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YIELD ATTRIBUTES AND HERITABILITY IN GREEN GRAM
(*PHASEGLUS AUREUS* ROXB.)

Phenotypic variability and heritable component of variability were estimated with the help of genetic parameters in 15 varieties (5 parents and 10 hybrids) grown in a randomized block design with 3 replications during 1976—1977 in the Department of Agricultural Botany, College of Agriculture, Vellayani, Trivandrum. Observations on 10 characters were made on 5 plants selected at random in each plot. A wide range of variation was noticed in respect of all the characters studied. Data are given in Table 1. High genetic advance and high heritability associated with the characters like number of leaves, number of branches, number of pods and grain yield indicate the role of additive gene action and offer a good scope for selection on the basis of these traits. Other characters viz. height, length of pod, days to flowering etc. showed a low genetic advance and high heritability. Similar findings were made by Veeraswamy *et al.* (1973) in green gram. Johnson

Table 1 Range, general mean, Phenotypic variance, Genotypic variance, heritability and Genetic advance on various characters in green gram

| Characters | Range | General mean | Phenotypic variance (VP) | Genotypic variance (VG) | Heritability % (h^2) | Genetic advance as percentage of means (Best 5% of the values) |
|-------------------------|-------------|--------------|--------------------------|-------------------------|--------------------------|--|
| Height of plants (cm) | 29.43—45.04 | 35.69 | 34.70 | 14.97 | 43.14 | 14.67 |
| Number of leaves | 4.87—12.40 | 8.45 | 4.82 | 3.33 | 69.18 | 36.99 |
| Number of branches | 1.40—3.47 | 2.46 | 0.70 | 0.38 | 54.29 | 38.02 |
| Number of clusters | 4.33—10.73 | 7.13 | 8.56 | 2.74 | 32.00 | 27.05 |
| Number of pods | 11.67—23.60 | 16.57 | 17.48 | 9.95 | 56.92 | 29.58 |
| Pod length (cm) | 7.48—11.92 | 9.40 | 2.89 | 1.38 | 47.75 | 17.79 |
| Number of seeds/pod | 10.40—14.73 | 12.19 | 1.69 | 1.01 | 59.75 | 13.13 |
| Hundred seed weight (g) | 4.40—7.36 | 5.38 | 0.70 | 0.50 | 71.43 | 22.97 |
| Grain yield (g) | 7.56—20.32 | 14.88 | 16.36 | 12.83 | 78.38 | 43.95 |
| Days to flowering | 31.80—41.07 | 37.53 | 9.50 | 6.84 | 72.00 | 12.51 |

et al. (1953) suggested that heritability (h^2) value alone was not an ideal criterion for predicting the resultant effect of selecting the best individual. The heritability estimate is useful only when the heritable variate is accompanied by high genetic advance. The results of the study indicate that while selecting the parents for the improvement of green gram due emphasis has to be given for number of leaves, number of branches, number of pods and grain yield.

സംഗ്രഹം

ചെറുപയറിന്റെ വിളവ് വർദ്ധിപ്പിക്കുന്നതിനായി കൂടുതൽ ഇലകൾ, കവരങ്ങൾ, കായ്കൾ എന്നിവ നൽകാൻ കഴിവുള്ള മാതൃപിതൃ ഇനങ്ങളെ തിരഞ്ഞെടുക്കുന്നതായിരിക്കും ഉത്തമമെന്ന് ചെറുപയറിന്റെ ജീനരൂപം, പ്രകടരൂപം മുതലായവയിലുള്ള പരിവർത്തനശീലതയെ ആസ്പദമാക്കി നടത്തിയ പരീക്ഷണങ്ങൾ തെളിയിച്ചു.

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