The Effect of Mycorrhizae Inoculant on Plant Growth

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The process investigated in this project is the role of arbuscular mycorrhizal symbiosis and its effect on plant growth. Plant growth was taken by measuring height, biomass, amount of flowering, and leaf count. During this experiment I collected 30 days of data. On this data I performed some statistical analysis. When I ran an ANOVA statistical analysis test of significance looking at variance within and between groups on the total change for shoot height, I got a P value of 0.0252. This tells me that there is a significant difference between treatment groups. The concentration of 0.01g/ml of mycorrhizae inoculant produced the best results for plant height. The 0.01g/ml group total change average was 48cm and the average rate of change was 1.6cm per day. The control group had a total change average of 26cm and a rate of change average of 0.9cm per day. The highest concentration used in this experiment was 0.025g/ml of mycorrhizae inoculant. This test group had an average total change of 32cm and an average rate of change of 1.2cm per day. For the plant biomass data I also ran an ANOVA test and got a P value of 0.02583. Since this P-Value is less than 0.05 it tells me that there is a difference between treatment groups. On average test groups that were treated with a concentration of mycorrhizal inoculant were anywhere between 1.6 to 3.4 grams heavier than the control plants.

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