The Effect of Nitrogen-Rich Fertilizers on the Growth and Yield of Cotton Plants

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If four different fertilizers are applied at two different rates, then the Agrium with 44%nitrogen at the lowest rate (50%) will have the most significant difference and will be the most cost productive. How helpful are nitrogen fertilizers to the cotton plant for production and yield? The study was conducted at Texas Tech University. In this experiment four different fertilizer treatments were tested at two different ratios to see which one affected the growth and yield the most. The height, nodes, nodes after white flower, number of bowls, biomass, ground cover fraction, SPAD meter readings, end of season yield, lint pounds per acre and seed pounds per acre were recorded and tested throughout the experiment. From my past experiments, the data presented showed how harmful the fertilizers are not only for the environment but also for aquatic life. The runoff water from the fertilizers go into the lakes and streams causing danger for future human consumption. The results of this experiment showed: a farmer can use less fertilizer with less nitrogen to control how much goes back into our water supply and environment. The same amounts of water were applied throughout the experiment. Stats were also ran on all of the data to find the most significant differences between all of my variations. A cost analysis was studied to see the cost differences between the fertilizers and applications to see if the yield of the cotton was producing. A research farm from a university was used, two cotton seeds and four fertilizer treatments. The expected outcome was that the farmer could use less nitrogen and still produce an acceptable yield. In conclusion, it can be stated that a farmer can use half the amount of fertilizer that was initially applied and have the same, if not more yield.

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