RESEARCH ARTICLE

PLANT GROWTH REGULATORS AFFECTING SEX EXPRESSION OF BOTTLE GOURD [*LAGENARIA SICERARIA* (MOL.)] CV. PUSA SUMMER PROLIFIC LONG

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Abstract: The investigation was carried out in the experimental farm of Department of Horticulture, S.K.N Agriculture University, Jobner,Jaipur (Rajasthan) to see the effect of various plant growth regulators and thiourea on vegetative growth, sex expression, quality and yield attributes of bottle gourd cv. cv. Pusa Summer Prolific Long, during the season 2012. The experimental was laid out with 13 treatments in randomized block design and replicated thrice. The treatment comprised of plant growth regulators and thiourea, viz. T_0 (control), T_1 (100 ppm NAA), T_2 (200 ppm NAA), T_3 (300 ppm NAA), T_4 (150 ppm Ethrel), T_5 (300 ppm ethrel), T_6 (450 ppm ethrel), T_7 (100 ppm CCC), T_8 (200 ppm CCC), T_9 (300 ppm CCC), T_{10} (250 ppm thiourea), T_{11} (500 ppm thiourea), T_{12} (750 ppm thiourea). The results revealed that the application of NAA 300 ppm (T_3) recorded maximum vine length (6.80 m), nodes per vine(22.01) and leaf area (274.00 cm^2). The CCC 300 ppm (T_9) treatment produced maximum primary branches (22.97) and secondary branches (9.30) per vine and leaf area (203.26 m^2) were observed in this treatment. The results showed that NAA 300 ppm registered maximum vegetative growth, ethrel 750 ppm significantly decreased male flower (65.60). Most of the quality parameters are maximum at ethrel 450 ppm as crude protein contents (0.226), ascorbic acid (12.90), TSS (5.31%). It may be concluded that ethrel 400 ppm (T_6) was found most effective as it remained statistically at par in all the growth, flowering attributes and yield.

Keywords: Bottle guard, PGRs, Thiourea, Vegetative growth, Flowering, Yield, Quality

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