

RESPONSE OF GROWTH PROMOTERS ON PHYSIOLOGY AND PRODUCTIVITY OF *OCIMUM* GERmplASMS

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ABSTRACT: Nine *Ocimum* germplasms, viz., IC369247, EC38737, IC33776, IC391924, *Ocimum basilicum*, *Ocimum local*, *Ocimum cannum*, *Ocimum basilicum* local and *Ocimum sanctum* local were screened for their physiological traits contributing to the yield and herbage production using salicylic acid and ascorbic acid applied as foliar spray during the kharif season of 2008. Salicylic acid has shown better performance amongst all others growth promoters tested in this investigation. This growth promoter had increased the plant height, leaf area index (LAI), leaf area duration (LAD), specific leaf area (SLA), crop growth rate (CRG), relative growth rate (RGR), net assimilation rate (NAR), seed yield, herbage yield, harvest index (HI), nitrogen, protein and oil %, photosynthetically active radiation (PAR), net photosynthesis (P_N), transpiration rate (E), stomata conductance (g_s), CO_2 and H_2O utilization in comparison to other treatments. Among the germplasms, IC 369247 had shown better performance for plant height, LAI, LAD, CGR, RGR, seed yield, PAR, P_N , E , g_s , CO_2 and H_2O utilization and oil percent. The second next germplasm EC 387337 had increased the SLA, herbage yield, nitrogen and protein followed by *Ocimum basilicum* which had increased the NAR and HI.

Key words: *Salicylic acid, Ascorbic acid, Ocimum germplasms*

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