# Gardona

### the spray-safe insecticide

Gardona is a new insecticide from Shell. And it's a spray-safe insecticide because it can be sprayed without the use of special protective clothing. What's new about Gardona is its low toxicity to man and animals.

Gardona is especially effective against caterpillars, flies and beetles. It protects apples and pears from Codling moth, citrus fruits from fruit flies, and vegetables from caterpillars and flea-beetles.

And Gardona's selective activity against these pests means most beneficial insects and organisms survive the spraying.

Although Gardona will control pests for up to fourteen days, depending on the dosage, its low mammalian toxicity means crops may be safely harvested a very short time after treatment. In most cases the following day.

Spray-safe Gardona is also showing promising results in the control of major pests in a variety of other crops such as cotton, rice and maize.

Gardona is another product of Shell's continuing research into the development of effective and safe insecticides. For further information or supplies of Gardona contact your Shell company or Shell Chemicals distributor.

Shell Chemicals (SHELL





## THE INDIAN JOURNAL OF AGRICULTURAL SCIENCES

The Indian Journal of Agricultural Sciences is devoted to all branches of experimental agriculture. It lays emphasis on original articles reporting results of problem-orientated, completed researches in India and the adjoining countries with a similar climate. It also includes short research notes and critical review articles.

The journal, a monthly, has 1,200 pages in a volume.

Single copy: Sh. 7.6d Annual: £4/10 \$10

Orders and enquiries to: The Business Manager,

Publications Wing,

Indian Council of Agricultural Research,

New Delhi 1,

India.

#### EXPERIMENTAL AGRICULTURE

VOLUME 6 NUMBER 3 JULY 1970

#### CONTENTS

Pushkarnath: Problems of Potato Varieties in India

POON YEW CHIN, J. A. VARLEY and J. B. WARD: The Foliar Composition of the Oil Palm in West Malaysia. II. The Relationships between Nutrient Contents

DAVID GIBBON, ROBERT HOLLIDAY, FRANCESCO MATTEI and GAETANO LUPPI: Crop Production Potential and Energy Conversion Efficiency in Different Environments

H. K. PANDE and K. V. B. R. TILAK: Effects of Soil Fertility on Yield and Juice Quality of Sugarcane

G. D. Anderson: Fertility Studies on a Sandy Loam in Semi-Arid Tanzania. II. Effects of Phosphorus, Potassium and Lime on Yields of Groundnuts B. B. CHAUDHURI and S. L. BASAK: Effect of Competition in Jute

R. G. Heathcote: Soil Fertility under Continuous Cultivation in Northern Nigeria. I. The Role of Organic Manures

J. R. Dunsmore: Experiments on the Fertilization of Dry Rice (Hill Padi) in Sarawak, Malaysia

D. PALEVITCH: Effects of Variety, Season and Maturity on Yield and Quality of Single-Harvest Snap Beans

J. F. Seitzer: Effects of CCC on Bread Wheat in Kenya

K. C. WILLSON: Foliar Analysis of Tea

35s. net (\$5.00 in U.S.A.). Annual subscription £5 net (\$16.50 in U.S.A.) for four issues

#### CAMBRIDGE UNIVERSITY PRESS

#### THE JOURNAL OF AGRICULTURAL SCIENCE

#### CONTENTS

#### Vol. 75 Part 2 October 1970

	PAGE
DENT, J. B., BLAIR, R., ENGLISH, P. R. and RAEBURN, J. R. Protein, lysine and feed intake level effects on pig growth. III. Regression analysis and economic aspects. (With 7 text-figures)	189
BURLACU, GH., IONILA, DUMITRA and BALTAC, MARGARETA. Efficiency of the utilization of the energy of casein in fowls	207
CHRISTIAN, K. R., JONES, D. B. and FREER, M. Digestibility and chemical composition of fractions of lucerne during spring and summer. (With 5 text-figures)	213
HULL, R. and Webb, D. J. The effect of sowing date and harvesting date on the yield of sugar beet. (With 3 text-figures).	223
SCHRÖDER, H. H. E. Pathways for the elimination of biuret in sheep. (With 4 text-figures) .	231
WALKER, N. The effect of feeding at 3, 6 or 12 hourly intervals on the performance and carcass composition of growing-finishing pigs	241
POULTON, S. G. and ASHTON, W. M. A study of the composition of Clun Forest ewe's milk. IV. The proteins of ewe's milk and their variation with stage of lactation. (With 2 text-figures)	245
PAQUAY, R., DE BAERE, R. and LOUSSE, A. Statistical research on the fate of water in the adult cow. II. The lactating cow	251
OSMAN, A. H., EL SHAFIE, S. A. and KHATTAB, A. G. H. Carcass composition of fattened rams and wethers of Sudan Desert sheep.	257
LEAVER, J. D. A comparison of grazing systems for dairy herd replacements. (With 3 text-figures)	265
JAGUSCH, K. T., NORTON, B. W. and WALKER, D. M. Body composition studies with the milk-fed lamb. I. Chemical composition and calorific content of the body and organs of newlyborn lambs	273
JAGUSCH, K. T., NORTON, B. W. and WALKER, D. M. Body composition studies with the milk-	213
fed lamb. II. The effect of the age of the lamb and the protein content of the diet on the chemical composition of the body and its organs. (With 1 text-figure)	279
NORTON, B. W., JAGUSCH, K. T. and WALKER, D. M. Body composition studies with the milk-fed lamb. III. The effect of the protein and energy intake on the composition of the live-weight gain. (With 2 text-figures)	287
JONES, D. I. H. The ensiling characteristics of different herbage species and varieties	293
Low, A. J. and Piper, F. J. The ammonification and nitrification in soil of urea with and without biuret. (With 2 text-figures)	301
MCLEOD, D. S., WILKINS, R. J. and RAYMOND, W. F. The voluntary intake by sheep and cattle of silages differing in free-acid content	311
BAILEY, R. W. and MACRAE, J. C. The hydrolysis by rumen and caecal microbial enzymes of	
hemicellulose in plant and digesta particles	321
of different quality on the performance of Friesian steers. I. Voluntary food intake and food utilization. (With 6 text-figures)	327
McCullough, T. A. A study of the effect of supplementing a concentrate diet with roughages of different quality on the performance of Friesian steers. II. Growth rate, efficiency of food conversion and carcass yield	337
REID, D. and CASTLE, M. E. A comparison of the effects of anhydrous ammonia and a solid ammonium nitrate fertilizer on herbage production from a pure perennial ryegrass sward.	347
NEWTON, J. E., BETTS, J. E. and LARGE, R. V. Increasing litter size in three breeds of sheep by	2.00
superovulation	355
MITCHELL, J. D. D. Yields of, and N uptakes by, some grass species and varieties under different glasshouse conditions (With 1 text-figure).	361
ADDISCOTT, T. M. A note on resolving soil cation exchange capacity into 'mineral' and 'organic' fractions. (With 1 text-figure)	365

SUBSCRIPTIONS. Two volumes of three parts are published annually. The subscription price is £6 net (U.S.A. \$19.50) per volume (post free); single parts are available at £2 12s. net (U.S.A. \$8.00) plus postage. Orders or enquiries may be sent to any bookseller or subscription agent, or to Cambridge University Press, P.O. Box 92, London, N.W. 1. (U.S.A. and Canada, Cambridge University Press American Branch, 32 East 57th Street, New York, N.Y. 10022, U.S.A.)