

SPECIALTY CROP BLOCK GRANT AWARDS 2016

In 2016, the Washington State Department of Agriculture received approximately \$4.3 million to help fund 21 projects:

Grant Recipient: Washington State University – Pappu

Project Title: Utilization of Natural Genetic Resources for Developing Multiple Disease Resistant Potatoes

Award: \$199,937

Abstract: This project will enhance the sustainability of potato production by generating tools and resources required for breeding *potato cultivars with multiple disease resistance*. Growing disease resistant cultivars will result in *reduced inputs including insecticides for vector control, thus reducing the cost of production with a subsequent increase in profit, and will directly contribute to environmental stewardship and increased sustainability*. Diseases are a major production constraint affecting both yield and quality of seed and commercial potatoes. Tuber necrosis-causing diseases, Potato Virus Y (PVY), Potato mop-top, and Corky ring spot, are three major viral diseases that affect yield and tuber quality. Certification programs for PVY are constrained by the emergence of new and more damaging strains. Mop-top and corky ring spot are emerging diseases that are becoming increasingly damaging. Yield losses due to these diseases vary from 10 to 70% and could cause rejection of an entire seed crop. Seed certification for PVY is a recurring cost, and vector control to manage PVY adds to the input costs. Because of the environmental concerns and financial costs, growing disease resistant cultivars is the most desirable, economical, and cost-effective means for controlling these diseases. Thus, it is critical to identify new genes conferring resistance to these pathogens that could be incorporated into modern potato cultivars. We propose to develop novel genomic resources for the tri-state potato advanced russet selection, POR06V12-3, which possesses resistance to various necrosis-causing diseases. Our new genomic resources will enhance breeding efficiency (=fast-track breeding for new disease resistant cultivars).

Grant Recipient: Washington State University – Chastagner

Project Title: Management of Botrytis Gray Mold on Conifer Nursery Stock

Award: \$103,772

Abstract: Washington State conifer nurseries produce more than 53 million seedlings annually for forest restoration, Christmas tree production and landscaping. Botrytis gray mold is a chronic disease that despite up to 10 applications of fungicide per season, continues to elude reliable control resulting in crop losses of 5 to 50%. In an effort to increase the effectiveness of Botrytis disease management programs in conifers nurseries, Washington State University plans to utilize newly-developed molecular tools to examine the diversity of Botrytis species associated with gray mold in conifer nurseries, determine the role fungicide resistance plays in limiting the effectiveness of current disease management programs, and screen newly-developed reduced-risk fungicides and biopesticides for their effectiveness in controlling gray mold. The outcome of this research will be fewer losses in production and storage and the identification of alternative fungicide and biopesticide products that can be used in a disease management program which will reduce the potential buildup of fungicide resistant strains of the pathogen and potentially reduce the number of fungicide applications applied to the crop. Adoption of the resulting best management practices will enhance the competitiveness of conifer nurseries via a more sustainable gray mold disease management program.

Grant Recipient: Washington State University – Main

Project Title: Enhancing the Sustainability of Lentil Production in Washington

Award: \$199,046

Abstract: Lentils are integral components of rain-fed cropping systems in Eastern Washington. Aphanomyces root rot (ARR) is an economically significant pathogen in many lentil growing areas of Washington. Yield losses of 10-30% are not unusual in fields infested with ARR, with up to 100% loss recorded under extreme weather conditions and in fields with tight pea/lentil rotations. There is no genetic resistance in any cultivar and there are no effective control measures. Screening of the USDA Lentil Collection has identified nine accessions with high levels of resistance; however they are landraces, not suitable for use as varieties.

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Leveraging our previous work, with ARR in pea, Washington State University will:

- identify the lentil genes, and their functions, associated with ARR resistance;
- identify potential additional, unique, sources of resistance from international germplasm collections.

The outcomes of this project will be:

- breeder-friendly markers linked to ARR resistance;
- freely available lentil germplasm with ARR resistance;
- an optimized system for collecting legume phenotypic data.

Tasks to be completed include:

- screen, in field and greenhouse, germplasm from the International Center for Agricultural Research in the Dry Areas and the USDA to identify additional genetic sources of resistance;
 - identify QTL and candidate genes associated with ARR resistance in lentils using genome-wide association studies in genetically diverse populations;
 - develop and disseminate breeder-friendly DNA markers for genes associated with ARR resistance;
 - optimize the Android-based 'Field Book' App to enhance the accuracy and efficiency of collecting legume phenotype data;
 - develop and release freely-available lentil germplasm with high levels of ARR resistance.
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Grant Recipient: Washington State University – Jones

Project Title: Expanding the WSU Decision Support Systems in Potato and Tree Fruit

Award: \$243,023

Abstract: This project will develop and implement a decision support system (DSS) for potato growers based on the existing WSU-Decision Aid System (DAS) for tree fruits. Our approach fast-tracks the development process by eliminating the need to re-develop the underlying programming infrastructure and data display common to all DSS's. Our approach will also speed implementation in both systems of models for common pests (*e.g.*, green peach aphid), and natural enemies (NE) (*e.g.*, lacewings, syrphid flies, predatory hemipterans). We expect the potato system to be on-line after year 1 and use to rapidly increase in year 2 (25% decision makers) and year 3 (50%) based on our experience with the DAS system. Our DAS user surveys have consistently shown a cost savings of \$75/acre (roughly the cost of a single pesticide application), and if the same trends happen for potato, would save growers \$12M/yr with full implementation. Finally, we will also develop an IPM training program using recently developed pesticide effect models for tree fruits that allow evaluation of different spray programs for efficacy against two pests (codling moth, oblique-banded leafroller) and their effects on two lacewing species. These models provide users with realistic training scenarios and the consequences of poorly timed sprays for two major pests of tree fruits and NE's, resulting in better decision makers, reduced costs, and reduced environmental effects. Our proposal addresses the funding priorities of: (1) Controlling pests and diseases, (2) improving production practices through innovative technologies, and (3) developing organic and sustainable production practices.

Grant Recipient: Washington State Department of Agriculture – Looney

Project Title: Biological Control of the Lily Leaf Beetle

Award: \$99,690

Abstract: Washington State is a leading producer of Asiatic and Oriental lily bulbs worldwide, and the second largest producer of cut flowers in the United States. In 2011 the exotic lily leaf beetle (LLB), *Lilioceris lili* (Scopoli) (Coleoptera: Chrysomelidae), a major pest of lilies (*Lilium* spp.) and fritillaries (*Fritillaria* spp.) was detected in Bellevue, Washington. Adults and larvae can completely defoliate plants and damage buds and flowers, reducing aesthetic value and eventually killing plants. The beetle poses an economic threat to lily and fritillary producers, the cut flower industry, and native plant nurseries by increasing production costs and diminishing the consumer market. Washington State Department of Agriculture (WSDA) seeks funds to implement a classical biological control project in western Washington to establish a parasitoid wasp (*Tetrastichus setifer*) that will control LLB. *Tetrastichus setifer* has been federally approved for release in the United States, and has proven to be a very effective control agent in the eastern states and provinces. WSDA will purchase this wasp from University of Rhode Island and collaborate with Washington stakeholders to release *T. setifer* in affected areas and monitor effects for three field seasons. A network of stakeholders will be developed to continue monitoring after the funding ends. WSU Extension will help develop outreach materials, stakeholder surveys, and coordinate community

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meetings. Successful establishment will provide an environmentally safe, permanent control of LLB, protecting lilies and fritillaries in home gardens, natural ecosystems, and commercial operations.

Grant Recipient: Washington State University - DuPont

Project Title: Sustainable Pear Pest Management

Award: \$247,461

Abstract: Washington grows one half of the nation's pears. The pear industry in this highly productive region is threatened by pear psylla and mites, rated as the number one challenge to pear producers in the Wenatchee River Valley of Washington in 2015. Successful psylla and mite management can no longer rely on sprays alone because the pests are developing resistance far faster than new products are released. Past projects have shown that soft programs can save producers \$150-200/ acre and reduce the use of 'harder pesticides' including pyrethroids, neonicotinyls and organophosphates. However, these programs have not been adopted widely. This project will: Demonstrate the successful use of softer pear pest management programs providing a beneficial scorecard to assist growers and consultants to make pest management decisions; establish and support an information sharing network for psylla and mite management among field consultants; increase producer knowledge of and confidence in effective biologically based control; and partner to train and sustain a group of Pear IPM Scouts who can continue to provide monitoring after the grant is over. As a result of this project the nation's most important pear region will have an economically viable option for sustainable pear pest management.

Grant Recipient: Washington State Department of Agriculture - Cooper

Project Title: Enhancing Nursery Stock Exports by Establishing a Pest Free Area for *Xylella fastidiosa*

Award: \$217,746

Abstract: In 2015, the presence of the bacterium *Xylella fastidiosa* was confirmed in Oregon, the first ever occurrence of this plant pathogen in the Northwest. *Xylella* causes chronic leaf-scorching disease in common nursery plants like maples, oaks, cherry, apricot and pear trees, raspberries, grapevines and blueberries. In orchards and vineyards, it reduces fruit yield and can eventually kill the plant. *Xylella fastidiosa* is widely distributed in the southern and eastern United States however it is not known to be present in the state of Washington. Since 2013, *Xylella fastidiosa* has spread throughout Italy, killing olive, almond, and oleander trees. It is now poised to invade other European Union countries. As a consequence, the EU has established new phytosanitary requirements for importing host nursery stock from the United States; only plants from a Pest Free Area (established by survey) may now be imported. Since Washington has never surveyed for *Xylella*, the export of thousands of blueberry, grapevine, raspberry and other fruit plants from Washington has been halted. WSDA will establish Pest Free Areas by conducting a survey of exporting counties. Inspection, sampling and testing of both nursery stock and native vegetation will be completed, using USDA and EU guidelines to establish the number of samples per county. Laboratory testing will be conducted by WSDA's Plant Pathology Lab in Olympia, using accepted ELISA and PCR protocols. Pest Free Areas will be certified by USDA and the EU ministry of agriculture. Survey will be repeated for two additional years, as required by international guidelines.

Grant Recipient: Washington State University – Rayapati

Project Title: Gambling with Grafting: Analyzing Risks and Benefits of Top-Grafting for Vineyard Profitability and Sustainability

Award: \$248,587

Abstract: This project will generate science-based knowledge for mitigating negative impacts of virus diseases in top-grafted vineyards in Washington State. Virus diseases are among the most serious impediments to the rapidly expanding grape and wine industry that had an estimated \$4.8 billion impact on Washington State's economy in 2013. In recent years, growers are adopting top-grafting to quickly replace existing wine grape varieties in a vineyard with preferred varieties for taking advantage of new business opportunities arising from shifting wine market trends. The success of top-grafting and ensuing performance of grafted vines is critically dependent on the sanitary status of both lower trunk variety and upper scion variety. If the sanitary status of both trunk and scion varieties is compromised prior to the top-grafting exercise, viruses can spread from the infected lower trunk variety and/or bud wood scion cuttings, resulting in increased risk of graft failures and poor vine health leading to uneven canopy, reduced fruit yield and quality and decelerated lifespan of grafted vines. Since top-grafting is a relatively 'new' strategy for wine grape growers, the project will study crop losses and determine economic impacts of viral diseases

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in top-grafted vineyards to showcase financial benefits of adopting knowledge-based best practice guidelines for establishing healthy and profitable top-grafted vineyards. The project activities will be performed in collaboration with wine grape growers and participatory approaches will be pursued with stakeholders to disseminate science-based knowledge for fostering economic prosperity and sustainability of Washington's grape and wine industry.

Grant Recipient: Pike Place Market Preservation and Development Authority (PDA)

Project Title: Farm to Go: Community Supported Agriculture from Pike Place Market

Award: \$55,000

Abstract: Pike Place Market has long served as a place for local farmers to sell fresh produce directly to Seattle residents, giving customers a chance to “meet the producer”. However, as the Market has grown to attract more visitors and out-of-town guests, we have seen a decline in direct sales of fresh produce. In an effort to help farmers increase their sales of fresh produce and provide the local community an opportunity to engage with the producer, we have created innovative programs to directly serve our community of farmers and residents. One such effort is the Market's Farm to Go, Community Supported Agriculture program, which is organized by Pike Place Market staff and sourced from Market farmers. By taking on the logistics associated with running a CSA, we can provide farmers an easy, efficient way to sell produce in bulk and get their crops into the hands of new customers. For the past two years, the program has offered CSA shares, a season's worth of fresh and local specialty crops, to individuals and families, including low-income families, living or working in Seattle. In the future we plan to expand the program to connect more members of the community with fresh local produce, provide more sales opportunities for Market growers, provide educational workshops for farmers, and continue the “meet the producer” tradition. The proposed funding would help grow our efforts in marketing, administering the program, providing educational opportunities for both farmers and consumers, and program evaluation.

Grant Recipient: Washington State Department of Agriculture

Project Title: Facilitating Relationships in Value Chain Development and Food Hubs by Region

Award: \$223,144

Abstract: This project will provide technical assistance and facilitate relationships needed to fill missing links in regional supply chains that currently limit sales for specialty crop producers and processors to the institutional markets that demand their products. WSDA will activate regional networks and supply chain linkages with referrals, marketing support, and crucial on-the-ground presence and coordination in target regions. WSDA will leverage its relationships with other agencies and organizations to improve market access. WSDA will apply findings from its recent FSMIP-funded research on gaps in regional “value chains” to deliver tailored technical assistance. WSDA will provide intensive market and regulatory expertise and value chain development guidance in 3-4 target regions as well in-person technical assistance to other regions as needs and opportunities arise. WSDA will convene and facilitate 3 strategy meetings per region and offer guidance about specific market sector opportunities and buyer requirements. Based on local needs, WSDA will publish factsheets and/or tools to share best practices with other food hubs, co-ops and supply chain entities or businesses. WSDA will build stronger data for relationship management and facilitate connections between buyers, processors and growers with a focus on food hubs, farmer co-ops, and other aggregation, processing, and distribution efforts at various stages of development. WSDA will share best practices with partners through case studies and a final report, and throughout the duration of the project. Through a food system assessment for each target region, WSDA will develop recommendations to address barriers, needed assets in current region, and value chain development opportunities.

Grant Recipient: Washington State Tree Fruit Association

Project Title: Acreage Survey for Tree Fruits and Grapes

Award: \$227,000

Abstract: The Washington State Tree Fruit Association (WSTFA) will contract with the United States Department of Agriculture's National Agricultural Statistics Service (USDA-NASS) to conduct a survey of tree fruit and grape acreage in Washington by crop, variety, age and density. WSTFA will work in cooperation with other commodity groups including the Washington Apple Commission, Washington State Fruit Commission, Pear Bureau Northwest and Washington Wine to provide guidance to USDA-NASS on survey questions and the formatting of results. They will also communicate with their members to ensure full participation of the state's fruit growers. The 4,769 growers of grapes and tree fruits (2012 Census of

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Agriculture) in Washington will have access to detailed information about fruit crop plantings and trends. Oregon growers are proposing a similar project, and USDA-NASS would be able to combine the two efforts thus reducing the total cost of each state's survey.

Grant Recipient: Washington State Nursery & Landscape Association

Project Title: Developing & Enhancing Local & Regional Markets of Washington Specialty Nursery Crop Producers

Award: \$181,561

Abstract: Washington State Nursery & Landscape Association is seeking funding to promote, encourage and increase the production, sale and use of Washington's specialty crop nursery products. This multi-year marketing campaign features promotion of wholesale and retail nurseries, and includes consumer education as a marketing strategy to increase awareness and sales. The first component of our proposal is to create an Online Washington Wholesale Nursery Guide & Plant Finder as a tool to enhance the marketability of Washington specialty nursery crop growers within the state and beyond. The Online Wholesale Plant Finder will be developed featuring current wholesale availability of Washington nursery crop producers. This tool serves as a new resource for planning and purchasing plant material grown and shipped from Washington. Grant funds will also support promotion and outreach throughout the State, Western US and British Columbia. Building on this effort, WSNLA will work to increase awareness and sales of Washington specialty nursery crop customers by implementing a 15% circulation increase each year for the Garden Washington Guide & Green Passport; add a retail nursery tourism map feature that can also be downloaded by region; and develop a Garden Washington app that will connect consumers with Washington retail nurseries and encourage sales through incentives and customer education. All activities support the end result of a 10-15% increase in sales of Washington specialty nursery crop products.

Grant Recipient: Northwest Cider Association

Project Title: Educational Mission to Enhance and Standardize Quality of Northwest Ciders

Award: \$120,585

Abstract: The Northwest Cider Association (NWCA) will enhance the competitiveness of Washington apples and pears by improving the overall quality of cider being made in the Northwest, through educating members about science-based tools for fermenting and growing that are widely used overseas. Members will travel internationally to production sites to see first-hand how cider fruit (apples and pears specifically) is grown and then fermented in an area known for its impeccable quality of ciders. Upon return, members will share their knowledge and industry experts will come to the Northwest to help overall membership gain additional knowledge in science-based techniques that work at home. With improved fermentation technique, the cider industry could open up a larger market for Washington's apple industry. The cider industry is growing rapidly, the NWCA membership is also growing quickly, having started with seven members, just six years ago. Today, it has 75 members who make cider and perry. To ensure sustainability and innovation, to also open additional markets, the industry needs to learn best practices from established producers. Through international connections with cidemakers and cider fruit growers, NWCA members will accelerate knowledge sharing in order to be able to produce higher quality cider and cider fruit. The creative and distinct Northwest cider flavor profiles are largely a result of the industry's sourcing of local specialty crops for their primary ingredients, most notably: apples, pears, hops, stone fruits, cane berries and cranberries.

Grant Recipient: Washington Tree Fruit Research Commission

Project Title: A Mechanistic Model to Predict Drift from Orchard and Vineyard Airblast Sprayers

Award: \$120,000

Abstract: The project "A Mechanistic Model to Predict Drift from Orchard and Vineyard Airblast Sprayers" proposed by the Washington Tree Fruit Research Commission will yield a mechanistic ground sprayer model to predict spray deposition and drift using typical orchard/vineyard airblast sprayers under varying orchard and environmental conditions. This project will develop the model using new knowledge and existing information; gather additional financial support to generate crop-specific validation data; compare validation data with model output; and modify the model as necessary to improve predictability. Model development will be strictly guided by accepted norms of quality control and quality assurance and all science will be subjected to independent peer review. The model and its validation data will be published and available in the public domain for use by industry, grower groups, state and federal regulators

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and other interested parties.

Grant Recipient: Washington State University – Zhu

Project Title: Validate non-pathogenic surrogates for *Listeria monocytogenes* antimicrobial intervention in fresh apple

Award: \$210,552

Abstract: The Washington apple industry suffered a significant loss of income following the *Listeria monocytogenes* caramel apple outbreak traced back to a California packer. The final FDA Produce Rule and Preventive Controls Rule are challenging apple packers and handlers to develop specific efficacy data for their process controls. The apple industry has an immediate need to begin the process of science-based improvements in *Listeria* control during packing. A reliable non-pathogenic surrogate organism of non-*Listeria* species is urgently needed to indirectly study and predict the behavior of *L. monocytogenes* in the Apple packing and production lines. The overall goal of the proposed studies is to identify and validate a suitable non-pathogenic surrogate for *L. monocytogenes* antimicrobial intervention in the apple packing line. We will pursue two specific objectives: 1) Evaluate appropriate non-pathogenic surrogates for *L. monocytogenes* antimicrobial interventions in the selected apple variety; 2) Validate the selected non-pathogenic surrogate of *L. monocytogenes* for antimicrobial interventions in different apple varieties. The proposed project will result in tested and validated non-pathogenic surrogate for *L. monocytogenes* in antimicrobial intervention in fresh apple packing and processing lines. Knowledge obtained will be disseminated to the apple and tree fruit industries, generating immediately-actionable information for the apple packers and handlers in Washington and other regions. Equally, there is a high potential for transferability to other tree fruit and vegetable commodities with similar surface traits and postharvest handling systems. This project is *vital and timely* in response to the FSMA Proposed Rules for fresh produce.

Grant Recipient: Rural Community Development Resources

Project Title: Enhancing specialty crop growers' knowledge in food safety for a prosperous farm operation

Award: \$152,600

Abstract: This project is being submitted by the Center for Latino Farmers based in Yakima, WA. The project entitled “Engaging Socially Disadvantaged (SDA) Specialty Growers” is for two-years for \$150,000 will provide outreach and services for specialty growers in Central WA State, primarily Latino farmers. Based on focus groups and training surveys, 90% of the producers being served by the Center are tree fruit growers: apples, cherries and pears in that order, and tend to be disconnected to ag industry groups. The biggest barrier for SDA is that they are primarily Mexican immigrants who were brought in as farmworkers by corporate farmers, so tend to have self-imposed barriers-limited education (6th grade in MX), limited English skills, cultural barriers and lack of knowledge of programs and services. Many times these barriers are not adequately addressed by state and federal governments in outreach strategies or policies, who tend to do “sporadic outreach” as an afterthought and do not establish those relationships. The Center has 15 years of experience in working with Latino SDA and has established those relationships by having culturally competent bi-literate staff (English/Spanish), flexible hours of service and as providing well attended valuable workshops and conferences. The Center knows the importance of educating the SDA on issues that are important to the Ag Industry that will provide the outcomes needed to move them forward on issues. The goal of the project is to enhance specialty crop SDA producers in their knowledge of food safety and implementation of the FSMA regulations to increase their production, increase the quality of their products and connect them to ag associations.

Grant Recipient: Washington State Potato Commission

Project Title: Connecting Consumers to Specialty Crops through the Washington Grown Project

Award: \$300,000

Abstract: The Washington Grown project will connect consumers to agriculture by providing an informational framework to better understand specialty crops grown in Washington State. Specifically the project will educate people as to what specialty crops are grown in Washington, where they can purchase these products, what nutritional benefits specialty crops provide and how they can fully utilize them within their own meal preparation. In addition, the project will provide a first-hand look at Washington's family farms and increase consumers trust in the practices of Washington's specialty crop farmers. Multiple partnering agriculture groups will oversee the project with the Washington State Potato Commission

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serving as the day-to-day point of contact. The funding from the project will be used to produce the Washington Grown Video Project of which all of the assets will be shared with the participating agricultural groups that support specialty crop farmers. Through the visual materials produced, participating groups can repurpose the materials for their own promotional and communication projects, extending the impact of the project beyond the immediate Washington Grown Project.

Grant Recipient: Washington State Blueberry Commission

Project Title: Improved Irrigation Practices to Enhance Water Productivity and Fruit Quality of Blueberry and Raspberry

Award: \$248,479

Abstract: Washington berry growers are dependent on irrigation but are facing limited water supplies. The goal of this project is to develop more efficient irrigation practices for blueberry and raspberry. We will utilize remote sensing technology to develop practices that will enable a user to quickly assess spatial variability in crop water status and adjust irrigation and water allocations accordingly; develop regulated deficit irrigation strategies to reduce irrigation water use and facilitate production of fruit with better quality and storability; and assess the technical and economic feasibility of pulsed drip irrigation for increasing water productivity. Trials will be conducted throughout the state at participatory-grower research sites located in commercial blueberry and raspberry fields. As a result of this research, we will be able to provide growers with state-of-the-art water management tools for reducing both irrigation and energy use, for avoiding water limitations, and for improving production and fruit quality. Workshops will be held annually for growers and other stakeholders to provide training and obtain feedback. Through modelling, we will extrapolate the results to different soil types and will use the information to produce an extension publication.

Grant Recipient: Washington State University – Keller

Project Title: Generating knowledge and recommendations that will empower grape growers to cope with drought and heat

Award: \$245,428

Abstract: Recurring heat and drought episodes are challenging the sustainable growth of the Washington grape and related industries. In order to address this emerging issue, Washington State University aims to generate and disseminate knowledge and practical recommendations that will empower grape growers to mitigate the adverse impacts of heat and drought on grape production. Knowledge on how grapevines respond to the interaction between heat and drought stress and how grape ripening is impacted will form the basis to develop enhanced recommendations for irrigation management. In addition to knowledge generation, this project will also test and enhance technology for water-conserving vineyard heat mitigation. To achieve these goals, we will investigate the effects of heat and drought on grapevine growth and physiology, grape ripening, and fruit quality. Further, we will test canopy hydrocooling practices in the vineyard with the aim to reduce water consumption from current practices, and quantify its impact on grape production. We will transfer and share knowledge, and provide practical recommendations to the industry through outreach and education programs. Ultimately, this project will contribute to the long-term economic and environmental sustainability of the Washington grape industry through enhancing grape quality and production and through preserving water resources.

Grant Recipient: Snoqualmie Valley Watershed Improvement District

Project Title: Snoqualmie Valley Water Right Analysis Project

Award: \$89,600

Abstract: This project addresses one of our most important barriers to specialty crop production: lack of access to water rights. Currently, nearly 70% of the farmable acreage in the Snoqualmie Valley lacks access to water rights. Our WSDA-funded Water Supply Strategy Project identified breakthrough strategies, creating new water right opportunities not seen since the 1970s. We are anxious to get to work implementing that strategy more broadly, and we seek funding to deliver against one particular technical component of a cornerstone of the strategy, which is to create a water bank. We have received funding from the Department of Ecology to develop this water bank – a mechanism to bring willing buyers and sellers of water rights together – but existing historic water rights must go through a technical evaluation before they can be “deposited” into the water bank. We seek funding to perform this necessary technical step to increase available water supply for specialty crop farmers in the Snoqualmie Valley.

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Grant Recipient: Washington State University – Ganjyal

Project Title: Food Safety Training and Education for Small Producers and Value-Added Food Processors

Award: \$229,733

Abstract: The majority of food safety outbreaks are traced back to insufficient good manufacturing or hygiene practices (GMPs) and good agricultural practices (GAPs). Since prevention is the best way to reduce food safety outbreaks, education and training becomes very important for achieving the state and national goals of making our food system safe. A significant portion of specialty crop food producers and value added food processors in the state of Washington (WA) are small scale. They usually lack educational resources to train themselves and their employees, or lack the monetary resources to bring in technical experts to their site to assist with training and food safety plan development. With the enactment of the Food Safety Modernization Act (FSMA), these producers and processors will need education and training to meet the revised Good Manufacturing Practices (GMP) and Good Agricultural Practices (GAP) regulations necessary for compliance. Thus, this proposed project is timely and very much essential to address an existing need and educational gap for successful implementation of FSMA for the food industry in our state. We are proposing to provide practical training and education to small producers and value-added food processors. We will provide training and practical tools that they can use to successfully integrate prerequisite programs with the preventative controls and produce rule requirements. Outcomes will include: conventional class trainings, simple fact sheets covering technical and regulatory compliance requirements under FSMA, and relevant model plans that can help enhance understanding of the FSMA rules to insure timely compliance.