

Investigation on ecology and pesticide applications of Mango gall midge (*Procontarinia mangicola* (Shi))

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Abstract

Mango blossom feeder belongs to the Genus Diptera and in cecidomyiidae family. The female predominantly lay their eggs on young shoot and damage the leaves. It is a newly recorded pest on mango tree in Taiwan. When it reach peak population, hundreds of gall can be found on a leaf. It could seriously damage the growth and photosynthesis process of the plant. When larvae become mature, it jumped and buried pupae into the soil to pass low temperature winter. An experiment was conducted to investigate the effect of temperature on the larvae development. Under 20, 24, 28, 32°C and room temperature, the larvae stage were 12.1±0.3, 8.1±0.2, 7.2±0.3, 7.1±0.3 and 9.0±0.3 days respectively. The larvae growth rate correlated with the increase of the temperature. At pupae stage the results were: 7.3±0.2, 4.3±0.1, 4.3±0.2, 4.4±0.1 and 4.8±0.2 days respectively. The life span of the adults were 5.9±0.5, 3.2±0.3, 3.6±0.2, 3.1±0.3 and 3.5±0.5 days respectively. The results recorded on the degree of damage showed that: From January to March there was no larvae density recorded (0%). This might be due to low humidity and temperature. When relative humidity (RH) reach 84.5% it showed significant difference on larvae density as compare to 91% and 100% RH. The pesticide screen test revealed that the application of 2% Abamectin 1000 times had high potential of inhibit its damage to 81%.

Keywords : *Procontarinia mangicola* (Shi) 、 gall 、 ecology

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