

عنوان مقاله:

(Effects of Plant Population Density on Yield and Yield Components of Eight Isolines of cv. Clark (Glycine max L

محل انتشار:

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خلاصه مقاله:

A field study was conducted to evaluate the agronomic response of eight isolines of cv. Clark on a clay loam soil (at Karaj-Iran, ۳۵°۴۸') to four plant population densities of ۱۱.۳, ۱۸.۵, ۶۸.۵, and ۱۰۳.۴ plants per square metre. Significant yield increase was obtained as a result of higher plant density. Differences among the cv. Clark isolines were significant ($p < 0.05$). Yield components such as numbers of branches, pods, and seeds per plant decreased linearly as population density increased. Adjustments in pods and seeds per plant resulted from altered branches per plant. The isolines which exhibit profuse branching (e.g. E1E2E3, E1E2E3, E1E2 e3) were capable of optimising yield when planted at low densities. The second dynamic factor that aided yield compensation by plant population density was greater total dry matter partitioning, which resulted in a significantly greater harvest index at the lower compared with the higher plant density. The results indicated that total biomass and crop growth rate were the major elements explaining the reduced yield compensation factors at higher plant population density. Plotting the fitted seed yield values against the number of dominant alleles showed the effect of the maturity genes on the response of seed yield to plant density.

کلمات کلیدی:

Dry matter partitioning, Branching, Harvest index, Soyabean

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