

New environmental friendly initiatives in the production of Melomas (*Citrus grandis*) in Kuala Kangsar, Perak, Malaysia

Abstract

'Melomas', a new pomelo clone (*Citrus grandis*) was introduced to the public in 1998 by MARDI. Several pilot projects involving the planting of Melomas were conducted to further promote this pomelo clone. One of these projects was conducted in Stesen MARDI Kuala Kangsar, Perak and as a result, healthy and vigorous pomelo trees were grown. In 2007, the pomelo trees managed to produce an abundance of flowers, but surprisingly the fruit setting had died and almost no harvesting was done. A very low harvest was reported due to an occurrence of fungus in numerous locations in Northern Perak in 2007 and 2008. A study was conducted beginning from January 2007 to December 2011 to tackle this phenomenon. It was noticed that every flowering season coincided with high daily rainfalls. The relatively high humid conditions had increased the incidence of Anthracnose infection that caused the young flower bud to die and undeveloped fruit sets to drop unattainably. The heavy rainfall severely prolongs raindrop smears on the flower fruit set. Almost every Melomas grower faced the same predicament. This case study was designed to intervene and stop the causal fungus infection brought by the rain. Transparent plastic covers (TPC) were introduced to prevent raindrops from continuously smearing the flower bunch. It was stapled onto the branch above the bunch of flowers to form a small half cylinder plastic roofing that prevents the raindrop falling onto the small fruits. To tackle the problem, a series of workshops and technology transfer seminars were arranged for the Melomas growers by the MARDI extension personnel. The results showed that the manipulation of the microenvironment around the flowers had helped the grower to recover and eventually increase the Melomas yield. It was observed that this low-cost technique had significantly increased the number of Melomas fruit sets as opposed to the control treatment (without plastic covers). This technique had been practiced by local pomelo farmers in Padang Rengas, spanning over an area of 35 ha and it is being practiced in a pilot project at MARDI Kuala Kangsar. It has a proven 85% success rate and has been reported to significantly boost the productivity in the area.

Keyword: Pomelo flower; Manipulation of microenvironment; Technology transfer; Farmers