

RESEARCH NEWS

HF 02-A PROMISING TOMATO HYBRID WITH BACTERIAL WILT RESISTANCE AND GOOD FRUIT QUALITY CHARACTERS

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Tomato (*Lycopersicon esculentum* Mill) is one of the most important Solanaceous vegetables cultivated in Sri Lanka. At present many exotic tomato hybrids are available in the market and farmers tend to purchase them and cultivate with the intention of obtaining high yields and income. However, farmers face many problems such as high infestation of diseases especially bacterial wilt and curly top virus, high seed cost and high cost of cultivation. Therefore, keeping in this view, tomato hybrid varietal development programme was initiated at the Horticultural Crops Research and Development Institute, Gannoruwa, Peradeniya in 1999.

Several cross combinations using ten promising donor parents were performed and one hybrid originating from a single cross was found to be very promising. The yield evaluation studies of this hybrid in Randomized Complete Block Design with three replications using seven exotic hybrids Red boy, Sonata, S 901, 03719, Ninja, Gordon F₁, Pomodoro and two check varieties Maheshi (local hybrid variety), Rajitha (open pollinated variety) were conducted at Gannoruwa during dry and wet seasons in 2001. The highest yield was obtained from HF 02 and it was followed by Maheshi. HF 02 is an indeterminate type variety whereas Maheshi hybrid is a determinate type variety. The yield of the tested varieties ranged 67.2-19.3 t/ha. The hybrid HF 02 consistently gave significantly higher yields (64.2 t/ha) than all the tested varieties. The laboratory and field screening tests revealed that it is resistant to Bacterial wilt disease. The hybrid variety HF 02 was tested with seven exotic hybrid varieties along with check varieties Maheshi (hybrid variety) and Thilina (open pollinated variety) in National Coordinated Varietal Trials and Varietal Adaptability Trials in farmer fields. The results clearly showed that the hybrid HF 02 is a promising hybrid variety having an average yield potential (67.2 t/ha), bacterial wilt resistance and good fruit quality characters. The consumer preference of this variety is very high due to the dark red fruit colour, shiny appearance, and thick pericarp (9 mm thickness), long shelf life period (three weeks) and non cracking nature of fruits. The weight of the fruit is about 75 g and it has high round shape and in the market it fetches Rs.5-10/kg more than the other tomato varieties. HF 02 has already qualified in the Distinctness Uniformity Stability test. The hybrid variety HF 02 is a potential candidate for varietal release in near future.