

**Annual Meeting WERA-97/NCERA-184
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Extension and Technical Publications

- Anderson, J.A., R.H. Busch, D.V. McVey, J.A. Kolmer, Y. Jin G.L. Linkert, J.V. Wiersma, R. Dill-Macky, J.J. Wiersma, and G.A. Harland. 2006. Registration of "Ulen" wheat. *Crop Sci.* 46:979-980.
- Anderson, J.A., S. Liu, X. Zhang, Y. Jin, R. Dill-Macky, and S. Chao. 2006. Marker-assisted selection for FHB resistance in wheat. p. 3. In: *Proceedings of the CIMMYT Fusarium Head Blight Workshop on Global Fusarium Initiative for International Collaboration*, 14-17 March, 2006. El Batan, Mexico, 137 p.
- Appel, J.A., R.L. Bowden, W.W. Bockus, and D. Jardine. 2006. Preliminary 2006 Kansas Wheat Disease Loss Estimates. *Kansas Cooperative Plant Disease Survey Report*.
<http://www.ksda.gov/Default.aspx?tabid=169>
- Babcock, C., X.M. Chen, P.W. Crous, F.M. Dugan, B. Goates, and P.N. Green. 2007. Plant germplasm centers and microbial culture collections: A user's guide to key genetic resources for plant pathology. *Plant Dis.* 91:476-484.
- Baek, K.H., D.Z. Skinner, P. Ling, and X.M. Chen. 2006. Molecular structure and organization of the wheat genomic manganese superoxide dismutase gene. *Genome* 49:206-218.
- Bai, G., P. St. Amand, A. Ibrahim, S. Baenziger, B. Bockus, and A. Fritz. 2006. Transfer of a QTL for FHB resistance into hard winter wheat using marker-assisted backcross. *Proc. 2006 National Fusarium Head Blight Forum*, p. 82.
- Bockus, W.W., R.L. Bowden, R.M. Hunger, T.D. Murray, R.W. Smiley, and W. Morrill, eds. 2007. *Compendium of Wheat Diseases and Insects, Third Edition*. APS Press, Minneapolis. (IN PRESS).
- Bockus, W.W., Z. Su, K.A. Garrett, B.S. Gill, J.P. Stack, A.K. Fritz, K.L. Roozeboom, and T.J. Martin. 2007. Number of experiments needed to determine wheat disease phenotypes for four wheat diseases. *Plant Dis.* 91:103-108.
- Bockus, W.W., A.K. Fritz, and T.J. Martin. 2007. Reaction of the 2006 Kansas Intrastate Nursery to barley yellow dwarf and Fusarium head blight. *Plant Disease Management Reports (online)*. Report 1:CF012. DOI: 10.1094/PDMR01. The American Phytopathological Society, St. Paul, MN.
- Bockus, W.W., P.S. Baenziger, and A. Ibrahim. 2007. Reaction of Kansas, Nebraska, and South Dakota winter wheat accessions to Fusarium head blight (FHB), 2006. *Plant Disease Management Reports (online)*. Report 1:CF001. DOI: 10.1094/PDMR01. The American Phytopathological Society, St. Paul, MN.

- Bockus, W.W., and M.A. Davis. 2007. Reaction of selected winter wheat accessions to Fusarium head blight, 2006. Plant Disease Management Reports (online). Report 1:CF013. DOI: 10.1094/PDMR01. The American Phytopathological Society, St. Paul, MN.
- Bockus, W.W. 2007. Reaction of selected Kansas winter wheat cultivars to barley yellow dwarf, 2006. Plant Disease Management Reports (online). Report 1:CF014. DOI: 10.1094/PDMR01. The American Phytopathological Society, St. Paul, MN.
- Bruckner, P.L., J.E. Berg, N. Riveland, J.L. Eckhoff, D.M. Wichman, K.D. Kephart, G.R. Carlson, G.D. Kushnak, R.N. Stougaard, D.L. Nash, W.E. Grey, A.T. Dyer, Y. Jin, and X.M. Chen. 2007. Registration of 'Yellowstone' wheat. Crop Sci. Journal of Plant Registration 1:18-19.
- Burrows, M.E., M.C. Caillaud, D.M. Smith, and S.M. Gray. 2007. The transmission of Barley yellow dwarf luteovirus-SGV and Cereal yellow dwarf luteovirus-RPV is genetically controlled in the aphid *Schizaphis graminum*. Heredity 98:106-113.
- Burrows, M.E. and W. Lanier. 2007. Where the rubber meets the road: timely information delivery to farmers with and without the internet. Phytopathology 97:S15. abstr.
- Canevari, M., S. Orloff, R. Vargas, S. Wright, R. Wilson, D. Cudney, and L. Jackson. 2006. Pest Management of Small Grains – Weeds. University of California Agriculture and Natural Resources, Publication 8172.
- Canevari, M., R. Vargas, S. Wright, and L. Jackson. 2006. Trouble-shooting small grain production. University of California Agriculture and Natural Resources, Publication 8177.
- Canevari, W.M., R.N. Vargas, S.D. Wright, H.L. Carlson, L. Jackson, and J.E. Hill. 2007. UC IPM Pest Management Guidelines: Small Grains - Weeds (revised, February, 2007). UC ANR Publication 3466. IPM Education and Publications, University of California Statewide IPM Program.
- Chakraborty, S., C.J. Liu, V. Mitter, J.B. Scott, O.A. Akinsanmi, S. Ali, R. Dill-Macky, J. Nicol, D. Backhouse, and S. Simpfendorfer. 2006. Pathogen population structure and epidemiology are keys to wheat crown rot and Fusarium head blight management. Aust. Plant Path. 35:643-655.
- Chakraborty, S., J.B. Scott, O.A. Akinsanmi, C.J. Liu, V. Mitter, and R. Dill-Macky. 2006. Fusarium pathogens of wheat in Australia. p. 42-45. In: Proceedings of the CIMMYT Fusarium Head Blight Workshop on Global Fusarium Initiative for International Collaboration, 14-17 March, 2006. El Batan, Mexico, 137 p.
- Chen, X.M. 2007. Challenges and solutions for stripe rust control in the United States. Aust. J. Ag. Res. 58:648-655
- Chen, X.M., and D.A. Wood. 2007. Control of stripe rust of spring wheat with foliar fungicides, 2006. Plant Disease Management Reports 1:FC109.

- Chen, X.M., and D.A. Wood. 2007. Control of stripe rust of winter wheat with foliar fungicides, 2006. Plant Disease Management Reports 1:FC108.
- Chen, X.M., and D.A. Wood. 2007. Fungicide seed treatments for reducing yield losses caused by stripe rust on winter wheat, 2006. Plant Disease Management Reports 1:ST007.
- Chen, X.M., and D.A. Wood. 2007. Fungicide seed treatments for reducing yield losses caused by stripe rust on spring wheat, 2006. Plant Disease Management Reports 1:ST006.
- Chen, X.M., and D.A. Wood. 2007. Fungicide seed treatments for reducing yield losses caused by stripe rust on spring barley, 2006. Plant Disease Management Reports 1:ST005.
- Chen, X.M., D.A. Wood, L. Penman, P. Ling, M.N. Wang, and F. Lin. 2006. Epidemiology and control of wheat stripe rust in the United States, 2005. Annual Wheat Newsletter 52: 192-196.
- Chicaiza, O., I.A. Khan, X. Zhang, J.C. Brevis, L. Jackson, X. Chen, and J. Dubcovsky. 2006. Registration of five wheat isogenic lines for leaf rust and stripe rust resistance genes. Crop Sci. 46:485-487.
- Collar, C., S. Orloff, M. Mathews, S. Wright, and L. Jackson. 2006. Small Grain Forages. University of California Agriculture and Natural Resources, Publication 8173.
- Davis, R.M., and L. Jackson. 2007. UC IPM Pest Management Guidelines: Small Grains - Diseases (revised, February, 2007). UC ANR Publication 3466. IPM Education and Publications, University of California Statewide IPM Program.
- Di, R., A. Blechl, R. Dill-Macky, A. Tortora, and N.E. Tumer. 2006. Expression of a truncated form of ribosomal protein L3 in transgenic wheat confers resistance to deoxynivalenol and Fusarium head blight. In: Proc. 2006 National Fusarium Head Blight Forum, Research Triangle Park, North Carolina, USA, December 10-12, 2006, p. 64.
- Dill-Macky, R., A.M. Mudge, Y. Dong, and J.M. Manners. 2006. Systemic colonization and production of deoxynivalenol throughout wheat plants following inoculation of crown tissues with *Fusarium graminearum*. In: Proc. 2006 National Fusarium Head Blight Forum, Research Triangle Park, North Carolina, USA, December 10-12, 2006, p. 45.
- Dill-Macky, R. 2006. Implications of population variability on the management of Fusarium head blight. p. 72. In: Proc. CIMMYT Fusarium Head Blight Workshop on Global Fusarium Initiative for International Collaboration, 14-17 March, 2006. El Batan, Mexico, 137 p.
- Dill-Macky, R., C.K. Evans, M.D. Culler, A.M. Elakkad, and K.J. Wennberg. 2006. Considerations in designing nurseries for screening FHB response in wheat and barley. p.109. In: Proc. CIMMYT Fusarium Head Blight Workshop on Global Fusarium Initiative for International Collaboration, 14-17 March, 2006. El Batan, Mexico, 137 p.
- Dill-Macky, R., A.M. Mudge, Y. Dong, and J.M. Manners. 2006. Systemic colonization and production of deoxynivalenol throughout wheat plants following inoculation of crown

tissues with *Fusarium graminearum*. p. 66. In: Book of Abstracts, 9th European Fusarium Seminar, 19-22 September, 2006, Wageningen, The Netherlands, p. 194.

- Fuentes, R.G., H.R. Mickelson, R.H. Busch, R. Dill-Macky, C.K. Evans, W.G. Thompson, J.V. Wiersma, W. Xie, Y. Dong, and J.A. Anderson. 2005. Resource allocation and cultivar stability in breeding for Fusarium head blight resistance in spring wheat. *Crop Sci.* 45:1965-1972.
- Fulton, A., K. Bali, Z. Mousli, and L. Jackson. 2006. Irrigation and Water Relations of Small Grains. University of California Agriculture and Natural Resources, Publication 8168.
- Gallagher, L.W., L.F. Jackson, and H.E. Vogt. 2006. Registration of 'Ishi' Barley. *Crop Sci.* 46: 1396.
- Godfrey, L., E. Natwick, S. Wright, and L. Jackson. 2006. Pest Management of Small Grains – Insects. University of California Agriculture and Natural Resources, Publication 8170.
- Gray, S.M., M.C. Caillaud, M.E. Burrows, and D.M. Smith. 2007. Transmission of viruses that cause barley yellow dwarf is controlled by different loci in the aphid, *Schizaphis graminum*. *J. Insect Sci.* 7:25.
- Hall, M.D., W.W. Bockus, A.K. Fritz, and G. Brown-Guedira. 2007. Mapping Septoria leaf blotch and soil-borne mosaic virus resistance genes derived from *Aegilops tauschii*. P312. Plant & Animal Genomes XV Conference, San Diego, CA
- Harrison, L.A., and T.D. Murray. 2007. Resistance to *Wheat streak mosaic virus* in perennial wheat. *Phytopathology* 97:S168. abstr.
- Hayes, P.M., L. Marquez-Cedillo, C.C. Mundt, K. Richardson, and M.I. Vales. 2006. Perspectives on finding and using quantitative disease resistance genes in barley. Pages 182-200 in: Plant Breeding: The Arnel R. Hallauer International Symposium. K.R. Lamkey and M. Lee, eds. Blackwell, Ames, IA.
- Hill, N.S., S. Neate, B. Cooper, R. Horsley, P. Schwarz, L.S. Dahleen, K.P. Smith, R. Dill-Macky, K. O'Donnell, and J. Reeves. 2006. Is there value in quantifying *Fusarium* mycelium for breeding FHB resistance? In: *Proceedings of the 2006 National Fusarium Head Blight Forum*, Research Triangle Park, North Carolina, USA, December 10-12, 2006, p. 98.
- Hill, N.S., S.M. Neate, B. Cooper, R.D. Horsley, P.B. Schwarz, L.S. Dahleen, K.P. Smith, and R. Dill-Macky, R. 2006. ELISA Analysis for Fusarium in Barley: Application in Field Nurseries. Abstract 1827b, In American Society of Agronomy - Crop Science Society of America - Soil Science Society of America, 2006 International Meetings, 12-16 November, 2006, Indianapolis IN.
- Hogg, A.C., R.H. Johnston, and A.T. Dyer. 2007. Applying Real-Time Quantitative PCR to Fusarium Crown Rot of Wheat. *Plant Dis.* 91:1021-1028.

- Hogg A.C., R.H. Johnston, A.T. Dyer. 2007. Monitoring *Fusarium* populations in no-till wheat cropping systems utilizing quantitative real-time PCR. *Phytopathology* 97:S47. abstr.
- Jackson, L. 2006. UC IPM Pest Management Guidelines: Small Grains - Cultivar characteristics (revised, October, 2006). UC ANR Publication 3466. IPM Education and Publications, University of California Statewide IPM Program.
- Jackson, L. et al. 2006. Small Grain Production Manual. University of California, Agriculture and Natural Resources Publications, 14 parts. (<http://anrcatalog.ucdavis.edu>)
- Jackson, L., B. Fernandez, H. Meister, and M. Spiller. 2006. Importance of Small Grain Crops in California Agriculture. University of California Agriculture and Natural Resources, Publication 8164.
- Jackson, L., and J. Williams. 2006. Growth and Development of Small Grains. University of California Agriculture and Natural Resources, Publication 8165.
- Jackson, L. 2006. Pest Management of Small Grains – Diseases. University of California Agriculture and Natural Resources, Publication 8169.
- Johnson W.A, R.H. Johnston, A.T. Dyer. 2007. Root lesion nematode (*Pratylenchus nelgectus*) found in wheat fields in Montana *Phytopathology* 97:S53. abstr.
- Jones, S.S., S.R. Lyon, K.A. Balow, M.A. Gollnick, J.W. Burns, W.E. Schillinger, P.E. Reisenauer, T.D. Murray, X.M. Chen, G.C. Campbell, C.F. Morris, and B. Goates. 2007. Registration of ‘Bauermeister’ wheat. *Crop Sci.* 47:430-431.
- Kearney, T., B. Marsh, S. Wright, and L. Jackson. 2006. Seedbed Preparation, Sowing, and Residue Management of Small Grain. University of California Agriculture and Natural Resources, Publication 8166.
- Kearney, T., S. Garcia, and L. Jackson. 2006. Harvesting and Storage of Small Grains. University of California Agriculture and Natural Resources, Publication 8176.
- Lanning, S.P., G.R. Carlson, D. Nash, D.M. Wichman, K.D. Kephart, R.N. Stougaard, G.D. Kushnak, J.L. Eckhoff, W.E. Grey, A. Dyer, and L.E. Talbert. 2006. Registration of “Vida” spring wheat. *Crop Sci.* 46:2315-2316.
- Lin, F., and X.M. Chen. 2007. Genetics and molecular mapping of genes for race-specific all-stage resistance and non-race specific high-temperature adult-plant resistance to stripe rust in spring wheat cultivar Alpowa. *Theor. Appl. Genet.* 114:1277-1287.
- Ling, P., M.N. Wang, X.M. Chen, and K.G. Campbell. 2007. Construction and characterization of a full-length cDNA library for the wheat stripe rust pathogen (*Puccinia striiformis* f. sp. *tritici*). *BMC Genomics* 8:145. (Online: <http://www.biomedcentral.com/1471-2164/8/145>).
- Makander, R., V. Nalam, J.S. Essig, M.A. Schapaugh, H. Trick, W. Bockus, R. Dill-Macky, and J. Shah. 2006. Enhancing resistance to *Fusarium graminearum* by expression of

- Arabidopsis thaliana* NPR1 in wheat. In: *Proceedings of the 2006 National Fusarium Head Blight Forum*, Research Triangle Park, North Carolina, USA, December 10-12, 2006, p. 66.
- Marsh, B., and L. Jackson. 2006. Small Grains in Crop Rotations. University of California Agriculture and Natural Resources, Publication 8175.
- Mickelson, J.A., and W.E. Grey. 2006. Effect of soil water content on wild oat (*Avena fatua*) seed mortality and seedling emergence. *Weed Sci.* 54:255-262.
- Mitchell, J., M. Van Horn, D. Munier, and L. Jackson. 2006. Small Grain Cover Crops. University of California Agriculture and Natural Resources, Publication 8174.
- Mundt, C.C., J. Brunet, and K.E. Sackett. 2007. Impact of density and disease on frequency-dependent selection and genetic polymorphism: Experiments with stripe rust and wheat. *Evol. Ecol.* (IN PRESS).
- Munier, D., T. Kearney, G.S. Pettygrove, K. Brittan, M. Mathews, and L. Jackson. 2006. Fertilization of Small Grains. University of California Agriculture and Natural Resources, Publication 8167.
- Murray, T.D. 2006. Seed infection and transmission of *Cephalosporium gramineum* in commercial winter wheat varieties. *Plant Dis.* 90:803-806.
- Nirmala, J., S. Dahl, B. Steffenson, C.G. Kannangara, D. von Wettstein, X.M. Chen, and A. Kleinohs. 2007. Proteolysis of the barley receptor-like protein kinase Rpg1 by a proteasome pathway is required for Rpg1 mediated stem rust resistance. *PNAS* 104:10276-10281.
- Nishio, Z., N. Iriki, T. Tabiki, M. Ito, M. Tanio, and **T.D. Murray**. 2007. Mapping of a quantitative trait locus associated with resistance to speckled snow mold in winter wheat. *Phytopathology* 97:S84. abstr.
- Nita, M., E. De Wolf, L. Madden, P. Paul, G. Shaner, T. Adhikari, S. Ali, J. Stein, and L. Osborne. 2006. Effect of corn residue level on disease intensity of Fusarium head blight (FHB) and on deoxynivalenol (DON) concentration: A multi-state field study. *Phytopathology* 96:S85. abstr.
- Osborne, L.E., and J. Stein. 2007. Effect of maize residues on Fusarium head blight disease and head-borne inoculum on two differentially susceptible wheat cultivars. *Phytopathology* 97:S163. abstr.
- Osborne, L.E., and J.M. Stein. 2006. Temporal inoculum dynamics for Fusarium head blight of wheat and barley in South Dakota. *Phytopathology* 96:S88. abstr.
- Paul, P.A., L.V. Madden, P.E. Lipps, E. De Wolf, G. Shaner, G. Buechley, T. Adhikari, S. Ali, J. Stein, and L. Osborne. 2006. Modeling the abundance of propagules of *Gibberella zeae* within wheat canopies. *Phytopathology* 96:S91. abstr.

- Richardson, K.L., M.I. Vales, J.G. Kling, C.C. Mundt, and P.M. Hayes. 2006. Pyramiding and dissecting disease resistance QTL to barley stripe rust. *Theor. Appl. Genet.* 113:485-495.
- Rossi, C., A. Cuesta-Marcos, I. Vales, L. Gomez-Pando, G. Orjeda, R. Wise, K. Sato, K. Hori, F. Capettini, H. Vivar, X.M. Chen, and P. Hayes. 2006. Mapping multiple disease resistance genes using a barley mapping population evaluated in Peru, Mexico, and the USA. *Molecular Breeding* 18:355-366.
- Roozeboon, K., A. Fritz, D. Jardine, M. Knapp, J. Whitworth, M. Claassen, W.B. Gordon, W. Heer, J. Kimball, L. Maddux, P. Evans, J. Long, T.J. Martin, A. Schlegel, E. Parker, J. Lingenfelter, B. Bockus, and J. Shroyer. 2006. Performance Tests. Pages 5-26 in: 2006 Kansas Wheat Seed Book. Contribution No. 07-8-S from the Kansas Agricultural Experiment Station. 48 pp.
- Shin, S.H., J.M. Lewis, C.A. Mackintosh, A.M. Elakkad, K.J. Wennberg, S.J. Heinen, R. Dill-Macky, and G.J. Muehlbauer. 2006. Transgenic wheat with enhanced resistance to *Fusarium* head blight. In: *Proceedings of the 2006 National Fusarium Head Blight Forum*, Research Triangle Park, North Carolina, USA, December 10-12, 2006, p. 67.
- Stein, J., L. Osborne, and K. Glover. 2007. Evaluation of historical and elite hard red spring wheat germplasm for susceptibility to common root rot and *Fusarium* crown rot. *Phytopathology* 97:S164. abstr.
- Stein, J., and L.E. Osborne. 2006. A relationship between the number of *Gibberella zeae* propagules present during heading and deoxynivalenol (DON) content in wheat grain. *Phytopathology* 96:S110. abstr.
- Sun, Z., D.K. Weaver, W.E. Grey, A. Dyer, and W.L. Morrill. 2006. Impact of the naturally-occurred *Fusarium* species on the overwintering larvae of wheat stem sawfly, *Cephus cinctus* (Hymenoptera: Cephidae). Abstract Annual Meeting, Entomological Society of America.
- Wan A.M., X.M. Chen, and Z.H. He. 2007. Wheat stripe rust in China. *Aust. J. Ag. Res.* 58:605-619.
- Whisson, D., T. Salmon, and L. Jackson. 2006. Pest Management of Small Grains – Vertebrates. University of California Agriculture and Natural Resources, Publication 8171.
- Worster, C.A., and C.C. Mundt. 2007. The effect of diversity and spatial arrangement on biomass of agricultural cultivars and native plant species. *Basic Appl. Ecol.* (IN PRESS).
- Yan, G.P., and X.M. Chen. 2007. Molecular mapping of the *rps1.a* recessive gene for resistance to stripe rust in BBA 2890 barley. *Phytopathology* 97:668-673.
- Zhan, J., C.C. Mundt, and B.A. McDonald. 2007. Sexual reproduction facilitates the adaptation of parasites to antagonistic host environments: evidence from a field experiment in the wheat-*Mycosphaerella graminicola* system. *Int. J. Parasitol.* 37:861-870.