EVALUATION OF BITTER GOURD F $_1$HYBRID VARIETIES IN MID COUNTRY WET ZONE

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Bitter gourd *(Momordica charantia)* is a popular vegetable due to its medicinal value and wide cultivation in Sri Lanka. In this context, identification of high yielding varieties with desirable qualities is a timely need to fulfill the local demand. Introduction of new varieties may affect the farmers adversely. This study was carried out to evaluate the adaptability of twelve new exotic hybrid varieties and two locally developed varieties of bitter gourd. Department of Agriculture recommended two varieties namely, Thinnaweli White and Matale Green were used for the experiment and Matale Green employed as the control. The experiment was arranged in a Randomized Complete Block Design (RCBD) with three replicates in the Horticultural Crops Research and Development Institute at Gannoruwa during 2012/2013 *Maha* season. Uniformity, pest and disease resistance, earliness, yield parameters, fruit quality and shelf life were the characters recorded. Days to 50% male and female flowering were significantly different among varieties at $p<0.05$. Generally 50% female flowering was observed 3-11 days later than male. Local F_1 hybrid T- 16, recorded the highest total fruit yield of 14.78 t ha^{-1}, while the lowest was 5.48 t ha^{-1} by exotic hybrid variety, Nimali. Pest damages were controlled with regular application of pesticides; however disease severity was varied widely. Local F_1hybrid T- 16, performed better than tested exotic varieties. Study revealed that adaptability testing of exotic varieties is essential before introduction to the farmers.

Key words: Bitter gourd, Exotic hybrid, Fruit yield