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**A STUDY ON THE VIGOUR OF DIFFERENT SEED TYPES OF  
COBS AND THE PERFORMANCE OF THEIR PLANT  
POPULATION IN MAIZE (Zea may L.)**

BY

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## ABSTRACT

An experiment to identify the most suitable kind of seed of maize (*Zea mays* L.) cob to use as planting seeds, was carried out during the period from April, to August, 1993 at the Agricultural Farm of the Eastern University, Chenkalady; located in the Eastern region of Sri Lanka.

The three kinds of seed used were extracted from apical, middle and bottom portions of the cob, and planted in a Randomized Complete Block Design (RCBD) with seven replications. The experiment was managed under the recommended cultural practices.

The data collection commenced and measurements as well as observations were made on date to 100% tasselling and 100% silking, plant height at 100% tasselling and 100% silking, weight of cob, length of cob, 1000 seed weight, germination % in cold test as well as germination test and seed yield. The data were subjected to statistical analysis.

Correlation analysis showed a significant association and positive relationship of days to 100% tasselling with yield and length of cob; plant height at 100% silking with plant height at 100% tasselling; 1000 seed weight with length of cob and germination percentage as well as germination test in cold test (vigour) with yield.

The population of maize raised from seeds of middle cobs showed significantly better values in cob length, Thousand seed weight and seed yield, compared to the corresponding values for population from apical or bottom cobs or both.

Considering the data on all the plant characters as well as yield and yield component of the plant populations raised from the three kinds of seed lots, it is possible to reveal that the seeds from the middle portion of cobs would be able to produce plant population of high early vigour and seed yield and large cobs with big seeds.

Further more, it could be said from the data that perhaps, the plant come into tasselling early may produce long cobs and high yields. Infact, it is also possible to elucidate that plants from high vigour seeds have the potential for high yields.

By and large seeds from the middle portion of the cobs are the most suitable to use as planting seeds, in order to realise the maximum yield in maize.

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