*Journal Crop and Weed, 11(Special Issue):38-43(2015)*

**Stability analysis for yield and related traits in maize (*Zea mays* L.) hybrids**

**grown under different moisture regimes in terai region of West Bengal**

**A. SARKAR**

*Department of Genetics and Plant Breeding*

*Uttar Banga Krishi Viswavidyalaya*

*Pundibari – 736165, Coochbehar, West Bengal*

*Received: 01-09-2014; Revised: 15-11-2014; Accepted: 17-12-2014*

**ABSTRACT**

*A study was undertaken with eight maize hybrids in three different environments, characterized by having different moisture regime with different irrigation scheduling, in the experimental farm of Uttar Banga Krishi Viswavidyalaya located under terai region of West Bengal to assess the extent of genetic variability of the different hybrids and to analyse the stability performance for yield and other yield related traits. There existed substantial variation in the mean performance of all the genotypes over environments for most of the characters and for yield r under moisture regime-1 was the rich environment and the two other were poor . But for plant height, number of tassel branches, ears per plant and width of ear the g x e (linear) and pooled deviation were both significant indicating differential performance of genotypes under diverse moisture regimes environments and with varying reaction norms and they were positively and significantly correlated with the yield. Hence selection may be made for related traits under poor environments (stress) and then for yield under rich environments and under optimum conditions with emphasis on the related traits. The hybrids Deccan and 900-M-Gold had the negative phenotypic stability with high deviation from linearity while the hybrid KMH-3712 showed negative deviations from linearity with a low but positive phenotypic stability for grain yield. Ganga Safed and Pinnacle could be recommended for the rich environments as better yielding ones but none of the hybrids were found to be stable over all the environments. That moisture regime during crop growth is an important factor is thus found to be an important factor in this region for the studied genotypes as found in similar such studies.*

***Keywords* :** Maize, moisture, stability