

PHENOLOGY AND HEAT USE EFFICIENCY OF WHEAT GENOTYPES UNDER HEAT STRESS CONDITION

Shipra Roy¹, Sripati Sikder^{2}, Subrota Kumer Pramanik³*

**Corresponding author E-mail: srisikder@gmail.com*

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ABSTRACT

Phenology, growing degree days and heat use efficiency of four wheat genotypes (BAW-1170, BARI Gom 25, BARI Gom 26 and E 22) were studied under normal sowing and late sowing heat stress conditions in a split plot design. The requirement of days to attain various phenological stages was highest in BAW-1170 and the lowest in E 22 under both growing conditions. The growing degree days (GDD) and heat use efficiency were slightly higher under normal sowing compared to late sowing. The lowest heat unit requirement was observed in seedling emergence stage, whereas in the successive phenological stages there were an increasing trend of heat unit (GDD) requirement for all the genotypes in each sowing and the highest heat unit (GDD) requirement was observed at maturity stage. The highest GDD (1031.20 at normal and 1146.00 at heat stress) and HUE (3.37 at normal and 2.33 at heat stress) were found in BAW-1170, whereas the lowest GDD (902.00 at normal and 963.80 at heat stress) and HUE (2.76 at normal and 1.61 at heat stress) were found in E 22. Based on phenology, growing degree days and heat use efficiency BAW-1170 can be suggested as comparatively heat tolerant genotype than other three genotypes.

¹Shipra Roy, Former MS Student, Department of Crop Physiology and Ecology, Hajee Mohammad Danesh Science and Technology University, Dinajpur-5200, Bangladesh.

²Sripati Sikder, Professor, Department of Crop Physiology and Ecology, Hajee Mohammad Danesh Science and Technology University, Dinajpur-5200, Bangladesh.

³Subrota Kumer Pramanik, Former MS Student, Department of Crop Physiology and Ecology, Hajee Mohammad Danesh Science and Technology University, Dinajpur-5200, Bangladesh.