Course Name
Instructor
Experiment Title
Your name
Date

James Tison 11/25/12 11:17 AM
Comment: Cover Page

Title: Testing the effects of added nutrients on plant growth

Abstract

This experiment was done to test whether adding nutrients to the soil will increase plant growth. Two plants were monitored for four days, one with added nutrients and one without. At the end of the four days, the plant with nutrients had grown 1.1 mm while the plant without nutrients had grown only 0.6 mm. Adding nutrients increased plant growth over time.

James Tison 11/25/12 9:58 AM

Comment: Summarizes report. A person reading the abstract will understand what the experiment is about, how you did it and your results.

Introduction

Background: Gardeners and farmers often add nutrients to soil when they plant crops or flowers. It has been observed that plants with added nutrients grow faster than plants without added nutrients.

Objective: This experiment will test whether adding nutrients to soil affects plant growth.

Hypothesis: The addition of nutrients to soil increases the speed of growth in plants.

James Tison 11/25/12 10:07 AM

Comment: 3 parts to introduction.

Background: Includes theory (some brief historical reference is OK) behind the experiment and must describe the relevant equations used with the measurements to calculate quantitative results. Do not develop the equations here, but do explain the meaning of its terms.

Cite the sources for the theory here and in Reference section.

Objective: One sentence stating what the is being tested or evaluated.

Hypothesis: One sentence statement This is an "if-then" statement of what is expected

Materials and Method

Two plants of the same type and initial size were used for this experiment. At the beginning of the experiment, each plant was planted in an identical pot, each containing 500 g of soil. One pot was labeled "Nutrients" and one pot was labeled "Control." The initial height of each plant was measured and recorded in Table 1.

In a 100mL beaker, 5 drops of liquid plant nutrients was added to 50mL of tap water. This 50mL of water was then used to water the plant labeled "Nutrients." The "Control" plant was watered with 50mL of tap water.

Both plants were placed in area of equal light and temperature and allowed to grow for four days. The height of each plant was measured at noon each day and recorded in Table1.

James Tison 11/25/12 11:03 AM

Comment: Write this in continuous text. No bulleted lists. Method should be concise, not all the personal details of what you did or encountered doing the experiment

Data and Results

Table and graph show the height of each plant over time.

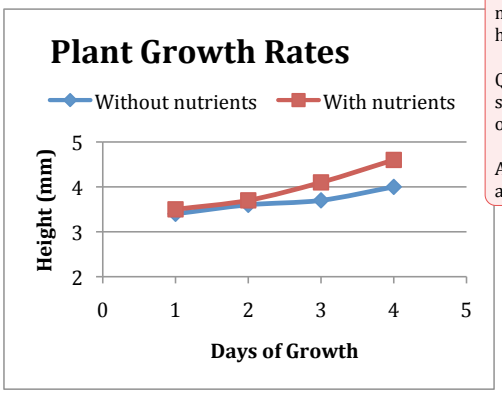
James Tison 11/25/12 10:14 AM

Comment: This includes data table of measurements, with column and row headings and units of measurement.

Quantitative results calculated from the data should be stated either within the data table or below it.

A graphical representation of the results is also appropriate here.

	Height (mm)			
Variable	Day 1	Day 2	Day 3	Day 4
Control (without nutrients)	3.4	3.6	3.7	4
Independent (with nutrients)	3.5	3.7	4.1	4.6



The "Control" plant grew 0.6 mm over the four days, and the "Nutrients" plant grew 1.1 mm over the four days.

Discussion

As hypothesized, the plant with added nutrients grew faster than the plant without nutrients. At the end of the experiment, the nutrients plant had grown almost twice as much as the control. Since other variables such as temperature and sunlight were kept as constant as possible, the nutrients should be the only factor affecting plant growth.

James Tison 11/25/12 11:05 AM

Comment: Analysis of experimental work. Describe possible sources for experimental error, and any conditions that may have influenced results.

This study was only done with two plants and over four days. Additional experiments could look at the long term effects of nutrients. Will a plant die without added nutrients? How often do you need to add more nutrients to keep the plant healthy? Or, you could look at how different amounts of nutrients affect plant growth. Is it possible to add too much nutrients to the plant?

Conclusion

Nutrients do increase plant growth over time in comparison to untreated plants.

James Tison 11/25/12 11:05 AM

Comment: Confirm or refute your hypothesis. One to two sentences should do.

References

(Use APA formatting) In this case, students use books or the Internet to look up background information for why farmers add nutrients to soil when they grow crops. They might also cite other students' lab reports to discuss contradictory results or conclusions.