

Variabilities in luffa variety LA33

The Luffa variety LA 33 released by the Department of Agriculture is cultivated as one of the local vegetables. It belongs to the genus *Luffa acutangula* and is heterozygotic in nature. Although it is naturally cross pollinated it remains homogenous in the early vegetative phase. Once the reproductive phase sets in , the phenotypes begin to exhibit heterogeneity in the external morphological characters.

Since variabilities tend to lower the pod uniformity and finally the market value of Luffa, a study was undertaken to reduce the undesirable variabilities. In an observational study during year 1999 and in a multi- locational trial during 1999/2000 at Kalpitiya, Tabowa, Wariyapola, Makandura and Inginimitiya the pod characters were found to exhibit very high variabilities.

The pod condition described as bottle shape was genetic and this character was suspected to have a linkage with seed yield. The environmental influence on the thick neck condition and goose-neck condition was significant. The lowest variability was with the number of ridges per pod and it was easy to eliminate it by recurrent selection. The environmental influence on the length and diameter of pod was also significant. However, selection for a particular range of these characters appeared to show promise. Hence selection in this direction will be continued for maintaining the required pod qualities.

The expected reduction in heterozygosity with the elimination of the undesirable characters may result in reduction in the number of useful genes which are linked. A long-term study of each population from selection will enable us to consider preservation of certain linked characters in LA33.