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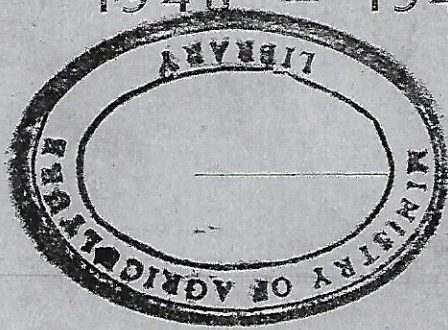
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DEPARTMENT OF AGRICULTURE  
JAMAICA

CARDI  
MONA, KINGSTON  
JAMAICA.

INVESTIGATIONS

1948 — 1949



BULLETIN No. 45  
(New Series)

PRICE 2/-



Gammexane Smoke Generators, Agrocide No. 3, Pyrethrum-Kerosene and White Oil (1:60) were tried out against "Flatters" (*Ormenis marginata*) attacking the twigs and young fruits of citrus. The Gammexane Smoke Generators were tried in the early morning in sheltered valleys. Despite the still atmosphere the smoke rose and diffused rapidly. Further tests in a very deep valley in early morning and late afternoon when the air was exceptionally still produced equally disappointing results. There was no effect and no insecticide was left on the trees in any of the tests. Agrocide No. 3 had no effect on adults or nymphs and did not prevent reinfestation. Pyrethrum-Kerosene gave an instantaneous kill of both nymphs and adults. Reinfestation occurred after two days. The best results were obtained with White Oil and this insecticide has the added advantage of controlling other pests such as scale insects. None of the insecticides adversely affected the foliage or the young fruits which at the time of the experiment were of an average size of one inch in diameter.

Agrocide used in the treatment of stored grain was effective in controlling pests but it had the great disadvantage of tainting not only the grain but also the eggs of fowls which were fed on the treated grain.

Halodane, a proprietary product containing chlordane, diluted 1:25 in water proved to be very lethal to the ants *Crematogaster brevispinosa* and *Solenopsis geminata*.

The local representatives of the manufacturers of new insecticides were kept informed of all results and advised on any disadvantages which required consideration.

## BIOLOGICAL CONTROL

### Investigations And Application Of Results (EE. bc. 1)

The Government Entomologist continued his investigations on the biological control of insect pests and the results were widely applied in the field. By local distribution full use has been made of beneficial insects which have in the past been successfully established and four species of Coccinellids new to Jamaica were imported against scale insects.

#### Local Distributions

- (a) For controlling the thrip, *Selenothrips rubrocinctus*, on mango and cashew.

The Eulophid, *Dasyscapus parvipennis*, was bred in large numbers in the laboratory and mass liberations were made at appropriate times in several mango groves on the Liguanea plains of Clarendon, St. Elizabeth, St. Ann and St. James.

- (b) For controlling the banana borer, *Cosmopolites sordidus*.

Distributions of *Dactylosternum hydraphiloides*, *D. abdominale* and *Plaesius javanus* were made in many recently established banana fields.

- (c) For controlling scale, *Aulacaspis pentagona*, on seedling Mahoe (*Hibiscus elatus*).

The wasp, *Aphelinus diaspidus*, was reared from the scale insect *Aulacaspis pentagona* infesting Oleander and liberated in Mahoe

The coconut scale though not recorded in Jamaica is a potent danger because of proximity to the Cayman Islands where this pest is firmly established. Approximately 5,000 specimens of four species of Coccinellid, *Azya trinitatis*, *Cryptognatha nodiceps*, *Chnoodes* sp. and *Prodis* (*Neoporia*) sp. were sent from Trinidad by Dr. F. J. Simmonds of the Trinidad Branch of the Imperial Bureau Parasite Service of Belleville, Ontario, Canada. These coccinellids which are new to Jamaica are known to control coconut scale. Liberations were made at several strategic points in Coconut and Lime plantations.

#### Inter-seas Distributions

- a) *Eretmocerus serius* which in Jamaica has practically eliminated Citrus Black Fly (*Aleurocanthus woglumi*) was despatched to Grand Cayman and Cayman Brac where attack by Black Fly in citrus groves was reported to be serious. Up to the end of the year five shipments had been made.
- b) *Plaesius javanus* was provided to the Standard Fruit and Steamship Company for liberation on banana holdings in British Honduras.
- c) *Plaesius javanus* (557 insects) and *Dactylosternum* spp. (1266 insects) had up to the end of the year been supplied to Dr. Simmonds in Trinidad in five air-borne consignments on an exchange basis for the supply of Coccinellids which he sent here.
- d) The four species of Coccinellids received from Trinidad were despatched to Grand Cayman and Cayman Brac for liberation in coconut plantations.

## FIELD CROPS

### GENERAL

#### Introduction And Trials Of New Varieties Of Local Food Crops (FC. g. 1)

With the opening up of three new agricultural stations and two substations it was possible to undertake the work of multiplying up stocks of imported seed and seed of local selections in preparation for a plan of series of trials to test new imported varieties against local strains of several food crops. During the year the following genetic stocks were planted under the supervision of the Senior Botanist at one or more of the stations:—

- |         |  |
|---------|--|
| Cereals | (i) Maize — 3 locally selected strains JSY, RVTM and MJ in addition an imported variety of sweet corn, Pajimaca. |
|         | (ii) Sorghum — 8 imported strains.   |
|         | (iii) Rice — 2 imported strains.   |
| Pulses  | (i) Soya Bean — 11 imported strains and one local selection.   |
|         | (ii) Cowpea — 7 imported strains and 3 local selections.   |
|         | (iii) Pigeon Pea — 2 imported strains and 4 local selections.  |
|         | (iv) Peanut — 8 imported strains.  |



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The wasp, *Aphelinus diaspidus*, was reared from the scale insect *Aulacaspis pentagona*, infesting Oleander and liberated in Mahoe nurseries under the control of the Forestry Department for the control of the same scale on Mahoe. The results were very gratifying.

- (d) As a prophylactic measure against the scale, *Aspidiotus destructor*, on coconut and lime.

Coccinellid, *Azya brille*, *Coccinella septempunctata*, *Prodiclus* (*Neoporia*) sp. were sent from Trinidad by Dr. F. J. Simmonds of the Trinidad Branch of the Imperial Bureau Parasite Service of Belleville, Ontario, Canada. These coccinellid which are new to Jamaica are known to control coconut scale. Liberations were made at several strategic points in Coconut and Lime plantations.

#### Caribbean Distributions

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|         | (iv)   | Peanut — 8 imported strains.   |
|         | (v)    | Bambara nut — 1 imported strain.   |
|         | (vi)   | Broadbean — 5 local selections.  |
|         | (vii)  | Kidney Bean — 2 local selections.  |
|         | (viii) | Bonavist — 1 local selection.  |
|         | (ix)   | Grams — 2 imported strains, one local selection.   |