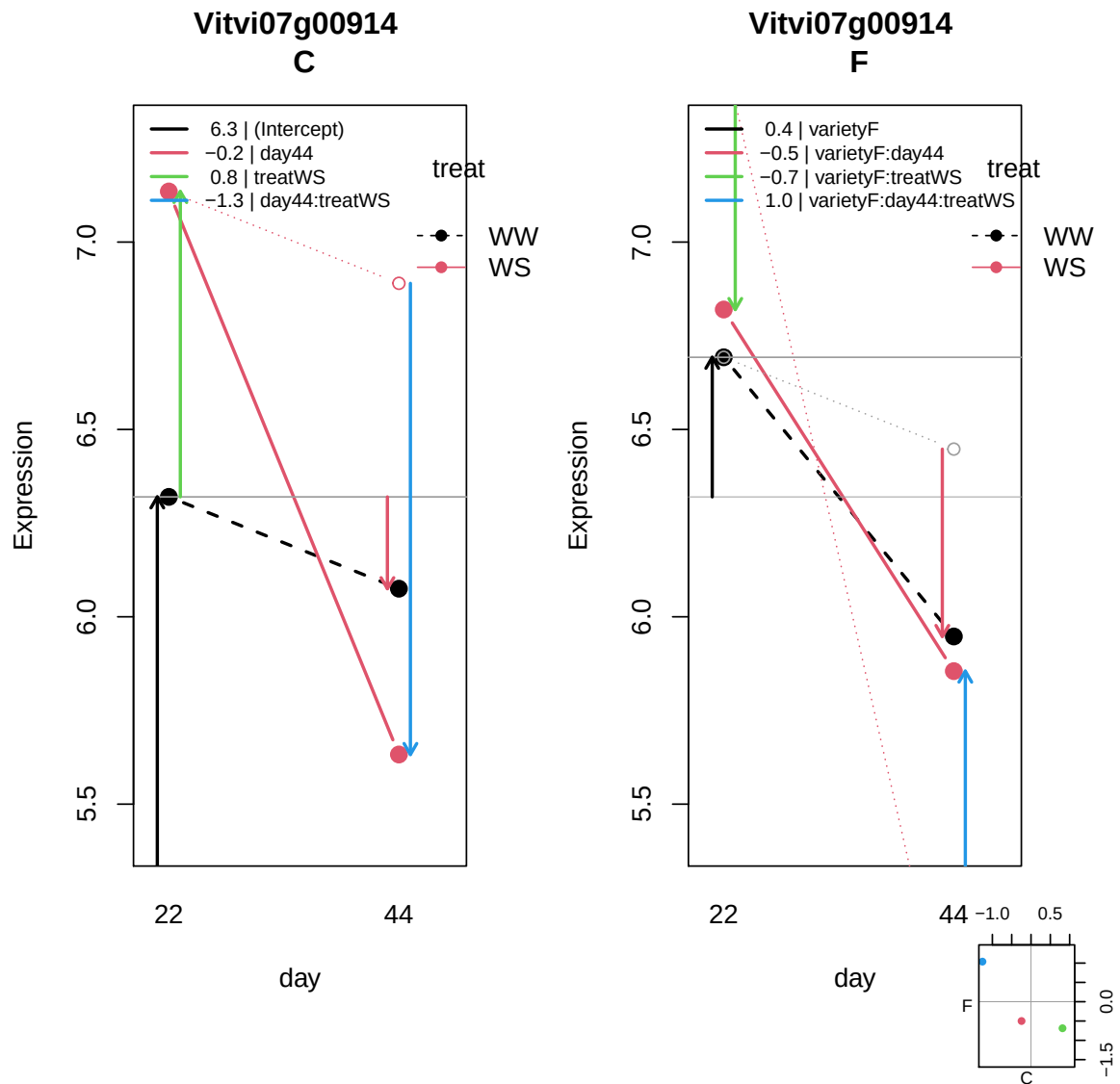
```

> fit1[varname,]$coefficients

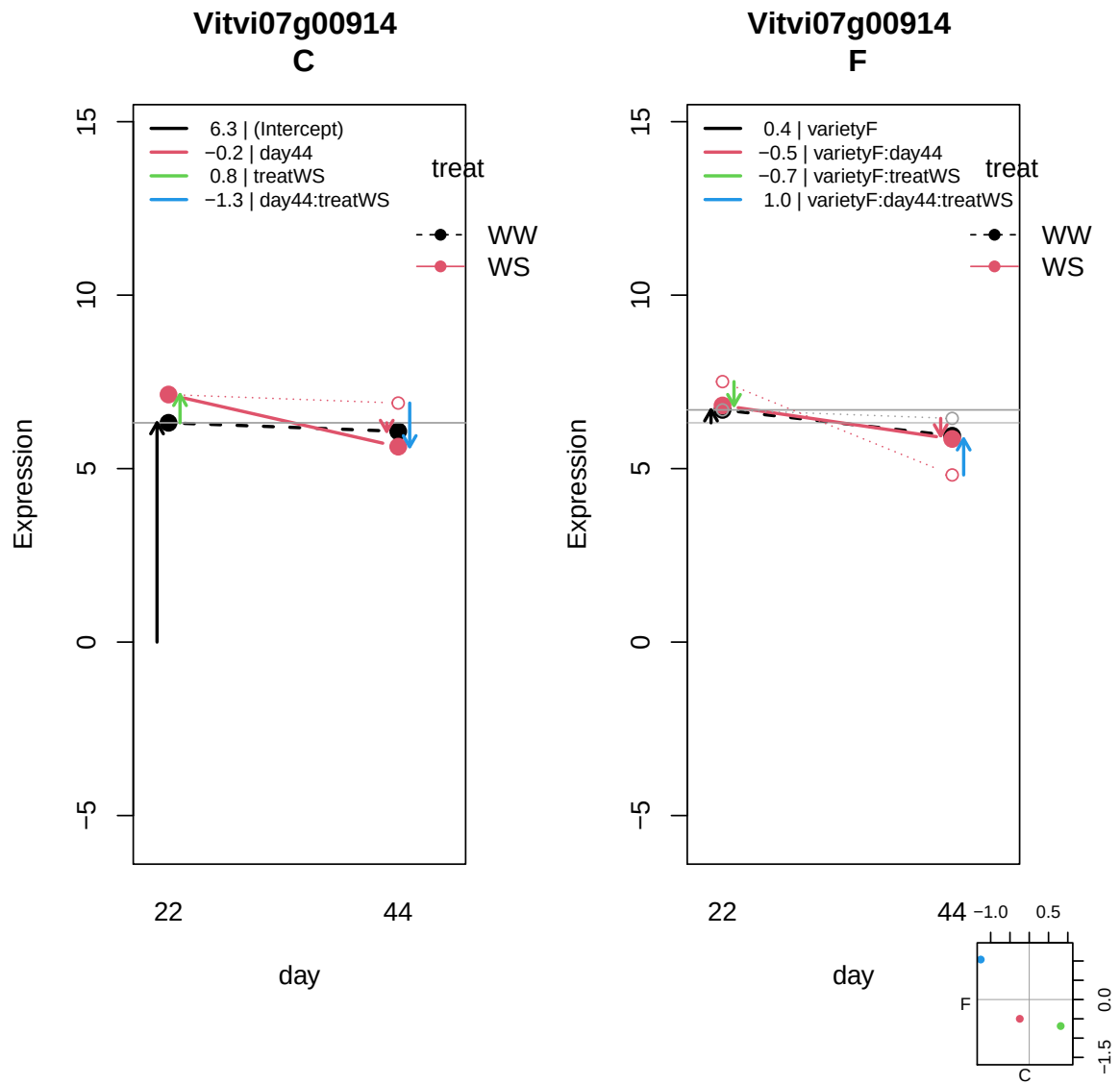
              (Intercept) varietyF  day44 treatWS
Vitvi07g00914           6.32   0.3725 -0.245   0.815
              varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi07g00914           -0.5         -0.6875         -1.2575
              varietyF:day44:treatWS
Vitvi07g00914           1.0375

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



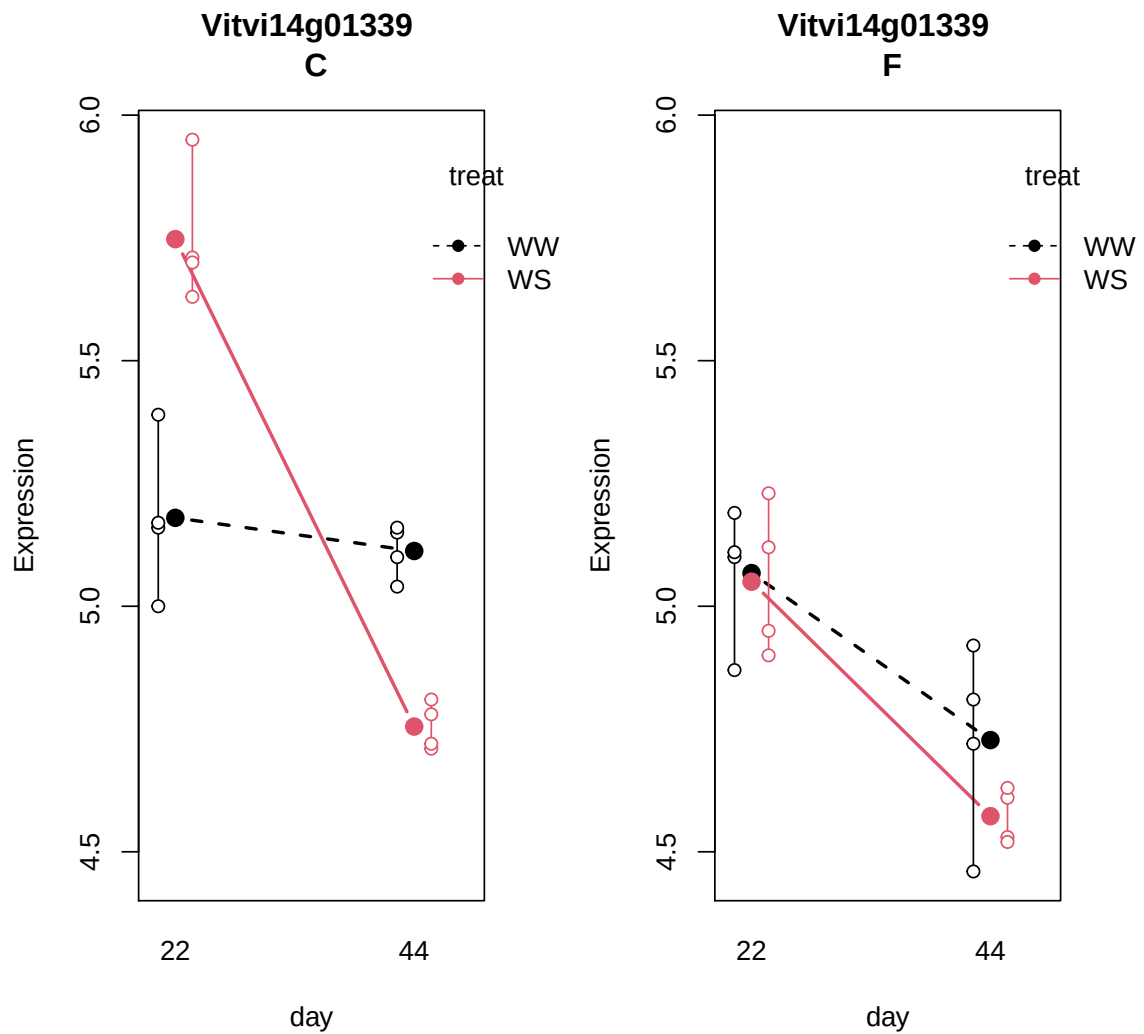
Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

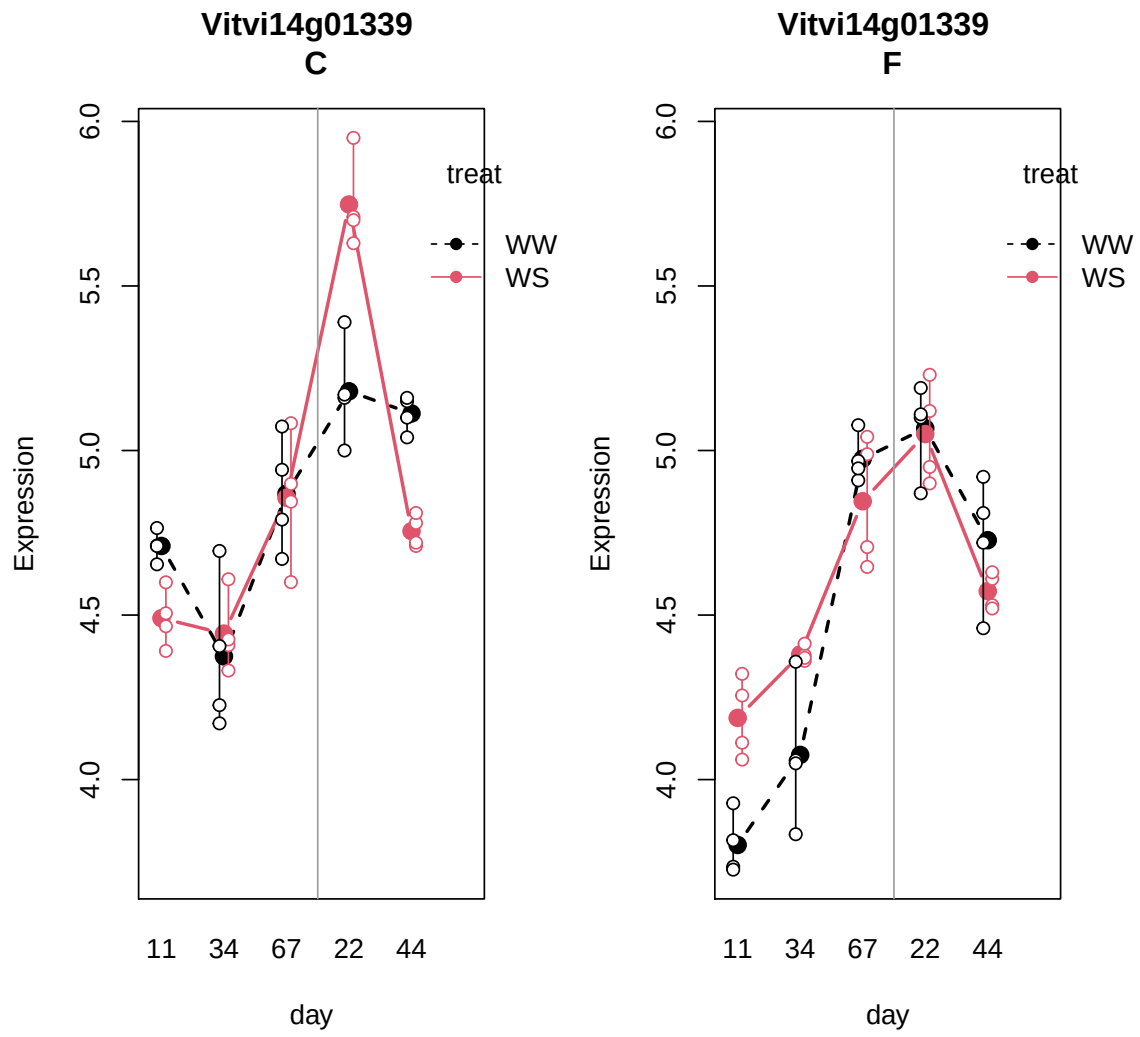
8.6.4 Vitvi14g01339

Coefficient day44:treatWS for Vitvi14g01339.

```
> tt[varname,]
              logFC  AveExpr          t      P.Value
Vitvi14g01339 -0.925  5.026562 -6.632804 4.400293e-07
              adj.P.Val          B
Vitvi14g01339 0.001380892  6.350825
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

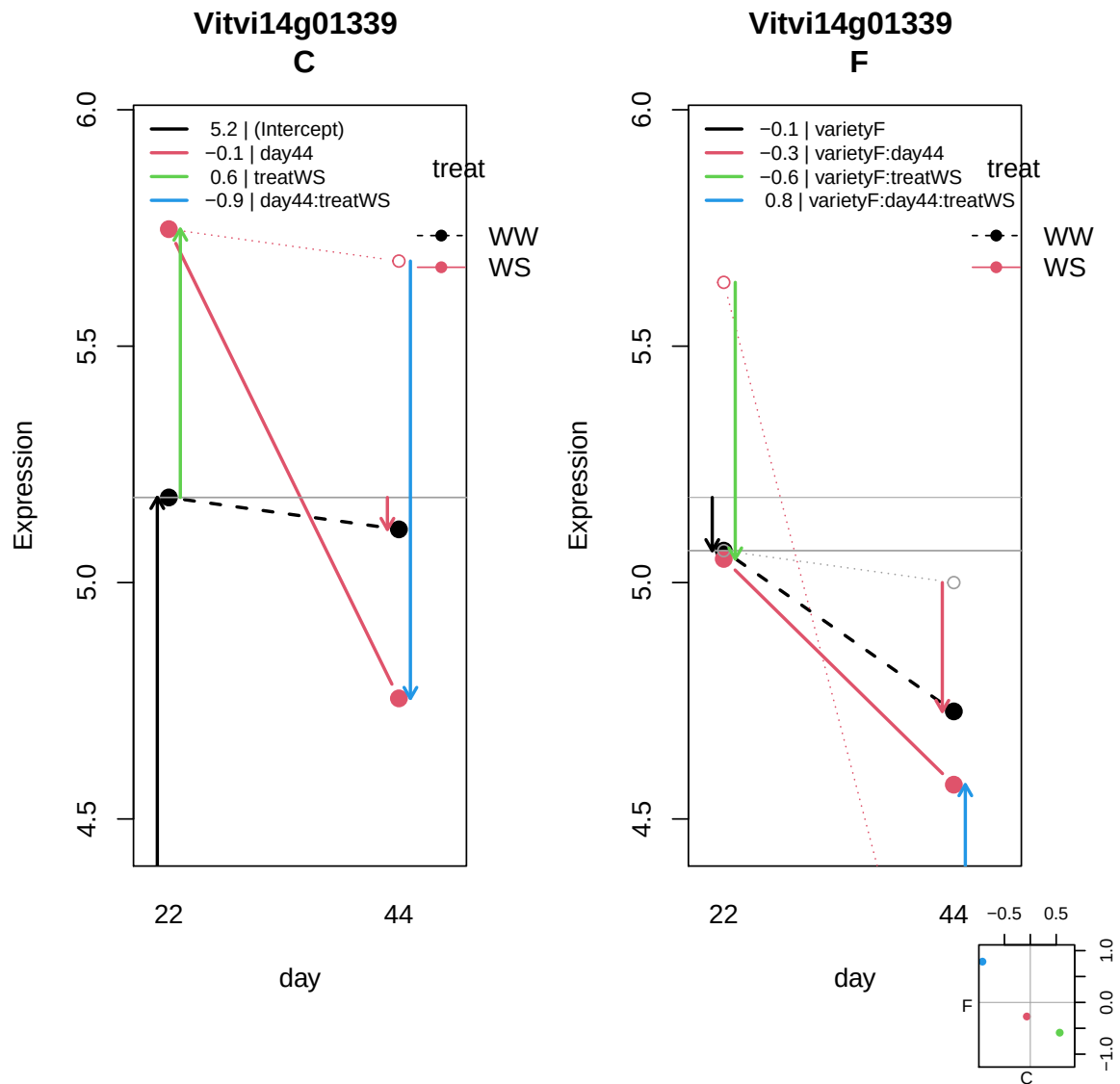


```

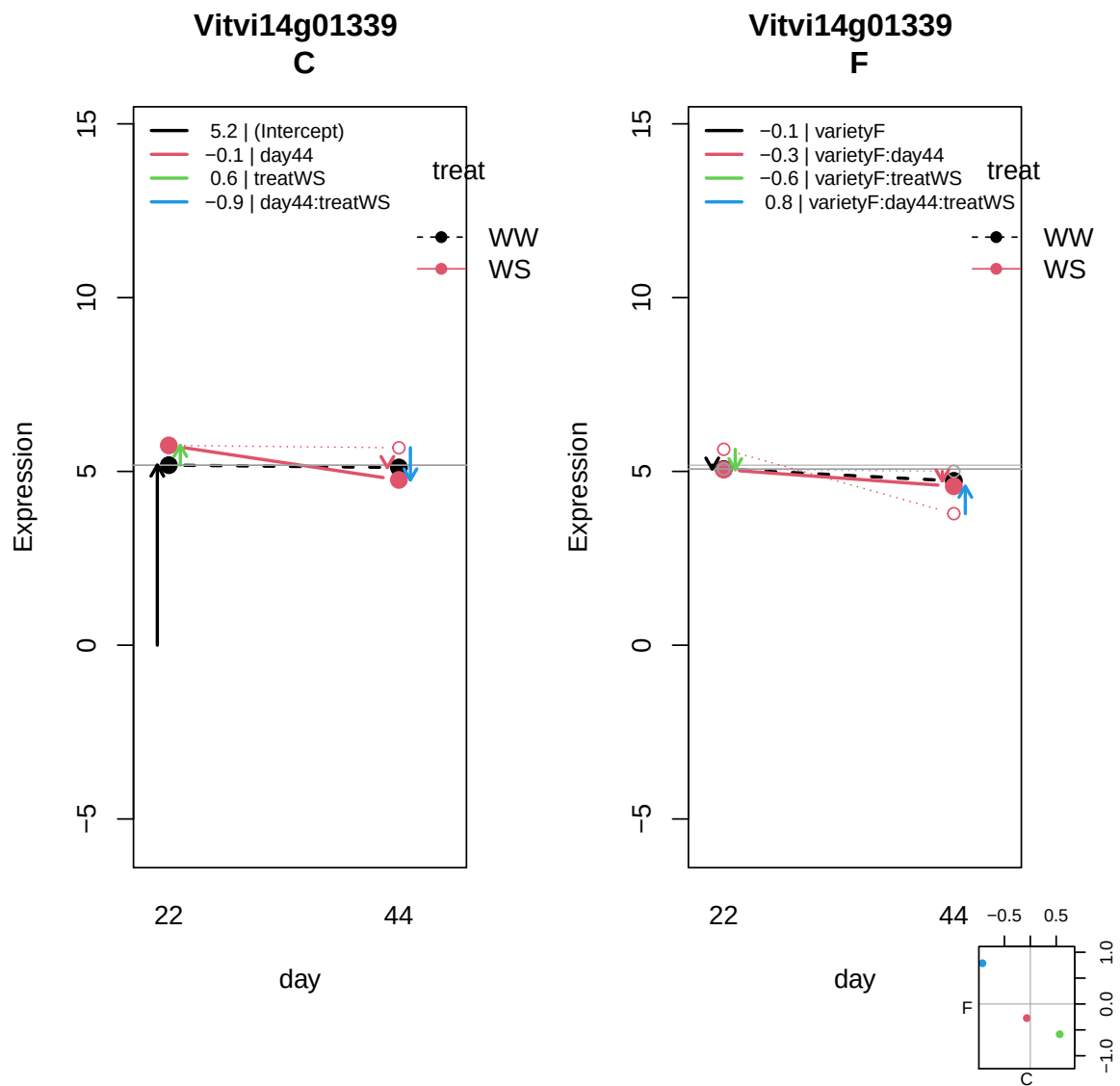
> fit1[varname,]$coefficients
               (Intercept)  varietyF    day44  treatWS
Vitvi14g01339           5.18  -0.1125 -0.0675  0.5675
               varietyF:day44  varietyF:treatWS  day44:treatWS
Vitvi14g01339          -0.2725           -0.585        -0.925
               varietyF:day44:treatWS
Vitvi14g01339              0.7875

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```




```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

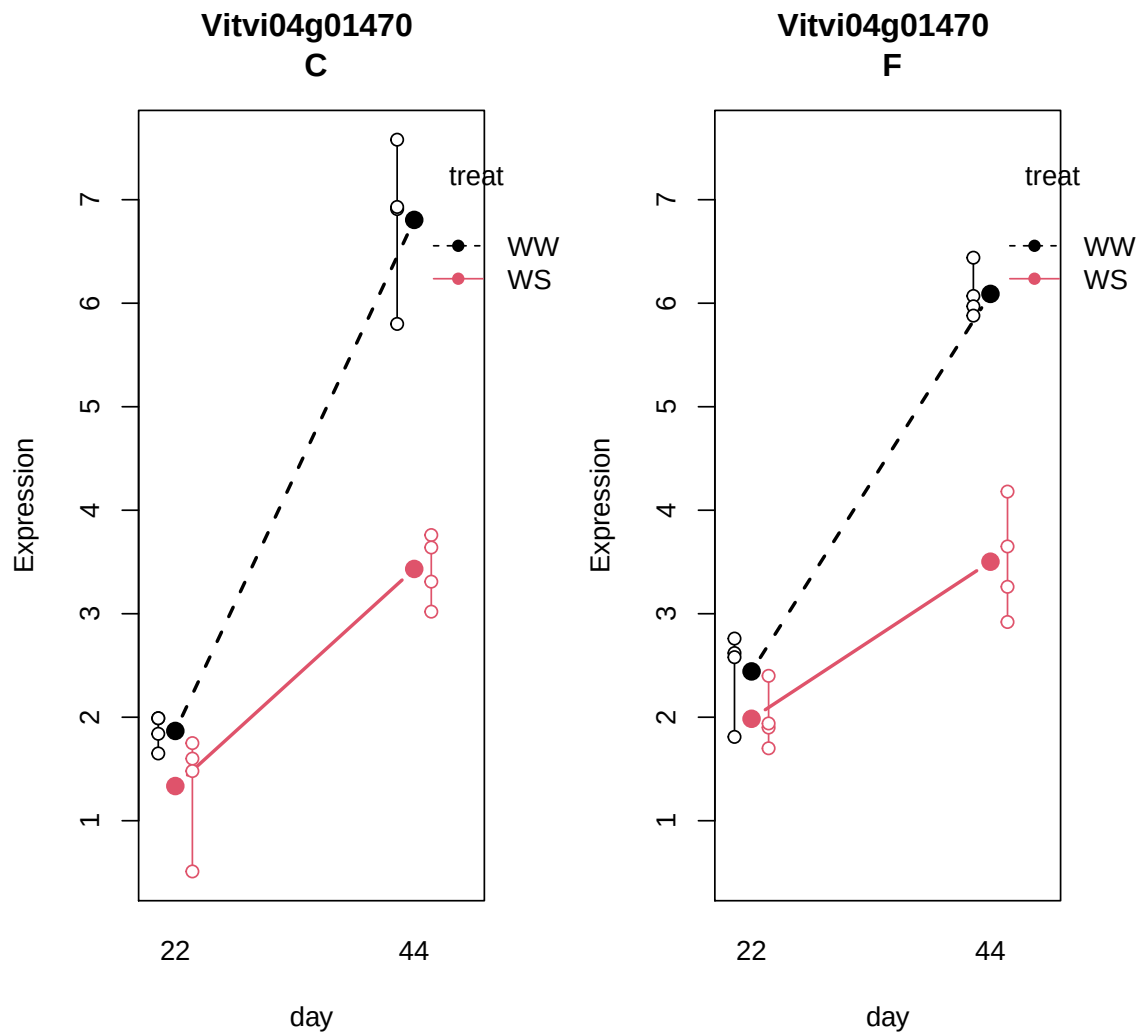
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

8.6.5 Vitvi04g01470

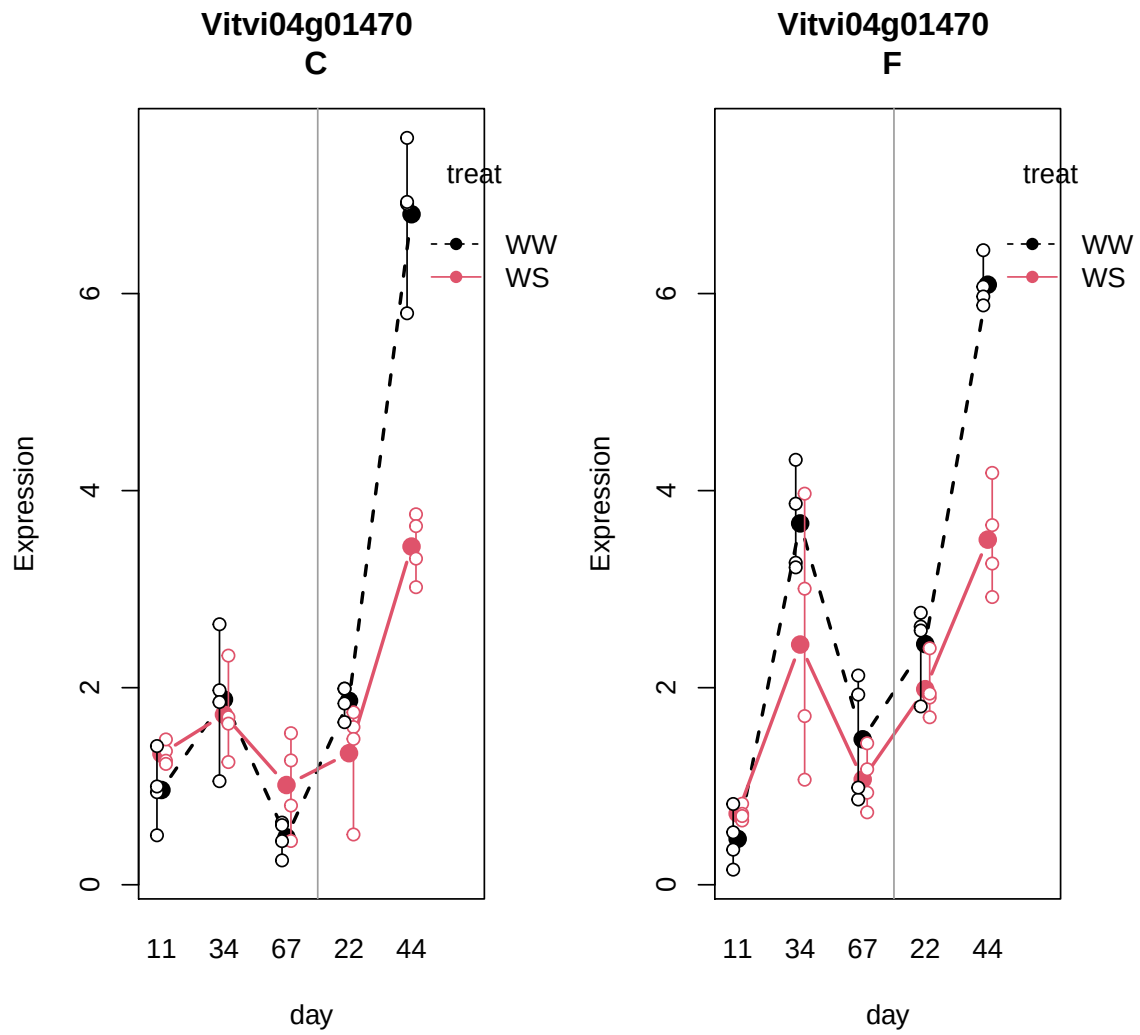
Coefficient day44:treatWS for Vitvi04g01470.

```
> tt[varname,]
              logFC AveExpr          t      P.Value
Vitvi04g01470 -2.84  3.4325 -6.558734 5.316238e-07
              adj.P.Val          B
Vitvi04g01470 0.001380892 6.178863

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

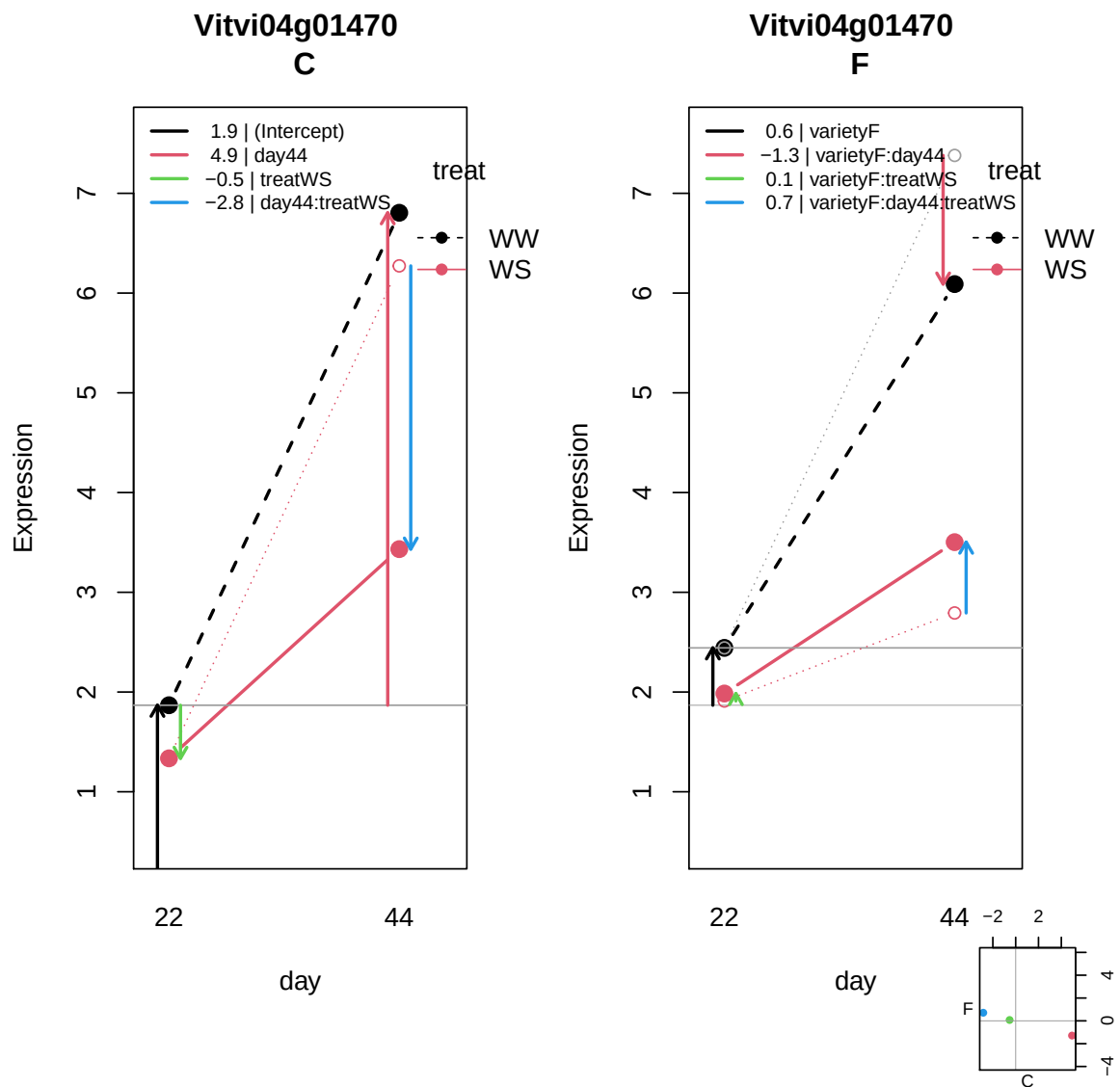


```

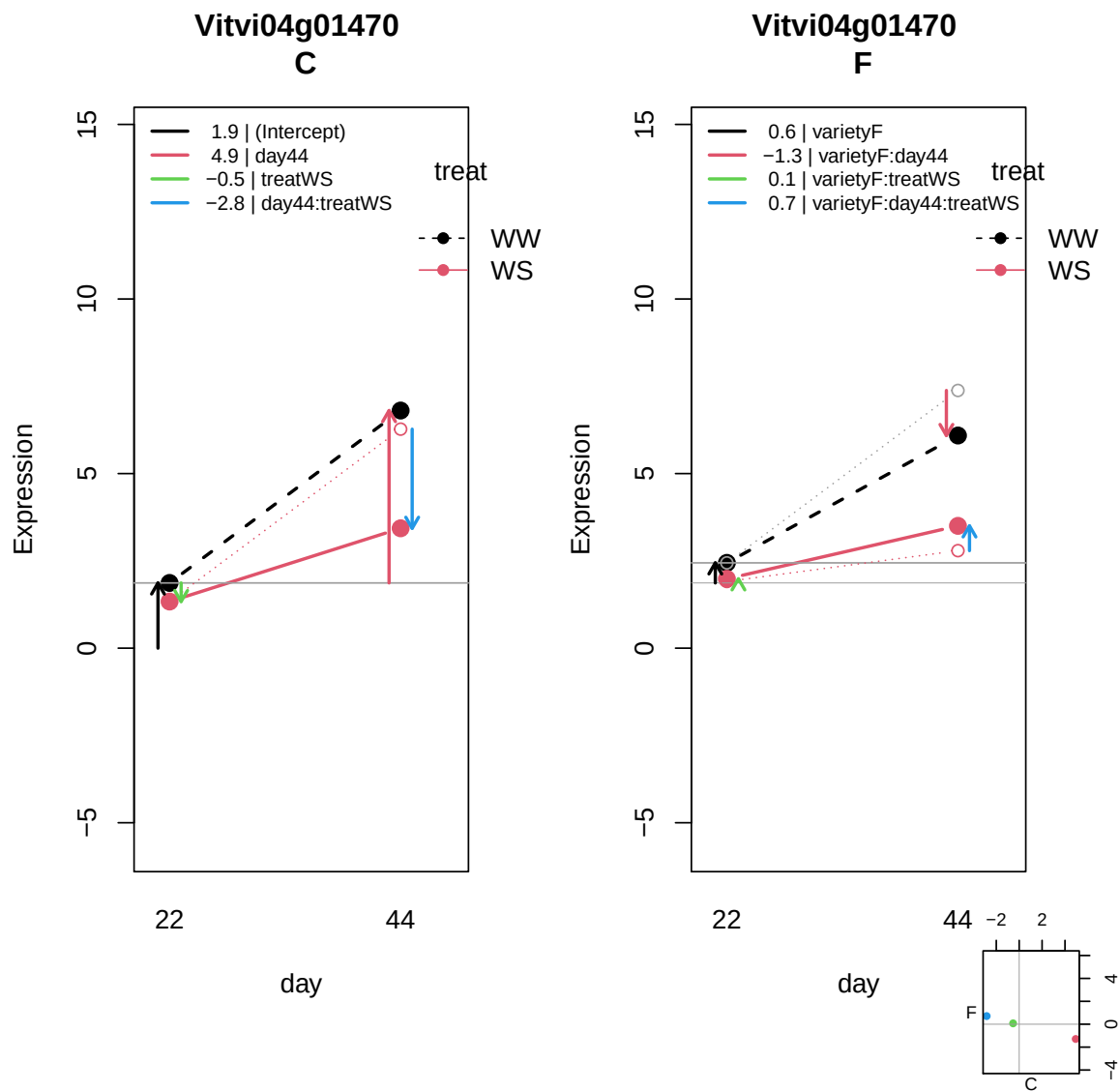
> fit1[varname,]$coefficients
              (Intercept) varietyF  day44 treatWS
Vitvi04g01470      1.8675    0.575 4.9375 -0.5325
              varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi04g01470      -1.29              0.075          -2.84
              varietyF:day44:treatWS
Vitvi04g01470              0.71

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

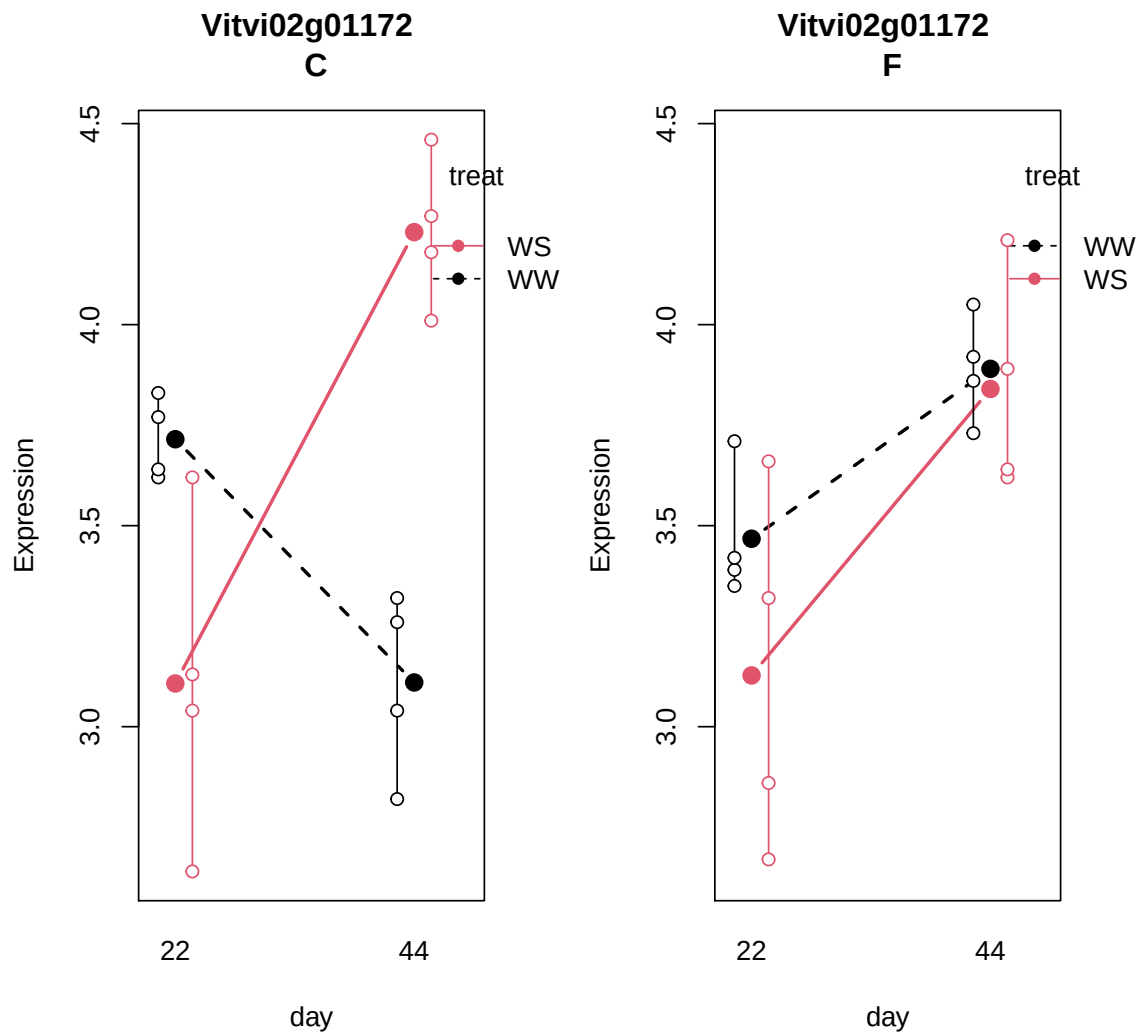
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

8.6.6 Vitvi02g01172

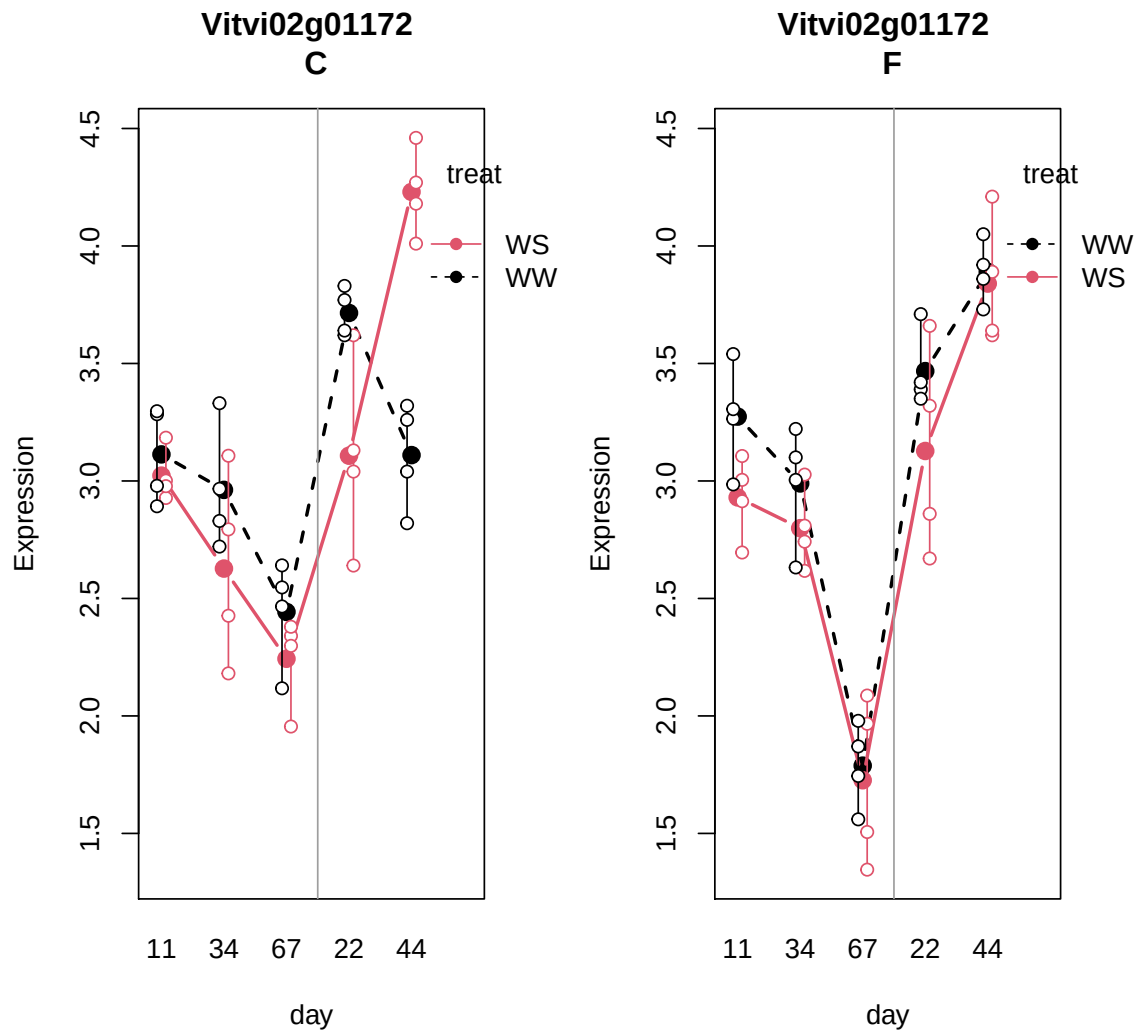
Coefficient day44:treatWS for Vitvi02g01172.

```
> tt[varname,]
              logFC  AveExpr          t      P.Value
Vitvi02g01172  1.7275  3.560938  6.538263  5.602039e-07
              adj.P.Val          B
Vitvi02g01172  0.001380892  6.131212

> plot.interactions(varname, phdata=pd, data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

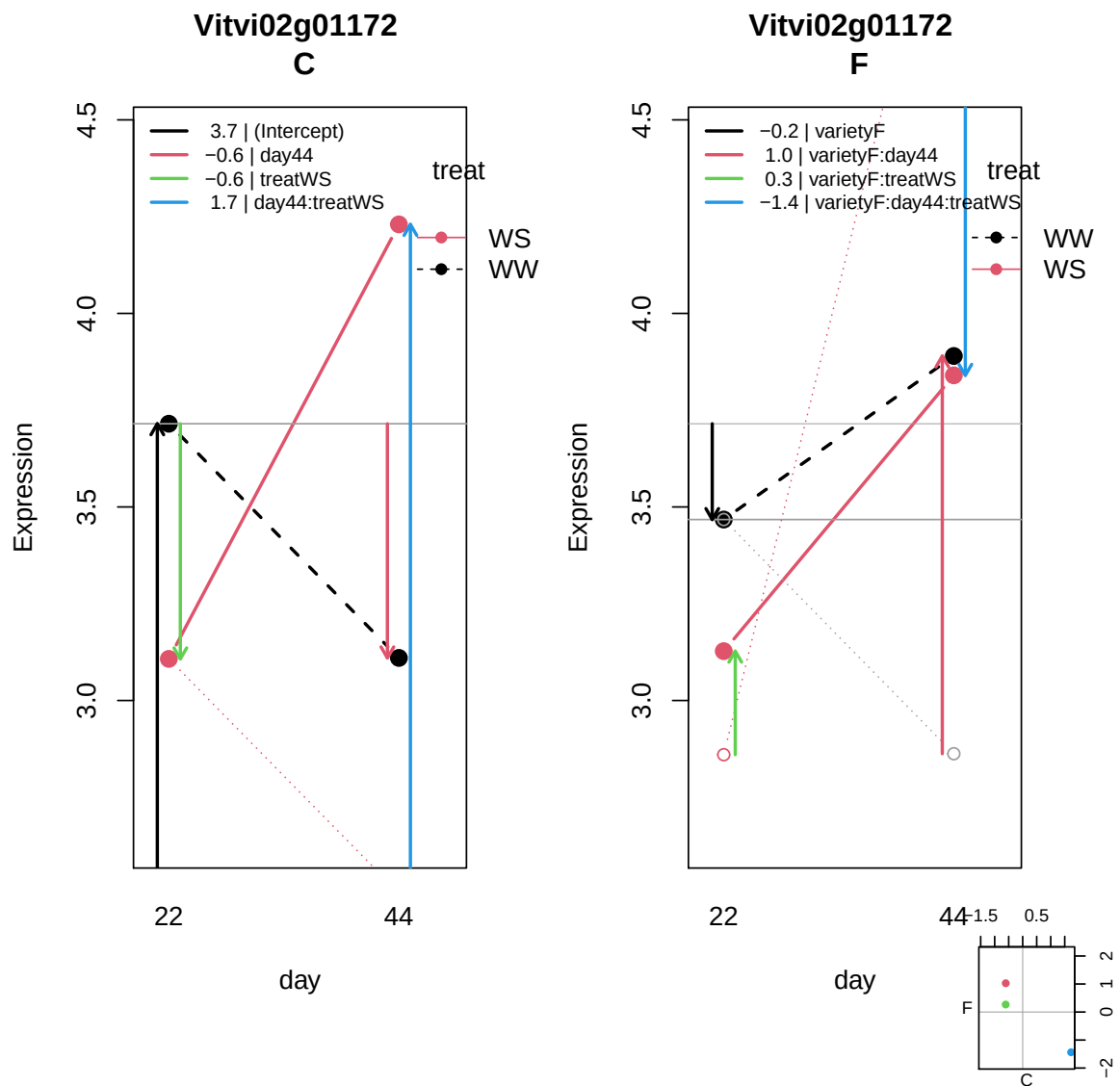


```

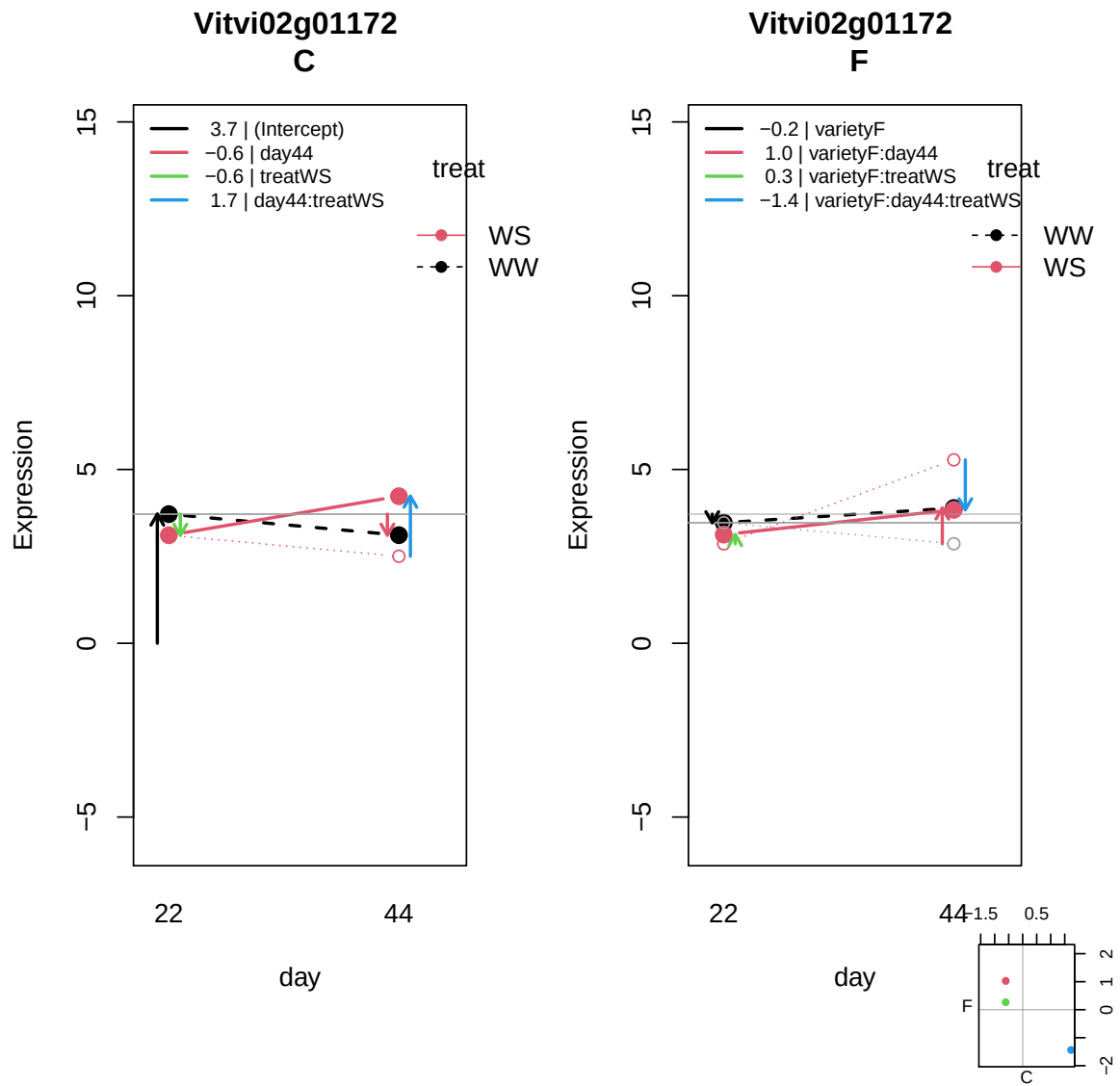
> fit1[varname,]$coefficients
               (Intercept) varietyF  day44 treatWS
Vitvi02g01172      3.715   -0.2475 -0.605 -0.6075
               varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi02g01172      1.0275             0.2675      1.7275
               varietyF:day44:treatWS
Vitvi02g01172      -1.4375

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

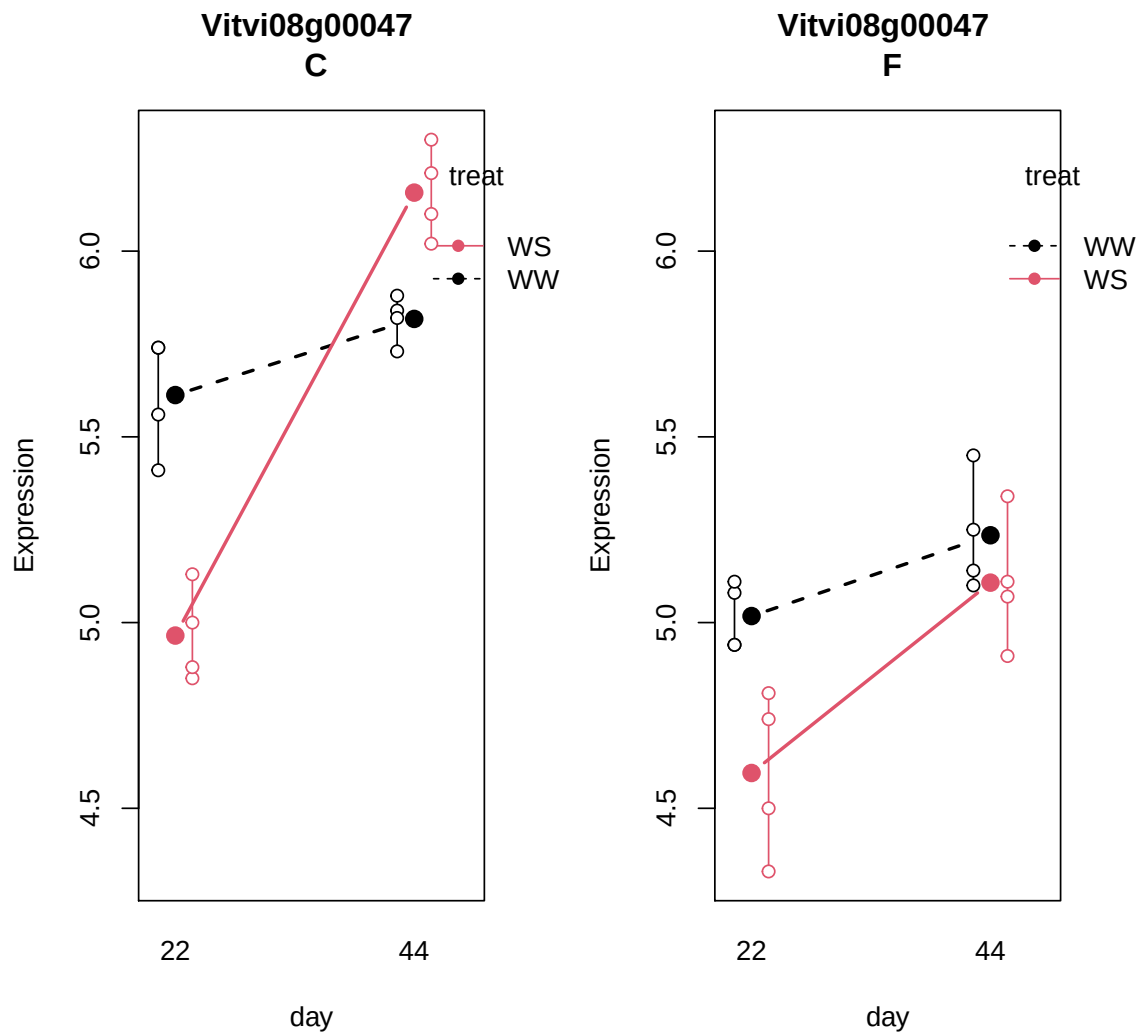
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

8.6.7 Vitvi08g00047

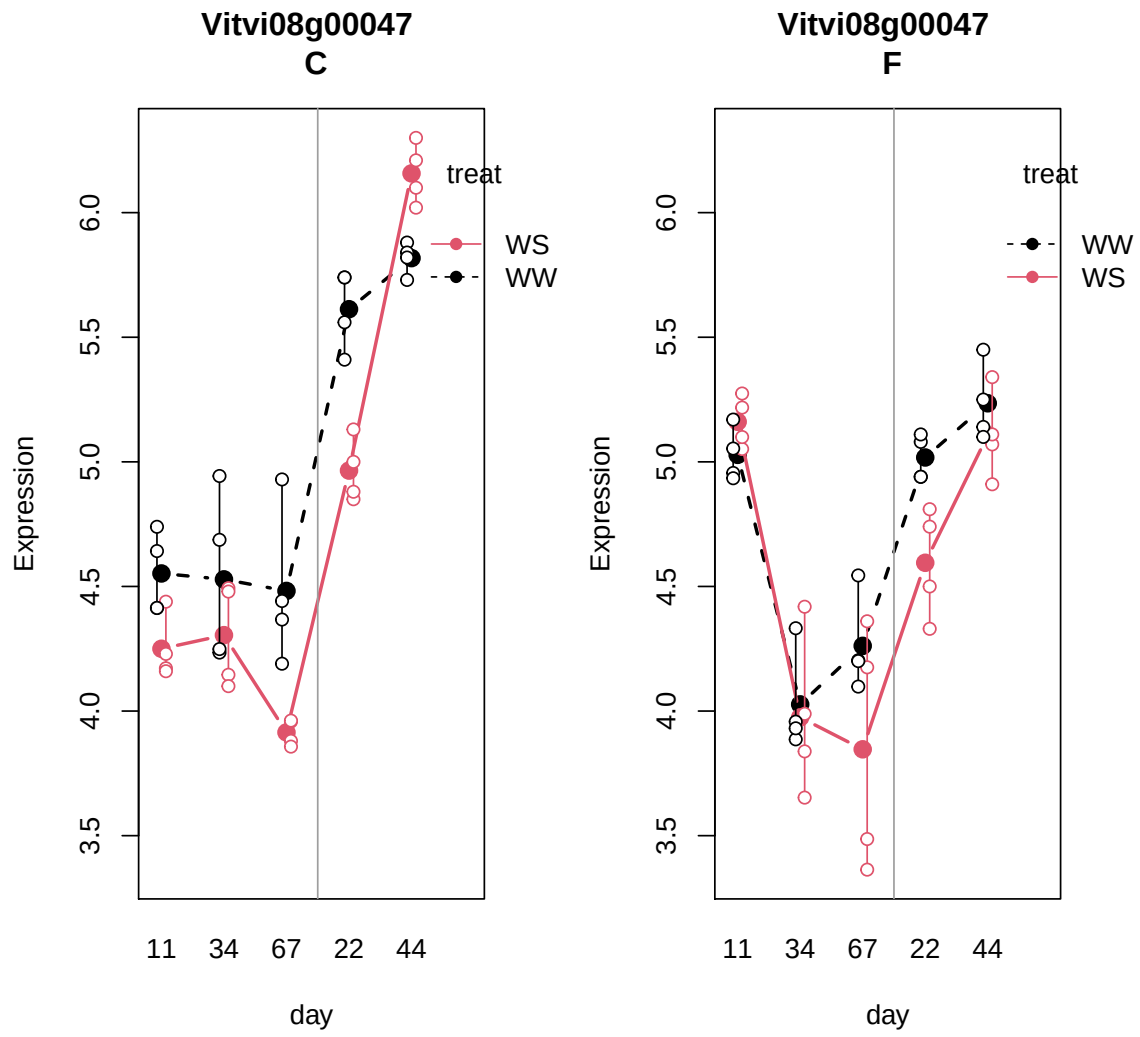
Coefficient day44:treatWS for Vitvi08g00047.

```
> tt[varname,]
              logFC  AveExpr          t      P.Value
Vitvi08g00047  0.9875  5.313438  6.385124 8.300092e-07
              adj.P.Val          B
Vitvi08g00047  0.001380892  5.773046

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

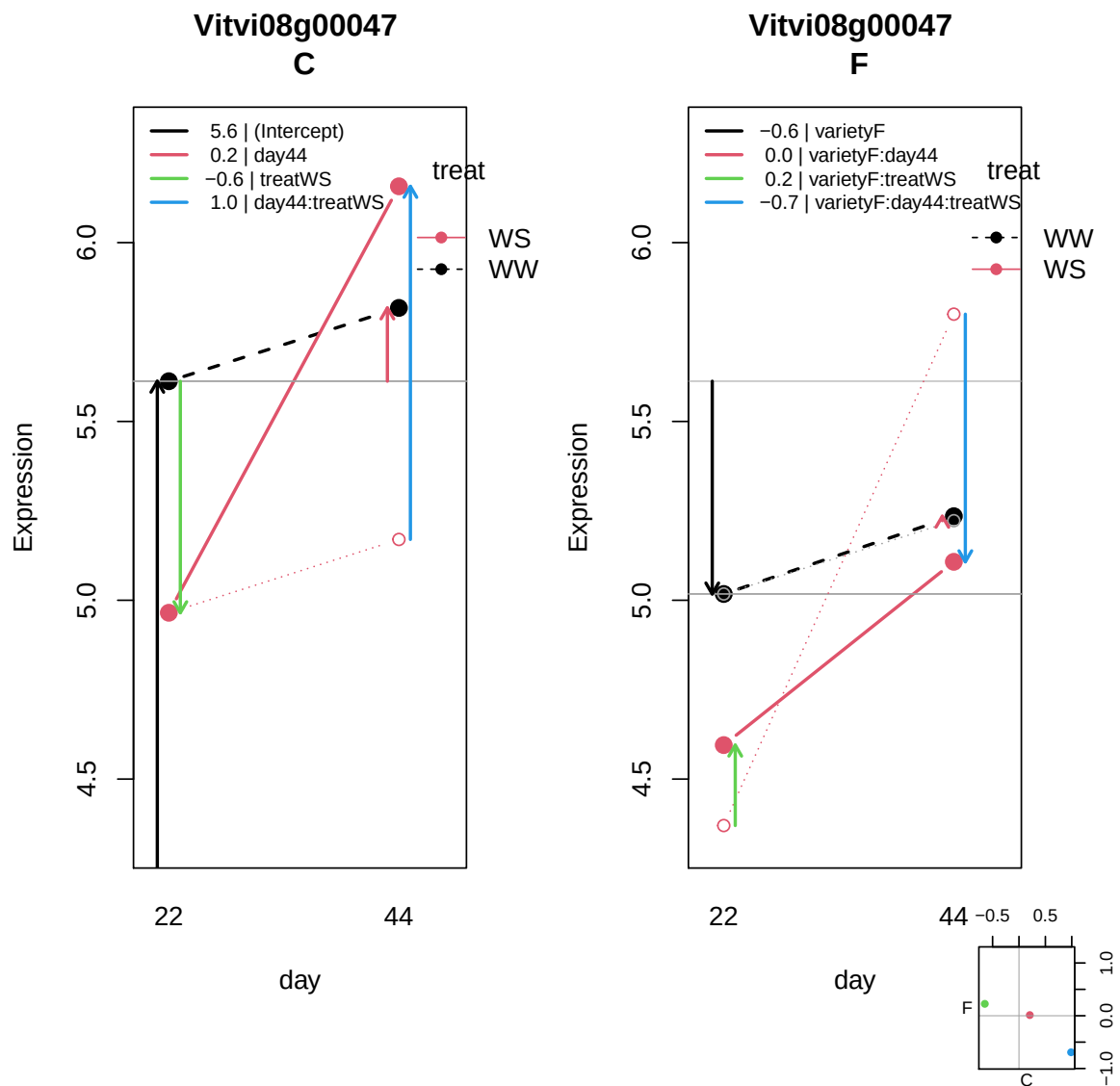


```

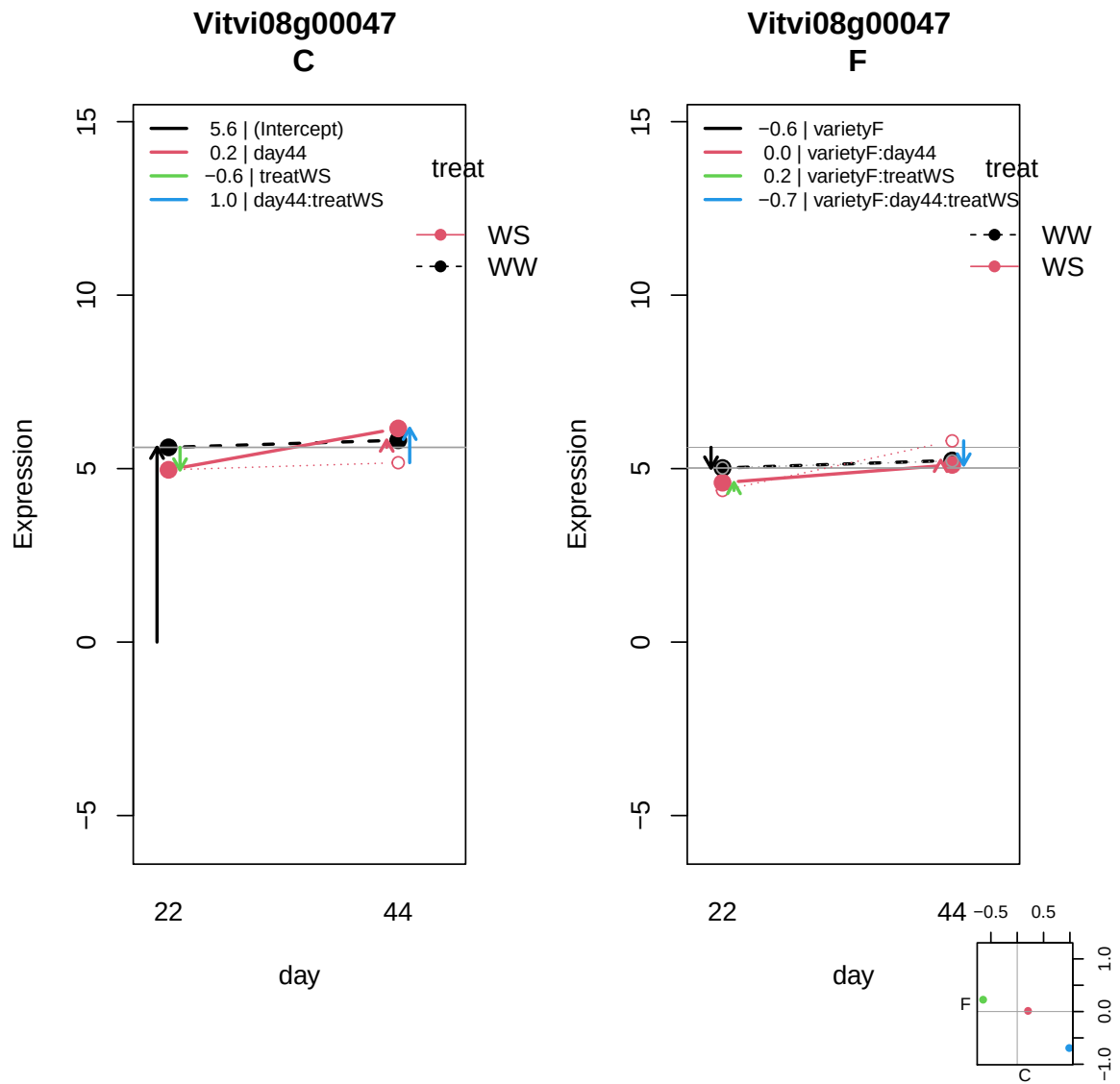
> fit1[varname,]$coefficients
              (Intercept) varietyF day44 treatWS
Vitvi08g00047      5.6125   -0.595  0.205  -0.6475
              varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi08g00047      0.0125                0.225      0.9875
              varietyF:day44:treatWS
Vitvi08g00047      -0.6925

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



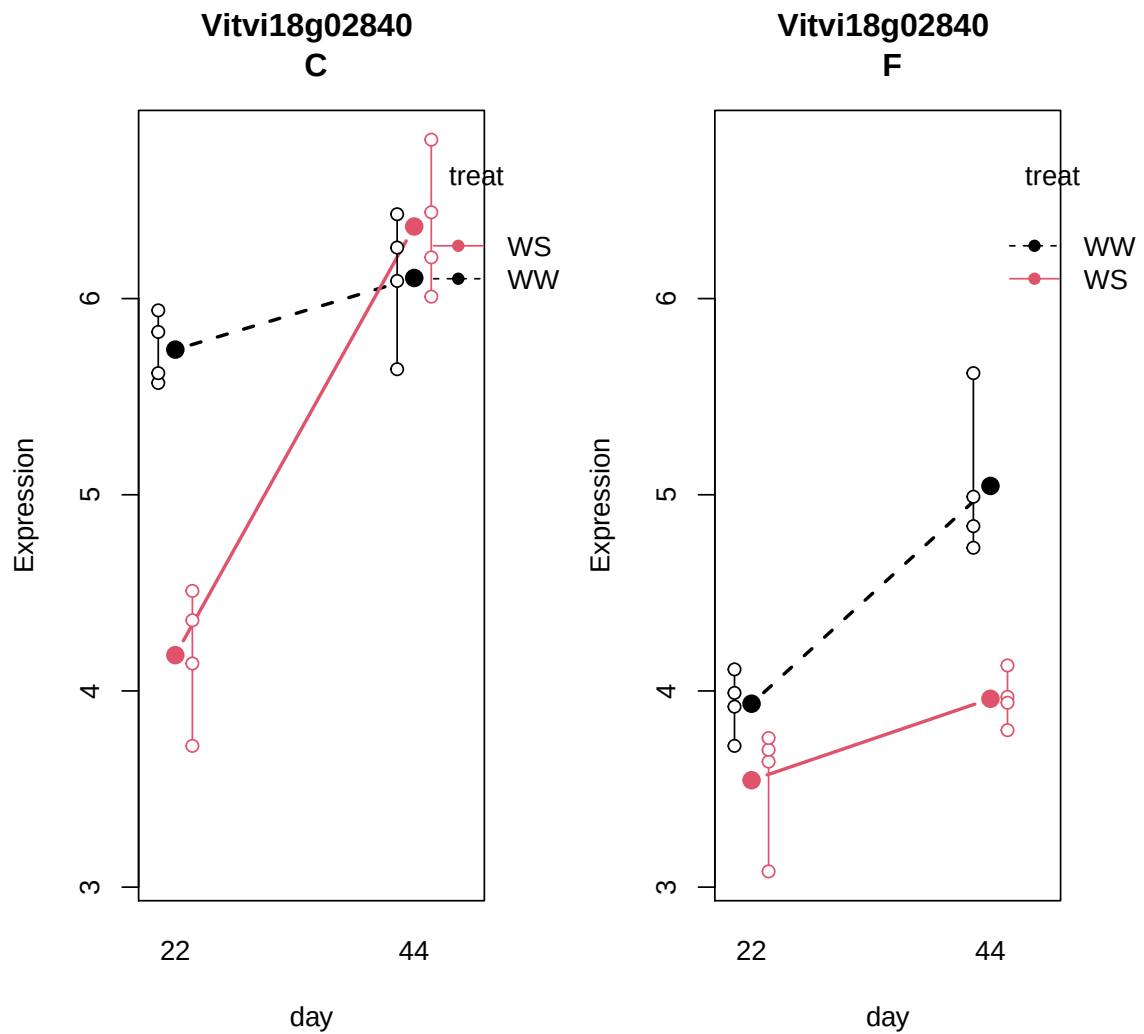
Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

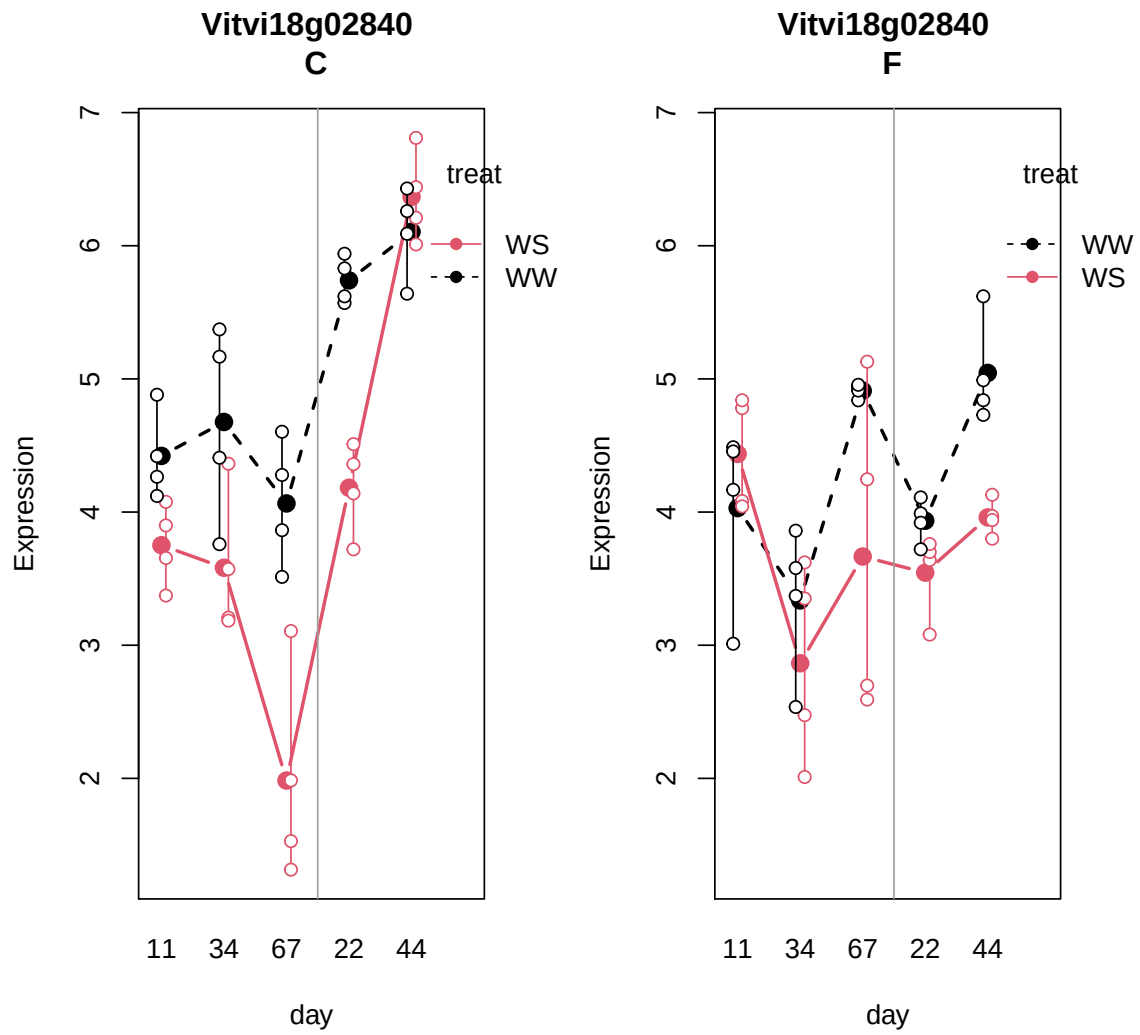
8.6.8 Vitvi18g02840

Coefficient day44:treatWS for Vitvi18g02840.

```
> tt[varname,]
              logFC AveExpr      t    P.Value  adj.P.Val
Vitvi18g02840  1.82    4.86 6.376496 8.4866e-07 0.001380892
              B
Vitvi18g02840 5.75278
> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

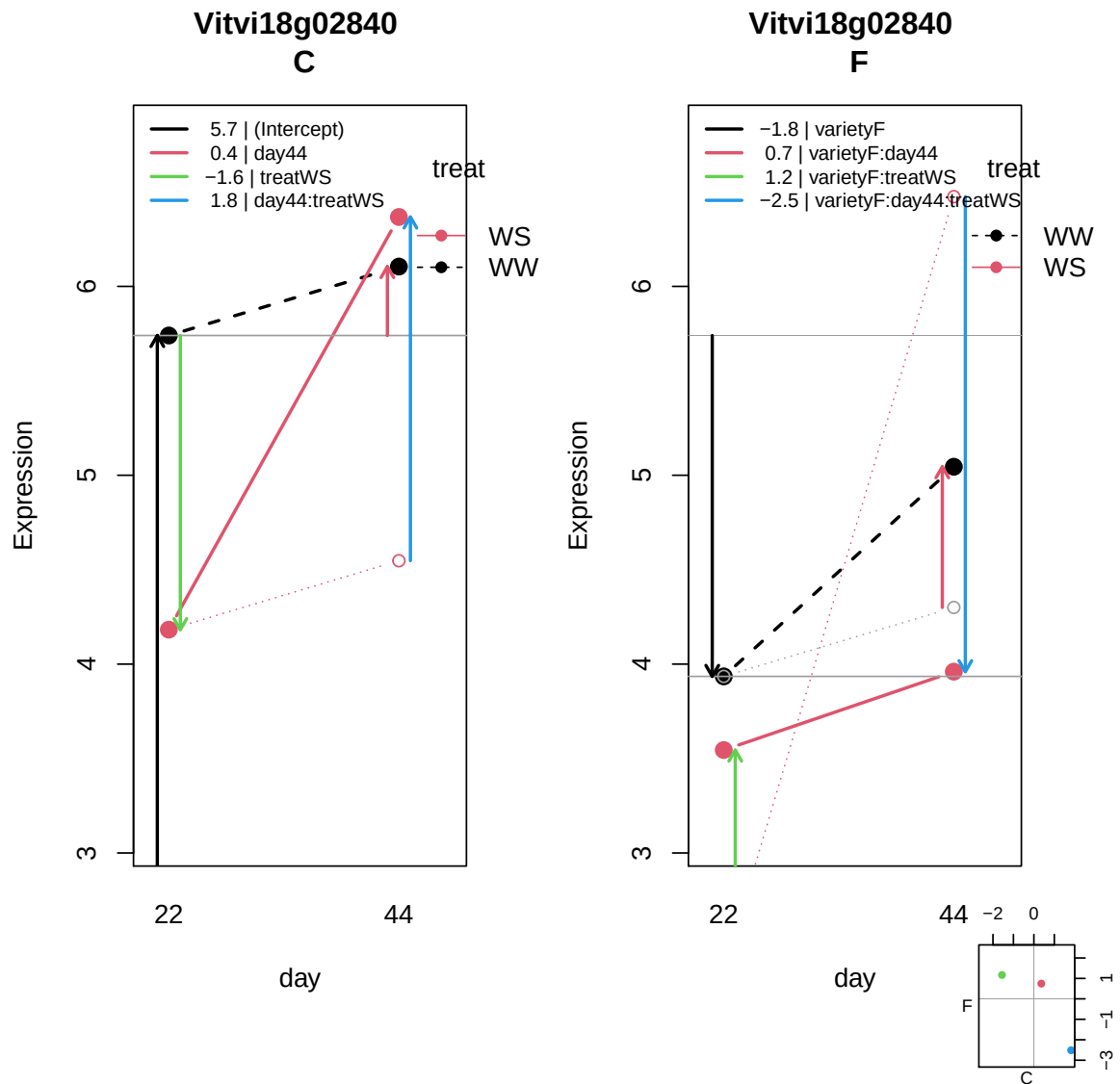


```

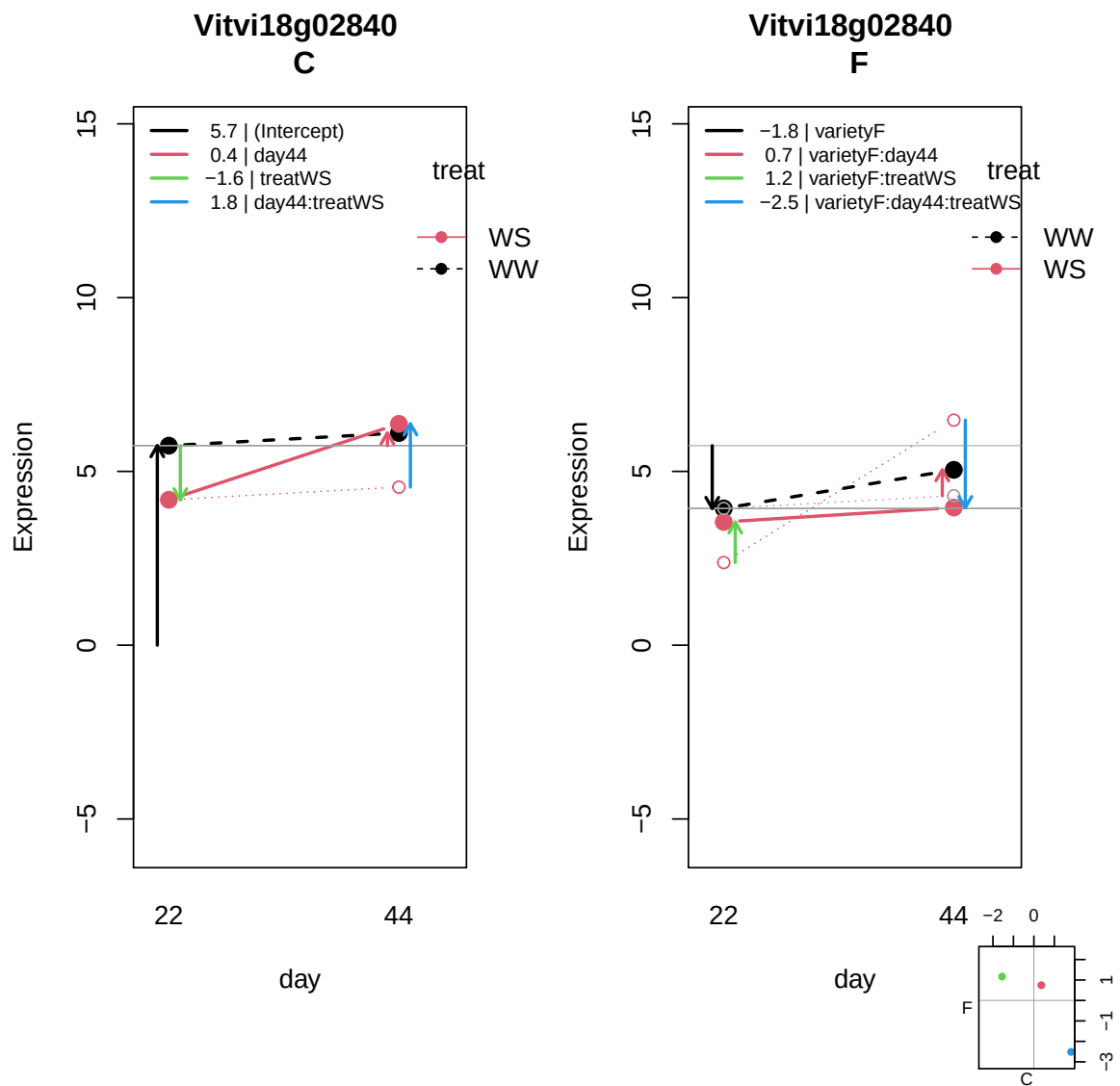
> fit1[varname,]$coefficients
              (Intercept) varietyF day44 treatWS
Vitvi18g02840          5.74   -1.805 0.365 -1.5575
              varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi18g02840          0.745          1.1675          1.82
              varietyF:day44:treatWS
Vitvi18g02840          -2.515

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

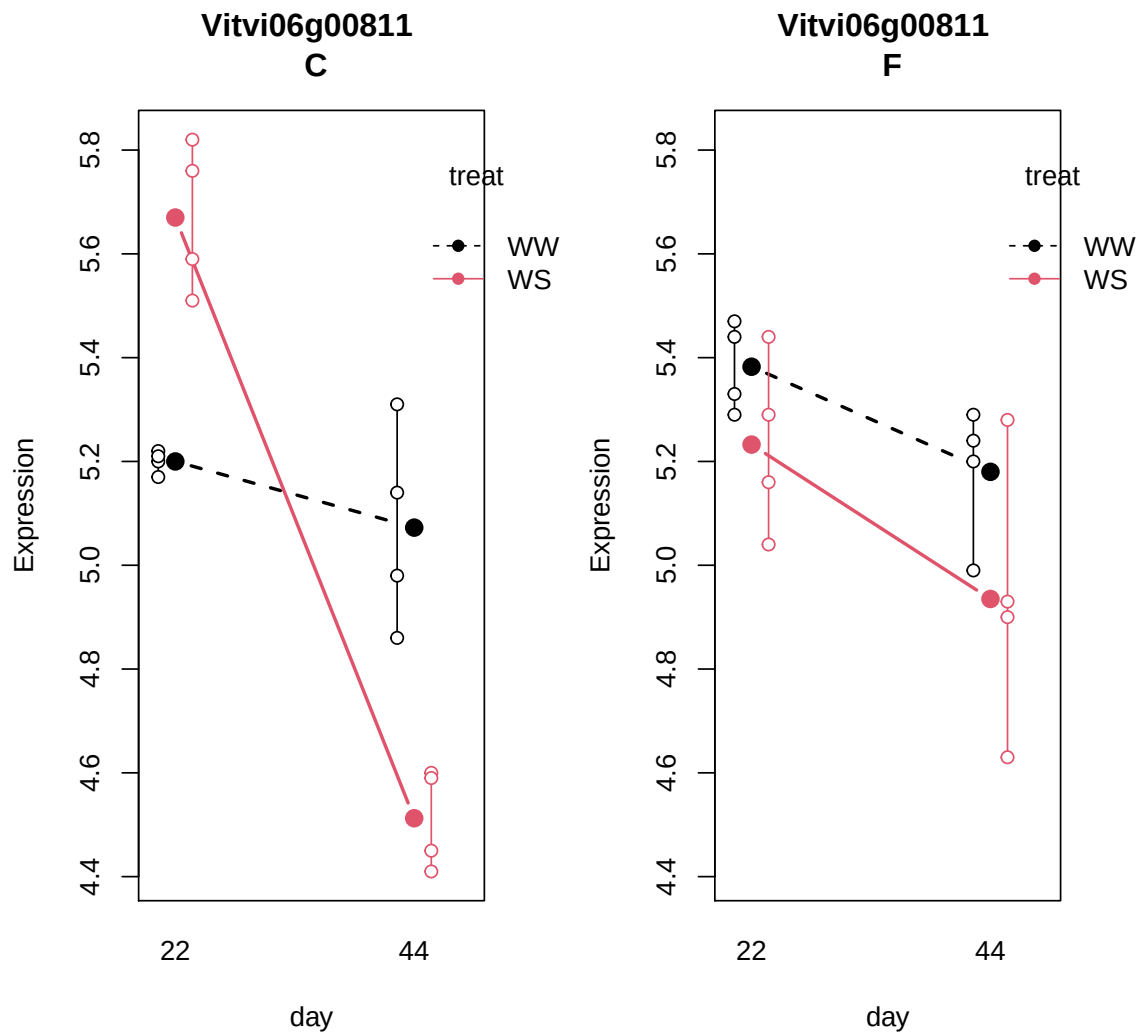
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

8.6.9 Vitvi06g00811

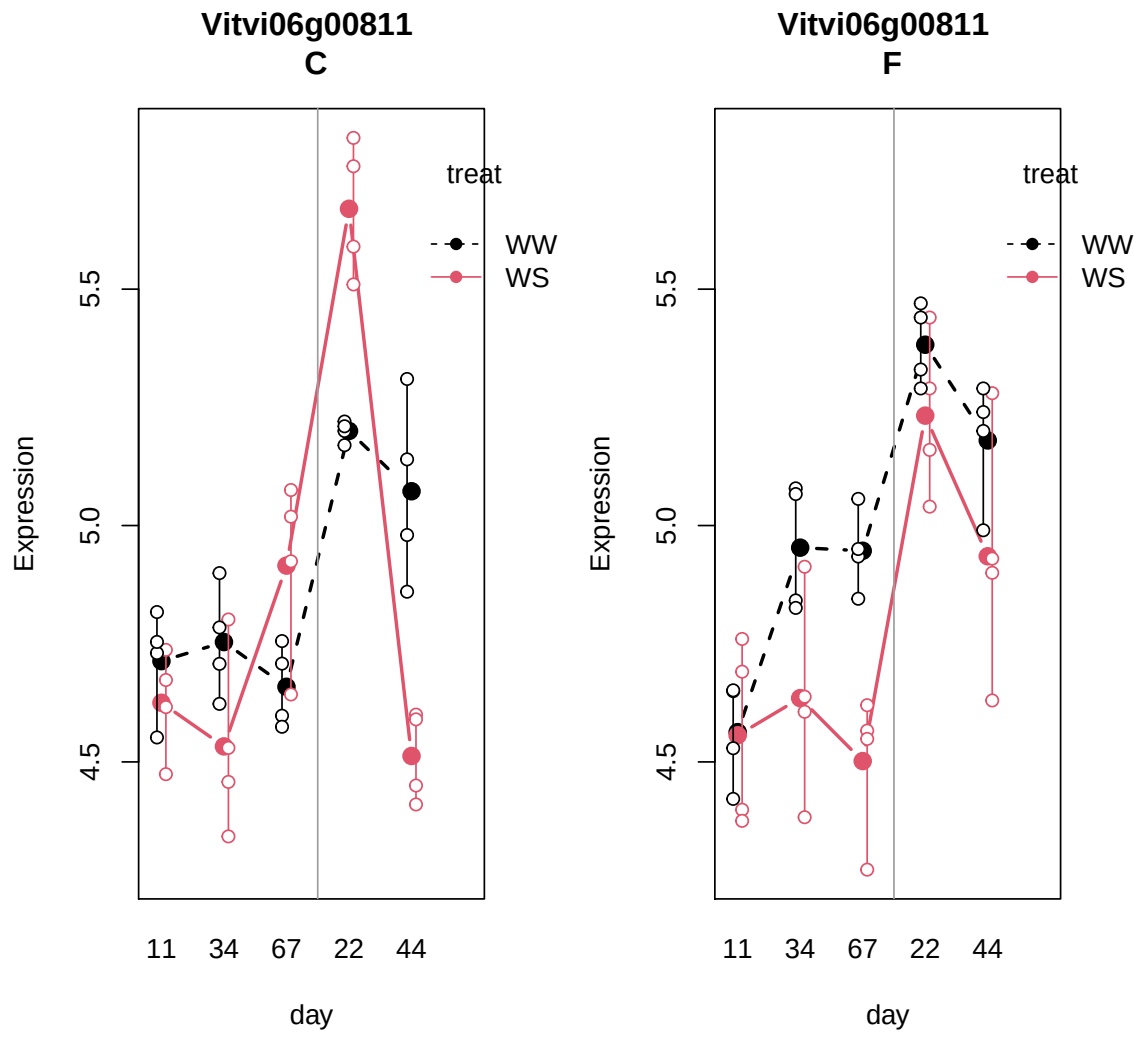
Coefficient day44:treatWS for Vitvi06g00811.

```
> tt[varname,]
              logFC AveExpr          t      P.Value
Vitvi06g00811 -1.03  5.148125 -6.359295 8.871232e-07
              adj.P.Val          B
Vitvi06g00811 0.001380892  5.712348

> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```




```
> fit1[varname,]$coefficients
```

```

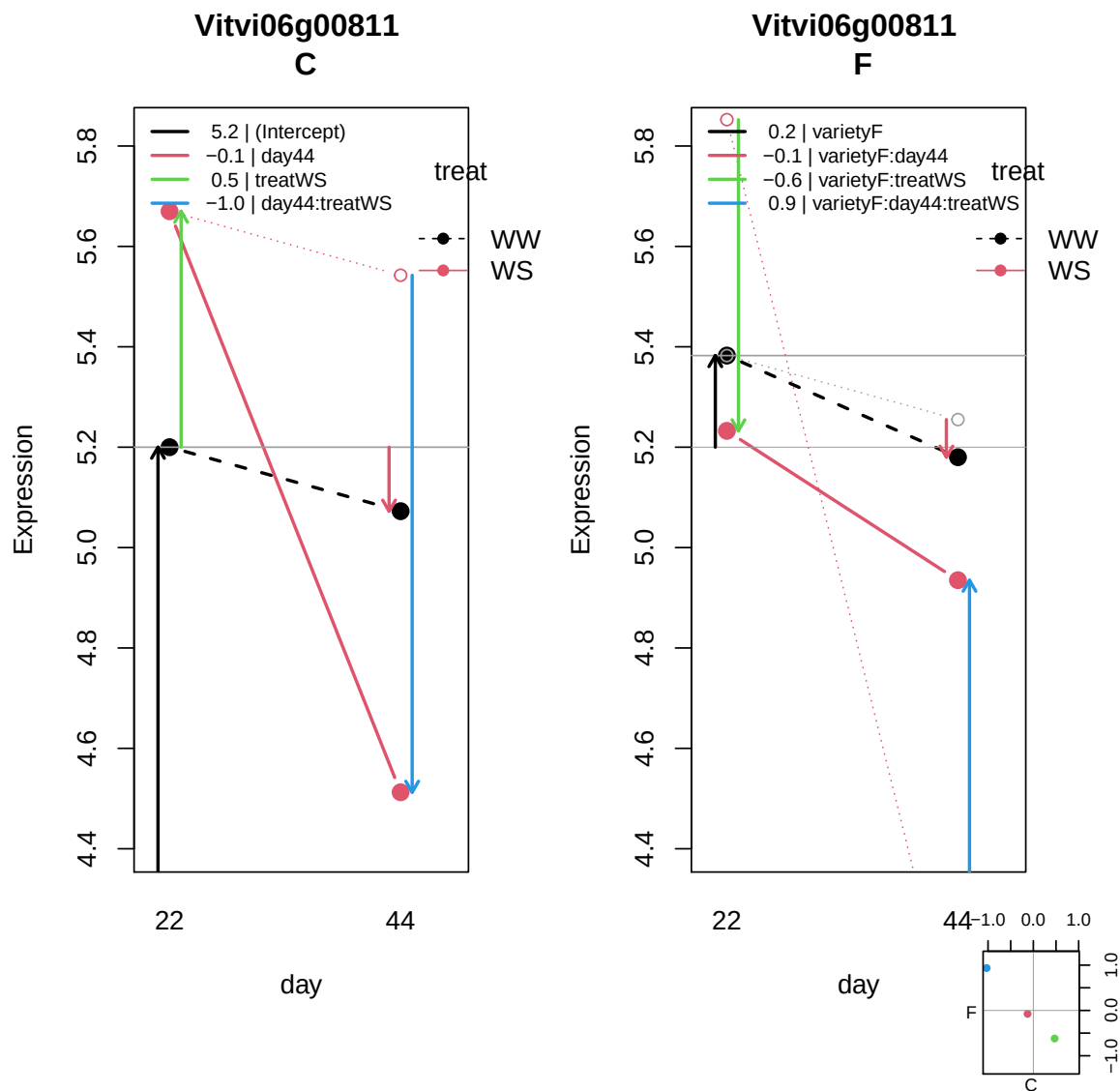
              (Intercept) varietyF    day44 treatWS
Vitvi06g00811          5.2   0.1825 -0.1275     0.47
      varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi06g00811        -0.075         -0.62        -1.03
      varietyF:day44:treatWS
Vitvi06g00811              0.935

```

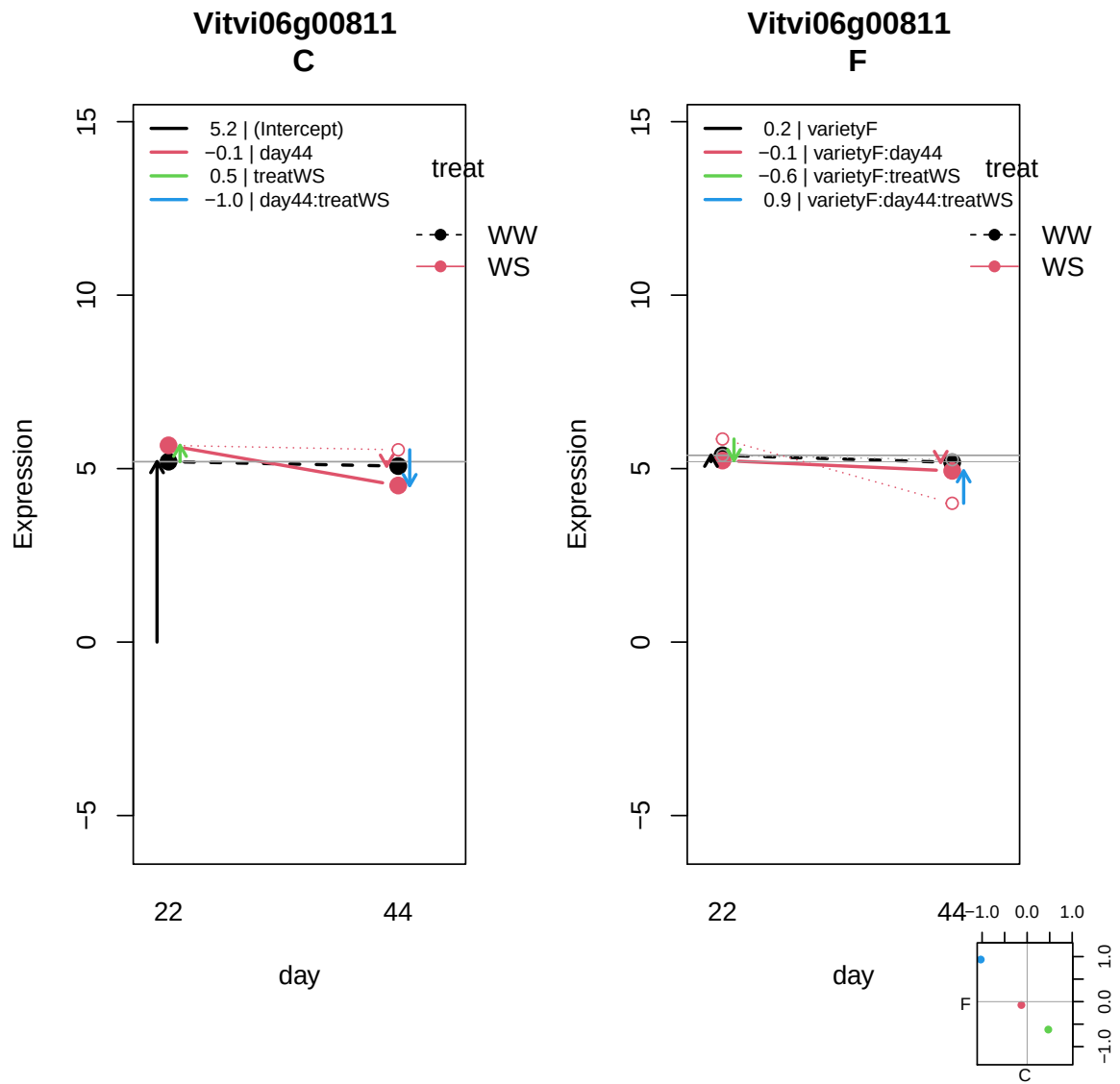
```

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



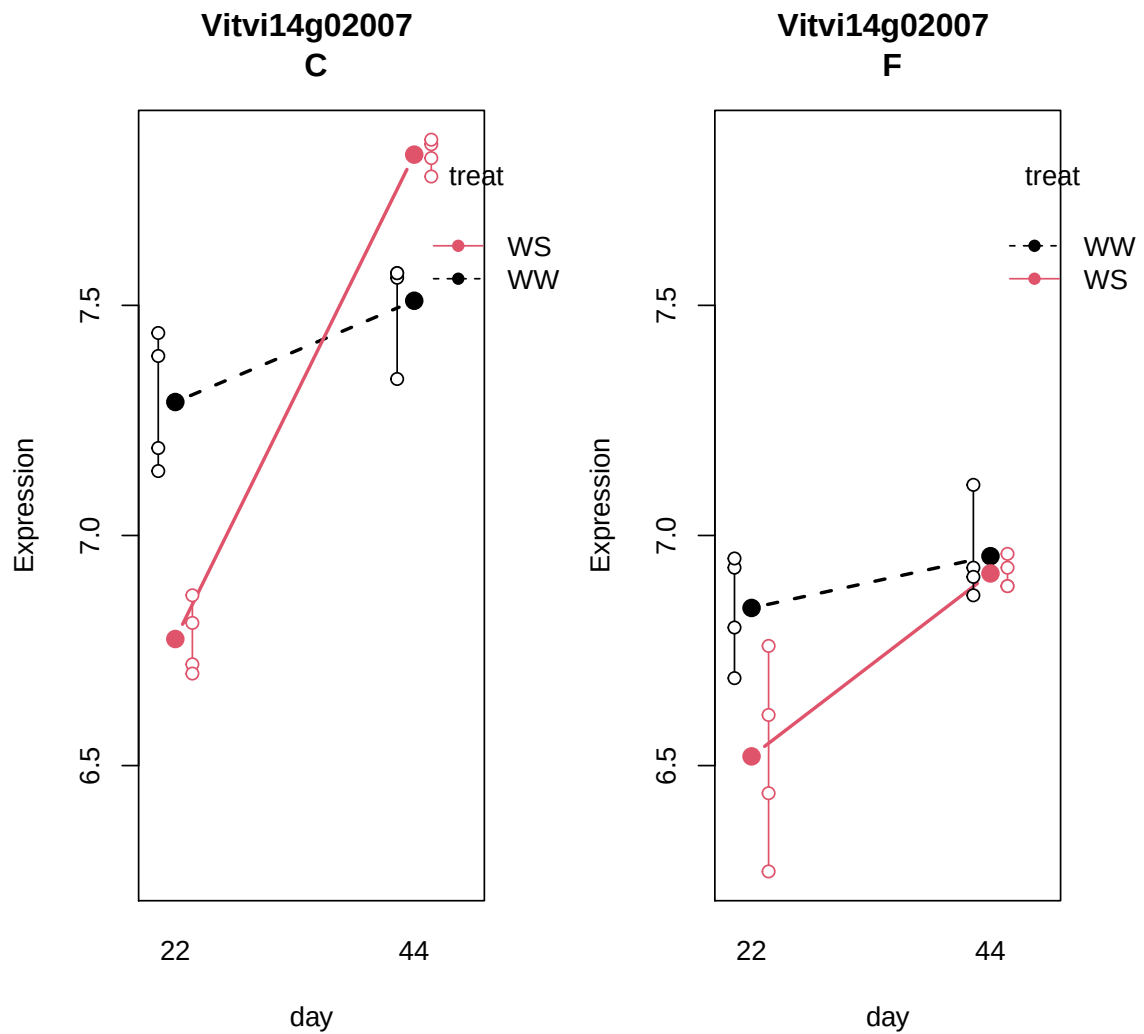
Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

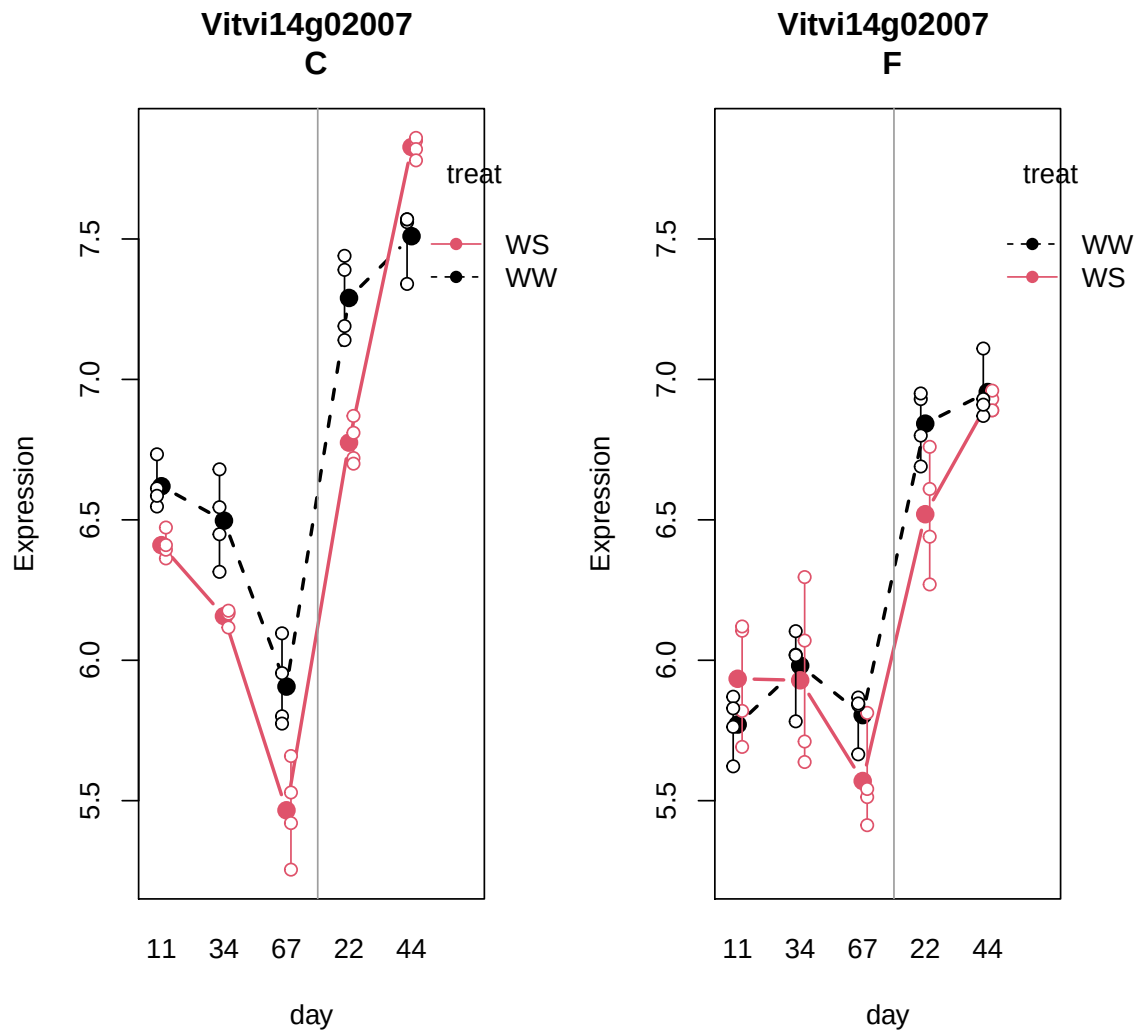
8.6.10 Vitvi14g02007

Coefficient day44:treatWS for Vitvi14g02007.

```
> tt[varname,]
              logFC  AveExpr          t      P.Value
Vitvi14g02007  0.8325  7.079688  6.351137 9.059783e-07
              adj.P.Val          B
Vitvi14g02007  0.001380892  5.693161
> plot.interactions(varname, phdata=pd, data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

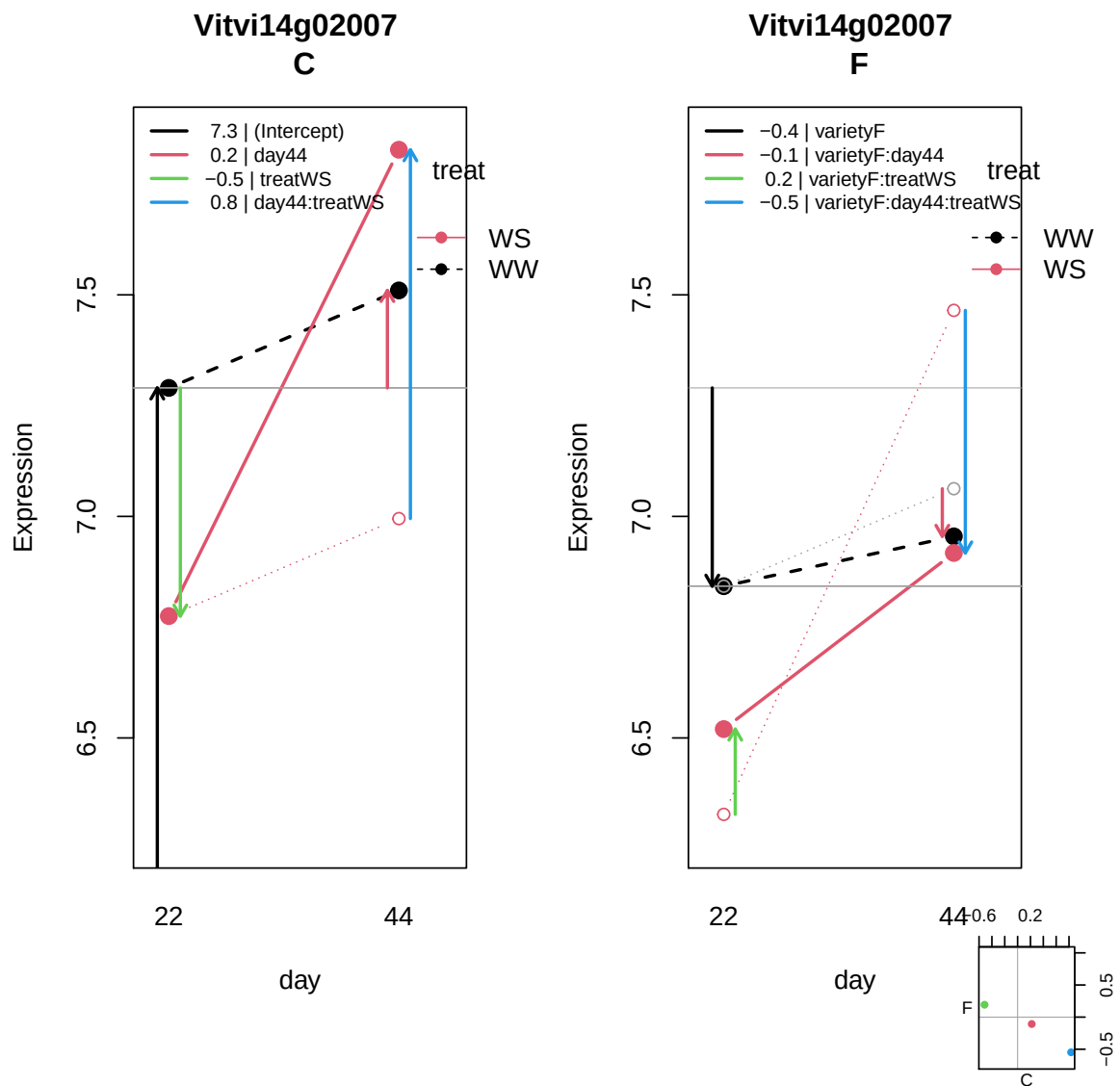


```

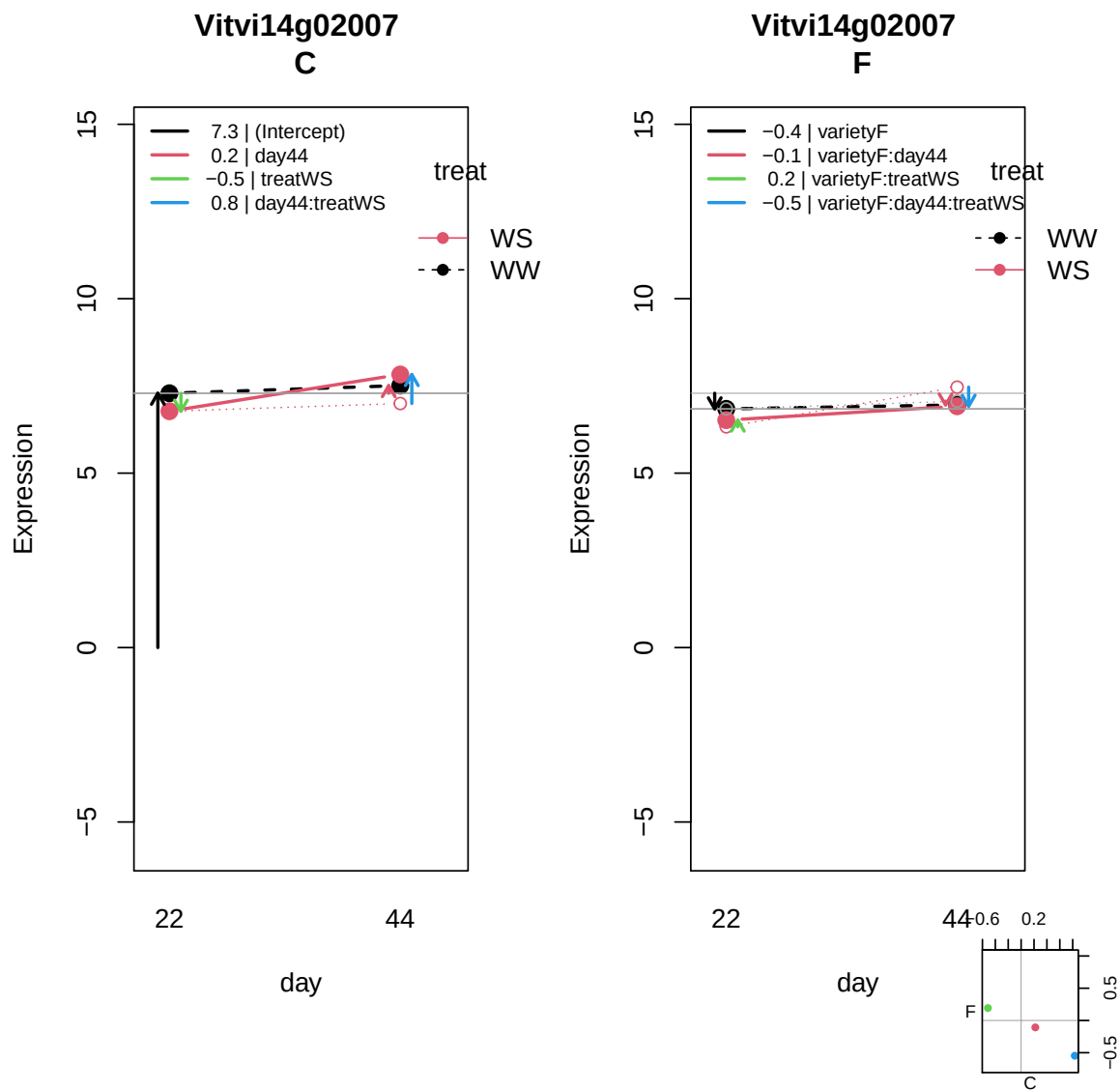
> fit1[varname,]$coefficients
              (Intercept) varietyF day44 treatWS
Vitvi14g02007           7.29  -0.4475  0.22  -0.515
              varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi14g02007          -0.1075           0.1925           0.8325
              varietyF:day44:treatWS
Vitvi14g02007          -0.5475

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```


8.7 varietyF:day44:treatWS

8.7.1 NA

Coefficient varietyF:day44:treatWS for NA.

```
> tt[varname,]
      logFC AveExpr  t P.Value adj.P.Val  B
NA      NA      NA NA      NA      NA NA
> plot.interactions(varname, phdata=pd, data=exprs)
Warning in min(x): no non-missing arguments to min; returning Inf
Warning in max(x): no non-missing arguments to max; returning -Inf
Error in plot.window(...): need finite 'ylim' values
```

```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
Warning in min(x): no non-missing arguments to min; returning Inf
Warning in max(x): no non-missing arguments to max; returning -Inf
Error in plot.window(...): need finite 'ylim' values
```

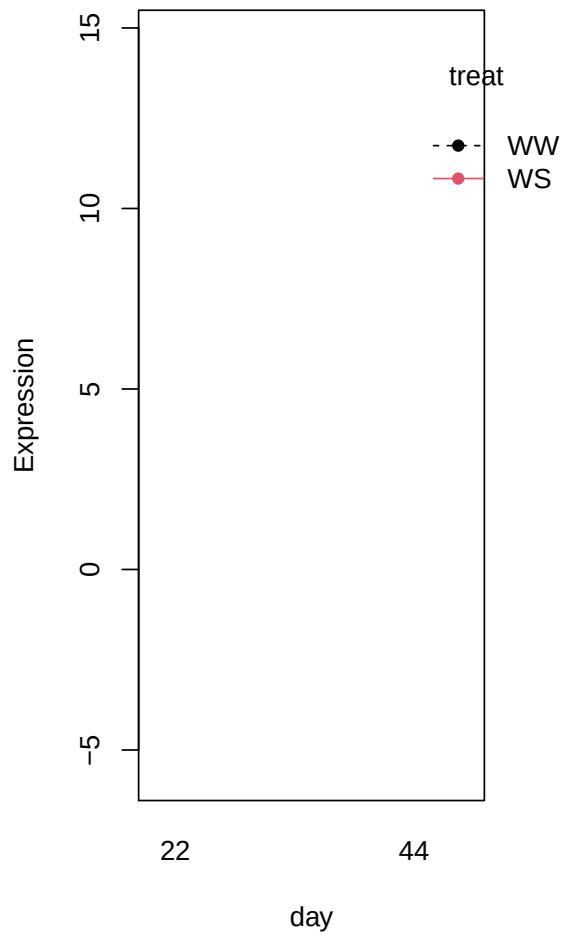
```

> fit1[varname,]$coefficients
Error in subsetListOfArrays(object, i, j, IJ = IJ, IX = IX, I = I, JX = JX): S
> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)
Warning in min(x): no non-missing arguments to min; returning Inf
Warning in max(x): no non-missing arguments to max; returning -Inf
Error in plot.window(...): need finite 'ylim' values

```

```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```

```
Error in subsetListOfArrays(object, i, j, IJ = IJ, IX = IX, I = I, JX = JX): S
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot.coefficients(1:6, legend=TRUE)
Error in subsetListOfArrays(object, i, j, IJ = IJ, IX = IX, I = I, JX = JX): S
> plot.coefficients(2:6)
Error in subsetListOfArrays(object, i, j, IJ = IJ, IX = IX, I = I, JX = JX): S
> plot.coefficients(1:6, add=TRUE)
Error in subsetListOfArrays(object, i, j, IJ = IJ, IX = IX, I = I, JX = JX): S
> plot.coefficients(2:6, add=TRUE)
Error in subsetListOfArrays(object, i, j, IJ = IJ, IX = IX, I = I, JX = JX): S

> which <- ncol(fit1$coefficients)
> cname <- colnames(fit1$coefficients)[which]
> cname
[1] "varietyF:day44:treatWS"
```

8.8 varietyF:day44:treatWS

```
> which <- ncol(fit1[1:6,]$coefficients)
> which

[1] 8

> #comps[8,]
> tt <- topTable(fit1,coef=which, number=Inf)
> alpha <- 0.05
> table(tt$adj.P.Val < alpha)
```

```
FALSE TRUE
15240    2
```

```
> head(tt)
```

	logFC	AveExpr	t	P.Value
Vitvi18g02840	-2.515	4.860000	-6.230655	1.236946e-06
Vitvi07g01523	-1.620	5.318125	-5.883420	3.057472e-06
Vitvi17g01515	-1.610	5.089375	-5.227899	1.729025e-05
Vitvi06g00415	-2.120	1.649375	-5.091644	2.485216e-05
Vitvi17g00854	-1.950	4.754375	-5.036191	2.881069e-05
Vitvi17g00175	3.570	-0.150000	4.897017	4.176044e-05

	adj.P.Val	B
Vitvi18g02840	0.01885353	4.611372
Vitvi07g01523	0.02330099	3.909593
Vitvi17g01515	0.08782652	2.542377
Vitvi06g00415	0.08782652	2.252583
Vitvi17g00854	0.08782652	2.134213
Vitvi17g00175	0.10008215	1.836174

Expressions in exprs, phenodata in pd

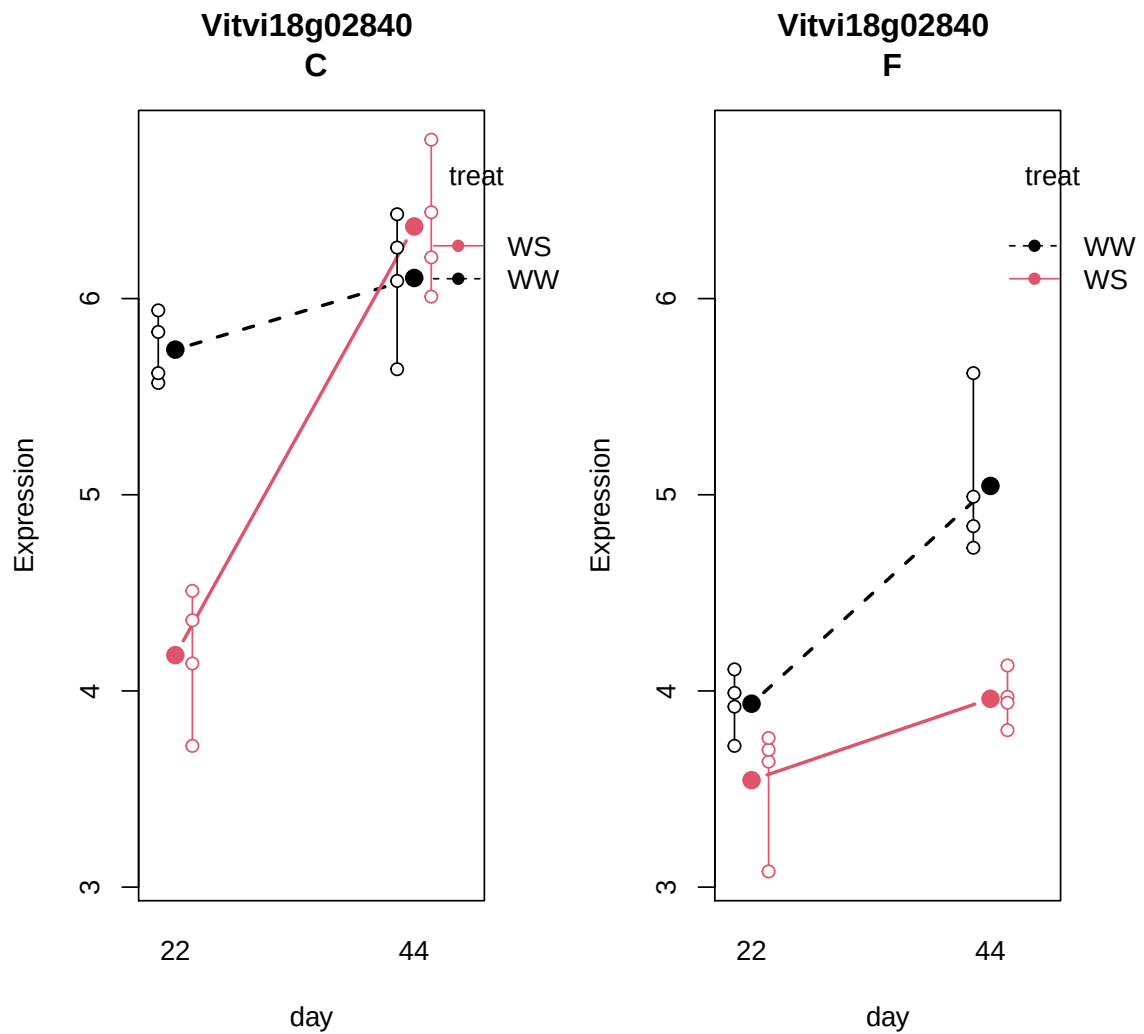
```
> out <- ""
> filter <- tt$adj.P.Val < alpha
> for ( varname in rownames(tt)[filter])
+ out <- paste(out,knit_child("20aa_interaction-plots.rnw",quiet=TRUE))
```

8.8.1 Vitvi18g02840

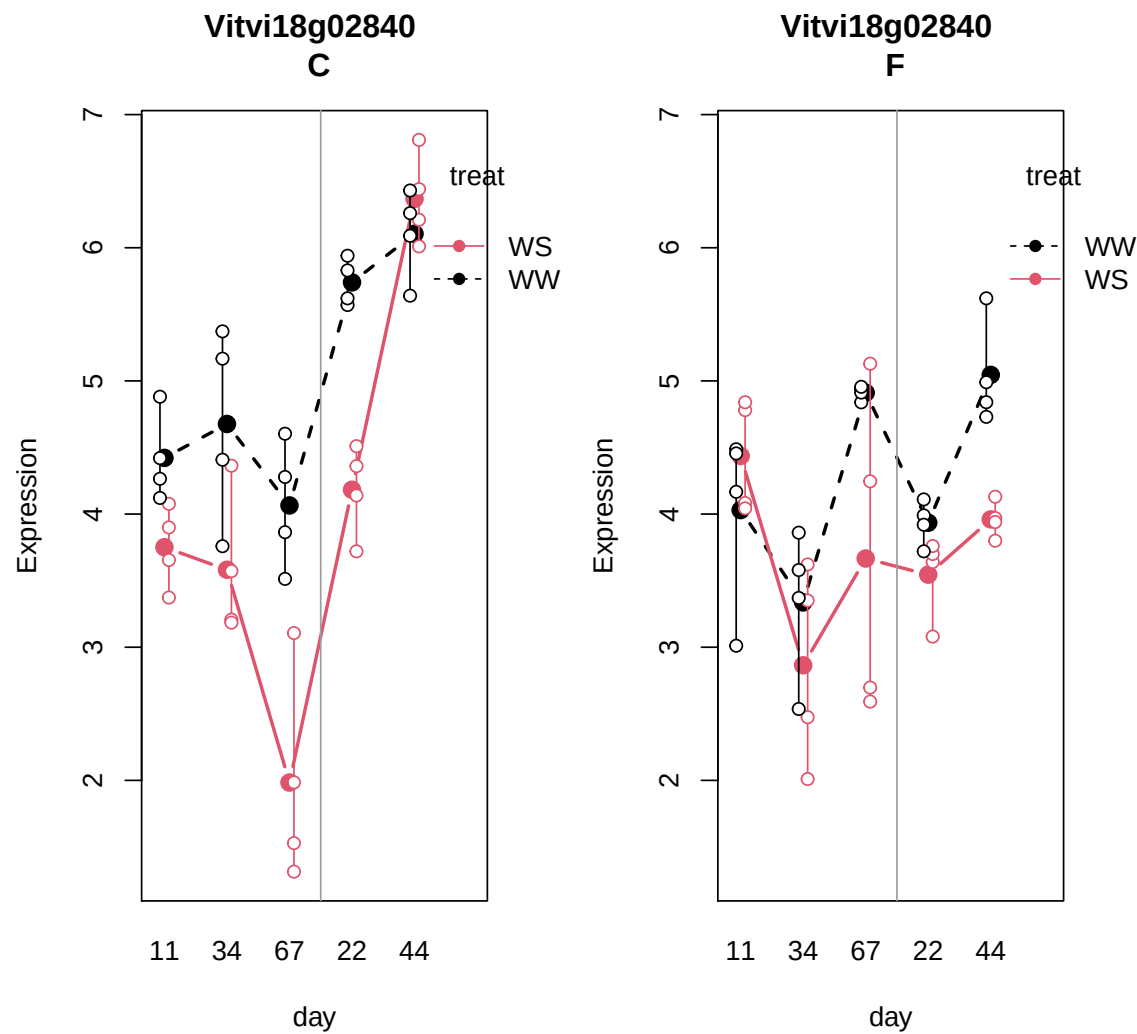
Coefficient varietyF:day44:treatWS for Vitvi18g02840.

```
> tt[varname,]
      logFC AveExpr      t      P.Value
Vitvi18g02840 -2.515    4.86 -6.230655 1.236946e-06
      adj.P.Val      B
Vitvi18g02840 0.01885353 4.611372

> plot.interactions(varname,phdata=pd,data=exprs)
```




```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

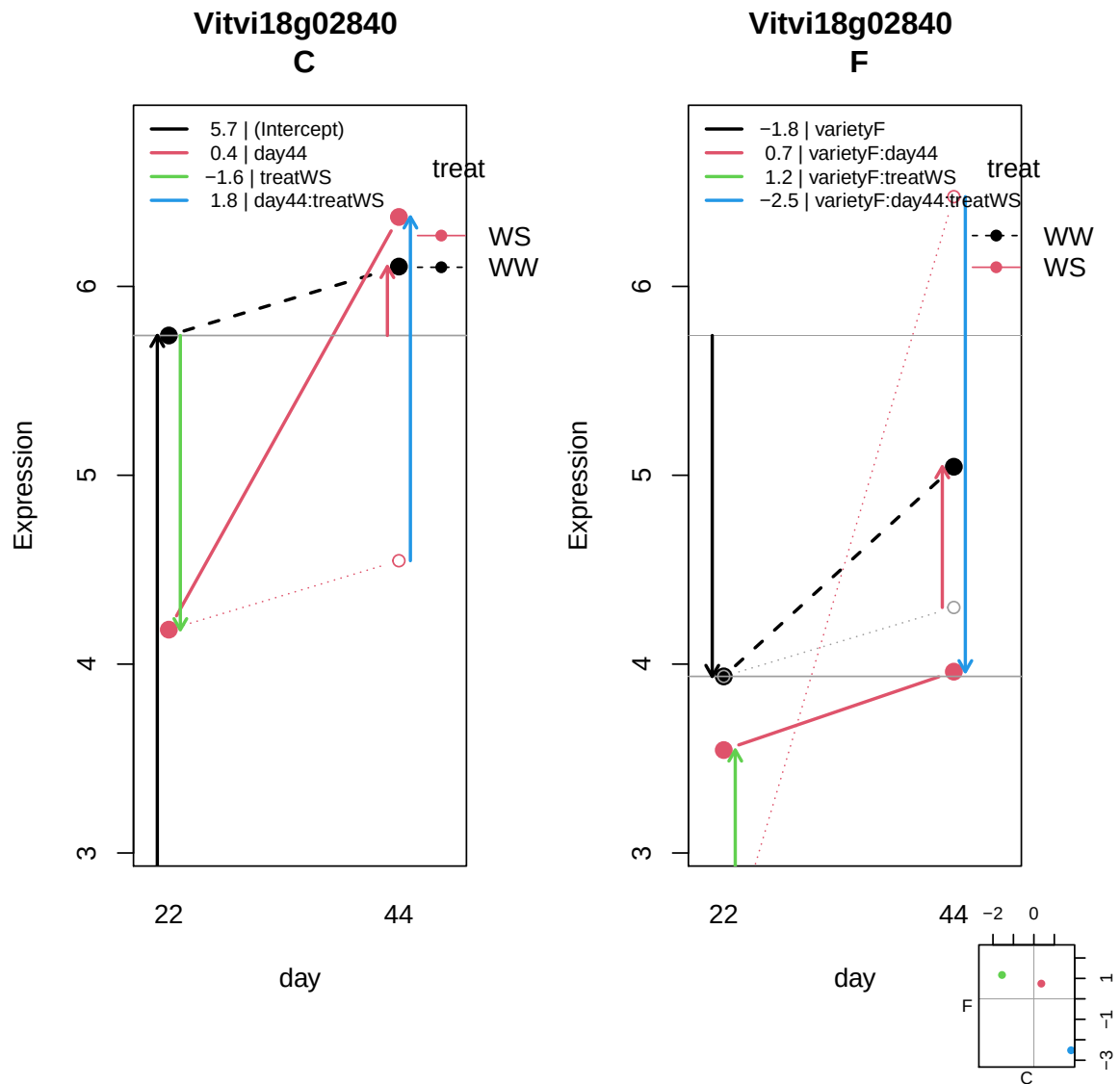


```

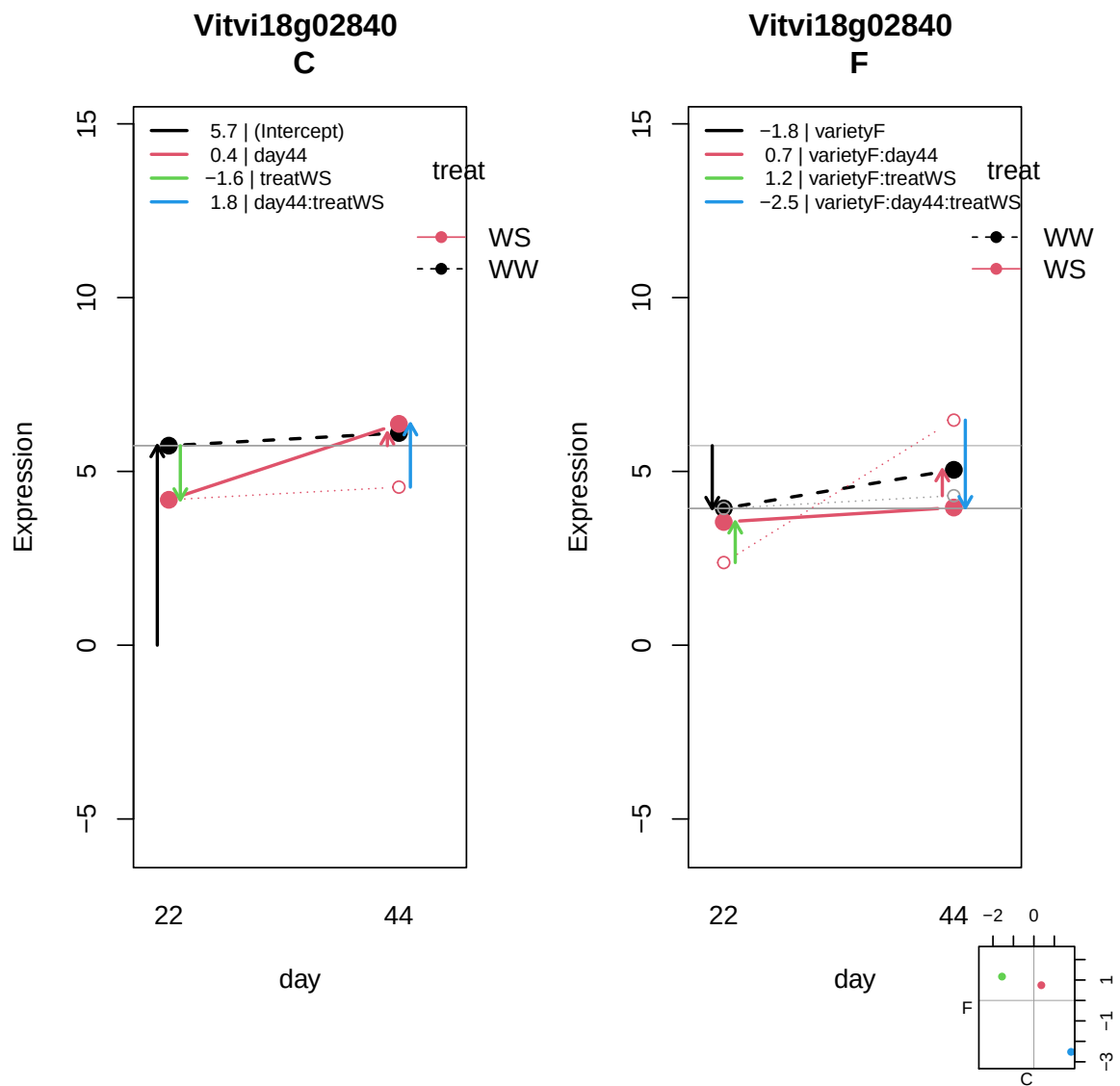
> fit1[varname,]$coefficients
              (Intercept) varietyF day44 treatWS
Vitvi18g02840          5.74   -1.805 0.365 -1.5575
              varietyF:day44 varietyF:treatWS day44:treatWS
Vitvi18g02840          0.745          1.1675          1.82
              varietyF:day44:treatWS
Vitvi18g02840          -2.515

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

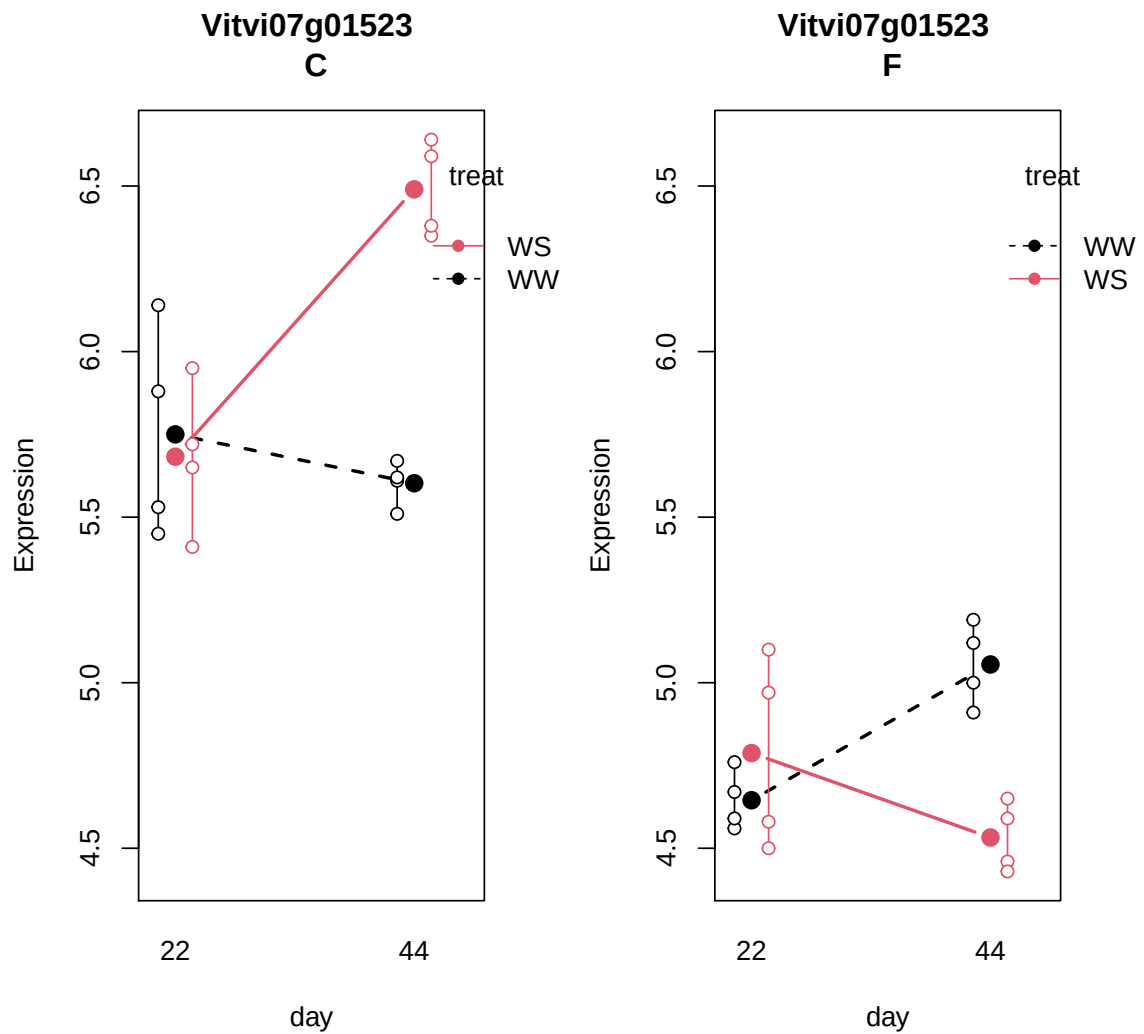
```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

8.8.2 Vitvi07g01523

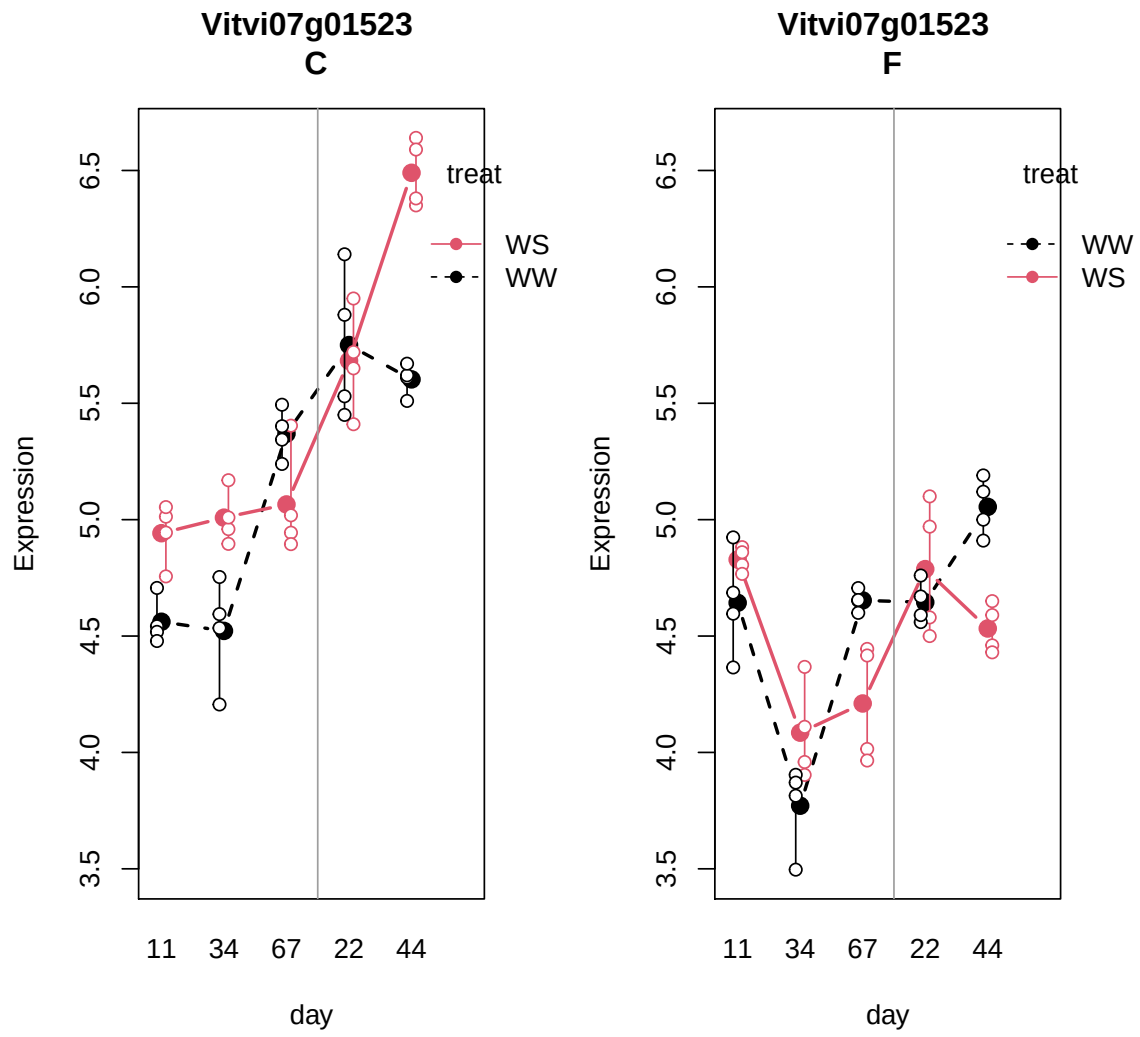
Coefficient varietyF:day44:treatWS for Vitvi07g01523.

```
> tt[varname,]
              logFC AveExpr          t      P.Value
Vitvi07g01523 -1.62  5.318125 -5.88342 3.057472e-06
              adj.P.Val          B
Vitvi07g01523 0.02330099 3.909593

> plot.interactions(varname,phdata=pd,data=exprs)
```



```
> plot.interactions(varname,phdata=pdata1819, data=t1819)
```

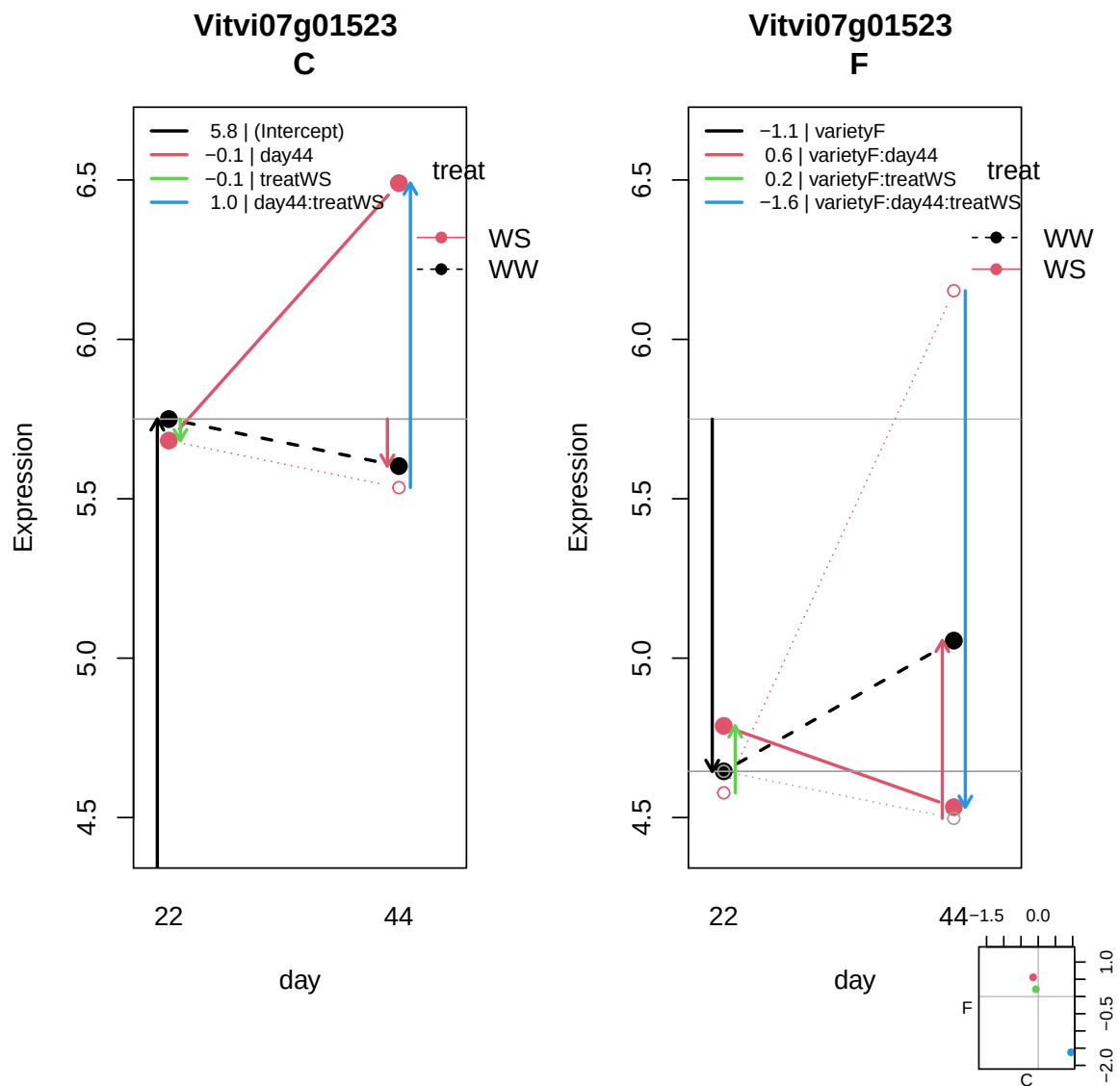


```

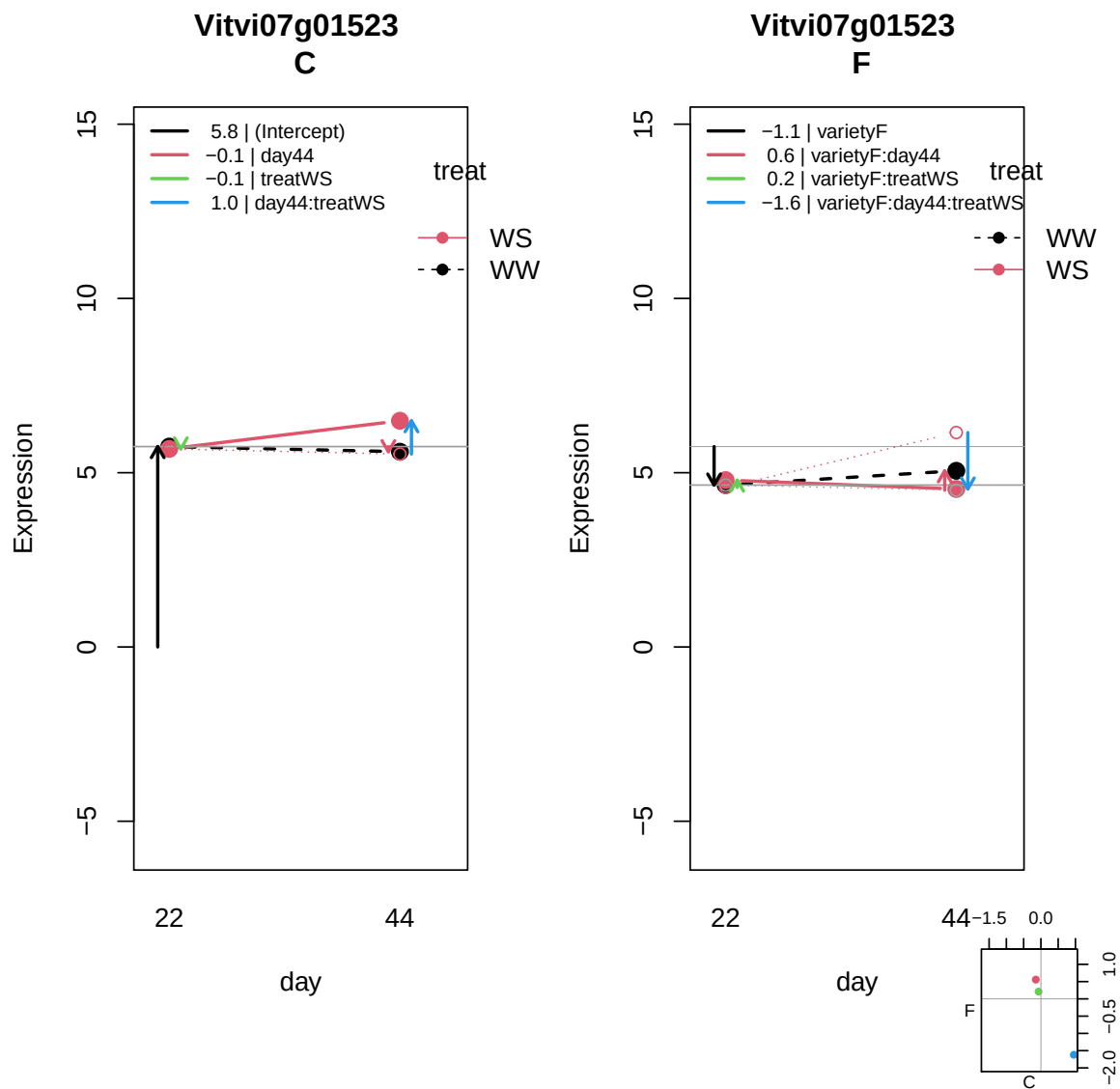
> fit1[varname,]$coefficients
              (Intercept)  varietyF    day44  treatWS
Vitvi07g01523           5.75    -1.105 -0.1475 -0.0675
              varietyF:day44  varietyF:treatWS  day44:treatWS
Vitvi07g01523           0.5575             0.21             0.955
              varietyF:day44:treatWS
Vitvi07g01523           -1.62

> plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE)

```



```
> coefs <- plot.interactions(varname,
+ coef=fit1[varname,]$coefficients,
+ coef.plt=TRUE, ylim=NA)
```



Coefficient plot

```
> par(mfrow=c(2,2),mar=c(4,4,2,2))
> plot(coefficients(1:6, legend=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(1:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
> plot(coefficients(2:6, add=TRUE)
Error in plot.window(...): need finite 'xlim' values
```

A Metadata files

A.1 Project metadata

Table 1: Project metadata

Item	Value
project:	_p_VinskaTrta
Short Name:	VinskaTrta
Title:	Vine related research
Description:	*
pISA projects path:	D:/DEJAVNOSTI/OMIKE/pISA-projects
Local pISA-tree organisation:	NIB
pISA project creation date:	2020-11-13
pISA project creator:	AB
Project funding code:	*
Project coordinator:	Marusa Pompe Novak
Project partners:	*
Project start date:	*
Project end date:	*
Principal investigator:	*
License:	CC BY 4.0
Sharing permission:	Private
Upload to FAIRDOMHub:	Yes

A.2 Investigation metadata

Table 2: Investigation metadata

Item	Value
Investigation:	_I_EnViRoS
Short Name:	EnViRoS
Title:	Integration of data from different platforms
Description:	*
Phenodata:	./phenodata_20201113.txt
pISA Investigation creation date:	2020-11-13
pISA Investigation creator:	AB
Principal investigator:	*
License:	CC BY 4.0
Sharing permission:	Private
Upload to FAIRDOMHub:	Yes

A.3 Study metadata

Table 3: Study metadata

Item	Value
Study:	_S_01_Integ
Short Name:	01_Integ
Title:	*
Description:	*
Raw Data:	
pISA Study creation date:	2020-11-13
pISA Study creator:	AB
Principal investigator:	*
License:	CC BY 4.0
Sharing permission:	Private
Upload to FAIRDOMHub:	Yes

A.4 Assay metadata

Table 4: Assay metadata

Item	Value
Assay:	_A_01_Desc-R
Short Name:	01_Desc-R
Assay Class:	DRY
Assay Type:	R
Title:	Data overview and descriptive statistical presentation
Description:	First we will organize the data and perform preliminary data analyses to overview what we have.
pISA Assay creation date:	2020-11-13
pISA Assay creator:	Andrej Blejec
Analyst:	Andrej Blejec
Phenodata:	Phenodata_20201109.txt
Featuredata:	
Transcript data 18:	/input/Transcripts 2018.txt
Transcript data 19:	/input/Transcripts 2019.txt

B SessionInfo

Windows 10 x64 (build 19041)

- R version 4.0.2 (2020-06-22), x86_64-w64-mingw32
- Locale: LC_COLLATE=Slovenian_Slovenia.1250, LC_CTYPE=Slovenian_Slovenia.1250, LC_NUMERIC=C, LC_TIME=Slovenian_Slovenia.1250
- Running under: Windows 10 x64 (build 19041)
- Matrix products: default
- Base packages: base, datasets, graphics, grDevices, methods, parallel, stats, utils
- Other packages: amisc 0.1.0, Biobase 2.50.0, BiocGenerics 0.36.0, Formula 1.2-4, ggplot2 3.3.2, Hmisc 4.4-1, knitr 1.30, lattice 0.20-41, limma 3.46.0, lubridate 1.7.9.2, survival 3.2-7, xtable 1.8-4
- Loaded via a namespace (and not attached): backports 1.2.0, base64enc 0.1-3, checkmate 2.0.0, cluster 2.1.0, colorspace 1.4-1, compiler 4.0.2, crayon 1.3.4, data.table 1.13.2, digest 0.6.27, dplyr 1.0.2, ellipsis 0.3.1, evaluate 0.14, foreign 0.8-80, generics 0.1.0, glue 1.4.2, grid 4.0.2, gridExtra 2.3, gtable 0.3.0, highr 0.8, htmlTable 2.1.0, htmltools 0.5.0, htmlwidgets 1.5.2, jpeg 0.1-8.1, latticeExtra 0.6-29, lifecycle 0.2.0, magrittr 1.5, Matrix 1.2-18, munsell 0.5.0, nnet 7.3-14, pillar 1.4.6, pkgconfig 2.0.3, png 0.1-7, purrr 0.3.4, R6 2.5.0, RColorBrewer 1.1-2, Rcpp 1.0.5, rlang 0.4.8, rpart 4.1-15, rstudioapi 0.12, scales 1.1.1, splines 4.0.2, stringi 1.5.3, stringr 1.4.0, tibble 3.0.4, tidyselect 1.1.0, tools 4.0.2, vctrs 0.3.4, withr 2.3.0, xfun 0.19

Analysis project path: [\[link\]](#)

Local

D:

DEJAVNOSTI

OMIKE

pISA-projects

_p_VinskaTrta

_I_EnViRoS

_S_01_Integ

_A_01_Desc-R

other

Network

O:

DEJAVNOSTI

OMIKE

pISA-projects

_p_VinskaTrta

_I_EnViRoS

_S_01_Integ

_A_01_Desc-R

other

Main file : [../doc/20_Expression-lm.Rnw](#)

Main file : [../scripts/20_Expression-lm.Rnw](#)

Project file: [\[link\]](#)

View as vignette

Source files can be viewed by pasting this code to R console:

```
projectName <-"other"
mainFile <-"20_Expression-lm"
commandArgs()
library(tkWidgets)
openPDF(file.path(dirname(getwd()),"doc",
paste(mainFile,"PDF",sep=".")
viewVignette("viewVignette", projectName,
file.path("../doc",paste(mainFile,"Rnw",sep=".")))
```