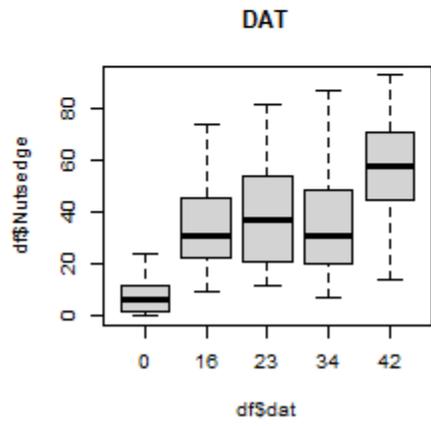
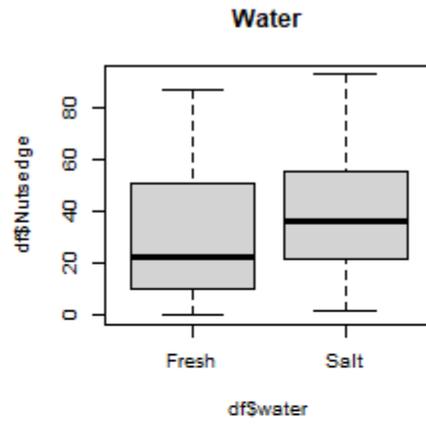
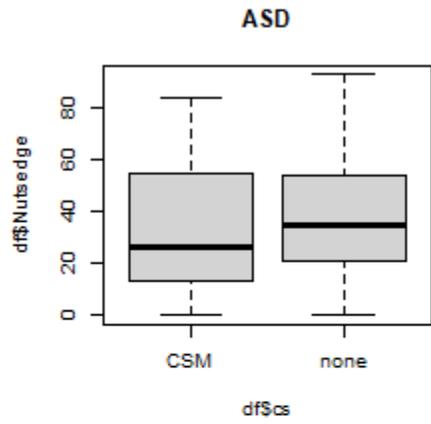
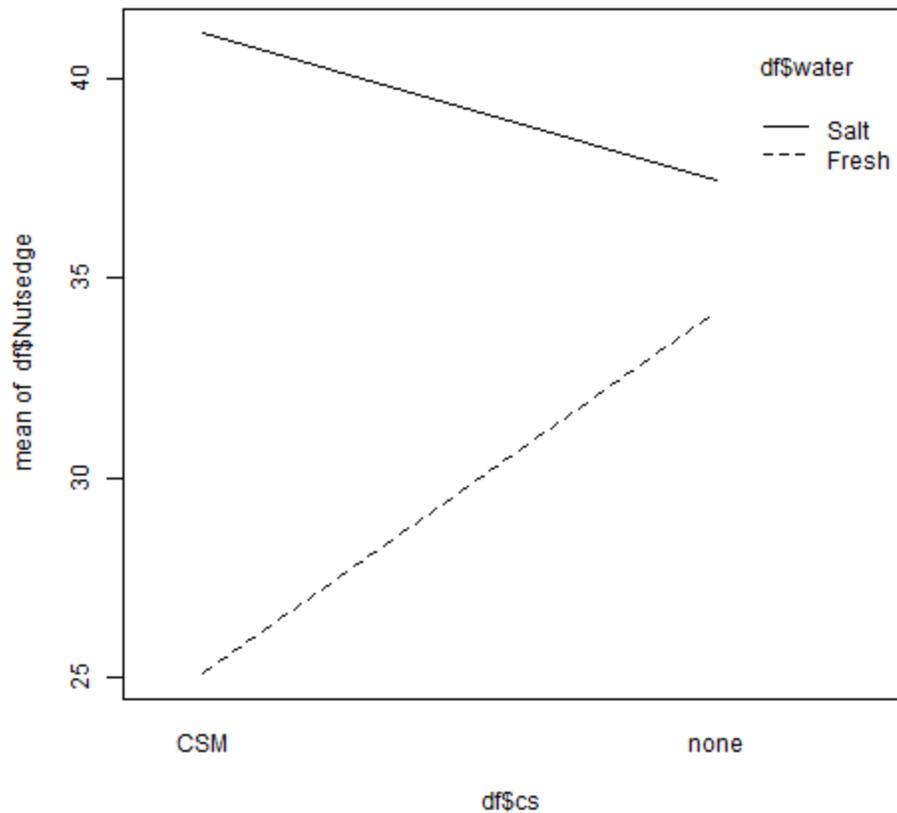


1. WEEDS





```

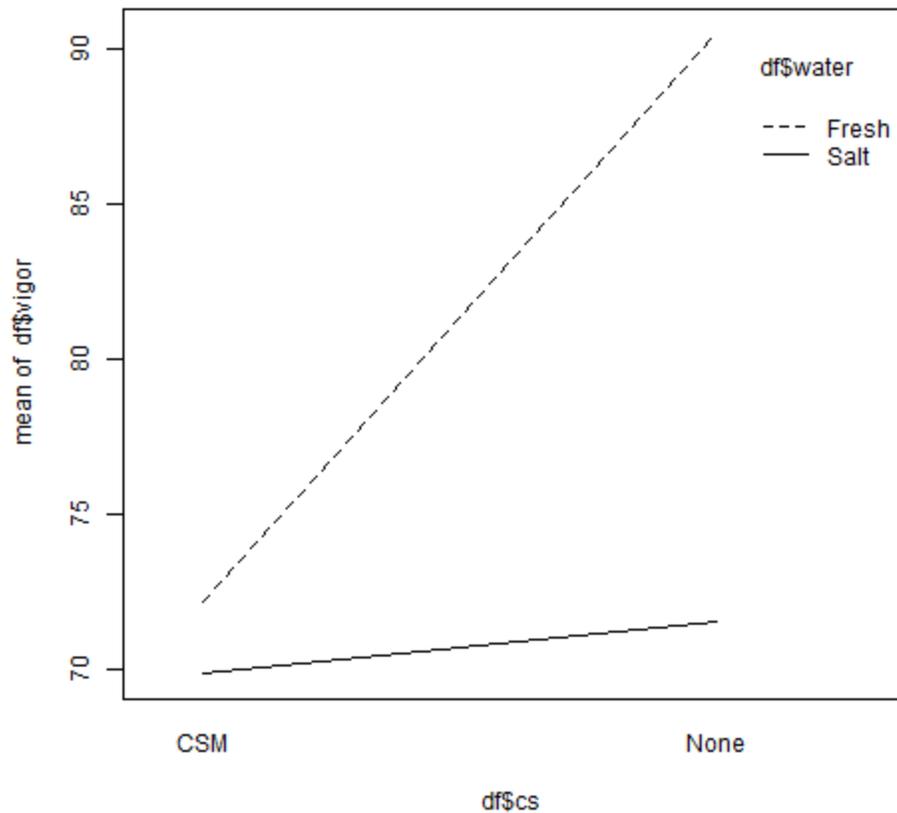
Residuals:
    Min       1Q   Median       3Q      Max
-32.976 -11.098  -3.594  10.927  45.198

Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)    5.6371     5.0046   1.126  0.2636
csnone         2.7000     4.2698   0.632  0.5291
waterSalt      9.6500     4.2698   2.260  0.0267 *
dat            0.9843     0.1466   6.713 3.04e-09 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 19.1 on 76 degrees of freedom
Multiple R-squared:  0.3995,    Adjusted R-squared:  0.3758
F-statistic: 16.86 on 3 and 76 DF,  p-value: 1.73e-08

```

For this dataset there weren't any significant interactions, but there is a potential interaction between carbon source and water salinity ($p = 0.13$). We included an interaction plot of thisWATERMELONS



```

Coefficients: (3 not defined because of singularities)
              Estimate Std. Error t value Pr(>|t|)
(Intercept)  86.8257    16.1855   5.364 1.24e-06 ***
csNone       26.0000    12.8824   2.018 0.04783 *
waterSalt    12.6000    18.2185   0.692 0.49173
dat          -0.4750     0.1337  -3.552 0.00073 ***
row2         17.9200    18.2185   0.984 0.32907
row3        -11.5000    12.8824  -0.893 0.37542
row4        -12.6000    12.8824  -0.978 0.33178
csNone:waterSalt -41.3200    25.7648  -1.604 0.11377
row1:col2    21.3000    18.2185   1.169 0.24675
row2:col2   -31.8200    18.2185  -1.747 0.08558 .
row3:col2     9.0200    18.2185   0.495 0.62225
row4:col2     3.2600    18.2185   0.179 0.85856
row1:col3    -1.8600    18.2185  -0.102 0.91901
row2:col3   -68.1200    22.3130  -3.053 0.00332 **
row3:col3   -20.5000    18.2185  -1.125 0.26476
row4:col3      NA         NA         NA     NA
row1:col4     4.0000    18.2185   0.220 0.82693
row2:col4    -2.0200    18.2185  -0.111 0.91207
row3:col4      NA         NA         NA     NA
row4:col4      NA         NA         NA     NA
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```

This analysis needs some sort of spatial effect to account for the field conditions. With the way it's set up I should have everything I need, but I want to spend a bit more time looking at the

The carbon source did have a significant effect on the vigor ratings, but it seems that adding CSM lowered vigor ratings in this data. I'm not sure what caused this, I would've expected the opposite. There was also a potential interaction between CS and salinity, I included an interaction plot. Because the effect from CSM seems a bit backwards here I'm not sure if repeating this trial will make the interaction stronger or make it disappear.