Maximizing of crop yield with the best revenue of using nitrogen fertilizer and inoculation of seed with bacteria in sustainable agricultural systems in soybean (Glycine max L.)

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Integrating nitrogen fertilizer and inoculation of seed with bacteria in sustainable agricultural systems in soybean (Glycine max L.)

1. Introduction

Split Plot Design (SPD) is a statistical approach used in agricultural experiments, where the experimental units are divided into sub-units. In this study, we utilized SPD to determine the effects of nitrogen fertilizer and bacteria inoculation on soybean yield and revenue in sustainable agricultural systems.

2. Materials and Methods

We conducted a field experiment in a soybean field in the summer season. The experiment was designed using SPD, with nitrogen fertilizer and bacteria inoculation as main factors. The sub-units consisted of different levels of bacteria inoculation.

3. Results

Our results showed that the combination of high nitrogen fertilizer and bacteria inoculation led to the highest soybean yield and revenue. The highest yield was obtained from the treatment with the highest level of nitrogen fertilizer and bacteria inoculation.

4. Conclusion

Our findings suggest that the integration of nitrogen fertilizer and bacteria inoculation is an effective strategy for maximizing crop yield and revenue in sustainable agricultural systems. This approach can contribute to the development of sustainable agricultural practices.

References


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