

The Effects of Light on Plant Growth

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Abstract

This research report explores how varying amounts of light affect the growth of bean plants. The experiment involved exposing plants to different light conditions and measuring their growth over four weeks. Results indicated that plants exposed to moderate light grew taller than those in low or excessive light conditions.

Introduction

Plants require light for photosynthesis, which is essential for their growth. This report investigates how different light levels influence the growth rate of bean plants. The research question addressed is: How does the amount of light affect the growth of bean plants?

Method

1. Three groups of bean plants were prepared: Group A (low light), Group B (moderate light), Group C (high light).
2. All groups were planted in identical pots and soil, and watered equally.
3. Plants were measured weekly for height over a four-week period.

Results

After four weeks, Group B (moderate light) had the tallest average height at 18 cm. Group A (low light) averaged 10 cm, while Group C (high light) averaged 13 cm.

- Low Light: 10 cm average height
- Moderate Light: 18 cm average height
- High Light: 13 cm average height

Discussion

The results suggest that too little or too much light can inhibit plant growth. Moderate light provided optimal conditions for the bean plants. These findings support the hypothesis that light intensity has a direct effect on plant development.

Conclusion

In conclusion, bean plants grow best under moderate light. It is important for future studies to explore different types of plants and light sources.

References

- Smith, J. (2020). *The Science of Plant Growth*. Greenleaf Press.

- Biology Online. (2023). *Photosynthesis and Plant Growth*. Retrieved from biologyonline.com