



Washington State
Potato Commission

ANNUAL REPORT

2019-2020

Supporting Potato Farmers



2019-2020 WSPC COMMISSIONERS

Chair:
Mike Madsen

1st Vice Chair:
Chris Olsen

2nd Vice Chair:
Heath Gimmestad

Secretary:
Mark Hammer

Treasurer:
Grant Morris

Past Chair:
Roger Hawley

Commissioners:
Adam Weber

Ellie Charvet

Hector Castro

Albert Stahl

Jordan Reed

Josh Bunger

Kraig Knutzen

Mike Dodds

STAFF

Executive Director:
Chris Voigt

Director of Government Affairs:
Matt Harris

Director of Research &
Industry Outreach:
Matthew Blua

Director of Marketing &
Industry Affairs:
Brandy Tucker



108 S. Interlake Road
Moses Lake, WA 98837
t. (509) 765-8845 | f. (509) 765-4853
office@potatoes.com | potatoes.com



A LETTER FROM THE COMMISSION CHAIR

Dear Washington Potato Growers,

It has been an honor to serve as Chairman of the Washington State Potato Commission this past year. I have been a Commissioner since 2012, and I am grateful for all the opportunities I have had to work with the great people in our industry and throughout the state and beyond.

While the potato industry as a whole faced many challenges at the beginning of 2020 due to COVID-19, we all came together to find solutions, and help our fellow growers. We collaborated with the National Potato Council (NPC) and the USDA to explain the realities of growing a specialty crop and how flaws in the Coronavirus Food Assistance Program (CFAP) made it unworkable. As a result, there have been many changes to the program, and the Government Affairs Committee toils tirelessly to communicate our hardships in order to put forth the best solution for us all.

We held our ever-important Potato Summit in December 2019. The summit has traditionally been held every 5 years. We had nearly 100 attendees gather in Spokane to discuss trends in soil health, weather patterns, labor issues, and new technology. We thank all who took the time to participate and look forward to keeping you all updated on the Commission's activities.

The Research and Outreach Committee works continuously on prioritizing research to enhance our industry. Working closely with the Tri-State Consortium, WSU, OSU, U of I, and USDA ARS, researchers strive to maximize your research dollars on current projects and issues we face here in the Pacific Northwest.

Charged with promoting Washington State Potatoes in all their forms, the Marketing and Industry Affairs Committee hit the ground running in 2019 by adding 54 new Powered by Potato team members who entered events all over the region. When COVID-19 forced trade shows to go virtual and shut down restaurants around the state, WSPC staff implemented strategies to keep Washington Potatoes top of mind for food service buyers and consumers cooking from home during quarantine.

It has been a pleasure to work more closely with the staff at WSPC as Chair. Without them these projects would cease to continue. I thank them for their dedication to representing our industry on both small and large issues. I encourage all potato farmers to get involved by joining one of the Commission's committees, or by becoming a Commissioner at some point in your career. If you are interested, please contact the WSPC office and information will promptly be provided. Please enjoy the 2019-2020 Annual Report.

Mike Madsen
2019-2020 Chair



Back Row: Ellie Charvet, Albert Stahl, Mike Madsen, Grant Morris, Matt Harris, Chris Voigt, Heath Gimmestad, Chris Olsen, Kraig Knutzen, Adam Weber **Front Row:** Matthew Blua, Josh Bunger, Mike Dodds, Marvin Wollman, Mark Hammer, Hector Castro, Brandy Tucker, Roger Hawley **Not pictured:** Jordan Reed



Washington Grown Wins Emmy

Washington Grown, funded in part by WSCP, was honored with its second regional Emmy Award in the show's seven-year history. The National Academy of Television Arts and Sciences presented the award to the show's producers in the category, "Best Informational/Instructional Program or Special" during a virtual awards ceremony held in June. The first Emmy for *Washington Grown* was awarded in 2015.

Washington Grown grew out of a long-range planning meeting held nine years ago. In the meeting, representatives from growers, processors, packing sheds, consultants, and researchers expressed the need to tell our state's agriculture story to the public, or suffer the consequences of letting others tell that story for us. In the beginning, the show aired on only two television stations. Today, it is broadcast on seven stations throughout Washington, and nationally on RFD TV. Season eight is currently in production and will debut in January of 2021. Each season we produce 13 different episodes covering the broad spectrum of crops grown in Washington State. A TV station will typically air those 13 episodes over the course of 13 weeks. They repeat them for the next 13 weeks, after which time they dig into the archive of *Washington Grown* and air previous season episodes for the remaining 26 weeks of the year. You can find every episode of every season at www.wagrown.com

Ride On! Washington Potatoes Joins STP

The WSPC partnered with Cascade Bicycle Club to sponsor their 40th annual Kaiser Permanente Seattle to Portland (STP) ride. This 206 mile, two-day Seattle to Portland bicycle ride is the largest multi-day ride in the Pacific Northwest. With close to 10,000 participants, Cycling Magazine ranks it as one of the best cycling events in the nation. In the two days prior to the ride, WSPC staff were on hand at the Cascade Bicycle Club offices in Seattle during the pre-event known as "packet-pickup" to meet thousands of riders to hand out easy to prepare recipes, and talk to them about the health benefits of eating potatoes before, during and after long rides. During the STP, WSPC staff was set up at the halfway point at Centralia College to interact with friends and family of the riders who were waiting there to cheer them on. WSPC staff joined in the festivities while Executive Director, Chris Voigt, who sported his Powered by Potatoes jersey and participated in the two-day ride himself while snacking on boiled potatoes for energy throughout the ride.



At the halfway point in Centralia, WA, cyclists visit the Powered By Potatoes booth



A rider sports Powered by Potatoes gear



WSPC Executive Director Chris Voigt



So Northwest Woman's Show

Once again, WSPC sponsored the Chef's Corner cooking demonstration at the So Northwest Woman's Show held in Tacoma. Celebrity Chefs Logan Niles of Seattle's Pot Pie Factory, and Fox's MasterChef Season 7 Winner Shaun O'Neale showed off their culinary skills to the crowd from the Potato Stage.

Unique mashed potato recipes were sampled by the appreciative audience. WSPC staff handed out recipes and potato peelers as we explained the versatility of Washington potatoes to the crowd of more than 8,000 attendees.

MIA COMMITTEE 2019-2020:

Mark Hammer, Chair | Kraig Knutzen, Vice Chair
 Josh Bunker, Hector Castro, Heath Gimmestad, Roger Hawley
 Jordan Reed, Jerry Heilig*, Frank Martinez*, Suzy Schaapman*
 Karen Halvorson-Johnson*, Kristy Gundersen*, Shelley Olsen*
 Randi Hammer*, Staff: Brandy Tucker

**at large industry position*

ROAD TO 1 MILLION POUNDS

When COVID-19 shut down the restaurants, school cafeterias and the food service industry in general, the demand to process potatoes into fries, wedges, tots and hash browns came to a sudden, screeching halt. Washington State potato farmers felt the impact almost immediately. One billion pounds of processing potatoes grown in our state and held in storage suddenly had no supply chain to take them. With no demand, processors stopped processing. Worse yet, another crop of processing potatoes was already in the ground and faced an uncertain future.

Rather than be victimized by the situation, Washington processing potato growers decided to turn this circumstance into an opportunity to feed their hungry neighbors; promote the nutritional value of one of our state's largest crops; and raise awareness among consumers and the USDA, (to whom WSPC & others were lobbying for relief) of the struggles that the growers faced as a result of the crisis. The Road to One Million Pounds was born.

From April 29 through June 2, Washington potato growers gave away one million pounds of processing potatoes at 10 donation sites and four direct deliveries around the state. From Ritzville to Olympia, thousands of hungry Washingtonians lined up to receive free 15. lb. bags of potatoes to help feed their families. A GoFundMe account raised more than \$46K to help cover the cost of bagging the processing potatoes and transporting them to donation sites.

At the Largest Potato Giveaway in Tacoma on May 14, where 200,000 pounds of potatoes were given away to those in need, WA State Speaker of the House Laurie Jenkins was there to help distribute the spuds. "We've got potato farmers whose families are going to be going without this year because they could not sell their potatoes. Still they decided that what they were going to do was give them to other families in need," Jenkins said. "So, what I hope is that all the way through this we recognize that we're going to need to give back to those who contributed to us right now."

PMA in Anaheim

The Produce Marketing Association attracted 24,000 attendees to the PMA Fresh Summit held in October 2019 in Anaheim, California. The WSPC Staff and Commissioners had beautiful Washington potatoes on display for buyers around the world to see along with materials about marketing, sizing, nutrition and recipes. A new trade show floor plan grouped booths by product and market, making it easier for buyers to find what they were looking for, which resulted in higher traffic volumes at the WSPC booth. Clips of Washington Grown were played on a screen along the main aisle for folks to stop and watch as they made their way through the show.



WSDA Director Sandison stops by the WSPC booth at his first PMA Fresh Summit to talk with grower Randi Hammer.



Winning Recipes:

WINNER!

JALAPENO CHEESE POPPERS POUTINE

Chris Lutgen
Wenatchee School District

2nd Place

POTATO SOUP

Delene Andrew and Team
Northshore School District

3rd Place

FIESTA POTATOES

Kaydee Harris
West Valley School District

4th Place

LOADED POTATO DOG

Valerie Gray
Wenatchee School District

Washington School Nutrition Association Recipe Contest

Contestants from across the state submitted their USDA approved school recipes for a chance to win a free trip to the July 2019 summer WSNA conference with paid mileage and more! Brandy Tucker, Director of Operations and Marketing at WSPC, presented four winners with a special plaque and recognized contestants for their creativity at the Washington School Nutrition Association's conference in Spokane. Tucker said, "We are so impressed by the devotion of those involved in feeding kids across the state. WSPC wants to recognize everyone for their hard work."

To see all the winning recipes, visit <https://www.potatoes.com/wsna-info>

LEGISLATIVE ISSUES

HOURS OF SERVICE RULE CHANGE TO IMPROVE SAFETY AND INCREASE FLEXIBILITY FOR COMMERCIAL DRIVERS

WSPC and the National Potato Council advocated for common sense regulations that provide common-sense flexibility to trucking industry regulations. We commend the U.S. Department of Transportation's Federal Motor Carrier Safety Administration (FMCSA) for publishing a rule change to the Hours of Service (HOS) regulations for commercial motor vehicle (CMV) drivers.

- Expands the short-haul exception to 150 air-miles and allows a 14-hour work shift to take place as part of the exception
- Expands the driving window during adverse driving conditions by up to an additional 2 hours
- Requires a 30-minute break after 8 hours of driving time (instead of on-duty time)
- Allows an on-duty/not driving period to qualify as the required break
- Modifies the sleeper berth exception to allow a driver to meet the 10-hour minimum off-duty requirement by spending at least 7, rather than at least 8 hours of that period in the berth
- Minimum off-duty period of at least 2 hours spent inside or outside of the berth, provided the two periods total at least 10 hours, and that neither qualifying period counts against the 14-hour driving window

EPA, U.S. ARMY REPEAL 2015 RULE DEFINING “WATERS OF THE UNITED STATES” ENDING REGULATORY PATCHWORK

The U.S. Environmental Protection Agency (EPA) Administrator Andrew Wheeler and Department of the Army Assistant Secretary of the Army for Civil Works R.D. James announced that the agencies are repealing a 2015 rule that impermissibly expanded the definition of “waters of the United States” (WOTUS) under the Clean Water Act. The agencies also codified the longstanding and familiar regulatory text that existed prior to the 2015 Rule—ending a regulatory patchwork that required implementing two competing Clean Water Act regulations, which has created regulatory uncertainty across the United States.

This is the first step in a two-step rulemaking process to define the scope of “waters of the United States” that are regulated under the Clean Water Act. Step 1 provides regulatory certainty as to the definition of “waters of the United States” following years of litigation surrounding the 2015 Rule. The two federal district courts that have reviewed the merits of the 2015 Rule found that the rule suffered from certain errors and issued orders remanding the 2015 Rule back to the agencies. Multiple other federal district courts have preliminarily enjoined the 2015 Rule pending a decision on the merits of the rule. In this action, EPA and the Army jointly conclude that multiple substantive and procedural errors warrant a repeal of the 2015 Rule.

With this final repeal, the agencies will implement the pre-2015 regulations, which are currently in place in more than half of the states, informed by applicable agency guidance documents and consistent with Supreme Court decisions and longstanding agency practice. The final rule takes effect 60 days after publication in the Federal Register. In December 2018, EPA and the Army proposed a new definition—Step 2—that would clearly define where federal jurisdiction begins and ends in accordance with the Clean Water Act and Supreme Court precedent. In the proposal, the agencies provide a clear definition of the difference between federally regulated waterways and those waters that rightfully remain solely under state authority.

USMCA RATIFIED

The USMCA was proposed by United States President Donald Trump and was signed by Trump, Mexican President Enrique Peña Nieto, and Canadian Prime Minister Justin Trudeau on November 30, 2018, as a side event of the 2018 G20 Summit in Buenos Aires. A revised version was signed on December 10, 2019, and was ratified by all three countries, with the final ratification (Canada) on March 13, 2020. USMCA will maintain zero tariffs for US potato exports to Canada and Mexico and improved phytosanitary measures to move produce across borders.

Olympia Potato Day

Potato farmers gathered in Olympia to meet with state legislators, staff members, and agency personnel. Family potato farm perspectives were shared, communicating various challenges. Expressed was the need to fund soil health research, specifically the Washington State Soil Health Initiative which provides a win-win opportunity for potato growers, the environment, and local communities. Growers also shared their concerns about how low carbon fuel standards and ensuing taxes could add to production costs, as well as concerns over the proposed removal of the four lower snake river dams.



INDUSTRY IMPACTS

FOOD SERVICE STARTING TO BOUNCE BACK

Restaurant sales bounced back in May 2020, according to new federal data, as consumers continued to emerge from quarantine to use drive-thrus and other takeout services as states started gradually reopening dining rooms. Food services and drinking places sales rose 29% to \$38.6 billion, leading to a 17.7% overall increase in retail sales, according to new U.S. Census data. The numbers suggest that the industry has hit a bottom. April sales were just under \$30 billion, less than half of where they were in April a year ago and the lowest sales number for the industry in well over a decade.

Yet May's sales, while an improvement, remain well below normal. The industry has a long way to go to fully recover from the coronavirus pandemic and state-led quarantines that closed dine-in service at restaurants around the country. May's restaurant sales are still \$25 billion below where they were a year ago. Sales must improve another 39% before they can fully recover. Chains reporting their sales figures have all suggested things are improving. Meanwhile, the number of restaurants with operating dining rooms have increased from 11 on April 29 to 1,234 on June 10. Fast-food giant McDonald is also said it is improving, from a decline of 19.2% in the U.S. in April to a decline of 5.1% in May.

WASHINGTON POLICY CENTER RELEASES STUDY ON TAXES PAID BY FARMS

Agriculture is an intrinsic part of Washington State's economy, providing its second largest driver of growth, income, and jobs. Contrary to some claims, farmers provide a great deal of revenue for state and county governments through tax collection. The WPC study examines the claim that farmers and ranchers in our state "do not pay any taxes; none whatsoever." This study describes the various tax categories including Business and Occupation (B&O), property, retail sales, and self-employment and payroll taxes that farmers and ranchers pay.

As the economics of farming becomes more difficult, this study provides a better understanding of where our food dollars go and how farmers and ranchers maintain their livelihoods while contributing to the larger state economy. In all, the estimated 2018 taxes paid by farmers and ranchers in Washington totaled \$922,849,403.

GOVERNMENT AFFAIRS COMMITTEE 2019-2020:

Heath Gimmetstad, Chair
Adam Weber, Vice Chair
Grant Morris
Mike Dodds
Mark Hammer
Chris Olsen
Roger Hawley
Ted Tschirky*
Stacy Kniveton*
Darrin Morrison*
Kees Wyens*
Randy Mullen*
Lynn Olsen*
Ben Harris*
Blaine Meek*
Jake Henke*
Ken Luke*
Staff: Matt Harris

**at large industry position*

REVENUE FORECAST FOR WASHINGTON STATE

The State Economic & Revenue Forecast Council issued its latest, much-awaited revenue forecast in June 2020. Not surprisingly, it is substantially worse than the dire preliminary projections due to a loss of sales tax and B&O tax revenue, because of COVID business restrictions. The revenue shortfall is now forecast at \$4.5 billion for the balance of the current biennium (2019-21) and an additional \$4.3 billion for the 2021-23 biennium. It amounts to a total impact of \$8.8 billion on the State General Fund over the next three years compared to the February forecast, which was the basis for the state's current Operating Budget. It is likely that the State Legislature will call a special session to deal with this loss of revenue. Budget cuts and tax increases are likely to be on the agenda.

WSPC has been communicating to the Legislature about the damage caused from the foodservice closures. The WSPC is also working with Washington State University on an economic impact study, examining the economic losses due to COVID-19 restrictions on food service operations. This report will be shared with members of the State Legislature prior to any discussion of additional taxes on food production.

Washington
State potato farm
families provide
\$7.4 billion
dollars
in direct and
indirect economic
benefit while
supporting more than
36,000 jobs.

EXPORT NEWS

US POTATO EXPORTS GROW PRE-COVID19

U.S. potato exports increased significantly for the first quarter of the July 2019 – June 2020 crop year. This continues the growth seen at the end of last marketing year and despite the continuing trade issues in Asia. These figures reflect potato and product stocks coming out of last marketing year. Continued growth in exports for this marketing year will depend on the availability of potatoes and products in the U.S. and the size of the rebound in EU production.

Exports of frozen potato products increased 9% in volume and 10% in value to \$305,045,624. The volume growth was driven by a 58% increase to the Middle East, 42% increase to the Philippines and 19% increase to Central America. The elimination of the retaliatory tariff on fries entering Mexico resulted in a 7% increase, which was less of a rebound than anticipated. Exports to Japan were up 2% as product from the EU, New Zealand and Canada now enjoy tariff concessions into this market that the U.S. does not. U.S. exports to China declined -4% as the U.S. product incurs a 15% retaliatory tariff entering that market.

Dehydrated potato exports grew 18% in volume and 22% in value to \$59,301,492. This growth was driven by a 23% increase to Japan, 13% increase to Canada and 11% to Mexico. Smaller markets in Asia, (Korea, Malaysia, Thailand, and Vietnam) all saw double digit growth as well. The retaliatory tariffs on U.S. dehy entering China led to -31% decline.

Exports of fresh potatoes (table-stock, chip-stock & frozen-stock) increased 17% in volume and 13% in value to \$77,689,365. The biggest driver was a 34% increase in exports to the largest fresh market, Canada. Much of this is raw product destined for the frozen processing plants there. Exports to the second largest market, Mexico, declined by -13% as high U.S. prices discouraged imports into this price-sensitive market. Exports of chip-stock potatoes grew 14% to Japan, 60% to Malaysia, 83% to Thailand and 88% to Vietnam. Exports to Korea dropped -90% as a large domestic crop led to reductions in both table-stock and chip-stock needs.

Fry Van



Planning a post-COVID festival event or Free Fry Day? Request the WSPC fry van!

Contact:
Brandy Tucker at
btucker@potatoes.com

EFFORTS CONTINUE TO ELIMINATE PHILIPPINE FRY TARIFFS

For the past several years, the Philippine tariff on frozen fries has been zero due to an agreement between the Philippines and the World Trade Organization (WTO). The Philippine government was not able to implement a commitment to the WTO on rice, so in exchange for the delay, they offered to lower tariffs on several products, including fries. Earlier in 2019, the rice issue was resolved, and the Philippine government reinstated the 10% tariff on fries. Importers and quick service restaurants are now working to build an economic case to present to the Philippine government that the tariff should be reduced again to zero. The group will argue that the lower fry tariff allows for expansion of restaurants and creates economic benefits.

GLOBAL DEMAND GROWTH SEEN FOR FRENCH FRIES PRE-COVID19

Washington State exports world sales by dollar value have increased 10% from the 2018 calendar year. In total, french fry sales by value exceeded \$883 million dollars in 2019. The peak in that growth curve has not yet been reached, as Asia and Latin America consumption is still smaller than the American one. This is good news for Washington State potato farmers as french fry capacity growth could help strengthen the State's economy. The top five french fry markets by value in 2019 were:

- Japan: \$220 million
- Korea: \$91 million
- Philippines: \$83 million
- China: \$66 million
- Taiwan: \$57 million

Washington State fry exports by value have fallen in China by 24% due to a 15% applied tariff rate versus 5% MFN tariff rate stemming from geopolitical issues.

Dehydrated potato exports grew 18% in volume and 22% in value to \$59,301,492. This growth was driven by a 23% increase to Japan, 13% increase to Canada.



JAPAN'S PARLIAMENT APPROVES TRADE PACT WITH U.S.

Japan's Upper House approved a new trade pact with the U.S., paving the way for lower tariffs on U.S. beef, almonds, walnuts, potatoes, sorghum, and other agricultural products. It cleared the lower house a couple of weeks earlier. According to the U.S. Trade Representative's office, once this agreement is implemented, over 90% of U.S. food and agricultural products imported into Japan will either be duty free or receive preferential tariff access. Details of the tariff reductions:

- Frozen Fries (HS 2004.1): 8.5% tariff on frozen fries immediately reduced on January 1, 2020, to 4.25%. Further reduced to 2.1% on April 1, 2020. Fully eliminated on April 1, 2021.
- Other Frozen Potatoes (HS 2004.10.2): 9-13.6% tariff on other frozen potatoes immediately reduced to 6-9%. Annual reductions and fully eliminated by April 1, 2023.
- Dehy Flakes, Granules, and Pellets (HS 1105.20): 20% tariff immediately reduced to 13.3%. Annual reductions and fully eliminated by April 1, 2023.
- Processed blended dehy (HS 2005.20): 9-13.6% tariff on other frozen potatoes immediately reduced to 6.75-11.1%. Annual reductions and fully eliminated by April 1 of years 2023, 2025, and 2028, respectively.

In return, the U.S. will provide tariff elimination or reduction on 42 tariff lines for agricultural imports from Japan valued at \$40 million in 2018, including products such as certain perennial plants and cut flowers, persimmons, green tea, chewing gum, and soy sauce. This agreement also provides for the limited use of safeguards by Japan for surges in imports of beef, pork, whey, oranges, and racehorses, which will be phased out over time.

U.S. total exports of agricultural products to Japan totaled \$13 billion in 2018, our 3rd largest agricultural export market. Leading domestic export categories include corn (\$2.8 billion), beef & beef products (\$2.1 billion), pork & pork products (\$1.6 billion), soybeans (\$927 million), and wheat (\$717 million), according to USTR.



Photo Credit: Port of Tacoma

YEAR-ROUND ACCESS FOR U.S. CHIPPING POTATOES TO JAPAN

The Ministry of Agriculture, Fisheries and Forestry (MAFF) in Japan has informed USDA that U.S. chipping potatoes will be allowed to enter year-round starting February 14, 2020. Currently the import protocol for U.S. chipping potatoes states that the import period shall be from February 1 to July 30 each year. The new language will state that U.S. chipping potatoes can enter all year round or January 1 – December 31. Year-round access should allow U.S. fresh chip-stock potato exports to Japan to increase, though the very tight shipment, processing and waste treatment requirements in Japan limits the number of chip processors in Japan currently buying U.S. potatoes. The U.S. exported 32,240 metric tons of fresh chipping potatoes, valued at \$15,014,946 in 2019. U.S. exports were 41,683 MT in 2016, when exports were allowed in December & January due to the short crop in Japan.

CHINESE MARKET OPENS FOR FRESH CHIPPING POTATOES

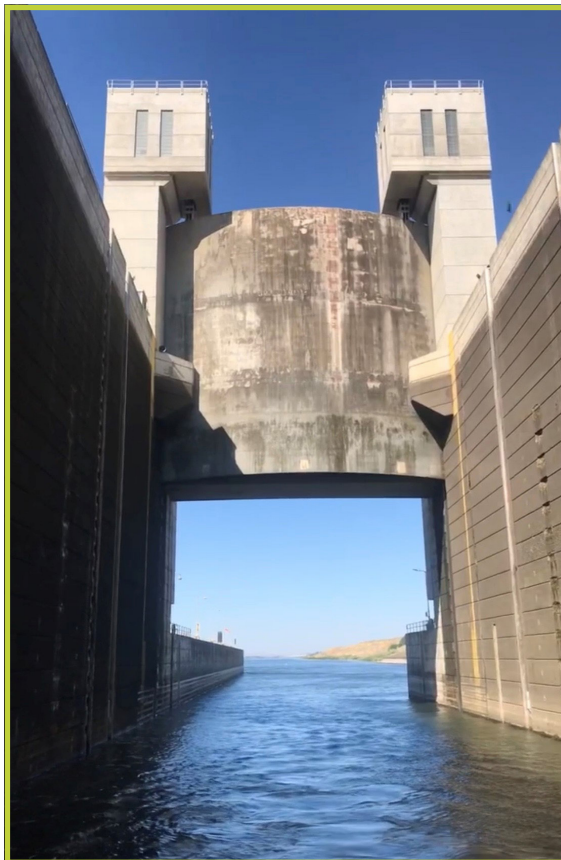
U.S. Secretary of Agriculture Sonny Perdue and United States Trade Representative Robert Lighthizer announced that China has taken numerous actions to begin implementing its agriculture-related commitments on schedule under the landmark U.S.-China Phase One Economic and Trade Agreement. The agreement entered into force on February 14, 2020. Specifically, for the U.S. potato industry, the actions include signing an historic protocol that allows the importation of U.S. fresh chipping potatoes from the states of Washington, Oregon, and Idaho. Shipments will not occur until the 2020 crop is grown, and growers must register with USDA Animal and Plant Health Inspection Service prior to shipping. China is currently a top 10 export market for U.S. potatoes, primarily in processed products. With a combination of competitive tariffs and enhanced market access, China could become a top five market soon.

U.S. WOULD LOSE OVER \$2.3 BILLION BY BREACHING LOWER SNAKE RIVER DAMS

The removal of four lower Snake River dams would cost the U.S. more than \$2.3 billion over the next 30 years, lead to significant additional carbon emissions that contribute to climate change, and jeopardize health, safety and livelihoods in already economically fragile local and regional economies, according to an independent evaluation commissioned by the Pacific Northwest Waterways Association. The study was performed by financial and economic consultants FCS Group to assess several impacts that would result if barging on the Snake River is lost. Significant additional effects due to the loss of hydropower, irrigation and other authorized uses would also occur, but are not captured in this targeted report.

Carbon emissions equivalent to the cumulative emissions generated by a Boardman coal-fired power plant every 5-6 years would result. Breaching the Snake River dams would cause diesel fuel consumption to increase by nearly 5 million gallons per year as barges are replaced by less efficient truck-to-rail shipments. At least 201 additional unit trains and 23.8 million miles in additional trucking activity would be required annually, resulting in increases in CO₂ and other harmful emissions by over 1.2 million tons per year.

Transportation and storage expenses will likely increase 50% to 100% for grain suppliers and shippers. At the current reported “break even” cost per bushel of \$5.00, the transportation/storage cost is now approximately \$0.40 per bushel of wheat. These costs could increase by up to \$0.80 per bushel with barging removed as a transportation option.



If farm subsidies are not increased, over 1,100 farms may be at risk of bankruptcy. Average regional net farm cash income was only \$42,825 in 2017. With wheat prices already down near the break-even point, the federal government would need to increase annual direct payments to farmers by up to \$38.8 million to maintain current income levels.

Highway, rail, and grain elevator networks would need over \$1.6 billion in capital investment, if barging were removed from the Snake River, and new infrastructure or costly upgrades would be needed to accommodate the displaced cargo. This includes hundreds of miles of shortline rail track that have been abandoned, new rail, major highway improvements, and retrofits for grain elevators that do not have rail loading capabilities.

Essential health, sanitation and safety would be jeopardized, along with other public services. Additional rail and truck traffic would also lead to corresponding increases in accidents and fatalities. As observed in the 1992 Snake River drawdown experiment, existing wastewater infrastructure is likely to be damaged or rendered useless if the river level drops, requiring new investments in water intakes, filtration and pumping/transmission systems for a number of cities, counties and major industrial businesses. Roadways, public docks, and other infrastructure would also be damaged or rendered useless.

The impacts would be socially unjust and target fragile economies. The 10 counties most impacted by a dam breaching scenario are primarily rural areas in which 1 in 5 people are already at or below the federal poverty level, and average wages are 25% below the national average. Dam breaching would have a negative regional economic impact on agriculture, manufacturing, transportation, warehousing, and tourism businesses that are physically or functionally related to freight movement and river access.

COLUMBIA & SNAKE RIVER SYSTEM LEGISLATIVE TOUR

As the debate around breaching the lower Snake River dams grew, the Washington State agricultural community brought more than 40 state legislators and aides together on a boat tour of the Columbia and Snake River in an effort to demonstrate how important dams are to the region's economy.

While traveling to Ice Harbor Dam, the group was given an overview of the Snake River System from U.S. Army Corps of Engineers (USACE) representatives and saw a barge in the process of being loaded at Tri-Cities Grain. Besides moving cargo up and down the river system, the Snake River dams are also an important part of Bonneville Power Administration's (BPA) energy generation portfolio. Chris Allan, a BPA official, explained that the dams play an important role in providing back-up power during times of heavy usage. Chad A. Rhynard, Chief, Technical Support Branch, USACE's Walla Walla District, added that each of the six turbines at Ice Harbor Dam out produces, with consistent energy, versus the wind turbine portfolio in the region. Snake River dams are rated as one of the top 10 hydropower groups in the United States.

Laurie Weitkamp, a research fisheries biologist at the National Oceanic and Atmospheric Administration's (NOAA) Northwest Fisheries Science Center, gave a presentation on West Coast salmon recovery and orca health. She explained salmon populations are cyclical, with periods of high and low numbers. The bottom line is many salmon populations are in a downward trend largely due to unfavorably warm ocean conditions. As far as breaching the Snake River dams being the answer to orca recovery, NOAA's position is dam breaching is not seen as the solution. Once at Ice Harbor Dam, the group had the opportunity to go through the navigation lock and then see where the

turbines are housed. They also got a brief overview of the fish ladders and the steps BPA is taking to help salmon move past the dam.

On the boat trip back to Kennewick, potato grower Blaine Meek talked about the importance of the river for irrigation, and Tom Kammerzell, a wheat grower and Port of Whitman County commissioner, talked about the importance of the river system for getting products to market.

Sponsors of the tour included Food Northwest; NW Agricultural Cooperative Council; NW Grain Growers; Pacific Northwest Waterways Association; Pomeroy Grain Growers, Inc.; Tri-Cities Grain LLC; the Washington Association of Wheat Growers; the Washington Grain Commission; the Washington Potato & Onion Association; and the Washington State Potato Commission.



RIVER VALUES

The Columbia Snake River System provides 90% of renewable power in the Pacific Northwest. The river system reduces traffic congestion and pollution. In 2018, it would have taken 38,966 rail cars or 149,870 semi-trucks to move the cargo that was barged on the Snake River. Juvenile fish survival rates past each of the eight federal dams on the system are between 95% and 98%. The four Lower Snake River dams alone provide enough clean energy to power 1.87 million homes.

In early August 2020, the U.S. Army Corps of Engineers, Bureau of Reclamation, and Bonneville Power Administration released a joint Environmental Impact Statement that says the dams need to stay in place on the Snake River. WSPC continues to monitor the situation and advocate for the Washington potato industry on this issue.

Know The Facts! →

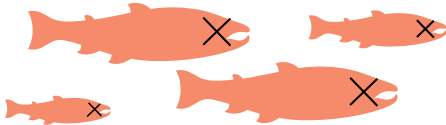
5 MYTHS AND 5 FACTS ABOUT THE COLUMBIA-SNAKE RIVER SYSTEM

KNOW THE FACTS!

MYTHS

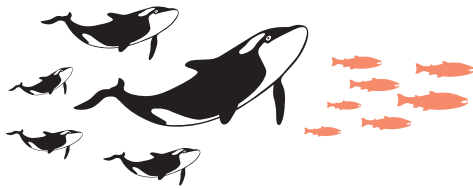
1.

THE DAMS ARE SALMON-KILLERS!



2.

THE ORCAS RELY HEAVILY ON SNAKE RIVER SALMON



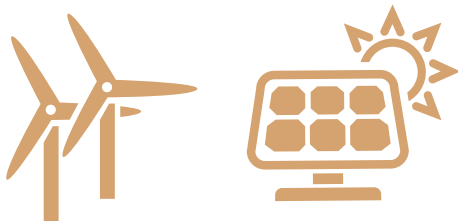
3.



THE LOWER SNAKE RIVER DAMS AREN'T IMPORTANT TO POWER GENERATION

4.

WIND AND SOLAR CAN REPLACE HYDROPOWER IN THE PACIFIC NORTHWEST TODAY



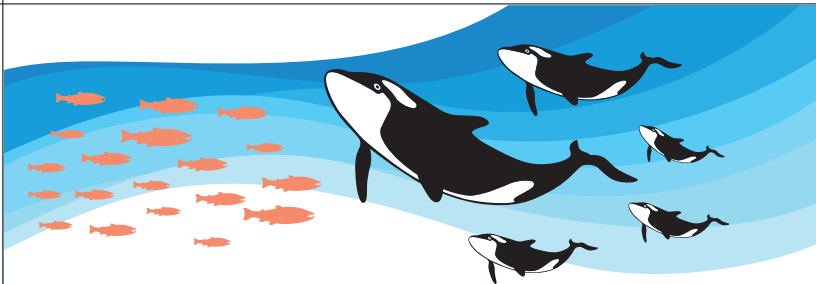
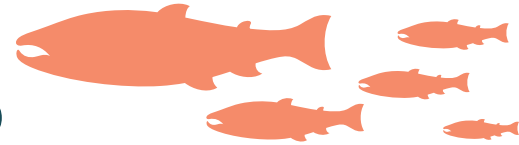
5.

REMOVAL OF THE LOWER SNAKE RIVER DAMS WILL SAVE SALMON AND THE ORCA POPULATION

FACTS

95%

More than 95% of juvenile fish pass through each of the eight federal dams



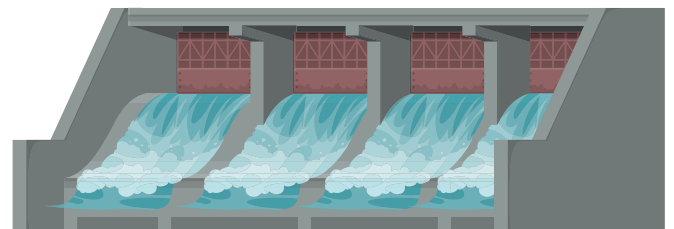
The orcas' diet is dependent on fish from dozens of rivers



x 1.87 Million

The Lower Snake River Dams alone provide enough clean energy to power 1.87 million homes

Wind and solar energy aren't as reliable and have shorter life spans than hydroelectric equipment



Salmon and orcas face a number of challenges, including sea lions, ocean acidification, underwater noise, water pollution, habitat loss and more



Financials



**Assessment
Revenue**
\$3,450,000



**Reserve
Account Transfer**
\$860,176



**Tri State
Research MOU**
\$96,000



**Interest
Income**
\$40,000

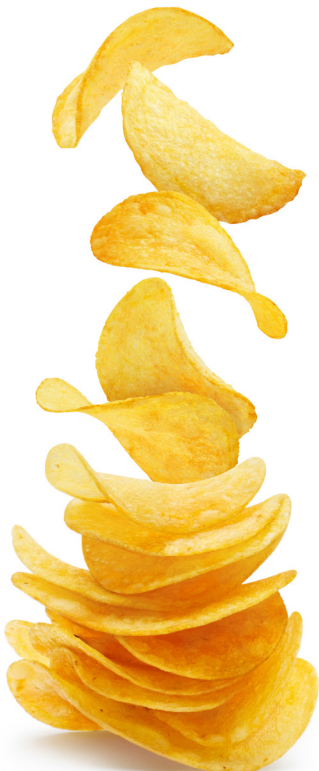


**Administrative
Service Income**
\$500



**APPROVED
BUDGET REVENUE**
Subtotal \$4,346,676

**Charts are for illustration only, not to scale.*



**Office &
Operations**
\$1,106,750



**Research &
Outreach**
\$1,074,331



**Market &
Industry Affairs**
\$757,895



**Government
Affairs**
\$757,700

**APPROVED
PROGRAM BUDGET**
Subtotal \$4,346,676

**Charts are for illustration only, not to scale.*

Potato Summit
\$50,000

**WSU Mount Vernon
Pathologist**
\$200,000

**WSU Soil Health
Endowed Chair**
\$300,000

WSU Physiologist
\$200,000

PROVISIONING POTATO GROWERS FOR SUCCESS

The WSPC is proud to support Washington potato growers by providing pest monitoring supplies, farm safety videos, and Good Agricultural Practices (GAP) notebooks. Among the provisions we supply are:

- Yellow sticky cards and stands to monitor aphids, potato psyllid, and beet leafhopper.
- Sweep nets and beat sheets to monitor many insect pests and beneficial insects.
- Delta traps with stands, sticky liners, and pheromone caps to monitor tuber moth.
- Instructions on how to use insect monitoring supplies.
- Free disease diagnostics through Washington State University.

- In print and downloadable: 2020 Integrated Pest Management Guidelines for Insects and Mites in Idaho, Oregon, and Washington Potatoes by A. Schreiber, A. Jensen, S.I. Rondon, E.J. Wenninger, S. Reitz, and T. Waters.
- Pest identification spiral-bound books with photographs and descriptions of WA potato pests.
- GAP notebooks, in print and downloadable: USDA GAP, USDA Harmonized GAP, Primus GAP, and GLOBAL GAP.
- Agricultural Safety DVD Library, including the 2019 WSCP produced Potato Safety DVD.



SERVING THE POTATO COMMUNITY

The WSPC Research and Outreach arm is dedicated to making Washington a great place to grow potatoes profitably and sustainably. To that end, we engage in a variety of ways with the agricultural community, state and federal agencies, and private industry. Here are a few of our focal points:

- We are board members on the Potato Variety Management Institute (PVMI), a nonprofit group that markets University potato varieties, and the United States Department of Agriculture, Agricultural Research Service in WA, OR, and ID. PVMI also collects royalties and licensing fees. In turn, PVMI uses funds generated to enhance potato breeding efforts.
- We are committed to farm safety. In addition to our farm safety DVD's, we work with the Washington State Department of Labor and Industries to provide Ag Safety Days to the agricultural community.
- We engage with the Environmental Protection Agency and provide commentary when they review agricultural chemicals that are important to Washington potatoes.
- We keep abreast of new technology, including crop rotations benefiting potatoes, spectral imaging, drone scouting and artificial intelligence detection of potato pathogens and pests.
- We play an active role in the WSU Potato Field Day.
- We engage the National Resource Conservation Service and county conservation districts to find ways potato growers can use their services.
- We provide guest lectures to institutes of higher education and other groups.
- We serve on hiring committees for Washington State University and the United States Department of Agriculture, Agricultural Research Service.
- We have a staff member on the board of the Washington State Commission for Pesticide Registration.
- We were involved in creating the OR/WA/ID Potato IPM Strategic Plan (<https://catalog.extension.oregonstate.edu/em9275>).

RICK KNOWLES: PERSPECTIVES FROM COLLEAGUES

The announcement of Dr. N. Rick Knowles retirement was punctuated by his receipt of the coveted “Giant Potato Peeler” presented to him by Ed Schneider on behalf of the Washington potato community at the 2020 WA/OR Potato Conference in January. Ed Schneider was on the search committee that led to hiring Dr. Knowles as faculty in the Washington State University Department of Horticulture in 1999 and is currently on the search committee to fill the vacant position. Dr. Knowles was long respected by the potato community throughout the United States, and no more so than in the Pacific Northwest. He was also respected as an excellent scientist by his colleagues, and his leadership, creativity, and grantsmanship will be missed. On a personal level, Rick’s calm nature, sense of humor, kindness, authenticity, and integrity are qualities for which he is known. Below are impressions of some of Rick’s colleagues.



Dr. Norman Richard “Rick” Knowles has been assisting potato growers via innovative, cutting edge research for over 37 years. Rick has made positive impacts on the potato world by researching and developing solutions to physiological issues that haunt the industry. Rick is liked by most and many seek his advice - from statistical analysis to potato flavor. He always had an open-door policy on campus; students and colleagues were always welcome to stop and discuss current events. One of his greatest achievements was mentoring 53 graduate students; chairing the committees for 16 of those students. While at WSU, Dr. Knowles was highly driven by physiological challenges created through imperfect potato quality and production. He approached challenges intelligently with dedication, employing an incredible work ethic. This ethic is no different in retirement when he is pursuing salmon, steelhead, trout, and smallmouth bass. The fish are nervous, and rightly so.

- Dr. Mark Pavek (WSU Faculty)

Rick and I started our work for the Washington potato industry at about the same time, and throughout these 20 years Rick has represented the gold standard of scientists working on potatoes anywhere in this country. His insights into research directions useful to the industry have been outstanding and ambitious, and his willingness to tackle complicated experiments to achieve his goals has been inexhaustible. Rick set the highest bar possible for quality of written work, both proposals and reports, and with good humor taught his graduate students to aim for that high bar he set. Rick will be sorely missed as a key pillar of research and grower support in the Northwest potato industry.

- Dr. Andy Jensen (Manager, Northwest Potato Research Consortium)

I have known Dr. Knowles (Rick) since he was a graduate student at Washington State University (WSU) where I served as a member of his thesis committee. Later I served as chair of the search committee that recruited him for the faculty position that he held in the Department of Horticulture at WSU.

A scan of Dr. Knowles vita is all it takes to recognize the extent, depth and outstanding quality of the many contributions he has made that have contributed to the betterment of the potato industry of Washington, the Pacific Northwest, North America and through the world. His interests and scientific contributions cover many different subject matter fields including but not limited to potato agronomy and stress physiology, crop production, post-harvest physiology, nitrogen and phosphorus nutrition and metabolism and plant growth regulation.

During Rick's entire career at WSU, he has been a leader in the Washington potato research program, and throughout the Northwest. His expertise in the post-harvest physiology aspects of potato tubers destined for use by the potato processing industry and the potato seed industry are recognized worldwide. Rick has the capability to diagnose problems, design and implement research to address those problems, obtain, interpret and present the result in a language meaningful and understandable to the industry. Rick has been vigorous in providing his research benefits to the industry by frequently speaking at university and industry-sponsored meetings, schools, conferences and field days. His research on potatoes includes potato variety development, crop production, stress physiology, post-harvest physiology and biochemistry elucidation, the mechanisms of age-induced deterioration of seed quality and productivity, oxidative metabolism in response to wounding and wound periderm formation, identification of metabolic markers of seed-tuber age, development of methods for estimating and managing the yield potential of seed-potatoes, discovery and development of novel sprout inhibitors, and management practices to optimize yield.

Rick's research is also recognized worldwide as his research has been published in multiple peer-reviewed scientific journals including the American Journal of Potato Research, Journal of Biological Chemistry, Plant Journal, Plant Physiology & Biochemistry, Post-harvest Biology and Technology, Journal of the American Society for Horticultural Science, HortScience, Physiologia Plantarum, Canadian Journal of Botany, Canadian Journal of Plant Science, Australian Journal of Experimental Agriculture, Annals of Botany, Plant Breeding, Canadian Biosystems Engineering, Plant Physiology, Arab Gulf Journal of Scientific Research, Plant Science, Canadian Agricultural Engineering, Soil Biology and Chemistry. More importantly, he has regularly published his research in potato industry trade journals and newsletters.

The list of undergraduate, masters, and doctorate students Dr. Knowles has mentored is extensive both while at WSU and during his prior employment. Many of those students now serve the potato industry in various capacities. Dr. Knowles' contributions to the Washington potato industry has been recently acknowledged by the Washington Potato Foundation awarding him the Industry Leadership Award. His value to the potato scientific community has been acknowledged by bestowing the title of Honorary Life Member of the Potato Association of America. I consider it a distinct privilege to have been a colleague of Rick's during my career at WSU but even more important to have him as a dear and valued friend.

- Dr. Robert Thornton (Former WSU faculty)

WASHINGTON OREGON POTATO CONFERENCE

It was another successful Washington Oregon Potato Conference! Held January 21 - 23 in Kennewick, the diverse attendance is a great testament to the quality of the show ...

2,178

A record-breaking attendance

34

Different states, numerous Canadian provinces and four foreign countries

Over

170

exhibitor booths to visit

3

Days of industry presentations

... and plenty of opportunities to meet with friends and colleagues.

A NEW ALLIANCE: COLUMBIA BASIN POTATO SOIL HEALTH WORKGROUP

The WSPC formed an alliance with industry leaders from the private sector, including Lamb-Weston, Simplot, McCain Foods, and Washington State University (WSU). The focus of this alliance is to improve agricultural soils in the Columbia Basin to enhance potato production and profitability. To date, the biggest goals we achieved were:

- Developing a team charter for founding members of the Columbia Basin Potato Soil Health Workgroup
- Commissioning a review of scientific journal articles that involved potato soil studies (<http://s3-us-west-2.amazonaws.com/wp2.cahnr.wsu.edu/wp-content/uploads/sites/32/2018/12/Safeguarding-Potato-Cropping-Systems-in-the-PNW-Through-Improved-Soil-Health.pdf>)
- Generating cash and commitments of \$3.4 million to fund an Endowed Chair in Soil Health for Potato Cropping Systems
- Developing an advisory committee structure that will oversee the Endowed Chair's activities and make recommendations to WSU administration
- The \$3.4 million for the Endowed Chair came from potato growers, including \$300,000 from the WSPC, and private industry including processors, registrants, and others. \$3 million of the total will go into an interest-bearing account under control of WSU to generate approximately \$120,000 annually to fund research that will be directed by the scientist to be named to the Endowed Chair. The remainder (\$400,000) will be used as start-up funds for the position to outfit a laboratory and hire technical staff. WSU will provide funds for the chair's salary/benefits package, laboratory, and administration. The scientist hired to fill the position will be expected to research issues important to soils including soil physics, chemistry, biology, and ecology, and discover ways soils can be manipulated to facilitate potato farming.

FEDERAL RESEARCH GRANTS BENEFIT WA GROWERS

The WSPC and the Northwest Potato Research Consortium, an alliance composed of the WSPC and potato commissions in Oregon and Idaho, put substantial effort into funding research that frequently acts as a catalyst leading to larger federally-funded grant proposals. Three large grants were received by our scientists from national funding agencies in FY2019-20 to research pests that are important to WA agriculture:

- “Development of sustainable system-based management strategies for vector-borne, tuber necrotic viruses in potato,” NIFA Specialty Crop Research Initiative. Alexander Karasev, Project Director, \$5,756,299
- “Systems-level analysis of antagonistic and mutualistic dialogues in tripartite interactions among potato-protist-virus,” NSF-NIFA Plant Biotic Interactions program. Hanu Pappu, Project Director, Kiwamu Tanaka Co-Project Director, Stephen Ficklin Co-Project Director. \$800,000.
- “Biodegradable immunostimulant and its rhizospheric delivery system to control powdery scab disease of potatoes,” USDA-AFRI Foundational Program, Pests and Beneficial Species in Agriculture. Kiwamu Tanaka Project Director, Cynthia Gleason, Co-Project Director. \$492,164.

Using our research funds to leverage larger grant funding is our strategy to ensure that potato producers have the best possible

and timely research underway. We also provide letters of support, and grant reviews to support our scientists.

RESEARCH COMMITTEE 2019-2020:

Grant Morris, Chair | Albert Stahl, Vice Chair
Ellie Charvet, Jordan Reed, Marvin Wollman, Matt Taylor*
Greg Harris*, Bob Halvorson*, Dan Adamson*
Staff: Matthew Blue
*at large industry position

PROJECTS FUNDED BY THE NORTHWEST POTATO RESEARCH CONSORTIUM FY2020-21

PLANT PATHOLOGY / SOIL HEALTH

Relationship between in vitro fungicide resistance of Fusarium dry rot pathogens and disease control of Fusarium dry rot in vivo and in the field: Kasia Duellman, \$28,885

Data mining for crop rotations that predict the occurrence of mefenoxam-resistant Pythium species: Ken Frost, \$37,150

Using next generation sequencing to characterize the total microbial community in soils associated with seed potato: Ken Frost, \$23,990

Managing the potato microbiome for improved soil and potato health: Deirdre Griffin LaHue, Tarah Sullivan, \$42,519

“Active Carbon” as a critical control of microbial performance in potato fields: Markus Kleber, \$55,017

Evaluation of phosphorous acid fungicide programs for improved pink rot management: Jeff Miller, \$11,600

Evaluation of new potato varieties for disease susceptibility and relative response to fungicide programs: Jeff Miller, Nora Olsen, \$50,400

Support for the investigation of emerging and persistent potato diseases in the Northwest: Kylie Swisher Grimm, \$12,000

Testing plant-defense elicitation compounds and antimicrobial agents to control silver scurf disease: Kiwamu Tanaka, \$40,707

Developing collaborative modern diagnostic approaches for potato pest and pathogen detection and characterization for the Pacific Northwest: James Woodhall, Kiwamu Tanaka, Ken Frost, \$30,000

A network of spore samplers as an early warning detection system for foliar potato pathogens: James Woodhall, Kasia Duellman, Phill Wharton, Tim Waters, Lindsey du Toit, \$46,000

NEMATOLOGY

An investigation into the potential for broad-spectrum resistance against plant parasitic nematodes in potato: Cynthia Gleason, \$20,000

Identification of potato genes responsible for susceptibility to Meloidogyne chitwoodi: Cynthia Gleason, \$15,000

Functional Genomics of Solanum sisymbriifolium (Litchi Tomato) Immunity for PCN Eradication: Louise-Marie Dandurand, Joe Kuhl, Allan Caplan, Fangming Xiao, Inga Zasada, \$88,434

Development of New Nematicides for Potatoes: Alan Schreiber, \$23,000

POTATO VIRUS

Improving detection of PVY-infected plants with innovative peptide application: Aymeric Goyer, \$35,451

Testing genes that have the potential to provide resistance to PVY: Aymeric Goyer, \$35,418

Monitoring the PVY strains in Othello and Hermiston trials: Alex Karasev, Ken Frost, \$25,808

“Window of susceptibility” to PVYNTN infection in potato and effect on virus translocation into tubers: Alex Karasev, \$45,000

Understanding Tobacco rattle virus epidemiology through basic and applied assays: Kylie Swisher Grimm, Max Feldman, \$32,004

ENTOMOLOGY

Molecular and landscape approaches to understanding beet leafhopper and potato purple top disease in the Columbia Basin: Rodney Cooper (+Dave Horton, Kylie Swisher Grimm),

Dave Crowder, Ken Frost, \$44,174

Role of vector saliva in pathogen transmission: Rodney Cooper, \$6,250

Development of a sex pheromone lure to detect low-level populations of wireworms: Rodney Cooper, \$16,000

Development of Crop Protection Chemicals for Pacific Northwest Potatoes: Alan Schreiber, \$30,000

Quantifying Crop Safety and Efficacy when Tank Mixing Insecticides and Fungicides: Tim Waters, \$18,285

Attempting to Establish the Economic Threshold for Lygus in Potatoes and Determining Efficacy and Tolerance of Insecticides for Control of Lygus: Tim Waters, Doug Walsh, \$20,000

CROPPING SYSTEMS, PLANT PHYSIOLOGY

Determination of factors that regulate tuber glycoalkaloid content: Roy Navarre, Mark Pavek, \$39,000

Improving Potato Value and Quality by Refining Irrigation Recommendations: Mark Pavek, \$16,782

Evaluation of Potassium Requirement for Different Potato Varieties in the Columbia Basin: Ray Qin, Sagar Sathuvalli, Rhett Spear, \$50,000

Practices associated with blackspot bruise susceptibility: Nora Olsen, Mike Thornton, Jeff Miller, Aymeric Goyer, Ray Qin, Ken Frost, \$84,000

BREEDING / VARIETY DEVELOPMENT

Breeding and Selecting Russet and Specialty Varieties with Improved Tuber Qualities, Disease and Pest Resistance, and Sustainability: Rhett Spear, Rich Novy, Mike Thornton, \$76,508

Storage Requirements for New and “Potential Release” Cultivars for the Potato Industry: Rhett Spear, Nora Olsen, \$44,510

In-Field Testing to Identify New Potato Varieties and Best Management Practices for Growers: Mark Pavek, \$72,377

Postharvest Quality of Clones in the Western Regional Potato Variety Development Program: Knowles replacement. \$56,600

Genetic Improvement and Cultivar Development of Russet, Chip and Specialty Potatoes for the PNW Potato Industry: Sagar Sathuvalli, Brian Charlton, Clint Shock, \$134,001

Identifying molecular genetic markers linked to Tobacco Rattle Virus resistance and other critical processing traits: Max Feldman, Sagar Sathuvalli, \$32,988

Breeding for Resistance to Columbia Root-Knot Nematode: Introgression of new sources of resistance and development of genomic resources: Sagar Sathuvalli, Cynthia Gleason, Kelly Vining, Max Feldman, \$60,000

PROJECTS FUNDED BY THE WSPC

WSU Research Support – Othello Research Unit: Rick Knowles on behalf of Depts. Of Horticulture, Entomology, and Plant Pathology, plus Prosser IAREC. \$73,343

Washington Commercial Potato Seed Lot Trial: Mark Pavek, \$37,186

Regional Sampling Network for Insect Pests of Potato in the Columbia Basin of WA: Carrie Wohleb, \$33,000

Developing Insect IPM Programs in Washington Potatoes: Alan Schreiber, Tim Waters, \$47,000

Development of Genomic Resources for Management of Verticillium wilt of Potato: David Wheeler, Jeremiah Dung, \$30,000



108 S. Interlake Road
Moses Lake, WA 98837
t. (509) 765-8845 | f. (509) 765-4853
office@potatoes.com | potatoes.com