Annals of the Sri Lanka Department of Agriculture. 2005. 7: 393-394.

RESEARCH NEWS

A LOCAL TOMATO HYBRID OUT-PERFORMS THE EXOTIC HYBRID VARIETIES

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Tomato (*Lycopersicon esculentum* Mill.), one of the most important vegetable crops in Sri Lanka, is preferred by farmers due to the high economic returns, export potential and nutritious value. During the past ten years, the cultivated extent of tomato has increased from 4244 to 5936 ha. Many foreign tomato hybrids are available in the market and farmers prefer to grow them with the intention of getting high yields and income. However, many farmers have reported that cultivation of these exotic hybrids poses several problems, among which, high infestation of pests and diseases, especially bacterial wilt (BW) and curly top virus and high cost of seeds, are of particular significance. Investigations were carried out at Gannoruwa during 2003-2004 planting season to test the adaptability and performance of exotic tomato hybrids available in the mid country region, along with a local hybrid.

Nine hybrids (Alamra, Ninja, S-901, Gorden, Pomodoro, Sonata-21, Mission 102, Red boy, Heat Master) along with a locally developed hybrid (HF-01) were evaluated in 2.4 x 3.5m plots with three replicates arranged in a Randomized Complete Block Design. The spacing was 80cm between rows and 50cm between plants. All cultural practices were followed as per recommendations of the Department of Agriculture. Data were collected on horticultural traits, fruit quality and yield components and were subjected to statistical analysis. Laboratory screening of the hybrids for bacterial wilt (BW) disease was done by arranging the treatments in a Completely Randomized Design with ten replications. Stem and root inoculation method using Marglobe as susceptible variety was adopted during the screening procedure. The locally developed HF-01 gave a significantly higher yield (>50 t/ha) over all the exotic hybrids. The hybrids Pomodoro and Alambra were highly affected with BW and curly top virus during the crop growth period and as a result, no marketable yield was recorded. The relatively low yields of exotic hybrids observed in this study were mainly due to BW disease. Except Red Boy hybrid, all the other exotic hybrids showed a reaction of moderately susceptible to susceptible in BW screening studies. The hybrids Red Boy and HF-01 gave a reaction of moderate resistance to BW. The fruit shape of most of the hybrids was slightly flattened while mean fruit weight of Ninja, Heat Master and HF-01 exceeded 100g. In general, the overall

performance of the locally developed hybrid, HF-01 was better than those of the exotic hybrids.

This study revealed that growing exotic hybrids of tomato in a large extent in the open field requires some prior knowledge on the performance and adaptability of individual exotic hybrids for a successful and profitable tomato cultivation.