

Preliminary Studies on the effect of UV-A radiation on Seedling of Green gram and Black gram

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Depletion of stratospheric ozone and the resulting increase in ultraviolet-A (UV-A, wavelength range 400-320nm) radiation may have a negative effect on the productivity of terrestrial ecosystems. This concern has led to a number of studies. Hence, to ascertain statement, this study was undertaken to evaluate the effect of UV-A radiation (356nm) on the Growth of two Fabaceae family plants. In this study seedling of green gram (*Phaseolus aureus*) and Black gram (*Phaseolus mungo*) were grown after treatment of UV-A (UV-A radiation was provided from UV-A fluorescent lamps) radiation for 20,40,80,100,110 and 120 min. The seedlings were incubated for 72h under light at room temperature and the growth of the seedlings was measured at 24h intervals. Control was also maintained without exposure to UV-A radiation. Mean length of seedling \pm SD was taken. There were no significant differences ($P<0.05$) observed among the mean height of seedling of green gram and black gram treated at 20,40,80,100 and 110min intervals compared with controls. Significant difference was observed among the mean height of seedlings of green gram and black gram treated at 120min when compared with the control. UV-A radiation inhibited the growth of seedlings of green and black gram when treated for 120min.

Key Words: Fabaceae, UV-A radiation, Productivity of terrestrial ecosystems.