

ABSTRACT

The study " Selection and Propagation of Ackee, *Blighia sapida*" was aimed at the establishment of the principles for improving the ackee crop by the achievement of the following objectives:

i. The identification and categorisation of variability in local ackee germplasm.

ii. The selection of a cultivar acceptable to the ackee processing industry and fresh fruit consumers.

iii. The assessment of the methods by which the ackee can be propagated vegetatively.

Emphasis was placed on the variability of ackee germplasm expressed in terms of flowering, yield and fruit quality.

The results of the study allowed a more accurate estimation of ackee yield measured in total number of fruits per annum and overall weight of fruit and aril tissue.

The mean yield of ackee is 882 fruits per tree per annum, produced in two main harvesting periods. Yields range from 186 to 3188 fruits per tree per annum however. Extrapolation of yield data, the results of fresh and dry weight analysis of fruit and population estimates indicate that yield of ackee aril tissue in Jamaica is 2,758,490 kg per annum.

A more accurate description of the male and hermaphrodite flowers as well as a more definitive distinction between the two types of flowers have resulted from the study. The variation in proportions of hermaphrodite and male flowers with each flush of flowering was determined and it was observed that, over the fifty-two week period, the overall mean of the two types of flowers was 67% hermaphrodite flowers and 33% male flowers.

The rooting of stem cuttings was found to be the most efficient method of vegetative propagation, and the experimental results confirm the cardinal rule of Garner et al. (1976) that "....not only must a cutting be alive when collected, but thereafter it must be kept alive while it is becoming a complete entity capable of fending for itself". The observance of this rule appears to be of greater importance

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than the use of rooting hormones as stem cuttings, which were not treated with hormones, rooted readily under the required environmental conditions, and gave results better than many of those treated with hormones.