



To Study about Growth and Survival Percentage of Jackfruit in Different Planting Time and Different Varieties of Jackfruit

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Abstract

The jackfruit is an emerging crop of India due to its various uses as fruits, vegetable medicinal, timber and wood. The present study was carried out in 2023-24 to find the most appropriate time of inarching in jackfruit. The experiment were laid out in one factorial randomized block design and was replicated four times. The experiment was consisted of 12 dates of inarching from september 2023- april 2024. The results obtained from the experiment revealed that the inarching performed in the month of July recorded the highest survival percentage (93.80%), length (8.55 cm) and diameter (5.80 mm) of new growth. Number of primary branches (3.47), number of leaves (9.37), length of primary roots (32.84 cm) and dry root: shoot ratio (0.70) at 90 DAG, However, the maximum length of tap root (15.85 cm) and fresh root: shoot ratio were noted during the November (0.72) inarched plant. From the present finding, it can be concluded that under Prayagraj conditions of Uttar pradesh inarching performed during July is the most suitable time for quality production of jackfruit plants.

Introduction

The Jackfruit, *Artocarpus heterophyllus* Lam., which is commonly known as jackfruit. It is a tropical climacteric fruit, belongs to Moraceae family, It is native to Western Ghats of India and common in Asia, Africa, and some regions in South America. It is known to be the largest edible fruit in the world. Jackfruit is one of the commonly consumed foods in Sri Lanka from the ancient time. It is a non seasonal fruit and had a major contribution to the food supply of the people and their livestock when there were short supplies of staple food grains. Therefore, it is referred to as poorman's food .

It Is a monoecious tree and both male and female inflorescences are found on the same tree The fertilization is by cross-pollination and the propagation is mostly through seeds. The complete fruit development process takes about three to seven months from the pollination, varying in different countries.

Varieties of jackfruit

1. Honey jack
2. Vietnam early tender
3. Singapore wada
4. Manmohana
5. Redmoon
6. Bhaira chanda
7. Hemachandra
8. Chips variety

9. Gumlesh
10. Lalbaugh madhura
11. Jack vietnam early
12. Jack j. 33
13. Jack thai pink
14. Jack singapuri yellow
15. Sadanand
16. Honey
17. Thai red
18. Redflesh
19. Gumlesh
20. Mutta marrica

Economic importance and benefits

The Jackfruit tree is a good source of wood for timber industries. Also, many parts of the jackfruit tree may be used in the preparation of medicines. Jackfruit is yellowish-brown in colour, and its exterior is composed of hexagonal apices.

The importance and potential benefits of studying the influence of different planting times on jackfruit cultivation in the Prayagraj region.

Environmental Adaptability: Prayagraj, located in a subtropical region, possesses a unique agro-climatic condition that significantly affects plant growth and development. Exploring the influence of different planting times on jackfruit varieties can provide valuable insights into their adaptability to local environmental conditions. By identifying optimal planting windows, farmers can enhance the survival rates and growth percentages of jackfruit plants, ultimately leading to increased productivity and economic gains.

Seasonal Variability: Planting time plays a crucial role in determining the success of agricultural endeavors. In Prayagraj, the region experiences distinct seasons, including summer, monsoon, and winter.

Variety-Specific Responses : Different jackfruit varieties exhibit varying responses to environmental stimuli and have unique growth patterns. By studying the impact of planting time on survival and growth percentage, researchers can ascertain the specific requirements of each variety and optimize planting strategies accordingly. This knowledge will enable farmers to select the most suitable jackfruit varieties for Prayagraj's agro-climatic condition

Yield Optimization: Maximizing the survival and growth percentage of jackfruit plants is directly linked to achieving higher yields.

Conclusion

Investigating the influence of different planting times on the survival and growth percentage of different varieties of jackfruit grown under Prayagraj's agro-climatic conditions is of paramount importance. The findings from this study will provide valuable insights into the adaptability of jackfruit varieties to local environmental conditions and help farmers optimize their cultivation practices for enhanced productivity. Furthermore, this research can contribute to sustainable agricultural practices and improve the economic well-being of farmers in Prayagraj and similar regions.

With the above points in mind, an investigation will be undertaken to analyse the "Influence of different planting time on their survival and growth percentage on different varieties of Jackfruit" carried out at Horticulture research farm, Naini Agricultural Institute, Sam Higginbottom University of Agriculture, Technology and Sciences (SHUATS), prayagraj (U.P) in the month of November to March during the Rabi season of the year (2023-24).

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