

**Genotype-Environment Interaction in Soybean:
1- Effects on vegetative and reproductive durations.**

By

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Abstract: The present investigation was designed to study the effect of late planting date on some characters of different soybean genotypes. Delaying planting of soybean after June 15 did not favour vegetative, reproductive durations and seed filling rate, however, it hastens maturity. Proportion of reproductive duration was greater at delaying planting after June 15. Differences among genotypes within and between maturity groups were significant for all the studied traits. Combined analysis of variance revealed presence of genotype-environment interactions for all characters except that of cultivar X year (C x Y) for vegetative duration and cultivar X planting date X year (C x D x Y) for days to maturity and filling rate. Variance component of genotype X planting date interaction (σ^2_{gd}) was larger and dominated the other interactions for vegetative duration, days to maturity, and seed filling rate. Genetic variance (σ^2_g) was two third of the variance of σ^2_{gd} for vegetative period and twice the value of (σ^2_{gd}) for reproductive duration and seed filling rate. Genetic variance (σ^2_g) was dominated and more important for proportion of reproductive duration. Heritability estimates on plot basis was low for reproductive duration and moderate for vegetative duration, filling rate, and proportion of reproductive duration. Heritability estimated on an entry-mean basis was high for most of the studied traits.