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Effect Of Planting Dates And Pinching Methods On Growth And Flower Production In Carnation

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ABSTRACT

Rooted cuttings of carnation cv. 'Sunrise' were planted on four dates i.e. 16 December, 16 January, 16 February and 16 March with three pinching methods viz. Single pinch, pinch and a half and double pinch. Maximum plant height (66.27 cm), stem length (54.12 cm) and flower yield m^{-2} (121.0) was recorded in December planted crop. Least calyx splitting (5.02%) was recorded in January planted crop. Flower bud formation and flowering were earliest (136.4 days and 156.2 days, respectively) in March planting whereas December planted crop took maximum days for bud formation (161.1) and flowering (182.9). Least disease incidence (6.50%) and insect pest incidence (5.54%) was recorded in January planted crop.

Key words: carnation, planting dates, pinching methods

INTRODUCTION

Carnation (*Dianthus caryophyllus* L.) has a great potential to be grown for year round flower production. Planting schedules are important to regulate flower production. Staggered planting is very helpful for regulating flowering in carnation. Flowering can be spread over a period of five months by multiple pinching (Pathania *et al*. (2000). So, efforts were made to regulate the flower production by manipulating the planting dates and pinching methods.

MATERIALS AND METHODS

The experiment was conducted at Regional Horticulture and Forestry Research Station, Bhota, Hamirpur (HP) during 2003-04. Rooted cuttings of carnation cv. 'Sunrise' were planted on four dates i.e. 16 December, 16 January, 16 February and 16 March with three pinching methods viz. Single pinch, pinch and a half and double pinch at a spacing of 20 x 20cm. Before planting, 5kg FYM, 30g N, 20g P_2O_5 and 10g K_2O per meter square were mixed in the beds. Nitrogen was applied in two equal splits (15g at the time of transplanting and remaining half after 45 days of transplanting). All the recommended cultural practices were followed uniformly for the entire plot. The experiment was laid out with Randomized Block Design (Factorial) and each treatment was replicated three times. In case of pinch and a half method, flowering was obtained in two flushes and data expressed is the mean of first and second flush of flowers.

RESULTS AND DISCUSSION

Maximum plant height (66.27 cm) was recorded in December planting whereas minimum (53.32 cm) in March planted crop (Table 1a). Plants in December took advantage of having a longer growing period due to low light intensity and temperature during December to February. However, in March planting light intensity and duration as well as temperature were high. Reduction in plant height in March planted crop was obvious due to high temperature leading to high rate of photosynthetic activity. Gill and Aulakh (1993) found 16°C day and 10°C night temperatures optimum for excellent growth and flowering. Mohammad (1994) recorded maximum plant height in October planted carnations whereas it was minimum in April planting under open conditions. Plant height was maximum (65.81cm) in single pinch method whereas minimum (54.97cm) in double pinched plants. Verma *et. al.* (2002) recorded more plant height in single pinched plants as compared to pinch and a half method. Interaction effect showed that maximum plant height (72.20cm) was recorded in single pinched plants of December planted crop while the minimum (48.93cm) in double pinched plants of March planting.

Longest stems (54.12cm) were obtained from December planted crop whereas shortest (44.77cm) from March. Longer stems in December planting were due to

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