

GROWTH AND YIELD OF COMMERCIAL HYBRID MAIZE (*Zea mays* L.) VARIETIES UNDER DRY ZONE RAINFED CONDITIONS

A.E.Rathnayaka¹, M.A.P.W.K.Malaviarachchi² and N. Senanayaka¹

¹*Department of Plant Sciences, Faculty of Agriculture, Rajarata University of Sri Lanka, Puliyankulama, Anuradhapura, Sri Lanka.*

²*Field Crops Research and Development Institute, Mahailuppallama, Sri Lanka.*

Maize (*Zea mays* L.) is an important cereal crop in Sri Lanka. In response to increasing demand for maize for food and feed industry the extent cultivated with hybrid varieties has been raising over the past though most of the exotic varieties grown are not been tested for their adaptability.

A study was undertaken at the Field Crops Research and Development Institute, Mahailuppallama during maha 2009/2010 season to identify hybrid maize varieties for the dry zone rain fed conditions. Six exotic varieties were tested against Sampath (local hybrid) and Ruwan (Open pollinated Variety) in a Randomized Complete Block Design with three replicates.

Result revealed that the number of cobs per plant was significantly higher in liberty 777. Jumbo and NK-48 gave the highest yield (6.2433 t/ha and 6.1800t/ha respectively) compared to Sampath and Ruwan. The cob diameter was significantly higher in NK- 48 and Jumbo, though lowest cob diameter was recorded from Pacific 984 and Liberty 777. Highest cob length was recorded by Jambo. Pacific 984 and Liberty 777 were significantly delayed to reach 50% flowering. LAI at 50% flowering did not show significant differences though at maturity Jumbo and NK-48 recorded a higher LAI compared to all other varieties.

Jumbo and NK- 48 had yield advantage over others under rain fed farming. However, this study should be repeated and data from multi location trials should be taken into account to reach a firm conclusion.

Key words: Hybrid maize, Rain fed environment, Dry zone, LAI