The Australian field cricket

J A. Button
IMPORTANT DISCLAIMER

This document has been obtained from DAFWA's research library website (researchlibrary.agric.wa.gov.au) which hosts DAFWA's archival research publications. Although reasonable care was taken to make the information in the document accurate at the time it was first published, DAFWA does not make any representations or warranties about its accuracy, reliability, currency, completeness or suitability for any particular purpose. It may be out of date, inaccurate or misleading or conflict with current laws, polices or practices. DAFWA has not reviewed or revised the information before making the document available from its research library website. Before using the information, you should carefully evaluate its accuracy, currency, completeness and relevance for your purposes. We recommend you also search for more recent information on DAFWA's research library website, DAFWA's main website (https://www.agric.wa.gov.au) and other appropriate websites and sources.

Information in, or referred to in, documents on DAFWA's research library website is not tailored to the circumstances of individual farms, people or businesses, and does not constitute legal, business, scientific, agricultural or farm management advice. We recommend before making any significant decisions, you obtain advice from appropriate professionals who have taken into account your individual circumstances and objectives.

The Chief Executive Officer of the Department of Agriculture and Food and the State of Western Australia and their employees and agents (collectively and individually referred to below as DAFWA) accept no liability whatsoever, by reason of negligence or otherwise, arising from any use or release of information in, or referred to in, this document, or any error, inaccuracy or omission in the information.
THE AUSTRALIAN FIELD CRICKET

By J. A. BUTTON, B.Sc. (Agric.), Entomologist

THE Australian field cricket, or the black field cricket as it is sometimes known, is a native of Australia and is widely distributed throughout the south western, south and south eastern sections of the continent.

A particularly severe outbreak occurred in isolated areas throughout the south western districts of Western Australia during May and June, 1966.

Economic importance
As a solitary insect the field cricket (Acheta commodus, Walker) is widely scattered through the south western part of the State, but the species in this form does not normally breed in sufficient numbers to attract attention or cause much damage. It can, however, become a notable pest when permanent pasture is established on soil types which possess the physical characteristics required for heavy breeding and ultimate swarming to take place. Under these circumstances damage is likely in autumn, and this can be particularly severe in seasons when early germination is followed by a prolonged period of relatively dry conditions. When the soil becomes water-logged cricket activity ceases.

Serious damage occurs only spasmodically in the susceptible areas. Although no detailed study has been made of the ecology of this species under local conditions, work carried out in South Australia* indicates that outbreaks are generally preceded by a wet winter. Wet winter and spring conditions have been shown to favour a high level of egg survival, permitting heavy hatching of nymphal crickets during the summer months. The 1966 outbreak in Western Australia followed above-average winter and spring rainfall in the previous season.

Soil type association
Swarming of the field cricket in Western Australia is always associated with black soils which are rich in organic matter and usually have some clay content. As they dry out with the onset of summer these soils characteristically shrink to form a network of surface cracks which become progressively wider and deeper until many

Swarming of the field cricket in W.A. is always associated with black soils which shrink on drying out and develop a network of deep cracks.

are 2 to 3 inches wide and up to 2 feet deep.

In winter, as the crevices close and the soils become water-logged and boggy, their capacity to retain moisture provides an ideal environment for the survival of cricket eggs.

Life history and habits

The field cricket has only one generation per year in the outbreak areas of this State.

Eggs are laid in late summer or early autumn and remain dormant in the soil throughout the winter, then hatch in early summer. The insects go through a number of small wingless hopper stages before becoming winged adults in February and March.

Newly hatched crickets are very small (about 1/10th inch long) and are pale in colour. However, they darken rapidly and within a few hours have become black like the more mature stages. They develop through a number of successively larger wingless stages until maturity.

The adult is shining black with brown wings, and a body length of slightly less than one inch. The female is somewhat larger than the male, from which it is further distinguished by the sword-like ovipositor extending from the abdomen. It is by means of this device that the eggs are inserted into the soil.

Both the immature and mature stages are plant feeders. When they are present in large numbers considerable damage may be done to pasture and nearby cereal crops.

The insects are most active at night, preferring to shelter in soil crevices or under debris during the day. When swarming, however, they may be observed in daylight hours feeding and sunning themselves in dense clusters.

Control

Because of residue problems associated with hydrocarbon insecticides such as dieldrin, malathion in various forms was tested in a series of trials in 1966. Satisfactory control was achieved with both ground and aerial applications of Malathion L.V. concentrate using ultralow volume equipment. Malathion bran and wheat baits also gave good control.

Recommendations

AERIAL SPRAYS: 4 fl. oz. of technical malathion per acre.*

GROUND APPLICATIONS WITH ULTRA-LOW VOLUME MISTERS: 4-8 fl. oz. of technical malathion per acre.

BRAN BAIT: Bran—30 lb., and Malathion 50 per cent. E.C.—8 fl. oz. per acre.

WHOLE WHEAT: Wheat—30 lb., and Malathion 50 per cent. E.C.—8 fl. oz. per acre.

* Aircraft booms must be specially adapted for ultralow volume spraying.
Fast Economical Control of Cattle Lice

AGSERV SPRAYRITE
CATTLE SPRAYER

The Agserv Sprayrite is the lowest priced hoop sprayer you can buy. Effectively treats twenty head per minute (as many as a three or four-hoop model will handle) with the convenience of one-hoop operation.

WITH THE SPRAYRITE YOU GET:
- Quicker handling
- Less maintenance
- Portable or permanent installation
- Slashed operating costs with instant spray control
- Easy installation
- Economical water and chemical usage

FOR BEST RESULTS USE
NEOCIDOL 20 LIQUID CATTLE SPRAY

Please mention the "Journal of Agriculture of W.A.," when writing to advertisers
EARLY!
SPRAY WHEAT EARLY—
GREATLY INCREASE YIELD WITH DU PONT
LINURON 50
WEED KILLER

Apply Linuron 50 early — at 2 leaf stage — and you cut out competition from weeds and greatly increase wheat yield.

Linuron 50 is low in toxicity, long lasting and easy to apply. Kills most weeds, even those not readily controlled by hormone sprays.

SPRAY EARLY—WHEN CROPS ARE YOUNG.
INCREASE WHEAT YIELD — AND YOUR PROFIT.

See your local dealer or write to:

DU PONT FAR EAST, INC., 49 Falcon Street, CROWS NEST, N.S.W.
Better Things for Better Living . . . through Chemistry
® Reg. trade mark E. I. Du Pont De Nemours & Co. Inc.
With all pesticides always read labelling instructions carefully

Please mention the "Journal of Agriculture of W.A.," when writing to advertisers