

STABILITY PARAMETERS FOR POD YIELD IN  
PEANUT (ARACHIS HYPOGAEA, L.)

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ABSTRACT

Twelve promising varieties of groundnut (Arachis hypogaea L.) were evaluated for stability of performance for pod yield over nine environments in Egypt. Highly significant coefficient was detected for genotype and genotype x environment interaction. Significant bi values were obtained for all genotypes and the slope of the regression lines did not deviate significantly from unity in the varieties L 404, L 447, NA 128, NA 219, NA 297 and NA 299. The deviation from regression mean squares ( $S^2_{di}$ ) were significant for NA 128, NA 219, NA 242 and Giza 4. The highest yielding genotypes were, L 447, NA 268, Giza 4 and L 262. The variety L 447 had average stability and high level of performance for pod yield and hence it seemed to be an ideal variety in the material under study.

INTRODUCTION

The development of peanut varieties that are high-yielding and relatively stable when grown in different environments is of fundamental importance to commercial peanut production.

The interpretation of observed interactions between genotypes and the environments has been discussed on numerous occasions. Several authors including Yates & Cochran (1939), Finlay & Wilkinson (1963); Eberhart & Russell (1966); Tai (1971) and others have proposed that where a number of genotypes it should be regressed on the mean yield overall genotypes in each environment.

The present investigation was planned to study the stability parameters of pod yield in twelve genotypes of groundnut.