

WEED SCIENCE



9284.450000

IIII VOL 47 PART 3

1/1



Volume 47 Number 3 MAY-JUNE 1999

https://doi.org/10.1017/5004LSSN09943ubils7et5nline by Cambridge University Press

WEED SCIENCE

Published six times a year by the Weed Science Society of America

Robert L. Zimdahl, Editor

Weed Science accepts for review manuscripts describing original research on the biology, ecology, physiology, or management of weeds; and on herbicides, plant growth regulators, environmental issues, and other topics directly related to the science of weed management. Original research encompasses scholarship of discovery that brings forth new data, scholarship of integration that weaves knowledge into new patterns, and scholarship of application in which intellectual work applies existing knowledge.

Each published manuscript must be written as a logical unit that contributes to the advancement of scientific knowledge. Manuscripts should advance the conceptual framework of the science of weed management. Symposia papers and reviews are accepted.

Associate Editors

Robert E. Blackshaw, Agriculture & Agri-Food Canada, P.O. Box 3000 Main, Lethbridge, AB, Canada T1J 4B1

Michael E. Foley, USDA-ARS, Biosciences Research Lab, Fargo, ND 58105-5674

Frank Forcella, USDA/ARS, North Central Soil Conservation Res. Laboratory, Morris, MN 56267

B. Clifford Gerwick, Agric. Products Dept., DowElanco, 9330 Zionsville Rd., Indianapolis, IN 46268

Jeffrey L. Gunsolus, University of Minnesota, 411 Borlaug Hall, 1991 Buford Circle, St. Paul, MN 55108

J. Christopher Hall, University of Guelph, Bovey Bldg., Room 2225, Guelph, ON, Canada N1G 2W1 Alec McClay, Alberta Research Council, P.O. Bag 4000, Vegreville, AB, Canada T9C 1T4

David A. Mortensen, Agronomy Department, University of Nebraska, 309 Keim Hall, Lincoln, NE 68583

John T. O'Donovan, Pest Management Program, Alberta Environmental Centre, Bag 4000, Vegreville, AB, Canada T9C 1T4 Emilie Regnier, Horticulture/Crop Science, Ohio State University, Kottman Hall, 2021 Coffey Road, Columbus, OH 43210

Dale L. Shaner, American Cyanamid Co., P.O. Box 400, Princeton, NJ 08540

Clarence J. Swanton, Crop Science Dept., University of Guelph, Guelph, ON, Canada N1G 2W1

John R. Teasdale, USDA-ARS, Bldg. 001, Room 323, Beltsville, MD 20705

Mahesh K. Upadhyaya, Plant Science Department, University of British Columbia, 2357 Main Mall, Suite 248, Vancouver, BC, Canada V7C 2M9

William K. Vencill, Crop and Soil Sciences, University of Georgia, 3111 Miller Plant Science Bldg., Athens, GA 30602 William W. Witt, Agronomy Department, University of Kentucky, N-106C Ag. Science Ctr., North Lexington, KY 40546

> Debra E. Palmquist, Consulting Statistical Editor Sheila M. Rake, Managing Editor

Officers of the Weed Science Society of America

James M. Chandler, President Lawrence R. Oliver, *President-Elect* Charlotte V. Eberlein, Vice President F. Dan Hess, Past President

Jill Schroeder, Secretary Joan Dusky, Treasurer

Anne Légère, Director of Publications

Horace D. Skipper, Chair, Constitution and Operating Procedures

Weed Science (ISSN 0043-1745) is an official publication of the Weed Science Society of America, 810 East 10th Street, Lawrence, KS 66044-8897 (785-843-1235). It contains refereed papers describing the results of research that elucidates the nature of phenomena relating to all aspects of weeds and their control. It is published bimonthly, one volume per year, six issues per year beginning in January.

Membership is \$85 per year, student affiliate membership \$30, which includes receipt of Weed Science, Weed Technology, and WSSA Newsletter. Dues should be sent to WSSA, 810 East 10th Street, Lawrence, KS 66044-8897 not later than December 1 of each year. Membership in the society is on a calendar-year basis only.

Subscriptions (institutions, libraries, etc.) to Weed Science are \$95 per year, one volume per year of six issues beginning in January. Subscriptions to both Weed Science and Weed Technology (ISSN 0890-037X) (four issues per volume) are available for \$160 per year. New subscriptions and renewals begin with the first issue of the current volume and should be sent to WSSA, 810 East 10th Street, Lawrence, KS 66044-8897.

Change of address affecting the mailing list for members, students, and subscribers, inquiries about copies lost in the mail, requests for back issues, and all matters pertaining to the receipt of the Journal, membership and subscription information should be sent to WSSA, 810 East 10th Street, Lawrence, KS 66044-8897. Claims for copies lost in the mail must be received within 30 days (90 days foreign) of the date of issue to insure replacement at no charge.

One copy of the manuscript must be sent to the Editor, Robert L. Zimdahl, Weed Research Laboratory, Colorado State University, Fort Collins, CO 80523. Two copies of the manuscript must be sent to the Managing Editor, Sheila M. Rake, Allen Press, Inc., 810 East 10th Street, Lawrence, KS 66044-8897. Directions for contributors are published in the October-December issue of Weed Science. Authors are asked to pay \$50 per page as a portion of the cost of publication. The Editor can make exceptions in advance when justified.

The Weed Science Society of America fully subscribes to the belief that progress in science depends upon the sharing of ideas, information, and materials among qualified investigators. Authors of papers published in Weed Science are therefore encouraged, whenever practicable and when state and federal laws permit, to share genotypically unique, propagative materials they might possess with other workers in the area who request such materials for the purpose of scientific research.

> Weed Science published by the Weed Science Society of America. Periodical postage paid at Lawrence, KS and at additional mailing offices. Copyright 1999 by the Weed Science Society of America. Printed in USA. All rights reserved. Reproduction in part or whole prohibited.

POSTMASTER: Send address changes to WSSA, 810 East 10th Street, Lawrence, KS 66044-8897.



VOLUME 47	MAY-JUNE 1999	NUMBER 3
EDITORIAL		
My view. D. Shaner		255
RAPID PUBLICATION		
Cross-resistance of primisulfuron-resistant $\it L$ Hendrickson, and George Mueller-Warran	Bromus tectorum L. (downy brome) to sulfosulfuron. Carol Mallory-Smith, Paul nt	l 256
PHYSIOLOGY, CHEMISTRY, AND	BIOCHEMISTRY	
Effect of malathion on resistance to soil-app	plied herbicides in a population of rigid ryegrass (Lolium rigidum). Fançois J. Ta	ardif 258
Photolytic degradation of 2,4-D on Zea may	ys leaves. Ramarao Venkatesh and S. Kent Harrison	262
	f foliar absorption of MON 37500. Patrick A. Miller, Philip Westra, and Scott	
	d allelic interactions in shattercane accessions. Chad D. Lee, Alex R. Martin, Fi	
	Lee	
WEED BIOLOGY AND ECOLOGY	Y	
	subsequent cereal crops: a comparative survey. P. D. Ominski, M. H. Entz, a	
	Amaranthus retroflexus. Stevan Z. Knezevic, Michael J. Horak, and Richard	
Prediction of corn (<i>Zea mays</i>) yield loss fro Mathleu Ngouajio, Claudel Lemieux, and	om early observations of the relative leaf area and the relative leaf cover of weed Gilles D. Leroux	ds. 297
Full-season Palmer amaranth (Amaranthus Murray, and Laval M. Verhalen	s palmeri) interference with cotton (Gossypium hirsutum). Matt W. Rowland, Dor	n S. 305
Molecular markers indicate intraspecific var Antonio Pujadas Salva, Robert P. Finch,	riation in the control of <i>Echinochloa</i> spp. with quinclorac. Nuria Lopez-Martinez . George Marshall, and Rafael De Prado	z, 310
	eight and crop competitiveness. Steven S. Seefeldt, Alex G. Ogg, Jr., and Yue	
	on and soybean looper (<i>Pseudoplusia includens</i>) management. Charles F. Grym	
James L. Griffin, B. Rogers Leonard, Da	vid L. Jordan, and David J. Boethei	n es, 321
Cyperus esculentus interference in Cucumi	is sativus. W. Carroll Johnson, III and Benjamin G. Mullinix, Jr	327
WEED MANAGEMENT		
Influence of tillage and Triticum aestivum of Michael P. Braverman, and Dearl E. Sand	over crop on herbicide efficacy in <i>Oryza sativa</i> . David L. Jordan, Patrick K. Boders	ollich,
Adaptation and evaluation of the WEEDSIN James J. Kells	M weed management model for Michigan. Karen A. Renner, Scott M. Swinton,	, and 338
SOIL, AIR, AND WATER		
Flumetsulam mobility in two Mississippi soil	ils as influenced by irrigation timing. Chris H. Tingle, David R. Shaw, and Patri	ick D.
	uron in Colorado soils. Brian K. Cranmer, Philip Westra, and Robert L. Zimdahi	
SPECIAL TOPICS		
Effect of Galerucella spp. on survival of pur	rple loosestrife (<i>Lythrum salicaria</i>) roots and crowns. Elizabeth J. Stamm Kato	vich,

Accessing Your WSSA Business Office

Memberships, subscriptions, address changes, missing journal issues, single journal issue and back issue orders, reprints, color plates and page charge payments, ordering special publications: WSSA Business Office, 810 East 10th St., P.O. Box 1897, Lawrence, KS 66044-8897 [phone: 1-800-627-0629 (U.S. and Canada), 785-843-1235; fax: 785-843-1274; e-mail: wssa@allenpress.com]. Executive Secretary: Joyce Lancaster (ext. 250; jlancaster@allenpress.com); Association Manager: Rhonda Green (ext. 220; rgreen@allenpress.com).

Directions for Submission to Weed Science

Send two copies of the manuscript and all illustrations to Sheila M. Rake, Managing Editor, Allen Press, 810 East 10th St., P.O. Box 1897, Lawrence, KS 66044-8897 and one copy to R. L. Zimdahl, Editor, Weed Science, Weed Research Laboratory, Colorado State University, Fort Collins, CO 80523. In the accompanying cover letter to R. L. Zimdahl provide: 1) the corresponding author's name and telephone number, b) three stick-on labels showing the name and address of the corresponding author, c) the category that best describes the paper's content: Weed Management; Physiology, Chemistry, and Biochemistry; Weed Biology and Ecology; Soil, Air, and Water; or Special Topic, and d) a brief list of names, addresses, phone numbers, fax numbers, and e-mail addresses of suggested reviewers.

Directions for Submission to Weed Technology

Send three copies of the manuscript and all illustrations to Sheila M. Rake, Managing Editor, Allen Press, Inc., 810 East 10th St., P.O. Box 1897, Lawrence, KS 66044-8897 and one copy to Chester L. Foy, Editor, Weed Technology, Dept. of Plant Pathology, Physiology, and Weed Science, Virginia Polytechnic Institute and State Univ., 502 Price Hall, Blacksburg, VA 24061-0331. Please include the names, addresses, phone numbers, fax numbers, and e-mail addresses of suggested reviewers.

Cover drawing from: USDA/ARS Handbook No. 366. 1970. Selected Weeds of the United States, p. 291.