B-43 : SEX DETERMINATION OF PAPAYA USING ISOZYMES

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An attempt was made to predict the sex of papaya at the early seedling stage using isozyme analysis without waiting until the reproductive stage.

Tender leaf samples obtained from the sex types --male, female and hermaphrodite-- from 8 different locations of the suburbs of Kandy were subjected to starch gel electrophoresis. Two types of papaya samples were employed. The first was tender leaves of mature trees of 4 sex types from 8 locations. The second was immature leaves from one week old seedlings germinated from the seeds of female and hermaphrodite fruits.

Four enzyme systems, MDH, DIA, ACP & EST(UV) were investigated. A single band was seen in ACP. Two bands were observed with MDH and EST(UV). Even though a faint band could be seen the resolution with DIA for all samples was not satisfactory.

Since no variation was found either from different locations or from different fruit types, it was not possible to predict sexes with the 4 enzyme systems studied.