Who is looking after our entomological “canary” in the agrochemical coal mine?

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The honey bee is the major pollinator among a cadre of insects which perform the important function of pollination that provides us with much of our food supply. A current estimate is that the honey bee contributes food and services supporting $5.1 billion of primary production in New Zealand. The honey products we all enjoy are just a fraction of the value of pollination of fruits, flowers and nitrogen fixing clovers in agriculture that bees perform. Packages of New Zealand bees are regularly sent to North America to support their pollination industry. In New Zealand, the Varroa mite, accidentally introduced to New Zealand in 1990, has every beekeeper maintaining strict hive hygiene supplemented by the use of synthetic pyrethroids and organic compounds such as thymol and oxalic acid to keep the mite under control. Hives are also regularly inspected for American Foul Brood and other diseases. The in-hive regime is a stressor that amplifies any other stressor that is brought back to the hive by foragers as they harvest pollen and nectar from plants treated with systemic insecticides. Little notice seems to be given to the critical role that non-volatile pheromones of bees play in keeping a hive operating smoothly. An example will be given of the threat that a registered product that accumulates in crop pollens has on brood health in a beehive.