



RESEARCH PAPER

Effect of drought stress at reproductive stage on yield and foraging capacity of maize (*Zea mays* L.)

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Abstract : Maize is under threat due to the global climate change, which seemingly will increase global temperature, alter the distribution of precipitation and intensify drought. Maize is the third most important crops. Drought is one of the most serious world-wide problems for agriculture and it causes adverse effects on crop yield. Screening of genotypes for relative drought tolerance is a tough task, since it is difficult to predict the stage at which the moisture stress is encountered under rainfed conditions. The present study experiments were carried in Faculty of Agriculture, Rural and Tribal Development, Ramakrishna Mission Vivekananda Educational and Research Institute, Coimbatore to evaluate morphological and yield responses to drought stress at anthesis to silking stage. The genotypes VIM-147, VIM-452-1, VIM-396, VIM-275 registered significantly minimum number of days for anthesis to silking interval (ASI) (3.1 days) while, VIM-257 (16.4) took significantly maximum number of days for anthesis to silking interval. The highest dry matter accumulation (491.70) was recorded in the VIM-147 genotype. The maximum cob weight (216.97) was recorded in VIM-147 which was significantly higher than rest of the genotypes. From this study, the genotype VIM-147 has emerged as an ideal donor for the future breeding programme for heat and drought stress.

Key Words : Drought, Maize, Growth, Yield, Cob, ASI

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