

DEPARTMENT OF AGRICULTURE

JAMAICA

INVESTIGATIONS

1949 — 1950

BULLETIN No. 47

(New Series)

PRICE 2/-

Another commercial insecticide known as "Halodane", and falling the same group as DDT and Gammexane, was found to be very effective against the fire ant, *Solenopsis geminata* F., which was building nests in banana seedlings in pots in a greenhouse. There was no apparent damage to the plants.

BIOLOGICAL CONTROL

Investigations and Application of Results (EE. bc. 1)

The exchange of predators between Jamaica and the Trinidad Station of the Commonwealth Bureau of Biological Control was continued. Jamaica has supplied to Trinidad for Dr. Simmonds, 880 *Plaesus javanus* Er., and 1,914 *Dactylosternum* spp.

Shipments of ladybird beetles from Trinidad were discontinued by request in July 1949. In Jamaica 6,562 beetles were received alive and they have been distributed as follows:—

In Jamaica	..	..	2,309
In Grand Cayman	..	..	3,120
In Cayman Brac	..	..	1,133

The species supplied were *Cryptognatha nodiceps* Mshl., *Azya trinitatis* Mshl., ? *Chnoodes* sp., ? *Protilis* sp. They were liberated in Jamaica among coconut growing areas, citrus groves, bamboo groves, in the flower garden at Hope Botanic Gardens and elsewhere. Searches have been conducted in most of the areas in which the imported ladybird beetles were liberated but up to date these beetles have not been recovered.

Shipments of *Eretmocerus serius* Silv. were made to the Cayman Islands to control the Citrus Black Fly *Aleurocanthus woglumi* Ashby. The Deputy Director of Agriculture (Extension Services) who visited these Islands in March 1950 reported that the parasite was then well established there.

Investigations in regard to the incidence of the diamond-back cabbage moth, *Plutella cruciferarum* Zell, were carried out in the Christiana area in order to determine the possibility of establishing biological control of the pest.

Plots of cabbage, both imported and "native heads", were established at Grove Place Agricultural Station in readiness to receive shipments of parasites promised by the Commonwealth Bureau of Biological Control.

Possible parasites of *Ormenis marginata* Brunn. in nymphs taken from cedar trees growing among coffee in the Harry Watch area of Manches where the pest occurs, were sent to Dr. Simmonds of the Commonwealth Bureau of Biological Control.

The ladybird beetles *Cycloneda sanguinea* L., *Brachycantha bistripulata* Fabr. and *Naemia sereata* Melsh. were found at Grove Place Agricultural Station feeding on the aphid *Myzus persicae* Sulz. infesting cabbage.

Chilocorus cacti L. was found preying on the West Indian Peach Scale *Aulacaspis pentagona* Targ., attacking mahoe in a forest reserve in Portland

at Grove Place Agricultural Station revealed that the local parasite *Tetrastichus haitiensis* Gahan parasitized 80% of the egg-masses and 44% of the eggs examined.

Much attention was given to the control of the banana borer, *Cosmopolites sordidus* Germar., particularly in the newly established Lacatan banana nurseries. Liberation in all nurseries operated by the All-Island Banana Growers' Association of the imported predators *Plaesus javanus* Er., *Dactylosternum hydrophiloides* McL., and *D. abdominale* L. was effected by officers of the Department as well as through the officers of the All-Island Banana Growers' Association.

FIELD CROPS

GENERAL

Introduction and Trials of New Varieties of Local Food Crops (FC. g. 1)

Importations of new varieties of soya bean, groundnut, rice, maize and sweet potato were made during the year as follows:—

Soya bean: Roanoke, S-100, Volstate, Ogden, Arcadian, Avoyelles, Pelican, all from the United States of America.

Groundnut: Jumbo, from the United States of America.

Rice: Swamp varieties: D.110, D.52-37 and No. 79 from British Guiana.
Hill varieties: Buffalo, Fortuna and Arroz Surreno Precoz from San Domingo.

Maize: Dent variety Moyarbella from Puerto Rico. Sweet corn varieties Evergreen 14-11, Keystone Evergreen, Ioana, Illinois 10, Illinois 16, Illinois 17, Flagship and KVF 47-10 from Cuba.

Sweet Potato: Pelican Processor, Triumph and White Star from the United States of America.

Food crop varieties under multiplication, observation and trial on agricultural stations during the year were:—

					No. of Varieties
Pulses:	Soya bean	..	..	..	15
	Cowpea	..	..	..	8
	Pigeon pea	..	..	..	5
	Groundnut	..	..	..	8
	Bambarra nut	..	..	..	1
	Broadbean	..	..	..	2
	Kidney bean	..	..	..	2
	Bonavist	..	..	..	1
	Gram	..	..	..	4
	Cereals: Maize	..	..	..	12
Cereals:	Sorghum	..	..	..	8
	Rice	..	..	..	9
	Roots: Sweet Potatoes	..	..	..	9

banana seedlings in pots in a greenhouse. There was no apparent damage to the plants.

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Chilocorus cacti L. was found preying on the West Indian Peach Scale *Aulacaspis pentagona* Targ., attacking mahoe in a forest reserve in Portland.

Apanteles congregatus Say was found parasitizing *Protoparce seajamaicensis* Br. attacking tomato in St. Ann.

Random examination of egg masses of the Fiddler beetle *Prepoda*

44% of the eggs examined. Much attention was given to the control of the banana borer, *Cosmopolites sordidus* Germar., particularly in the newly established Lacatan banana nurseries. Liberation in all nurseries operated by the All-Island Banana Growers' Association of the imported predators *Plaesus javanus* Er., *Dactylosternum hydrophiloides* McL., and *D. abdominale* L. was effected by officers of the Department as well as through the officers of the All-Island Banana Growers' Association.

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Kidney bean	2
Bonavist	1
Gram	4
Cereals: Maize	12
Sorghum	8
Rice	9
Roots: Sweet Potatoes	9
Irish Potatoes	12
Cassava	19
Yam	2
Cocoa	5