

A Survey on Reserve Remobilization from Different Aerial Organs in 10 Common Wheat Genotypes (*Triticum aestivum* L.) Under With and Without Drought Stress Conditions

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Abstract

In order to determine the effect of amount, efficiency and contribution of dry matter translated from different aerial organs, on grain yield in advanced wheat genotypes under normal and water stress after anthesis, an experiment was carried out at agricultural and natural resources research station of Ardabil in 2008-2009. Eight advanced winter and facultative wheat genotypes compared with Shahriyar and C-80-4 were evaluated in two separated experiments under normal irrigation and after anthesis drought stress condition in a randomized complete block design with three replications. There were observed significant differences among genotypes in terms of remobilization parameters such as amount, efficiency and contribution of dry matter on grain yield in both of normal and water stress experiments after anthesis stage. There were observed significant interaction effects at almost of remobilization parameters between genotypes and water levels. The genotypes with 6 and 10 without different significant have the highest amount of dry matter translated to grain (10.2 and 10.4, respectively) under water stress condition, while there were observed the lowest value of this parameter under drought stress in genotypes with Shahriyar, C-80-4, 3 and 7. Maximum and minimum efficiency in DMT were obtained by genotype 6 in stress condition and genotype 7 under normal condition, also the genotypes with 6 and 10 without different significant had the highest contribution of dry matter translated total, whereas the lowest value of this parameter belonged to genotype 7 which obtained under normal condition. Lowest increasing percent for amount, efficiency and contribution of Dry Matter Translated related to Shahriyar and C-80-4 and highest increasing percent obtained from 4, 5, 6 and 10. Those are satisfactory for cold climates of Iran in terminal drought stress.

Keywords: Shahriyar, Grain yield, Remobilization efficiency, Terminal drought stress.

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