The Effect of Application Rates on the Growth and Yield of Gossypium hirsutum L.

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The investigation and research with stressed plant growth has come to the forefront of the agricultural community worldwide because water has become very scarce. The purpose of this experiment was to evaluate two types of irrigations methods (single large once a week and small irrigation daily) and the effect on four different commercial cotton cultivars. Four cotton cultivars were watered with 17.5 mm of water weekly using two different application systems. Plots were either watered daily with 2.5mm or all at once with 17.5mm until October 19, 2015. Leaf tissue samples were taken from randomized samples from each set of cultivars every other day. Sample were analyzed for fuorescense using a fluorometer and samples were analyzed for sugar using a HPLC analyzer. In conclusion, the cultivars watered at 2.5mm per day, had the greatest lint yield. Cultivars A and B had a greater difference of lint yield when watered 2.5mm a day rather being watered 17.5 mm one-time weekly application. It was proven that farmers could plant and produce cotton with half the amount of water while maintaining or have a slight decrease in their lint yield. Now farmers can cut back on water and still produce the same amount of lint yield when watering what is considered normal amount of water

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