

## Development of a cherry type tomato variety through induced mutation

Ranjani Peiris\* and T K Wickremesinghe

*Horticultural Crop Research and Development Institute (HORDI), Gannoruwa, Peradeniya*

Tomato (*Lycopersicon esculentum* Mill) is one of the most important vegetables grown in Sri Lanka. Recently, the demand for tomato has tremendously increased due to its attractive market price. At present, the producers and consumers are much concerned about the quality of the fruits. The use of induced mutations is a potential tool to create genetic variability in tomato crop improvement programmes. Therefore, the present study was aimed at creating genetic variability by the use of induced mutations in Manik variety, which has poor fruit quality characters. The research was carried out from 1996-1999 at the Horticultural Crop Research and Development Institute (HORDI), Gannoruwa.

The seeds of the Manik variety were treated with 320Gy gamma rays from  $^{60}\text{Co}$  source. Generations from  $M_1$ - $M_4$  were established and evaluated. In  $M_2$  generation, an attractive cherry type mutant was identified among the other mutants. The fruit is pear shaped, small, weighing 7 g/fruit, dark red in colour. It fetched a higher price than the normal tomato varieties. The Bacterial Wilt (BW) screening studies in the laboratory revealed that it is moderately resistant to BW. In  $M_3$  generation it was found out that M 65-1 is a true breeding mutant. The yield evaluation studies in  $M_4$  generation using Complete Randomized Block Design with the check variety T 245 showed that it has

a yield potential of 17 t/ha. The fruit quality of the cherry variety M 65-1 was very much different in shape, and colour and improved from the original variety Manik which has irregular shape, non-attractive colour and large locular cavities. This is a potential variety suitable for super market consumers and the hotel industry.