

SPECIALTY CROP BLOCK GRANT AWARDS 2017

In 2017, the Washington State Department of Agriculture received approximately \$4.1 million to help fund 20 projects:

Grant Recipient: WSDA - Food Assistance and Regional Markets Program

Project Title: A Collaborative Effort to Advance WA State Cut Flowers

Award: \$249,116

Abstract: This project is a partnership between the Washington State Department of Agriculture and the Washington Farm Bureau and aims to advance the marketing of local cut flowers. An integrated marketing campaign will raise general consumer awareness about the beauty and quality of locally grown flowers in Washington and engagement from the primary channels that local growers sell their flowers (florists, grocery, and farmers markets). Marketing collateral will be produced for farmers markets and their flower vendors. Another component is training to increase knowledge and familiarity of locally grown flowers for growers via peer-to-peer training and for farmers market managers on topics of local varieties, seasonality, quality, harvest stages, and assistance in best practices to grow the cut flower industry. The project will provide peer-to-peer technical assistance and grower networking connections to assist beginning flower growers meet industry quality standards and support business growth with business management tools. In addition, the general marketing and promotion campaign will raise the profile of Washington grown flowers which will provide benefits for all Washington cut flower growers and especially beginning farmers who often do not yet have the resources for extensive marketing of their products. Furthermore, this highly-collaborative project will engage with other organizations and industry experts to highlight Washington/Pacific Northwest Grown within a larger “American Grown” campaign. A professional caliber baseline consumer survey will inform B2B and consumer messaging and education strategies. Strategic integrated marketing campaign will utilize advertising, promotions, direct selling and events to build knowledge, brand awareness and equity and sales.

Grant Recipient: Washington State University – Patrick Moore

Project Title: A Thriving Fresh Market Strawberry Industry through Breeding, Horticulture Systems, Grower Resources and Nursery Expansion

Award: \$110,401

Abstract: Washington’s strawberry industry predominantly produces fruit for the processing market, which has been in decline for the last 30 years. Meanwhile, consumption and value of fresh strawberries continues to increase nationwide. Washington producers have an opportunity to meet the growing demand for fresh local strawberries, but face several obstacles in doing so. Researchers at Washington State University (WSU) will address these barriers through plant breeding research, evaluation of horticultural practices, grower outreach, and plant propagation research for nursery expansion. Traditional breeding methods and molecular markers have resulted in a number of promising perpetual-flowering advanced selections from WSU and collaborators in OR and BC. These advanced selections will be trialed with standard commercial cultivars to examine their potential to have long seasons, high yields, and outstanding fruit quality for regional growers. The research in horticultural practices will focus on biodegradable mulching films (BDMs), which show promise in reducing field work and disposal expenses compared to polyethylene mulch. This project proposes to evaluate the mulching efficacy of available BDMs in establishment, overwintering, and spring and summer production of perpetual-flowering fresh-market strawberries. Thirdly, growers will be reached through a survey of their knowledge gaps and marketing needs, and also through two grower workshops sharing information on best production practices, postharvest handling, and marketing techniques of fresh market strawberries. Finally, three propagation methods will be examined for their impact on commercial field performance of fresh strawberry, which will help expand the capacity of nurseries that support the fresh market strawberry industry.

Grant Recipient: Washington Apple Commission

Project Title: Apple Industry Video

Award: \$75,000

Abstract: The Washington Apple Commission seeks SCBGP funding to produce, film and translate into 7 languages a video showcasing the Washington apple industry for international consumers and trade members. The video will provide strong visuals of Washington's ideal growing conditions, state of the art technology and strict food safety practices to increase the knowledge of Washington's high quality apples among target consumers in Mexico and Central America, India, the Middle East, China, Taiwan, Vietnam and Indonesia. In addition, the video will contain information about the health benefits and optimal home care and handling practices to keep purchased Washington apples fresh and to ensure consumers have an enjoyable eating experience. The video will be composed of "vignettes" covering unique aspects of the growing, harvesting, packing and storing of Washington apples that can be used individually in social media communications and digital marketing applications, such as e-commerce promotions. As competition increases in Washington apple export markets, the ability to visually show why consumers should choose Washington apples is more critical than ever to the financial health of the 1,450 growers in the state. These growers collectively export roughly one-third of their harvest and depend on those exports to maintain stable and profitable returns to their orchards.

Grant Recipient: USDA-ARS – John Henning

Project Title: Assessing the Response of Hops to Drought and Heat

Award: \$240,775

Abstract: Hops are very sensitive to drought and heat, and recent drought years have severely impacted hop yields in the state of Washington. This project is timely because climate predictions suggest that the number of days Washington's productive Yakima Valley could experience damaging drought and high temperatures could increase in the future, threatening growth in hop agriculture and a burgeoning craft brewing industry alike. Researchers from the USDA-ARS propose to study the physiological response of hop plants to drought and heat to identify existing varieties with increased water use efficiency. We will then compare gene expression patterns using next-generation sequencing techniques among drought/heat-tolerant varieties and drought/heat sensitive varieties to describe expression of abiotic stress response pathway genes in leaf tissue and expression of genes that respond directly to soil moisture in root tissue. From these data, we will be able to correlate gene expression patterns in the roots to gene expression patterns in the leaf, to the physiological response of the plant to drought/heat. Our objectives are to identify existing hop varieties with increased water use efficiency, to compare the physiological response of these varieties to drought/heat sensitive varieties, and to compare patterns in gene expression from the leaves and roots of these varieties to identify candidate genes for increased drought/heat tolerance. Our goal will be to identify candidate genes that can further be used for marker- assisted selection to eventually breed a more drought/heat tolerant hop variety.

Grant Recipient: Washington Wine Industry Foundation

Project Title: Bolstering Sustainability with Vinewise®: Online Tools for Large and Small Washington Grape Growers

Award: \$225,000

Abstract: The Washington Wine Industry Foundation (WWIF) serves Washington wine grape producers and processors by identifying industry challenges and bringing together partners to create innovative solutions. Vinewise® (vinewise.org) is one such solution—an online, interactive guide created by and for Washington State wine grape producers and processors to assess and improve the sustainability of their current viticulture and business management practices. Developed in 2002 by a team of producers, processors, specialists, and researchers, Vinewise® has been updated regularly; however with the exponential

growth of Washington’s grape and wine industry—which has seen a 58% grape production increase in seven years—producers are seeking more tools that address sustainability. A robust update is necessary to meet producers’ needs.

Once updated, Vinewise® will help producers build and manage businesses that are economically viable, socially supportive, and ecologically sound by equipping them with resources on critical sustainability topic areas, from Business Planning to Water Management. Vinewise® will enable producers to:

- Understand why practices are important
- Evaluate current practices against industry standards
- Create action plans for improving sustainability
- Understand regulations and certifications related to sustainability
- Measure the results of sustainability-driven decisions

To update Vinewise®, WWIF will:

Establish a contract with a specialist in ag-focused sustainability management information systems to facilitate the update.

- Convene industry stakeholders and subject matter experts to evaluate content, identify gaps, and inform a roll-out plan
- Update content
- Execute roll-out plan
- Measure outcomes of use
- Continue partnership with the Washington Winegrowers Association to keep Vinewise® active and relevant

Grant Recipient: Washington State University – Pius Ndegwa

Project Title: Concentrating and Blending of Manure Nutrients to Enhance Sustainable Production Practices

Award: \$249,973

Abstract: Specialty crop farmers commonly use animal manure nutrient to fertilizer their soils. The bulkiness of manure, however, hampers this practice mostly because it has to be hauled from distant production regions. Manure use is also invariably plagued by several other concerns, including: inconsistencies and imbalances in nutrient contents, food safety issues from pathogens inherent in manure, and potential importation of weed seeds. Researchers from Washington State University are submitting this proposal to the Washington State Department of Agriculture to investigate the economic, agronomic, and food safety benefits of concentrating manure and associated compost via pelleting and blending with other locally available byproducts (e.g. canola and fish meals). Our central hypothesis is that pelleting will not only significantly concentrate these nutrients to allow for economic export to distant specialty crop production areas but will also provide adequate pathogen and weed seeds kill to enhance food safety and reduce the burden of importing noxious weeds to the receiving areas. We also postulate that blending of manure and associated with other locally available organic byproducts will provide a product with balanced and known nutrient levels to enhance precise application. To achieve this overall goal and to test the central hypothesis, the specific objectives are: (1) Determine optimal conditions for pelleting of manure and manure composts with/without supplemental fish and canola meals, (2) Evaluate effectiveness of the pellets versus other nutrient sources for specialty crop production and food safety issues, and (3) Disseminate the project results to pertinent stakeholders.

Grant Recipient: Washington State University – Carol Miles

Project Title: Cost Effective Technologies for Cider Apple Orchard Mechanization and Fruit Quality Evaluation

Award: \$177,808

Abstract: Washington State University will lead and execute this project. Objectives are to test technologies for detecting fruit maturity, develop a protocol for harvesting fruit at optimal quality, develop an on-line database and website www.cider.wsu.edu for cider apples, including information on production, bloom and fruit habit, yield, and juice characteristics, and develop enterprise budgets for small, medium and large-scale orchards suitable for mechanical pruning and mechanical harvest. The cider program at WSU Mount Vernon NWREC is one of the most active in the U.S., has a cider research orchard of 70 cultivars, and has carried out studies demonstrating over-the-row mechanical harvest. To develop harvest metrics and protocol for optimum harvest, we will test a portable, non-destructive quality meter utilizing near infrared spectroscopy. To create an on-line cider cultivar database, we will collate long-term data plus data collected in this project for all cultivars grown at NWREC; by the end of this project we will have 6-16 years of data for each cultivar (long-term data is important to understand year-to-year variability). We will develop enterprise budgets for small-scale (10 acres or less), medium-scale (up to 25 acres), and large-scale (more than 50 acres) cider orchards. We will interview apple production specialists and experienced apple growers to determine fixed and variable costs; survey suppliers for costs of trees and other supplies and materials; determine the cost of harvest equipment by contacting equipment suppliers in the U.S. and Europe; and calculate the profit and break-even scenarios for each of the three orchard systems.

Grant Recipient: WSDA - NRAS

Project Title: Dairy Manure Compost Applications on Red Raspberries: Food Safety and Soil Quality Investigation

Award: \$153,090

Abstract: Red raspberry growers are not currently able to make dairy manure compost applications to active plantings due to food safety concerns. These growers are experiencing decreasing soil quality, decreases in planting lifetimes, and increased costs due to more frequent replanting. The Washington State Department of Agriculture and Washington State University are currently conducting a project studying the food safety implications of regular, moderate dairy manure compost application (with both raw dairy manure and conventional fertilizer as controls) to red raspberry plantings. Applications are followed by testing of soil, leaves, and fruit for the presence of Salmonella, *L. monocytogenes*, and *E. Coli* O157:H7. Plant and soil health are being monitored to assess the effects of compost applications on soil quality and plant health. The first year of research is complete, with a second season happening this year. During the first year there were no detections of *E. coli* O157:H7 or *L. monocytogenes* in soil, fertilizer, foliar, or fruit samples for manure, compost, and conventional fertilizer treatments. There were some detections of Salmonella in soil in the manure treatment. There were no significant differences between treatments in plant growth or soil health. Continuing this research for a third year will confirm zoonotic pathogen testing results and makes it more likely that changes in soil and plant health (that take time to develop) will be observed. With data from this project, growers will be able to make evidence-based decisions on the risks and benefits of different fertilizer choices.

Grant Recipient: Washington State Wine Commission

Project Title: Developing a Washington State Wine Education Program for International Trade Audience

Award: \$165,134

Abstract: The Washington State Wine Commission (WSWC) will develop an international wine education program for use in international target markets. The program will certify that members of the trade are knowledgeable about Washington State wine. Funding will cover the development of course materials and pilot sessions in five target markets. Uniquely, the program will emphasize education by partnering with culinary and professional wine training schools. Partnering with these schools will (1) engage new professionals at the beginning of their careers when they are most receptive, (2) ensure that the program is academically robust, and (3) reduce logistical costs. The WSWC will also use the education program to target current, influential trade in order to boost exports in the near-term. However, this will not significantly increase costs because the materials and certification systems that are developed for schools can be used for stand-alone sessions for current trade. The project will result in the following outcomes: (1) expansion in the percentage of trade members in international markets that are knowledgeable about Washington State wine and can advocate for it, (2) increase in the volume of wine purchased by sommeliers and buyers who participate in the pilot sessions, (3) increase in the number of Washington State wineries supplying wine to the sommeliers and buyers who participate in the pilot sessions, and (4) higher demand for the specialty crop (wine grapes) by creating a business diversification opportunity and via expanded and sustainable markets for Washington State wine.

Grant Recipient: Washington State Fruit Commission

Project Title: Development of Spanish Language Safety and Horticulture Information for Workers in Tree Fruit Industry

Award: \$176,000

Abstract: This is a three-year Training and Education project to expand Spanish-language educational, technical and horticultural information for farmworkers by the Washington State Fruit Commission (WSFC) using its magazine, Good Fruit Grower, a widely-respected publication with comprehensive print and digital platforms. The project seeks to provide information in Spanish to enhance workers' understanding and compliance with food safety rules, workplace safety, farm management, and best horticultural practices, and in doing so enhance overall competitiveness in the grower community. In partnership with industry individuals and organizations, WSFC will develop a library of videos and text that serve as tools to improve understanding and compliance with the Food Safety Modernization Act and other new regulations. The library will assist with understanding and utilization of new research on horticultural best practices; and help Spanish speakers better understand orchard safety information for topics such as pesticide management and tractor operation. Industry advisors will help develop topics deemed most essential to the audience and will advise on content creation to avoid duplication with any existing Spanish content elsewhere. WSFC/Good Fruit Grower will make this content available for sharing at no cost to industry companies and organizations. Content will be hosted on a permanent searchable dedicated Spanish language web site optimized for mobile devices, for sharing by readers and for printing. Self-assessment includes annual reader surveys and Google Analytics.

Grant Recipient: Washington State University – Richard Knowles

Project Title: Evaluation of Crop Enhancement Products and Innovative Technologies to Enhance Yield and Quality of Potato

Award: \$248,700

Abstract: Researchers in the Department of Horticulture at Washington State University are investigating the efficacy of various crop enhancement products for potato and are developing novel plant growth regulator- based techniques to manipulate tuber size distribution and shape to enhance the yield and quality of raw product for frozen processing. The crop enhancement product research is designed to provide growers with data that will inform decisions for adopting products for which credible efficacy data is lacking. Cost/benefit analysis will demonstrate the effects of these products on profitability. Plant growth regulators are being investigated for their potential use in mitigating various weaknesses that affect the yield and quality of frozen processing varieties. These weaknesses include delayed plant establishment, low tuber set, overly large tubers, and round tuber shape. Tuber size and shape interact to affect yield of usable raw product (French fries) versus waste for frozen processing. Preliminary work has demonstrated potential in using low-dose applications of GA and NAA (plant hormones) to hasten emergence, elongate otherwise round tubers, and shift tuber size distribution to maximize the yield of raw product for frozen processing.

Grant Recipient: Grow Food dba Viva Farms

Project Title: Improving Incubator Models for Beginning Specialty Crop Producer Success

Award: \$200,000

Abstract: Viva Farms will improve and expand incubator models and their services, and enhance and develop local and regional markets to increase beginning and socially disadvantaged specialty crop producer success. Producers will achieve sustainable crop production by reducing inputs and cost, and increasing yields, net revenue and resource conservation all essential for viability. Consumer knowledge/access will be improved through education, promotion and increased access points which is key to growing consumption of specialty crops. Our project will effectively engage project partners, stakeholders and specialty crop beneficiaries and document and evaluate baseline and year over year performance measures of incubator models and participating beginning and socially disadvantaged specialty crop producers, and implement program and business plan improvements at Skagit and Sammamish Valley locations. In addition, our project will provide bilingual training, technical assistance and coordination of production planning, coordination for greenhouse propagation and management, crop management (soil prep, planting, irrigation, pest, weed and disease management practices), harvesting and post- harvesting practices, Organic and GAP certification, and aggregation, processing, marketing and distribution. Finally, our project will increase the number of markets and access points through outreach, promotion and education, and share our results, strategies and tools through workshops, presentations and online via Viva Farms and WSU websites. Local and regional specialty crop farms and other food businesses will experience enhanced competitiveness increasing revenue, number of rural and urban careers, number of jobs and new businesses maintained and created, and the number of new beginning and socially disadvantaged specialty crop producers.

Grant Recipient: Washington Hop Commission

Project Title: Mitigating the Risk of Powdery Mildew on Formerly Resistant Hop Cultivars

Award: \$213,497

Abstract: In this project, the Washington Hop Commission and its USDA researcher partner seek to develop and deliver a decision aid tool to improve management of hop powdery mildew on the variety Cascade, and similar varieties, which can improve growers' disease control efficiency. Cascade is the most widely planted variety in Washington because of its prominent role in many styles of craft beer, being used by over 4,000

breweries worldwide. Until 2013, the disease powdery mildew was not a serious issue on Cascade because of its inherent genetic resistance to the disease. However, new strains of the powdery mildew fungus specifically adapted to Cascade have emerged and spread through the Pacific Northwest. Growers are now forced to learn to manage powdery mildew on a variety widely planted throughout the industry, leading to an average of five fungicide applications a year on Cascade at an aggregate costs of over \$1 million annually to Washington producers. This proposed project will develop new knowledge, understanding, and approaches to efficiently and effectively mitigate the threat of powdery mildew on newly susceptible varieties where growers lack experience. This project will integrate and formalize risk factors for powdery mildew into an intuitive, easy-to-use decision aid. The tool will be linked to forecasted weather data and pushed to users to ensure its utility and accessibility. In doing this, we will explicitly address documented industry needs for new decision aids, best management practices, and commercial- scale implementation of research.

Grant Recipient: Washington State University – Sindhuja Sankaran

Project Title: Novel Sensing for Potato Harvest Quality and Loss Management in Bulk Storage Environment

Award: \$249,951

Abstract: Washington State is a major potato producer in the U.S. However, postharvest potato management is a challenge to stakeholders with bulk storage losses of about 6% (NPC, 2016; USDA/NASS, 2016). Several diseases affect potato quality during storage. Presently, managers' lack state-of-art sensing tools to detect and manage storage diseases at early stages. Existing methods involve periodic visible symptom monitoring, air sniffing for anomalies by personnel, plus sparse temperature probes for hot spot monitoring that are somewhat subjective, labor intensive, and inadequate. Thus, we propose to develop novel sensing technologies for early disease detection in bulk-stored potatoes. This will: 1) offer an unprecedented aid for growers to implement appropriate potato rot detection and management practices by manipulating temperature, humidity, and airflow to limit pathogen growth and development; and 2) help reduce the postharvest potato storage losses through early processing. The technology we develop can also be adapted for other specialty crops (e.g. onions) grown in the region. Specific objectives of this project are to investigate portable field asymmetric ion mobile spectrometry, chemosensor, and thermal infrared imaging based sensing modules for trace level volatile biomarkers and anomaly detection associated with potato rots. Our primary focus is on *Pythium* leak caused by *Pythium ultimum* var. *ultimum* (stramenopile –fungus like) and soft rot caused by *Pectobacterium carotovorum* subsp. *carotovorum* (bacterium), two predominant pathogens associated with potato storage losses. Research will be conducted using Russet Burbank, an industry standard variety for French fries, and Ranger Russet, most vulnerable variety to storage issues.

Grant Recipient: Washington State University – Gary Chastagner

Project Title: Optimizing Postharvest Botrytis Control and Handling of Cut Peonies

Award: \$80,968

Abstract: Washington State University will address the 2017 "control pests and diseases" WSDA SCBG funding priority by developing information that will allow peony cut flower growers to optimize their postharvest Botrytis disease control and handling of flowers. This will be done by identifying when infection of flowers occurs, developing effective postharvest Botrytis control measures, and determining optimal storage temperatures to prolong storage, reduce Botrytis and maximize vase life. The results from this project will be shared with growers via annual research updates at grower meetings, publication of articles in grower publications and through the development of a fact sheet on the handling and storage of peony flowers.

Grant Recipient: Organic Seed Alliance

Project Title: Production, Economics and Marketing of Purple Sprouting Broccoli

Award: \$105,560

Abstract: Organic Seed Alliance (OSA) project objectives are: 1) facilitate market expansion of purple sprouting broccoli (PSB); 2) release and commercialize a new variety of organic PSB; 3) provide production recommendations and economic planning tools for PSB vegetable production; 4) provide information and publications on PSB seed production. Outcomes: 1) Increase sales of PSB, 2) increase production of PSB and PSB seed. General tasks: 1) field work to finish breeding and produce stock seed of a new organically bred variety of PSB; 2) conduct promotion and negotiate the commercial release of this new variety; 3) execution and support of two years of on-farm strip trials of PSB on farms in Jefferson, Skagit, King, Snohomish, and Clallam counties; 4) two years of succession planted trials at the OSA research farm to determine optimum planting time for PSB; 5) working with an agricultural economist to gather and summarize information from OSA trials and breeding work and on-farm strip trials to produce a production and economic planning guide for PSB; 7) writing and publishing a PSB seed production guide; 8) distributing surveys and hosting in-person and virtual focus sessions with produce wholesalers, retailers, farmers and chefs to determine knowledge and best practice needs for PSB harvesting, packaging, and marketing; and 9) developing a marketing campaign that includes social media, press promotion, coordinated store promotions, product demos in stores and at farmers markets, and delivering outreach at regional food and farming conferences.

Grant Recipient: Washington Asparagus Commission

Project Title: Promoting Washington Asparagus

Award: \$120,000

Abstract: The Washington asparagus industry is starting to increase production after a two decade decline in production. The industry has transformed itself from a low value, processed industry to a higher value fresh pack industry. There is a forecast of increased production over the next several years. The asparagus industry is starting a promotional campaign to educate Pacific Northwest consumers that there is a Washington asparagus season and that consumers should be buying Washington asparagus during April, May and June. We propose to hire a marketing firm to manage this campaign that would be focused on the metropolitan areas of Seattle, Portland, Spokane and Boise. Our goal is to get one of out of seven consumers to buy one more pound of asparagus the first year, two pounds the second year and three pounds the third year. If successful this effort would absorb 50% of the forecasted new production. (The industry assumes the other 47states and Canada will take the remaining extra asparagus.) The Washington asparagus industry is very enthusiastic about this project and there is a high degree of support for this proposal.

Grant Recipient: The Center for Produce Safety

Project Title: Rechargeable Antimicrobial Antifouling Plastics for Plastic Bins and Totes

Award: \$250,000

Abstract: The Center for Produce Safety will partner with the University of California, Davis, to develop a novel antimicrobial plastic material that can be used in reusable plastic containers (RPC's) and as a liner in bins and totes. Sanitation of reusable plastic containers is a significant challenge and can lead to cross-contamination of fresh produce. These cross-contamination events can result in a foodborne disease outbreak as well as reduce the shelf life or quality of the product. To address this challenge, this proposed research is aimed at developing a rechargeable antimicrobial and anti-fouling plastic material and its evaluation for elimination contamination of RPCs from various contaminating sources and reducing biofilm formation. The antimicrobial properties of this material can be recharged by simply using a diluted bleach solution. This novel material can be used as a rechargeable liner attached to existing RPCs and/or development of new

RPCs with this novel plastic material. This novel material may also be used in combination with wooden bins. The proposed research plan will focus on *Listeria* as the target bacteria. To complement laboratory-based research, the proposed research plan also evaluates field testing of this material in improving sanitation of RPCs in fresh produce processing facilities as well as evaluating any impact on produce quality with extended contact. In summary, this research proposal addresses a significant unmet need in the industry to improve sanitation of RPCs.

Grant Recipient: Washington State University – Achour Amiri

Project Title: Understanding Pre- and Postharvest Parameters to Enhance Gray Mold Management in Pome Fruit

Award: \$230,155

Abstract: This project, submitted by Washington State University, aims to develop strategies for a sustainable management of gray mold, a major pre- and postharvest disease of apple and pear, two major specialty crops (annual farm gate value > \$3 billion) in Washington State. We specifically propose to (1) determine the sources of inoculum and critical timing of fruit infection, (2) conduct a statewide resistance monitoring to all fungicides used pre- and postharvest, (3) determine the genetic structure of the gray mold fungus (*Botrytis*) and how it impacts pathogenicity and sensitivity to fungicides, and (4) develop efficient management programs to enhance gray mold control and alleviate resistance problems. To achieve these objectives, we propose to conduct research in multiple orchards and different weather conditions to determine the critical timing of fruit infection. We will collect different *Botrytis* populations at different growth stages to evaluate the impact of weather conditions (overwintered vs. summer vs. storage populations), growth stage (flowers vs. fruit) and pesticide usage (organic vs. conventional) on the *Botrytis* population structure and test them for resistance to fungicides using standard lab and novel molecular biology techniques. Findings from these objectives will help design and assess different rotations and tank-mixture of existing fungicides preharvest and determine their impact on gray mold development postharvest. Expected outcomes from this study include timed and targeted fungicide sprays to enhance gray mold control and scientifically-based recommendations relying on the exact causal species of the disease and real-time occurrence and distribution of resistance to all fungicides.

Grant Recipient: Washington State Potato Commission

Project Title: Washington Grown

Award: \$250,000

Abstract: More and more people admittedly do not have any connection to Washington's agricultural community. This divide results in confusion about who Washington's farmers are, what products they grow and what steps they take to ensure safe quality food for all. The purpose of the Washington Grown project is to provide a positive conduit to link consumers to Washington's specialty crop producers. The project will achieve this goal by providing an informational framework and platform encouraging people to increase their knowledge and trust of Washington's farmers and resulting in more people choosing Washington's specialty crops. Specifically, the project will teach people 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 in their meals and as part of their diet. The project will also provide a first-hand look at Washington's family farms. Each of these steps will indeed increase consumer's understanding of, and confidence in Washington's specialty crop farmers. As trust increases with those who have been exposed to the project, more people will look to purchase specialty crops. Multiple specialty crop groups will partner to design and oversee the success of the endeavor. The Washington State Potato Commission will serve as the day-to-day point of contact for the project. Funding will be used to produce various video production elements that will promote Washington's specialty crops. The Washington Grown television series and associated video assets are also shared amongst all partnering groups.