

FIELD TRIAL TO TEST THE EFFICACY OF PREDATORY MITES TO CONTROL THRIPS IN BANANA (*MUSA* SPP. VARIETY 'CAVENDISH')

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Thrips is a major problem in banana plantations around the world. Damage symptoms, including red rust, corky scab, and oviposition damage, cause huge losses for the industry. Biological control with predatory mites has proven to be efficient in controlling thrips in other crops. As part of an integrated approach, biological control has the potential to reduce thrips populations without causing adverse effects such as increased resistance to chemical pesticides. Thrips specimen collected from a trial field in Vietnam was identified as *Thrips hawaiiensis*. The predatory mites *Amblyseius swirskii* and *Neioseius californicus* (family: Phytoseiidae) are both known thrips predators on a wide range of crops and climate regions. The predation capacity of the predatory mites, examined in a laboratory experiment, suggests *A. swirskii* as the more voracious predator with a feeding capacity of 16.65 first instar larvae/female/day, as compared to *N. californicus* at 3.10 larvae. *A. swirskii* also can feed on pollen collected from banana flowers and will even lay eggs given a pollen diet. In the field trial, different product formulations containing predatory mites are tested in the field for their ability to establish a population on the plant and its effect on the thrips population. No significant differences were found. However, the use of *A. swirskii* as a biological control agent for banana thrips remains promising.

Keywords: *Thrips hawaiiensis*, *Amblyseius swirskii*, *Neioseius californicus*, augmentative biological control, integrated pest management, predation capacity, scouting, monitoring