B – 28

Effect of polythene rain-shelter on *Lycopersicon lycopersicum* (L.) Karsten [Tomato] yield and fruil quality under dry zone condition

Many cultivars of tomato [Lycopersicon lycopersicum (l.) Karsten] can be grown satisfactorily during Maha season in the dry zone. But marketable fruit yield are generally low due to various factor such as excessive rainfall, high relative humidity (Rh) and fruit diseases etc.

Excessive rainfall may adversely affect the fruit setting by washing off the pollens and may severely affect the fruit quality by inducing fruit cracking and other fruit diseases. High Rh affects pollen dispersal and often causes heavy losses in yield due to foliar diseases. Many experiments have shown that translucent plastic covers can enocourage plant growth, by reducing the heavy rains, wind or excessive sunshine.
An experiment was conducted during 1996/97 Maha season at Field Crops Research and Development Institute, Maha Illuppallama to find out the possibilities of increasing the tomato yield and quality by avoiding direct raindrops. The treatments consisted of three cultivars of tomato (KWR, T -245 and B – 13) polythene rain shelter and the control. Split-plot design was adopted with three replicates accommodating six experimental units in each. Results showed that, flowers senescence was significantly lower and fruit setting was higher under rain-shelter crop than the control. Compared to varieties KWR and T – 245, variety B -13 gave the highest number of undamaged fruits under rain-shelter. Thus there may be a possibility to increase tomato fruit yield and

quality by improving the growing environment using polythene rain-shelters. However, futher investigations are needed to draw firm conclusions.