ABSTRACT

Present investigation was carried out at the Botanic Garden of GC University, Lahore during 2005 season using two sunflower (Helianihus anmaus L.) cultivars “S-278 and 63A90” in a pot experiment, and the treatment was a Growth Booster

- a formulation of chelated micronutrients and gibhercllic acid in varying proportions obtained from Stoller Pakistan Ltd. Which is multinational agro product dealers. Four foliar treatments of Growth Booster were used at vegetative and early reproductive stage of sunflower plants. The 4 treatments of Growth Booster were; T1 (0.125%), T2 (0.25%), T3 (0.50%) and T4 (1.00%). A set of plants without any treatment was used as control (T0) to compare the experimental plants. Each treatment was replicated 6 times with 4 plants per pot of each cultivar.

Weekly growth assessment of treatment plants was carefully recorded. A midseason harvest was taken at the p4ie of vegetative growth of plants in order to check any effect of Growth Booster on biomass of sunflower crop.

Plant growth and development was highly pronounced in highest treatment concentration i.e., T4 with 36-40% increase in plant height, 33-38% increase in stem diameter, 12% increase in leaf production, and delayed senescence as compared to control. There was slight decline in the magnitude of stimulation in T3 and T2 treatments than T4, while TI treatment remained almost similar to control. Fresh and dry weights of plant were also higher in T4 (21-31% fresh, and 43-65% dry weight) along with more chlorophyll relative of control. Similarly, seeds yield in both cultivars of sunflower was increased by 25-27% in T4 (1.00%) treatment when compared with control. Increases in 100-seed weight were negligible in all foliar treatments; however, straw was increased by 39-42% in T4 treatment in two cultivars. Growth Booster has shown clear impact on both vegetative and reproductive growth of plants, and thus proved a useful mean of increasing the productivity of crops. Its various concentrations may be applied on a number of crops before recommending to the farmers.