

STUDY ON GROWTH AND AGRONOMIC PERFORMANCES OF DIFFERENT CHILLI HYBRIDS FOR YIELD AND YIELD ATTRIBUTING CHARACTERISTICS

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Abstract

Capsicum annuum L., commonly known as chilli, is a distinctive and popular spice worldwide, renowned for its hot and pungent flavour. The selection and adaptation of new hybrid varieties are required to meet the national demand. This study aimed to assess the growth and agronomic performance of different chilli hybrids for yield and yield attributing characteristics. The experiment was carried out in a Randomized Complete Block Design (RCBD) with fifteen treatments having two replications. Various parameters such as plant height at 100% flowering, height at the third harvesting stage, canopy width at 100% flowering, primary and secondary branches at 100% flowering, and canopy width at the third harvesting stage were measured. Additionally, weekly observations were made on the number of pods, colour before and after ripening, fresh weight of chilli, pod length, pod width, and pod thickness. Notably, treatments T10 and T12 displayed the highest mean canopy width (63.3 cm), while T3 (20), T13 (19), and T11 (18) had the highest mean number of primary and secondary branches in the order. Treatment number 7 was identified with the highest number of pods, while T11 and T7 showed the highest dry weight (46.2 g) and the highest length of pod (7.5 cm) was found in the T12. In comparison, the results indicated that there was significant difference ($p < 0.05$) among the treatments. These findings indicate that different chilli hybrids have varying effects on plant growth and pod characteristics. The results from this study demonstrate the valuable insights for optimizing the selection criteria of chilli hybrids to enhance yield and quality traits.

Keywords: *Capsicum annuum*, Growth parameters, Hybrids, Yield attributes

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