

## CAPITULO VIII

### SUMMARY

#### **EVALUATION OF ALCOHOL BAITS IN HANDMADE TRAPS TO MONITOR AND CONTROL A BEETLE SPECIES (*Hypothenemus hampei Ferrari*) IN ORGANIC COFFEE PRODUCTION IN THE ZONA DE INTAG**

The study described in this paper was carried out in the Zona de Intag, Imbabura Province, in order to find low-cost alternatives for monitoring and/or controlling the coffee beetle. The study was carried out on three coffee parcels, evaluating six types of alcohol baits using methanol/ethanol/cane liquor in different proportions. Traps made of disposable plastic cola bottles were used. Data was recorded on the number of adult coffee beetle captured using different baits and we performed a statistical study on the relationship between captures and the phenological state of the crop on the three parcels evaluated.

A design of Randomly Selected Blocks was applied, with six treatments and three repetitions, and Tukey significance tests at 5% in order to evaluate the mixtures of alcohol baits.

The traps with 1:1 methanol/cane liquor bait resulted in more captures in relation to the control trap without bait. The alcohol-based bait mixtures resulting in the greatest number of captures were as follows: Site 1 (Guagschic, 1,409 masl): 1:1 methanol/cane liquor, with 1,305 adult beetles captured in six months, followed by the 1:1:1 mixture of methanol/ethanol/cane liquor plus coffee cherry extract, which captured 1,239 adult beetles. At Site 2 (La Playa, 1,640 masl), the alcohol mixture resulting in the highest number of captures was the 1:1 methanol/ethanol mixture

with 196 adult beetles captured. No significant differences were observed in the number of beetles captured at Site 3 (La Esperanza, 1,851 masl).

It was determined that the greater numbers of adult beetles were captured during resting and flowering periods of coffee plants, primarily, because during this period there is no natural food available.

The use of this type of homemade trap is recommended more for diminishing the the number of beetles; the number captured during rest periods increases, thus contributing to a strategy of holistic management. This system of trapping, with different mixtures of alcohol baits of ethanol/methanol/cane liquor, represents an alternative for organic coffee producers in the Zona de Intag, for monitoring and diminishing the presence of pests.