

Journal of Agricultural Entomology

Contents

 Volume 11, No. 4

October 1994

- BREWER, M. J. and J. T. TRUMBLE — Beet armyworm resistance to fenvalerate and methomyl: resistance variation and insecticide synergism 291
- STRAUB, R. W. and P. J. JENTSCH — Relationship of the white apple leafhopper, *Typhlocyba pomaria* McAtee, and the rose leafhopper, *Edwardsiana rosae* (L.) on apple in the Hudson Valley region of New York 301
- WIER, A. T., D. J. BOETHEL, B. R. LEONARD and E. BURRIS — Laboratory toxicity and field efficacy of AC 303,630 (Pirate®) against beet armyworm, *Spodoptera exigua* (Hübner), larvae 311
- THRONE, J. E. and L. D. CLINE — Seasonal flight activity and seasonal abundance of selected stored-product Coleoptera around grain storages in South Carolina 321
- WILLIAMS, W. P., G. A. MATTHEWS, JR. and P. M. BUCKLEY — Control of contamination in corn callus cultures used for insect resistance studies 339
- CHERRY, R. H. and F. J. COALE — Oviposition of the sugarcane grub, *Ligyris sub-tropicus*, (Coleoptera: Scarabaeidae) in different soils 345
- ZENG, F., G. A. PEDERSON, F. M. DAVIS and M. M. ELLSBURY — Modalities of resistance of N-2 red clover germplasm to pea aphid (Homoptera: Aphididae) 349
- MUCKENFUSS, A. E. and B. M. SHEPARD — Seasonal abundance and response of diamondback moth, *Plutella xylostella* (L.) (Lepidoptera: Plutellidae), and natural enemies to esfenvalerate and *Bacillus thuringiensis* subsp. *kurstaki* Berliner in coastal South Carolina 361
- SHEPARD, B. M., K. D. ELSEY, A. E. MUCKENFUSS and H. D. JUSTO, JR. — Parasitism and predation on egg masses of the southern green stink bug, *Nezara viridula* (L.) (Heteroptera: Pentatomidae), in tomato, okra, cowpea, soybean and wild radish 375
- WILLSON, H. R. and B. R. STINNER — Recovery of field corn following insecticide treatment to arrest defoliation by *Pseudaletia unipuncta* (Haworth) (Lepidoptera: Noctuidae) 383

THE JOURNAL OF AGRICULTURAL ENTOMOLOGY

Volume 11 • Number 4 • October 1994

The *Journal of Agricultural Entomology* is published quarterly under the auspices of the South Carolina Entomological Society, Inc., at Clemson, SC. The *Journal* publishes contributions of original research concerning insects and other arthropods of agricultural importance (including those affecting man, livestock, poultry and wildlife). The *Journal* is particularly dedicated to the timely publication of articles and notes pertaining to applied entomology, although it will accept suitable contributions of a fundamental nature related to agricultural entomology.

A subscription to the *Journal* automatically accompanies membership in the South Carolina Entomological Society. For information on the *Journal* or Society, contact the Secretary-Treasurer, SCES, P.O. Box 582, Clemson, SC 29633-0582.

For guidelines in preparing manuscripts for submission, contributing authors should consult "Instructions for Authors," *J. Agric. Entomol.* 11(1): 1-7. Authors should submit **an original and three copies** of their manuscript typed double spaced to the Editor, *Journal of Agricultural Entomology*, Oklahoma State University, WWAREC, P. O. Box 128, Lane, OK 74555-0128. **An abstract, 3-10 key words, and a running head must be included with each manuscript.** All measurements should be given in metric or in metric and English units. A charge of \$45.00 per page will be made; photos, figures, tables, etc. are charged at an additional \$20.00 each. Excessive or complicated tables, sideways tables, oversize figures, or photos may be subject to an additional charge of \$5.00 - 20.00 per page depending on number, length, complexity, etc. Author's alterations on the galley will be charged at the rate of \$2.00 per line. (Page charges are subject to change without notice.)

For more information on prevailing page charges and charges for immediate publication, advertising rates, cost of reprints, etc., contact the Business Manager.

EDITORIAL COMMITTEE

Editor: Bob Cartwright, Oklahoma State University, WWAREC, P. O. Box 128, Lane, OK 74555-0128

Technical Editor: J. K. Reed, P.O. Box 425, Fairview, NC 28730

Business Manager: H. W. Fescemyer, Dept. of Entomol., Clemson Univ., Clemson, SC 29634-0365

Subject Editors:

J. D. Culin, Dept. of Entomol., Clemson Univ., Clemson, SC 29634-0365

C. J. Eckenrode, Dept. of Entomol., NYS Agricultural Expt. Sta., Geneva NY 14456

E. E. Grafton-Cardwell, Kearney Agricultural Center, Univ. of California, Parlier, CA 93648

J. F. Grant, Entomol. & Plant Path. Dept., Univ. of Tennessee, Knoxville, TN 37901-1071

N. C. Hinkle, Dept. of Entomol., Univ. of California, Riverside, CA 92521

J. A. Lockwood, Dept. of Plant, Soil & Insect Sciences, Univ. of Wyoming, Laramie, WY 82071

J. P. McCaffrey, Dept. Plant, Soil & Entomological Science, University of Idaho, Moscow, ID 83843

P. Mitchell, Dept. of Biology, Winthrop University, Rock Hill, SC 29731

NOTE: Statements in the *Journal of Agricultural Entomology*, whether fact or opinion, are the sole responsibility of the authors. Mention of a commercial product does not constitute endorsement by the South Carolina Entomological Society.

OFFICERS
SOUTH CAROLINA ENTOMOLOGICAL SOCIETY, INC.
1994

- President: Randall P. Griffin, 104 Long Hall, Department of Entomology, Clemson University, Clemson SC 29634-0365 (803) 656-5045
- President Elect & Program Chairman: Michael J. Sullivan, Edisto Research and Education Center, Box 247, Blackville, SC 29817 (803) 284-3343
- Past President: Merle Sheperd, Coastal Research and Education Center, 2865 Savannah Highway, Charleston, SC 29414 (803) 766-3761
- Secretary/Treasurer: Robert R. Nash, 630 College Street, Central, SC 29630, (803) 639-2453
- Chair, Editorial Committee: Bob Cartwright, Oklahoma State University, WWAREC, P. O. Box 128, Lane, OK 74555-0128 (405) 889-2476
- Business Manager, J. Agric. Entomol.: Howard W. Fescemyer, Clemson University, Department of Entomology, Long Hall, Box 340365, Clemson, SC 29634-0365, (803) 656-5050
- Historian: Ben Kissam, 349 Gin Shoals Road, Six Mile, SC 29682 (803) 868-9440
- Chair, Honors and Awards Committee: Dave Alverson, 104 Long Hall, Department of Entomology, Clemson University, Clemson, SC 29634-0365 (803) 656-5045
- Chair, Nominations Committee: Sam Turnipseed, Clemson Univ., Edisto Research and Education Center, P. O. Box 247, Blackville, SC 29817, (803) 284-3343
- Chair, Membership Committee: Paula Mitchell, Winthrop College, Rock Hill, SC 29731
- Chair, Resolutions Committee: Adam Muckenfuss, Coastal Research and Education Center, 2865 Savannah Highway, Charleston, SC 29414 (803) 776-3761
- Chair, Local Arrangements Committee: Jay W. Chapin, Edisto Research and Education Center, Box 247, Blackville, SC 29817 (803) 284-3343

COCHRAN MEMORIAL FUND PATRONS¹

American Cyanamid Co.
Hoechst-Roussell Agricultural Company
ICI Americas Inc.
J. B. Kissam
Mr. and Mr. T. P. Knox, Jr.
Orkin Pest Control
Rhone-Poulenc Ag Company
South Carolina Pest Control Association
South Carolina Entomological Society

¹ The J. H. Cochran Memorial Scholarship is awarded annually by the South Carolina Entomological Society to a deserving graduate student. Donors who contribute \$1,000 or more to the Cochran Memorial Fund are recognized by the Society as Cochran Memorial Fund Patrons. Such donations continually support graduate work in entomology since only the annual interest is used to support the award.