# CAPITULO VIII

## SUMMARY

### "EFFECT OF THREE DOSES OF ACID LÁCTICO AND OXÁLICO MORE A COMBINATION OF THE TWO IN THE CONTROL POPULATION OF VARROA (Varroa jacobsoni Oudemans) IN APICULTURE"

In the country the apicultura, has developed in the last years of way very signifícant, due to the fact that our Country has diverse climatic fíats, where finds a big diversity of apícola that is taken advantage of by the bees, but this also has carried achieve several sanitary problems the introduction of pests and ülnesses in the hives between these the acaro "Varroa" (Varroa jacobsoni Oudemans) that today constitutes the enemy number One of the bees, since it produces mortality of the colmena, enjambrazón, is transmitter of virus and illnesses that to the dessert merman the life of the colonies of bees.

Low is problematic does necessary the use of alternative methods of control of this plague, considering like an alternative the use of organic acids, that allow us improve the fortress of the beehives, increase the production of The derived of the beehive, reduce the use of products highly toxic in the control of this plagues, and also us lead to the organic production, to guarantee the safety of the aliments.

The present investigation realized the apiarios of the sir Diego Túquerres situated in the parroquia Ayora cantón Cayámbe province of Pichincha; the aims posed were the following:

• Determine the efficiency of each one of the acids in study, in the control population of varroa adult.

• Determine the most effective dose of each one of the acids in the control population of larvae of varroa.

• Evalúate the fortress in the camera child of bees.

• Evalúate the survival of the larvae of bees.

• Determine the costs of application by treatment

For this effect use a design of blocks entirely at random with 10 treatments and three repetitions, having a total of 30 experimental unities, each unity was up by a core of bees.

The application of the acids, realized each 8 days and realized it during the 4 controls.

The variables to evalúate were the following: Population of the varroa adult, population of larvae of varroa, fortress in the camera child, increases population, survival a of the larvae of bees, costs of application by treatment.

• In the variable population of varroa adult the best treatment was the dose (Al + A2)D2 since it is this dose the one who least number of mites presents at the end of the investigation with an average of 2,75 varroas.

• In the variable population of larvae of varroa, presented a better control the treatments, A2D2 and (TI + T2) D3 with an average of 2,24  larvae of varroa, at the end of the investigation .

• In the evaluation of the survival of larvae of bees in this variable do not detect significant differences. Quantitatively there is a minimum increase of the survival

since to the start of the investigation began with an average 97,53 larvae of alive bees and increase to 99,33   larvae of alive bees.

In the variable concerning to the costs of application by treatment determine that AlDl, A1D2, A1D3 have a cost by application of 0,0124ctvs/cc, whereas for the treatments A2D1, A2D2, To2D3, have a cost by application of 0,0085ctvs/cc, and for the combinations, of (Al+A 2) DI, (Al + A2) D2, (TAI + A2) D3, determine that the cost by application was of 0,0104ctvs/cc.