

70th Annual Meeting of the North Central Weed Science Society 2015 (NCWSS 2015)

Indianapolis, Indiana, USA
7 – 10 December 2015

ISBN: 978-1-5108-2240-5

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2015) by North Central Weed Science Society
All rights reserved.

Printed by Curran Associates, Inc. (2016)

For permission requests, please contact North Central Weed Science Society
at the address below.

North Central Weed Science Society
205 W. Boutz, Building 4, Suite 5
Las Cruces, New Mexico 88005
USA

Phone: 575-527-1888
Fax: 575-527-8853

www.ncwss.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

The 2015 NCWSS Proceedings is Dedicated to Dr. Thomas Baumann



Dr. Thomas Trost Bauman, Professor Emeritus, passed away Saturday July 11, 2015 at his home in West Lafayette. Born September 11, 1939 in Lafayette, he was the son of Ronald Hawkins Bauman and Martha G. (Trost) Bauman. He is survived by his loving wife of nearly 50 years, Nancy L. (Sahnd). They were married on August 14, 1965 in Cincinnati, OH. Also surviving are his three children, Bob of Seattle, MaryBeth (Ken) Johnson of West Lafayette, and John (Emily) of West Lafayette; four grandchildren, Olivia and Luke Johnson, and Gretchen and Grant Bauman; his three siblings Ronald "Bill" (Irmgard) Bauman of Los Angeles, CA, Elizabeth "Sis" (Leslie) Graham of Lake Forest, IL and Naples, FL, and Richard (Sharon) Bauman of Punta Gorda, FL; as well as five nieces and seven nephews. Tom attended West Lafayette schools and graduated from WLHS in 1957 where he was active within the student body in numerous roles including student council president and 1956 football MVP. He remained close to his classmates and treasured their friendships, often organizing frequent class reunions and still

attending Friday night games. As a lifelong West Lafayette resident, he often served as a West Lafayette and Purdue University amateur historian and tour guide for those visiting from out of town. He attended Purdue University, receiving a B.S., M.S., and PhD in Agriculture. He was a member of Sigma Alpha Epsilon fraternity. Following in his father's footsteps as a professor at his alma mater, he was appointed to the Botany and Plant Pathology Department, with a focus on Extension and Research. Tom and his students were well published in both scientific and Extension journals. He served the North Central Weed Science Society in many capacities culminating with the office of President in 1994 and he was given the Fellow Award, the NCWSS highest honor, in 1996. Tom's work was acknowledged worldwide and he was fortunate to frequently travel internationally to share his work; he particularly enjoyed his extensive efforts in Brazil and remained close friends with many Brazilian scientists. Although Tom was internationally recognized, he was humble and took his greatest joy in helping to train young people, future scientists and simply farming the black Indiana soil, whether it be corn, beans, weeds, or the greatest of hybrid sweet corn. Tom was a caring, kind, concerned person, especially sensitive to his graduate students and those who worked with him in the field. He respected Indiana farmers and enjoyed his many meetings with them, particularly his annual field day at the Purdue Agronomy Farm.

Program

General Session.....	3
Agronomic Crops.....	3
Agronomic Crops I (Corn, Sorghum, Cereals)	4
Agronomic Crops II (Soybeans, Dry Beans/Sugar Beets)	5
Equipment and Application Methods	8
Extension	10
Herbicide Physiology.....	10
Horticulture and Ornamentals.....	12
Rangeland, Pasture, and Industrial Vegetation Management.....	13
Weed Biology, Ecology, Management	13
Molecular Techniques in Weed Science	15
Invasive Weeds Symposium (MIPN)	15

Abstracts.....	18
Author Index	93
Keyword Index.....	99
Meeting Attendees.....	102

PROGRAM

2015 Officers/Executive Committee

President -John Hinz	Editor, NCWSS Proceedings -Greg Kruger
President Elect - Anita Dille	Editor, NCWSS Communications -Vince Davis
Vice President -Greg Dahl	WSSA Representative -Reid Smeda
Past President -J.D. Green	CAST Representative -Curtis Thompson
Secretary/Treasurer -David Simpson	Executive Secretary -Phil Banks

General Session

Welcome to Indianapolis.*; (93)

How The North Central Weed Control Conference Shaped Agricultural Aviation in the Grasslands. David D. Vail*; Kasnas State Univeristy, Manhattan, KS (94)

NCWSS Presidential Address. John Hinz*; Bayer CropScience, Story City, IA (95)

Necrology Report. Aaron Hager*; Univeristy of Illinois, Urbana, IL (96)

***SPEAKER † STUDENT CONTEST**

Agronomic Crops

Comparisons of winter versus early spring preemergence herbicide applications for kochia control in fallow. Randall S. Currie*1, Patrick Geier2, Curtis R. Thompson3; 1Kansas State Univ., Garden City, KS, 2Kansas State, Garden city, KS, 3Kansas State, Manhattan, KS (97)

†Preharvest Herbicide Application Effects on Winter Wheat Harvestability. Kelsey Rogers*, Christy L. Sprague; Michigan State University, East Lansing, MI (98)

†Evaluation of Herbicide Programs for the Termination of Eight Different Cover Crop Species in the Spring. Cody D. Cornelius*1, Kevin W. Bradley2, Mandy D. Bish3, Alex R. Long2, Meghan E. Biggs2, David L. Kleinsorge4; 1University of Missouri, Columbia MO, MO, 2University of Missouri, Columbia, MO, 3University of Missouri, 65211, MO, 4Research Specialist, Columbia, MO (99)

†Cover Crop Interseeding in Grain Corn using a Modified Grain Drill. Daniel H. Smith*1, Matthew D. Ruark1, Francisco J. Arriaga1, Vince M. Davis2; 1University of Wisconsin-Madison, Madison, WI, 2BASF Corporation, Verona, WI (100)

†Sulfentrazone Tank-mix Partners for Grass Control in Ontario Dry Beans (*Phaseolus vulgaris* L.). Allison N. Taziar*, Peter H. Sikkema, Darren E. Robinson; University of Guelph, Ridgetown, ON (101)

†Halosulfuron Tank Mixes Applied PPI and PRE in White Bean. Zhenyi Li*1, Rene Van Acker1, Darren E. Robinson2, Nader Soltani2, Peter H. Sikkema2; 1University of Guelph, Guelph, ON, 2University of Guelph, Ridgetown, ON (102)

†Sonic and SureStart II for Palmer Amaranth control in Agronomic Crops. Alinna Umphres-Lopez*1, Tony W. Weiss2, Zachary Lopez3, Thomas C. Mueller1; 1University of Tennessee, Knoxville, TN, 2Dow AgroSciences, Raleigh, NC, 3Dow AgroSciences, Bishop, TX (103)

2015 North Central Weed Science Society Proceedings Vol. 70.