

The Efficacy of Check Mites strips, Apistan Strips, Pimento Oil, and Rosemary Oil for the Control of *Varroa jacobsoni* in Jamaica

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[Abstract]

Varroa jacobsoni was detected in Jamaica in 1999. That pest has destroyed some of the managed beehives, in addition to many of those in the wild. The efficacy of two essential oils (pimento oil and rosemary oil) and two commercial pesticides (Apistan® -10% Taufluvalinate and Check Mite® - 10% coumaphos), was tested for the control of Varroa mites. Twelve standard langstroth beehives were randomly treated with Apistan® strips, Check Mite® strips, Pimento Oil, and Rosemary Oil with the Oils separately, and in a 50% mixture of both oils and there was a control (no treatment). Apistan® strips and Check Mite® strips significantly reduced the Varroa mite population from adult honeybees and the worker brood within 28 days after application. Beehives treated with essential oils performed generally worst than the control and thus had more Varroa mites at the end of the 56 days. Essential oils (pimento oil, and rosemary oil, separately, and in a 50% mixture of both oils) were not effective in reducing the Varroa mite population over the 56 days of treatment. Rosemary had a negative impact on beehive performance as one hive became 'queenless' and died. Apistan® strips are still effective for the control of Varroa mites in Jamaica. Check® Mite can be added to the list of miticides tested and found to be effective in Jamaica. However, prior to its use, consideration should be given to the issue of residues in the hive products and the requirement(s) in target markets.