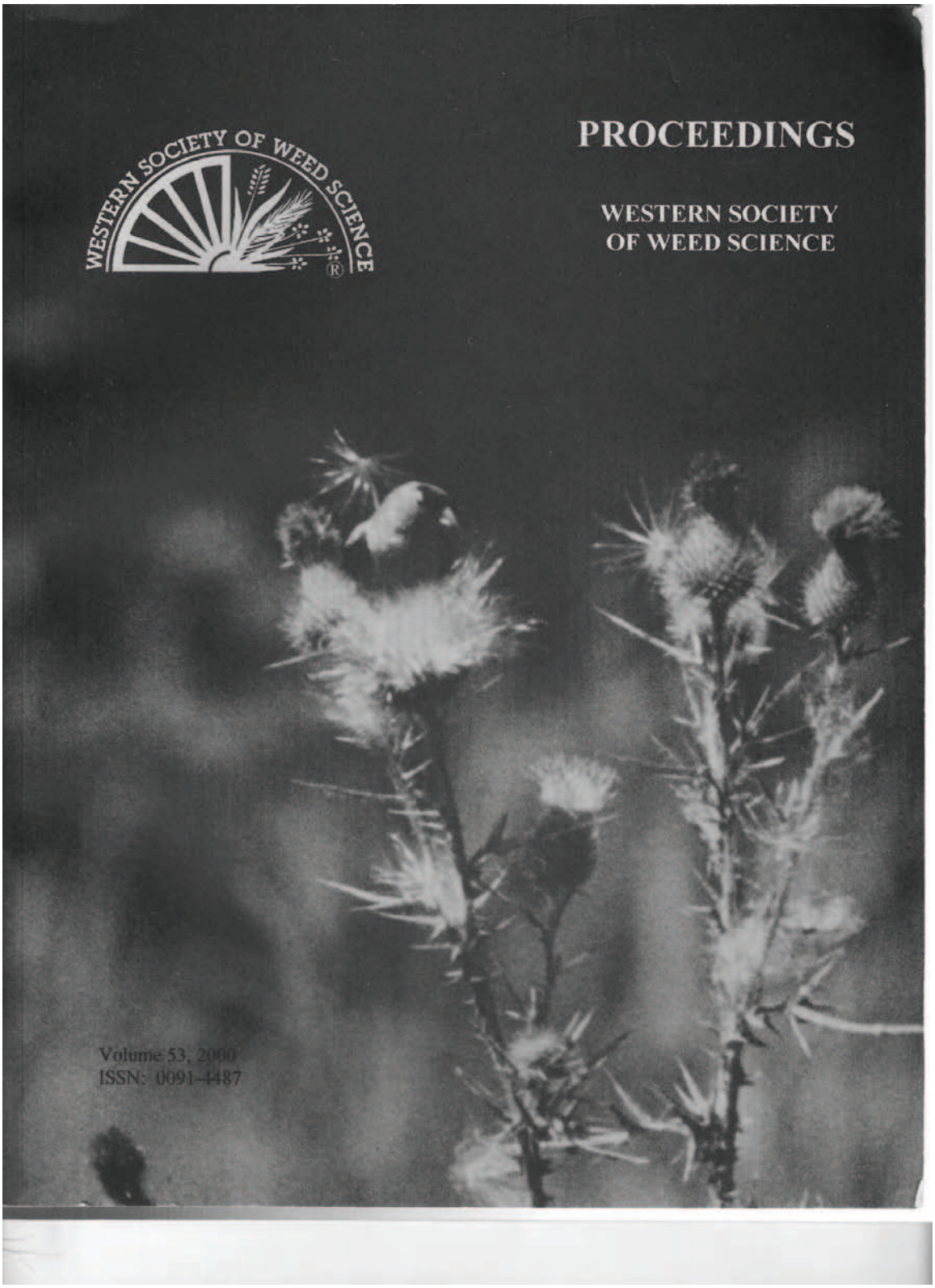
WESTERN SOCIETY OF WEED SCIENCE
PROCEEDINGS
WESTERN SOCIETY
OF WEED SCIENCE
Volume 53, 2000
ISSN: 0091-4487

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2000 - 2001

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PROCEEDINGS

OF

THE WESTERN SOCIETY OF WEED SCIENCE

VOLUME 53

PAPERS PRESENTED AT THE ANNUAL MEETING

MARCH 14 TO 16, 2000

HOLIDAY INN CITY CENTER

TUCSON, ARIZONA

PREFACE

The Proceedings contain the written summary of the papers presented at the 2000 Western Society of Weed Science Annual meeting plus summaries of the research discussion groups and of the business transacted by the Executive Board. Authors submitted either abstracts or full papers of their presentations.

In these Proceedings, herbicide application rates are given as acid equivalent or active ingredient unless otherwise specified. Chemical names of the herbicides mentioned in the text are given in the herbicide index. Botanical names of crops and weeds are given in the appropriate index and are not repeated in the text unless their omission may cause confusion. Common and botanical names follow those adopted by the Weed Science Society of America as nearly as possible and Hortus third.

Copies of this volume are available at $15.00 per copy from Wanda Graves, WSWS Business Manager, P.O. Box 963, Newark, CA 94560.

Cover: American Goldfinch (*Carduelis tristis*) feeding on bull thistle (*Cirsium vulgare*). Cover photograph by Rod Lym, North Dakota State University. All other photographs by Steve Dewey.

Proceedings Editor: Kathy Christianson

plus 0.0009 lb tribenuron/A herbicide treatment which was equivalent to 0.1 times the recommended rate for small grains. Herbicide applications were at the rosette stage of the canola ahead of the bifenthrin applications. Insect populations were determined by counting the number of cabbage aphid colonies at set intervals following the bifenthrin application and determining the percentage of canola siliques exhibiting exit holes caused by the cabbage seedpod weevil.

Cabbage aphid counts taken 10 days after the bifenthrin application in 1998 showed greater than a five-fold increase in the number of aphid colonies within an insecticide treatment when 0.01 and 0.001 rates of sulfonylurea herbicide were applied in combination with either insecticide. Aphid populations for both insecticides were approximately one-half of the population of the nontreated insecticide treatment within the 0.01 and 0.001 rates herbicide treatment. Aphid populations were not different for any of the three herbicide treatments within the nontreated insecticide treatment. Cabbage seedpod weevil counts taken at harvest showed that within the imidacloprid treatment, populations were over 10 and 25 times greater when the insecticide was applied in combination with 0.01 and 0.001 field rates of sulfonylurea, respectively, than imidacloprid alone. For bifenthrin the differences were approximately 2 and 5 times greater, respectively. A reduction in canola seed yield of approximately 25% in comparison to the yield of the nontreated herbicide treatment was seen within both imidacloprid and bifenthrin treatments for both herbicide rates. Within the nontreated insecticide treatment, canola seed yield actually increased approximately 25% with both herbicide rates compared to the nontreated herbicide treatment. Results for 1999 are not completely summarized, but initial summary shows the same trends.

WILD PROSO MILLET (*PANICUM MILIACEUM*) RESPONSE TO IMAZAMOX: SHOOT DRY MATTER REDUCTION AND ABSORPTION. Décio Karam[1,2], Scott J. Nissen[1], and Philip Westra[1], Graduate Research Assistant, Associate Professor, and Professor, [1]Department of Bioagricultural Science and Pest Management, Colorado State University, Ft. Collins, CO 80523 and [2]Brazilian Agricultural Research Corporation.

Abstract. Imazamox control of wild proso millet, a weed problem in corn producing areas in the United States and Canada, was studied under greenhouse and laboratory conditions at Colorado State University. Twelve biotypes of wild and cultivated proso millet were grown in flats filled with commercial potting soil. Plants were treated in a spray chamber at 210 L ha^{-1} when plants had 4-leaves to 1-tiller about 10 days after planting. Imazamox was applied at 0.053, 0.027, 0.013, and 0.007 kg ha^{-1}. Shoot dry matter reduction varied by biotypes. Imazamox at 0.053 kg ha^{-1} reduced shoot dry weight from 72 to 93% depending on the biotype. Shoot dry weight reduction observed due to imazamox at 0.027 kg ha^{-1} varied from 42 to 73%. Absorption was studied in two wild proso millet biotypes selected based on differential response to imazamox. Imazamox at 0.053 kg ha^{-1} was applied alone and in combination with methylated seed oil (1% v/v), NIS (0.25% v/v), NIS (0.25% v/v) plus urea ammonium nitrate (UAN-28% 1% v/v), and UAN-28% (1% v/v). Treated leaves were washed with 10% methanol plus 0.25% NIS. Absorption was calculated by the difference of the imazamox applied and the imazamox recovered in leaf wash. No differences in absorption were observed at 24 and 48 hours. Imazamox absorption with methylated seed oil and with NIS plus UAN-28% was 89% and 94% respectively, while absorption of imazamox alone was 65% at 24 hours.

EFFECTS OF PROPICONAZOLE ON GERMINATION AND GROWTH OF BROADLEAF WEEDS. Laura A. Hanson, Bill D. Brewster, Carol A. Mallory-Smith, and Bradley D. Hanson, Graduate Student, Senior Instructor, Associate Professor, and Faculty Research Assistant, Oregon State University, Corvallis, OR 97331-3002.

Abstract. Propiconazole, a sterol biosynthesis inhibitor, is frequently employed in the control of fungal pathogens in agricultural and horticultural crops. Field studies conducted in 1998 and 1999 indicated that propiconazole inhibited germination and growth of broadleaf weeds. In a 1999 field study, propiconazole applied at a rate of