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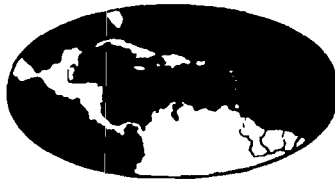
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PROCEEDINGS
OF THE
CARIBBEAN FOOD CROPS SOCIETY



THIRD ANNUAL MEETING
RIO PIEDRAS, PUERTO RICO
AUGUST 9-13, 1965

VOLUME III

CONTROL OF LEAF-CUTTING ANTS

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Leaf cutting ants, also called parasol ants, draagmieren, sauva ant and bachac, are the major concern in many tropical countries (1, 7) often cropland is reduced to barrenland in a matter of days. Many plants are attacked and the semi-circular parts cut out of leaves are carried to subterranean nests. These sections of the leaves form the substratum of a fungus, which in the case of the genus *Atta* was identified as *Rozites gongylophora* (2). Two species are commonly found in Surinam namely *Atta cephalotes* (L) and *Atta sexdens* (L). The first is mainly present in the coastal plain where plantation crops such as citrus, coffee, cacao, are attacked. *Atta sexdens* lives mainly in the interior where it feeds on cassava, the principal food crop of the Amerindians and Bushnegroes, and is one of the causes of shifting agriculture among these people. The nests are often very large sometimes up to a surface area of 100-180 square meters as in the case of *Atta sexdens* (L). In several countries, especially in Brazil and Surinam, extensive research work was done.

Stahel and Geyskes (3,4,5,6) published several articles on their control, their fungus gardens, on the structure of nests, the temperature and moisture in the nests, and on nuptial flight times.

Mainly carbon disulphide was used to control the ants in Surinam up to 1951. However with introduction of methyl-bromide good results were obtained also. This method was not adopted by the population since application was costly and some-what dangerous for a layman.

Experiments made by the Ministry of Agriculture showed that application of a 2 per cent aldrin dust at the rate of 1 kilogram per 100 square meters of nest surface, gave excellent control. About 10-20 grams of dust per hole were deposited into the openings of the nest with a small spoon (7). After a few weeks, holes that had become active again were treated for a second time.

Aldrin is less expensive and easier to apply than both carbon disulphide and methyl bromide. In forest areas this method can not be used extensively because the nests are difficult to locate and the undergrowth has to be cleared away before treatment can take place in most cases. Recently a new bait from allied chemical company named "Mirex 450" was introduced in Surinam. It contains an attractant and has as active ingredient dodecahloro-octahydro-1,3,4,-metheno-2H-cyclobuta (cd) pentalene. The manufacturer advises the use of 15 grams per square meter of area covered by the colony or 0.5 to 1 kilogram of bait per ant colony. Using this bait which is in the form of pellets one does not have to look for nests which may be quite a distance away from the crops they attack. The only thing

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you have to do is to apply the bait to actively working ant trails or entrance holes. Pellets are carried into the nests by the ants and these are killed as well as the fungus gardens on which the ants feed.

The results of these preliminary experiments are very successful with both *Atta cephalotes* and *Atta sexdens* up to now. For instance, at Bobownhol a new citrus grove in the interior of Surinam Mirex 450 was used against *A. sexdens*. In the coastal plain where *A. cephalotes* is found mainly very good results were obtained also. Not only the ants were killed but also the fungus gardens, the food supply of these ants.

The price of Mirex 450 is \$45.13 cif Paramaribo which is high, considering the fact that this does not include import duty, handling and profit for the dealer. This new chemical seems to be very promising however, for several countries where there are still large forest areas, and growing of food crops in an impossibility damage caused by these insects.

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