

Ian Cristofer Burke

Curriculum Vitae

EDUCATION

Ph.D., Weed Science, North Carolina State University. December 2005.

Dissertation: Biology, physiology, and pollen expression of ACCase resistance in johnsongrass (*Sorghum halepense*). Dr. John Wilcut, Advisor.

Master of Science, Weed Science, North Carolina State University. May 2002.

Thesis: Influence of environmental factors on broadleaf signalgrass (*Brachiaria platyphylla*) and crowfootgrass (*Dactyloctenium aegyptium*) and antagonism of clethodim by CGA 362622 and imazapic. Dr. John Wilcut, Advisor.

Bachelor of Science, Biology, Old Dominion University. May 1997.

PROFESSIONAL POSITIONS

Assistant Professor, Washington State University, August 2006 to Present.

My research program at Washington State University is focused on basic aspects of weed biology and ecology with the goal of integrating such information into practical and economical methods of managing weeds in the environment. Currently, projects include physiological, biological and ecological studies on prickly lettuce, a common and troublesome weed in crops, range, and noncropland throughout the inland Pacific Northwest. Prickly lettuce is an invasive weed with wind dispersed seeds that crosses boundaries at multiple scales - from field borders to regional boundaries. It infests Conservation Reserve Program (CRP) land and appears to cause significant economic losses in wheat-based cropping systems. Future research will focus on improving understanding of the biology of this species and the implications of control inputs in different adjacent managed ecosystems (wheat and CRP). This project will test the hypothesis that weed control practices resulting from policy-directed economic limitations in CRP will have a direct effect on production practices and profitability in adjacent agroecosystems. Those same control practices may have also contributed to the development of herbicide resistance. To test this hypothesis, the effects of policy-driven prickly lettuce control practices in CRP on fecundity in response to typical (low) input versus effective (high) input are being determined. When combined with information on seed movement and seed rain dynamics to adjacent crop ground that result from those inputs, and density-dependent yield losses (and thus the economic costs) based on seed production in crops and seed movement out of CRP and into adjacent crop fields, I will be able to assign thresholds and value to prickly lettuce in CRP. This information would allow more accurate guidance for policy makers and growers on how to manage this destructive weed for the benefit of both ecosystems.

Other projects include an assessment of the changes in the soil seed bank in response to 8 years of crop rotation at the Cook Agronomy Farm, biological and physiological aspects

of *Artemisia annua* cultivation in eastern Washington, physiological and biochemical investigations with aminocyclopyrachlor, and biochemical characterization of prickly lettuce latex and rubber.

Post-Doctoral Research Associate and Plant Physiologist, USDA-ARS Southern Weed Science Research Unit, August 2005 to August 2006.

[[†]Note: *h*-index based on Web of Science data from 6/1/11. *h*-index is a metric that measures the combination of number (quantity) and impact (citations) of an author's publications. The *h*-index states that *h* publications have at least *h* citations. For example, an *h*-index of 9 means that there are 9 publications that have been cited 9 or more times.]

Journal Impact Factors:

Journal of Agricultural and Food Chemistry	2.469
Journal of Heredity	2.052
Journal of Soil and Water Conservation	1.030
Journal of Sustainable Agriculture	0.393
Pest Management Science	2.040
Pesticide Biochemistry and Physiology	1.719
Proceedings of the National Academy of Sciences	9.432
Weed Science	1.451
Weed Technology	0.749

HONORS AND AWARDS

2011:

- Excellence in Research, College of Agriculture, Human, and Natural Resources.

2010:

- Outstanding Weed Scientist, Early Career, Western Society of Weed Science.
- Finalist, Excellence in Research, College of Agriculture, Human, and Natural Resources.

2005:

- Outstanding Ph.D. Graduate Student Award, Southern Weed Science Society.
- Outstanding Ph.D. Graduate Student Award, Weed Science Society of North Carolina.
- 1st Place Southern Weed Science Society Paper Contest, Agronomic Crops Section.

2004:

- Outstanding Graduate Student Award, Weed Science Society of America.
- 2nd Place, North Carolina Crop Protection Meeting Graduate Student Paper Contest.

2003:

- Outstanding Masters Graduate Student, Weed Science Society of North Carolina.

2001:

- 2nd Place Southern Weed Science Society Paper Contest, Agronomic Crops Section.

GRANTS FUNDED**TOTAL AMOUNT FUNDED: \$23,663,474****TOTAL AMOUNT RECEIVED IN PROGRAM: \$1,620,312****Weed Control in Wheat**

Principal Investigator(s): I. C. Burke (PI).

Agency: Washington Grain Commission

Dates: 7/01/2011 - 6/30/2012

Amount requested: \$41,929

Amount received: \$39,000

Washington Wheat Commission Equipment Grant

Principal Investigator(s): I. C. Burke

Agency: Washington Grain Commission

Dates: 6/01/2011

Amount requested: \$25,000

Amount received: \$25,000

Approaches to Climate Change for Inland Pacific Northwest Agriculture

Principal Investigator(s): Eigenbrode, S. (PD), J. T. Abatzoglou, J. M. Antle, I. C. Burke, S. Capalbo, P. E. Gessler, J. R. Gosz, D. R. Huggins, J. Johnson-Maynard, C. E. Kruger, B. K. Lamb, P. W. Mote, K. M. Painter, W. L. Pan, S. Petrie, T. C. Paulitz, P. B. Sepson, C. O. Stockle, V. P. Walden, J. D. Wulforst, K. J. Wolf.

Agency: National Institute of Food and Agriculture

Dates: 03/01/2011 - 2/28/2016

Amount requested: \$195,674

Amount received: \$195,674

Total amount requested: \$19,572,258

Total award amount: \$19,572,258

Pursuit Carryover and Osprey Tolerance in Winter Wheat

Principal Investigator(s): I. C. Burke (PI) and J. P. Yenish.

Agency: Washington Grain Commission

Dates: 7/01/2010 - 6/30/2011

Amount requested: \$23,500

Amount received: \$23,500

Washington Wheat Commission Equipment Grant

Principal Investigator(s): I. C. Burke (PI)

Agency: Washington Grain Commission

Dates: 7/01/2010 - 6/30/2011

Amount requested: \$32,000

Amount received: \$32,000

Weed Control in Wheat

Principal Investigator(s): I. C. Burke (PI) and J. P. Yenish.

Agency: Washington Grain Commission

Dates: 7/01/2010 - 6/30/2011

Amount requested: \$37,014

Amount received: \$36,500

Weed, Disease, and Residue Management Strategies for CRP to Crop Transition

Principal Investigator(s): I. C. Burke (PI), D. Ball, A. Esser, W. Pan, T. Paulitz, D. Wysocki, and J. P. Yenish.

Agency: USDA-CSREES Solutions to Environmental and Economic Problems Special Research Grant Program

Dates: 7/01/2010 - 6/30/2012

Amount requested: \$125,000

Amount received: \$125,000

Total award amount: \$150,000

Development of Artemisinin Compounds for Cancer Treatment – Cultivation of *Artemisia annua* L.

Principal Investigator(s): W. Pan and I. C. Burke

Agency: Life Science Discovery Fund

Dates: 4/01/2010 - 3/30/2013

Amount requested: \$231,312

Amount received: \$231,312

Project Director: T. Sasaki, University of Washington Total Award: \$1.44 M

W. Pan is responsible for investigating the fertility requirements for *Artemisia annua*, while I. C. Burke is responsible for investigating plant growth and artemisinin production.

Sustainable Dryland Organic Farming Systems in the Pacific Northwest

Principal Investigator(s): E. P. Fuerst, R. Koenig, I. C. Burke (PI), and A. M. Fortuna

Agency: United States Department of Agriculture-Organic Research and Extension Initiative

Dates: 11/01/2009 - 11/01/2013

Amount requested: \$232,028

Amount received: \$217,791

Total amount requested: \$1.09 M

Total award amount: \$1.04 M

E. P. Fuerst, who authored the grant, has stepped aside as the principal investigator and I. C. Burke assumed that role in September of 2010.

Biofuel Cropping Systems Oil Seed Analysis

Principal Investigator(s): I. C. Burke (PI) and Eugene Fuerst

Agency: Washington State Legislature

Dates: 7/01/2009 - 6/30/2011

Amount requested: \$60,000

Amount received: \$60,000

Weed Control in Wheat

Principal Investigator(s): I. C. Burke (PI) and J. P. Yenish.

Agency: Washington Wheat Commission

Dates: 7/01/2009 - 6/30/2010

Amount requested: \$37,014

Amount received: \$35,000

Washington Wheat Commission Equipment Grant

Principal Investigator(s): I. C. Burke (PI) and J. P. Yenish.

Agency: Washington Wheat Commission

Dates: 7/01/2009 - 6/30/2010

Amount requested: \$17,250

Amount received: \$17,250

Pursuit Carryover and Osprey Tolerance in Winter Wheat

Principal Investigator(s): I. C. Burke (PI) and J. P. Yenish.

Agency: Washington Wheat Commission

Dates: 7/01/2009 - 6/30/2010

Amount requested: \$41,958

Amount received: \$41,500

Determining Critical Weed-Free Period for Broadleaf Weeds in Chickpeas and Developing Broadleaf Weed Management Systems

Principal Investigator(s): J. P. Yenish (PI); I. C. Burke

Agency: USDA Cool Season Food Legumes

Dates: 4/1/2009 – 3/31/2011

Amount requested: \$50,000

Amount received: \$36,000

Aegilops Cylindrica (Jointed Goatgrass)

Principal Investigator(s): I. C. Burke (PI) and M. Neff

Agency: USDA-CSREES Special Research Grant Program

Dates: 7/01/2008 - 6/30/2010

Amount requested \$56,000

Amount received \$56,000

Project Director: Michael Kahn

Total award amount: \$243,536

Camelina Improvement for Insensitivity to Residual Herbicide Activity

Principal Investigator(s): S. Hulbert (PI) and I. C. Burke.

Agency: Sun Grant

Dates: 7/01/2008 - 6/30/2009

Amount requested \$89,428

Amount received \$43,229

Weed Control in Wheat

Principal Investigator(s): I. C. Burke (PI) and J. P. Yenish.

Agency: Washington Wheat Commission

Dates: 7/01/2008 - 6/30/2009

Amount requested: \$37,014

Amount received: \$31,000

Pursuit Carryover and Osprey Tolerance in Winter Wheat

Principal Investigator(s): I. C. Burke (PI) and J. P. Yenish.

Agency : Washington Wheat Commission

Dates: 7/01/2008 - 6/30/2009

Amount requested: \$41,958

Amount received: \$41,500

Determining Critical Weed-Free Period for Broadleaf Weeds in Chickpeas and Developing Broadleaf Weed Management Systems

Principal Investigator(s): J. P. Yenish (PI); I. C. Burke

Agency: USDA-CSREES Cool Season Food Legumes Special Research Grant

Dates: 7/01/2008 - 6/30/2009

Amount requested: \$50,000

Amount received: \$31,965

Strategies to Achieve Ecological and Economic Goals in the Transition Phase of Eastern Washington Organic Dryland Grain Production

Principal Investigator(s): E. P. Fuerst (PI), R. Koenig, I. C. Burke, A. M. Fortuna, B. Baik, H. Hinman, and D. Roberts.

Agency: WSU CSANR through the BioAg Initiative

Dates: 7/01/2008 - 6/30/2009

Amount requested: \$41,000

Amount received: \$41,000

Matching Funds: \$18,000 (Matching Funds received from Small Planet Foods)

Field-Scale Evaluation of Key Economic, Weed, Disease, Soil C and N Properties in Long-term Direct-Seeding at the Cook Agronomy Farm

Principal Investigator(s): I. C. Burke, A. M. Fortuna, D. Huggins, S. Hulbert, K. Painter, and T. Paulitz.

Agency: Solutions to Environmental and Economic Problems

Dates: 7/01/2008 - 6/30/2011

Amount requested: \$17,091

Amount received: \$17,091

Primary PI: I. C. Burke

Total award amount: \$85,453

Weed Control in Cool Season Food Legumes

Principal Investigator(s): J. P. Yenish (PI) and I. C. Burke.

Agency: USA Dry Pea and Lentil Commission

Dates: 7/01/2008 - 6/30/2009

Amount requested: \$4000

Amount received: \$4000

Strategies to Achieve Ecological and Economic Goals in the Transition Phase of Eastern Washington Organic Dryland Grain Production

Principal Investigator(s): R. Koenig (PI), E. P. Fuerst, I. C. Burke.

Agency: WSU CSANR through the BioAg Initiative

Dates: 7/1/2007 - 6/30/2008

Amount requested: \$21,000

Amount received: \$21,000

Matching Funds: \$15,000 (Matching Funds received from Small Planet Foods)

Weed Control in Oilseed Crops

Principal Investigator(s): J. P. Yenish, I. C. Burke, and T. Miller

Agency: Washington State Legislature

Dates: 7/01/2007 - 6/30/2009

Amount requested: \$80,000

Amount received: \$80,000

Biofuel Cropping Systems Oil Seed Analysis

Principal Investigator(s): I. C. Burke (PI) and Eugene Fuerst

Agency: Washington State Legislature

Dates: 7/01/2007 - 6/30/2009

Amount requested: \$90,000

Amount received: \$90,000

Composition of the Cuticle of Russian Thistle in Response to Drought Stress

Principal Investigator(s): I. C. Burke (PI) and L. Keuhl.

Agency: Weed Science Society of America Undergraduate Research Award

Dates: 7/1/2007 - 6/30/2008

Amount requested: \$1000

Amount received: \$1000

Weed Control in Wheat

Principal Investigator(s): I. C. Burke (PI) and J. P. Yenish.

Agency: Washington Wheat Commission

Dates: 7/1/2007 - 6/30/2008

Amount requested: \$31119

Amount received: \$30000

Strategies to Achieve Ecological and Economic Goals in the Transition Phase of Eastern Washington Organic Dryland Grain Production

Principal Investigator(s): R. Koenig (PI), I. C. Burke, B. Baik, H. Hinman, D. Roberts, E. P. Fuerst

Agency: WSU CSANR through the BioAg Initiative

Dates: 7/1/2006 - 6/30/2007

Amount requested: \$21,000

Amount received: \$21,000

Matching Funds: \$14,000 (Matching Funds received from Small Planet Foods)

GIFTS GRANTS**TOTAL AMOUNT RECEIVED: \$196,975**

- Pea Response to Simulated Defoliation
Source: National Crop Insurance Agency: \$8,000
- Planting Density Effects on Wheat Growth and Yield
Source: National Crop Insurance Agency: \$8,000
- Effects of Palisade on Winter Wheat Growth and Development
Source: Syngenta Crop Protection: \$4,500
- Weed Control in Winter Wheat with Axial Star
Source: Syngenta Crop Protection: \$5,800
- Weed Control in Winter Wheat
Source: Bayer Crop Science: \$12,500
- Physiological attributes of DPX-MAT-28 in invasive weed species.
Source: Dupont Crop Protection: \$10,000
- Physiological attributes of DPX-MAT-28 in invasive weed species.
Source: Dupont Crop Protection: \$30,000
- Physiological attributes of DPX-MAT-28 in invasive weed species.
Source: Dupont Crop Protection: \$30,000
- Physiological attributes of DPX-MAT-28 in invasive weed species.
Source: Dupont Crop Protection: \$20,000
- Movement of aminopyralid and clopyralid in rush skeletonweed.
Source: Dow AgroSciences: \$7200
- BAS556 and Twinline Crop Safety
Source: BASF Crop Protection: \$3000
- Rattail Fescue Control with Pyroxsulam
Source: Dow AgroSciences LLC: \$4500
- Mayweed Chamomile control with Widematch
Source: Dow AgroSciences LLC: \$3500
- Maverick, Olympus, PowerFlex, Olympus Flex, and Osprey Wheat Injury
Source: Monsanto: \$8000
- Pyroxsulam and Mesosulfuron Winter Wheat Variety Tolerance
Source: Dow AgroSciences LLC: \$4500
- Pyroxsulam, Olympus, Olympus Flex, and Maverick Applications Timings
Source: Dow AgroSciences LLC: \$3425

- Optimum Adjuvant Package for Pyroxsulam in Winter Wheat in Washington
Source: Dow AgroSciences LLC: \$3425
- Chickpea Response to BAS-800 PPI
Source: BASF Crop Protection: \$4500
- Chickpea and Field Pea Response to BAS-800 PPI and PRE with Simulated Rainfall
Source: BASF Crop Protection: \$7000
- Pea Response to BAS-800
Source: BASF Crop Protection: \$2600
- Fallow Applications of BAS-800
Source: BASF Crop Protection: \$2400
- Triticale Tolerance to Axial
Source: Syngenta Crop Protection: \$5000
- Fall and Spring Applications of Pyroxsulam
Source: Dow AgroSciences LLC: \$4250
- Application Timing for Pyroxsulam in Winter Wheat
Source: Dow AgroSciences LLC: \$4250
- Weed Control with Pyroxsulam
Source: Dow AgroSciences LLC: \$2125
- Weed Control with Pyroxsulam
Source: Dow AgroSciences LLC: \$2750

INVITED LECTURES

Dupont Crop Protection Aminocyclopyrachlor Research Exchange, Sonoma, CA: 2010.

Bayer Crops Science Weed Resistance Congress, Miami, FL: 2009.

Dow AgroScience Aminopyralid Research Exchange, San Diego, CA: 2009.

Dupont Crop Protection Aminocyclopyrachlor Research Exchange, Sonoma, CA: 2009.

Dupont Crop Protection Aminocyclopyrachlor Research Exchange, Fresno, CA: 2008.

Dow Agroscience Pyroxsulam Research Exchange, Indianapolis, IN: 2007.

Washington State University, Department of Crop and Soil Sciences, Pullman, WA: 2006.

University of Arkansas, Crop, Soil, and Environmental Sciences, Fayetteville, AK, 2006.

USDA-ARS Weed Science Research Unit, Stoneville, MS: 2005.

University of Florida, Plant and Soil Sciences, Gainesville, FL: 2005.

Clemson University, Department of Entomology, Soils, & Plant Sciences, Clemson, SC: 2005.

TEACHING AND MENTORING

Post-Doctoral Associates:

Dilpreet Singh Riar, 1/1/2010 – 8/1/2010, Development of molecular markers for detection of 2,4-D resistance in prickly lettuce.

Research Associates:

Randall E. Stevens, 5/15/2010 – 7/15/2010, Detection of herbicide resistance in downy brome populations.

Jamin Smitchger, 7/1/2010 – 1/20/2011, Weed Control in Chickpea and Lentil.

Graduate Students, Completed (2):

- **Randall E. Stevens, M.S.** May 2010. Growth and Competitiveness of Diploid and Tetraploid Prairie Junegrass and Weed Control in the Palouse Prairie Ecosystem.
- **Jamin Smitchger, M.S.** July 2010. Critical Period of Weed Control in Chickpea and Lentil.

Graduate Students, Current:

1. Ph.D. (6 in progress)

- **Bell, Jared.** August 2008 to present. Latex and rubber quality and quantity in prickly lettuce. Washington State University Molecular Plant Sciences Program.
- **Lawrence, Nevin.** June 2011 to present. Climatic effects on the growth and development of weed species in the inland Pacific Northwest. Department of Crop and Soil Sciences.
- **Malone, Heather.** (Co-Advised with Dr. William Pan). June 2010 to present. Genetic and physiological aspects of artemisinin production in *Artemisia annua* grown Eastern Washington. Department of Crop and Soil Sciences.
- **Ott-Borelli, Kristy.** (Co-Advised with Dr. Richard Koenig). August 2009 to present. Nitrogen balance and alternate sources for dryland organic production. Department of Crop and Soil Sciences.
- **Surachet, Attawan.** (Co-Advised by Dr. Camille Steber). August 2010 to present. Mechanism of resistance to glyphosate in mutated spring wheat. Department of Crop and Soil Sciences.
- **Unger, Rachel.** June 2010 to present. Field-scale evaluation of key economic, weed, disease, soil C and N properties in long-term, dryland conservation cropping systems of the Pacific Northwest. Department of Crop and Soil Sciences.

2. M.S. (2 in progress)

- **Manuchehri, Misha.** May 2010 to present. Relative competitiveness of spring crops for dryland organic systems. Department of Crop and Soil Sciences.
- **Raeder, Alan.** June 2011 to present. Persistence and carryover of pyroxsulam and florasulam in inland Pacific Northwest soils. Department of Crop and Soil Sciences.

Doctoral (Committee Member)

Dilpreet Singh, January 2007 to December 2009

Hyejin Lee, September 2007 to December 2010

Ebraheim Babiker, September 2007 to present

Masters (Committee Member)

Priscilla Nyamai, January 2007 to May 2009

Dusty Walsh, 8/2008 to 12/2010

Samuel Turner, 8/2010 to present.

Student Awards:

2010:

- Jared Bell, 1st Place Graduate Paper Presentation, Western Society of Weed Science, for the paper entitled: 'Characterization of Rubber Production in Eastern Washington Prickly Lettuce Biotypes.'

2008:

- Randall Stevens, 2nd Place Graduate Poster Presentation, Western Society of Weed Science, for the paper entitled: 'Organic transition cropping systems for weed management in eastern Washington.'
- Dilpreet S. Riar, 2nd Place Graduate Paper Presentation, Western Society of Weed Science, for the paper entitled: 'Absorption and translocation of 2,4-D in resistant prickly lettuce.'
- Zwainz, Amanda. 2008. Weed Science Society of America Undergraduate Research Award. Wheat Variety Response to Mesosulfuron.

2007:

- Lockard, Maria. 2007. First place, 2007 Graduate Student Paper Presentation Competition, Western Society of Weed Science Annual Meeting, Anaheim, CA.
- Kuehl, Lillian. 2007. Weed Science Society of America Undergraduate Research Award. Composition of the Cuticle of Russian Thistle in Response to Drought Stress.

Courses Instructed

2011:

Co-Instructor, AFS 201 Systems Skills Development, WSU, Spring 2010.

Enrollment: 46

2010:

Instructor, CropS 305 Ecology and Management of Weeds, WSU, Fall 2010.

Enrollment: 28

Co-Instructor, AFS 201 Systems Skills Development, WSU, Spring 2010.

Enrollment: 21

Instructor, CropS 510 Graduate Student Seminar, WSU, Spring 2010.

Enrollment: 6

2009:

Instructor, CropS 305 Ecology and Management of Weeds, WSU, Fall 2009.

Enrollment: 28

Instructor, CropS 512 Advanced Weed Science, WSU, Fall 2009.

Enrollment: 8

Instructor, CropS 512 Herbicide Modes of Action, WSU, Fall 2009.

Enrollment: 10

Instructor, CropS 512 State Tour, WSU, Fall 2009.

Enrollment: 14

2008:

Instructor, CropS 305 Ecology and Management of Weeds, WSU, Fall 2008.

Enrollment: 18

Instructor, CropS 512 Research Laboratory Techniques in Weed Science, WSU, Spring 2008.

Enrollment: 3

2007:

Instructor, CropS 305 Ecology and Management of Weeds, WSU, Fall 2007.

Enrollment: 29

2006:

Instructor, CropS 305 Ecology and Management of Weeds, WSU, Fall 2006.

Enrollment: 11

2004:

Instructor, CS 414L Weed Science Lab, NC State, Fall 2004.

2002:

Instructor, CS 414 Weed Science, NC State, Fall 2002

2001:

Instructor, CS 414L Weed Science Lab, NC State, Fall 2002.

2000:

Instructor, CS 414L Weed Science Lab, NC State, Fall 2000.

ACADEMIC AND EXTENSION SERVICE ACTIVITIES

2010:

Member, Finance Committee, Weed Science Society of America.

Associate Editor, Weed Technology, 2nd 3 Year Term.

Columbia County Field Tour: Control of Rattail Fescue with Powerflex (Invited).

Colfax Direct Seeders Breakfast Meeting: Transitioning CRP to production (Invited).

Boyd Farm Organic Wheat Production Field Day: Mechanical weed control strategies (Invited).

Spillman Crop Diagnostic Clinic: Diagnosing herbicide injury (Invited).

2009:

Secretary, Western Society of Weed Science, 2 Year Term.

Chair, Agronomic Crops Section, Western Society of Weed Science.

Member, Weed Resistance Committee, Western Society of Weed Science.

Member, Weed Biology Committee, Weed Science Society of America.

Cook Agronomy Farm Field Day: Prickly Lettuce Accession Response to Broadleaf Herbicides (Invited).

WSU Weed Science Field Day: Winter Wheat Variety Tolerance to Osprey (Invited).

Washington State Weed Association: Winter Wheat Variety Tolerance to Osprey.

Rush Skeletonweed Field Day, Cambridge, ID.: Absorption and translocation of aminocyclopyrachlor in rush skeletonweed.

Direct Seed Conference, Pasco, WA.: Pursuit Carryover to Oilseed Crops (Invited).

Colfax Direct Seeders Breakfast Meeting: 2,4-D Resistance in Prickly Lettuce (Invited).

Walla Walla Cereal Grain Conference: 2,4-D Resistance in Prickly Lettuce (Invited).

Lewiston Direct Seeders Breakfast Meeting: 2,4-D Resistance in Prickly Lettuce (Invited).

2008:

Secretary, Western Society of Weed Science, 2 Year Term

Chair, Poster Section, Weed Science Society of America

Lind Field Day: Weed Control, Application Timing, and Adjuvants for use with Powerflex (Invited).

Washington State Weed Association: Identification of Herbicide Resistance: 2,4-D Resistant Prickly Lettuce (Invited).

Washington State Weed Association: Agronomics and Weed Control in Peanut in the Columbia Basin.

2007:

Associate Editor, Weed Technology, 3 Year Term.

Chair, Agronomic Crops Section, Weed Science Society of America.

Cook Farm Field Day: Seed Bank Response to Direct-Seed Rotations (Invited).

Cook Farm Field Day: Weed Control with a Weed-Sensing Sprayer (Invited).

North Lincoln County Field Day: Update on 2,4-D Resistant Prickly Lettuce (Invited).

Washington State Weed Association. Weed Management Challenges with Peanut.

Washington State Weed Association. Weed Seeker Technology.

Herbicide Fate and Mode of Action Course: Lipid Biosynthesis Inhibitor Herbicides.

Herbicide Fate and Mode of Action Course: Herbicide Resistant Crops.

2004:

Peanut Field Day: Weed Identification Clinic.

Cotton Field Day: Identification of Common North Carolina Amaranths.

2003:

Peanut Field Day: Weed Identification Clinic.

2002:

Cotton Field Day: Weed Identification Clinic, Site-Specific Sprayer Demonstration.

2001:

Peanut Field Day: Weed Identification Clinic.

2000:

Cotton Field Day: Weed Identification Clinic

PROFESSIONAL AFFILIATIONS

American Society of Agronomy
Crop Science Society of America
Gamma Sigma Delta Honor Society of Agriculture
Weed Science Society of America
Western Society of Weed Science
Washington State Weed Association
Southern Weed Science Society
American Peanut Research and Education Society