

2006  
Publications of Agricultural Research Center Scientists  
By Department and Project  
Agricultural Research Center Washington State University

**Agricultural Research Center:**  
**0556 and 0587 Jointed Goatgrass: A  
Threat to U.S. Wheat Production**

Rehman, M., J.L. Hansen, J. Brown, W. Price, R.S. Zemetra, and C. Mallory-Smith. 2006. Effect of Wheat Genotype on the Phenotype of Wheat x Jointed Goatgrass (*Aegilops cylindrica*) Hybrids. *Weed Science*. 54:690-694.

Rehman, M., J. Hansen, and R.S. Zemetra. 2006. Hybrids and Amphidiploids of *Aegilops cylindrica* and *Triticum aestivum*; Production, Morphology and Fertility. *Journal of Biological Science*. 9:1563-1566.

Perez-Jones, A., C.A. Mallory-Smith, J. Hansen, and R. S. Zemetra. 2006. Introgression of an Imidazolinone-Resistance Gene from Winter Wheat (*Triticum aestivum* L.) into Jointed Goatgrass (*Aegilops cylindrica* Host). *TAG*. 114:177-186.

**0557 and 0592 Aquaculture, Idaho  
and Washington**

Ramsrud, A.L., S.A. LaFrentz, B.R. LaFrentz, K.D. Cain, and D.R. Call. 2006. Differentiating 16s RNA Alleles of *Flavobacterium psychrophilum* using A Simple PCR Assay. *Journal of Fish Health*. 30:175-180.

Shin, J.H., D.H. Kang, and B.A. Rasco. 2006. Survival and Growth of *Listeria Monocytogenes* in MAP Packed Fresh Rainbow Trout. *World Aquaculture*. 37:6-10.

Al-Holy, M.A., and B.A. Rasco. 2006. Characterization of Salmon (*Oncorhynchus Keta*) and Sturgeon (*Acipenser Transmontanus*) Caviar Proteins. *Journal of Food Biochemistry*. 30:422-428.

Laing, K.J., J.J. Zou, L.J. Purcell, R.B. Phillips, C.J. Secombes, and J.D. Hansen. 2006. Evolution of the CD4 Family: Teleosts Possess Two Divergent Forms of CD4 in Addition to LAG3. *Journal of Immunology*. 177:3939-3951.

Landis, E.D., Y. Palti, J.J. DeKoning, R.B. Phillips, and J.D. Hansen. 2006. Mapping and Functional Genomics of the Tapbp and Tapbpr Genes. *Immunogenetics*. 58:56-59.

Bernard, D., B. Riteau, J.D. Hansen, R.B. Phillips, F. Michel, P. Boudinot, and A. Benmansour. 2006. Costimulatory Receptors in a Teleost Fish: Typical CD 28, Elusive CTLA4. *Journal of Immunology*. 176:4191-4200.

Phillips, R.B., K.M. Nichols, J.J. DeKoning, M.R. Morasch, K.A. Keatley, C. Rexoad, S. Gahr, R.G. Danzmann, R.E. Drew, and G.H. Thorgaard, 2006. Assignment of Rainbow Trout Linkage Groups to Specific Chromosomes. *Genetics*. 174:1661-1670.

Thorgaard G.H., K.M. Nichols, and R.B. Phillips. 2006. Comparative Gene and QTL Mapping in Aquaculture Species. *Israeli Journal of Aquaculture*. 58:341-346.

Garikipati, D., S.A. Ghar, and B.D. Rodgers, 2006. Identification, Characterization and Quantitative Expression Analysis of Rainbow Trout Myostatin-1a and 1b Genes. *Journal of Endocrinology*. 190:879-888.

### **Animal Science:**

#### **0167 Enhancement of Dietary Energy use for Maintenance, Growth, and Lactation by Beef Cattle**

Mount, G.H., D.R. Yonge, B.K. Lamb, H.H. Westberg, K.A. Johnson, and R.L. Kincaid. 2006. Atmospheric Flux of Ammonia from Sprinkler Application of Dairy Waste. *Atmospheric Environment*. 40:7246-7258.

#### **0374 Nutrient Management: Feeding for Reduced Excretion of Nutrients by Ruminants**

Hostetler, C.E., M. Robison, T.L. Ott, and R.L. Kincaid. 2006. Effect of Selenium Intake and Fetal Age on mRNA Levels of Two Selenoproteins in Porcine Fetal and Maternal Liver. *Journal of Animal Science*. 84:2382-2390.

Harrison, J.H., and R.L. Kincaid. 2006. Prediction and Evaluation of Urine and Urinary Nitrogen and Mineral Excretion from Dairy Cattle. *Journal of Dairy Science*. 89:353-364.

Mount, G.H., D.R. Yonge, B.K. Lamb, H.H. Westberg, K.A. Johnson, and R.L. Kincaid. 2006. Atmospheric Flux of Ammonia from Sprinkler Application of Dairy Waste. *Atmospheric Environment*. 40:7246-7258.

#### **0432 Pre- and Post-Harvest Manipulation of Palatability, Appearance and Lipid Composition of Red Meat**

Xiao, Q., X.L. Wu, J.J. Michal, J.J. Reeves, J.R. Busboom, G.H. Thorgaard, and Z. Jiang. 2006. A Novel Nuclear-Encoded Mitochondrial Poly(A) Polymerase PAPD1 is a Potential Candidate Gene for the Extreme Obesity Related Phenotypes in Mammals. *International Journal of Biological Sciences*. 2:171-178.

Xiao, Q., T.A. Wibowo, X.L. Wu, J.J. Michal, J.J. Reeves, J.R. Busboom, G.H. Thorgaard, and Z. Jiang. 2006. A Simplified QTL Mapping Approach for Screening and Mapping of Novel AFLP Markers Associated with Beef Marbling. *Journal of Biotechnology*. 127:177-187.

Purchas, R.W., J.R. Busboom, and B. Wilkinson. 2006. Changes in the Forms of Iron and in Concentrations of Taurine, Carnosine, Coenzyme Q10, and Creatine in Beef Longissimus Muscle with Cooking and Simulated Stomach and Duodenal Digestion. *Meat Science*. 74: 443-449.  
[http://www.sciencedirect.com/meat\\_sci](http://www.sciencedirect.com/meat_sci) .

#### **0536 Development of Ex Situ Bovine Spermatogenesis**

Schmidt, J.A., J.M. de Avila, and D.J. McLean. 2006. Effect of Vascular Endothelial Growth Factor and Testis Tissue Culture on Spermatogenesis in Bovine Ectopic Testis Xenografts. *Biology of Reproduction*. 75:167-175.

Schmidt, J.A., J.M. de Avila, and D.J. McLean. 2006. Grafting Period and Donor Age Effect the Potential for Spermatogenesis in Bovine Ectopic Testis Xenografts. *Biology of Reproduction*. 75:160-166.

McLean, D.J. 2006. Vertebrate Reproductive Stem Cells: Recent Insights and Technological Advances. *Seminars in Cell and Developmental Biology*. 17:534-539.

#### **0567 Endocrine Control of Rainbow Trout Skeletal Muscle Growth and Development**

Oufattole, M., S.W.J. Lin, B. Liu, D. Mascarenhas, P. Cohen, and B.D. Rodgers. 2006. RNA Polymerase II Subunit 3 (Rpb3), A Potential Nuclear Target of IGFBP-3. *Endocrinology*. 147:2138-46.

Garikipati, D., S.A. Ghar, and B.D. Rodgers. 2006. Identification, Characterization and Quantitative Expression Analysis of Rainbow Trout Myostatin-1a and -1b Genes. *Journal of Endocrinology*. 190:879-88.

Rodgers, B.D., E.H. Roalson, G.M. Weber, S.B. Roberts, and F.W. Goetz. 2006. A Proposed Nomenclature Consensus for the Myostatin Gene Family. *American Journal of Physiology; Endocrinology Metabolics*.  
<http://ajpendo.physiology.org/>

#### **0568 National Animal Genome Research Program**

Schenkel, F.S., S.P. Miller, Z. Jiang, I.B. Mandell, X. Ye, H. Li, and J.W. Wilton. 2006. Association of a Single Nucleotide Polymorphism in the Calpastatin (CAST) Gene with Carcass and Meat Quality Traits of Beef Cattle. *Journal of Animal Science*. 84:291-299.

Garcia, M.D., J.J. Michal, C.T. Gaskins, J.J. Reeves, T.L. Ott, Y. Liu, and Z. Jiang. 2006. Significant Associations of the Calpastatin Gene with Fertility and Longevity in Dairy Cattle. *Animal Genetics*. 37:304-305.

Sharma, B.S., G.B. Jansen, N.A. Karrow, D. Kelton, and Z. Jiang. 2006. Detection and Characterization of AFLP Markers for Clinical Mastitis in Canadian Holsteins. *Journal of Dairy Science*. 89:3653-3663.

Michal, J.J., Z. Zhang, C.T. Gaskins, and Z. Jiang. 2006. The Bovine Fatty Acid Binding Protein 4 Gene is Significantly Associated with Marbling and Subcutaneous Fat Depth in Wagyu x Limousin F2 Crosses. *Animal Genetics*. 37:400-402.

Xiao, Q., X.L. Wu, J.J. Michal, J.J. Reeves, J.R. Busboom, G.H. Thorgaard, and Z. Jiang. 2006. A Novel Nuclear-Encoded Mitochondrial Poly(A) Polymerase PAPD1 is a Potential Candidate Gene for the Extreme Obesity Related Phenotypes in Mammals. *International Journal of Biological Sciences*. 2:171-178.

Jiang, Z., J.J. Michal, G.A. Williams, T.F. Daniels, and T. Kunej. 2006. Cross Species Association Examination of UCN3 and CRHR2 as Potential Pharmacological Targets for Antiobesity Drugs. *PLoS ONE* 1:e80; DOI number:10.1371/journal.pone.0000080, [www.plosone.org](http://www.plosone.org)

Xiao, Q., T.A. Wibowo, X.L. Wu, J.J. Michal, J.J. Reeves, J.R. Busboom, G.H. Thorgaard, and Z. Jiang. 2006. A Simplified QTL Mapping Approach for Screening and Mapping of Novel AFLP Markers Associated with Beef Marbling. *Journal of Biotechnology*. 127:177-187.

#### **0709 Mastitis Resistance to Enhance Dairy Food Safety**

Park, Y.H., S.U. Lee, W.A. Ferens, S. Samuels, W.C. Davis, L.K. Fox, J.S. Ahn, K.S. Seo, B.S. Chang, S.Y. Hwang, and G.A. Bohach. 2006. Unique Features of Bovine Lymphocytes Exposed to a *Staphylococcal superantigen*. *Journal of Veterinary Science*. 7:233-239.

Fox, L.K., C. Gradle, and A. Dee. 2006. Disinfectant Containing a Complex of Skin Conditioners. *Journal of Dairy Science*. 89:2539-2541.

Borm, A.A., L.K. Fox, K.E. Leslie, J.S. Hogan, S.M. Andrew, K.M. Moyes, S.P. Oliver, Y.H. Schukken, D.D. Hancock, C.T. Gaskins, W.E. Owens, and C. Norman. 2006. Effects of *Prepartum Intramammary* Antibiotic Therapy on Udder Health. *Journal of Dairy Science*. 89:2090-2098.

#### **0764 Enhancing the Global Competitiveness of U.S. Meats**

Xiao, Q., X.L. Wu, J.J. Michal, J.J. Reeves, J.R. Busboom, G.H. Thorgaard, and Z. Jiang. 2006. A Novel Nuclear-Encoded Mitochondrial Poly(A) Polymerase PAPD1 is a Potential Candidate Gene for the Extreme Obesity Related Phenotypes in Mammals. *International Journal of Biological Sciences*. 2: 171-178.

Xiao, Q., T.A. Wibowo, X.L. Wu, J.J. Michal, J.J. Reeves, J.R. Busboom, G.H. Thorgaard, and Z. Jiang. 2006. A Simplified QTL Mapping Approach for Screening and Mapping of Novel AFLP Markers Associated with Beef Marbling. *Journal of Biotechnology*. 127:177-187.

Purchas, R.W., J.R. Busboom, and B. Wilkinson. 2006. Changes in the Forms of Iron and in Concentrations of Taurine, Carnosine, Coenzyme Q10, and Creatine in Beef Longissimus Muscle with Cooking and Simulated Stomach and Duodenal Digestion. *Meat Science*. 74:443-449.

[http://www.sciencedirect.com/meat\\_sci](http://www.sciencedirect.com/meat_sci) .

#### **0858 Investigation of Food Animal Disease Problems in the State of Washington**

Motteram, E., and L. Fox. 2006. Neosporosis in Dairy Cattle: An update from the Epidemiology Perspective. *American Journal of Veterinary Research*. 59:204-207.

Fox, L., and J.M. Gay. 2006. Neosporosis in Dairy Cattle: An update from the Epidemiology Perspective. *Theriogenology*. 66:629-632.

Fox, L., and J.M. Gay. 2006. *Theriogenology and Developments in Epidemiology: Future Opportunities? Research in Veterinary Science*. 66:526-533.

Soule, M., E. Kuhn, F. Loge, J. Gay, and D. R. Call. 2006. Using DNA Microarrays to Identify Library-Independent Markers for Bacterial Source Tracking. *Applied and Environmental Microbiology*. 72:1843-51.

Gay, J.M. 2006. Determining Cause and Effect in Herds. *Veterinary Clinics of North America: Food Animal Protection*. 22:124-147.

#### **0862 Metabolic Relationships in Supply of Nutrients for Lactating Cows (NC-1040)**

Hanigan, M.D., H.G. Bateman, J.G. Fadel, and J.P. McNamara. 2006. Metabolic Models of Ruminant Metabolism: Recent Improvements and Current Status. *Journal of Dairy Science*. 89:E52-64E.

**0913 Molecular Mechanisms  
Regulating Skeletal Muscle  
Growth and Differentiation**

Fernyhough, M.E., J.L. Vierck, and M.V. Dodson. 2006. Assessing a Non-Traditional View of *Adipogenesis*: *Adipocyte* Dedifferentiation-Mountains or Molehills? *Cells Tissues Organs* : in Vivo. in Vitro. 182:226-228.

**0957 Reproductive Performance in  
Domestic Ruminants**

Garcia, M.D., J.J. Michal, C.T. Gaskins, J.J. Reeves, T.L. Ott, Y. Liu, and Z. Jiang. 2006. Significant Associations of the Calpastatin Gene with Fertility and Longevity in Dairy Cattle. *Animal Genetics*. 37:304-305.

**8167 Emission Measurements of  
Ammonia, Methane, Nitrous  
Oxide, and Particulates from  
Beef Production**

Mount, G.H., D.R. Yonge, B.K. Lamb, H.H. Westberg, K.A. Johnson, and R.L. Kincaid. 2006. Atmospheric Flux of Ammonia from Sprinkler Application of Dairy Waste. *Atmospheric Environment*. 40:7246-7258.

Szasz, J., C. Hunt, A. Turgeon, P. Szasz, and K.A. Johnson. 2006. The Effects of Pasteurized Potato Slurry by-Product Fed in Corn or Barley-Based Beef Finishing Diets. *Journal of Animal Science*. 83:2806-2814.

**Biological Systems Engineering:  
0371 Novel Processes and  
Technologies for Food and  
Agricultural Commodities**

Pandit, R.B., J. Tang, G. Mikhaylenko, and F. Liu. 2006. Kinetics of Chemical Marker M-2 Formation in Mashed Potato--A Tool to Locate Cold Spots under Microwave Sterilization. *Journal of Food Engineering*. 76:353-361.

Zhang M., J. Tang, A.S. Mujumdar, and S. Wang. 2006. Trends in Microwave Related Drying of Fruits and Vegetables. *Trends in Food Science and Technology*. 17:524-534.

**0467 Improvement of Thermal and  
Alternative Processes for Foods**

Guerrero-Beltran, J.A., and G.V. Barbosa-Canovas. 2006. Inactivation of *Saccharomyces cerevisiae* and *Polyphenoloxidase* in Mango Nectar Treated with UV light. *Journal of Food Protection*. 69:362-368.

Guerrero-Beltran, J.A., G.V. Barbosa-Canovas, G. Moraga-Ballesteros, M.J. Moraga-Ballesteros, and B.G. Swanson. 2006. Effect of pH and Ascorbic Acid on High Hydrostatic Pressure-Processed Mango Puree. *Journal of Food Processing and Preservation*. 30:582-596.

San Martin-Gonzalez, M.F., J. Welti-Chanes, and G.V. Barbosa-Canovas. 2006. Cheese Manufacture Assisted by High Pressure. *Food Reviews International*. 22:275-289.

Sepulveda, D.R., J.A. Guerrero, and G.V. Barbosa-Canovas. 2006. Influence of Electric Current Density on the Bactericidal Effectiveness of Pulsed Electric Field Treatments. *Journal of Food Engineering*. 76:656-663.

**0553 Development and Application of Models for the Analysis of Agricultural Systems in the State of Washington**

Badini, O., C.O. Stockle, J. Jones, R. Nelson, A. Kodio, and M. Keita. 2006. A Simulation-Based Analysis of Productivity and Soil Carbon in Response to Time-Controlled Rotational Grazing in the West African Sahel Region. *Agricultural Systems*.  
<http://dx.doi.org/10.1016/j.agsy.2005.09.010> .

Oyarzun, R., C.O. Stockle, and M.D. Whiting. 2006. A Simple Approach to Modeling Radiation Interception by Fruit-Tree Orchards. *Agricultural and Forest Meteorology*. 142:12-24.  
<http://dx.doi.org/10.1016/j.agrformet.2006.10.004> .

**0630 Animal Waste Treatment, Management, and Utilization for Protection of Air and Water Qualities**

Hamilton, D.W., I.N. Kourtchev, P.M. Ndegwa, H.J. Cumba, and F. Gioelli. 2006. Methane and Carbon Dioxide Emissions from Simulated Anaerobic Swine Manure Treatment Lagoons under Summer Conditions. *Transactions of the ASABE*. 49:157-165.

Templer, J., J.A. Lalman, N. Ling, and P.M. Ndegwa. 2006. Influence of C18 Long Chain Fatty Acids on Hydrogen Metabolism. *Biotechnology Progress*. 22:199-207.

Zhu, J., A. Luo, and P.M. Ndegwa. 2006. Effect of Microbial Additives Combined with Aeration on Reduction of Nutrients in Swine Manure. *Applied Engineering in Agriculture*. 49:203-208.

**0990 Assuring Fruit and Vegetable Product Quality and Safety through the Handling and Marketing Chain**

Hansen, J.D., S.R. Drake, M.L. Heidt, M.A. Watkins, J. Tang, and S. Wang. 2006. Potential Radio Frequency-Hot Water Dip Treatment for Postharvest Codling Moth Control in Fresh Apples. *Journal of Food Processing and Preservation*. 30:631-642.

Hansen, J.D., S.R. Drake, M.A. Watkins, M.L. Heidt, P.A. Anderson, and J. Tang. 2006. Radio Frequency Pulse Application for Heating Uniformity in Postharvest Codling Moth (*Lepidoptera: Tortricidae*) Control of Fresh Apples (*Malus Domestica Borkh*). *Journal of Food Quality*. 29:492-504.

Wang, S., J. Tang, T. Sun, E.J. Mitcham, T. Koral, and S.L. Birla. 2006. Considerations in Design of Commercial Radio Frequency Treatments for Postharvest Pest Control in Inshell Walnuts. *Journal of Food Engineering*. 77:304-312.

Wang, S., S.L. Birla, J. Tang, and J.D. Hansen, 2006. Post-Harvest Treatment to Control Codling Moth in Fresh Apples using Water Assisted Radio Frequency Heating. *Postharvest Biology and Technology*. 40:89-96.

Yin, X., S. Wang, J. Tang, J.D. Hansen, and S. Lurie. 2006. Thermal Conditioning of Fifth Instar '*Cydia pomonella*' (*Lepidoptera: Tortricidae*) Affects HSP70 Accumulation and Insect Mortality. *Physiological Entomology*. 31:241-247.

**4674 Planning Workshop--Emerging Food Processing Technologies: From Lab Bench to the Table**

- Guerrero-Beltran, J.A., and G.V. Barbosa-Canovas. 2006. Inactivation of *Saccharomyces cerevisiae* and Polyphenoloxidase in Mango Nectar Treated with UV Light. *Journal of Food Protection*. 69:362-368.
- Guerrero-Beltran, J.A., G.V. Barbosa-Canovas, G. Moraga-Ballesteros, M.J. Moraga-Ballesteros, and B.G. Swanson. 2006. Effect of pH and Ascorbic Acid on High Hydrostatic Pressure-Processed Mango Puree. *Journal of Food Processing and Preservation*. 30:582-596.
- Juliano, P., B. Li, S. Clark, J.W. Mathews, P.C. Dunne, and G.V. Barbosa-Canovas. 2006. Descriptive Analysis of Precooked Egg Products after High-Pressure Processing Combined with Low and High Temperatures. *Journal of Food Quality*. 29: 05-530.
- Juliano, P., M. Toldra, T. Koutchma, V.M. Balasubramaniam, S. Clark, J.W. Mathews, C.P. Dunne, G. Sadler, and G.V. Barbosa-Canovas. 2006. Texture and Water Retention Improvement in High-Pressure Thermally Treated Scrambled Egg Patties. *Journal of Food Science*. 71:E52-61.
- Penna, A.L.B., S. Gurram, and G.V. Barbosa-Canovas. 2006. Effect of High Hydrostatic Pressure Processing on Rheological and Textural Properties of Probiotic Low-Fat Yogurt Fermented by Different Starter Cultures. *Journal Food Process Engineering*. 29:447-461.
- Rivas, A., D. Rodrigo, A. Martinez, G.V. Barbosa-Canovas, and M. Rodrigo. 2006. Effect of PEF and Heat Pasteurization on the Physical-Chemical Characteristics of Blended Orange and Carrot Juice. *LWT-Food Science and Technology*. 39: 163-1170.
- Sampedro, F., D. Rodrigo, A. Martinez, G.V. Barbosa-Canovas, and M. Rodrigo. 2006. Review: Application of Pulsed Electric Fields in Egg and Egg Derivatives. *Food Science and Technology International*. 12:397-405.
- San Martin-Gonzalez, M.F., J. Welti-Chanes, and G.V. Barbosa-Canovas. 2006. Cheese Manufacture Assisted by High Pressure. *Food Reviews International*. 22:75-289.
- Sepulveda, D.R., J.A. Guerrero, and G.V. Barbosa-Canovas. 2006. Influence of Electric Current Density on the Bactericidal Effectiveness of Pulsed Electric Field Treatments. *Journal of Food Engineering*. 76:656-663.
- 5378 Radio Frequency Energy as an Alternative to Methyl Bromide Fumigation for Controlling Pests in Stone Fruits and Nuts**
- Wang, S., J. Tang, T. Sun, E.J. Mitcham, T. Koral, and S.L. Birla. 2006. Considerations in Design of Commercial Radio Frequency Treatments for Postharvest Pest Control in Inshell Walnuts. *Journal of Food Engineering*. 77:304-312.
- Wang, S., S.L. Birla, J. Tang, and J.D. Hansen. 2006. Post-Harvest Treatment to Control Codling Moth in Fresh Apples using Water Assisted Radio Frequency Heating. *Postharvest Biology and Technology*. 40:89-96.
- Yin, X., S. Wang, J. Tang, J.D. Hansen, and S. Lurie. 2006. Thermal Conditioning of Fifth Instar '*Cydia pomonella*' (*Lepidoptera: Tortricidae*) Affects HSP70 Accumulation and Insect Mortality. *Physiological Entomology*. 31:241-247.

**7319 Modeling Hydrology and Erosion under Winter Climatic Conditions of the Pacific Northwest: Modifying WEPP**

Greer, R.C., J.Q. Wu, P. Singh, and D.K. McCool. 2006. WEPP Simulation of Observed Winter Runoff and Erosion in the U.S. Pacific Northwest. *Vadose Zone Journal*. 5:261-272.

**Center for Precision Agricultural Systems:**

**0551 Advancing Precision Agricultural Systems through Automation, Sensing, Control, and Information Systems**

Collins, H.P., R. Navare, E. Riga, and F.J. Pierce. 2006. Effect of Foliar Applied Plant Elicitors on Microbial and Nematode Populations in the Root Zone of Potato. *Comm. Soil Science and Plant Analysis*. 37:1-13.

Blom, P.E., J.M. Tarara, J. Ferguson, F. Pierce, and M. Olmstead. 2006. A Novel Method for Continuous Crop Monitoring and Yield Estimation in Vineyards. *Journal of Idaho Academy of Science*. 42:60.

Cabot, P.E., F.J. Pierce, P. Nowak, and K.G. Karthikeyan. 2006. Monitoring and Predicting Manure Application Rates using Precision Conservation Technology. *Journal of Soil and Water Conservation*. 61:282-292

**Community and Rural Sociology:**

**0127 Local Agri-Food Systems in a Globalizing Context**

Kondoh, K., and R.A. Jussaume. 2006. Contextualizing Farmers' Attitudes towards Biotechnology. *Agriculture and Human Values*. 23:341-352.

**0942 How Visual Design and Layout Influences Answers to Self-Administered Paper and Internet Questionnaires**

Dillman, D.A. 2006. Why Choice of Survey Mode Makes a Difference. *Public Health Reports* 121:11-13.

Smyth, J.D., D.A. Dillman, and L.M. Christian. 2006. Comparing Check-All and Forced-Choice Question Formats in Web Surveys. *Public Opinion Quarterly*. 70:66-77.

Stern, M.J., and D.A. Dillman. 2006. Community Participation, Social Ties, and Use of the Internet. *City and Community*. 5:409-424.

**Crop and Soil Sciences:**

**0128 Management of Grain Quality and Security for World Markets**

Quinde-Axtell, Z., and B.-K. Baik. 2006. Phenolic Compounds of Barley Grain and Their Implication in Food Products Discoloration. *Journal of Agriculture and Food Chemistry*. 54:9978-9984

Quinde-Axtell, Z., P. Powers, and B.-K. Baik. 2006. Retardation of Discoloration in Barley Flour Gel and Dough. *Cereal Chemistry*. 83:385-390.

Han, I., and B.-K. Baik. 2006. Oligosaccharides in Legumes and Reduction by Soaking, Cooking, Ultrasound and High Hydrostatic Pressure. *Cereal Chemistry*. 83:428-433.

Dalgetty, D.D., and B.-K. Baik. 2006. Fortification of Bread with Hulls and Cotyledon Fibers Isolated from Peas, Lentils, and Chickpeas. *Cereal Chemistry*. 83:269-274.

**0152 Characterizing Mass and Energy Transport at Different Scales**

Jerez, J., M. Flury, J. Shang, and Y. Deng. 2006. Coating of Silica Sand with Aluminosilicate Clays. *Journal of Colloid and Interface Science*. 294:155-164.

Jerez, J., and M. Flury. 2006. Humic Acid, Ferrihydrite, and Aluminosilicate Coated Sands for Column Transport Experiments. *Colloids and Surfaces A: Physicochem Engineering Aspects*. 273:90-96.

Shira, J.M., B.C. Williams, M. Flury, S. Czigany, and M. Tuller. 2006. Sampling Silica and Ferrihydrite Colloids with Fiberglass Wicks under Unsaturated Flow Conditions. *Journal of Environment Quality*. 35:1127-1134.

Mon, J., M. Flury, and J.B. Harsh. 2006. A Quantitative Structure-Activity Relationships (QSAR) Analysis of Triarylmethane Dye Tracers. *Journal of Hydrology*. (Amsterdam) 316:84-97.

Mon, J., M. Flury, and J.B. Harsh. 2006. Sorption of Four Triarylmethane Dyes in a Sandy Soil Determined by Batch and Column Experiments. *Geoderma*. 133:217-224.

#### **0232 Breeding and Genetics of Winter Wheat**

Jones, S.S., S.R. Lyon, K.A. Balow, T.D. Murray, X.M. Chen, B.P. Carter, C.R. Morris, K.G. Campbell, J.W. Burns, W.F. Schillinger, P.E. Reisenauer, B.J. Goates. 2006. Registration of Masami Wheat. *Crop Science*. 46:476.

Murphy, K., S. Jones 2006. Perennial Wheat Cropping Systems in the Pacific Northwest, Sustaining the Pacific Northwest. 4:6-8.

#### **0250 Cropping Systems Research for Low-Precipitation Dryland in Eastern Washington**

Jones, S.S., S.R. Lyon, K.A. Balow, T.D. Murray, X. Chen, K. Campbell, J.W. Burns, W.F. Schillinger, P. Reisenauer, and B. Goates. 2006. Registration of Masami Wheat. *Crop Science*. 46:476-477.

Schillinger, W.F., and T. Paulitz. 2006. Reduction of Rhizoctonia Bare Patch in Wheat with Barley Rotations. *Plant Disease*. 90:302-306.

Kennedy, A.C., and W.F. Schillinger. 2006. Soil Quality and Water Intake in Traditional-Till vs. No-Till Paired Farms in Washington's Palouse region. *Soil Science Society of America Journal*. 70:940-949.

Williams, J.D., S.B. Wuest, W.F. Schillinger, and H.T. Gollany. 2006. Rotary Subsoiling Newly Planted Winter Wheat Fields to Improve Infiltration in Frozen Soil. *Soil and Tillage Research*. 86:141-151.

Paulitz, T., P. Okubara, and W.F. Schillinger. 2006. First Report of Damping-Off of Canola Caused by *Rhizoctonia solani* AG 2-1 in Washington State. *Plant Disease*. 90:829.

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