

Abstract

The study of honey bee selection for increasing pollination efficiency in peach and coffee on highland has following objectives; 1) to evaluate and select the potential honey bee for tree fruit pollination and fruit quality of peach and coffee, 2) to study beekeeping technology for highland bees for pollinating peach and coffee, and 3) to study the methods of harvesting and post-harvest management for quality honey. The study found that in the highlands in the area of the Wawee Royal Project Extension Area, peach in control plot had 47.18 percent of initial fruit set, which was not different from the peach in plot with Asian honey bee which had 44.10 percent, but it was higher than those in plot with European honey bee which had 8.48 percent. The coffee in plot with Asian honey bee had 41.27 percent fruit set, which was higher than that from the control plot and the plot with European honey bee, which had 24.39 and 13.32 percent fruit set, respectively. In the coffee plot of Mae Salong Royal Project Extension Area, the coffee in control plot, the plot with European honey bee, and the plot with Asian honey bee, the fruit set were not significantly different (53.68, 52.48, and 40.32 percent, respectively). Asian honey bees had flights in and out of bee hive the most in peach and coffee plots in Wawee Royal Project Extension Area. The result found that number of European honey bee flying into bee hive is about 10-800. The number of flying out of bee hive is about 10-700. When measuring the temperature and humidity, the temperature inside bee hive is between 22.3-29.5 degrees Celsius. The outside temperature of bee hive is between 22.4-28.9 degrees Celsius. The humidity in bee hive is between 48-91 percent and the outside is between 48-89 percent. When comparing the population of bees, it has a population of around 4-87 percent of the area of comb. The result found that number of Asian honey bee flying into bee hive is about 100-450. The number of flying out of bee hive is about 90-200. When measuring the temperature and humidity, the temperature inside bee hive is between 23.0-26.6 degrees Celsius. The outside temperature of bee hive is between 19.4-26.0 degrees Celsius. The humidity in bee hive is between 54-100 percent and the outside is between 51-93 percent. When comparing the population of bees, it has a population of around 36-55 percent of the area of comb. In the coffee plot of the Mae Salong Royal Project Extension Area. The result found that number of European honey bee flying into bee hive is about 10-350. The number of flying out of bee hive is about 10-290. When measuring the temperature and humidity, the temperature inside bee hive is between 22.8-26.4 degrees Celsius. The outside temperature of bee hive is between 20.0-25.0 degrees Celsius. The

humidity in bee hive is between 48-89 percent and the outside is between 48-86 percent. When comparing the population of bees, it has a population of around 15-69 percent of the area of comb. The result found that number of Asian honey bee flying into bee hive is about 30-200. The number of flying out of bee hive is about 20-120. When measuring the temperature and humidity, the temperature inside bee hive is between 23.2-29.0 degrees Celsius. The outside temperature of bee hive is between 23.99-27.79 degrees Celsius. The humidity in bee hive is between 53-90 percent and the outside is between 44-83 percent. When comparing the population of bees, it has a population of around 40-52 percent of the area of comb. In addition, the study of harvesting and post-harvest management of honey from peach and coffee plots of Wawee Royal Project Extension Area showed that Chemical and biological properties of honey passed the criteria by the Ministry of Public Health No. 211 (2000), which is considered good quality honey. And the type of honey pollen has been investigated. castanea, coffee, maize and macadamia are the main crops grown by farmers in that area. Assessment of satisfaction with tasting of honey found that the honey bees from the Wawee Asian honey bee has the highest total satisfaction rating.

