

BREEDING STUDIES ON YARD—LONG BEAN
***VIGNA SESQUIPEDALIS* (L.) FRUW**

S. Aathiththan, K. Theivendirarajah,
(Dept. of Botany, University of Jaffna)

and P. Ganashan
*(Agricultural Regional Research Station,
Karadian Aru, Batticaloa)*

The native popular varieties of yard-long bean 'Hawari' and 'Polong' were characterised and hybridized. Of the reciprocal crosses, the hybrid progeny obtained from the cross Polong X Hawari was promising and showed hybrid vigour. The F_2 progeny raised gave rise to various combinations of segregants. The study made in the F_2 population revealed that the characters seed colour, flower colour and pigmentation on pod were of single gene inheritance. Black colour of seed, purple colour of flower, and streaked nature of pods were found to be dominant over white colour of seed with black patches, yellow colour of flower and non-streaked nature of pod respectively. The variation in the pod length, weight and fleshiness observed in F_2 indicated that these characters were controlled by additive gene action.

The pedigree method of selection was followed and the individual plants were selected on the basis of the following agronomic aspects: early flowering, length, weight and fleshiness of pod, number of seeds per pod, number of pods per plant, plant with short internode, number of pods per peduncle, yield efficiency and reaction to pests, viral, bacterial and fungal diseases.

Progeny testing and further selection and purification were done with 68 selected segregants of F_2 . In the third generation, a few of these lines were promising for agronomic characteristics. The results of this investigation reveal that there will be more chances of obtaining promising breeding lines of yard-long bean with good combinations of economic qualities.

Financial support from Natural Resources, Energy and Science Authority of Sri Lanka (RGB/81/13) is acknowledged.