**Above ground biomass Data Analysis**

* Instead of treating this as a factorial experiment, I ran the analyses as a one-way ANOVA with all of the treatments crossed. This is supposed to minimize the unbalance of the data due to plant death. I first ran a contrast of all pairwise comparisons using the log of shoot weight. I ran groups of contrasts in three rounds. First, I ran a set of planned comparions (Difference between invasive genotype and native genotype; Presence or absence of rhizobia; Presence or absence of soil). I also ran two post hoc comparisons asking about soil concentration and coevolution. I then ran as one round contrasts about interactions in the data. I used a false discovery rate p value adjustment for this set.

1. Mac HD:Users:chanj:Documents:Friesen lab:Soil_Rhizobia:AllCompShoots8Feb2017.pdfIs there a difference between treatments? YES; F13,25 = 12.92, p < 0.01
2. Does St. Augusine-2 have a mean shoot weight that differs from PI493292? NO; t(38) = 1.754, p = 0.092
3. Does the presence of rhizobia have an effect on mean shoot weight? YES; t(38) = -6.859, p < 0.001

Mac HD:Users:chanj:Documents:Friesen lab:Soil_Rhizobia:ShootInoculateContrast8Feb2017.pdf

1. Does the presence of soil have an effect on mean shoot weight? YES; t(38) = -3.196, p < 0.05
   1. NoneVsLow: t(38) = -3.064, p <0.01
   2. NoneVsHigh: t(38) = -4.32, p <0.001
   3. LowVsHigh: t(38) = -0.071, p = 0.944

Mac HD:Users:chanj:Documents:Friesen lab:Soil_Rhizobia:SoilConc10Feb1017.pdf

1. Is average shoot weight different depending on the location of the soil used? YES; t(38) = -5.078, p < 0.001
2. Do plants have larger shoot mass with co-evolved soil? NO; t(38) = -0.958, p = 0.347

Mac HD:Users:chanj:Documents:Friesen lab:Soil_Rhizobia:SoilLocation11Feb2017.pdf

1. Within Genotype, do plants vary in shoot weight with or without soil?
   1. St. Augustine: YES; t(38) = -2.897 p < 0.05
   2. PI439292: YES; t(38) = -2.470 p < 0.05
2. Within Genotype, does the location of the soil matter?
   1. St. Augustine: YES; t(38) = -4.75 p < 0.001
   2. PI439292: YES; t(38) = 5.021 p < 0.001
3. Within Rhizobia, do invasive plants differ from native?
   1. Rhizobia +:NO, t(38) = 0.062, p = 0.951
   2. Rhizobia -: YES; t(38) = -2.791 p < 0.05
4. Within Rhizobia x Genotype interaction, does soil location matter?
   1. St. Augustine: YES; t = 3.845, p <0.01
   2. PI439292: YES; t(38) = 3.583 p < 0.01