

# WEED SCIENCE

JOURNAL OF THE WEED SCIENCE SOCIETY OF AMERICA

VOLUME 36

MAY 1988

NUMBER 3

## PHYSIOLOGY, CHEMISTRY, AND BIOCHEMISTRY

- Mode of Clopyralid Uptake by Honey Mesquite (*Prosopis glandulosa*). **Rodney W. Bovey, Hugo Hein, Jr., and Robert E. Meyer** . . . . . 269
- Water Relations in Quackgrass (*Agropyron repens*) Following Postemergence Herbicides. **Mark C. Trimmer and Dean L. Linscott** . . . . . 273
- Effects of Phenolic Acids and Ragweed Parthenium (*Parthenium hysterophorus*) Extracts on Tomato (*Lycopersicon esculentum*) Growth and Nutrient and Chlorophyll Content. **Wondimagegnehu Mersie and Megh Singh** . . . . . 278
- Absorption and Translocation of CGA-82725 with Additives. **Greg R. Gillespie, Grzegorz A. Skrzypczak, and John D. Nalewaja** . . . . . 282
- Potential Mechanisms for Bentazon Antagonism with Haloxifop. **B. Clifford Gerwick III** . . . . . 286
- Influence of Glyphosate Concentration on Glyphosate Absorption and Translocation in Canada Thistle (*Cirsium arvense*). **Chris M. Boerboom and Donald L. Wyse** . . . . . 291
- Thiameturon Phytotoxicity to Kochia (*Kochia scoparia*). **John D. Nalewaja and Kazimierz A. Adamczewski** . . . . . 296
- Basis for Differential Susceptibility of Rice (*Oryza sativa*), Wild Rice (*Zizania palustris*), and Giant Burreed (*Sparganium eurycarpum*) to Bentazon. **Sharon A. Clay and Ervin A. Oelke** . . . . . 301
- Plant Response to Haloxifop as Influenced by Water Stress. **Daniel W. Kidder and Richard Behrens** . . . . . 305
- Absorption, Translocation, and Toxicity of Foliar-Applied Imazaquin in Yellow and Purple Nutsedge (*Cyperus esculentus* and *C. rotundus*). **Ujjanagouda B. Nandihalli and Leo E. Bendixen** . . . . . 313

## WEED BIOLOGY AND ECOLOGY

- Growth and Water Relations of Cotton (*Gossypium hirsutum*), Spurred Anoda (*Anoda cristata*), and Velvetleaf (*Abutilon theophrasti*) During Simulated Drought and Recovery. **David T. Patterson** . . . . . 318
- Allelopathic Effects of Palmer Amaranth (*Amaranthus palmeri*) on Seedling Growth. **Robert M. Menges** . . . . . 325
- Anthrachnose of Florida Beggarweed (*Desmodium tortuosum*) Caused by *Colletotrichum truncatum*. **John Cardina, Robert H. Littrell, and Richard T. Hanlin** . . . . . 329

## WEED CONTROL AND HERBICIDE TECHNOLOGY

### WEED CONTROL AND HERBICIDE TECHNOLOGY

- Propanil Plus Methyl Parathion on Rice (*Oryza sativa*). **Gene D. Wills and Joe E. Street** . . . . . 335
- Consecutive Annual Applications of Alachlor and Metolachlor to Continuous No-Till Corn (*Zea mays*). **J. Peyton Doub, Henry P. Wilson, Thomas E. Hines, and Kriton K. Hatzios** . . . . . 340
- Recovery of Pitted Morningglory (*Ipomoea lacunosa*) and Ivyleaf Morningglory (*Ipomoea hederacea*) Following Applications of Acifluorfen, Fomesafen, and Lactofen. **Jeffery M. Higgins, Ted Whitwell, Edward C. Murdock, and Joe E. Toler** . . . . . 345
- Control of White Locoweed (*Oxytropis sericea*). **Michael H. Ralphs, Larry V. Mickelsen, David L. Turner, and Darwin B. Nielsen** . . . . . 353

|   |     |
|---|-----|
| Control of Large Crabgrass ( <i>Digitaria sanguinalis</i> ) and Fall Panicum ( <i>Panicum dichotomiflorum</i> ) in Corn ( <i>Zea mays</i> ) with Tridiphane and Atrazine Combinations. <b>Prasanta C. Bhowmik and Ujjanagouda B. Nandihalli</b> . . . . . | 359 |
| Quackgrass ( <i>Agropyron repens</i> ) Control in Potatoes ( <i>Solanum tuberosum</i> ) with Fluazifop. <b>Jerry A. Ivany</b> . . . . .   | 363 |
| Effect of Environment and Adjuvants on Asulam Phytotoxicity. <b>John D. Nalewaja and Zenon Woznica</b> . . . . .  | 367 |
| Tebuthiuron Formulation and Placement Effects on Response of Woody Plants and Soil Residue. <b>Robert E. Meyer and Rodney W. Bovey</b> . . . . .  | 373 |
| Tolerance of Rice ( <i>Oryza sativa</i> ) to Acifluorfen and Triclopyr Applied Alone or in Mixtures with Propanil. <b>Roy J. Smith, Jr.</b> . . . . .   | 379 |
| Long-Term Effects of No-tillage in a Winter Wheat ( <i>Triticum aestivum</i> )-Sorghum ( <i>Sorghum bicolor</i> )-Fallow Rotation. <b>Gail A. Wicks, Darryl E. Smika, and Gary W. Hergert</b> . . . . .   | 384 |
| Use of Winter Wheat ( <i>Triticum aestivum</i> ) Cultivars and Herbicides in Aiding Weed Control in an Ecofallow Corn ( <i>Zea mays</i> ) Rotation. <b>Robert E. Ramsel and Gail A. Wicks</b> . . . . .   | 394 |
| <b>SOIL, AIR, AND WATER</b>   |     |
| Soil Factors and Efficacy of Hexazinone Formulations for Loblolly Pine ( <i>Pinus taeda</i> ) Release. <b>Patrick J. Minogue, Bruce R. Zutter, and Dean H. Gjerstad</b> . . . . .   | 399 |
| <b>SPECIAL TOPICS</b>   |     |
| An Atomizer for Application of Very Low Volumes of Herbicide Solutions. <b>Dennis L. Bucholtz and F. Dan Hess</b> . . . . .   | 406 |
| Actions Taken by the Weed Science Associate Editors . . . . .   | 410 |

# WEED SCIENCE

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

Dayton L. Klingman, *Editor*  
2028 Forest Hill Drive  
Silver Spring, MD 20903  
AC/301-434-6806

## *Associate Editors*

- Nagi R. Achhireddy, Yoder Brothers, Inc., P.O. Box 68, Alva, FL 33920  
N. E. Balke, Department of Agronomy, University of Wisconsin, 1575 Linden Drive, Madison, WI 53706  
Richard Behrens, 1490 West County Road C-2, St. Paul, MN 55113  
Malcolm Devine, Department of Crop Science and Plant Ecology, University of Saskatchewan, Saskatoon, Saskatchewan, Canada S7N 0W0  
R. A. Evans, 1560 California Avenue, Reno, NV 89509  
K. K. Hatzios, Department of Plant Pathology, Physiology, and Weed Science, Plant Molecular Biology Building, VPI and State University, Blacksburg, VA 24061  
R. D. Ilnicki, Department of Soils and Crops, Rutgers University, New Brunswick, NJ 08903  
R. S. McAllister, Dynamac International, Inc., 1140 Rockville Pike, Rockville, MD 20852

Jerry Oot, *Technical Editor*  
AC/217-892-4329

## *Reviewers*

- |                 |                    |                 |                |
|-----------------|--------------------|-----------------|----------------|
| W. H. Ahrens    | A. G. Dexter       | J. S. Holt      | P. J. Shea     |
| L.W.J. Anderson | Charlotte Eberlein | Rex Liebl       | R. F. Turco    |
| Michael Barrett | Raymond Forney     | A. R. Martin    | A. K. Watson   |
| A. R. Bonanno   | Greg Gillespie     | Wondi Mersie    | Glenn Wehtje   |
| D. D. Buhler    | K. N. Harker       | Tom Moorman     | S. C. Weller   |
| G. E. Coats     | S. S. Harper       | L. J. Moshier   | L. L. Whatley  |
| J. F. Derr      | Kent Harrison      | D. T. Patterson | G. A. Wicks    |
|                 |                    |                 | M. C. Williams |

## *Officers of the Weed Science Society of America*

- |                                       |   |
|---------------------------------------|---|
| J. F. Ahrens, <i>President</i>        | A. G. Dexter, <i>Secretary</i>                      |
| H. M. LeBaron, <i>President-Elect</i> | J. R. Abernathy, <i>Treasurer</i>                   |
| L. W. Mitich, <i>Vice President</i>   | B. Truelove, <i>Editor-in-Chief</i>                 |
| J. H. Dawson, <i>Past President</i>   | R. A. Schmidt, <i>Assistant Executive Secretary</i> |

*Weed Science* (ISSN 0043-1745) is the official publication of the Weed Science Society of America, 309 West Clark Street, Champaign, IL 61820 (AC/217-356-3182). It is published bimonthly, one volume per year, six issues per year beginning in January.

Membership is \$40 per year, student affiliate membership \$20, which includes receipt of *Weed Science*, *Weed Technology*, and *WSSA Newsletter*. Dues should be sent to WSSA, 309 West Clark Street, Champaign, IL 61820 not later than December 1 of each year. Membership in the society is on a calendar-year basis only.

Subscriptions (institutions, libraries, etc.) are \$50 per year, one volume per year of six issues beginning in January. New subscriptions and renewals begin with the first issue of the current volume and should be sent to WSSA, 309 West Clark Street, Champaign, IL 61820.

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, 309 West Clark Street, Champaign, IL 61820. Claims for copies lost in the mails must be received within 30 days (90 days foreign) of the date of issue to insure replacement at no charge.

Manuscripts must be sent to the Editor, Dayton L. Klingman, 2028 Forest Hill Drive, Silver Spring, MD 20903. Directions for contributors are published in the September 1986 issue of *Weed Science*. Authors are asked to pay \$50 per page charge as a portion of the cost of publication. The Editor can make exceptions in advance when justified.

*Weed Science* published by the Weed Science Society of America.

Second class postage paid at Champaign, IL. and at additional mailing offices.

Copyright 1988 by the Weed Science Society of America. Printed in USA.

All rights reserved. Reproduction in part or whole prohibited.

Return POD form 3579 to WSSA, 309 West Clark Street, Champaign, IL 61820.

Sustaining Members  
WEED SCIENCE SOCIETY OF AMERICA

May 10, 1988

|                                      |  |
|--------------------------------------|--|
| ABC Laboratories, Inc.               | Minnesota Valley Testing Labs, Inc.        |
| A & L Agricultural Laboratories      | Mobay Chemical Corporation                 |
| Agri-Growth Research Inc.            | Monsanto Company                           |
| ALMACO                               | Mycogen Corporation                        |
| American Agricultural Services, Inc. | Nippon Soda Company                        |
| American Cyanamid Company            | NOR-AM Chemical Company                    |
| American Hoechst Corporation         | OMNI-DATA International                    |
| The Andersons                        | Pan-Agricultural Labs., Inc.               |
| BASF Wyandotte Corporation           | Pennwalt Corporation                       |
| Cenex/Land O'Lakes                   | Pioneer Overseas Corporation               |
| Chang Farms, Inc.                    | R & D Sprayers Inc.                        |
| Chevron Chemical Company             | Rhone Poulenc Inc.                         |
| CIBA-GEIGY Corporation               | Rogers Engineering Inc.                    |
| Deere & Company                      | Rohm & Haas Company                        |
| Dow Chemical USA                     | O. M. Scott & Sons Company                 |
| E. I. DuPont deNemours & Company     | Spraying Systems Company                   |
| Eli Lilly & Company                  | Stewart Agricultural Research Service Inc. |
| Fermenta Plant Protection Co.        | Thomson Publications                       |
| FMC Corporation                      | Uniroyal Chemical Corporation              |
| Gandy Corporation                    | Virginia Chemicals Inc.                    |
| Griffin Corporation                  | Wintersteiger America, Inc.                |