THE ANALYSIS OF ADAPTATION IN SOYBEAN IMPROVEMENT PROGRAMME

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An adaptability study was performed with 14 soybean (Glycine max (L.) Merr.) genotypes grown at five locations varying from low to high productive environments. Response of each genotype to the five locations was assessed by computing a linear regression of individual yields on the mean yields of all genotypes for each location. The regression coefficient values obtained for each genotype provided an interpretation of genotypic adaptation to natural environments[1,2]. Based on the analysis, it was evident that out of 14 genotypes tested five were highly sensitive to environmental changes and specifically adapted to high yield environments, one had general adaptability to all environments, and two were resistant to environmental changes and specifically suited to poor and/or fluctuating environments. (PM 78-25 and F 78-14-18) would be the ideal genotypes for recommendation, under our local conditions. However, the recommended cultivar Bossier, with general adaptability would be a potential candidature for all environments tested in this study.

References

1. Eberhart, S.A. and Russell, H.A. (1966). Crop Sci. 6, 36-40.

2. Finlay, K.W. and Wilkinson, G.N. (1963). Australian J. Agr. Res. 14, 742-754.

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