

IMPACT OF SUPPLEMENTAL UV-B RADIATION ON NUMBER OF TILLERS IN BARLEY (*HORDEUM VULGARE* LINN.)

Rakesh Kumar, Suruchi Tyagi, A.K. Goyal* and Rajesh Kumar

Department of Botany, M.M.H. College, Ghaziabad

**Principal, KMGPG College, Badalpur, Gautam Buddha Nagar.*

Abstract: Sun is the basic source of energy on the planet earth. It emits UV rays along with solar radiation. These UV rays increase the average temperature of the earth and harmful for living beings. Ultraviolet radiation was given by UV lamps. The number of tillers in *Hordeum vulgare* was increased when plants are irradiated with longer duration in comparison to control. In all the observations, the number of tillers was recorded highest in T₃ (2 hour) then T₄ (3 hour) and T₂ (1 hour) treatments. This increase in the number of tillers is helpful in yielding the higher amount of seeds, grains and a good amount of fodder.

Keywords: *Hordeum vulgare* Linn., Tillers, Ultra violet radiation

REFERENCES

- Barnes P.W., Jordan P.W., Gold W.G., Flind S.D. and Caldwell M.M.** (1985). Competition, morphology and canopy structure in wheat (*Triticum aestivum* L.) and wild oat (*Avena fatua* L.) exposed to enhanced ultraviolet-B radiation. *Funct. Ecol.* **2**: 319-330.
- Bothmer R. and Jacobson N.** (1985). Origin, taxonomy and related species in Barley (ed. D Ramusson) pp12-18 (asa: Rome).
- Hidema J., Zhang W., Yamamoto M. and Kumagai T.** (2005). Change in grain size and grain storage protein of rice (*Oryza sativa* L.) in response to elevated UV-B radiation under outdoor conditions. *J. Radiat. Res.* **46**(2): 143-149.
- Kakani V.G., Reddy K.R., Zhao D. and Sailja K.** (2003). Field crop responses to ultraviolet-B radiation: A review. *Agricultural and Forest Meteorology.* **120**: 191-218.
- Kanash E.V., Artem'eva V.V. and Nikandrova O.V.** (1991). The yield of barley plants during growth in conditions of constant exposure to high-level UV-radiation. *Kosm Biol Aviakosm Med.* **25**(4): 20-3.
- Torabinejad, J. Caldwell, M.M. Flint, S.D. and Durham, S.** (1998). Susceptibility of pollen to UV-B radiation: an essay of 34 taxa. *American Journal of Botany.* **85**(3): 360-369.