2015BalsamPhenoMunging.R

Audrey McCombs

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```r
library(tidyr)
```

```
## Warning: package 'tidyr' was built under R version 3.2.5
```

```r
library(dplyr)
```

```
##
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
##
##     filter, lag
```

```
## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```r
library(lubridate)
```

```
## Warning: package 'lubridate' was built under R version 3.2.5
```

```
##
## Attaching package: 'lubridate'
```

```
## The following object is masked from 'package:base':
##
##     date
```

```r
setwd("D:/Iowa State University/Debinski Lab/Nectar data/MAL")

bp15all <- read.csv("nectar analysis/data files/raw data/Balsamroot phenology/2015BalsamrootPhenologyFi

#Convert from wide to long format

bp15 <- bp15all[,1:12]

for (i in 1:15) {
  bptemp <- bp15all[,c(1:2,13:22)]
  names(bptemp)[3:12] <- c("Date", "Flower.height", "Leaf.height", "BD", "AB", "FF", "SG", "SD", "ST", "
  bp15 <- rbind(bp15, bptemp)
  bp15all <- bp15all[,-c(13:22)]
}

rm(bp15all)
rm(bptemp)

#create unique plant ID
bp15$Plot <- gsub("\\(", "", bp15$Plot)
bp15$Plot <- gsub("\\)", "", bp15$Plot)
bp15$plantid <- paste(bp15$Plot, bp15$Plant, sep = "-")
```

```r
#create treatment category
bp15$treatment <- gsub("^C", "", bp15$Plot)
bp15$treatment <- gsub("W", "", bp15$treatment)
bp15$treatment <- gsub("E", "", bp15$treatment)
bp15$treatment <- gsub("HSR", "H", bp15$treatment)
bp15$treatment <- gsub("SR", "C", bp15$treatment)
bp15$treatment <- substr(bp15$treatment, 1, 1)

#remove plants that have no flowers
bpsmall <- bp15[!(is.na(bp15$Flower.height)),]
bpsmall <- bpsmall[bpsmall$Flower.height != "0",]
rm(bp15)
bpsmall <- bpsmall[,-c(2,4:5, 7, 11:12)]

bpsmall <- rename(bpsmall, plot = Plot, date = Date)

bpsmall <- bpsmall[,c(1,7,8,2,3,4,5,6)]

bpsmall$date <- mdy(bpsmall$date)
bpsmall$plot <- as.factor(bpsmall$plot)
bpsmall$plantid <- as.factor(bpsmall$plantid)
bpsmall$treatment <- as.factor(bpsmall$treatment)

bpsmall[is.na(bpsmall)] <- 0
bpsmall$TF <- rowSums(bpsmall[,5:8])

#Create plant-level tables

plantdfs <- list()
dfnames <- levels(bpsmall$plantid)
for (i in 1:length(dfnames)) {
  plantdfs[[i]] = as.data.frame(subset(bpsmall, plantid == dfnames[i], select = c(1:9)))
}

# lapply(plantdfs, print)  For some reason this prints the list twice, not sure why.  For loop below wo

for (i in 1:length(plantdfs)){
  print(plantdfs[[i]])
}
```

```
##       plot plantid treatment       date BD FF SG SD TF
## 375    CC6   CC6-1         C 2015-05-29  1  0  0  0  1
## 534    CC6   CC6-1         C 2015-06-01  0  0  0  0  0
## 693    CC6   CC6-1         C 2015-06-03  0  0  0  0  0
## 852    CC6   CC6-1         C 2015-06-05  0  0  0  0  0
## 1011   CC6   CC6-1         C 2015-06-07  0  0  0  0  0
## 1170   CC6   CC6-1         C 2015-06-09  0  0  0  0  0
## 1329   CC6   CC6-1         C 2015-06-11  0  0  0  0  0
## 1488   CC6   CC6-1         C 2015-06-13  0  0  0  0  0
## 1647   CC6   CC6-1         C 2015-06-15  0  0  0  0  0
## 1806   CC6   CC6-1         C 2015-06-17  0  0  0  0  0
## 1965   CC6   CC6-1         C 2015-06-19  0  0  0  0  0
## 2124   CC6   CC6-1         C 2015-06-21  0  0  0  0  0
## 2283   CC6   CC6-1         C 2015-06-23  0  0  0  0  0
```

```
## 2442   CC6    CC6-1          C 2015-06-26  0  0  0  0  0
##         plot plantid treatment       date BD FF SG SD TF
## 66      CC6    CC6-10         C 2015-05-24  1  0  0  0  1
## 225     CC6    CC6-10         C 2015-05-26  1  0  0  0  1
## 384     CC6    CC6-10         C 2015-05-29  1  0  0  0  1
## 543     CC6    CC6-10         C 2015-06-01  1  0  0  0  1
## 702     CC6    CC6-10         C 2015-06-03  1  0  0  0  1
## 861     CC6    CC6-10         C 2015-06-05  0  1  0  0  1
## 1020    CC6    CC6-10         C 2015-06-07  0  1  0  0  1
## 1179    CC6    CC6-10         C 2015-06-09  0  1  0  0  1
## 1338    CC6    CC6-10         C 2015-06-11  0  0  1  0  1
## 1497    CC6    CC6-10         C 2015-06-13  0  0  1  0  1
## 1656    CC6    CC6-10         C 2015-06-15  0  0  0  1  1
## 1815    CC6    CC6-10         C 2015-06-17  0  0  0  1  1
## 1974    CC6    CC6-10         C 2015-06-19  0  0  0  1  1
## 2133    CC6    CC6-10         C 2015-06-21  0  0  0  1  1
## 2292    CC6    CC6-10         C 2015-06-23  0  0  0  1  1
## 2451    CC6    CC6-10         C 2015-06-26  0  0  0  1  1
##         plot plantid treatment       date BD FF SG SD TF
## 65      CC6    CC6-9          C 2015-05-24 12  0  0  0 12
## 224     CC6    CC6-9          C 2015-05-26  8  2  0  0 10
## 383     CC6    CC6-9          C 2015-05-29 10  2  0  0 12
## 542     CC6    CC6-9          C 2015-06-01  4  6  0  0 10
## 701     CC6    CC6-9          C 2015-06-03  2  8  0  0 10
## 860     CC6    CC6-9          C 2015-06-05  0 10  0  0 10
## 1019    CC6    CC6-9          C 2015-06-07  0 10  0  0 10
## 1178    CC6    CC6-9          C 2015-06-09  0  9  0  1 10
## 1337    CC6    CC6-9          C 2015-06-11  0 10  0  0 10
## 1496    CC6    CC6-9          C 2015-06-13  0  0  7  3 10
## 1655    CC6    CC6-9          C 2015-06-15  0  0  8  1  9
## 1814    CC6    CC6-9          C 2015-06-17  0  0  4  6 10
## 1973    CC6    CC6-9          C 2015-06-19  0  0  4  6 10
## 2132    CC6    CC6-9          C 2015-06-21  0  0  0 10 10
## 2291    CC6    CC6-9          C 2015-06-23  0  0  1  9 10
## 2450    CC6    CC6-9          C 2015-06-26  0  0  0 10 10
##         plot plantid treatment       date BD FF SG SD TF
## 74      CH5    CH5-2          H 2015-05-24  3  0  0  0  3
## 233     CH5    CH5-2          H 2015-05-26  3  0  0  0  3
## 392     CH5    CH5-2          H 2015-05-29  3  0  0  0  3
## 551     CH5    CH5-2          H 2015-06-01  2  1  0  0  3
## 710     CH5    CH5-2          H 2015-06-03  0  3  0  0  3
## 869     CH5    CH5-2          H 2015-06-05  0  0  0  0  0
## 1028    CH5    CH5-2          H 2015-06-07  0  3  0  0  3
## 1187    CH5    CH5-2          H 2015-06-09  0  3  0  0  3
## 1346    CH5    CH5-2          H 2015-06-11  0  3  0  0  3
## 1505    CH5    CH5-2          H 2015-06-13  0  0  3  0  3
## 1664    CH5    CH5-2          H 2015-06-15  0  0  3  0  3
## 1823    CH5    CH5-2          H 2015-06-17  0  0  2  1  3
## 1982    CH5    CH5-2          H 2015-06-19  0  0  0  3  3
## 2141    CH5    CH5-2          H 2015-06-21  0  0  0  3  3
## 2300    CH5    CH5-2          H 2015-06-23  0  0  0  3  3
## 2459    CH5    CH5-2          H 2015-06-26  0  0  0  3  3
##         plot plantid treatment       date BD FF SG SD TF
## 76      CH5    CH5-4          H 2015-05-24  1  0  0  0  1
```

```
## 235    CH5    CH5-4          H 2015-05-26  1  0  0  0  1
## 394    CH5    CH5-4          H 2015-05-29  1  0  0  0  1
## 553    CH5    CH5-4          H 2015-06-01  0  1  0  0  1
## 712    CH5    CH5-4          H 2015-06-03  0  1  0  0  1
## 871    CH5    CH5-4          H 2015-06-05  0  1  0  0  1
## 1030   CH5    CH5-4          H 2015-06-07  0  1  0  0  1
## 1189   CH5    CH5-4          H 2015-06-09  0  1  0  0  1
## 1348   CH5    CH5-4          H 2015-06-11  0  1  0  0  1
## 1507   CH5    CH5-4          H 2015-06-13  0  1  0  0  1
## 1666   CH5    CH5-4          H 2015-06-15  0  1  0  0  1
## 1825   CH5    CH5-4          H 2015-06-17  0  1  0  0  1
## 1984   CH5    CH5-4          H 2015-06-19  0  0  1  0  1
## 2143   CH5    CH5-4          H 2015-06-21  0  0  1  0  1
## 2302   CH5    CH5-4          H 2015-06-23  0  0  1  0  1
## 2461   CH5    CH5-4          H 2015-06-26  0  0  1  0  1
##        plot plantid treatment      date BD FF SG SD TF
## 77     CH5    CH5-5          H 2015-05-24  2  0  0  0  2
## 395    CH5    CH5-5          H 2015-05-29  1  0  0  0  1
## 554    CH5    CH5-5          H 2015-06-01  1  1  0  0  2
## 713    CH5    CH5-5          H 2015-06-03  1  1  0  0  2
## 872    CH5    CH5-5          H 2015-06-05  1  1  0  0  2
## 1031   CH5    CH5-5          H 2015-06-07  1  1  0  0  2
## 1190   CH5    CH5-5          H 2015-06-09  1  1  0  0  2
## 1349   CH5    CH5-5          H 2015-06-11  0  2  0  0  2
## 1508   CH5    CH5-5          H 2015-06-13  0  2  0  0  2
## 1667   CH5    CH5-5          H 2015-06-15  0  2  0  0  2
## 1826   CH5    CH5-5          H 2015-06-17  0  0  2  0  2
## 1985   CH5    CH5-5          H 2015-06-19  0  0  1  1  2
## 2144   CH5    CH5-5          H 2015-06-21  0  0  1  0  1
## 2303   CH5    CH5-5          H 2015-06-23  0  0  0  2  2
## 2462   CH5    CH5-5          H 2015-06-26  0  0  0  2  2
##        plot plantid treatment      date BD FF SG SD TF
## 78     CH5    CH5-6          H 2015-05-24  4  0  0  0  4
## 237    CH5    CH5-6          H 2015-05-26  4  0  0  0  4
## 396    CH5    CH5-6          H 2015-05-29  4  0  0  0  4
## 555    CH5    CH5-6          H 2015-06-01  2  2  0  0  4
## 714    CH5    CH5-6          H 2015-06-03  1  3  0  0  4
## 873    CH5    CH5-6          H 2015-06-05  1  3  0  0  4
## 1032   CH5    CH5-6          H 2015-06-07  0  4  0  0  4
## 1191   CH5    CH5-6          H 2015-06-09  0  4  0  0  4
## 1350   CH5    CH5-6          H 2015-06-11  0  4  0  0  4
## 1509   CH5    CH5-6          H 2015-06-13  0  2  2  0  4
## 1668   CH5    CH5-6          H 2015-06-15  0  1  3  0  4
## 1827   CH5    CH5-6          H 2015-06-17  0  1  3  0  4
## 1986   CH5    CH5-6          H 2015-06-19  0  0  4  0  4
## 2145   CH5    CH5-6          H 2015-06-21  0  0  1  3  4
## 2304   CH5    CH5-6          H 2015-06-23  0  0  0  4  4
## 2463   CH5    CH5-6          H 2015-06-26  0  0  0  4  4
##        plot plantid treatment      date BD FF SG SD TF
## 79     CH5    CH5-7          H 2015-05-24 12  0  0  0 12
## 238    CH5    CH5-7          H 2015-05-26 10  0  0  0 10
## 397    CH5    CH5-7          H 2015-05-29 12  0  0  0 12
## 556    CH5    CH5-7          H 2015-06-01  5  6  0  0 11
## 715    CH5    CH5-7          H 2015-06-03  1 10  0  0 11
```

```
## 874   CH5    CH5-7             H 2015-06-05  1 10  0  0 11
## 1033  CH5    CH5-7             H 2015-06-07  1 10  0  0 11
## 1192  CH5    CH5-7             H 2015-06-09  0 10  1  0 11
## 1351  CH5    CH5-7             H 2015-06-11  0 11  0  0 11
## 1510  CH5    CH5-7             H 2015-06-13  0  5  6  0 11
## 1669  CH5    CH5-7             H 2015-06-15  0  0 11  0 11
## 1828  CH5    CH5-7             H 2015-06-17  0  0 11  0 11
## 1987  CH5    CH5-7             H 2015-06-19  0  0  3  8 11
## 2146  CH5    CH5-7             H 2015-06-21  0  0  2  9 11
## 2305  CH5    CH5-7             H 2015-06-23  0  0  2  9 11
## 2464  CH5    CH5-7             H 2015-06-26  0  0  0 11 11
##       plot plantid treatment       date BD FF SG SD TF
## 85    CHSR8 CHSR8-2           H 2015-05-24  6  0  0  0  6
## 244   CHSR8 CHSR8-2           H 2015-05-26  8  0  0  0  8
## 403   CHSR8 CHSR8-2           H 2015-05-29  8  0  0  0  8
## 562   CHSR8 CHSR8-2           H 2015-06-01  6  2  0  0  8
## 721   CHSR8 CHSR8-2           H 2015-06-03  3  5  0  0  8
## 880   CHSR8 CHSR8-2           H 2015-06-05  4  5  0  0  9
## 1039  CHSR8 CHSR8-2           H 2015-06-07  2  7  0  0  9
## 1198  CHSR8 CHSR8-2           H 2015-06-09  2  7  0  0  9
## 1357  CHSR8 CHSR8-2           H 2015-06-11  1  7  1  0  9
## 1516  CHSR8 CHSR8-2           H 2015-06-13  0  2  2  0  4
## 1675  CHSR8 CHSR8-2           H 2015-06-15  0  4  4  0  8
## 1834  CHSR8 CHSR8-2           H 2015-06-17  0  0  6  2  8
## 1993  CHSR8 CHSR8-2           H 2015-06-19  0  0  3  5  8
## 2152  CHSR8 CHSR8-2           H 2015-06-21  0  0  4  4  8
## 2311  CHSR8 CHSR8-2           H 2015-06-23  0  0  2  6  8
## 2470  CHSR8 CHSR8-2           H 2015-06-26  0  0  0  7  7
##       plot plantid treatment       date BD FF SG SD TF
## 87    CHSR8 CHSR8-4           H 2015-05-24 22  0  0  0 22
## 246   CHSR8 CHSR8-4           H 2015-05-26 24  0  0  0 24
## 405   CHSR8 CHSR8-4           H 2015-05-29 29  0  0  0 29
## 564   CHSR8 CHSR8-4           H 2015-06-01 26  3  0  0 29
## 723   CHSR8 CHSR8-4           H 2015-06-03 21  8  0  0 29
## 882   CHSR8 CHSR8-4           H 2015-06-05 18 10  0  0 28
## 1041  CHSR8 CHSR8-4           H 2015-06-07 17 13  0  0 30
## 1200  CHSR8 CHSR8-4           H 2015-06-09 12 20  0  0 32
## 1359  CHSR8 CHSR8-4           H 2015-06-11 14 21  0  0 35
## 1518  CHSR8 CHSR8-4           H 2015-06-13 11 17  4  1 33
## 1677  CHSR8 CHSR8-4           H 2015-06-15  7 15  8  0 30
## 1836  CHSR8 CHSR8-4           H 2015-06-17  8  5 14  5 32
## 1995  CHSR8 CHSR8-4           H 2015-06-19  6  5 14  5 30
## 2154  CHSR8 CHSR8-4           H 2015-06-21  6  4 14  6 30
## 2313  CHSR8 CHSR8-4           H 2015-06-23  5  1 11 11 28
## 2472  CHSR8 CHSR8-4           H 2015-06-26  4  0  2 21 27
##       plot plantid treatment       date BD FF SG SD TF
## 89    CHSR8 CHSR8-6           H 2015-05-24  8  0  0  0  8
## 248   CHSR8 CHSR8-6           H 2015-05-26  8  0  0  0  8
## 407   CHSR8 CHSR8-6           H 2015-05-29  7  0  0  0  7
## 566   CHSR8 CHSR8-6           H 2015-06-01  8  2  0  0 10
## 725   CHSR8 CHSR8-6           H 2015-06-03  5  3  0  0  8
## 884   CHSR8 CHSR8-6           H 2015-06-05  6  4  0  0 10
## 1043  CHSR8 CHSR8-6           H 2015-06-07  5  5  0  0 10
## 1202  CHSR8 CHSR8-6           H 2015-06-09  3  7  0  0 10
```

```
## 1361 CHSR8 CHSR8-6        H 2015-06-11  3  5  2  0 10
## 1520 CHSR8 CHSR8-6        H 2015-06-13  2  4  2  2 10
## 1679 CHSR8 CHSR8-6        H 2015-06-15  2  4  4  0 10
## 1838 CHSR8 CHSR8-6        H 2015-06-17  0  1  5  1  7
## 1997 CHSR8 CHSR8-6        H 2015-06-19  2  1  5  2 10
## 2156 CHSR8 CHSR8-6        H 2015-06-21  0  0  5  3  8
## 2315 CHSR8 CHSR8-6        H 2015-06-23  0  0  1  6  7
## 2474 CHSR8 CHSR8-6        H 2015-06-26  0  0  0  6  6
##       plot plantid treatment       date BD FF SG SD TF
## 2317 CHSR8 CHSR8-8        H 2015-06-23  0  0  0  0  0
##       plot plantid treatment       date BD FF SG SD TF
## 251  CSR7   CSR7-1        C 2015-05-26  0  0  0  0  0
## 410  CSR7   CSR7-1        C 2015-05-29  1  0  0  0  1
## 569  CSR7   CSR7-1        C 2015-06-01  1  0  0  0  1
## 728  CSR7   CSR7-1        C 2015-06-03  0  0  0  0  0
## 887  CSR7   CSR7-1        C 2015-06-05  0  0  0  0  0
## 1046 CSR7   CSR7-1        C 2015-06-07  0  0  0  0  0
## 1205 CSR7   CSR7-1        C 2015-06-09  0  0  0  0  0
## 1364 CSR7   CSR7-1        C 2015-06-11  0  0  0  0  0
## 1523 CSR7   CSR7-1        C 2015-06-13  0  0  0  0  0
## 1682 CSR7   CSR7-1        C 2015-06-15  0  0  0  0  0
## 1841 CSR7   CSR7-1        C 2015-06-17  0  0  0  0  0
## 2000 CSR7   CSR7-1        C 2015-06-19  0  0  0  0  0
## 2159 CSR7   CSR7-1        C 2015-06-21  0  0  0  0  0
## 2318 CSR7   CSR7-1        C 2015-06-23  0  0  0  0  0
## 2477 CSR7   CSR7-1        C 2015-06-26  0  0  0  0  0
##       plot plantid treatment       date BD FF SG SD TF
## 1207 CSR7   CSR7-3        C 2015-06-09  0  0  0  0  0
## 1525 CSR7   CSR7-3        C 2015-06-13  0  0  0  0  0
## 1684 CSR7   CSR7-3        C 2015-06-15  0  0  0  0  0
## 2161 CSR7   CSR7-3        C 2015-06-21  0  0  0  0  0
##       plot plantid treatment       date BD FF SG SD TF
## 414  CSR7   CSR7-5        C 2015-05-29  0  0  0  0  0
##       plot plantid treatment       date BD FF SG SD TF
## 100  CSR7   CSR7-9        C 2015-05-24  0  0  0  0  0
## 259  CSR7   CSR7-9        C 2015-05-26  2  0  0  0  2
## 418  CSR7   CSR7-9        C 2015-05-29  2  0  0  0  2
## 577  CSR7   CSR7-9        C 2015-06-01  0  1  0  0  1
## 736  CSR7   CSR7-9        C 2015-06-03  1  1  0  0  2
## 895  CSR7   CSR7-9        C 2015-06-05  0  2  0  0  2
## 1054 CSR7   CSR7-9        C 2015-06-07  0  2  0  0  2
## 1213 CSR7   CSR7-9        C 2015-06-09  0  2  0  0  2
## 1372 CSR7   CSR7-9        C 2015-06-11  0  2  0  0  2
## 1531 CSR7   CSR7-9        C 2015-06-13  0  1  1  0  2
## 1690 CSR7   CSR7-9        C 2015-06-15  0  0  2  0  2
## 1849 CSR7   CSR7-9        C 2015-06-17  0  0  2  0  2
## 2008 CSR7   CSR7-9        C 2015-06-19  0  0  0  2  2
## 2167 CSR7   CSR7-9        C 2015-06-21  0  0  0  0  0
## 2326 CSR7   CSR7-9        C 2015-06-23  0  0  0  2  2
## 2485 CSR7   CSR7-9        C 2015-06-26  0  0  0  0  0
##       plot plantid treatment       date BD FF SG SD TF
## 44   EC3    EC3-1         C 2015-05-24  0  0  0  0  0
## 203  EC3    EC3-1         C 2015-05-26  1  0  0  0  1
## 362  EC3    EC3-1         C 2015-05-29  1  0  0  0  1
```

```
## 680    EC3    EC3-1          C 2015-06-03  0  0  0  0  0
## 839    EC3    EC3-1          C 2015-06-05  1  0  0  0  1
## 1157   EC3    EC3-1          C 2015-06-09  0  0  0  0  0
## 1316   EC3    EC3-1          C 2015-06-11  0  0  0  0  0
## 1634   EC3    EC3-1          C 2015-06-15  0  0  0  0  0
## 1793   EC3    EC3-1          C 2015-06-17  0  0  0  0  0
##        plot plantid treatment       date BD FF SG SD TF
## 204    EC3    EC3-2          C 2015-05-26  1  0  0  0  1
## 363    EC3    EC3-2          C 2015-05-29  1  0  0  0  1
## 522    EC3    EC3-2          C 2015-06-01  1  0  0  0  1
## 681    EC3    EC3-2          C 2015-06-03  0  0  0  0  0
## 1317   EC3    EC3-2          C 2015-06-11  0  0  0  0  0
## 1476   EC3    EC3-2          C 2015-06-13  0  0  0  0  0
## 2430   EC3    EC3-2          C 2015-06-26  0  0  0  0  0
##        plot plantid treatment       date BD FF SG SD TF
## 46     EC3    EC3-3          C 2015-05-24  1  0  0  0  1
## 205    EC3    EC3-3          C 2015-05-26  2  0  0  0  2
## 364    EC3    EC3-3          C 2015-05-29  2  0  0  0  2
## 523    EC3    EC3-3          C 2015-06-01  0  1  0  0  1
## 682    EC3    EC3-3          C 2015-06-03  0  1  0  0  1
## 841    EC3    EC3-3          C 2015-06-05  0  1  0  0  1
## 1000   EC3    EC3-3          C 2015-06-07  0  1  0  0  1
## 1159   EC3    EC3-3          C 2015-06-09  0  1  0  0  1
## 1318   EC3    EC3-3          C 2015-06-11  0  1  0  0  1
## 1477   EC3    EC3-3          C 2015-06-13  0  1  0  0  1
## 1636   EC3    EC3-3          C 2015-06-15  0  0  1  0  1
## 1795   EC3    EC3-3          C 2015-06-17  0  0  0  0  0
## 1954   EC3    EC3-3          C 2015-06-19  0  0  0  1  1
## 2113   EC3    EC3-3          C 2015-06-21  0  0  0  1  1
## 2272   EC3    EC3-3          C 2015-06-23  0  0  0  1  1
## 2431   EC3    EC3-3          C 2015-06-26  0  0  0  1  1
##        plot plantid treatment       date BD FF SG SD TF
## 51     EC3    EC3-8          C 2015-05-24  1  0  0  0  1
## 210    EC3    EC3-8          C 2015-05-26  2  0  0  0  2
## 369    EC3    EC3-8          C 2015-05-29  2  0  0  0  2
## 528    EC3    EC3-8          C 2015-06-01  2  0  0  0  2
## 687    EC3    EC3-8          C 2015-06-03  1  0  0  0  1
## 846    EC3    EC3-8          C 2015-06-05  0  1  0  0  1
## 1005   EC3    EC3-8          C 2015-06-07  0  1  0  0  1
## 1164   EC3    EC3-8          C 2015-06-09  0  1  0  0  1
## 1323   EC3    EC3-8          C 2015-06-11  0  1  0  0  1
## 1482   EC3    EC3-8          C 2015-06-13  0  1  0  0  1
## 1641   EC3    EC3-8          C 2015-06-15  0  0  1  0  1
## 1800   EC3    EC3-8          C 2015-06-17  0  0  1  0  1
## 1959   EC3    EC3-8          C 2015-06-19  0  0  1  0  1
## 2118   EC3    EC3-8          C 2015-06-21  0  0  0  1  1
## 2277   EC3    EC3-8          C 2015-06-23  0  0  1  0  1
## 2436   EC3    EC3-8          C 2015-06-26  0  0  0  1  1
##        plot plantid treatment       date BD FF SG SD TF
## 191    EH4    EH4-11         H 2015-05-26  1  0  0  0  1
## 350    EH4    EH4-11         H 2015-05-29  1  0  0  0  1
## 668    EH4    EH4-11         H 2015-06-03  0  0  0  0  0
## 1145   EH4    EH4-11         H 2015-06-09  0  0  0  0  0
## 1304   EH4    EH4-11         H 2015-06-11  0  0  0  0  0
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## 1463   EH4   EH4-11         H 2015-06-13  0  0  0  0  0
## 1622   EH4   EH4-11         H 2015-06-15  0  0  0  0  0
## 1781   EH4   EH4-11         H 2015-06-17  0  0  0  0  0
## 1940   EH4   EH4-11         H 2015-06-19  0  0  0  0  0
## 2099   EH4   EH4-11         H 2015-06-21  0  0  0  0  0
## 2258   EH4   EH4-11         H 2015-06-23  0  0  0  0  0
## 2417   EH4   EH4-11         H 2015-06-26  0  0  0  0  0
##        plot plantid treatment       date BD FF SG SD TF
## 24     EH4   EH4-3          H 2015-05-24  2  0  0  0  2
## 183    EH4   EH4-3          H 2015-05-26  2  0  0  0  2
## 342    EH4   EH4-3          H 2015-05-29  3  0  0  0  3
## 501    EH4   EH4-3          H 2015-06-01  2  0  0  0  2
## 660    EH4   EH4-3          H 2015-06-03  3  0  0  0  3
## 819    EH4   EH4-3          H 2015-06-05  2  1  0  0  3
## 978    EH4   EH4-3          H 2015-06-07  1  2  0  0  3
## 1137   EH4   EH4-3          H 2015-06-09  1  2  0  0  3
## 1296   EH4   EH4-3          H 2015-06-11  1  2  0  0  3
## 1455   EH4   EH4-3          H 2015-06-13  0  3  0  0  3
## 1614   EH4   EH4-3          H 2015-06-15  0  2  1  0  3
## 1773   EH4   EH4-3          H 2015-06-17  0  0  2  1  3
## 1932   EH4   EH4-3          H 2015-06-19  0  0  2  1  3
## 2091   EH4   EH4-3          H 2015-06-21  0  0  2  1  3
## 2250   EH4   EH4-3          H 2015-06-23  0  0  2  1  3
## 2409   EH4   EH4-3          H 2015-06-26  0  0  0  3  3
##        plot plantid treatment       date BD FF SG SD TF
## 25     EH4   EH4-4          H 2015-05-24  1  0  0  0  1
## 184    EH4   EH4-4          H 2015-05-26  1  0  0  0  1
## 343    EH4   EH4-4          H 2015-05-29  1  0  0  0  1
## 502    EH4   EH4-4          H 2015-06-01  1  0  0  0  1
## 661    EH4   EH4-4          H 2015-06-03  2  0  0  0  2
## 820    EH4   EH4-4          H 2015-06-05  2  0  0  0  2
## 979    EH4   EH4-4          H 2015-06-07  2  0  0  0  2
## 1138   EH4   EH4-4          H 2015-06-09  0  1  0  0  1
## 1297   EH4   EH4-4          H 2015-06-11  0  1  0  0  1
## 1456   EH4   EH4-4          H 2015-06-13  0  1  0  0  1
## 1615   EH4   EH4-4          H 2015-06-15  0  1  0  0  1
## 1774   EH4   EH4-4          H 2015-06-17  0  0  1  0  1
## 1933   EH4   EH4-4          H 2015-06-19  0  0  1  0  1
## 2092   EH4   EH4-4          H 2015-06-21  0  0  0  1  1
## 2251   EH4   EH4-4          H 2015-06-23  0  0  1  0  1
## 2410   EH4   EH4-4          H 2015-06-26  0  0  0  1  1
##        plot plantid treatment       date BD FF SG SD TF
## 26     EH4   EH4-5          H 2015-05-24  5  0  0  0  5
## 185    EH4   EH4-5          H 2015-05-26  3  1  0  0  4
## 344    EH4   EH4-5          H 2015-05-29  5  0  0  0  5
## 503    EH4   EH4-5          H 2015-06-01  3  1  0  0  4
## 662    EH4   EH4-5          H 2015-06-03  2  3  0  0  5
## 821    EH4   EH4-5          H 2015-06-05  2  3  0  0  5
## 980    EH4   EH4-5          H 2015-06-07  3  2  1  0  6
## 1139   EH4   EH4-5          H 2015-06-09  2  3  0  1  6
## 1298   EH4   EH4-5          H 2015-06-11  1  3  1  0  5
## 1457   EH4   EH4-5          H 2015-06-13  1  2  2  1  6
## 1616   EH4   EH4-5          H 2015-06-15  0  1  2  2  5
## 1775   EH4   EH4-5          H 2015-06-17  1  1  1  3  6
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## 1934    EH4    EH4-5          H 2015-06-19  0  0  1  4  5
## 2093    EH4    EH4-5          H 2015-06-21  0  1  1  3  5
## 2252    EH4    EH4-5          H 2015-06-23  0  1  2  3  6
## 2411    EH4    EH4-5          H 2015-06-26  0  1  0  5  6
##         plot plantid treatment       date BD FF SG SD TF
## 27      EH4    EH4-6          H 2015-05-24  2  0  0  0  2
## 186     EH4    EH4-6          H 2015-05-26 13  0  0  0 13
## 345     EH4    EH4-6          H 2015-05-29  9  0  0  0  9
## 504     EH4    EH4-6          H 2015-06-01 12  2  0  0 14
## 663     EH4    EH4-6          H 2015-06-03 14  3  0  0 17
## 822     EH4    EH4-6          H 2015-06-05  8  6  0  0 14
## 981     EH4    EH4-6          H 2015-06-07 15  5  0  0 20
## 1140    EH4    EH4-6          H 2015-06-09  7 10  0  0 17
## 1299    EH4    EH4-6          H 2015-06-11  3 10  2  0 15
## 1458    EH4    EH4-6          H 2015-06-13  2  7  7  0 16
## 1617    EH4    EH4-6          H 2015-06-15  2  2 10  0 14
## 1776    EH4    EH4-6          H 2015-06-17  1  1  9  3 14
## 1935    EH4    EH4-6          H 2015-06-19  0  0  6  7 13
## 2094    EH4    EH4-6          H 2015-06-21  0  0  4 10 14
## 2253    EH4    EH4-6          H 2015-06-23  1  0  5  9 15
## 2412    EH4    EH4-6          H 2015-06-26  0  0  0 11 11
##         plot plantid treatment       date BD FF SG SD TF
## 28      EH4    EH4-7          H 2015-05-24  1  0  0  0  1
## 346     EH4    EH4-7          H 2015-05-29  1  0  0  0  1
## 505     EH4    EH4-7          H 2015-06-01  1  0  0  0  1
## 664     EH4    EH4-7          H 2015-06-03  0  1  0  0  1
## 823     EH4    EH4-7          H 2015-06-05  0  1  0  0  1
## 982     EH4    EH4-7          H 2015-06-07  0  1  0  0  1
## 1141    EH4    EH4-7          H 2015-06-09  0  1  0  0  1
## 1300    EH4    EH4-7          H 2015-06-11  0  1  0  0  1
## 1459    EH4    EH4-7          H 2015-06-13  0  1  0  0  1
## 1618    EH4    EH4-7          H 2015-06-15  0  1  0  0  1
## 1777    EH4    EH4-7          H 2015-06-17  0  0  1  0  1
## 1936    EH4    EH4-7          H 2015-06-19  0  0  1  0  1
## 2095    EH4    EH4-7          H 2015-06-21  0  0  1  0  1
## 2254    EH4    EH4-7          H 2015-06-23  0  0  1  0  1
## 2413    EH4    EH4-7          H 2015-06-26  0  0  0  1  1
##         plot plantid treatment       date BD FF SG SD TF
## 188     EH4    EH4-8          H 2015-05-26  2  0  0  0  2
## 347     EH4    EH4-8          H 2015-05-29  3  0  0  0  3
## 506     EH4    EH4-8          H 2015-06-01  1  1  0  0  2
## 665     EH4    EH4-8          H 2015-06-03  2  1  0  0  3
## 824     EH4    EH4-8          H 2015-06-05  2  1  0  0  3
## 983     EH4    EH4-8          H 2015-06-07  2  2  0  0  4
## 1142    EH4    EH4-8          H 2015-06-09  2  2  0  0  4
## 1301    EH4    EH4-8          H 2015-06-11  0  4  0  0  4
## 1460    EH4    EH4-8          H 2015-06-13  0  3  1  0  4
## 1619    EH4    EH4-8          H 2015-06-15  0  3  1  0  4
## 1778    EH4    EH4-8          H 2015-06-17  0  1  3  0  4
## 1937    EH4    EH4-8          H 2015-06-19  0  0  2  2  4
## 2096    EH4    EH4-8          H 2015-06-21  0  0  2  2  4
## 2255    EH4    EH4-8          H 2015-06-23  0  0  2  2  4
## 2414    EH4    EH4-8          H 2015-06-26  0  0  0  3  3
##         plot plantid treatment       date BD FF SG SD TF
```

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## 16   EHSR1 EHSR1-2            H 2015-05-24 8  1  0  0  9
## 175  EHSR1 EHSR1-2            H 2015-05-26 8  0  0  0  8
## 334  EHSR1 EHSR1-2            H 2015-05-29 5  4  0  0  9
## 493  EHSR1 EHSR1-2            H 2015-06-01 2  4  0  0  6
## 652  EHSR1 EHSR1-2            H 2015-06-03 2  5  0  0  7
## 811  EHSR1 EHSR1-2            H 2015-06-05 1  5  1  0  7
## 970  EHSR1 EHSR1-2            H 2015-06-07 1  5  1  0  7
## 1129 EHSR1 EHSR1-2            H 2015-06-09 0  3  2  2  7
## 1288 EHSR1 EHSR1-2            H 2015-06-11 0  3  3  1  7
## 1447 EHSR1 EHSR1-2            H 2015-06-13 0  0  3  4  7
## 1606 EHSR1 EHSR1-2            H 2015-06-15 0  0  2  5  7
## 1765 EHSR1 EHSR1-2            H 2015-06-17 0  0  0  7  7
## 1924 EHSR1 EHSR1-2            H 2015-06-19 0  0  0  7  7
## 2083 EHSR1 EHSR1-2            H 2015-06-21 0  0  0  7  7
## 2242 EHSR1 EHSR1-2            H 2015-06-23 0  0  0  7  7
## 2401 EHSR1 EHSR1-2            H 2015-06-26 0  0  0  7  7
##       plot plantid treatment       date BD FF SG SD TF
## 18  EHSR1 EHSR1-4            H 2015-05-24 0  0  0  0  0
## 177 EHSR1 EHSR1-4            H 2015-05-26 0  0  0  0  0
## 336 EHSR1 EHSR1-4            H 2015-05-29 0  0  0  0  0
##       plot plantid treatment       date BD FF SG SD TF
## 1    ESR2  ESR2-1            C 2015-05-24 1  0  0  0  1
## 160  ESR2  ESR2-1            C 2015-05-26 2  0  0  0  2
## 319  ESR2  ESR2-1            C 2015-05-29 1  0  0  0  1
## 478  ESR2  ESR2-1            C 2015-06-01 0  0  0  0  0
## 637  ESR2  ESR2-1            C 2015-06-03 0  0  0  0  0
## 796  ESR2  ESR2-1            C 2015-06-05 0  0  0  0  0
## 955  ESR2  ESR2-1            C 2015-06-07 0  0  0  0  0
## 1432 ESR2  ESR2-1            C 2015-06-13 0  0  0  0  0
## 1591 ESR2  ESR2-1            C 2015-06-15 0  0  0  0  0
## 1750 ESR2  ESR2-1            C 2015-06-17 0  0  0  0  0
## 1909 ESR2  ESR2-1            C 2015-06-19 0  0  0  0  0
## 2068 ESR2  ESR2-1            C 2015-06-21 0  0  0  0  0
## 2227 ESR2  ESR2-1            C 2015-06-23 0  0  0  0  0
## 2386 ESR2  ESR2-1            C 2015-06-26 0  0  0  0  0
##       plot plantid treatment       date BD FF SG SD TF
## 2    ESR2  ESR2-2            C 2015-05-24 6  0  0  0  6
## 161  ESR2  ESR2-2            C 2015-05-26 5  0  0  0  5
## 320  ESR2  ESR2-2            C 2015-05-29 5  0  0  0  5
## 479  ESR2  ESR2-2            C 2015-06-01 3  0  0  0  3
## 638  ESR2  ESR2-2            C 2015-06-03 2  1  0  0  3
## 797  ESR2  ESR2-2            C 2015-06-05 2  1  0  0  3
## 956  ESR2  ESR2-2            C 2015-06-07 0  2  0  0  2
## 1115 ESR2  ESR2-2            C 2015-06-09 0  3  0  0  3
## 1274 ESR2  ESR2-2            C 2015-06-11 0  3  0  0  3
## 1433 ESR2  ESR2-2            C 2015-06-13 0  2  1  0  3
## 1592 ESR2  ESR2-2            C 2015-06-15 0  2  1  0  3
## 1751 ESR2  ESR2-2            C 2015-06-17 0  0  3  0  3
## 1910 ESR2  ESR2-2            C 2015-06-19 0  0  3  0  3
## 2069 ESR2  ESR2-2            C 2015-06-21 0  0  1  2  3
## 2228 ESR2  ESR2-2            C 2015-06-23 0  0  2  1  3
## 2387 ESR2  ESR2-2            C 2015-06-26 0  0  0  3  3
##       plot plantid treatment       date BD FF SG SD TF
## 3    ESR2  ESR2-3            C 2015-05-24 0  0  0  0  0
```

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## 162  ESR2  ESR2-3           C 2015-05-26  0  0  0  0  0
## 321  ESR2  ESR2-3           C 2015-05-29  0  0  0  0  0
## 480  ESR2  ESR2-3           C 2015-06-01  0  0  0  0  0
## 639  ESR2  ESR2-3           C 2015-06-03  0  0  0  0  0
## 798  ESR2  ESR2-3           C 2015-06-05  0  0  0  0  0
## 957  ESR2  ESR2-3           C 2015-06-07  0  0  0  0  0
## 1116 ESR2  ESR2-3           C 2015-06-09  0  0  0  0  0
## 1275 ESR2  ESR2-3           C 2015-06-11  0  0  0  0  0
## 1434 ESR2  ESR2-3           C 2015-06-13  0  0  0  0  0
## 1593 ESR2  ESR2-3           C 2015-06-15  0  0  0  0  0
## 1752 ESR2  ESR2-3           C 2015-06-17  0  0  0  0  0
## 1911 ESR2  ESR2-3           C 2015-06-19  0  0  0  0  0
## 2070 ESR2  ESR2-3           C 2015-06-21  0  0  0  0  0
## 2229 ESR2  ESR2-3           C 2015-06-23  0  0  0  0  0
## 2388 ESR2  ESR2-3           C 2015-06-26  0  0  0  0  0
##       plot plantid treatment      date BD FF SG SD TF
## 4    ESR2  ESR2-4           C 2015-05-24  2  0  0  0  2
## 163  ESR2  ESR2-4           C 2015-05-26  2  0  0  0  2
## 322  ESR2  ESR2-4           C 2015-05-29  2  0  0  0  2
## 481  ESR2  ESR2-4           C 2015-06-01  2  1  0  0  3
## 640  ESR2  ESR2-4           C 2015-06-03  2  1  0  0  3
## 799  ESR2  ESR2-4           C 2015-06-05  1  2  0  0  3
## 958  ESR2  ESR2-4           C 2015-06-07  1  2  0  0  3
## 1117 ESR2  ESR2-4           C 2015-06-09  0  3  0  0  3
## 1276 ESR2  ESR2-4           C 2015-06-11  0  3  0  0  3
## 1435 ESR2  ESR2-4           C 2015-06-13  0  1  2  0  3
## 1594 ESR2  ESR2-4           C 2015-06-15  0  0  3  0  3
## 1753 ESR2  ESR2-4           C 2015-06-17  0  0  0  3  3
## 1912 ESR2  ESR2-4           C 2015-06-19  0  0  0  3  3
## 2071 ESR2  ESR2-4           C 2015-06-21  0  0  0  3  3
## 2230 ESR2  ESR2-4           C 2015-06-23  0  0  2  1  3
## 2389 ESR2  ESR2-4           C 2015-06-26  0  0  0  3  3
##       plot plantid treatment      date BD FF SG SD TF
## 6    ESR2  ESR2-6           C 2015-05-24  2  0  0  0  2
## 165  ESR2  ESR2-6           C 2015-05-26  3  0  0  0  3
## 324  ESR2  ESR2-6           C 2015-05-29  3  0  0  0  3
## 483  ESR2  ESR2-6           C 2015-06-01  3  0  0  0  3
## 642  ESR2  ESR2-6           C 2015-06-03  3  1  0  0  4
## 801  ESR2  ESR2-6           C 2015-06-05  2  2  0  0  4
## 960  ESR2  ESR2-6           C 2015-06-07  2  2  0  0  4
## 1119 ESR2  ESR2-6           C 2015-06-09  1  2  0  0  3
## 1278 ESR2  ESR2-6           C 2015-06-11  1  3  0  0  4
## 1437 ESR2  ESR2-6           C 2015-06-13  0  1  2  0  3
## 1596 ESR2  ESR2-6           C 2015-06-15  0  1  2  0  3
## 1755 ESR2  ESR2-6           C 2015-06-17  0  0  1  2  3
## 1914 ESR2  ESR2-6           C 2015-06-19  0  0  1  2  3
## 2073 ESR2  ESR2-6           C 2015-06-21  0  0  1  2  3
## 2232 ESR2  ESR2-6           C 2015-06-23  0  0  1  2  3
## 2391 ESR2  ESR2-6           C 2015-06-26  0  0  0  3  3
##       plot plantid treatment      date BD FF SG SD TF
## 8    ESR2  ESR2-8           C 2015-05-24  6  0  0  0  6
## 167  ESR2  ESR2-8           C 2015-05-26 12  1  0  0 13
## 326  ESR2  ESR2-8           C 2015-05-29 14  1  0  0 15
## 485  ESR2  ESR2-8           C 2015-06-01 10  3  0  0 13
```

```
## 644  ESR2  ESR2-8           C 2015-06-03 10  3  0  0 13
## 803  ESR2  ESR2-8           C 2015-06-05  6  5  0  0 11
## 962  ESR2  ESR2-8           C 2015-06-07  7  6  0  0 13
## 1121 ESR2  ESR2-8           C 2015-06-09  4  8  1  0 13
## 1280 ESR2  ESR2-8           C 2015-06-11  1  7  2  0 10
## 1439 ESR2  ESR2-8           C 2015-06-13  1  4  4  1 10
## 1598 ESR2  ESR2-8           C 2015-06-15  0  3  6  2 11
## 1757 ESR2  ESR2-8           C 2015-06-17  0  3  1  6 10
## 1916 ESR2  ESR2-8           C 2015-06-19  0  2  2  7 11
## 2075 ESR2  ESR2-8           C 2015-06-21  0  0  3  9 12
## 2234 ESR2  ESR2-8           C 2015-06-23  0  0  3  8 11
## 2393 ESR2  ESR2-8           C 2015-06-26  0  0  0 11 11
##       plot plantid treatment       date BD FF SG SD TF
## 133  WC11  WC11-1           C 2015-05-24  1  0  0  0  1
## 292  WC11  WC11-1           C 2015-05-26  1  0  0  0  1
## 451  WC11  WC11-1           C 2015-05-29  1  0  0  0  1
## 610  WC11  WC11-1           C 2015-06-01  1  0  0  0  1
## 769  WC11  WC11-1           C 2015-06-03  2  0  0  0  2
## 928  WC11  WC11-1           C 2015-06-05  1  0  0  0  1
## 1087 WC11  WC11-1           C 2015-06-07  2  0  0  0  2
## 1246 WC11  WC11-1           C 2015-06-09  2  0  0  0  2
## 1405 WC11  WC11-1           C 2015-06-11  1  0  0  0  1
## 1564 WC11  WC11-1           C 2015-06-13  1  0  0  0  1
## 1723 WC11  WC11-1           C 2015-06-15  0  1  0  0  1
## 1882 WC11  WC11-1           C 2015-06-17  0  1  0  0  1
## 2041 WC11  WC11-1           C 2015-06-19  0  0  1  0  1
## 2200 WC11  WC11-1           C 2015-06-21  0  0  1  0  1
## 2359 WC11  WC11-1           C 2015-06-23  0  0  0  1  1
## 2518 WC11  WC11-1           C 2015-06-26  0  0  0  1  1
##       plot plantid treatment       date BD FF SG SD TF
## 134  WC11  WC11-2           C 2015-05-24  1  0  0  0  1
## 293  WC11  WC11-2           C 2015-05-26  1  0  0  0  1
## 452  WC11  WC11-2           C 2015-05-29  1  0  0  0  1
## 611  WC11  WC11-2           C 2015-06-01  1  0  0  0  1
## 770  WC11  WC11-2           C 2015-06-03  0  0  0  0  0
## 1088 WC11  WC11-2           C 2015-06-07  0  0  0  0  0
## 1247 WC11  WC11-2           C 2015-06-09  0  0  0  0  0
## 1406 WC11  WC11-2           C 2015-06-11  0  0  0  0  0
## 1724 WC11  WC11-2           C 2015-06-15  0  0  0  0  0
## 1883 WC11  WC11-2           C 2015-06-17  0  0  0  0  0
## 2042 WC11  WC11-2           C 2015-06-19  0  0  0  0  0
## 2201 WC11  WC11-2           C 2015-06-21  0  0  0  0  0
## 2360 WC11  WC11-2           C 2015-06-23  0  0  0  0  0
## 2519 WC11  WC11-2           C 2015-06-26  0  0  0  0  0
##       plot plantid treatment       date BD FF SG SD TF
## 135  WC11  WC11-3           C 2015-05-24  6  0  0  0  6
## 294  WC11  WC11-3           C 2015-05-26  7  0  0  0  7
## 453  WC11  WC11-3           C 2015-05-29  6  0  0  0  6
## 612  WC11  WC11-3           C 2015-06-01  3  0  0  0  3
## 771  WC11  WC11-3           C 2015-06-03  2  1  0  0  3
## 930  WC11  WC11-3           C 2015-06-05  1  2  0  0  3
## 1089 WC11  WC11-3           C 2015-06-07  0  3  0  0  3
## 1248 WC11  WC11-3           C 2015-06-09  0  3  0  0  3
## 1407 WC11  WC11-3           C 2015-06-11  0  3  0  0  3
```

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## 1566 WC11   WC11-3         C 2015-06-13  0  3  0  0  3
## 1725 WC11   WC11-3         C 2015-06-15  0  1  2  0  3
## 1884 WC11   WC11-3         C 2015-06-17  0  0  2  1  3
## 2043 WC11   WC11-3         C 2015-06-19  0  0  2  1  3
## 2202 WC11   WC11-3         C 2015-06-21  0  0  1  2  3
## 2361 WC11   WC11-3         C 2015-06-23  0  0  0  3  3
## 2520 WC11   WC11-3         C 2015-06-26  0  0  0  3  3
##      plot plantid treatment      date BD FF SG SD TF
## 136  WC11   WC11-4         C 2015-05-24  1  0  0  0  1
## 295  WC11   WC11-4         C 2015-05-26  1  0  0  0  1
## 454  WC11   WC11-4         C 2015-05-29  1  0  0  0  1
## 613  WC11   WC11-4         C 2015-06-01  1  0  0  0  1
## 772  WC11   WC11-4         C 2015-06-03  0  1  0  0  1
## 931  WC11   WC11-4         C 2015-06-05  0  1  0  0  1
## 1090 WC11   WC11-4         C 2015-06-07  0  1  0  0  1
## 1249 WC11   WC11-4         C 2015-06-09  0  1  0  0  1
## 1408 WC11   WC11-4         C 2015-06-11  0  1  0  0  1
## 1567 WC11   WC11-4         C 2015-06-13  0  0  1  0  1
## 1726 WC11   WC11-4         C 2015-06-15  0  0  1  0  1
## 1885 WC11   WC11-4         C 2015-06-17  0  0  0  1  1
## 2044 WC11   WC11-4         C 2015-06-19  0  0  0  1  1
## 2203 WC11   WC11-4         C 2015-06-21  0  0  0  1  1
## 2362 WC11   WC11-4         C 2015-06-23  0  0  0  1  1
## 2521 WC11   WC11-4         C 2015-06-26  0  0  0  1  1
##      plot plantid treatment      date BD FF SG SD TF
## 139  WC11   WC11-7         C 2015-05-24  4  0  0  0  4
## 298  WC11   WC11-7         C 2015-05-26  4  0  0  0  4
## 457  WC11   WC11-7         C 2015-05-29  4  0  0  0  4
## 616  WC11   WC11-7         C 2015-06-01  3  0  0  0  3
## 775  WC11   WC11-7         C 2015-06-03  0  2  0  0  2
## 934  WC11   WC11-7         C 2015-06-05  0  2  0  0  2
## 1093 WC11   WC11-7         C 2015-06-07  0  2  0  0  2
## 1252 WC11   WC11-7         C 2015-06-09  0  2  0  0  2
## 1411 WC11   WC11-7         C 2015-06-11  0  2  0  0  2
## 1570 WC11   WC11-7         C 2015-06-13  0  2  0  0  2
## 1729 WC11   WC11-7         C 2015-06-15  0  0  2  0  2
## 1888 WC11   WC11-7         C 2015-06-17  0  0  2  0  2
## 2047 WC11   WC11-7         C 2015-06-19  0  0  0  2  2
## 2206 WC11   WC11-7         C 2015-06-21  0  0  0  2  2
## 2365 WC11   WC11-7         C 2015-06-23  0  0  0  2  2
## 2524 WC11   WC11-7         C 2015-06-26  0  0  0  2  2
##       plot plantid treatment       date BD FF SG SD TF
## 108  WHSR9 WHSR9-1         H 2015-05-24  2  0  0  0  2
## 267  WHSR9 WHSR9-1         H 2015-05-26  2  0  0  0  2
## 426  WHSR9 WHSR9-1         H 2015-05-29  2  0  0  0  2
## 585  WHSR9 WHSR9-1         H 2015-06-01  1  1  0  0  2
## 744  WHSR9 WHSR9-1         H 2015-06-03  1  1  0  0  2
## 903  WHSR9 WHSR9-1         H 2015-06-05  0  2  0  0  2
## 1062 WHSR9 WHSR9-1         H 2015-06-07  0  2  0  0  2
## 1221 WHSR9 WHSR9-1         H 2015-06-09  0  2  0  0  2
## 1380 WHSR9 WHSR9-1         H 2015-06-11  0  2  0  0  2
## 1539 WHSR9 WHSR9-1         H 2015-06-13  0  1  1  0  2
## 1698 WHSR9 WHSR9-1         H 2015-06-15  0  1  0  1  2
## 1857 WHSR9 WHSR9-1         H 2015-06-17  0  0  1  1  2
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## 2016 WHSR9 WHSR9-1          H 2015-06-19  0  0  1  1  2
## 2175 WHSR9 WHSR9-1          H 2015-06-21  0  0  0  2  2
## 2334 WHSR9 WHSR9-1          H 2015-06-23  0  0  0  2  2
## 2493 WHSR9 WHSR9-1          H 2015-06-26  0  0  0  2  2
##       plot plantid treatment         date BD FF SG SD TF
## 109   WHSR9 WHSR9-2          H 2015-05-24  3  0  0  0  3
## 268   WHSR9 WHSR9-2          H 2015-05-26  2  0  0  0  2
## 427   WHSR9 WHSR9-2          H 2015-05-29  2  0  0  0  2
## 586   WHSR9 WHSR9-2          H 2015-06-01  1  1  0  0  2
## 745   WHSR9 WHSR9-2          H 2015-06-03  0  2  0  0  2
## 904   WHSR9 WHSR9-2          H 2015-06-05  0  2  0  0  2
## 1063 WHSR9 WHSR9-2          H 2015-06-07  0  2  0  0  2
## 1222 WHSR9 WHSR9-2          H 2015-06-09  0  2  0  0  2
## 1381 WHSR9 WHSR9-2          H 2015-06-11  0  2  0  0  2
## 1540 WHSR9 WHSR9-2          H 2015-06-13  0  2  0  0  2
## 1699 WHSR9 WHSR9-2          H 2015-06-15  0  0  2  0  2
## 1858 WHSR9 WHSR9-2          H 2015-06-17  0  0  2  0  2
## 2017 WHSR9 WHSR9-2          H 2015-06-19  0  0  1  1  2
## 2176 WHSR9 WHSR9-2          H 2015-06-21  0  0  1  1  2
## 2335 WHSR9 WHSR9-2          H 2015-06-23  0  0  0  2  2
## 2494 WHSR9 WHSR9-2          H 2015-06-26  0  0  0  2  2
##       plot plantid treatment         date BD FF SG SD TF
## 110   WHSR9 WHSR9-3          H 2015-05-24 14  0  0  0 14
## 269   WHSR9 WHSR9-3          H 2015-05-26 17  0  0  0 17
## 428   WHSR9 WHSR9-3          H 2015-05-29 14  0  0  0 14
## 587   WHSR9 WHSR9-3          H 2015-06-01 18  0  0  0 18
## 746   WHSR9 WHSR9-3          H 2015-06-03 14  3  0  0 17
## 905   WHSR9 WHSR9-3          H 2015-06-05 10  7  0  0 17
## 1064 WHSR9 WHSR9-3          H 2015-06-07  9  8  0  0 17
## 1223 WHSR9 WHSR9-3          H 2015-06-09  8 12  0  0 20
## 1382 WHSR9 WHSR9-3          H 2015-06-11  2 15  0  0 17
## 1541 WHSR9 WHSR9-3          H 2015-06-13  2 14  2  0 18
## 1700 WHSR9 WHSR9-3          H 2015-06-15  3 15  0  0 18
## 1859 WHSR9 WHSR9-3          H 2015-06-17  2  3 13  0 18
## 2018 WHSR9 WHSR9-3          H 2015-06-19  0  0 18  0 18
## 2177 WHSR9 WHSR9-3          H 2015-06-21  0  0 17  0 17
## 2336 WHSR9 WHSR9-3          H 2015-06-23  0  0  4 11 15
## 2495 WHSR9 WHSR9-3          H 2015-06-26  0  0  0 17 17
##       plot plantid treatment         date BD FF SG SD TF
## 116   WHSR9 WHSR9-4          H 2015-05-24  1  0  0  0  1
## 275   WHSR9 WHSR9-4          H 2015-05-26  2  0  0  0  2
## 434   WHSR9 WHSR9-4          H 2015-05-29  2  0  0  0  2
## 593   WHSR9 WHSR9-4          H 2015-06-01  1  0  0  0  1
## 752   WHSR9 WHSR9-4          H 2015-06-03  1  1  0  0  2
## 911   WHSR9 WHSR9-4          H 2015-06-05  1  1  0  0  2
## 1070 WHSR9 WHSR9-4          H 2015-06-07  1  1  0  0  2
## 1229 WHSR9 WHSR9-4          H 2015-06-09  1  1  0  0  2
## 1388 WHSR9 WHSR9-4          H 2015-06-11  0  2  0  0  2
## 1547 WHSR9 WHSR9-4          H 2015-06-13  0  2  0  0  2
## 1706 WHSR9 WHSR9-4          H 2015-06-15  0  2  0  0  2
## 1865 WHSR9 WHSR9-4          H 2015-06-17  0  1  1  0  2
## 2024 WHSR9 WHSR9-4          H 2015-06-19  0  0  2  0  2
## 2183 WHSR9 WHSR9-4          H 2015-06-21  0  0  2  0  2
## 2342 WHSR9 WHSR9-4          H 2015-06-23  0  0  0  2  2
```

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## 2501 WHSR9 WHSR9-4          H 2015-06-26  0  0  0  2  2
##       plot plantid treatment       date BD FF SG SD TF
## 112  WSR10 WSR10-1          C 2015-05-24  5  0  0  0  5
## 271  WSR10 WSR10-1          C 2015-05-26  4  0  0  0  4
## 430  WSR10 WSR10-1          C 2015-05-29  3  0  0  0  3
## 589  WSR10 WSR10-1          C 2015-06-01  0  2  0  0  2
## 748  WSR10 WSR10-1          C 2015-06-03  0  2  0  0  2
## 907  WSR10 WSR10-1          C 2015-06-05  0  2  0  0  2
## 1066 WSR10 WSR10-1          C 2015-06-07  0  2  0  0  2
## 1225 WSR10 WSR10-1          C 2015-06-09  0  0  2  0  2
## 1384 WSR10 WSR10-1          C 2015-06-11  0  0  2  0  2
## 1543 WSR10 WSR10-1          C 2015-06-13  0  0  1  1  2
## 1702 WSR10 WSR10-1          C 2015-06-15  0  0  1  1  2
## 1861 WSR10 WSR10-1          C 2015-06-17  0  0  0  2  2
## 2020 WSR10 WSR10-1          C 2015-06-19  0  0  0  2  2
## 2179 WSR10 WSR10-1          C 2015-06-21  0  0  0  2  2
## 2338 WSR10 WSR10-1          C 2015-06-23  0  0  0  2  2
## 2497 WSR10 WSR10-1          C 2015-06-26  0  0  0  2  2
##       plot plantid treatment       date BD FF SG SD TF
## 103  WSR10 WSR10-7          C 2015-05-24  7  0  0  0  7
## 262  WSR10 WSR10-7          C 2015-05-26  2  0  0  0  2
## 421  WSR10 WSR10-7          C 2015-05-29  5  0  0  0  5
## 580  WSR10 WSR10-7          C 2015-06-01  1  1  0  0  2
## 739  WSR10 WSR10-7          C 2015-06-03  0  1  0  0  1
## 898  WSR10 WSR10-7          C 2015-06-05  0  1  0  0  1
## 1057 WSR10 WSR10-7          C 2015-06-07  0  1  0  0  1
## 1216 WSR10 WSR10-7          C 2015-06-09  0  1  0  0  1
## 1375 WSR10 WSR10-7          C 2015-06-11  0  0  1  0  1
## 1534 WSR10 WSR10-7          C 2015-06-13  0  0  1  0  1
## 1693 WSR10 WSR10-7          C 2015-06-15  0  0  1  0  1
## 1852 WSR10 WSR10-7          C 2015-06-17  0  0  0  1  1
## 2011 WSR10 WSR10-7          C 2015-06-19  0  0  0  1  1
## 2170 WSR10 WSR10-7          C 2015-06-21  0  0  0  1  1
## 2329 WSR10 WSR10-7          C 2015-06-23  0  0  0  1  1
## 2488 WSR10 WSR10-7          C 2015-06-26  0  0  0  1  1
##       plot plantid treatment       date BD FF SG SD TF
## 105  WSR10 WSR10-9          C 2015-05-24  3  0  0  0  3
## 264  WSR10 WSR10-9          C 2015-05-26  2  1  0  0  3
## 423  WSR10 WSR10-9          C 2015-05-29  2  1  0  0  3
## 582  WSR10 WSR10-9          C 2015-06-01  0  2  0  0  2
## 741  WSR10 WSR10-9          C 2015-06-03  0  2  0  0  2
## 900  WSR10 WSR10-9          C 2015-06-05  0  2  0  0  2
## 1059 WSR10 WSR10-9          C 2015-06-07  0  2  0  0  2
## 1218 WSR10 WSR10-9          C 2015-06-09  0  2  0  0  2
## 1377 WSR10 WSR10-9          C 2015-06-11  0  1  1  0  2
## 1536 WSR10 WSR10-9          C 2015-06-13  0  0  2  0  2
## 1695 WSR10 WSR10-9          C 2015-06-15  0  0  2  0  2
## 1854 WSR10 WSR10-9          C 2015-06-17  0  0  0  2  2
## 2013 WSR10 WSR10-9          C 2015-06-19  0  0  0  2  2
## 2172 WSR10 WSR10-9          C 2015-06-21  0  0  0  2  2
## 2331 WSR10 WSR10-9          C 2015-06-23  0  0  0  2  2
## 2490 WSR10 WSR10-9          C 2015-06-26  0  0  0  2  2
```