CHARACTERIZATION AND PRELIMINARY EVALUATION OF INDIGENOUS MAIZE (ZEA MAYS L.).

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Twenty five quantitative characters and seven qualitative characters were studied in 30 accessions of maize with the objective of characterising the selected accessions. Twenty five of these were collected from various parts of Sri Lanka, and five were introductions from Indonesia, Thailand and Nigeria. Bhadra 1, a recommended variety, was used as the standard check variety.

The experiment was conducted in unreplicated plots at Plant Genetic Resources Centre, Gannoruwa during Maha 1990/91. Distinct differences were observed among the accessions for the characters studied.

High variability was observed for number of tassel branches, plant height and ear height (cv>20). Variability was moderately high for days to silking, days to tasselling, total number of leaves, leaves above the ear, ear length, ear weight, grain weight per ear and 100 seed weight, (cv=10-20). Variability was low for length of the ear leaf, width of the ear leaf, ear diameter, grain length, grain width and grain thickness (cv<10).

Most of the locally collected accessions were found to be tall and late maturing. Plant height showed a high positive correlation with total no of leaves (r=.89), days to silking (r = .94) and stalk lodging (r= . 83) indicating taller plants are late maturing and susceptible to stalk lodging.

Yield per plant showed no correlation with days to silking but exhibited moderately high correlation (r= .44) with plant height and high correlation with 100 seed weight (r= .72). The grouping of accessions with cluster analysis was attempted.

The following accessions R 5099, R 5106 (Local Collection); 5012, 1368 (Inbred lines); check variety Bhadra 1 are found to be promising accessions.