

Thesis Title Uses of Honey Bee (*Apis mellifera* L.) and Stingless Bee (*Trigona laeviceps* Smith) in Pollination to Increase the Production of Strawberry (*Fragaria x ananassa* Duch.) Cultivar 329

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Abstract

Efficient pollinators for increasing production of strawberry (*Fragaria x ananassa* Duch.) cultivar 329 were investigated. Pollination by honey bee (*Apis mellifera* L.) and stingless bee (*Trigona laeviceps* Smith) for three days during the full blooming period in netted cage were compared to pollination by stingless bee (*Trigona apicalis*) in opened field and to self-pollination in netted cage at the commercial strawberry garden at Aomlong, Tambon MaeSap, Amphur Sameang, Chiang Mai Province. Twenty-eight days at harvesting time, pollination by the honey bee yielded strawberry fruits of 15.39 g/tree, yield increased by 74.49% and production of well-formed true to type fruits increased by 55%. Pollination by stingless bee (*T. apicalis*) yielded strawberry fruits of 11.83 g/tree, yield increased by 31.30% and production of well-formed true to type fruits increased by 48.33%. Pollination by stingless bee (*T. laeviceps*) yielded strawberry fruits of 10.68 g/tree, yield increased by 23.44% and production of well-formed true to type fruits increased by 48.33%. The self-pollination in netted cage yielded strawberry fruits of 8.82 g/tree, and the de-formed fruits obtained were as high as 56.67%. The results suggested that honey bee (*Apis mellifera* L.) stingless bees (*T. laeviceps* and *T. apicalis*) significantly help increasing both quantity and quality of strawberry fruits as compared to the pollination without insects.