Exploring alternatives to conventional polybags for cucumber seedling production

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Introduction

Synthetic poly bags are mostly used to produce seedlings nowadays, but their use has led to environmental degradation since they are non-biodegradable, clog streams, and poison cattle and wild animals. This experiment intends to compare the performance of poly bags and biodegradable alternatives for raising quality seedlings.

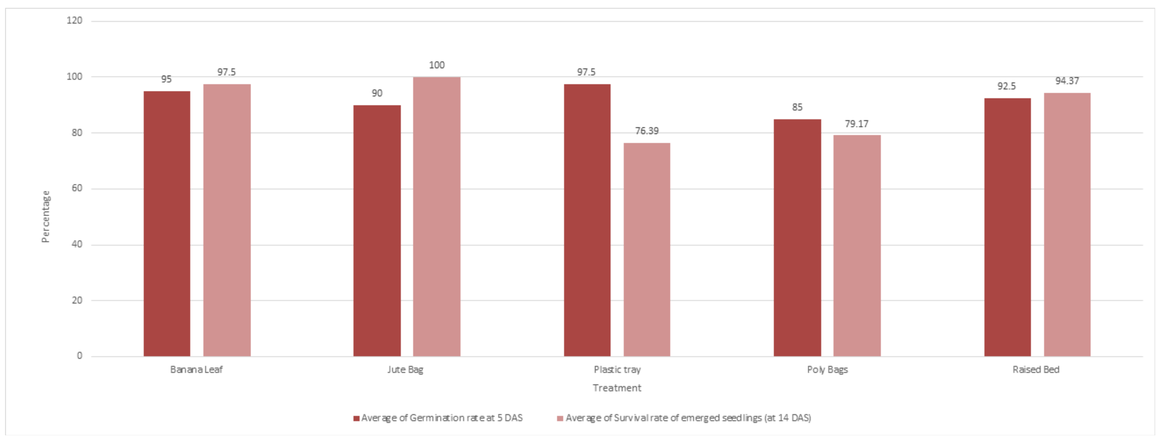
Research questions

- Why do we need alternatives to polybags for vegetable seedling production?
- What sustainable alternatives offer a comparable or superior performance in terms of seedling quality and environmental impact?

Methodology

The experiment was conducted in Dhangadhi-11 Bela, Kailali from 12th to 30th July, 2023. Randomized Complete Block Design was used, with five treatments (T1= Raised beds, T2= Poly bags, T3= Plastic trays, T4= Banana leaf bags, T5= Jute bags) and four replications.

Parameters of cucumber seedlings influenced by nursery raising techniques



Key findings

Findings revealed that banana leaf bags showed promising outcomes in terms of days to 50% germination (2.25 days), germination rate at 5DAS (95%), shoot length (4.32cm), diameter of shoot (3.43mm), number of leaf (2.50) and survival rate (97.4%) at 0.05 significance level compared to poly bags, followed by jute bags and raised beds.

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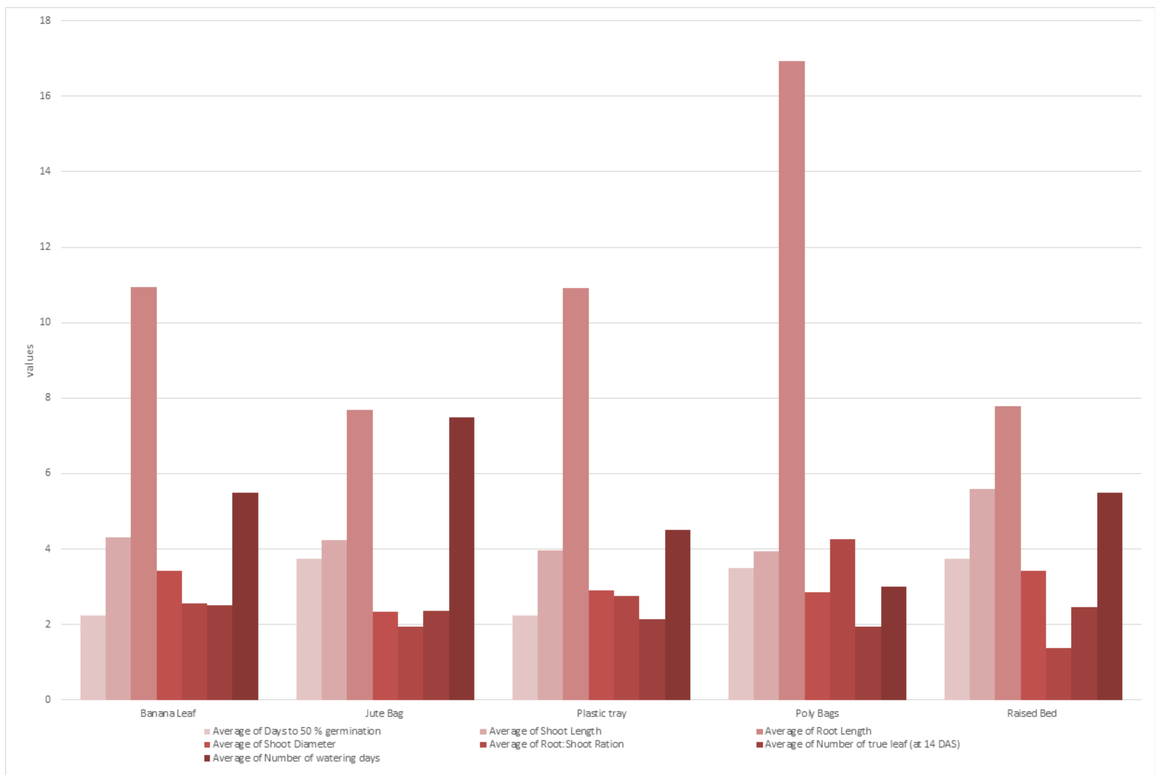

Conclusion

The study contributed valuable insights about nursery raising techniques for producing high-quality cucumber seedlings and offered potential solutions for reducing plastic waste.