

WEED SCIENCE

JOURNAL OF THE WEED SCIENCE SOCIETY OF AMERICA



VOLUME 26

NOVEMBER 1978

NUMBER 6

Page

— CONTENTS —

- 522 Sustaining Members
- 523 Dates of Glyphosate Treatments on Weeds and Bermudagrass (*Cynodon dactylon*). B. J. Johnson and G. O. Ware
- 527 Growth Inhibition in Tobacco (*Nicotiana tabacum*) Callus by 2,6-Dinitroaniline Herbicides and Protection by D- α -tocopherol Acetate. J. B. Huffman and N. D. Camper
- 530 Technique for Separating Weed Seed from Soil. P. K. Fay and W. A. Olson
- 533 Soybean (*Glycine max*) and Grain Sorghum (*Sorghum bicolor*) Tolerance to Residues of Tetrafluron and Fluometuron. D. L. Reasons, L. S. Jeffery and T. C. McCutchen
- 539 Photoperiod Effects on the Reproductive Biology of Purple Nutsedge (*Cyperus rotundus*). R. D. Williams
- 543 Effects of 2,4-D and Dalapon on Weed Seed Production and Dormancy. R. S. Fawcett and F. W. Slife
- 547 Influence of Nitrogen Fertility on Growth of Foxtail (*Setaria*) Taxa. M. M. Schreiber and P. L. Orwick
- 550 Interactions between *Bactra verutana* and the Development of Purple Nutsedge (*Cyperus rotundus*) Growth Under Three Temperature Regimes. K. E. Frick, R. D. Williams and R. F. Wilson
- 554 A Small Plot Technique for Assessing Control of Submersed Weeds. E. B. Hollingsworth
- 556 Pennsylvania Smartweed (*Polygonum pennsylvanicum*) Interference in Soybeans (*Glycine max*). H. D. Coble and R. L. Ritter
- 560 Status of Weed Science—A Worlds' Perspective. J. D. Fryer
- 566 Temperature Effect on Phytotoxicity of Soil-Applied Herbicides. C. E. G. Mulder and J. D. Nalewaja
- 571 Difenzoquat for Wild Oat (*Avena fatua*) Control. S. D. Miller, J. D. Nalewaja, J. Pudelko and K. A. Adamczewski
- 577 Influence of Light and Temperature on the Germination and Seedbed Ecology of Common Mullein (*Verbascum thapsus*). R. J. Semenza, J. A. Young and R. A. Evans
- 582 Bud Development in Excised Roots of Rush Skeletonweed (*Chondrilla juncea*). Roland Schirman and B. A. Zamora
- 585 Effects of Two Diphenylether Herbicides on Common Purslane (*Portulaca oleracea*). S. F. Gorske and H. J. Hopen
- 589 Suppression of Root Diseases and Weeds in Peas (*Pisum sativum*) Treated with Dinitrophenol and Dinitroaniline Herbicides. R. F. Sacher, H. J. Hopen and B. J. Jacobsen
- 594 Effects of Filled Applications of Nitrate on Weed Seed Germination and Dormancy. R. S. Fawcett and F. W. Slife
- 597 Drift of Glyphosate Sprays Applied with Aerial and Ground Equipment. W. E. Yates, N. B. Akesson and D. E. Bayer
- 605 Effects of Environment on the Toxicity of Glyphosate to Johnsongrass (*Sorghum halepense*) and soybeans (*Glycine max*). C. G. McWhorter and W. R. Azlin
- 609 Suppression of Pea (*Pisa sativum*) Root Rot by Dinitroaniline Herbicides. J. R. Teasdale, R. G. Harvey and D. J. Hagedorn
- 614 Seasonal Development of Yellow and Purple Nutsedges: (*Cyperus esculentus* and *C. rotundus*) in Illinois. J. E. Jordan-Molero and E. W. Stoller
- 619 A Comparative SEM Study of Red Rice and Several Commercial Rice (*Oryza sativa*) Varieties. R. E. Hoagland and R. N. Paul
- 626 Weed Interference in Pickling Cucumbers (*Cucumis sativus*). G. H. Friesen
- 629 Response of Sugarbeets (*Beta vulgaris*) to Sublethal Rates of 2,4-D. E. E. Schweizer
- 632 Yellow Foxtail (*Setaria lutescens*) Biotype Studies: Growth and Morphological Characteristics. C. A. Schoner, R. F. Norris and W. Chilcote
- 637 Control of Foxtail Millet (*Setaria italica*) in New Seedlings of Alfalfa (*Medicago sativa*) with EPTC Applied in Subsurface Lines. J. H. Dawson and Eduardo Dell'Agostino

Contents continued—inside front cover

Contents continued from front cover

- 640 Selectivity of Nitrofen and Oxyfluorfen Between *Portulaca oleracea* Ecotypes and Two Cabbage (*Brassica oleracea* var. *capitata*) Cultivars. S. F. Gorske and H. J. Hopfen
- 642 Diuron Metabolism in Two Sugarcane (*Saccharum officinarum*) Cultivars. Lii-Chyuan Liu, R. H. Shimabukuro and J. D. Nalewaja
- 647 Effect of Calcium and Nitrogen on Soybean (*Glycine max*) Root Fatty Acid Composition and Uptake of Linuron. C. M. Rivera and Donald Penner
- 650 Multiple Herbicide Treatments for Grassy Weed Control in Turf. B. J. Johnson
- 653 Protection of Corn (*Zea mays*) from Acetanilide Herbicidal Injury with the Antidote R-25788. J. R. C. Leavitt and Donald Penner
- 660 Control of Dodder (*Cuscuta* spp.) with Pronamide. J. H. Dawson
- 665 Field Bindweed (*Convolvulus arvensis*) Control in Corn (*Zea mays*) and Sorghum (*Sorghum bicolor*) with Dicamba and 2,4-D. E. E. Schweizer, J. F. Swink and P. E. Heikes
- 669 Protein and Nucleic Acid Syntheses in Dark-dormant Common Purslane (*Portulaca oleracea*) Seed. Bonnie J. Reger and Ida E. Yates
- 673 Separation of Glyphosate and Possible Metabolites by Thin-Layer Chromatography. Paul Sprankle, C. L. Sandberg, W. F. Meggitt and Donald Penner
- 675 Volunteer Kentucky Bluegrass (*Poa pratensis*) Control in Kentucky Bluegrass Seed Fields. W. O. Lee
- 679 Efficacy and Rate of Release of EPTC and Butylate from Starch Encapsulated Formulations Under Greenhouse Conditions. M. M. Schreiber, B. S. Shasha, M. A. Ross, P. L. Orwick and D. W. Edgecomb, Jr.
- 686 Factors Influencing Microbial Degradation of ¹⁴C-Glyphosate to ¹⁴CO₂ in Soil. Loren J. Moshier and Donald Penner
- 691 Simulation of Foxtail (*Setaria viridis* var. *robusta-alba*, *Setaria viridis* var. *robusta-purpurea*) Growth: The Development of SETSIM. P. L. Orwick, M. M. Schreiber and D. A. Holt
- 700 Some Aspects of Glyphosate Action in Purple Nutsedge (*Cyperus rotundus*). B. E. Abu-Irmaileh and L. S. Jordan
- 703 Augmenting the Moth (*Bactra verutana*) in Field Plots for Early-Season Suppression of Purple Nutsedge (*Cyperus rotundus*). K. E. Frick and J. M. Chandler
- 711 Target Tissue for Napropamide Inhibition: Effects on Green and White Callus Cultures and Seedlings. S. Zilkah, P. F. Bocion and J. Gressel
- 713 Nigerian Weed Species: Intraspecific Competition. M. A. O. Oladokun
- 720 Errata; News Notes
- 721 Author Index to Volume 26 WEED SCIENCE
- 724 Subject Index to Volume 26 WEED SCIENCE
- 731 Statement of Ownership

WSSA6 26(6) 521–730 (1978)

WEED SCIENCE

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

L. L. Danielson, *Editor*

University of North Carolina at Charlotte
Department of Biology, UNCC Station, Charlotte, NC 28223

Associate Editors

A. P. Appleby, Agronomy and Crop Science Department,
Oregon State University, Corvallis, OR 97331

D. E. Bayer, Botany Department, University of California, Davis, CA 95616

R. H. Hodgson, USDA, Metabolism and Radiation Laboratory,
State University Station, Fargo, ND 58102

D. L. Klingman, USDA, Beltsville Agricultural Research Center, Beltsville, MD 20705

E. E. Schweizer, USDA, Crops Research Laboratory,
Colorado State University, Fort Collins, CO 80523

G. D. Wills, Delta Branch Experiment Station, Stoneville, MS 38776

Editorial Committee

J. L. Anderson
W. L. Barrentine
M. A. Cole
W. B. Duke
A. E. Hiltbold

B. J. Johnson
T. N. Jordan
W. O. Lee
C. G. McWhorter

R. E. Meyer
J. A. Norton
J. V. Parochetti
D. P. Penner

A. R. Putnam
D. N. Riemer
R. B. Taylorson
B. Truelove
W. H. Vanden Born

Officers of the Weed Science Society of America

P. W. Santelmann, President
J. R. Hay, President-Elect
W. D. Carpenter, Vice-President
D. E. Bayer, Secretary
J. L. Hilton, Editor-in-Chief
G. H. Bayer, Treasurer
C. J. Cruse, Executive Secretary

Weed Science (SECD 671320) is the official publication of the Weed Science Society of America, 113 North Neil Street, Champaign, IL 61820. It is published bi-monthly, one volume per year, six issues per year beginning in January.

Membership is \$15 per year, student affiliate membership \$7.50, which includes receipt of the *Weed Science*, *Weeds Today*, and *WSSA Newsletter*. Dues should be sent to WSSA, 113 North Neil 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 \$25 per year, one volume per year of six issues beginning January. New subscriptions and renewals begin with the first issue of the current volume and should be sent to WSSA, 113 North Neil 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, 113 North Neil 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 office of the Editor located in the Department of Biology, University of North Carolina at Charlotte, UNCC Station, Charlotte, NC 28223. Directions for contributors are published annually in the January issue of *Weed Science*.

Weed Science published by the Weed Science Society of America.
Second class postage paid at Champaign, IL and at additional mailing offices.
Copyright 1978 by the Weed Science Society of America. Printed in USA.
All rights reserved. Reproduction in part or whole prohibited.

Return POD form 3 579 to WSSA, 113 North Neil Street, Champaign, IL 61820