Impact of Continuous Fertilization on Growth and Protein Content of Soybeans

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The objective of this experiment was to determine the impact continuous fertilization would have on the protein content and growth of soybean plants compared to initial fertilization only. The research focused on two primary hypotheses. H1: Plants with continuous fertilization would have increased amounts of nutrients available in the soil which would result in a higher growth rate and better overall health of the . H2: Plants with continuous fertilization would have a higher presence of protein in the soil available but would not result in an increased protein concentration in the soybeans. To test these hypotheses, an experimental design was used with three groups of soybeans: one control group with no fertilization, group 1 with initial fertilization, and group 2 with continuous fertilization. After letting the three groups grow for four weeks, and measuring the height of each plant weekly, the data did not support the first hypothesis. Both the control group and group 2 had the same average growth at week four, and group 1 had significantly lagged behind. Thus, the fertilizer seemed to have a zero to negative effect on the soybean growth. H2 was tested utilizing Biuret's solution to test for protein concentration. However, this test failed due to Biuret's solution failing to activate. These results did not support the hypothesis. Future research is needed to determine optimal fertilization schedules to promote growth and protein development in soybean plants.

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