

PUBLICATIONS

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by
S. E. Ullrich

Refereed/Edited [130 publications total: Journal (90); Symposium Proceedings-International (22); Regional (7); Book (1); Book Chapter (9); Research Bulletin (1)]

1. Ullrich, S. E. and R. F. Eslick. 1978. Lysine and protein characterization of spontaneous shrunken endosperm mutants of barley. *Crop Sci.* 18:809-812.
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Extension (4 listed)

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Abstracts

A total of 118 abstracts have been published from presentations made at professional meetings. Of these, 27 involved oral presentations by myself, 56 were poster presentations and 34 involved oral presentations made by coauthors usually graduate students or technologists. In addition, 3 posters were presented at a symposium without abstract publication. Of the 121 total presentations, 74 were at international, 39 were at national and 8 were at regional professional meetings. Only those abstracts published in the last six years (2006-2011) are listed below:

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 102. Druka, A*, E. Potokina, Z. Luo, N. Bonar, I. Druka, L. Zhang, B. Thomas, D. Marshall, S. Ullrich, B. Steffenson, T. Close, R. Wise, A. Kleinhofs, R. Williams, M. Kearsey, R. Waugh. 2007. Regulatory variation underlying developmental and quality traits in barley. Plant & Animal Genome XV International Conference (Jan. 13-17, San Diego). Final Abstracts Guide, p.. **Poster** presentation. Available at http://www.intl-pag.org/15/abstracts/PAG15_P07a_733.html.
 103. Nair, S.*, S.E. Ullrich, and B.-K. Baik. 2007. Variation in grain hardness and associated traits in USA barley breeding lines. AACCI Annual Meeting, San Antonio, TX, September 2007. Abstract online: <http://www.aaccnet.org/meetings/2007/abstracts/p07ma111.htm>
 104. Ullrich, S.E.*, V.A. Jitkov, A.D. Budde, M. Schmitt, and M.L. Wise. 2007. How can varieties and rain-fed production environments affect malting quality in spring barley. ASBC Newsletter 67 (no. 2): 35. available online: <http://meeting.asbcnet.org/registration/pdfs/programbook.pdf#abstracts> (p 45).
 105. Bonds, N, L. Carpenter-Boggs, S. Verhey, J. Davenport*, and S. Ulrich. 2007. Performance trials of composted mint distillery waste. Hort Science 42: 989. annual meetings of ASHS, poster presentation.
 106. Ullrich, S.E.*, J.A. Clancy, H. Lee, I.A. del Blanco, V.A. Jitkov, A. Kleinhofs, F. Han, D. Prada, I. Romagosa, and J.L. Molina-Cano. 2007. Genetic relationships between Preharvest sprouting and dormancy in barley. 11th International Symposium on Preharvest Sprouting in Cereals, 5-8 Nov. 2007, Mendoza, Argentina. Program and Abstract Guide p. 30. <http://www.agro.uba.ar/epg/sprout2007/index.htm> .
 107. Lee, H.*, S.E. Ullrich, I.A. del Blanco, I. Romagosa, D. Prada, and J.L. Molina-Cano. 2008. Genetic analysis of Preharvest sprouting in a two-row and 6-row barley cross. Plant & Animal Genome XVI Int'l Conf. Jan. 12-16, San Diego. Final Abstracts Guide, p. 199. **Poster** presentation. Available at: http://www.intl-pag.org/16/abstracts/PAG16_P05c_320.html
 108. Swanston, J.S.*, M. Elia, M. Moralejo, W.T.B. Thomas, S.E. Ullrich, A.M. Perez-Vendrell, F. Ciudad, J.L. Molina-Cano. 2008. Detection and assessment of genetic factors influencing quality in a cross between European and North American malting barley varieties. 10th Int'l. Barley Genetics Symp., Alexandria, Egypt, 5-10 April. Poster presentation.
 109. Ullrich, S.E.*, B._K. Baik, Z. Quinde-Axtell, and S. Nair. 2008. Barley for food: Traits and improvements. Abstracts 10th Int'l. Barley Genetics Symposium, Alexandria, Egypt, 5-10 April. Invited oral presentation.
 110. Participants of the Barley CAP and AGOUEB Consortia (G. Muehlbauer*). 2008. The Barley Agricultural Project. Abstracts 10th Int'l. Barley Genetics Symp., Alexandria, Egypt, 5-10 April.
 111. Nair, S.*, S.E. Ullrich, and B.-K. Baik. 2008. Variation, causes, and significance of grain hardness in barley for food. AACCI Annual Meeting, Honolulu, HI, Sept. 2008. Oral Presentation. Abstract online: <http://www.aaccnet.org/meetings/2008/abstracts/o08ma82.htm> .
 112. Nair, S., B.-K. Baik, S.E. Ullrich*. 2008. Variation, causes, and significance of grain hardness in barley for food. 18th North American Barley Researchers Workshop, Madison, WI, 26-29 Oct. Barley Newsletter 51: online: http://wheat.pw.usda.gov/ggpages/BarleyNewsletter/51/NABRW_2008_Proceedings.htm
 113. Cagirgan, M.I.*, S.E. Ullrich, P. Klungsupya, M.O. Ozbas. 2008. Herbicides may be the reason of a high frequency and wide spectrum of mutations in 'Baronesse' barley fields at Washington State. Abstracts 34th Congress on Science and Technology of Thailand, Bangkok, 31 Oct.-2 Nov. p 249-250.
 114. Nair, S.*, S.E. Ullrich, B. Baik. 2009. Structural differences in diverse barley lines for SKCS hardness index. AACCI Annual Meeting, Baltimore, MD, September 2009. Oral Presentation. Cereal Foods World 54:A24. <http://www.aaccnet.org/meetings/2009/abstracts/o09ma48.htm> .
 115. Lee, H.*, S.E. Ullrich, I. Burke, J. Yenish, T. Paulitz, C. Coyne. 2010. Mutation breeding for selective herbicide resistance in barley. Plant and Animal Genome XVIII Int'l. Conf., Jan. 9-13, San Diego. Abstract online: http://www.intl-pag.org/18/abstracts/P05c_PAGXVIII_308.html

116. Nair, S. G., Ullrich, S. E., and Baik, B.-K. 2010. Compositional and structural characterization of hullless barley lines of variable β -glucan content. AACCI Annual Meeting, Savannah, GA September 2010. Poster presentation. Cereal Foods World 55:A62. <http://www.aaccnet.org/meetings/2010/abstracts/p10ma139.htm>.
117. Wang, H., K.P. Smith, T. Blake, S. Ullrich, R. Horsley, B. Cooper, D. Obert, D. Hole, and G.J. Muehlbauer.. 2011. Association mapping of grain yield and plant height in a drought trial in Barley Coordinated Agricultural Project. Plant and Animal Genome XIX Int'l. Conf., Jan. 15-19, San Diego. Abstract online: http://www.intl-pag.org/19/abstracts/P05c_PAGXIX_319.html
118. Lee, H. S. Rustgi, N. Kumar, I. Burke, J. Yenish, and S.E Ullrich. 2011. Identification of a point mutation in barley acetohydroxy acid synthase (HvAHAS) gene conferring resistance against imidazolinone herbicides. Plant and Animal Genome XIX Int'l. Conf., Jan. 15-19, San Diego. Abstract online: http://www.intl-pag.org/19/abstracts/P05c_PAGXIX_325.html

* Indicates author presenting the paper at professional meeting.

Cultivar Releases

1. **Andre** spring 2-row malting barley. R. A. Nilan, A. J. Lejuene, C. E. Muir and S. E. Ullrich. 1983.
2. **Showin** winter 6-row feed barley. S. E. Ullrich, C. E. Muir, R. A. Nilan. 1985.
3. **Cougar** 6-row spring malting barley. S. E. Ullrich, C. E. Muir, R. A. Nilan. 1985.
4. **Hundred** winter 6-row feed barley. S. E. Ullrich, C. E. Muir, R. A. Nilan. 1989.
5. **Crest** spring 2-row malting barley. C. E. Muir, R. A. Nilan, S. E. Ullrich, J. A. Froseth, B. C. Miller. 1992.
6. **Bear** spring 2-row hullless barley. S.E. Ullrich, C.E. Muir, J.A. Froseth. 1997.
7. **Washford** spring 6-row hooded barley. S.E. Ullrich, C.E. Muir, M.L. Nelson, J.A. Froseth. 1997.
8. **Farmington** spring 2-row feed barley. Ullrich, S.E., C.E. Muir, V.A. Jitkov, J.W. Burns, P.E. Reisenauer, D.M. Wesenberg, R.F. Line, X. Chen, B.L. Jones, C.T. Liu, L.D. Robertson, R.S. Karow, P.M. Hayes. 2001.
9. **Bob** spring 2-row feed barley. S.E. Ullrich, V.A. Jitkov, C.E. Muir, J.W. Burns, P.E. Reisenauer, R.F. Line, X. Chen, B.L. Jones, D.M. Wesenberg, L.D. Robertson, P.M. Hayes. 2002.
10. **Radiant** spring 2-row feed barley. D.v. Wettstein, J. Cochran, S.E. Ullrich, C.G. Kannangara, V. Jitkov, J.W. Burns, P.E. Reisenauer, X. Chen, B.L. Jones. 2003.
11. **Elise** spring 2-row feed barley for licensing. 2011.

News/Press Releases

A total of 46 media releases have occurred since 11/80.

Unpublished and Other Reports

Six to eight progress reports are prepared per year.

SERVICE

International

- International Coordinator of Genetic Information of Chromosome 1 of Barley. Appointed by the International Committee for Barley Genetics. 7/81-8/91.
- International Coordinator of Information on Barley Molecular Markers and Probes--Monoclonal Antibodies. Appointed by the International Committee for Barley Genetics. 10/86-12/97.
- Cereal Breeding Evaluation/Recommendation Mission to Bolivia as Technical Cooperation Expert sponsored by U. S. Government and F.A.O./International Atomic Energy Agency to set up mutation breeding program and evaluate barley and wheat breeding programs in general, La Paz, 4/5-17/87. LaPaz, Oruro, Cochabamba, 10/21-11/6/88.
- Barley Breeding Evaluation/Recommendation Mission to Algeria as Technical Cooperation Expert sponsored by U.S. Government and F.A.O./International Atomic Energy Agency to set up mutation breeding program and evaluate barley breeding in general. Algiers, Siddi Bel Abbes, 5/7-27/89.
- Barley Breeding and Genetics Technology Mission to Korea as Technical Cooperation Expert sponsored by the U.S. Government and F.A.O./International Atomic Energy Agency to lecture on new breeding and genetics technologies. Suwon, Honam, 7/23-8/4/89.

- Member, Coordinating Committee for Quantitative Trait Loci (QTL) Analysis in the North American Barley Genome Mapping Project. 10/90 - 12/94.
- Member, Local Organizing Committee for the 6th International Symposium on Pre-Harvest Sprouting. 7/26-29/92, Coeur d'Alene, ID, USA. 1/92-8/92.
- Research Project Proposal Review: AID Research Program through NRC , NATO Research Program .
- Member, Steering Committee of the North American Barley Genome Mapping Project. Elected 4/94-4/99. Meetings-Portland, 10/9-10/94; Seattle, 11/15/94; St. Louis, 10/3/95; Sister Bay, WI, 10/26/96; Portland, 11/12/97; Milwaukee, 11/19-20/98.
- Manuscript Reviews: 164 in 25 international journals.
- External reviewer for research proposals (Canada, Israel, Denmark), university promotion (Lebanon), dissertation (India), Ph.D. dissertation defense (Spain).
- Invited lectures presented at the Int'l Cen. For Advanced. Mediterranean Agronomic Studies, Zaragoza, Spain, 1999, 2003, 2005, 2007, 2009.
- Editorial Board, Journal of Applied Genetics, 2006-2012.
- participated with lectures over two days in the Iraqi Extension Specialist Training Program conducted at WSU, 2009..

National

- Judge National Student Speech Contest, ASA Annual Meetings. Ft. Collins. 1979.
- Chairman, Barley Breeding Session, C-1, ASA Annual Meeting. Las Vegas, 1984.
- Research Project Proposal Reviews: MN Agric. Res. Institute (2). Consort. for Plant Biotechnology Research (4), NSF (1).
- USDA Federal Grain Inspection Service Science Orientation Evaluation Team. Appointed by K. W. Miller, Administrator. 9/87 - 3/88. Awarded USDA. Certificate of Merit.
- Northwest Representative (3 yr. peer elected term) to the National Barley Improvement Committee, 1/83-12/85. Reelected 1/86-12/88. Elected to the Executive Committee 1/84-7/87. Elected Chairman 7/87-5/90. Term ended 12/31/90. Reelected NW Rep. 1/92-12/94; 4/98-4/01; 4/01-4/04; 4/04-4/07.
- Review Team member for E. A. Hockett USDA-ARS Barley Breeding and Genetics Program at Bozeman, Montana. 10/82; for R. T. Ramage U.S.D.A.-ARS Barley Breeding and Genetics Program at Tucson, Arizona. 2/88; for R. K. Newman, Montana State University CRIS project on Nutritional Quality of Barley. 5/88; for B. L. Jones USDA-ARS Malting Barley Quality Research Program at the Cereal Crop Research Unit, Madison, Wisconsin, 9/89; for R. Skadsen USDA-ARS Barley Biochemical Genetics Research Program at the Cereal Crops Research Unit, Madison, WI, 9/92, 9/03, 12/09; for V. Rayboy USDA-ARS Cereal Quality and Genetics Research Program, Bozeman, MT, 5/96; for X. Chen, USDA-ARS, Pullman, 12/03; for D. Mornhinweg, USDA-ARS, Stillwater, OK, 7/07; for H. Bockelman, USDA-ARS, Aberdeen, ID, 12/07.
- Barley Crop Germplasm Committee. Appointed Chairman 2/1991 - 8/1996 and reappointed as a member 8/1996 - 12/2000, 12/2001-12/2005, and 1/2006-12/2010- by the National Barley Improvement Committee. The BCGC coordinates germplasm activities and interfaces with the USDA-ARS National Germplasm System.
- Member CSSA and Crop Science Crop Registration Committee C852; Subcommittee-Barley. C852.02 7/1/91-12/31/93. Appointed Chair 1/1/94-1/1/00 (=Associate Editor of Crop Science).
- Reviewer, NSF Research Proposals, 2005 (1), 2006 (2)

Regional

- Chairman, Election Committee for Northwest Regional Representation on the National Barley Improvement Committee, 1979. 1986. 1990, 1997, 2004, 2009.
- Chairman, Audit Committee, Western Society of Crop Science, 1980.
- Committee Member, Graduate Student Paper Presentation Awards, Western Society of Crop Science, 1983 and 1984.
- Secretary (peer elected 87-88), Vice Chair (peer elected 88-89), Chair (peer elected 89-90), Secretary (93-94), Vice Chair (94-95), Chair (95-96), Evaluation and Improvement of barley for food and feed -- Western Regional Project, W-166. Invited as sole plant science (barley breeder) member, 1984-1999. Converted to WCC-201, 2000-present.
- Member, PNW Plant Disease Management and Conservation Farming Systems Working Group. 5/92-9/97.

- Member from WA, Oregon Foundation Seed Advisory Committee. 3/93-99.
- Member, WERA 066, Integrated Management of Russian Wheat Aphid and Other Cereal Arthropod Pests. 2006-present.

Washington

- Judge Cereals, Palouse Empire Fair, Colfax, 1978-present. Garfield County Fair, Pomeroy, 1981-1990, 2000, 2004.
- Steering Committee Member, Committee to Establish a Washington Barley Commission, 9/84-3/85.
- WSU Foundation Seed Representative on Washington State Crop Improvement Association Board of Directors, appointed 10/87-present. Served on 9 subcommittees. Elected to Executive Committee 2007- present.
- Member, Arbitration Committee for Seed Disputes in Washington. Appointed by WSDA Director, 5/90-11/96 as alternate; 11/96-present as full member.
- Judge, Washington State FFA Speech Contest, Pullman, 1991, 2009.
- Member, Whitman County Parks and Recreation Board of Directors, 1986-present.
- Member, Whitman County Fish and Wildlife Habitat Advisory Committee, 11/95 - 2/96.
- Member, Whitman County Agricultural Burning Task Force, 12/95 - 12/98.

Washington State University

University (served on 11 committees)

- Plant Biology Subcommittee for WSU Grant-in-Aid Program, 11/84-2/85. Reviewed 6 proposals.
- Graduate Affairs Committee Faculty Representative at M.S. and Ph.D exams (15).
- Catalog Subcommittee of Senate Academic Affairs and Graduate Studies Committees, 9/88-5/91. Vice Chair, Fall 1989, Chair Spring 1990; 2007-2009.
- Search Committee for Assistant Registrar-Curriculum/Catalog 2-5/89. Julia Pomerenk hired.
- Academic Affairs Committee of WSU Faculty Senate. 8/92-8/95.
- Admissions Subcommittee. 8/94-8/95.
- Conflict of Interest Review Committee (Presidential Committee), 9/1995 – 9/2009.
- Evaluation Panel for New Faculty Seed Grant Competition, 2002-2006
- Graduate School Review via Yardley Research Group, 2005.
- CampusTree Committee (Presidential committee) 2009-Present

College (served on 17 committees)

- College of Agriculture Scholarship Committee, 1/79-7/81; 1/02-present.
- College of Agriculture Improvement of Instruction Committee, 5/80-6/82. Secretary, 1981-82.
- Horticulture-Agronomy and Soils Career Day Organization Committee, 1980.
- College of Agriculture Safety Committee. 7/82-7/83.
- Committee to Review Dept. Chair, 10/83-6/84
- College of Agriculture and Home Economics (CAHE) Curriculum Planning Committee, 11/86-11/90.
- CAHE Dean's Task Force on Maintaining a Safe and Abundant Food Supply, co-chair, 9/89-9/92.
- CAHE Major and Minor Curriculum Changes Review Committee. 1/90-7/91.
- CAHE Task Force to develop the first Agriculture degree curriculum at WSU - Tri Cities. 9/90-3/91. Student Competencies Subcommittee 11/90-3/91.
- CAHE Tenure and Promotion Advisory Committee, 9/94-9/97 (Chair, 96-97).
- CAHE B.S. Degree in Biological Systems Curriculum Development Committee, 11/96-12/97.
- CAHE Plant Protection/Property Rights Committee, 11/96-2003.
- CAHNRS Plant Growth Facilities Advisory Committee, 9/96 - present (Chair, 96-01).
- CAHE Plant Growth Facilities Manager Search Committee, 12/97-7/99.
- CAHNRS Plant Science Curriculum Committee, 11/03-2008
- CAHNRS Agriculture and Food Systems Degree/Curriculum/Advising Committee, 2005 - 2009

Department (served on 45 committees)

- Agronomy and Soils Scholarship Committee, 1979-1987; 1999-present.
- Agronomy and Soils Club Advisor, 1979-1987.
- Agronomy and Soils Displays/Presentations--Ag Awards
 - Banquet (4 yrs), State FFA Convention (2 yrs), New Student Orientation (4 yrs), Ag Days (1 yr), Alumni Homecoming (1 yr), Aggie Day (1 yr), High School Visitation Program (1 yr), Future Cougar Day (1 yr), WSU Preview: A day at College (1 yr).
- Search Committees-Crops Turf/Forages Position--W. J. Johnston hired, 1979-1980, Soil Genesis and Morphology-Position--A. J. Busacca hired, 1981-82, Crop Management Position--T. A. Lumpkin hired, 1982-83. Extension-Agronomist Position-Chairman--B. C. Miller hired, 1987-88. Weed Scientist Position, WSU-Mt. Vernon Chairman--K. Al-Khatib hired, 1990-91. Rapeseed Breeder Position - U of I--J. Brown hired, 1991-92; Spring and Winter Wheat Breeder Positions--K. K. Kidwell, S. S. Jones hired, 1993-94; USDA-ARS Club Wheat Breeder/Geneticist Position, J. Anderson hired, 1995-96, Extension Agronomist Position, S. Dofing hired, 1997-98; Winter and Spring Wheat Breeders Positions, 2008-2009.
- Agronomy and Soils Department A-V Equipment Coordinator, 1979-1980.
- Crops Teaching Equipment Committee, Co-chair with P. Chevalier, 1979-1980.
- WSU Crops--U of I Plant Science Course Cross-listing Committee, 10/80-7/81. Breeding and Genetics WSU-UI Cross-listing and Curriculum Committee, 10/87-present.
- Agronomy and Soils Safety Committee, Chair. 7/82-3/83.
- Tenure and Promotion Advisory Committees - S. C. Fransen, Chair; T. A. Lumpkin, member; S. T. Kenny, Chair; C. M. Boerboom, member; S. S. Jones, member; K.K. Kidwell, member; J.P. Yenish, member, B.-K. Baik (FSHN and CSS), member, M. Williams, chair; R. Gallagher, member; D. Brown, member; N. Oraguzie (Hort.), member .
- Crop Variety/Germplasm Release Committee 1980 - 2007.
- Variety Release Proposal Review Committees since 2008 (3)
- Research Proposal Review Committees (25)
- Manuscript (Departmental) Review Committees (83-31 chair).
- Hosted 10-15 scientific/industrial, domestic and international, delegations visiting the barley breeding program per year, 1980-present.
- Coordinator of Plant Breeding and Genetics Section for Ph.D. Prelim Exams, 1985, 1988, 1991, 1994, 1998; Production/Management 2001.
- Agronomy Graduate Student Admission Committee, 7/84-7/85.
- Chaired Plant Design Section for CSRS Review, 10/86.
- Wheat Breeding Planning Committee, 11/86-9/87.
- Associate Department Chair-Coordinator of Agronomy Teaching and Undergraduate Affairs, 8/86-11/87.
- Co-chair all Faculty Conference, Puyallup 5/87, Wenatchee 5/89, Mt. Vernon 5/91 and Teaching Retreat 9/87, 9/88, 11/90, 3/95.
- Graduate Advisory Committee, appointed 11/87-9/88.
- CSS Executive Committee, elected 11/87-12/92; 7/96-6/98; 6/99-6/2000.
- Student Recruitment Committee, 9/88-9/90. Undergraduate Recruitment Brochure published.
- Time Schedule/Catalog Review Committee, odd years.
- Spillman Farm Committee, 7/94-present.
- Coordinator, Crop Science Curriculum Review, 2/95 - 2/96
- K.J. Morrison Extension Award Selection Committee, 6/95-6/99.
- Awards Committee, 10/98-10/2004.
- Ex Officio Faculty Member of CSS Advisory Council. 2003-present.
- Benchmarks Committee, 2005-2006
- Space Committee, 2005-2006.
- Undergraduate Recruitment Committee, 2005 – present.
- CSS Budget Advisory Committee, 2009

MEETINGS/SYMPOSIA/TOURS + denotes professional scientific meeting
* denotes presentation given

International (>100 events, >75 scientific presentations given including >30 invited)

+North American Barley Researchers Workshop, Saskatoon, 8/13-17/78*; Minneapolis, Minnesota, 1/26-28/81; Williamsburg, 1/22-26/84*; Bozeman, 7/26-30/87, Co-chairman of Breeding Scientific Session with J. M. Helms (Canadian counterpart); Sacramento, 5/13-17/90*, Chairman of U.S. Barley Workers Session; Guelph, Ontario 7/10-15/93*; Idaho Falls, ID 7/11-15/99*; Fargo, 9/2002*; Red Deer, Alberta, 7/17-20/05*; Madison, WI, 10/26-29/08. Canadian, U. S. and Mexican Scientists attend.

+4th International Barley Genetics Symposium, Edinburgh, 7/22-29/81*.

+5th International Barley Genetics Symposium, Okayama, Japan 10/6-11/86. Co-chaired Molecular Genetics and Biotechnology Session (with Japanese Counterpart), Chaired Biotechnology and Genetic Engineering Workshop; presented a poster and coauthored an invited oral presentation; and wrote manuscripts for the proceedings summarizing the session and workshop.*

+6th International Barley Genetics Symposium, Helsingborg, Sweden 7/22 - 29/91*.

+7th International Barley Genetics Symposium, Saskatoon, Canada 7/30 - 8/6/96*.

+8th International Barley Genetics Symposium, Adelaide, SA, Australia 10/22-27/2001*Invited paper presentation.

+9th International Barley Genetics Symposium, Brno, Czech Republic 6/20-25/2004* Invited paper presentation.

+10th International Barley Genetics Symposium, Alexandria, Egypt, 4/5-10/2008* Invited paper presentation.

+Second International Summer School in Agriculture--Cereal Production, Royal Dublin Society, W. K. Kellogg Foundation, Dublin, 7/4-18/82. Invited with full Fellowship to attend.*

+International Atomic Energy Agency Research Coordination Meetings on the Evaluation and Genetic Analysis of Mutant Stocks for Semi-Dwarfism as Crossbreeding Materials in Cereals, Davis, California, 8/30-9/3/82. Obregon and Mexico City, Mexico 4/1-8/84. Rome, Italy 12/15-18/85. Invited with travel expenses provided.*

+International Atomic Energy Agency Research Coordination meeting on the Use of Nuclear Techniques for Cereal Grain Protein Improvement, Vienna, 12/4-10/82. Invited with travel expenses provided.*

+International Atomic Energy Agency Research Coordination Meeting on Use of Induced Mutation in Connection with Haploids and Heterosis in Cereals. Univ. of Guelph, Ontario, Canada. 12/6-10/86. Univ. of Silesia, Katowice, Poland. 7/25-30/88. WSU-Pullman 7/8-13/90. Co-hosted meetings with C. F. Konzak. Invited with travel expenses provided.*

+International Atomic Energy Agency Research Coordination Meeting on Improvement of Rice and Other Cereals through Mutation Breeding. Quito, Ecuador. 3/30-4/3/87. Invited as Scientific Lecturer with honorarium and travel expenses provided.*

-WSU-Anheuser-Busch--Carlsberg Research Institute, American/Danish Breeders Industry Liaison Meetings for Malting Barley Improvement, St. Louis and Spokane, 10/4 and 10/6/82.

-Seminar presentation on semi-dwarfism in barley, 12/12/85 and on monoclonal antibodies to hordeins, 3/12/86, Carlsberg Laboratory, Copenhagen, Denmark.*

-Visitations and associated seminars presented while in Europe on professional leave, 23 locations visited (Denmark, Sweden, Norway, Finland, Italy, West Germany, Netherlands) with nine invited seminars presented. 7/85-7/86.*

+Nordic Molecular Analysis of Plant Genes Symposium, Carlsberg Laboratory, Copenhagen, 3/13-14/86.

-Demonstration of Monoclonal Antibodies, Standing Conference of Rectors, Presidents and Vice-Chancellors of the European Universities, Carlsberg Laboratory, Copenhagen, 4/12/86.*

-U.K. Research Station tours - Scottish Plant Breeding Station, Pentlandfield. Welsh Plant Breeding Station Tour of Facilities, Aberystwych, 7/81.

-Carlsberg Research Laboratory and Carlsberg Plant Breeding Tour of Facilities and meet with scientists, Copenhagen, 12/82. 7/88. 7/91. 9/92.

-Kirin Brewing Co. Plant Research Station, invited seminar and research information and germplasm exchange. Tokyo, Japan 11/5-6/84.*

-Visited and reviewed plant/barley research at Kirin Plant Bioengineering Laboratory, Sapporo Plant research Laboratory, Tochigi Agricultural Experiment Station, National Agrobiological Resources Center and other institutes at Tsukuba Science City, University of Tokyo in Japan, 10/13-18/86.

-Visited and reviewed barley research at FAO/IAEA Seibersdorf Laboratory, Vienna Austria, Florimond Desprez and Hybritech, Breeding Cos. in France, and Carlsberg Laboratory, Copenhagen, 5/89.

-Visited and reviewed barley research at Carlsberg Research Center, Copenhagen, FAO/IAEA, Vienna, Florimond Desprez and Nordsaat Breeding Cos. in France and Germany, respectively, 7-8/91.

-Visited Gregor Mendel Museum, Brno, Czechoslovakia, 7/30/91.

+6th Interantional Symposium on Preharvest Sprouting in Cereals, Couer d'Alene, ID, USA, 7/26-29/92*.

+7th International Symposium on Pre-Harvest Sprouting in Cereals, Abashiri, Hokkaido, Japan, 7/2-6/95*; Invited paper presentation.

+11th International Symposium on Pre-Harvest Sprouting in Cereals, Mendoza, Argentina, 11/5-8/07*

+ICC/SCI International Symposium on Barley for Food and Malt, Uppsala, Sweden, 9/6-9/92.*

+Plant and Animal Genome II (1992)* and VI (1998) invited workshop speaker*, International Conference, San Diego.

+North American Barley Genome Mapping Project Mapping and QTL Workshop, Bozemen, MT 8/9-11/92; Guelph 7/11/93*; San Diego 1/22/94, 1/20/98*; Seattle 11/15/94; San Diego 1/18-22/98*.

+108th Ann Convention of the Master Brewers Assoc. of the Americas, Portland, OR., 9/17-20/95.*

-Visited University of Lleida and North Spain funded by USDA-FAS Travel Grant ; seminar at UdL, 6/1-15/96*.

- Visited University of Lleida and North Spain; seminars presented at UdL and U. Publica de Navarra, Pamplona and lectures presented at the Int'l Cen. For Adv. Mediterranean Agronomic Studies, Zaragoza, 5/21-31/99*

- Visited Carlsberg Research Center, Copenhagen, Denmark, 5/31-6/3/99.

- Visited Nordsaat Breeding Co., Germany, 6/18/2004.

- Visited Institute for Plant Research and Germplasm (IPK), Gatersleben, Germany, Presented invited Vavilov Seminar, 6/17/2004.

-Visited MAS Plant Breeding Services, Los Andes, Chile, 11/3-5/07.

-Presented a lecture at the French National Academy of Agricultural Sciences, Paris, 4/2/08*.

-Visited Florimond Desprez Plant Breeding Co., Cappelle en Pavele, France, 4/3/08.

-Visited Univ. of Lleida, Lleida and Aula Dei Exp. Sta., Zaragoza, Spain, 3/19-22 and 25/2009.

National (>100 events, >40 scientific presentations given including 12 invited)

+American Society of Agronomy Annual Meetings, Los Angeles, 1977*; Fort Collins, 1979*; Atlanta, 1981*; Anaheim, 1982*; Washington D. C., 1983; Las Vegas, 1984*; New Orleans, 1986*; Anaheim, 1988*; Las Vegas, 1989; Denver, 1991*; Minneapolis, 1992* invited symposium speaker; Seattle, 1994*; St. Louis, 1995; Baltimore, 1998*; Salt Lake City, 1999*; Minneapolis, 2000; Indianapolis, 2002; Seattle, 2004*; Indianapolis, 2006*.

+American Association of Cereal Chemists Annual Meetings, Miami Beach, 1993, invited symposium speaker*.

-Malting Barley Improvement Association Technical Committee Meeting, Portland, 3/4-5/80. American Malting Barley Association Technical Committee Meeting, Hosted in Pullman, 7/82; Bozeman, 7/84; Pocatello, 8/86; Minneapolis 1/87; Hosted in Pullman, 8/88; Corvallis, 6/90; Minneapolis, 1/91; Minneapolis, 1/93; Hosted in Pullman, 8/95; New Orleans, 1/99; San Antonio, 2001; San Francisco, 2003.

-National Barley Improvement Committee Meeting, Washington D.C., 1/26-28/83; Williamsburg, VA. 1/23-25/84; Washington D.C., 2/20-22/85; New Orleans, 11/30/86; Washington D.C., 3/3-5/87; Bozeman, MT, 7/28/87; Washington, D.C. 2/15-18/88; Washington, D.C. 2/27-3/2/89; Las Vegas, 10/15/89; Washington, D.C., 2/26-3/1/90; Sacramento, 5/14/90; Washington, D.C., 1992; 1993; 1994; 1999, 2000, 2002.

-Proanthocyanidin-free Barley Research Project Review, Anheuser-Busch, St. Louis, 11/18/83*; 9/20-21/84*.

-National Wheat Improvement Committee Meeting, Pullman, 11/5/86, presentation made on National Barley Improvement Committee*.

-National Oat Improvement Council Meeting, Las Vegas, 10/17/89.

+Barley Improvement Conference, American Malting Barley Association, Minneapolis, 1/7-8/87; 1/10/89; 1/9/91; 1/12/93; New Orleans, 1/6-7/99; San Antonio, 1/10-12/2001; San Francisco, 2003. Invited papers presented at all*.

-USDA-FGIS Science Orientation Evaluation Team Meeting, Kansas City, MO, 9/22-24/87. Washington, D. C., 10/21-23-87. New Orleans, LA, 11/29-12/2/87; Washington D.C., 1/19-21/88.

-USDA-ARS Small Grains Germplasm and Research Facility, Aberdeen, ID. Dedication Ceremony, 8/23/88. Invited speaker*.

+American Society of Brewing Chemists Annual Meetings, Ft. Lauderdale, 1990*; Chicago, 1996*; Tucson, 2002*; Albuquerque, 2003*.

-Barley Crop Germplasm Committee, Denver, 1991; Minneapolis, 1992; Guelph, 1993; Seattle, 1994; St. Louis, 1995; Saskatoon, 1996; Madison, 1998; New Orleans, 1999; Madison, 2001; Fargo, 2002; Brno, CZ and Seattle, 2004..

- Crop Germplasm Chairs Workshop, Beltsville, MD, 1994.
- USDA/ARS Feed Grains Nutrient Composition Workshop. St. Louis, 5/4-6-92*.
- +Wheat and Barley Biotechnology Workshop, San Diego, 1/18/98.
- Working Session on Malting Barley for Export, US Strategic Alliance, Portland, 5/28/98, invited co-chair and speaker*.
- Working Session on Barley Livestock Feed Issues, US Barley Strategic Alliance, Portland, 5/29/98.
- +Barley CAP Conference, St. Paul, MN, 11/2004. Invited speaker*

Regional (>90 events, >75 scientific presentations given)

- +Western Society of Crop Science Annual Meetings, Pullman, 1976*; Davis, 1980*; Logan, 1983; Tucson, 1984*; Pullman, 1992; Tucson, 2001
- +Northwest Barley Breeders Meeting, Portland, 1979; 3 and 10/83*, 1986* Pocatello, 1981*, 1986*, 1989*; Pullman, 1982* (host/coordinator); Bozeman, 1984*. Vancouver, 1988*, 1995*, 1997*; Spokane, 1990*, 1991*, 1994*, 1996*; Pendleton, 1992*; Portland, 1993*.
- +Tri-State Oilseed Research Coordination Meetings, Moscow, 1979*, McNary, 1980*, Prosser, 1981*.
- +Tri-State Wheat Meetings, Pullman, 6/28/79.
- +Western Regional Project, W-166. Characteristics and feed value of barley and western protein supplements for swine. Annual meetings, Puyallup, 1/20-21/84*; Honolulu, 1/2-4/85*; Fairbanks, 6/14-18/87* Elected Secretary. Renewal Proposal Subcommittee; Subcommittee meeting Pullman 8/24-28/87. Annual meetings, Fargo*, 3/22-25/88 Elected Vice-chairman; Spokane*, 4/27-28/89 Elected Chairman; U.C., Davis*, 1/5-6/90; U. of British Columbia, Vancouver, B.C.*, 3/7-8/91; Bozeman*, 10/24-25/91; Seward, AK*, 6/15-17/92; Portland*, 1/14-16/93; Ithaca*, 3/27-29/94; Moscow*, 1/5-7/95; Palmer, AK*, 7/5-6/96; Aberdeen, ID, 3/3-4/97*; Davis* 3/4-5/98; Bozeman* 10/2-3/98.
- Lewiston Grain Growers Field Representative - Growers Seminar, Craigmont, Idaho, 2/82*; 2/84*; 2/85*; 2/87*.
- Agronomy Field Day, U of I, Plant Science Farm, 7/78; 7/80.
- Tri-State Grain Marketing Tour, Portland, 3/18-20/79.
- Winter Rape Field Tour, Moscow, 6/6/79.
- Tri-State Oilseed Marketing Tour, N. Idaho, E. Washington, 7/24/79*.
- Irrigated Alternate Crops Tour, Columbia Basin, Washington and Oregon, 9/17-18/79.
- Better Barley Days, WA & ID Barley Commission Program. Moscow, 2/21/90; 2/6/91.
- Cereal Quality Forum. Boise, 11/21/91*.
- NW Plant Disease Management and Conservation Farming Systems Working Group meetings, Pullman 9/10/92, 9/15/94.
- Oregon Foundation Seed Advisory Committee meetings Pullman, 12/9/92; Pasco 12/16/93; Corvallis 2/2/93, 8/17/93, 2/15/94, 2/16/95, 2/21/97.
- PNW Farm Forum, Spokane, 1994*, 1995*, 1996*, 1997*, 1998*, 1999*, 2000*, 2001*, 2002*, 2003*, 2004*, 2005*, 2006*, 2007*, 2008*.
- WERA 066 annual meeting, KSU, Manhattan, KS, 2006.

Washington (>400 events, >300 scientific or professional presentations given; most of them invited)

- Spillman Agronomy Farm Field Day, WSU, 1978, 1979*, 1980*, 1981*, 1983*, 1984*, 1985*, 1987*, 1988*, 1989*, 1990*, 1991*, 1992*, 1993*, 1994*, 1996*, 1997*, 1998*, 1999*, 2000*, 2001*, 2002*, 2003*, 2004*, 2005*, 2007*, 2009*.
- Dryland Research Unit Field Day, Lind, 1979*, 1981*, 1982*, 1983*, 1984*, 1985*, 1987*, 1988*, 1989*, 1990*, 1991*, 1997*, 1999*.
- Conservation Farm Field Day, Pullman, 6/27/79.
- Wilke Farm Field Day. Davenport, 6/26/85*, 7/6/88*, 7/10/89*, 7/12/91*, 7/8/92*.
- Extension Field Tours: Columbia basin/Yakima Valley Chemical and Grain Tour 1978; Sunflower Marketing Tour 1979; Harrington 1980*, 81*, 83*, 85*, 88*, 89*, 90*; Lincoln Co.-Reardan, 1991*, 1992*, 1995*, 1996*, 1997*, 1998*, 1999*, 2000*, 2001*, 2002*, 2003*, 2004*, 2005*, 2006*, 2007*, 2008*, 2009*; Lincoln Co.-Almira, 2003*, 2008*; Bickelton 1982*, 1991*, 1998*, 1999*; Goldendale 1982*; WAWG Research Tour 1983*; Irish Agri-Business Tour of WA 1983*. Creston 1988*; Garfield County, 1988*, 1989*, 1990*, 1991*, 1992*, 1993*, 1994*, 1995*.

1996*, 1997*, 1998*, 1999*, 2000*, 2001*, 2002*, 2003*, 2004*, 2006*, 2007*, 2008*, 2009*; Walla Walla Co., 1989*, 2002*, 2003*, 2004*; Franklin Co., 1989*, 1990*, 1991*, 1992*; Japanese Trade, 1989*, 2000*, 2001*, 2002, Adams Co., 1991*; Dusty, 1991*, 1993*, 1994*, 1995*, 1996*, 1997*, 1998*, 1999*, 2000*, 2002*; Lamont, 1991*, 1995*, 1996*, 2007*; St. John, 1992*, 1995*, 97*, 2007*, 2009*; Farmington, 1992*, 1994*, 2002*, 2003*, 2004*, 2005*; Kittitas County, 1992*, 1993*; Asotin Co., 1993*, 1995*, 1996*, 1999*, 2000*, 2001*, 2002*, 2006*, 2007*; Spokane Co., 1992*, 1994*, 1995*, 1996*, 1999*, 2000*, 2001*, 2002*, 2003*, 2004*, 2005*, 2006*, 2007*; Columbia Co., 1998*, 2000* 2002*, 2003*, 2004*, 2005*, 2006*; Adams Co., Ritzville, 1998*, 2000*, 2002*, 2003*, 2005*; Ralston Direct Seed Study Field Day, 1998*; CENEX, Moses Lake 2001*. All presentations concerned Barley Research.

-Extension Grower/Field Rep Meetings: Whitman Co. Crop Imp. Assoc. Mtg., Colfax 1979, 82*, 85, 87, 90, 91, 92*; Garfield Co. Crop Imp. Assn. Mtg. Pomeroy 1981*, 82*, 84*, 85*, 87*, 88*, 92*, 93*, 94*, 96*, 97*; Endicott Ag. Clinic 1981*; Columbia Co. Crop Imp. Assoc. Mtg., Dayton, 1981*, 85*, 92*; CENEX Seed and Field Rep. Mtg., Pullman 1984*; Farming: Integrated Crop Mgt. Seminar, Harrington and Ritzville, 1985*; McGregor Ag Chemical Co. Seminar, Colfax 1987*. Grower Information Meetings for Barley and Wheat Assessment Increase Ref., Walla Walla, Colfax, 88*; Liberty, Spokane Co., 95*; Whitman Co. Ag. Tech Breakfast Mtg. 1996*; Wilbur Ellis Co. Ann. Growers' Mtg, 1997*. All presentations concerned Barley Research.

+WSU County Extension Agent Education Program, Pullman, 1/27/82*; WSU-U of I Program, Moscow, 1/20/85*; Pullman, 1/9/87*; Pullman, 1/13/89*; Pullman, 1/23/92*; 1/21/93*, 1/20/94*.

-Washington State Crop Improvement Association Annual Meetings, Yakima, 1978, Spokane, 1980*, Pasco, 1981*, Spokane, 1983*, Kennewick, 1984*, Pasco, 1987*, Spokane, 1988, Yakima, 1989*, Spokane, 1990; Pasco, 1991; Chelan, 1992*, 1992*; Lewiston, 1993*; Richland, 1995; Spokane, 1996, 1997; Richland, 1998; Spokane, 1999; Moscow, 2000; Kennewick, 2001*, Spokane, 2002*, Moscow, 2003, Richland, 2004*; Spokane, 2005; Pasco, 2007.

-Washington State Crop Improvement Association Board of Directors Meetings, Pasco, WA, 11/17-18/87; Spokane 1/11/88; Pasco, 9/15/88; Spokane, 11/16-17/89, Pasco, 6/14/89; Richland, 9/20/89; Yakima, 11/13/89; Spokane, 1/16-17/90; Pasco, 6/14/90; Spokane 11/13-15/90; Richland 2/5-6/91; Moses Lake 6/14/91 and 9/5/91; Pasco, 11/11/91; Spokane 1/13/92; Chelan 11/16/92; Richland 1/25/93; Lewiston 1/15/93; Moses Lake 6/22/94; Yakima 11/14/94; Spokane 1/19/95; Richland 9/7/95 and 11/13/95; Spokane 11/18/96; Richland, 2/27/97; Spokane, 11/15/97; Richland, 3/11/98, 11/16/98, 9/15/99; Spokane 11/15/99; Richland 3/2000; Moscow, 11/16, 2000; Kennewick, 9/2001; Kennewick, 11/2001; Kennewick, 6/2002; Spokane, 11/2002; Richland, 09/24/03; Moscow, 11/17/03; Kennewick, 3/24/04; Othello, 9/30/04; Richland, 11/15/04; Othello, 3/30/05; Othello, 6/14/05; Spokane, 11/14/05, Pullman, 3/06, 9/06; Pullman, 2/15/07; Connell, 9/13/07; Pasco, 11/12/07.

-Washington Annual Alfalfa Hay and Cubing Conference, Pasco, 2/19-20/79.

-Washington Association of Wheat Growers Annual Convention, Spokane, 12/5/83, 12/3/84*, 1998, 1999, 2000, 2001.

-Whitman County Association of Wheat Growers Annual Meeting, Colfax, 1983, 84*, 88, 90*, 92, 94*, 95, 2001, 2002.

-Whitman County Crop Improvement Association Annual Meeting, Colfax, 1982, 83, 88, 89, 90, 92, 94, 95, 96, 97.

-St. John Grain Growers Annual Meetings, 1980, 1981, 1982, 1983, 1984, 1987, 1990.

-Washington Wheat Commission Annual Research Review, Pullman, 1980*; Spokane, 1981*; Pullman, 1982*, 1983*, 1984*, 1985*.

-Washington Barley Commission Annual Research Review (Tri-State), Pullman, 1987*, 1988*, 1989*; Moscow, 1990*; 1991*; Pullman, 1992*; Moscow, 1993*, 1995*, 1996*, 1997*, 1998*, 2000*; Pullman, 2000*; Moscow, 2001*, Pullman, 2002*, 2003*, 2004*, 2005*, 2006*, 2007*, 2008*, 2009*.

-Washington Barley Commission Research Priorities Meeting. Pullman, 6/28/85*, 1/15/87*, 6/24/87*, Spokane, 10/30/87*, Pullman, 11/17/89; Fairfield Field Tour, 6/6/90*; Pullman, 11/9/90*, Spokane, 5/14/91; Pullman, 11/19/91*; 11/20/92*; 10/15/93*; 3/4/94*; 11/9/95*; 10/30/96*, 11/5/97*, 11/4/98, 10/4/99, 10/21/2000*, 11/1/2001*, 10/2002*, 11/20/03* .

-Annual WSU/Washington Community College Conference/Workshop, Yakima, 4/20/79*; IAREC, Prosser, 3/31-4/1/88*.

-Plant, Soil & Entomological Sciences, U of I Teaching Retreat. Lake Couer d'Alene, 5/14/85*.

-WSU Agronomy and Soils Club banquet; presented talk on Perspective on African Agriculture, Moscow, 12/11/78*; Club presentation on Agriculture in Europe, 4/22/87*.

-Chinese (PRC) Geneticists Delegation Visitation and Seminar, WSU, 10/27-31/83*; Chinese Higher Education Delegation Meeting, WSU, 4/25/85*; Sichuan Agricultural Univ. Delegation Tour of Department. 8/16/88*, 4/9/90*; Chinese Academy of Sciences Spillman Farm Tour, 5/27/92*.

-Clarkston Chamber of Commerce visitation to WSU, presentation given on plant breeding, 2/27/87*.

- Kiwanis Club of Pullman, address on barley research, 12/8/83*.
- +WSU Animal Sciences Department Seminar on Barley as a Washington Crop and the WSU Barley Breeding Program, with K. J. Morrison, 1/9./81*.
- +WSU Nutritional Quality Evaluation Laboratory Sponsored Mini-Symposium on the Nutritional Value of Barley, 6/16/81*.
- Some Observations on the Agriculture of China. WSU International Program Development Seminar 1/3/85*.
- Department of Animal Science seminar presentation on Monoclonal Antibodies 9/10/86*.
- Agronomy Seminar presentation on Monoclonal Antibodies 11/3/86*; on Somaclonal Variation 9/19/88*; on Genetic Complexity of Malt Extract Trait 10/13/97.
- WSU Plant Breeding Discussion Group Participant, 1986-87. Presentation with A. Kleinhofs on Plant Research in Japan 11/6/86*.
- WSU Animal Nutrition Discussion Group participant 9/86-89.
- WSU International Program Development Office Workshop on Administration of Overseas Projects, Pullman 11/2-4/87.
- +Western Regional Project W-132 Meeting, Pullman 12/18/87. Presentation given on W-166*.
- North Idaho Foundation Seed Association Annual Meeting, Moscow, 9/8/89*.
- Washington Wheat Commission and Washington Association of Wheat Growers Spillman Farm Field Tour. 6/27/90*.
- Japanese Extension Agent and Specialist Training Program. Presentation on Barley Production and Cultivar Development. Pullman 11/12/90*; 8/28/91*.
- Lincoln-Adams Co. Variety Testing Meeting. Sprague 11/28/90.
- Barley On-Farm Variety Testing Organizing Committee, Annual WAWG Convention, Spokane, 12/1/91*, 1/18/92; 12/7/92*, 12/10/93*; 12/4/94*.
- Pendleton Field Day, OSU & USDA-ARS, 6/12/91.
- Farm Credit Service Tour, Spillman Farm, Pullman, 6/30/93*
- PNW Farm Form/Ag Expo, Spokane 1/12/94*, 1/17/95*, 1/16/96*, 1/14/97*, 1/14/98*, 1/13/99*, 2000*, 2002*, 2003*, 2004*, 2005*, 2006*, 2007*, 2008*.
- CAHE Agriscience Leadership Experience, Presentation on barley and wheat genetics, WSU, 10/27/95*.
- WSU New Foreign Student Orientation. Presentation on adjusting at WSU to new graduate students, 1/10/96*; 1/6/97*
- Jacklin Seed Co./Sapporo Brewing Co. (Japan) Mtg, Presentation on WSU barley breeding and genetics research, Post Falls, ID, 4/49/96*.
- Korean Feed Barley Study Team, visit to WSU, seminar presentation on PNW Barley and WSU Barley Research, 8/7/95*.
- Japanese delegating visits to WSU and seminar presentations* on barley breeding and genetics research. Kirin Barley Breeding and Procurement Team, 8/10/95; Zenbakuren Food Barley Team, 11/9 - 10/95*; 10/8/96*; 9/15/98*.
- Washington Barley Commission promotional video tape presentation, Fairfield, 8/23/96*.
- Whitman Co. Ag. Tech Breakfast, Steptoe, 12/2/96*.
- Wilbur Ellis Co. Ann. Growers Mtg., 2/4/97*.
- US Grains Council, Latin American Malt Team visit, 7/30/98*.
- LaCrosse Grain Growers Producers Seminar, 1/26/99*
- Taiwanese Malting Barley Trade Team (US Grains Council), Pullman, 7/29/99*
- Cunningham Farm Field Day, Pullman, 6/28/2001*.
- Japanese Barley Processors Trade Team (US Grains Council, Pullman, 7/26/2001*, 7/2002*, 7 and 10/2007*.
- Korean Barley Trade Team, US Grains Council, Pullman, 7/2002.
- Minimizing Risk by Maximizing Production through Barley as a Rotational Crop Workshops- WBC/WSU, Colfax, Dayton, Spangle, Davenport, 2/07*.
- CAHNRS administrators retreat, 1/11/08.

+professional scientific meeting

*presentation given