

Thanchanita Chankrachang 2012: Effects of Paclobutrazol on Flowering and Fruit Set and Effects of Gibberellin on Fruit Quality of Marian Plum (*Bouea burmanica* Griff.) cv. Toon Klaow. Master of Science (Horticulture), Major Field: Horticulture, Department of Horticulture. Thesis Advisor: Associate Professor Chalongchai Babpraserth, BSc.Agr. 60 pages.

The study on the effects of paclobutrazol on flowering, fruit set and fruit quality of 10-year-old 'Toon Klaow' marian plum (*Bouea burmanica* Griff.) were conducted at La Ong Far 2 orchard, Sarika subdistrict, Muang district, Nakhon Nayok province during September 2010 – April 2011. At the mature leaves period, paclobutrazol at the concentration at 0, 1, 1.5 and 2 g/l m canopy diameter were applied by soil drench. For other treatments, paclobutrazol at a concentration of 0, 1500, 2000, 2500 and 3000 ppm were applied by foliar sprayed. The result showed that the blooming period of marian plum were occurred at 89 days after the two application methods. The soil drench treatment had shorter inflorescence than the control, whereas foliar sprayed one did not significantly affected inflorescence length. Eight weeks after anthesis, both of the two method of paclobutrazol application had significant higher the number of fruits/inflorescence than the control. The both methods not differences in any treatment of Fruit weight, fruit size, seed weight, seed size, percent recovery, fruit color, fruit firmness, total soluble solids (TSS), titratable acidity (TA) and TSS/TA.

The study on the effects of gibberellin on fruit quality of 'Toon Klaow' marian plum. Six treatments, gibberellin at a concentration of 0, 10, 20, 30, 40 and 50 ppm were applied by foliar sprayed at the 4 weeks after full bloom. The result showed that the fruit weight, fruit size, seed weight, seed length, percent recovery increased at higher concentrations. L* and a* increased at higher concentrations. Whereas decrease TSS/TA at higher concentrations. Not differences in any treatment of b*, seed width, fruit firmness, TSS and TA.

Student's signature

Thesis Advisor's signature