The Effects of Gibberellin Concentration on the Development of Bean Plants

Krohn, Logan (School: American Heritage Charter School)

Gibberellic acid is a growth hormone found naturally in plants. This experiment's primary goal was to find the most effective gibberellin concentration to use on green beans to promote growth. I hypothesized that plants would grow proportionally to the amount of gibberellic acid applied. In order to test the hypothesis, thirty green bean plants were sprayed with varying concentrations of a gibberellic acid solution. The height of each plant was measured daily for one week. Plants in the control group grew to a height of 24 Centimeters, 160% of their starting height. Plants sprayed with the lowest concentration of gibberellic acid grew to a height of 36 centimeters, 209% of their starting height. Finally, plants sprayed with the highest concentration of gibberellic acid grew to an average height of 42 centimeters, 233% of their starting height. My data demonstrates a clear correlation between the amount of gibberellic acid used and the growth of plants, though the potency of gibberellic acid decreases as it is applied in larger concentrations. Continued research on the ideal concentration of gibberellic acid to use on plants as well as how to improve the production methods of gibberellins could lead to the development of superior fertilizers for farms across the United States and the world.

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