

Survey for Mango Seed Weevils and Pulp Weevil *Sternochetus* Species (Coleoptera:Curculionidae) on Mango, *Mangifera indica* in Shan State- South, Myanmar

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Abstract : Detection survey of mango seed and Pulp weevils was undertaken at major mango production areas, Yat Sauk, Taunggyi, Nyaung Shwe and Hopong Townships, in Shan State (South) of Myanmar on two mango cultivars of Sein Ta Lone and Yinkwe from May to August 2016 to coincide with fruiting season to conduct a survey of mango seed and pulp weevils population. The total numbers of 6300 fruits of both mango cultivars were sampled. Among them, 2900 fruits from 5674 fruit bearing plants were collected for Sein Ta Lone cultivar of five well managed, one unmanaged orchards and Urban in Yatsauk Township, 400 fruits from only one well managed orchard in Taunggyi Township, 400 fruits from two managed orchards in Nyaung Shwe Township and 400 fruits from one managed orchard in Hopong Township from May to June. 2200 fruits were collected from 4043 fruit bearing plants for Yinkwe Cultivar of four well managed orchards, one unmanaged orchards and one wild tree only in Yat Sauk Township from July to August, 2016. Fruit sample size was 200 fruits /orchard, / wild or /volunteer trees as minimum number. The pulps of all randomly sampling fruits were longitudinal cut open into three slices on each side of fruit and seed were cut longitudinally to inspect the presence of mango weevils. The collected weevils were identified up to species level at Plant Quarantine Laboratory, Plant Protection Division, Department of Agriculture, Ministry of Agriculture, Livestock and Irrigation, Yangon, Myanmar. Mango Pulp and Seed weevils were found on Sein Ta Lone Mango Cultivar in three out of four surveyed Townships except Hopong with the level of infestation ranged from 0.0% to 3.5% of fruits per Township with 0.0% to 39.0% of fruits per orchard. The highest infestation rate per township was 3.5% of fruits (n=400 fruits) in Nyaung Shwe, then, at Yat Sauk, the rate was 2.47% (n=2900 fruits). A well-managed orchard at Taung Gyi had 0.75% (n=400 fruits) whereas Hopong was free 0.0% (n=400). The weevils were also recorded on Yinkwe Mango Cultivar in Yatsauk Township where the infestation level was 12.63% of fruits (n=2200) with 0.0% to 67.0% of fruits per orchard. This high level of infestation was obtained by including an absolutely non Integrated Pest Management (non IPM) orchards in both survey with the infestation rates 63.0% of fruits (n=200) and 67.0% of fruits (n=200) respectively on Yinkwe cultivar. Two different species; mango pulp weevil, *Sternochetus frigitus*, and mango seed weevil *Sternochetus olivieri* (Faust) of family Curculionidae under the order Coleoptera were recorded. *Sternochetus mangiferae* was not found during these surveys. Three different developmental stages of mango seed and pulp weevils: larva, pupa and adult were first detected since the first survey in 3rd week of May and mostly were recorded as adult stages in the following surveys in June, July and August. The number of Mango pulp weevil was statistically higher than that of mango seed weevils at $P < 0.001\%$. More precise surveys should be carried out national wide to detect the mango weevils.

Keywords : mango pulp weevil, *Sternochetus frigitus*, mango seed weevil *Sternochetus olivieri*, Faust, *Sternochetus mangiferae*, Fabricius, Sein Ta Lone, Yinkwe mango cultivars, Shan State (South) Myanmar

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