

**Agricultural Research Center
College of Agricultural, Human, and Natural Resource Sciences
Washington State University**

**Projects Approved by USDA/CSREES for FY 2005-2006
By Department**

DEPARTMENTS:

Agricultural Research Center Administration

0556 Jointed Goatgrass: A Threat to U.S. Wheat Production, Ristow, S.S.

0557 Aquaculture, Idaho Washington, Ristow, S.S.

0558 Grass Seed Cropping Systems for a Sustainable Agriculture, Cavalieri, R.P.

0587 Jointed Goatgrass: A Threat to U.S. Wheat Production, Ristow, S.S.

0592 Aquaculture, Idaho and Washington, Ristow, S.S.

0600 Grass Seed Cropping Systems for a Sustainable Agriculture, Cavalieri, R.P.

0623 Aquaculture, Idaho and Washington, Ristow, S.S.

0625 Grass Seed Cropping Systems for a Sustainable Agriculture, ID, OR, and WA, Cavalieri, R.P.

0626 Jointed Goatgrass: A Threat to U.S. Wheat Production, Ristow, S.S.

0628 Development of Alternative Controls for Burrowing Shrimp, Ristow, S.S., Bollens, S.M., and Patten, K.D.

7996 Multistate Research Coordination, Western Region, W-106, Cavalieri, R.P. and Ristow, S.S.

9916 Administration of Agricultural Research - Washington State, Cavalieri, R.P. and Ristow, S.S.

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0167 Enhancement of Dietary Energy Use for Maintenance, Growth, and Lactation by Beef Cattle, Johnson, K.A.

0181 Genetic Variation in Growth, Carcass Composition, Quality, and Fatty Acid Composition of Wagyu Angus and Wagyu-Angus Cross Cattle, Gaskins, C.T., Busboom, J.R., and O'Fallon, J.V.

0304 Altering Ruminal Fermentation with Plant Extract, Nelson, M.L.

0374 Nutrient Management: Feeding for Reduced Excretion of Nutrients by Ruminants, Kincaid, R.L.

0432 Pre-and Post-Harvest Manipulation of Palatability, Appearance, and Lipid Composition of Red Meat, Busboom, J.R.

0536 Development of *Ex situ* Bovine Spermatogenesis, McLean, D.J.

0567 Endocrine Control of Rainbow Trout Skeletal Muscle Growth and Development, Rodgers, B.D.

0568	National Animal Genome Research Program, NRSP-8, Jiang, Z.	Biological Systems Engineering
0569	Nutrient Management of Dairy Systems, Harrison, J.H.	0319 Modeling Hydrology and Erosion Processes at Watershed Scales: Modifying WEPP, Wu, J.Q.
0627	Associations of the Basal Mitochondrial Transcription Machinery Genes with Marbling in Beef Cattle, Jiang, Z.	0371 Studies of Using Microwave and Radio Frequency Energy in Food Safety, Phytosanitary, and Quarantine Applications, Tang, J., Cavalieri, R.P., Pitts, M.J., Rasco, B.A., Clark, S., Kang, D.H., and Li, B.*
0706	Germ Cell and Embryo Development and Manipulation for the Improvement of Livestock, W-1171, Wright, R.W.	0450 The Science and Engineering for a Biobased Industry and Economy, S-1007, Chen, S.
0709	Mastitis Resistance to Enhance Dairy Food Safety, NE-1009, Fox, L.K. and Davis, W.C.	0467 Improvement of Thermal and Alternative Processes for Food, NC-1023, Barbosa-Canovas, G.V., Powers, J.R., Tang, J., and Clary, C.
0764	Enhancing the Global Competitiveness of U.S. Red Meat, W-1177, Busboom, J.R.	0553 Development and Application of Water and Nutrient Models for the Analysis of Agricultural Systems, Stockle, C.O.
0858	Investigation of Food Animal Disease Problems in the State of Washington, Fox, L.K., Hancock, D.D., and Gay, J.M.	0554 Enhanced Anaerobic Digestion of Animal Manure with Nutrient Recovery, Chen, S.
0862	Metabolic Relationships in Supply of Nutrients for Lactating Cows, NC-1009, McNamara, J.P.	0562 Research and Development for Biomass Processing and Bioproduct Production, Chen, S.
0913	Molecular Mechanisms Regulating Skeletal Muscle Growth and Differentiation, NC-1131, Dodson, M.V.	0573 Physical Properties of Food Powders, Barbosa-Canovas, G.V.
0957	Reproductive Performance in Domestic Ruminants, W-112, Reeves, J.J.	0630 Animal Waste Treatment, Management, and Utilization for Protection of Air and Water Qualities, Ndegwa, P.M., Chen, S., Beutel, M., Harrison, J.H., and Koenig, R.T.
4956	Sterilization Vaccine for Cattle, Reeves, J.J.	0990 Assuring Fruit and Vegetable Product Quality and Safety through the Handling and Marketing Chain, NE-1008, Tang, J. and Fellman, J.K.
8167	Emission Measurements of Ammonia, Methane, Nitrous Oxide, and Particulates from Beef Production, Johnson, K.A., Westberg, H.H., Lamb, B.K., Kincaid, R.L., Harrison, J.H., and Mount, G.H.	4674 Planning Workshop-Emerging Food Processing Technologies: From Lab Bench to the Table, Barbosa-Canovas, G.V.

- 5378 Radio Frequency Energy as an Alternative to Methyl Bromide Fumigation for Controlling Pests in Stone Fruits and Nuts, Tang, J., Wang, S., Mitcham, E.J., Armstong, J.W., and Johnson, J.A.*
- 6373 Improved Quarantine Treatments for Tropical Fruit Using Thermal Energy , Tang, J., Wang, S., Mitcham, E., and Armstong, J.
- 7319 Modeling Hydrology and Erosion under Winter Climatic Conditions of the Pacific Northwest: Modifying WEPP, Wu, J.Q.
- 8553 Measuring and Modeling Gaseous Losses of Nitrogen from Irrigated Crops in Central Washington, Stockle, C.O., Lamb, B.K., Mount, G.H., and Kemanian, A.K.
- [Center for Precision Agricultural Systems](#)
- 0551 Advancing Precision Agricultural Systems through Automation, Sensing, Control, and Information Systems, Pierce, F.J., Perry, E., Brunner, J.F., Clary, C., Davenport, J.R., Grove, G.G., Jones, V.P., Stevens, R.G., Pitts, M.J., Tarara, J.M. *, and Whiting, M.
- 3227 Non-Chemical Pest Control in Fruits and Nuts using Electromagnetic Energy, Hansen, J.D.*, Mitcham, E., and Shellie, K.*
- 5059 Integrating Biological Control in the Management of *Solanaceous* Weeds, Ferguson, H.J. and Boydston, R.A. *
- 7703 Sustainability of Three Apple Production Systems: Organic, Convention, and Integrated, Andrews, P.K.
- [Center for Sustainable Agriculture and Natural Resources](#)
- 0414 A Proposed Study to Determine Agricultural Drainage Practices Which Minimize Detrimental Effects on Salmonids, Feise, C.
- 0588 Organic Cropping Research for the Northwest, Granatstein, D.M., Miles, C.A., and Feise, C.
- 0619 Organic Cropping Research for the Northwest, Granatstein, D.M. and Miles, C.A.
- 0636 Physical and Chemical Characteristics of Grape Berries as Influenced by Hang Time and Berry Shrivel, Bondada, B.
- 0644 Organic Cropping Research for the Northwest, Granatstein, D.M. and Miles, C.A.
- [Community and Rural Sociology](#)
- 0127 Local Agri-Food Systems in a Globalizing Context, Jussaume, R.A.
- 0230 Sustaining Local Food Systems in a Globalizing Environment: Forces, Responses, Impacts, NE-1012, Ostrom, M. and Jussaume, R.A.
- 0403 Systems Analyses of the Relationships of Agriculture and Food Systems to Community Health, NC-1001, Jussaume, R.A.
- 0445 Population Change in Rural Communities, W-1001, Kirschner, A.R.
- 0576 Socioeconomic and Environmental Impacts of Agricultural Research and Extension, Zuiches, J.J.
- 0585 Socio-Economic and Environmental Benefits of Agricultural Research and Extension, Zuiches, J.J.
- 0942 How Visual Design and Layout Influences Answers to Self-Administered Paper and Internet Questionnaires, Dillman, D.A.
- 0981 Changing Social Dynamics in Washington's Rural Areas, Kirschner, A.R.

Crop and Soil Sciences

- 0128 Management of Grain Quality and Security for World Markets, NC-213, Baik, B.K.
- 0152 Characterizing Mass and Energy Transport at Different Scales, W-1188, Flury, M. and Wu, J.Q.
- 0175 Adaptation Studies of Cereal Varieties and Selections, Burns, J.W.
- 0196 Molecular Markers for Barley Disease Resistance Genes in Barley, Kleinhofs, A., von Wettstein, D.H., and Steffenson, B.
- 0232 Breeding and Genetics of Winter Wheat, Jones, S.S., Murray, T.D., Baik, B.K., Chen, X.M.*, Morris, C.F.*, and Campbell, K.G.*
- 0250 Cropping Systems Research for Low-Precipitation Dryland in Eastern Washington, Schillinger, W.F., Young, D.L., Kennedy, A.C.*, Paulitz, T.*, Sharratt, B.S.*, Wuest, S.B.*, Williams, J.D.*, and Wysocki, D.J.*
- 0251 Breeding of Value-Added Barley by Incorporation of Protein-Engineered Beta-Glucanases and Beta-Xylanases, von Wettstein, D.H.
- 0256 Soil Conditions, Crop Productivity and Groundwater Quality in Some Western Washington Soils, Kuo, S., Peryea, F.J., and Miltner, E.D.
- 0257 Understanding and Managing Variability of Soil and Plant Nutrients in Irrigated Perennial Crop Systems, Davenport, J.R., Stevens, R.G., Keller, M., Olmstead, M., Peryea, F.J., and Pierce, F.J.
- 0267 Colloid Mobilization and Transport through the Vadose Zone, Flury, M.
- 0277 Biochemical Basis of Wheat and Wild Oat Seed Quality, Fuerst, E.P., Gallagher, R.S., and Morris, C.F.*
- 0281 Alternate Crops for Irrigated Central Washington, Hang, A.N., Fransen, S.C., and Kenny, S.T.
- 0297 Effects of Herbicide Application Timing and Technique on Bohemian Knotweed (*Polygonum bohemicum*) Shoot Growth and Rhizome Viability, Miller, T.W.
- 0308 Turfgrass Fertilizer and Pesticide Impacts on Surface Water Quality, Miltner, E.D., Stahnke, G.K., Cogger, C.G., Kuo, S., and Johnston, W.J.
- 0323 Remote Sensing and Geographic Information Systems for Land Management, Frazier, B.E. and Rossi, R.E.
- 0332 Evaluation and Management of Turfgrass Species and Cultivars, Johnston, W.J., Stahnke, G.K., Miltner, E.D., Johnson, R.C.*, Pan, W.L., and Bragg, D.R.*
- 0334 Improving Spring Wheat Varieties for the Pacific Northwest, Kidwell, K.K., Burns, J.W., Chen, X.M.*, Paulitz, T.*, Morris, C.F.*, Campbell, K.G.*, Steber, C.*, Dubcovsky, J., and Bosque-Perez, N.
- 0350 Weed Control Research in Irrigated Vegetable and Specialty Crops, Boydston, R.A.* and Parker, R.
- 0353 Soil Quality Changes with No-Till Management Adoption for Wind Erosion Control, Kennedy, A.C.*
- 0359 Improving Wheat Quality in the State of Washington, Baik, B.K.
- 0373 Carbon and Nitrogen Cycling and Management in Alternative Cropping Systems, Pan, W.L., Frazier, B.E., Kidwell, K.K., Stevens, R.G., Young, F.L.*, Johnston, W.J., McGuire, A., McKean, W., Yenish, J.P., Koenig, R.T., and Stannard, M.E.*

- 0385 Sorption and Transport of CS in Soils, Harsh, J.B. and Flury, M.
- 0398 An Integrated Physical and Expression Map for Barley for *Triticeae* Improvement, Kleinhofs, A.
- 0410 A Comparative Analysis of the Sustainability of Farming Systems, Reganold, J.P., Andrews, P.K., and Hinman, H.R.
- 0422 Ecologically-Based Management of Annual Weeds in Dryland Grain Production Systems of Eastern Washington, Koenig, R.T.
- 0449 Molecular Characterization and Manipulation of the Wheat Genome for Crop Improvement, Gill, K.S., Chen, X.M.*, Kleinhofs, A., Jones, S.S., Campbell, K.G.*, and Steber, C.*
- 0520 Developing Tissue Nutrient Standards for Irrigated Wine Grapes in Central Washington, Davenport, J.R.
- 0546 International Cooperation for Agriculture Research in Central Asia and The Caucasus, Pan, W.L. and Campbell, K.G.*
- 0552 PM-10 Particulate Emission Prediction and Control from Ag Land in the PNW, Schillinger, W.F.
- 0559 STEEP: Water Quality in the Pacific Northwest, Bezdicek, D.F.
- 0560 Exotic Germplasm Conversion and Breeding Common Bean for Resistance to Abiotic and Biotic Stresses and to Enhance Nutritional Value, W-1150, Hang, A.N. and Swanson, B.G.
- 0577 International Cooperation for Agriculture Research in Central Asia and The Caucasus, Pan, W.L. and Campbell, K.G.*
- 0578 PM-10 Particulate Emission Prediction and Control from Ag Lands in the PNW, Schillinger, W.F.
- 0579 The Strategic Use of Nitrogen Source, Placement, and Timing to Optimize Dryland Wheat Production in Use Efficiency and End-Use Quality, Koenig, R.T.
- 0581 The Chemical and Physical Nature of Particulate Matter Affecting Air, Water, and Soil Quality, NC-1022, Harsh, J.B.
- 0583 Breeding and Genetics of Hop, Kenny, S.T., Eastwell, K.C., Grove, G.G., and James, D.G.
- 0584 Integrated Management of Winter Annual Grass Weeds in Eastern Washington Dryland Crop Systems, Yenish, J.P., Huggins, D.*, Burns, J.W., and Young, F.L.*
- 0591 STEEP: Water Quality in the Pacific Northwest, Koenig, R.T.
- 0598 Eolian Soils, Global Change, and Washington Agriculture, Busacca, A.J., Frazier, B.E., and Gaylord, D.L.
- 0614 STEEP: Water Quality in the Pacific Northwest, Koenig, R.T.
- 0617 International Cooperation for Agricultural Research in Central Asia and the Caucasus, Pan, W.L. and Campbell, K.G.*
- 0618 PM10 Particulate Emission Prediction and Control from Agricultural Lands in the Pacific Northwest, Schillinger, W.F.
- 0629 Life and Death in Plants: Studies on Perennial Wheat as a Sustainable Alternative Cropping System, Jones, S.S. and Murray, T.D.
- 0645 Developing Wheat Varieties for Organic Agricultural Systems, Jones, S.S., Baik, B.K., Boggs-Carpenter, L., and Goates, B.J.

- 0689 Forage Management and Quality of Perennial Grasses as Stored Forage or Biofuel, Fransen, S.C., Collins, H.P.*, Hudson, T.*, and Vandmark, G.*
- 0690 Chemistry, Bioavailability, and Toxicity of Constituents in Residuals and Residual-Treated Soils, W-1170, Kuo, S., Harsh, J.B., and Miltner, E.D.
- 0715 Integrated Weed Management in Dryland Cropping Systems in Washington, Young, F.L.*
- 0719 Supplemental Support for Assessing the End-Use Quality of Washington Wheat Breeding Samples, Morris, C.F.* and McCurdy, A.R.
- 0722 Organic Amendments and Cover Crops in Sustainable Agricultural Systems and Urban Landscapes, Cogger, C.G., Bary, A.I., Koenig, R.T., Granatstein, D.M., and Hummel, R.L.
- 0747 Soil and Mineral Element Problems in Washington Tree Fruit Orchards, Peryea, F.J.
- 0805 Weed Research in Irrigated Agronomic, Horticultural, and Specialty Crops in WA, Parker, R.
- 0900 Soil Survey and Classification, Frazier, B.E. and Rossi, R.E.
- 1006 Breeding and Genetics of Barley, Ullrich, S.E., Kleinhofs, A., von Wettstein, D.H., Burns, J.W., Baik, B.K., Chen, X.M.*, Paulitz, T.*, and Kidwell, K.K.
- 1134 Plant Genetic Resource Conservation and Utilization, W-006, Jones, S.S., Hannan, R.M.*, Johnson, R.C.*, Clement, S.L.*, Dugan, F.M. *, Welsh, M.*, Cavalieri, R.P., Bradley, V.*, Coyne, C.J.*, Greene, S.L.*, and Hellier, B.*
- 1790 Breeding Dry Pea, Lentil, and Chickpea Germplasm for Stress Tolerance, Disease Resistance, and Quality, Muehlbauer, F.J.*, McPhee, K.E.*, and Chen, W.*
- 1851 Enhancing Winter Wheat for Coldhardiness; Studies to Increase Winter Hardiness, Skinner, D.* and Allan, R.E.*
- 3373 Low Temperature, Low Pressure Straw Pulping for Production of Linerboard, Corrugator Medium, Newsprint, and Fertilizer, Pan, W.L.
- 3422 Various Strategies to Achieve Ecological and Economic Goals in the Transition Phase of Eastern Washington Organic Dryland Grain Production, Koenig, R.T., Bezdicek, D.F., and Hinman, H.R.
- 4449 Molecular Characterization of a Major Gene-Rich Region of Wheat, Gill, K.S.
- 5422 Environmental Regulation of Seed Phenolics and Their Implication for Seed Band Persistence and Plant Fitness in *Avena fatua*, Fuerst, E.P., Kennedy, A.C.*, and Alldredge, J.R.
- 6297 Functional Analysis of the Barley Stem Rust Resistance Genes RPG1, RPG4, and RPGQ, Kleinhofs, A. and Steffenson, B.
- 6724 The Benefits and Costs of Using Organic Waste Streams in Small Scale Agriculture, Cogger, C.G., Ostrom, M., Bary, A.I., Carkner, R.W., Bristow, P.R., Miles, C.A., Stone, A.G., Sullivan, D.M., and Hemphill, D.
- 7232 Life and Death in Plants: Studies on Perennial Wheat as a Sustainable Alternative Cropping System, Jones, S.S. and Murray, T.D.

- 7333 Mapping and Cloning High Temperature Adult Plant Stripe Rust Resistant Genes in Wheat, Kidwell, K.K., Campbell, K.G.*, Santra, D.K., Chen, X.M.*, Dubcovsky, J., and Reganold, J.P.
- [Entomology Department](#)
- 0121 Biological Control in Pest Management Systems of Plants, W-1185, Piper, G.L.
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- 0327 The Delay in Population Growth: A New Approach for Estimating Toxicity of Pesticides to Populations of Pest and Beneficial Organisms, Stark, J.D., Banks, J.E., and Wennergren, U.
- 0337 Aphids: Ecology, Systematics, and Biocontrol, Pike, K.S., Footitt, R.G.*, Pappu, H.R., Schreiber, A.A.*, Thomas, P.E.*, Stary, P.*, and Unruh, T.*
- 0366 Understanding the Movement Patterns and Demography of Pests and their Natural Enemies in Deciduous Fruit IPM Programs, Jones, V.P., Brunner, J.F., Unruh, T.*, and Horton, D.*
- 0372 Agrochemical Impacts on Human and Environmental Health: Mechanisms and Mitigation, W-1045, Hebert, V.
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- 0405 Potential of Insect Growth Regulators for controlling Insect Pests of the Pacific Northwest, Brown, J.J. and Berryman, A.A.
- 0415 Utilizing Complex Communities of Natural Enemies in Biocontrol, Snyder, W.E.
- 0430 Biological Control of Invasive Toadflaxes in Washington, Piper, G.L.
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- 0604 Molecular Genetics of Honey Bee Subspecies and Selection and Breeding of New World Populations, Sheppard, W.S.
- 0631 The Genetic Basis for Phenotypic Plasticity in Insects, Corley, L.S.
- 1090 Management of Direct Pests of Apple in Washington Tree Fruit Orchards, Brunner, J.F., Beers, E.H., Dunley, J.E., Landolt, P.J.*, and Unruh, T.*

- 3417 Natural Enemy Biodiversity and the Biological Control of Aphids, Snyder, W.E.
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- 0586 Developing Integrated Pest Controls for the Oyster Industry to Replace Carbaryl for Burrowing Shrimp Control, Patten, K.D.
- 0437 Training Environment Stewards: Integrating Water Quality and Quantity Education from Mountain to Ocean, Gaolach, B.W., Zimmerman, T., Grotta, A., Kantor, S., and Racette, P.
- [Field Disease Investigative Unit](#)
- 0261 Enteric Diseases of Swine and Cattle: Prevention, Control, and Food Safety, NC-1007, Besser, T.E., Gay, J.M., Hancock, D.D., Call, D.R., and Cobbold, R.
- [Food Science and Human Nutrition](#)
- 0103 Dietary and Psychosocial Factors Affecting Self-Management of Type 2 Diabetes Mellitus, Armstrong Shultz, J., Massey, L.K., Evans, M.A., Butkus, S., and Cobett, C.*
- 0118 Vitamin B-6 Supplementation and Immune Function, Shultz, T.D.
- 0276 Parent and Household Influences on Calcium Intake among Preadolescents, W-1003, Edlefsen, M.S.
- 0286 Effect of Calcium-Containing Dairy and Nondairy Foods on Fat Accretion in Menopausal Women, Beerman, K.A.
- 0288 Microbiological and Chemical Factors Affecting Calcium Lactate Crystal Formation in Cheddar Cheese, Clark, S., Powers, J.R., Swanson, B.G., and Yuksel, G.
- 0305 Application of Spectroscopic Methods to Improve Food Quality and Safety of High Value Aquatic Food Products, Rasco, B.A.
- 0331 Dietary Astaxanthin in Inflammatory Disease: A Rheumatoid Arthritis Model in Dogs and Cats, Chew, B.P. and Park, J.S.
- 0369 Development of a New Rapid Method for the Estimation of *Escherichia coli* in Foods, Kang, D.H.
- 0370 Nutrition in the Treatment of Calcium Kidney Stones, Massey, L.K.
- 0522 Microbiology and Chemistry of Washington Wines, Edwards, C.G.
- 0531 Factors Influencing Wine and Wine Grape Quality in Washington, Harbertson, J.F.
- 0537 Factors Affecting the Quality of Washington Wine and Wine Grapes (*Vitis vinifera*), Harbertson, J.F., Edwards, C.G., Hendrix, W.G., Fellman, J.K., Keller, M., and Tarara, J.M.*
- 0607 *Lactobacillus helveticus* Enzyme Activity on Casein, Powers, J.R., Shultz, T.D., and Clark, S.
- 0608 Sensory Evaluation and Chemical Analysis of Selected Wines and Foods, Ross, C.F.
- 0612 Viticultural and Winemaking Practices that Shape the Color Stability, Astringency, and Total Phenolic Content of Washington Wines, Harbertson, J.F., Ross, C.F., Fellman, J.K., and Keller, M.

- 0613 Determination of Tannin, Total Phenolics, Anthocyanins, and Polymeric Pigment Levels in Wines Produced in Washington, Harbertson, J.F.
- 0615 Assessment of Astringency in Washington State Wines Using Sensory and Chemical Method, Harbertson, J.F. and Ross, C.F.
- 0634 Effect of c9, t11-18:2 (Conjugated Linoleic Acid (CLA)) and Consumption of High Fat Dairy Products on Gene Expression in the Human Mammary Epithelial Cell, McGuire, M.K.
- 0846 Enological and Viticultural Practices on Fermentation Microbiology, Chemistry, and Quality of Wines, Edwards, C.G., Tarara, J.M.*, Fellman, J.K., Keller, M., and Paznokas, J.L.
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- 0168 Gene Transfer for Potato Variety Development, Brown, C.R.*, Hamm, P.*, Johnson, D., Love, S.*, Navarre, R.*, Novy, N.*, Pavek, M.J., Riga, E., and Vales, I.
- 0217 Cultural and Cultivar Studies for Alternative Crop Production in a Maritime Climate, Moulton, G.A.
- 0260 Developing New Apple Cultivars for Washington State, Barritt, B.H. and Pusey, L.*
- 0285 Environmental/Cultural Factors on Water Stress: Resistance/Growth/Cold Hardiness of Landscape Plants, Hummel, R.L.
- 0298 Bioregulation of Vegetative Growth and Fruit Development in Apple, Pear, and Sweet Cherry for Maximum Production Efficiency and Fruit Quality, Elfving, D.C., McFerson, J., Whiting, M., Seavert, C., Fallahi, E., Curry, E.*, Whiting, M., and Xiao, C.L.
- 0321 Calcium/Calmodulin-Mediated Signaling in Plants, Poovaiah, B.W.
- 0326 Enhance Market Quality by Improving Fruit Finish in Apple, Schrader, L.E.
- 0375 Alternative Cropping Systems, Miles, C.A., Bristow, P.R., Myers, J., Stone, A., Cogger, C.G., and Granatstein, D.M.
- 0377 Production Horticultural and Integrated Management Systems of Grapes, Tarara, J.M.*, Keller, M., Olmstead, M., Smithyman, R.P., Pierce, F.J., and Spayd, S.E.
- 0412 Development and Application of Harvesting and Processing Technologies for Production of Value Added Fruit and Vegetable Products, Clary, C., Cavalieri, R.P., Durfey, J.E., Fellman, J.K., Edwards, C.G., Pierce, F.J., Spayd, S.E., Willemsen, K., and Tang, J.
- 0420 Integrating Whole-Tree Physiological, Horticultural, and Genetic Research in *Prunus* Tree Fruits, Whiting, M., Elfving, D.C., Grove, G.G., Howell, W.E., McFerson, J., and Nunez-Elisea,
- 0427 Evaluation of Apple Cultivars for Hard Cider Production, Moulton, G.A.
- 0428 Grapes Yield Components and Quality, Keller, M., Bondada, B., Olmstead, M.A., and Tarara, J.M.*

- 0452 Rootstock and Interstem Effects on Pome and Stone Fruit Trees, NC-140, Barritt, B.H. and Whiting, M.
- 0461 Optimizing Tuber Set and Size Distribution for Seed, Fresh, and Processing Markets, Knowles, N.R.
- 0519 Wine and Juice Grape Physiology and Production Systems, Keller, M., Tarara, J.M.*, Bondada, B., and Rogiers, S.Y.
- 0593 Mechanical Harvesting of Asparagus, Clary, C., Durfey, J.E., and Cavalieri, R.P.
- 0596 Multi-State Evaluation of Winegrape Cultivars and Clones, NE-1020, Keller, M. and Davenport, J.R.
- 0599 Development of Sustainable Viticulture Practices in the Pacific Northwest, Olmstead, M.A.
- 0622 Wine Grape Foundation Block, WA, Keller, M., Rayapati, N., and Eastwell, K.C.
- 0624 Potato Cultivar Evaluation and Commercial Potato Seed Lot Trial, Pavek, M.J., Hiller, L.K., and Trent, M.A.
- 0633 Berry Crop Water and Nutrient Management for Optimal Yield, and to Avoid Soil-borne Disease and Nitrate Leaching, Walters, T.W.
- 0637 Potato Variety Development and Improvement in the Northwest, Knowles, N.R., Pavek, M.J., Vales, M.I., and Stark, J.C.
- 0640 Breeding Superior Raspberry Cultivars for the Pacific Northwest, Moore, P.P., Finn, C.E., Kempler, C., and Martin, R.R.*
- 0695 The Impacts of Plants on People, Lohr, V.I.
- 0797 Postharvest Biology of Fruit, NE-1018, Fellman, J.K. and Kupferman, E.M.
- 0910 Isolation of A Flavonol Receptor Using A Photoaffinity-Tagged Kaempferol Ligands, Taylor, L.P.
- 0937 Role of Farm Management Systems and Environmental Stresses on the Physiology, Quality, and Sustainability of Temperate-Zone Fruit Crops, Andrews, P.K.
- 1984 Production and Environmental Impacts on Yield and Quality of Vegetable Crops and Potatoes, Hiller, L.K.
- 5324 Functional Analysis of a Novel Calcium and Calmodulin-Regulated Receptor-like Kinase in Plant Cold Tolerance, Poovaiah, B.W.
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- [IMPACT Center](#)
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