Effect of growth regulators on flowering and yield of sapota \([\text{Manilkara achras} \text{ (Mill.) Forsberg}]\)

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ABSTRACT

An experiment was conducted to study the effect of growth regulators on flowering and yield of sapota at Department of Horticulture, Marathwada Agricultural University, Parbhani during the year 2006-2007. The treatment \(T_6\) (NAA 150 ppm) produces more number of flowers (54.0), highest per cent of fruit set (43.13), higher per cent retention (over fruit set) at pea stage (18.77) and at lag phase (17.21), produces maximum number of fruits (2633.00) and yield (115.02 kg/tree) followed by \(T_5\) (NAA 100 ppm) while the lowest performance was observed in \(T_7\) (control).

Materials and Methods

The present investigation entitled "Effect of growth regulators on flowering and yield of sapota (\text{Manilkara achras} \text{ (Mill.) Forsberg}) var. kalipati" conducted at Department of Horticulture, Marathwada Agricultural University, Parbhani (M.S.). A field experiment was laid out in 2006-2007 in Randomized Block Design with seven treatments and three replications. The treatment details are as follows: \(T_1\) - GA 50 ppm, \(T_2\) - GA 100 ppm, \(T_3\) - GA 150 ppm, \(T_4\) - NAA 50 ppm, \(T_5\) - NAA 100 ppm, \(T_6\) - NAA 150 ppm and \(T_7\) - Control.

RESULTS AND DISCUSSION

Analysis of variance carried out for yield contributing attributes and flowering parameters is present in Table 1.

Number of flowers per shoot:

The treatment \(T_6\) (NAA 150 ppm) produced highest number of flowers per shoot which was at par with \(T_5\) (NAA 100 ppm) and significantly superior over the rest of the treatments, while least number of flowers recorded in \(T_1\) (GA 50 ppm) and \(T_2\) (GA 100 ppm) being at par with each other.

The result of present studies showed that the higher concentration of NAA at 150 ppm produced 27.05 per cent and 24.13 per cent more flowers over 50 ppm GA and control, respectively.

Duration of flowering:

Data regarding duration of flowering revealed that significantly less duration of flowering was recorded in