

## A B S T R A C T

Bachacs, or leaf-cutting ants of the genera Atta and Acromyrmex are, and have been, important general pests of agriculture in Trinidad from time immemorial. Accordingly a literature review was directed, with special emphasis on bachac taxonomy, distribution, damage, economic status and control methods. Of all the control methods currently available, insecticidal baits seemed to have the brightest future.

A survey of five Trinidad citrus growers was made and the results showed the magnitude of bachac damage in cash terms. It was found that a figure equivalent to 12.87% of present income was lost through tree death, replanting costs, control costs and reduced yields and that the capital cost of establishing citrus trees was increased by 100%. A tentative estimate was made for the National cost of damage, followed by an estimation of Nation wide control costs. It appeared that bachac control in Trinidad was an economically viable proposition.

A field experiment was performed to compare five insecticidal baits (Mirex 450, commercial 4% Parasol, experimental 1% Parasol and experimental Mirex and Aldrin baits). All the baits were effective in killing colonies of Acromyrmex octospinosus Reich, although the baits containing Aldrin (4% Parasol, 1% Parasol and the experimental Aldrin bait) reduced ant activity in the shortest time.

A laboratory evaluation of two baits (Mirex 450 and 4% Parasol) was made to examine the intoxication process on a known number of ants in highly simplified conditions, so that more information could be obtained on their modes of action.

The Parasol bait gave results which indicated that time of exposure to bait, and bait concentration were both important in determining percentage kill. A Probit Plane Analysis indicated that time was the more important factor.

An effort was made to estimate the interaction between time of exposure to bait, and bait concentration but no firm evidence of such an interaction was found.

The Mirex 450 gave highly variable results and it appears that factors other than solely the amount of bait present in the environment were involved in determining the kill.

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