

BuckModsDiag.R

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```
library(ggplot2)
library(lme4)
```

```
## Loading required package: Matrix
```

```
library(nlme)
```

```
##
## Attaching package: 'nlme'

## The following object is masked from 'package:lme4':
##
##      lmList
```

```
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
```

```
library(influence.ME)
```

```
## Warning: package 'influence.ME' was built under R version 3.2.5

##
## Attaching package: 'influence.ME'

## The following object is masked from 'package:stats':
##
##      influence
```

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

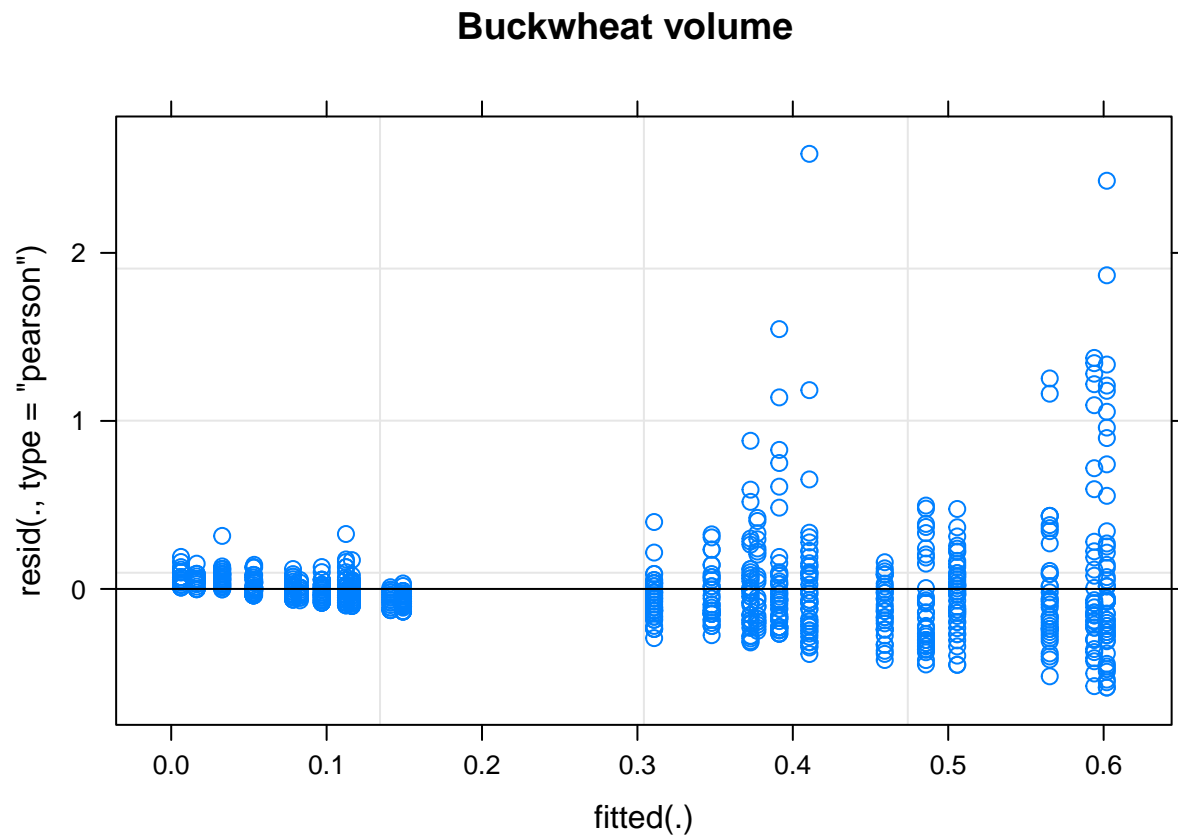
buckvol15 <- read.csv("nectar analysis/data files/buckvol15.csv", header = T)
buckvol16 <- read.csv("nectar analysis/data files/buckvol16.csv", header = T)
buckvolboth <- rbind(buckvol15,buckvol16)
buckvolboth$year <- as.factor(year(buckvolboth$date))
```

```

bucksug15 <- read.csv("nectar analysis/data files/bucksugar15.csv", header = T)
bucksug16 <- read.csv("nectar analysis/data files/bucksugar16.csv", header = T)
bucksugboth <- rbind(bucksug15,bucksug16)
bucksugboth$year <- as.factor(year(bucksugboth$date))

modvol <- lmer(volume ~ treatment * year + (1|plot), data = bucksugboth)
plot(modvol, main = "Buckwheat volume")

```

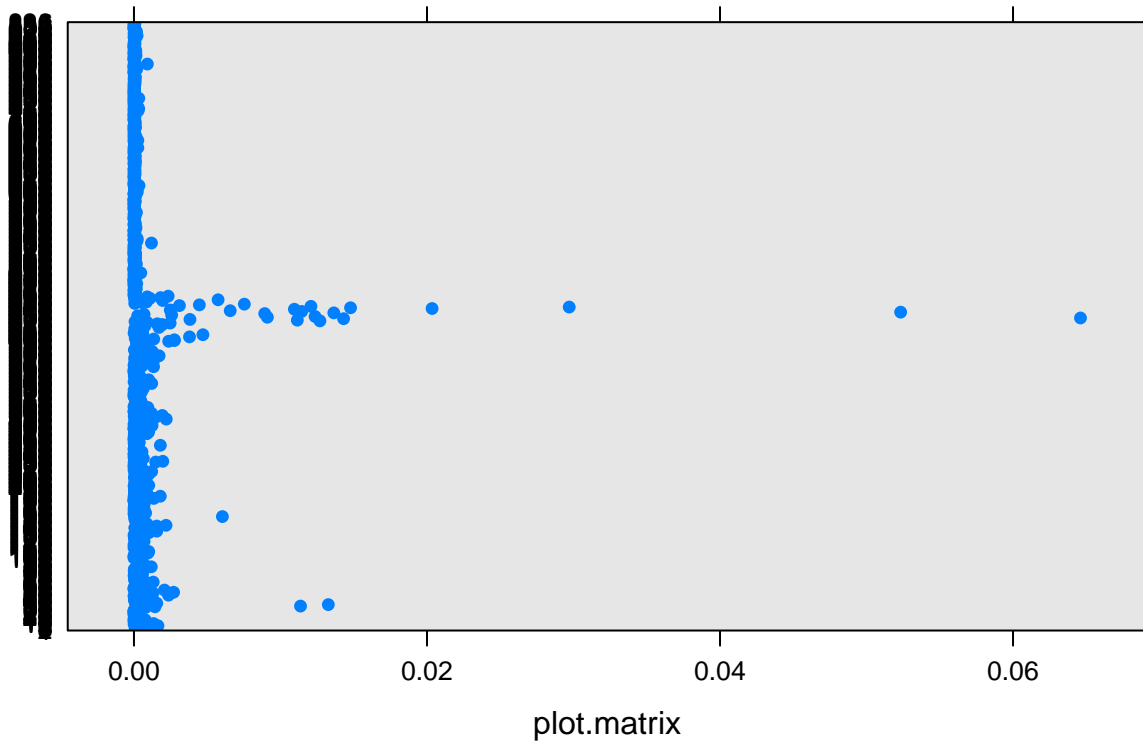


```

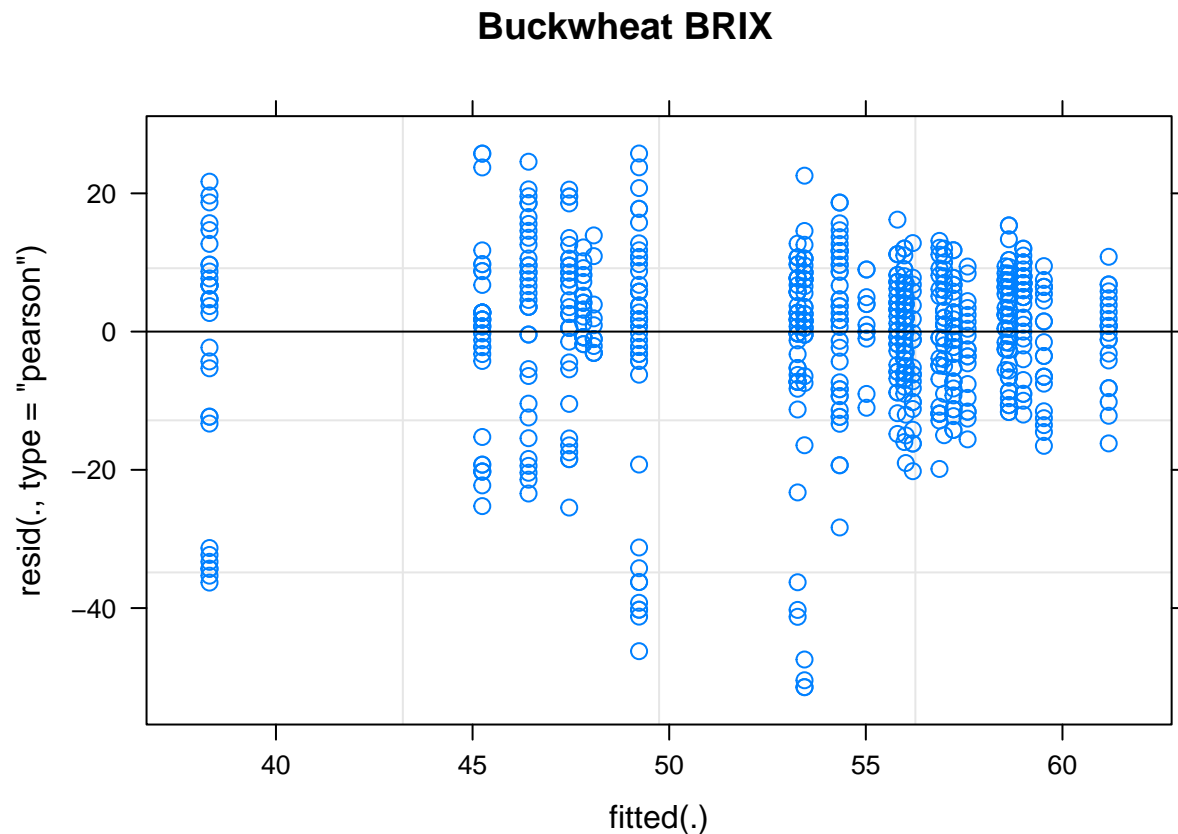
inflvol <- influence(modvol, obs = T)
plot(inflvol, which = "cook", main = "Buckwheat volume")

```

Buckwheat volume



```
modBRIX <- lmer(BRIX ~ treatment * year + (1|plot), data = bucksugboth)
plot(modBRIX, main = "Buckwheat BRIX")
```



```
inflBRIX <- influence(modBRIX, obs = T)
```

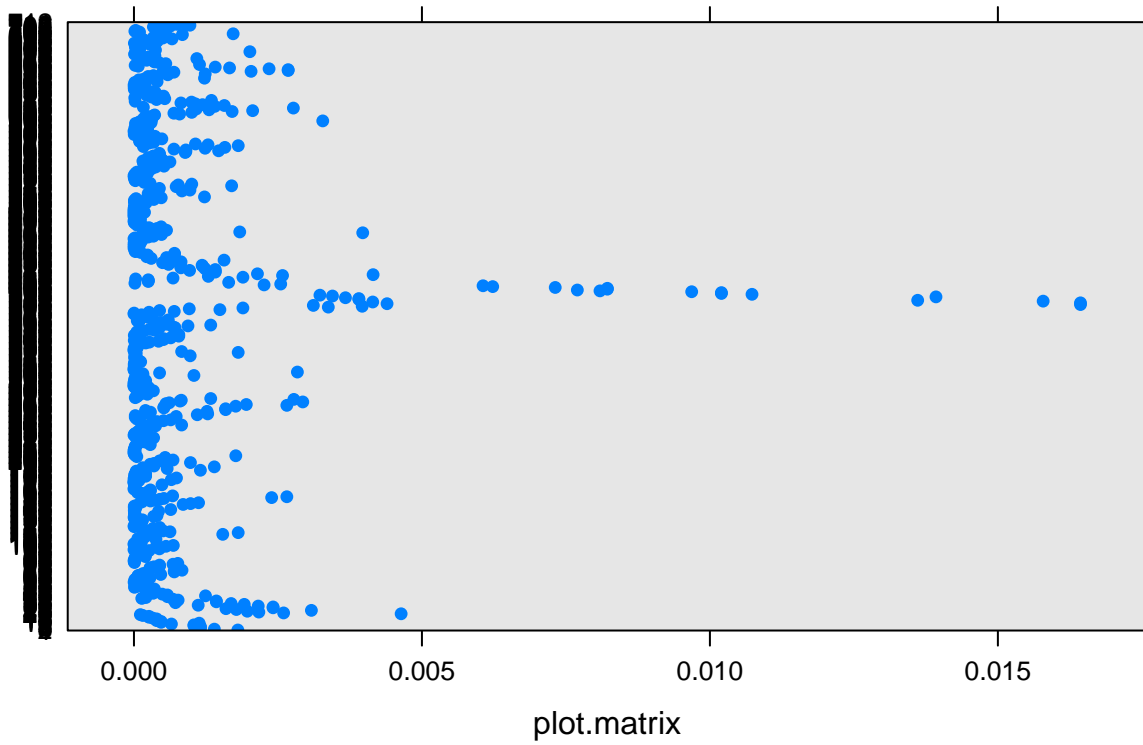
```
## Warning in optwrap(optimizer, devfun, getStart(start, rho$lower, rho$pp), :
## convergence code 3 from bobyqa: bobyqa -- a trust region step failed to
## reduce q
```

```
## Warning in optwrap(optimizer, devfun, getStart(start, rho$lower, rho$pp), :
## convergence code 3 from bobyqa: bobyqa -- a trust region step failed to
## reduce q
```

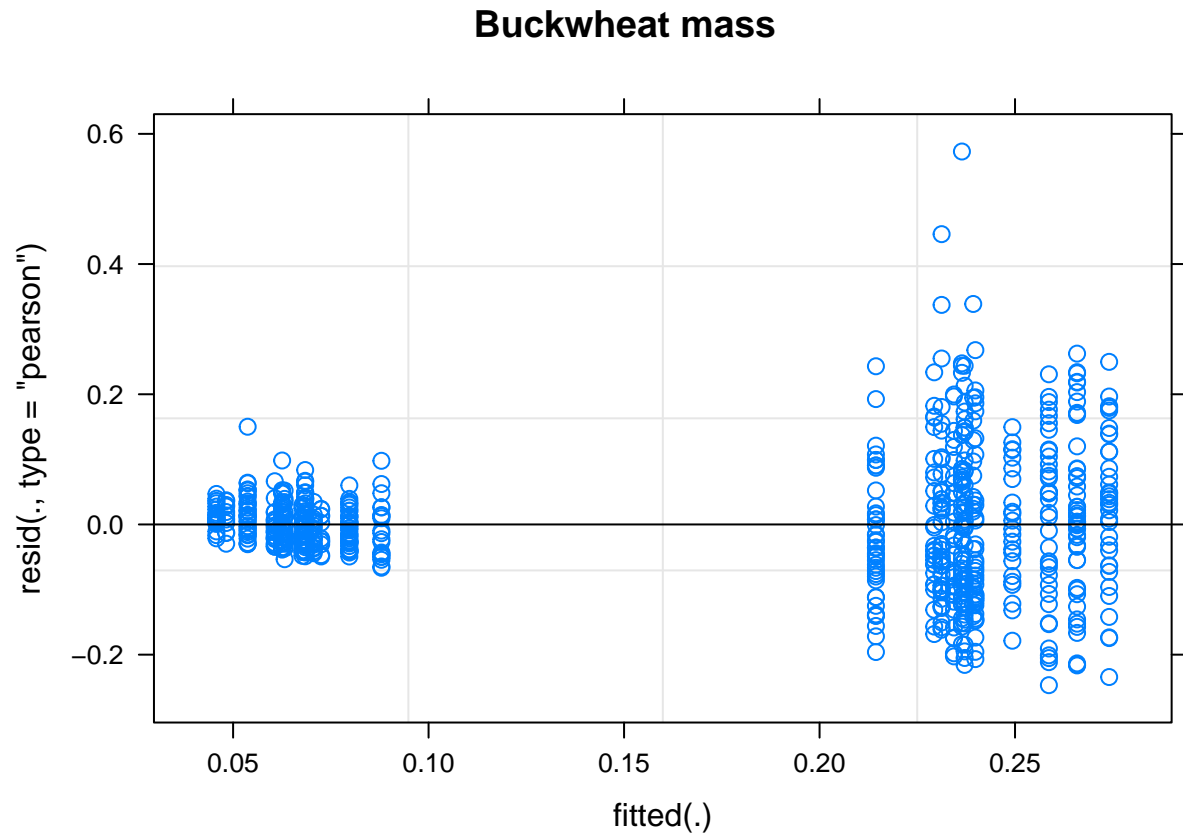
```
## Warning in optwrap(optimizer, devfun, getStart(start, rho$lower, rho$pp), :
## convergence code 3 from bobyqa: bobyqa -- a trust region step failed to
## reduce q
```

```
plot(inflBRIX, which = "cook", main = "Buckwheat BRIX")
```

Buckwheat BRIX



```
modmass <- lmer(mass ~ treatment * year + (1|plot), data = bucksugboth)
plot(modmass, main = "Buckwheat mass")
```



```
inflmass <- influence(modmass, obs = T)
plot(inflmass, which = "cook", main = "Buckwheat mass")
```

Buckwheat mass

