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WASHINGTON ASSOCIATION OF WHEAT GROWERS

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President's Perspective



A little about me...

By Howard McDonald

Since this is my first time writing as president of the Washington Association of Wheat Growers (WAWG), I thought I'd take a few minutes to introduce myself and my family. I'm the third generation on my family's Douglas County dryland wheat farm, which was settled in the 1950s by my grandfather. Although I grew up on the farm, I didn't always stay there. In the 1970s, I had to go out into the cruel world because times were tough on the farm. I

worked my way through Alaska and Idaho selling welding supplies before making my way back to Washington. I'm pretty proud of the experience I earned, and I feel like it made me a better farmer in the end.

My son (and fourth generation), Travis, now runs the farm day to day. I don't often tell him this, but he does a great job. We are about 80 percent no-till with the rest conventionally farmed. When Travis joined me on the farm, we took a hard look at our practices and rotations because our yields weren't where we thought they should be. We made some changes and started investing more in our soils. We may not have it right yet, but we think we are on the right track. We've been experimenting with cover crops—



that's a work in progress—and in the past few years, we've started growing canola and sunflowers alongside the wheat. My other son, Taylor, works for a major fertilizer company and is one of our farm's agronomists.

I can't mention Travis and Taylor without talking about the rest of my family, including our four grandchildren, and how grateful I am for what they bring to my life, especially my wife, Teri, who really pushed me to into getting involved in WAWG. I'm proud that our blended family is full of farmers, agronomists and teachers, occupations that are important in keeping our rural communities thriving.

I look at these younger farmers and am so proud of them. They are so passionate about farming. They talk to each other about what they are doing and share their knowledge so everybody benefits. I believe it's because they want to keep this way of life going for their kids. And let's be honest, farming is hard, and it can take a lot out of a family. Teri likes to joke that I'm never going to retire, and that's probably true. I go out to our farm almost every day just because I love being around what we're growing.

As I prepare to assume the responsibilities of WAWG president, I've been considering the year to come. I think we've got a lot of issues on our plate that we'll need to deal with. There's always transportation, protecting the lower Snake River dams and dealing with the new overtime rules in agriculture. But I'm also keeping my eye on the cost and availability of fertilizer and fuel. I'm hearing rumors of fertilizer shortages next year, not to mention potential seed shortages. Whatever happens, know that I and the other officers and staff at WAWG will be working hard on our farmers' behalf, both in Olympia and Washington, D.C.

Merry Christmas and a Happy New Year. I hope your holidays are safe and full of family, good food and fun. I'll see you in January, ready to get to work advocating for the best people I know—Washington wheat farmers.

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- ✓ Preserving the Snake River dams.

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DIRECTLY SPEAKING

A little bit of normalcy heading into 2022

The last six months have been interesting here at the Washington Association of Wheat Growers (WAWG). I feel like a little bit of normalcy is starting to set in as we've been having some in-person meetings, which has been quite refreshing. I think this will be our new normal, both virtual and in-person meetings, but it's important to note, from my perspective, nothing beats an in-person meeting and having that face-to-face communication.

This year's harvest was a big challenge for most. Washington state experienced a severe drought that devastated the crop in both quality and quantity. We had a challenging time getting the state to declare a drought. They declared a drought on groundwater availability but were slow to recognize drought caused by inad-

equate rain. We made sure the governor's office was aware of what was happening in Eastern Washington, and they finally came around. This year shows how important crop insurance is to our farmers, and strengthening crop insurance is one of our top priorities in the 2023 Farm Bill.

We also advocated heavily for WHIP+ funds to help address the protein issues that occurred due to the drought. Congress has voted to fund WHIP+ for 2020 and 2021, and now the U.S. Department of Agriculture (USDA) is looking at how to implement it. There's currently no timeline for when farmers can apply, but be sure to keep checking with your local Farm Service Agency office for updates. Since the WHIP+ disaster program is fairly new, USDA is asking for input. WAWG submitted comments on some of the issues we saw with the program for 2019, so we are hoping they make the application process easier for farmers.

The 2023 Farm Bill will be here before we know it, and planning and advocacy efforts are already taking off. We are working hard to have a seat at the table to be able to provide input to those that are writing the legislation. Some of the things we are focusing on include improving and maintaining USDA programs; if and how climate regulations will be implemented through conservation programs; maintaining farm bill safety programs; and increasing the wheat reference price in the Price Loss



Michelle Hennings Executive Director Washington Association of Wheat Growers

Coverage program. Farmers are being targeted more than I have ever seen before. It's always a challenge to educate the public about the industry that feeds the world and where food comes from.

e'll be traveling to D.C. in January for the national winter meetings and are planning to visit with our federal legislators in person. I can't wait! We need to continue developing relationships and our networking as we haven't had much of an opportunity to meet with members of the new administration yet. Besides the farm bill, we've got many other issues on our list of priorities, such as trade, climate and research funding.

The lower Snake River dams have taken up a lot of my time lately. In the 17 years I have worked for WAWG,

the current situation is the most alarming I've seen. We've had a Pacific Northwest representative propose removing the dams and spending billions to rebuild our transportation infrastructure, followed by one of our congressional senators teaming up with our governor to study dam removal. We've been successful at defeating dam-removal proponents who litigate against the federal environmental impact statement, but now, we have members of Congress talking about dam removal. This raises a big concern as Congress is key to preserving the dams.

WAWG is advocating heavily for the dams by joining with other, like-minded organizations and forming coalitions with more lobbying power than we have ever had. We want to be proactive and not reactive to the situation. I think it's critical that agriculture speaks with one voice on this issue. After all, removing these dams won't just affect the Pacific Northwest. Wheat, corn and soybeans from the Midwest also move down the river system, and those growers will also likely see an increase in transportation costs, especially rail rates, if the dams are removed.

Another issue we are watching is the rising cost of inputs. Although the wheat price looks good right now, what happens if the price drops? Will input prices go down as well? We are hearing that supplies of fertilizer and seed are becoming scarcer, and there is concern about having enough of both in the spring. ooking towards the 2022 Legislative Session in Olympia, the state legislature will yet again be holding committee meetings virtually. This was very frustrating last year as committees only allowed a minute or two for people to testify. In many cases, it was difficult to clearly explain in the allotted time why a certain bill was going to negatively affect a farming operation. Additionally, the committee chairman was able to choose who testified, and there was no interaction between the person testifying and the committee members. While we appreciated that we didn't have to travel to Olympia to testify, this system is flawed, and we felt like legislators weren't listening to the public.

While we are still waiting for more details, next year's session sounds like legislators can be on campus, but there will be very limited public access. In that case, we are working on strategies to educate legislators and providing them with information on wheat farming so they can make sound decisions without us having access to their offices.

I'm calling out to our WAWG membership for farmers who would like to volunteer to be an "expert" on an issue they're passionate about. This would include providing examples from your farm, testifying on the issue and educating others on that topic. If you are interested, please contact me at michelle@wawg.org. If the thought of testifying in front of a committee worries you, we'll work with you to provide your testimony. Wheat needs to tell their story, and I can't stress enough how important this is. We have some very big challenges ahead of us, and we'll need a big team to make sure we can get our message across to those to whom farming is a mystery.



Why Support the Washington Wheat PAC? Washington farmers are losing ground politically! The ability to protect our interests is slowly dwindling. Washington wheat producers need elected officials who know and understand the industry. Without these relationships our ability to remain competitive is at risk. Now is the time for the industry to join together and proactively influence legislation that directly impacts the Washington wheat producer. Please join our efforts by financially supporting the Washington Wheat PAC. Your contribution will strengthen the network of elected officials who understand the wheat industry's goals and objectives by fighting for what is critical to the livelihood of our members.

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WAWG at WORK

ADVOCATING FOR THE WHEAT FARMERS OF EASTERN WASHINGTON

WAWG leaders take part in national fall meetings

In November, leaders and staff of the Washington Association of Wheat Growers (WAWG) joined national wheat industry leaders at the wheat industry's fall conference in Kansas City, Mo., to discuss national issues including climate, transportation, research and the 2023 Farm Bill.

Washington state growers are well represented at the national level. Benton County farmer Nicole Berg is currently vice president of the National Association of Wheat Growers (NAWG). Spokane County grower Marci Green serves on the Special Climate and Sustainability Committee, and WAWG President Ryan Poe and Vice President Howard McDonald both serve on NAWG committees. WAWG Secretary/Treasurer Andy Juris, from Klickitat County, also attended.

"It was a great meeting and an opportunity for the industry to start to finalize some national resolutions and begin setting priorities in preparation for Capitol Hill visits in January," said WAWG Executive Director Michelle Hennings.

Richard Flournoy, acting administrator of the Risk Management Agency, gave a presentation to the board



Michelle Hennings (second row, second from left), executive director of the Washington Association of Wheat Growers, met with other wheat states' executive directors during the wheat industry's fall conference. The group discussed what issues their states are dealing with. Photo courtesy of Alison Vergeront .



Spokane County grower Marci Green (left) serves on the National Association of Wheat Growers' (NAWG) Special Climate and Sustainability Committee, which presented the NAWG board with several potential policy resolutions. See more on NAWG's climate and carbon regulation position on page 26.



Douglas County grower Howard McDonald (fifth from left), incoming Washington Association of Wheat Growers president, serves on the National Association of Wheat Growers' Environment and Research Committee.

and addressed crop insurance issues relating to the drought. Josh Maxwell, Republican policy director for the House Agriculture Committee, also addressed the board. Hennings was able to stress to him the need to have the Farm Service Agency state director and state committee positions filled as soon as possible.

The fall conference is held in conjunction with U.S. Wheat Associates, the export market development organization for the U.S. wheat industry. Hennings gave an update to the U.S. Wheat Transportation Committee on the lower Snake River dams and the current Washington state legislative situation concerning the dams.

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Wireworm

Counties meet prior to convention to discuss issues

Two counties held meetings last month in preparation for the 2021 Tri-State Grain Growers Convention. Growers heard state and federal updates, discussed issues and voted to donate items to the convention auction to help raise money for the Washington Association of Wheat Growers' (WAWG) advocacy efforts.



Adams County

It may have been a cold, wet morning outside, but inside a local Ritzville restaurant, Adams County growers were warming up over breakfast as they discussed the price of wheat, fertilizer and state and federal issues.

Pat Yerxa, from the Ritzville Warehouse Company, gave a market overview, touching on the price of wheat and the tight world wheat supply. He predicted that any production problems, especially in Australia, where they are looking to harvest one of their top wheat crops (if they don't get rained out) will push prices higher. His biggest concern is a strengthening dollar, which could price the U.S. out of the market.

Darrin Fleming from The McGregor Company walked growers through the reasons behind recent high input costs. A combination of weather, transportation issues, increased demand from India and strained relations with China have all negatively impacted the world's ability to make fertilizer and other chemicals and ship them. Fleming said he didn't see any relief from high prices through spring.

Aaron Esser, Washington State University Extension regional specialist, talked about the research he is doing, especially on fighting downy brome. Michelle Hennings, executive director of the Washington Association of Wheat Growers (WAWG), updated growers on the association's recent activities and the issues being addressed, including crop insurance, disaster funding for quality issues related

It's a wrap on 2021 event

Convention has wrapped for another year. Please join us next year in Coeur d'Alene, Idaho, Nov. 29-Dec. 2 for the 2022 convention. Because of the deadlines for the December issue, coverage of the 2021 Tri-State Grain Growers Convention will be published in the January issue of *Wheat Life*.

The wheat organizations of Idaho, Oregon and Washington want to thank everybody who made the convention possible, especially our sponsors, industry supporters and exhibitors.

PLATINUM

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to this year's drought, farm bill planning and carbon regulations.

Growers reviewed the group's finances and voted to keep the same slate of officers for another year. Jake Klein will remain as president, Ron Jirava as vice president and Derek Schafer as secretary/treasurer.

Spokane County

In Spangle, Spokane County growers shared news and discussed some of the issues they've been encountering over dinner at a local restaurant, including the feeling that increasing crop insurance inflexibility is making it difficult for growers to diversify their crop rotations and still have adequate coverage.

The county's Farm Service Agency (FSA) office has experienced a wave of retirements, and much of the staff is new and may be less familiar with growers' informa-



tion. Growers recommended double checking that all the information on the FSA paperwork is correct.

Michelle Hennings, WAWG's executive director, gave a state and national update. Hennings said she is expecting

WAWG welcomes two new wheat ambassadors for 2022

Two new high school seniors have been selected as Washington Wheat Ambassadors for 2021/22. Tate Nonnemacher and Cadence Zellmer, both of Davenport, were selected after a written application process that included a short introductory video. They will represent Washington wheat farmers at various civic and community events and will also participate in WAWG advocacy meetings with state agencies and legislators.

The new ambassadors will be awarded scholarships, funded by the Washington Wheat Foundation, of \$5,000 and \$4,500, based on their presentations at the Washington Association of Wheat Growers' annual banquet on Dec. 1 during the Tri-State Grain Growers Convention. Nonnemacher and Zellmer will represent Washington wheat farmers at various civic and community events and will also participate in WAWG advocacy

meetings with state agencies and legislators.

Cadence Zellmer

Zellmer is the daughter of Kyle and Kristin Zellmer. She grew up on their multigeneration family farm in Lincoln County. She has maintained a strong grade point average at Davenport High School, where she excels



in and out of the classroom. She is captain of the soccer and softball teams and demonstrates dedication to her community through acts of service. Her leadership roles include serving as an officer in FFA and FBLA, and she is a member of the National Honor Society. Cadence plans to become a registered nurse with a focus on rural healthcare.

"I live on a family farm and I'm passionate about the wheat industry. I'm excited to have the opportunity to represent the wheat growers community," Zellmer said. "I can't wait to see what happens."

Tate Nonnemacher

Nonnemacher is the son of Trea and Casey Nonnemacher. A student at Davenport High School, he has maintained a strong grade point average while taking a rigorous course load. The Nonnemacher family operates a multigeneration wheat farm in Lincoln County.



In addition to farm activities, he is active in FFA, FBLA, National Honor Society and football. He also has a passion for his breeding and market hog projects, outdoor activities and numerous community service opportunities. He plans to study agronomy at a four-year university and pursue a lifelong career in agriculture.

"Growing up on a wheat farm has definitely shaped what I want to do for a career. I couldn't do a city job," Nonnemacher said. "I'm interested in representing Washington wheat growers. I'm excited to learn how to advocate for the wheat industry." another tough year for advocacy, as it appears that the 2022 Washington State Legislative Session will be mostly virtual again, including testimony in committee hearings.

"COVID threw a wrench into things, and last year was very frustrating," she told growers.

Hennings is expecting that ag overtime will be an issue again this year, as the industry is preparing to push for a seasonal exemption. Carbon regulations and the lower Snake River dams are also hot state topics. At the federal level, 2023 Farm Bill planning is already underway, with the wheat industry preparing to defend the \$5.50 wheat reference price with hopes of increasing it so it is closer to wheat's break-even point.

Glen Squires, CEO of the Washington Grain Commission (WGC), and Mary Palmer Sullivan, WGC vice president, talked about research, transportation and nontariff trade barriers.

Deadline nearing for ag scholarship applications

The National Wheat Foundation is accepting applications for the Jerry Minore Scholarship through Dec. 31, 2021. The scholarship honors students pursuing a career in agriculture and is available to both high school and college students. Two \$2,500 scholarships will be awarded for the 2022 academic year.

More information and an application form can be found at wheatfoundation.org/ education-and-scholarships/.

"The scholarship is meant to aid students who have shown a passion for agriculture both inside and outside the classroom," said David Cleavinger, chairman of the



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National Wheat Foundation. "These students could play a key role in developing sound ag policy, research of new technologies or other discoveries that are important to wheat growers, agriculture and society."

The late Jerry Minore was a BASF senior market manager and a liaison to the wheat industry. Since his unexpected death in 2012, BASF has partnered with the National Wheat Foundation to fund scholarships and honor his advocacy efforts for wheat growers.

Enrollment open for 2022 crop year ARC, PLC

Elections and enrollment for the Agriculture Risk Coverage (ARC) and Price Loss Coverage (PLC) programs for the 2022 crop year began on Oct. 18, 2021, and will run through March 15, 2022.

The 2018 Farm Bill allows for changes to the farm election for 2022. Any producers wishing to make changes to the farm election must obtain signatures from all producers on the farm with an interest in the farm's cropland acres (excluding Conservation Reserve Program acres) for the new election to be considered valid. Producers may elect to enroll in PLC, ARC-County or ARC-Individual programs for 2022. Elections to PLC or ARC-County are made on a covered commodity by covered commodity basis, and all covered commodity base acres are elected into ARC-Individual if that program is chosen. Failure to agree to an election change for 2022 by March 15, 2022, will result in the farm defaulting to the election made in the 2021 program year. Contact your local Farm Service Agency office for information.



DINING ON POLICY. The Washington Association of Wheat Growers sponsored a table at the Washington Policy Center's Annual Dinner Event in Spokane in October. Dr. Ben Carson, former Housing and Urban Development secretary, was the keynote speaker. Pictured above, first row from left are Howard McDonald, Teri McDonald, Randy Suess, Laurie Suess, Marlene Poe and Michele Kiesz. Second row from left are Andrea Shawver, Jeff Shawver, Ryan Poe and Randy Kiesz.

USDA awards conservation project funding

The U.S. Department of Agriculture (USDA) recently announced it was awarding \$25 million to conservation partners across the country for 18 new projects under the Conservation Innovation Grants (CIG) On-Farm Conservation Innovation Trials program, including three projects involving Washington producers.

The Palouse Conservation District project received \$2.1 million to work with crop producers in Washington, Oregon and Idaho to demonstrate farming practices that build soil health and increase the resilience of dryland cropping systems. The overall goal of this project is to support widespread adoption of soil health management systems, specifically cover cropping, interseeding and cover crop-livestock integration.

Historically underserved producers in the Puget Sound Region will receive approximately \$910,000 to conduct trials of innovative soil health management system techniques. The third project involving Washington producers will focus on pollinator conservation and understanding how it can help further climatesmart agriculture. This project will include producers in California, Maine, Montana, Oregon and Washington.

"I am not surprised at all to see this level of commitment to climate smart agriculture, historically underserved producers and soil health," said Roylene Comes At Night, NRCS Washington state conservationist. "Assisting our partners in meeting their conservation goals is one of our primary responsibilities and privileges."

For more information about the Conservation Innovation Grants program, visit the NRCS website at nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/cig/.

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POLICY MATTERS

Legislature keeps working through interim

By Diana Carlen WAWG Lobbyist

Last month, the Washington State Senate Facilities and Operations Committee approved their plan on the format for the 2022 Legislative Session, which is set to begin Jan. 10. Under the plan, senators will conduct their work through a mix of virtual committee meetings and on-site votes. Senate committee hearings will remain remote, with the public being able to testify remotely like last session. Hearings will continue to be broadcast or live streamed by TVW.

On days when there is no floor action, senators and staff will have to provide proof of COVID-19 vaccination or submit to regular testing. For days when lawmakers are on campus conducting floor action, daily testing for all senators and staff, regardless of vaccination status, will be required. All 49 senators can attend floor sessions, and the two galleries above the floor will be open to the public, with a limit of up to 12 people on each side. Masking and public distancing will be required.

Senators are encouraged to hold meetings remotely, but in-office meetings will be allowed but capped at three people per meeting. Members who meet with senators at their office will not be required to show proof of vaccination or a negative COVID-19 test, but will be required to answer COVID-19 screening questions.

Staffers will be encouraged to continue working remotely.

There is still no news on the format of the 2022 Legislative Session for the House, but it is likely to have a hybrid format like the Senate. Notably, on Oct. 18, a new House rule became effective that requires members and staff to submit proof of vaccination in order to have access to House Legislative Facilities. The policy is set to remain in effect through early January.

Proposal to ban natural gas moving forward

As previously reported, the State Building Code Council is in the process of amending several of their codes. Of immediate concern to the natural gas industry, business and agricultural groups is two proposals to ban gas heat pump water heaters and gas heat pump space heaters in commercial settings. The CR-102 process includes public comment, economic analysis and public hearings.

Secretary of State accepts role in Biden Administration

In a surprise announcement, Washington State Secretary of State **Kim Wyman** announced that she will

resign to take a position with the Biden Administration. Specifically, Wyman will join the federal Cybersecurity and Infrastructure Security Agency as their senior election security lead. Secretary Wyman is the only Republican that holds a statewide elected office on the West Coast outside of Alaska.



Gov. Inslee has picked Sen. Steve

Hobbs (D-Lake Stevens) to replace Wyman. A special election will be held in November 2022 to fill the remaining two years of Wyman's term.

Ecology holds webinar on upcoming climate legislation

In October, the Department of Ecology (Ecology) held a webinar on agency request legislation for the 2022 session that would outline an EITE (energy intensive trade exposed) compliance pathway under the cap-and-trade legislation, the Climate Commitment Act (CCA). Under the CCA, Ecology is required to bring forward agency request legislation outlining a compliance pathway specific to EITE businesses for achieving their proportionate share of the state's emissions reduction limits from 2035 to 2050. The CCA prohibits expenditures from its accounts unless such legislation has been enacted by April 1, 2023. Ecology plans to release drafted legislation in early January.

Long term care tax update

The opt-out period for Washington's new long-term care program has officially begun. Passed last session, Substitute House Bill 1323 requires any worker in Washington that wishes to opt out of the state's long-term care program, and in turn the associated payroll tax, to have purchased their own long-term care insurance by Nov. 1, 2021. For those that have not opted out, a payroll tax of 0.58 percent will launch on Jan. 1, 2022. As of the end of October, nearly 280,000 people had applied to opt out of the program. Individuals requesting an exemption must apply by Dec. 31, 2022, and will be required to pay the tax until their application has been approved. ▶

Advertorial

A NEW VARIETY GIVES GROWERS More options this Upcoming season



WB6211CLP is a new variety for the Pacific Northwest region and is built for strong pest, disease and weed management," said Clemens.

WB6211CLP variety provides spring wheat growers a new option for top performance this upcoming season.

Growers in the Pacific Northwest combat pest, weed and disease pressures in their wheat fields, with Hessian fly and yellow (stripe) rust being some of the most problematic. WB6211CLP variety from WestBred® for the soft white spring market is designed to help defend against major pests and diseases while providing increased yield potential.

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WB6211CLP variety is designed with Clearfield® Plus technology to provide broad-spectrum grass and broadleaf weed control, leading to cleaner fields and increased yield potential. Along with its high-performing weed control, WB6211CLP variety is resistant to troublesome pests and disease.

Hessian fly, a native problem to the Pacific Northwest, is an annual issue growers face. With weather playing a large role in infestation, planting resistant varieties gives growers a good chance to reduce the pest's impact on yield. Heavy infestations of Hessian flies can result in significant yield loss. WB6211CLP variety excels in Hessian fly resistance in field studies.

WB6211CLP variety is built to withstand tough disease pressure, such as stripe rust and powdery mildew. Stripe rust is problematic in the Northwest and Montana regions by hurting yield and profit potential. Planting WB6211CLP variety can provide growers peace of mind with excellent disease resistance.

"Resistance to stripe rust and Hessian flies makes WB6211CLP an ideal variety for the PNW region," said Nathan Clemens, Regional Business Manager — PNW for Bayer Crop Science." For spring wheat growers in the Northwest, WB6211CLP variety is a strong performer in yield potential, a solid replacement for WB-1035CL+ and is adaptable in both dryland and irrigated areas."

See End-of-Season Rewards with WB6211CLP

After a long season of pests, weeds and diseases, WB6211CLP variety works to give growers not only strong yield potential, but also good end-use quality.

"For the PNW wheat industry, it's important to wheat growers to have quality varieties that stand up to our tough growing conditions," said Clemens. "WestBred understands grower needs and is focused on delivering varieties that produce high yield potential and good end-use quality. WB6211CLP variety has the potential to exceed standards for excellence in the PNW wheat region."

WB6211CLP variety will be available for purchase in spring 2022. To learn more about WB6211CLP variety and other WestBred wheat varieties, visit westbred.com.



Performance may vary, from location to location and from year to year, as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible and should consider the impacts of these conditions on the grower's fields. Bayer, Bayer, Cross, WestBred and Design and WestBred* are registered trademarks of Bayer Group. All other trademarks are the property of their respective owners. @2021 Bayer Group. All Rights Reserved.



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Marc B. Lange (509) 991-9088 Scott Lund (509) 995-5024 Jeff Miller (509) 599-9926 NOT JUST TRUCKS, TRAILERS TOO! www.class8trucksales.com The new requirements have received significant pushback from the business community and legislators. While it is unclear if the tax will face a legal challenge, an initiative to the legislature has been filed to make the program optional. In addition, a legislative workgroup will be issuing recommendations on modifications that might be needed to the program, and legislation is anticipated in the 2022 Legislative Session.

Workgroup reviewing potential tax code changes

In 2017, the Washington State Legislature established the Tax Structure Work Group (TSWG) to, "identify options to make the Washington state tax code more fair, adequate, stable and transparent." From September to November, the TSWG held seven virtual town halls to present tax code change scenarios and to gain feedback from residents around the state. The four scenarios being discussed include the following:

- Update property tax and tax personal wealth: Eliminate property tax for the first \$250,000 of a person's primary residence and then institute a 1 percent wealth tax levied on financial property like stocks and bonds worth more than \$1 billion.
- Replace B&O tax and add employer compensation tax: Eliminate the B&O tax and replace it with value-added tax, or margins tax and employer compensation.
- Tax personal income and corporate income: Eliminate the B&O tax and replace it with corporate or personal income tax, while reducing sales and property taxes.
- Change property tax limit factor: Tie property tax increases to population and inflation. Currently, the state is prohibited from raising property taxes more than 1 percent each year without approval from voters.

The TSWG will make recommendations to the legislature ahead of the 2023 Legislative Session.

Wheat growers spearhead letter on river system benefits

The Washington Association of Wheat Growers is spearheading a letter to President Biden emphasizing the importance of the Columbia-Snake River System to the nation's navigation and infrastructure system.

More than 100 agricultural organizations from around the country have signed onto the letter.

The Columbia-Snake River System is the third-largest

grain export corridor in the world, transporting nearly 30 percent of U.S. grain and oilseed exports. Dams on the river system allow barges to move more products using less fuel than either trucks or rail cars. Barging is 40 percent more fuel-efficient than rail, and 270 percent more fuel-efficient than semitrucks.

State representative to step down after current term ends

Sen. Sharon Brown, the Republican state senator from the 8th Legislative District, has announced she will not be

running for re-election when her term ends at the end of 2022. She has held that seat since February 2013.

"It has been one of the most challenging and rewarding periods of my life. However, I believe that it is now time to move on to new challenges and opportunities, as well as make room for new voices and ideas," she said in a statement.



The 8th Legislative District currently covers a portion of Benton County and includes the cities of Richland and Kennewick.

Vietnam eliminates wheat tariff

From the National Association of Wheat Growers

Last month's announcement that Vietnam's government will eliminate a 3 percent tariff on U.S. wheat imports effective Dec. 30, 2021, is welcome news to producers at home and their customers and wheat food processors in Vietnam. The U.S. national wheat industry organizations, the National Association of Wheat Growers (NAWG) and U.S. Wheat Associates, applaud the move.

Vietnam imported more than 500,000 metric tons of U.S. hard red spring, soft white, hard red winter and soft red winter wheat valued at \$129 million in the marketing year 2020/21, second in volume to Australia. Vietnam imports about 4 million metric tons of wheat per year.

"With about half of the wheat we produce available for export each year, we depend on increasing access to markets like Vietnam," said Dave Milligan, NAWG president and a wheat grower from Cass City, Mich. "Here at home, NAWG will continue advocating for trade policies that work toward positive opportunities for wheat growers and their customers."

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How Washington wheat moves from field to market

Much has changed since our ancestors loaded wagons full of 100-pound wheat sacks in the fields and headed to the local grain warehouse. Our wagons are now trucks, and our warehouses are now large, multimillion-dollar, temperature- and pest-controlled facilities. Computers run almost everything, and, in Washington, we use three main transportation modes: trucks, trains and barges.

Trucks

Trucks made their way onto farms at the turn of the century. Ford, Deere & Co., Allis-Chalmers and others debuted the first renditions of a "motor truck," and many of them served the dual purpose of hauling loads and pulling plows. In the early days, they had 20-horsepower engines and could only haul a few sacks of grain. Today, a common semitruck has 600-horsepower engines under the hood, and the grain hopper can hold approximately 1,000 bushels of wheat or 60,000 pounds of wheat in a single load.

In Washington, the semis and wheat trucks you see on the roads are usually the first transportation mode farmers use to get their product to the market. They are used during harvest to haul wheat from the fields to the local elevator or grain storage facility. These facilities are owned primarily by grain cooperatives. For example, farmers in Lincoln County use their trucks to haul grain to their closest elevators in Almira, Wilbur, Creston, Davenport, Harrington, Reardan and other locations. These are considered short hauls. Once at the local elevator, the cooperative then uses either more trucks, trains or barges to get the grain to the next step in the marketing chain.

Trains

The region's first main rail line, the Northern Pacific Railway, reached the Puget Sound from Minneapolis in 1883. Railroads made it possible for farmers to sell their goods on the other side of the country. Today, those same basic rails make transporting wheat more efficient, environmentally friendly and safer than trucks.

On a rail system, the local elevators load the grain onto



multiple hopper cars, and these "scoot" trains haul to larger facilities that can separate different grain types and quality levels. Washington state owns several shortline railways that the grain cooperatives use to move wheat to central locations where it joins the main track. At these locations, larger facilities load the grain into 110-car unit trains. In Washington, we have five, 110-car shuttle train car facilities.

Barges

For centuries, the Columbia River has been at the center of trade and transportation in the Pacific Northwest. Following the arrival of European Americans during the 19th century, trade began to shift toward agriculture and mining, and efforts were made to improve transporta-

The deadline for applying for the national Jerry Minore Scholarship is **Dec. 31, 2021**. The scholarship is available to both high school and college students for the 2022 academic year. Interested students should go to wheatfoundation.org/education-and-scholarships/ for more information.

Remember the Foundation in your charitable giving. Go to wawheat.org to find out more about ways you can support your industry. tion on and alongside the Columbia River. Between the 1930s and 1970s, a convergence of interests in navigation, irrigation and power led to the construction of a series of dams and locks that transformed the Columbia and its largest tributary, the Snake River, into a major waterway. Port districts and other government and private entities developed an infrastructure and transportation system that now supports the movement of some 50 million tons of cargo by barge between Lewiston, Idaho, and the Pacific Ocean.

Today, grain facilities along the Columbia and Snake rivers load 60 percent of Washington's wheat crop onto large, four-barge tows that are pushed by a tugboat down the river to the ports along the coast. The river system is roughly 360 miles from Portland/Vancouver to Lewiston, Idaho. A four-barge tow keeps more than 530 semitrucks off the highways. Barging is the safest method of moving cargo, with a lower number of injuries, fatalities and spill rates than both rail and trucks. It is also the most fuel-efficient and has the lowest emissions.

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Plotting a route

SOIL HEALTH ROAD MAP INFORMS STATE PROCESS, SETS MILESTONES



Karen Hills, research associate at Washington State University's Center for Sustaining Agriculture and Natural Resources, is one of the lead editors of the road map.

By Trista Crossley

Editor, Wheat Life

Leaders at the Washington Soil Health Initiative (WaSHI) now have a better understanding of the route ahead thanks to a recently released road map that outlines issues and concerns and sets milestones on the journey to improving the state's soils.

The road map, available at soilhealth.wsu.edu/washington-state-soil-health-roadmap/, divides the state into eight focus areas, representing more than 5.4 million acres and covering approximately 72 percent of cropland in the state. The focus areas are:

- Dryland agriculture in Eastern Washington.
- Irrigated Columbia Basin.
- Irrigated potato production in the Columbia Basin.
- Juice and wine grapes.
- Northwestern Washington annual cropping systems.
- Tree fruit.
- Western Washington diversified farming systems.
- The environmental community.

"With more than 300 crops grown in Washington, we weren't necessarily going to be able to cover every single one of them," explained Karen Hills, research associate at Washington State University's (WSU) Center for Sustaining Agriculture and Natural Resources. Hills was one of the lead editors of the road map. "The cropping systems that probably represent some of the most valuable commodities in Washington ag, like tree fruit and wine grapes, were each given their own group, in part, because there were specialists that work with those production systems at WSU. Some (cropping systems) were lumped together because of Extension expertise or region-specific crop rotations. Hopefully, most growers can find themselves somewhere in one of those groups."

Hills said having a road map gives the people working on the WaSHI a "systematic way to assess what the goals and priorities were for growers" for each of the focus areas. Growers provided feedback through direct and indirect interactions, including virtual listening sessions, previous soil health events and needs assessments and through personal interactions with WSU staff, especially Extension personnel. That information was collected and organized by individual focus area leaders, followed by the editors pulling out key themes and identifying information gaps. The road map is intended to be a living document, and Hills said she expects it will be revisited and updated as necessary.

Despite the fact that Washington agriculture includes many different crops grown in many different soil types in many different ways, there were some common threads that emerged, particularly the need for a low cost way to measure soil health and establishing measuring metrics appropriate to specific production systems.

Some of the other common goals and priorities include easy access to equipment that maintains soil health, such as no-till seeders; improved knowledge of soil health specific to different production systems; improved information dissemination to agricultural professionals and producers; and a greater valuation of soil health in the marketplace.

Some of the soil health issues cited include soil pH, soil compaction, nutrient cycling, water-holding capacity, soilborne plant diseases and wind and water erosion.

Hills hopes producers see the road map as a starting point for engaging with the WaSHI and a way to monitor soil health research and experiments. The road map includes short-term (one to five years), medium-term (five to 10 years) and long-term (10 to 20 years) milestones to help gauge progress.

The decision to include the environmental community as one of the focus areas came about because the off-farm benefits of soil health something that community tends to focus on—often doesn't directly impact a producer's bottom line. Hills feels including the environmental community viewpoint makes the road map stronger.

"It's not common that these different viewpoints are incorporated into the same effort," Hills said. "I think, in a lot of ways, the environmental community is sometimes seen as being at odds with agriculture, but I think in this case, there was a lot of understanding that producers really need to make the bottom line work for them and understanding that the return on investment (for soil health practices) may not always be clear, may not always happen over

How are we doing?

Like something you read in Wheat Life? Disagree with something you read in Wheat Life? Let us know by emailing your comments and suggestions to editor@wawg.org or mail them to 109 East First Avenue, Ritzville, Wash., 99169-2394. Please keep submissions less than 350 words. Submissions may be edited for length. Include a Premium Spring Canola in your 2022 Rotation: Contact your Local Retailer for Early Ordering Discounts





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What's next

While the road map is an important part of the Washington Soil Health Initiative (WaSHI), the three agencies involved are already moving forward on their respective pieces. At Washington State University (WSU), soil health leadership and faculty are being established, and researchers there are beginning to propose and set up research experiments. For more information on WSU's focus on soil

health, visit soilhealth.wsu.edu

At the Washington State Department of Agriculture (WSDA), **Dani Gelardi**, the WSDA soil health scientist, said the department is currently taking soil samples from across the state as part of their State of the Soils Assessment effort.



"We are taking actual soil samples and getting them analyzed for biological, physical and chemical parameters so we have a dataset that complements what we've learned," she said. "The data will be rolled into a soil health database. People will be able to look at a map and search 'carbon storage by crop' or 'nutrient bank by region.' It's a way to get the public more involved and educated about soils in the state."

WSDA is also working on a soil health economic report to demonstrate how soil health translates to a grower's bottom line. The goal is to determine the cost to implement a practice and if that practice makes economic sense to producers in different regions. For more information on WSDA's role in the WaSHI, visit agr.wa.gov/departments/land-and-water/ natural-resources/soil-health

The third agency, the Washington State Conservation Commission (WSCC), will take a more active role at a



later stage of the WaSHI, but right now, they are looking to reconvene their soil health committee, which will play a vital role in disseminating the information gathered by WSU and WSDA.

"The initiative is an multiyear process. We are still figuring out the current (soil health) baseline,

and where we want to be. Then we have to figure out how to best disseminate that information. That's when the conservation commission and the conservation districts will jump into a much higher gear," explained **Alison Halpern**, a scientific policy advisor for the WSCC.

the short term. I was impressed with their level of understanding of the constraints under which producers are working."

Rich Koenig, interim dean of WSU's College of Agricultural, Human and Natural Resource Sciences, was the primary author of the section of the road map focused on dryland agriculture in Eastern Washington.

"The Soil Health Initiative road map is a guide for future research focus and investment. Dryland farmers should expect to see this road map translate into research priorities in the near future," Koenig said in an email.

Some of the goals and priorities for Eastern Washington dryland producers include improved understanding of soil biology and plant interaction, use of additional off-farm inputs and better soil health assessment tools. Economic and sociological barriers and a lack of information were noted as roadblocks, with producers saying they could be overcome through improved research capacity, innovative extension/outreach methods and long-term investments in education.

For information on the WaSHI, visit agr.wa.gov/ departments/land-and-water/natural-resources/ soil-health.

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Climate, carbon efforts in the crosshairs

A look at what's happening at the federal level

By Trista Crossley

Editor, Wheat Life

Nearly a year into the Biden Administration, efforts focusing on climate, clean energy and carbon markets continue to ramp up. The Washington Association of Wheat Growers works through the National Association

of Wheat Growers (NAWG), the national wheat industry organization, to monitor these efforts and to provide feedback.

Jacob Westlin, NAWG's vice president of policy and communications, said the organization has been working on these issues through a Special Committee for Sustainability and Climate



(SCSC), which has been meeting regularly since spring. At the organization's fall meeting in November, the SCSC updated NAWG's board of directors on its progress and put forward some recommendations, which were adopted by the board as policy resolutions. In general, NAWG supports science-based, flexible approaches that recognize a one-size-fits-all solution won't work. As Dave Milligan, NAWG's president, said recently in a congressional hearing on voluntary carbon markets, "The carbon credit will be generated on the farm. The farmer needs to have an equitable return as the carbon credit increases in value." "We support voluntary, market-based programs that provide economic opportunities for farmers, and programs that recognize the achievements for growers in protecting and restoring the environment," Westlin said. "Also, our position is these programs need to reward early adopters when they are considering adding new practices."

NAWG is looking into a lifecycle assessment by a landgrant university that would look at the available data and help assess the environmental impacts of conservation practices.

"We really see that as being a tool to help tell our story with more meat, more numbers behind it, so when we are getting questions from Capitol Hill lawmakers and our federal partners, we have that background and analysis to help back up the claims we are making," Westlin said. "We have a lot of good and unique stories we think we could tell, but this would help us provide more credible information, backed by a land-grant university, to answer many of the questions we get."

Here's a look at the major climate and carbon efforts currently making the rounds of Washington, D.C. ►

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USDA's Climate-Smart Agriculture and Forestry Partnership Initiative

Announced earlier this year, this U.S. Department of Agriculture (USDA) initiative will finance climate-smart farming and forestry practices to aid in the marketing of climate-smart agricultural commodities. The USDA will support pilot projects, funded by the Commodity Credit Corporation (CCC), to provide incentives to implement climate-smart conservation practices on working lands and to quantify and monitor the carbon and greenhouse gas benefits associated with those practices. Ag Secretary Tom Vilsack has said he hopes to publish details of the initiative by the end of the year.

NAWG hasn't taken a formal position on the USDA program, but the organization did submit comments to the CCC, emphasizing the need of the pilot projects to reflect the diversity of U.S. agricultural production and include food crops, not just feed and biofuel crops.

"Climate-smart and regenerative agriculture cropping systems for wheat production must recognize the environmental and economic realities of individual farms, be regionally specific, provide for enhanced productivity or resource use efficiency and support the principles of soil health, including minimizing soil disturbance, providing soil cover through crop residue, increasing diversity, maximizing the time with living roots and, when applicable, incorporating livestock—all as appropriate for individual farms. Not all practices will work for all wheat growers, and any policies must be flexible and recognize the uniqueness of each farming operation and the climate conditions and production systems of that operation," the comments said.

Conserving and Restoring America the Beautiful

As part of Executive Order 14008, Tackling the Climate Crisis at Home and Abroad, President Biden set a national goal of conserving 30 percent of the nation's land and waters by 2030 in order to safeguard drinking water, clean air, food supplies and wildlife and fight climate change with the natural solutions that forests, agricultural lands and the ocean provide. The effort is being led by the U.S. Department of the Interior (DOI), USDA, the U.S. Department of Commerce through the National Oceanic and Atmospheric Administration and the Council on Environmental Quality.

The executive order directs the DOI, in coordination with other agencies, to establish a mechanism to measure progress and to provide yearly reports with updates. The first yearly report will be released by the end of 2021.

NAWG, while not having taken a position on this program at this time, is working with USDA to better understand what the department wants to accomplish, Westlin said. In response to grower concerns when the program goal was announced, Ag Secretary Tom Vilsack has emphasized that involvement in the program will be voluntary and that it's not a land retirement program.

"We (NAWG) are trying to be a conduit of information and providing feedback as necessary to the administration," Westlin said.

Build Back Better

This legislation invests more than \$500 billion for climate and clean energy investments, including \$90 billion earmarked for USDA to mitigate climate change, reduce the risk of wildfires, provide debt relief for economically distressed farmers and invest in ag research and infrastructure. The Build Back Better legislation passed the House on Nov. 18 by a vote of 220 to 213. The bill is expected to face an uphill battle in the Senate.

NAWG's SCSC has met with legislative staff to better understand the climate portions of the Build Back Better legislation and to provide feedback from growers. Westlin said NAWG has actively lobbied against a number of the tax provisions currently included in the bill, but the organization has also signed onto a letter with other ag groups that generally supported some of the provisions that would help provide investments in conservation programs.

The Growing Climate Solutions Act (S. 1251)

The Growing Climate Solutions Act, adopted by the Senate in June, is designed to make it easier for producers to participate in voluntary carbon credit markets and for them to get a fair share of the carbon credit revenue they generate. The bill is currently waiting on House action.

S. 1251 would require USDA to look at how voluntary carbon markets have been operated in the past four years, project supply and demand for the next four years, identify complications associated with measuring and verifying long-term carbon sequestration and evaluating the potential USDA role for improving carbon reduction measurement technologies. The bill would also establish a USDA advisory committee to oversee operation of a USDA program to certify greenhouse gas technical assistance providers and verifiers and create a website listing them. S. 1251 doesn't authorize USDA or the federal government to regulate the voluntary carbon market or restrict who producers might work with when participating in carbon markets.

At November's fall meeting, the NAWG board voted to support the Growing Climate Solutions Act as a way to provide credible information to growers about voluntary ecosystems service markets and to increase farmer engagement in USDA oversight, Westlin said.

What does Washington congressional leader have to say?

Wheat Life reached out to **Rep. Dan Newhouse** (R-Wash.) to see what he thought about the climate and carbon mitigation efforts in Washington, D.C.

What are some of the major red flags for you when you are considering any climate/carbon-related legislation?



The U.S. is already a global leader in emissions reduction. We should be building upon that success through continued investments in research, development and the globalization of our clean energy technologies. Any legislation that would eliminate resources from our energy mix raises red flags. Rather than using burdensome governmental regulations to restrict energy sources, we should be working with industry partners to find ways to incentivize clean, domestic production. We need to continue to pursue an all-of-theabove energy strategy and utilize all of our energy resources to ensure people can find affordable and reliable energy.

How involved do you think the federal government should be in carbon markets?

I have always maintained that we must continue with voluntary conservation practices. America's farmers and ranchers have fed the world for generations, and to me, carbon markets can be successful as long as these programs are voluntary and remain free from government control. Farmers are active environmentalists, and as a farmer, I know a lot of these conservation practices have been, and continue to be, practiced by producers. Further, many of these practices are unique to the region they come from. Rather than having bureaucrats who have never even heard of the Yakima Valley implementing a top-down approach, conservation practices should be implemented at the local level, by the farmers, ranchers and landowners who know the land best.

The federal government should not be involved in carbon markets, and what's more, is nowhere close to being equipped to do so. The U.S. Department of Agriculture (USDA) is already understaffed and struggling to keep up with demand at local Farm Service Agency and Natural Resources Conservation Services offices, with months of backlog in relief requests. The federal government must work to address these issues before Congress or USDA rush to create yet another program that the USDA is likely not ready to implement properly.

<text>



What are your thoughts on the Growing Climate Solutions Act that was passed by the Senate in June, but seems to be stalled in the House?

I do not support this legislation in its current form. I have and will continue to support voluntary conservation practices. The Growing Climate Solutions Act does not adequately address all of agriculture and undercuts practices by specialty crop growers.

What specific goals would you like to see successful climate-related legislation accomplish?

For climate-related legislation to be successful, it has to work with the men and women who supply the food and fiber for our nation. Earlier this year, I introduced legislation to bolster conservation practices for farmers and ranchers by increasing support and connecting our farmers and ranchers to our world-class researchers at our nation's land-grant universities. My bill specifically would enable partnerships between farmers and ranchers to increase technical assistance on innovative conservation and climate practices. Our land-grant university system and Extension offices are full of untapped potential, and my legislation will help bridge the divide between research and practice, paving the way for successful, longterm partnerships and improved conservation across the country.

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WL PROFILES

Spokane's 'truck whisperer'

Marc Lange, Class 8 Trucks

By Kevin Gaffney Special to Wheat Life

What do you get when you put together more than 150 years of experience in truck sales, service and maintenance? You get Class 8 Trucks in Spokane, Wash.

Owner Marc Lange grew up on a wheat and cattle ranch near Garfield in Whitman County. He had the background and experience of working with trucks and other farm equipment as a youth. Experience like that simply can't be replaced.

After high school, Lange earned a double major in agronomy and education from Washington State University, completing his studies in 1985. Before discovering that he was meant to have a career in truck sales, Lange was first employed as a teacher in the Rosalia School District.

"I felt right at home teaching in a farming community," recalled Lange. "I was also still involved with the family farm."

The farm is still in the family, now being operated by his brothers, Frank and David, following the retirement of their parents, Burgess and Maxine Lange, who instilled the values that Lange holds dear.

Ironically, Lange's entry into the truck sales business was unplanned. Lange needed to temporarily acquire a dump truck for some projects and found the unit he was looking for in Spokane at Gary Evans Truck & Trailer. When he later returned the truck, Evans offered to teach him the truck sales business, if he was interested. Lange thanked Evans for the offer, and that was that. However, the seed had been planted, and less than a year later, Lange was back in Spokane learning all about truck sales from Evans, who was eager to share his decades of knowledge and experience.

Eventually, Class 8 Trucks, owned and operated by Lange, opened for business in 1997 about the time Evans retired. Evans decided he was bored sitting at home and joined Class 8's sales team. Along with Butch Johnson, their three-man team stayed together for many years until Johnson retired. Another key employee, Sandy Brydges, also retired. She served as the company comptroller for 25 years.

Surprisingly, Evans, now in his mid-80s, still comes in on Fridays and Saturdays. Over the years, Jeff Miller and Scott Lund have been wonderful additions to Class 8 and its customers.



Gail and Marc Lange, owners of Class 8 Trucks, pictured in front of a Western Star truck that was recently detailed in their shop.

"Jeff is a consummate professional with trucks, and Scott is to trailers what Jeff is to trucks," said Lange. "Scott has an amazing knowledge of trailers, with more than 40 years of experience. We are so fortunate to have such a great team.

"I got into the truck business because I enjoy the people and the trucks. We have been successful filling a niche market. We always look for trucks that have special value, either for their specifications, their low mileage or other factors.

"There are millions of trucks out there. The challenge is finding really good trucks. How a truck is driven and maintained determines how it will drive and handle later in its life. We look for trucks without any major problems that have been treated right. Trucks are designed to last many years with component replacements. It's not unusual to get a million plus road miles out of an engine. We have seen as high as 4 million miles on a one-owner truck.

"When a farmer buys a truck or trailer, I want it to last for a long time. We do our best, and I really appreciate our customers and our crew."

When a client comes in with a specific request or need, Class 8 can deliver the truck or trailer about one-third of the time without having to do a search. Lange figures



they have about an 80 percent longterm success rate on matching up quality trucks and trailers for their customers.

Asked about changes in the industry over the years, Lange said two major ones are how the internet has changed the sales process, and how extensive pollution control regulations have decreased the efficiency and the pulling power of modern engines.

"In the past year, we've sold trucks to clients in Kansas, Missouri, Indiana, Mississippi, Iowa, Wisconsin and other states because of the internet," said Lange. "Another thing that has changed is the increased cost of shipping trucks. It can run from \$3,500 to more than \$5,000 to ship a truck or a trailer. Beginning in 2008, tighter emissions regulations forced engine manufacturers to design motors for emission control rather than for efficiency. The industry has paid a high price in higher maintenance costs for the modern exhaust systems."

Lange said an example of a problematic motor was the International MaxxForce engine. The idea behind the design was an understandable business decision. What looked good on paper didn't work out in reality. On the other side, excellent engines over the years were the Cummins N14 Red Top and the Detroit Diesel 12.7 Series 60 motors. They were powerful and dependable. Until they got out of the truck engine business, Caterpillar also had some great motors.

Every truck acquired by Class 8 goes through a rigorous checklist covering everything from the hub oil to the cap lights. The lights, brakes, transmission, windows, windshield wipers, heater and air conditioning systems and more are inspected and repaired as needed. All of this is then recorded both on hard copies and electronically for an accurate record of all systems on every truck.

The Class 8 shop has three truck bays for working on rigs. Many of the units look showroom new when they go out the door.

Class 8 Trucks has about a 60 to 40 percent ratio of sales to agriculture vs. commercial. A large portion of their sales are from word-of-mouth reputation and repeat buyers. They pride themselves on providing exactly what their clients need and for satisfaction after the sale.

"We have really good relationships with the truck dealers in Spokane," said Lange. "Actually, about 20 percent of our business is sales to other dealers."

The trailer component of their business has blossomed under Scott Lund's management. They provide both trailer sales and rentals. They have more than 80 rental trailers currently, for both commercial and agricultural use.

Discussing what the future holds for the trucking industry, Lange specified electric trucks.



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"We attended a show that included Tesla electric truck prototypes," said Lange. "It will probably be five to 10 years before they are widely adopted, but electric trucks are coming. All of the truck manufacturers are developing them. At this time, it would only be efficient for high-density, short-haul trucking due to battery charging limitations. We know those problems will be solved to travel longer distances. Once longer hauls are possible, electric engine trucks will likely revolutionize truck shipping nationwide."

Class 8 looks forward to many more years ahead with its capable crew. Even if Lange is taking more time with family, farm life and travels.

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WASHINGTON GRAIN COMMISSION

CHAIRMAN WASHINGTON GRAIN COMMISSION

The other day, Grandpa Henry commented, "If things get better with age, then I'm approaching excellent; and as excellent as I am, I still can't get anything!" That begs the question, has anyone tried to buy anything lately, like anything?

According to Freightwaves.com, throughout northern Mexico, parking lots full of finished automobiles (that are just waiting for a few semiconductors) have become common. The American National Standards Institute reports year-on-year prices for used cars are up 25 percent, a hands-down record. New models of televisions and consumer electronics are simply not happening this year. What about the port in San Diego? If you haven't finished your Christmas shopping, you may be too late.

Looking closer to home and on our farms, try to buy the major inputs for next year: fuel, fertilizer or chemicals. Crude oil prices have made a significant runup in the near term. According to Reuters, oil demand from OPEC+ will outpace production through 2021. According to the Data Transmission Network (DTN), the average retail price of anhydrous set a record in November after increasing 38 percent from October. The seven other major fertilizers tracked by DTN for the first week of November saw increases ranging from 9 percent to 36 percent as supply disruptions push prices to new highs.

There are a number of factors feeding into this supply chain problem: COVID-19 complications, labor shortages, changing regulations, whipsawing demand patterns and container shortages are all factors. Port bottlenecks are another big one. I had the opportunity to hear a report from Greg Borossay, principal of maritime business development at the Port of San Diego, during the recent U.S. Wheat Associates (USW) fall board meeting in Kansas City, Mo. According to Greg, most of America's product imports come via container on giant ships. Only "gateway" ports have the capacity—and in some cases the draft depths-to berth these large vessels, and a port's ability to handle containers simply cannot ramp up to meet demand. Every port specializes in a specific sort of cargo, and when they are at 100 percent capacity, they are at 100 percent capacity. The Port of San Diego, for example, is not one of these gateway ports. Most notable are the absence of the large, fixed-gantry cranes required to unload the largest ocean-going vessels, and installing such infrastructure is no small feat. Developing new gateway ports is probably seven to 10 years away, Greg said.

Greg also reported that the swing to "green" has eliminated about 20 percent of the trucking capabilities that would take containers from the port once the cargo comes off the ships. He mentioned that many trucks older than 10-20 years do not meet the criteria mandated by California's carbon reduction goals. The results are not simply bottlenecks at the ports, but backlogged shipments snaking through the entire road-and-rail system.

As bad as it has been, there is also a bright side when you flip the supply-chain coin for selling our product. From the producer at the beginning to the happy consumer at the end, there are many integral links to this sequence of events along the supply chain, which appears to keep working. Check out my column from the June issue (bit.ly/31YN9rC) for more details on the essential links that get the wheat we grow from our fields to our customers' tables.

HighLine Merchandiser Ty Jessup said, "The country elevator outbound supply-chain step has seemed to flow very well so far this year. Starting to hear of some potential issues with freight, but we have not seen any disruptions so far."

In another step along the way, according to Brian Liedl, director of merchandizing at United Grain Corp., "It's been a difficult year for exporters. Vessels are taking a long time to unload in Asia, some boats are sitting for weeks before they can get to port. Before the pandemic, a typical order could be between 30 to 60 days in advance of the delivery, but now it's more like 90 to 120 days. We haven't had to short any orders."

Programming through USW and the Washington Grain Commission (WGC) that includes technical servicing and providing buyers with information on the crop and protein levels over the last year has helped the outbound supply chain. Assisting our milling and baking customers overseas to modify their recipe formulas and, in turn, their contract specifications, alleviate the purchasing anxieties. This allows Pacific Northwest (PNW) farmers to keep the market open for our wheats and increase the end-use value for our customers.

From country elevator to the exporter to the end user, it's worth repeating that the WGC is the lubricant that helps the system run smoothly. We claim the U.S. provides the highest quality wheat for almost every customer need, and even in difficult years, we don't back down. Turns out, even in the most challenging year, the PNW still fulfills our customers' needs. ■

REVIEWASHINGTON GRAIN COMMISSION

Good news on soft white

U.S. Wheat Associates (USW) Technical Specialist Andres Saturno Eguren reports that the second-largest biscuit company in Colombia recently confirmed the usage of 100 percent of soft white flour in their lines with no complications and with a small amount of bread flour in fermented crackers (the same proportion used with soft red wheat). Also, they are requesting soft white and soft red wheat, and, if the price allows, they will continue buying soft white. This accomplishment is due to the many years of market development work in all areas: wheat purchasing, milling process and cookies and crackers technology services by the USW Santiago office with support from the Washington Grain Commission.

Meet new plant pest diagnostician

Washington State University (WSU) recently hired **Cassandra Bates** as the plant diagnostician at the Pullman Plant Pest Diagnostic Clinic.

"I graduated from Michigan State University with my master's degree in nematology/ entomology with an emphasis on biological control of plant parasitic nematodes in wheat and soybeans. Over the years, I have



had the privilege of working in various research programs ranging from various field crops to even tick-borne pathogens of cattle. Today, I run the WSU Plant Pest Diagnostic Clinic based in Pullman. My work at the clinic is centered on the timely identification of plant pests (pathogens, nematodes, insects and other various disorders) using visual and microscopic examinations, pathogen culturing, molecular techniques and utilizing WSU subject experts. If you suspect a problem with your crop, I can assist you with identifying the cause of the problems that are affecting your small grains, oilseeds and other crops and provide you with relevant management options."

Email: plant.clinic@wsu.edu Phone (clinic): (509) 335-3292 Website: plantpath.wsu.edu/diagnostics/

Lyon named interim chair of crop, soil sciences

Weed scientist **Drew Lyon** is filling in as interim chair of Washington State University's (WSU)

Department of Crop and Soil Sciences while Rich Koenig is interim dean. Lyon has been at WSU since 2012. He holds WSU's Endowed Chair in Small Grains Extension and Research, Weed Science, which is funded through the Washington



Grain Commission. His term as interim chair runs through June 30, 2022, at which point, the plan is for Koenig to return as chair of Crop and Soil Sciences when a new dean is selected. Koenig has served as chair of the department since 2017. Lyon is well known in Washington agriculture for his outreach to growers, something he hopes to continue even with the added administrative duties.

Joe Bippert steps into national role with USW

Joe Bippert started a new role as assistant regional director for South Asia with U.S. Wheat Associates (USW) on Nov. 1. Bippert had served

as the program director for the Washington Grain Commission (WGC) since January 2017. While at the WGC, Bippert managed Latin American marketing strategy, analyzed the state's wheat industry economy and monitored trade and transporta-



tion policy. He currently co-chairs USW's Wheat Transportation Working Group. Bippert; his wife, Corinne; and their sons, Jack, Max and Luke, currently call Spokane, Wash., home. He will work remotely until he and his family can relocate to USW's office in Manila, Philippines. Major wheat markets in USW's South Asian region include the Philippines, Indonesia, Thailand, Vietnam, Malaysia and Sri Lanka.

Squires elected to leadership at PNWA

The Pacific Northwest Waterways Association (PNWA) announced that **Glen Squires** has been elected as its incoming board president. Squires was sworn in at the PNWA meeting in October. Squires previously served as the board of directors senior vice president. Tom Kammerzell, who farms in both Washington and Idaho and is a Port of Whitman commissioner, is the new vice president, and Randy Hayden, executive director at Port of Pasco, is the board's new treasurer.



USW launches new website

U.S. Wheat Associates (USW) has launched an update to their website, including a new section on crop quality. The new "Crop Quality" section features data from the annual USW Crop Quality Report and has separate pages dedicated to each U.S. wheat class. Other big changes include a new centralized "Newsroom" page that pulls together content from across the site and is intended as the first stop for media and those looking for new content from USW and an updated section for USW office locations. The URL will be the same at uswheat.org.

WSCIA new staff

Aaron Jeschke is the new manager at the Washington State Crop Improvement Association (WSCIA), replacing Lauren Port who is now the executive director of the California Crop Improvement Association. Most recently, Jeschke worked in vegetable seed production in the Willamette Valley. WSCIA is responsible for small grains, peas, chickpeas, lentils, buckwheat, forest reproductive material and a few other crops, inspecting roughly 60,000 to 70,000 acres each year.

WSU awarded millions to better crop nutrition

A new project funded through the U.S. Department of Agriculture's National Institute of Food and Agriculture (NIFA) taps Washington State University's (WSU) agricultural strengths to increase nutritional value in whole grain-based foods, literally from the around up. The WSU Soil to Society project received a fiveyear, \$10 million grant to increase the nutrient value in food made from six crops—wheat, barley, peas, lentils, buckwheat and guinoa. The program's comprehensive approach will account for soil quality where the crops are grown (bit.ly/3DIEvkz). Plant breeders will develop more nutritional varieties, while food scientists will create products to bring to market, and health researchers will evaluate the impact of those foods. The grant involves more than 20 researchers across the WSU system, as well as three researchers from Johns Hopkins University.

WASHINGTON GRAIN COMMISSION

WGC board commissioners receive reappointment

Six Washington Grain Commission (WGC) board commissioners received reappointment letters from Washington State Department of Agriculture (WSDA) Director Derek Sandison last month.

District 2 Wheat (Whitman): Gary Bailey. Bailey is a St. John wheat grower representing the state's largest wheat-growing county. Bailey was appointed to the commission in 2016 and served as chairman from 2019-20.

District 3 Wheat (Columbia, Walla Walla, Garfield, Asotin): Brit Ausman. Ausman is a fifth-generation family farmer who grows spring wheat and spring barley near Asotin. Ausman has served on the board since 2012.

District 5 Wheat (Benton, Franklin, Kittitas, Klickitat, Yakima): Brian Cochrane. Cochrane is a fourth-generation wheat grower in Kahlotus. Cochrane was appointed to the commission in 2019.

District 6 Barley (Whitman, Asotin, Columbia,

Garfield, Walla Walla, Benton, Franklin, Klickitat, Yakima): Ben Barstow. Barstow is a Palouse barley grower representing the state's southern barley district. Barstow was appointed to the commission in 2019 and currently serves as vice chairman.

Wheat Industry Representative, Position 2: Ty Jessup. Jessup, based in Waterville, is currently the marketing manager for HighLine Grain Growers. Jessup has served on the commission since 2012.

WSDA Representative: Scott Steinbacher. Steinbacher is the program manager for WSDA's Warehouse Audit Program and the eastern regional manager for the Grain Inspection Program. Steinbacher was appointed to the commission in 2018.

Renewed terms for the six commissioners run through December 2024. For more information on the WGC board and a map of districts, visit our website at bit.ly/2UL0P5I.

I wish you were beer

NEW MALT QUALITY LAB KEY TO TURNING BARLEY PRODUCTION FROM FEED TO FOOD VARIETIES

By Lori Maricle, APR

Communications Director, Washington Grain Commission

"The feed barley market is not going to return, but I believe malt barley, which brings a price nearly double that of feed, will increase in demand," Robert Brueggeman told *Wheat Life* earlier this year.

As corn took over the feed market, Washington barley acreage plummeted. According to Brueggeman, in 2020, a dismal 70,000 acres of barley were harvested in the state. Thirty-five years ago, in 1985, barley production in Washington state stood at nearly 1.2 million harvested acres.

This is why he started the Malt Quality Lab with funding from the Washington Grain Commission (WGC).

Brueggeman holds an endowed chair in barley research and education with Washington State University (WSU). The focus of his breeding program is the development of high-quality spring and winter malting barley varieties that are widely adapted to diverse regions of the state.

The importance of a malt quality analysis lab at WSU to provide service to the regional craft malting, brewing and distilling industries arose from discussions between WGC Vice President Mary Palmer Sullivan and Aaron MacLeod, who runs a quality analysis lab of his own, prior to Brueggeman taking the helm of the WSU barley breeding program in August 2019.

"As the Robert A. Nilan Chair of Barley Research and the WSU barley breeder, I would like to see our state become a major producer of malting barley for both domestic and international use," Brueggeman said.

This goal made a significant step forward in October. The new, state-of-the-art WSU Malt Quality Lab, located on the Pullman campus adjacent to Brueggeman's barley breeding and molecular lab, has finally begun analyzing material. The lab was originally scheduled to be up and running in February, but between delays in delivery timelines due to COVID-19 and some challenges with getting the lab space configured appropriately for the new equipment, the lab is just getting going. Part of getting everything up to speed involved training on the new equipment for Brueggeman and his lab staff, so he called on Aaron MacLeod.

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MacLeod is a grain and malt quality chemist and has been involved with malting and brewing quality testing and research for more than 15 years. He was the founding director of the Hartwick College Center for Craft Food Beverage located in Oneonta, N.Y. The center is a resource for quality testing, research and education that supports small and midsized breweries, malthouses, farms and other craft food and beverage producers. MacLeod was previously responsible for providing quality assurance for malting barley grown in western Canada for the Canadian Grain Commission's Grain Research Laboratory, where he conducted research on factors affecting malting barley quality and quality measurement methods.

MacLeod spent a week in Pullman with Brueggeman and his staff and then presented an advanced malt quality workshop on Oct. 1 for farmers, maltsters, brewers, distillers and scientists.

WGC barley representatives Kevin Klein and Ben Barstow were among the 27 who participated in the workshop, along with WGC staff, Palmer Sullivan and Lori Maricle. MacLeod covered key metrics of selecting barley for malting, the impact of agronomic and environment on grain quality, understanding malt quality analysis and the impact of malt quality on brewing and distilling performance. The hands-on portion of the workshop gave participants the opportunity to evaluate four different types of malt and their corresponding styles of wort.

One very clear takeaway from the malt quality workshop was that malting is not easy. In order to create a good malt with maximum levels of enzymes needed for the brewing process, exacting specifications need to be met at every stage, from the way the crop is harvested (to be free of foreign materials, including other cereal grains) to how long the completed malt is stored. Proper crop rotation can help producers reduce mixing of other cereal grains and minimize disease. MacLeod recommends rotating barley after soybeans or legumes, but not



(From left) Washington Grain Commission (WGC) Vice President Mary Palmer Sullivan; WGC Barley District 6 commissioner and Palouse farmer Ben Barstow; Washington State University Barley Breeder Robert Brueggeman; Advanced Malt Quality Workshop keynote speaker Aaron MacLeod; Paradise Creek Brewery Owner Tom Handy; and WGC Barley District 7 commissioner and Edwall farmer Kevin Klein.

planting barley after barley or following corn or wheat.

"The plant breeder's job is to make the maltster's job easier," MacLeod said. Quality labs like Brueggeman's allow breeding programs to better select for quality traits and allow maltsters to better select varieties for their purchasing contracts. Having barley quality data is key for maltsters to deliver orders to brewers.

Large commercial brewers, like Anheuser-Busch and Molson Coors Beverage, have their own verticallyintegrated malt quality testing capabilities. But many midsize and craft malthouses must collect their own quality data through separate malt quality labs. There are roughly 20 malt quality labs in the U.S., but not all of them provide services to external sources. MacLeod's center at Hartwick College is one of the four U.S. universities that have a malt quality lab. WSU's new lab is one of those four, allowing Brueggeman to not only process material for his own breeding program but have the capacity to provide quality analysis as a service to others.

The WSU Malt Quality Lab will be able to accept samples for quality testing soon.

Brueggeman's breeding program aims to develop varieties that can make the American Malting Barley

Association's recommended list so large malting facilities like Great Western Malting (with facilities in Vancouver, Wash., and Pocatello, Idaho) will contract for the varieties. However, the craft brewing market is still a consideration. Having a malt quality lab that can provide barley quality testing services in Washington is a major boon for the Pacific Northwest craft brewing community.

According to MacLeod, there are more than 400 craft breweries in Washington that make more than half a million barrels of craft beer a year. Overall, craft breweries only account for about 13 percent of the total U.S. beer production, but their recipes take 25 percent of the malt. Currently, the U.S. imports some barley from Canada to cover domestic brewing and distilling demand.

Malt can be stored for up to a year in some cases, but it will lose freshness in storage. Having more craft malthouses in the Pacific Northwest, like LINC Malt based in the Spokane Valley, will increase the supply of fresh malt nearby. Brueggeman hopes that his breeding program can, in turn, increase the number of malt-quality barley bushels that are available to malthouses from local farmers, making a complete "farm-to-pint" supply chain in the Pacific Northwest.

Program grows in pandemic-impacted classrooms

By Kara Kaelber

Education Director, Franklin Conservation District

Wheat Week, a 4th and 5th grade hands-on science program using wheat as the teaching tool, is entering its 15th year in Washington state. Who would have thought the COVID-19 pandemic would have allowed the program to expand? In March of 2020, the in-person program was brought to a halt in classrooms. When it became clear that the 2020/21 school year was not going to begin in-person, the Wheat Week team took it upon themselves to create a "virtual" option. DIY (do-it-yourself) Online Wheat Week was created. Hands-on "kits" and short content videos were created so students were able to participate in Wheat Week from home or school. With the hands-on kits, students were still able to participate in the best parts of Wheat Week: growing wheat in a terrarium and threshing their own wheat heads!

COVID-19 provided silver linings all around, and the new DIY Online Wheat Week program was no exception. Previously, Wheat Week needed an educator in the area to offer the program to classrooms. Now, with DIY Online Wheat Week, staff is able to ship the kits to schools anywhere in the state. DIY Online Wheat Week by no means has replaced the original, in-person Wheat Week, but during times of uncertainty, for homeschool or virtual learners and for those schools outside coverage area, DIY Online Wheat Week will remain a great option for many students across Washington. Teachers really enjoyed the DIY Online Wheat Week program because of the flexibility it offered. In uncertain times, they knew they could still count on Wheat Week being a regular part of their yearly curriculum. Last school year, 26,700 DIY Online Wheat Week kits were delivered to teachers across Washington. Currently, many school districts are opening back up for in-person Wheat Week. Wheat Week educators are filling up their calendars providing both the DIY Online Wheat Week program and our traditional in-person Wheat Week program simultaneously to all public and private elementary schools, homeschools and online schools in Washington state.

The Washington Grain Commission (WGC) mission to advance and promote Washington small grains is accomplished in part by responsible allocation of assessment funds in educational programs. Wheat Week is brought to Washington classrooms by the Franklin Conservation District and funded through the WGC to provide schoolbased curriculum with hands-on lessons about the basic principles of water and soil interaction and environmental issues pertaining to the wheat industry; problem solving skills and understanding of best management practices related to wheat; and the importance of dams and wheat transportation. The program also provides teacher workshops and resource manuals, teacher guides, selftraining materials and student workbooks, all aligned with required Washington State Sciences Standards.



Lilly Steward (left), a 4th grader from Sammamish, Wash., and Ellie Smith, a 4th grader at Sunnyside Christian School in Sunnyside, Wash., both participated in DIY Online Wheat Week at home and in school. Photos from Kara Kaelber.

A tribute to Craig Morris

USDA-ARS researcher had a passion for improving small grains

By Alecia Kiszonas,

Cultivar Development Manager, USDA-ARS WWQL

We have all lost a colleague and a friend.

Dr. Craig F. Morris (1957-2021) grew up on a farm in Iowa, obtained a master's degree and Ph.D. from Kansas State University and moved to Pullman, Wash., to work as a post-doc for Washington State University. In 1989, Craig became the director of the Western Wheat Quality Lab (WWQL) for the U.S. Department of Agriculture's Agricultural Research Service, a position he held until his passing.

Craig had a successful and pioneering career, publishing more than 260 peer-reviewed articles, 15 book chapters and receiving five patents. Craig truly was an outstanding person who dedicated his life to improving wheat and pulse quality and being an innovator. Most notably, Craig led the team that discovered the genetic basis behind hard-textured and soft-textured wheat. This discovery helped in his invention of soft durum, a revolutionary type of durum that can be milled on a traditional "bread wheat" mill, opening limitless possibilities for the use of durum.

He loved his work and had a passion for it that is rare and was truly a gift to the wheat and pulse community. One part of Craig's career that he enjoyed most was being the connection between wheat growers, breeders and wheat buyers. Given Craig's farming background, he was keenly aware that yield was a top priority for growers, and his objective was to help breeders improve quality in high-yielding varieties to keep growers profitable and bring unparalleled quality to customers. Craig's passion for wheat quality was rare and truly a gift to the wheat community. He was continually astounded that he got paid to do something so fun and engaging.

He also had a deep love for his family and friends. Craig was a friend to all who met him, and this devastating loss will be felt deeply for years to come. We are all better people for having known Craig.



He was a dynamic and passionate advocate for the advancement of small grains.

Autophagy helps stress resiliency

UNDERSTANDING THE CELL BIOLOGY BEHIND HEAT AND DROUGHT TOLERANCE IN PLANTS

By Andrei Smertenko Associate Professor, Washington State University, Institute of Biological Chemistry

Plants use light energy to make grains, and they need a lot of it. However, collecting the energy and then converting it into useful chemicals by the process called photosynthesis is a dangerous business. Photosynthesis also generates a highly toxic by-product, reactive oxygen species (ROS). ROS causes oxidative damage to structures inside cells known as the organelles. Just like organs in our body, organelles perform specific functions inside cells (Figure 1). Too much oxidative damage will harm plant health or can even kill it.

A sophisticated system of ROS scavengers works hard to reduce the oxidative damage. The problem is, this system is vulnerable to environmental conditions. During the peak growth season from the middle of May to the middle of July, the sunlight becomes excruciatingly bright by the afternoon. High light intensity increases ROS production. To make matters worse, the afternoon temperatures rise, frequently reaching more than 100 degrees F during Washington summers. High temperatures make the ROS scavenging system less efficient. Plants can reduce their body temperature by evaporating water from the leaf surface, however, this strategy fails if rains are scarce. Bright light together with heat and drought overpower the ROS scavenging system, resulting in excessive oxidative damage to the organelles.

Luckily, both the light intensity and the temperatures fall in the evening, giving plants a much-



FIGURE 1. Organelles are miniature organs inside cells responsible for specific functions. Photosynthesis occurs inside chloroplasts, energy is produced inside mitochondria, endoplasmic reticulum produces fats and proteins, peroxisomes house many ROS scavengers, vacuole stores all sorts of goodies including water and minerals, and the nucleus contains genetic information. Organelles are swimming in cellular liquid or cytoplasm. A thin layer of fat or membrane surrounds many organelles. Membranes separate organelles from each other and from the cytoplasm. Another layer of membrane, cell membrane, defines the cell boundary and contains all cellular components. Above this membrane there is the rigid cell wall. Harsh weather leads to accumulation of damaged organelles in the cytoplasm. The magnifying glass shows an autophagosome budding out from the surface of the endoplasmic reticulum near a damaged organelle.

needed break to deal with the damage. Slightly affected organelles can be fixed by replacing the broken parts. If the damages extend beyond repair, the organelle must be replaced. Production of new organelles is easy; cells have established assembly lines. The question is, what to do with the old ones? Unable to function, they become junk and get in the way of the working organelles.

It turns out plants recycle damaged organelles with the help of a process called autophagy. Translated from Greek, autophagy means "self-eating." Autophagy starts with formation of a new organelle, an autophagosome, on



FIGURE 2. Autophagosome construction. New autophagosome has two layers of membrane. A damaged organelle is attached by specialized proteinsreceptors. Here peroxisome is used as an example, but any organelle can be damaged and attached to the autophagosome. New membrane material is delivered to the autophagosome edges until the organelle becomes completely enclosed.

the surface of the endoplasmic reticulum (Figure 1). At first, the autophagosome looks like a miniature baseball glove (Figure 2). At this point, damaged organelles get attached to its inner surface. In the meantime, not one but two layers of the membrane are gradually added to the edges of the autophagosome until the damaged organelle is completely enclosed.

Next, the autophagosome separates from the endoplasmic reticulum and makes its way towards the vacuole (Figure 3). Fusion of the autophagosome's outer membrane with the vacuole membrane allows the damaged organelle to enter the vacuole. In addition to many goodies, the vacuole also houses enzymes that can break down organelles into building blocks just like enzymes in our intestines digest food. These enzymes digest the autophagosome membrane with its whole content. The building blocks of the damaged organelle are no longer harmful for the cells and make their way outside the vacuole where they utilized for production of new organelles.

Why do cells make recycling of damaged organelles so complex? Can the digestion be done in the cytoplasm? The answer is this complex machinery is necessary to prevent damage to the working organelles. The enzymes are toxic and, if accidentally released to the cytoplasm, will destroy everything in the cell. Locking these enzymes inside the vacuole and delivering the damaged organelles inside an autophagosome minimizes the hazard.

Autophagy is not unique to plants. The organelles frequently sustain damage and undergo recycling in the cells of our bodies. The autophagy process becomes less efficient as our body ages. Accumulation of damaged organelles inside our cells can lead to organ failure. Drugs that increase autophagy can alleviate aging.

The ability to recycle building blocks from the damaged organelles for production of new organelles makes autophagy a powerful rejuvenation process that prepares plants for the next round of harsh weather. It is not surprising that plants with more efficient autophagy cope much better with all kind of stresses, including heat and drought. For this reason, breeding programs around the globe pay attention to the autophagy trait. My research team at WSU, which is funded in part by the Washington Grain Commission, works on harnessing the virtues of autophagy for increasing the resiliency of PNW wheat.



FIGURE 3. Organelle recycling. The autophagosome delivers damaged organelles to the vacuole. Fusion of the outer membrane with the vacuole membrane allows the autophagosome inside the vacuole. Enzymes inside the vacuole cut the membrane and the organelle into small building blocks. These blocks move into the cytoplasm for making new organelles.

ARTWORK BY EUGENIA REZNIK, ARTIST, GRADUATE STUDENT IN ARTS, UNIVERSITY OF QUEBEC, MONTREAL, CANADA AND UNIVERSITY OF ST-ETIENNE JEAN MONNET, FRANCE.

WASHINGTON GRAIN COMMISSION

Market leaves little slack for production issues



By Mike Krueger Founder, The Money Farm

The corn and soybean harvests are wrapped up, and the winter wheat crop has been planted. The November U.S. Department of Agriculture's (USDA) World Agricultural Supply and

Demand Estimates (WASDE) and corn and soybean production estimates are behind us. The December USDA reports will not update corn and soybean yields and production. That happens in the Jan. 12 summary reports.

Wheat futures markets have been strong. Chicago and Kansas City markets set new contract highs in November. The Minneapolis futures approached new highs and then faded in volatile trade. Remember, trading volume in the Minneapolis market is much smaller than Chicago and Kansas City.

The world wheat situation remains very tight, especially for the higher protein hard wheats. Australia is harvesting a very big crop, but the eastern side of the continent has been plagued by too much rain on a mature wheat crop. The result is lower-than-expected protein and quality losses. Logistic problems in Australia are also slowing deliveries to the ports. Many wheat buyers, especially in Southeast Asia, have been waiting for this big Australian wheat crop, hoping it would pressure prices and allow them to buy additional coverage. Those expectations have been reduced because of the wet harvest. This will further tighten the availability of milling supplies among the world's major wheat exporting countries. The missing link to a more bullish wheat price outlook has been the lack of any increase in the export pace for U.S. wheat. We still believe that will happen, although the USDA did reduce the U.S. wheat export forecast in their November WASDE. Russia continues to be a significant wheat exporter even though domestic wheat prices in Russia are higher than export prices. Export taxes have been increasing, but there have been no export restrictions on wheat so far.

There has been an interesting development in Argentina. Approximately 250,000 metric tons, or 9 million bushels, of GMO wheat has been produced in Argentina this year. This is a small amount from a relative standpoint, but it is the first significant amount of GMO wheat produced anywhere. The world's wheat importers have rejected GMO wheat. Brazil is Argentina's biggest wheat customer. This raises questions of possible contamination of non-GMO wheat with GMO wheat. The situation will be worth watching.

U.S. corn and soybean yields were slightly bigger than expected. Better yields in the eastern Corn Belt and some parts of the western Corn Belt offset the drought-reduced crops in the Dakotas and Minnesota. The soy complex has turned neutral to bearish based on the USDA increase in their soybean ending supply estimate to 340 million bushels. The other negative factor is current forecasts for another record soybean crop in Brazil and a big crop in Argentina. We are in a La Niña weather pattern. This typically results in a warmer and dryer growing season in Argentina and southern Brazil. No one is worried about this today. China's demand for soybeans and



the mix between U.S. and Brazil origins is also a question mark at this point.

The corn outlook is still somewhat bullish. The USDA might be underestimating ethanol demand by 150 to 200 million bushels. Some analysts believe they are also underestimating corn export demand. If these analysts are correct, corn ending supplies could be 200 to 300 million bushels below the latest USDA estimates. Sharply higher fertilizer prices might result in fewer acres of corn in South America now and in the U.S. in 2022.

Weather, of course, always becomes more important during periods of smaller supplies. Approximately one third of the U.S. hard red winter wheat went dormant with dry conditions. Most of the Pacific Northwest winter wheat crop received enough fall rainfall to allow the crop to get off to a decent start, but drought is still a worry as we head into 2022. Winter wheat crops in the Ukraine and Russia were also planted under dry conditions.

There are some important geopolitical situations that could have a significant impact on all the markets. The most important of these is developing tensions along the Russia/Ukraine border. Recall that markets zoomed higher following Russia's takeover of the Crimea Peninsula back in March of 2014. There are concerns that Russia might be preparing to enter the Ukraine itself. While the odds of this happening seem small, the impact would be important to markets. The Ukraine is the world's second largest exporter of corn behind the U.S. They are also an important exporter of wheat. Any disruption of exports from the Ukraine would leave many buyers short with few other sources to shift to



because of the tight world supply situation. China's relations with the U.S. are always important, and that road seems to get rockier almost daily. There have been rumors the Biden Administration might boycott the winter Olympics in Beijing. That could also impact trade. It would be a diplomatic boycott—athletes would be allowed to compete.

Supply chain issues are still causing major problems across nearly every industry and every country. This has pushed ocean freight costs sharply higher, in some cases, to all-time highs. The supply chain problems haven't affected the availability of bulk ocean freight yet, other than higher costs. Container freight has been seriously affected, and that includes shipments of specialty commodities as well as consumer products. Empty containers are simply not available in many markets and locations, and costs have more than quadrupled from "normal" times.

Wheat markets should continue to be the bullish leader in these markets. Most analysts believe the world's consumptive users, domestic as well as overseas importers, have little coverage heading into 2022. New crop winter wheat won't be available until midsummer of 2022. This should keep futures markets very volatile. There is little slack for any wheat production problems in 2022. Many analysists, including the USDA, are expecting increased wheat acres across North America next year. That isn't a sure bet with canola prices setting record highs, and the minor or specialty crops also begging for acres. Oil sunflower prices are now above \$30/cwt. Dry bean prices are sky high. Pulse crop also continue to increase.

Chart A above is the March 2022 Minneapolis wheat futures. This contract has had major price swings recently, and we expect more of the same going forward into 2022. The issues developing with Australia's wet harvest should be bullish for white wheat as well. Supplies simply aren't there.

Mike Krueger is president and founder of The Money Farm, a grain advisory service located in Fargo, N.D. A licensed commodity broker, Krueger is a past director of the Minneapolis Grain Exchange and a senior analyst for World Perspectives, a Washington, D.C., agricultural consulting group.



CONNECTED (in Coulee City)

Artist finds inspiration in Eastern Washington landscapes, western themes | By Trista Crossley

Connections are important to Don Nutt, a Coulee City, Wash., artist who specializes in oil painting with a strong western theme.

The first connection is immediately apparent—many of Nutt's paintings feature the landscape around his home and in the Okanagon, while others are rooted in the farming and cowboy culture of the West.

"There's something special about the Grand Coulee. I can drive the highway down to Coulee City like I've done 2,000 times before, and it will look different

than I've ever seen it. There's no end to inspiration here. I also spend lots of time in the Okanogan. A lot of the paintings you see of the forest are from up in that area," he said.

Nutt's great-grandfather settled in the Coulee City area in the 1900s on a small ranch. One bit of family lore is that the great-grandfather lost the ranch in a card game.

"I've looked through local history. He had quite a number of little patches of ground all over the county. I suspect he lost something in a card game but not everything," Nutt said. "I decided back in high school that I wanted to



Coulee City, Wash., artist Don Nutt and his wife, Debbie.

live in Coulee City, that I wanted to raise my family here. Coulee City was always home. Growing up, we were related somehow to almost everyone in town. We have roots here."

Nutt's artistic abilities showed up at an early age. He remembers around the 2nd grade, he showed his father "probably an awful drawing of Mt. Rainier." After raving about it, his father left and came back with several how-to-draw books.

"I was hooked from that point on. I'm sure I bombarded them with all kinds

of pictures," Nutt said. "He must have seen something. It makes you wonder. That little thing that my dad did, he probably didn't think much of it, but now, I can see this as almost a butterfly effect. Some little thing you don't think much of, something insignificant, can change somebody's life for better or worse. That's scary, as a parent."

Ironically, growing up, Nutt was steered away from pursuing a career as an artist. He attended Wenatchee Valley Community College but didn't even enter the art building until his last quarter when he needed a few credits to graduate. The only class he could enroll in was an intro to



Receding Ice - Jones Bay



Sunrise - Lenore Lake

Saint Andrews Wheat Harvest

There's something special about the Grand Coulee. I can drive the highway down to Coulee City like I've done 2,000 times before, and it will look different than I've ever seen it.



Saddle Bronc #6



Death, Taxes, and Dirty Jokes

drawing class. Nutt said it was a very slow transition into him being a full-time artist. As he put it, "I had a real job most of my life." In the mid-2000s, with his three kids grown and with the encouragement of his wife, Debbie, he made the leap. He opened his Coulee City art studio, Cariboo Trail Studio, in 2008.

Another connection that is important to Nutt is having an emotional connection with what he's painting. In his words, he needs to "experience" the subject.

"Over the years, I've had people show me a picture. They want me to do a painting of the red rock in Arizona or someplace they've been. I don't do that. I paint from photographs, but I don't want to do a painting of photo. One thing I've learned about myself, even though I take photos when I'm on-site and I paint from those photographs, is I've already got a clear idea in my mind of what I'm going to do with the painting. There is a point, and it may be fairly early in the painting, where I'll put the photo away and want to paint from my experience," he explained.

Nutt uses one of the oldest techniques in oil painting, transparent glazes, to achieve depth and complexity in his pieces. When it fits the subject, he likes to incorporate a sense of spontaneity in his paintings, dramatic brushstrokes that still have a realistic look—realistic, but not too detailed.

"Creating detail is boring. It's hard to keep the emotional aspect if you're sitting there for hours on end painting blades of grass," he said. "Every painting, there's a point where I want to put my foot through it. I think every artist deals with that. There's times when you have to walk away from it and do something else for a while."

Despite the occasional frustration, Nutt said he couldn't image not painting. He generally judges a piece as finished when he loses interest in it. He paints in his gallery, and when he's in production mode, he'll often have four or five paintings going at once, since he has to allow each layer to dry before putting on the next.

The final connection that Nutt finds important in his work is his connection

with customers. He used to do consignments, but he realized that he didn't like being insulated from his customers. He likes to get to know them and being part of the process of helping a potential customer make a connection to one of his pieces.

"I can tell them what inspired me to create the piece, explain the location, where it was, etc. You can't do that in a gallery," he said. But Nutt has had to learn that his connection to a piece might not always work in his favor. He recalls losing a sale early in his career because he told a potential customer that he didn't like a particular piece.

"One of rules I've learned early on was I'm going to have my favorite paintings, and I'm going to judge them by the process I used to create them. I have to keep reminding myself that the viewer doesn't see those things," he said.

His western themes seem to resonate with people. Nutt speculated that his customers find his landscapes comforting, and his paintings of western life nostalgic.

"As far as the more historical things, maybe people think things were simpler back then, that they didn't have the problems we have now. It's easy to think that life was so much simpler back then," he said.

These days, Nutt is doing much of his business online. Some of that is because of COVID-19, but some of that is just because of the ease and convenience of online shopping.

"As odd as it seems to me as an old timer, that's how people shop. They want to push a button, and it's in the mail. I can't even imagine buying artwork that way, but people do it every day," he said.

Cariboo Trail Studio is open by appointment only during the winter. Nutt's artwork can be seen at his website, caribootrailstudio.com.





September Symphony

End of Main Street

One of rules I've learned early on was I'm going to have my favorite paintings, and I'm going to judge them by the process I used to create them. I have to keep reminding myself that the viewer doesn't see those things.



Rising Mist - Teanaway River



Questions to ask before signing a farm lease

As the end of the year approaches, it's a good time for landlords to review their farm leases. The Center for Agriculture and Food Systems at the Vermont Law School has developed an online Farmland Access Legal Toolkit to provide a resource for both landlords and farm tenants. The toolkit can be accessed at farmlandaccess.org.

Some of the resources on the website include leasing guides from farm organizations, a list of potential state-specific leasing issues that landlords and tenants should consult before signing a lease and a free online farm lease tool to help build a draft lease.

Another resource is a list of questions landlords and tenants should ask before signing a farm lease. Remember, it's always a good idea to have a farm lease reviewed by an attorney who has experience working with farmers, especially if the lease is for multiple years and one or both of the interested parties are depending on the lease for income and/or housing.

- Are all the parties listed and accurately described with the correct individual and/or business names, correct addresses and up-to-date contact information?
- What property is being leased? Has the land been surveyed? Is a property map available and attached to the lease? Are the parties clear on property boundaries and uses?
- What is the procedure to follow if a party wishes to end the lease early? Is there a required notice period that is fair to both parties? Can the parties terminate

for any reason or just in specific situations described in the lease?

- How will rent be calculated, and when will it be paid? What happens if rent, especial in cash rent situations, is late or unpaid?
- What activities are permitted on the property, and what are prohibited? This could include hunting or forms of agritourism, such as weddings or tours. Do such events, if permitted, require that additional rent be paid to the landlord? Are these activities allowed under local laws or ordinances?
- Which party is responsible for what repairs? What is considered routine maintenance vs. capital improvements? Who pays for what? Who owns capital improvements at the end of the lease term? Will the tenant be reimbursed for capital improvements and/or associated labor in any way?
- What kind of insurance is required, how much, and which parties will maintain it? Is there a disaster clause allowing the parties to terminate or modify the lease in case of a natural disaster (hailstorm, flood, etc.)?
- Is there an indemnification clause for both parties? An indemnification clause generally states that one or both parties agree to compensate the other for any loss stemming from their own actions or negligence.
- Is there a mediation or negotiation process that both parties agree to in the case of a dispute?
- Are there any stewardship requirements relating to land, water or soil? Are any agricultural practices prohibited (e.g., the use of synthetic fertilizers or pesticides)? Are any practices or certifications (e.g., USDA organic) required?
- What type of communication is required between the landlord and tenant over the course of the lease? Will there be annual meetings or inspections?

These are just some of the questions that should be considered when entering into a farm lease agreement. Learn more at farmlandaccess.org.





THE BOTTON LINE

Tax issues in a year of uncertainty

By Ryan Janke, CPA Leffel, Otis, & Warwick, P.S.

Benjamin Franklin famously stated, "Nothing in this world is certain except death and taxes." The last two years could be summed up in many ways, but certainty is not one. Paycheck Protection Program loans, Employee Retention Credits and Farm Service Agency payments popped up seemingly overnight, sending producers and practitioners scrambling to understand and properly plan for the new-found government programs and stimulus. In times of uncertainty, a focus on items within our control can be sound advice.

At the time of this writing in early November, there is much speculation on the constantly changing federal tax proposals by the current administration, though it looks promising that we will have final regulations by the time this issue of Wheat Life is published. While the proposed changes to the tax code are finally looking better for ag producers than originally suggested, the final result is still uncertain. The original bill contained three proposed changes of major concern: eliminate the step up in basis, tax unrealized gains on transferred assets and significantly reduce the value of the federal estate exemption. Any one of these would have been a monumental change, but all three together seem unthinkable. Fortunately, it appears the first two are currently off the table, and our fears are now focused on the third proposal. Practitioners and producers began circling the wagons because the

reduction of the estate tax exemption would create major tax implications for closely held farm operations and possibly result in liquidation of farm assets to pay the increased taxes upon death. While we are neither certain nor can we control the end legislative result, a focus on how effectively your estate is positioned today will enable nimble and proactive alterations as tax laws change.

With the current federal estate tax exemption at \$11.7 million per individual and \$23.4 million per couple, many ag producers have not had to worry about paying federal estate taxes. With the new proposal, federal estate tax



exemptions may drop to \$5 million per individual and \$10 million per couple. This will impact ag producers tremendously! If the federal exemption is dropped to \$10 million for a couple, you may need to look for solutions and plan proactively or be prepared to face a large tax liability.

Estate taxes are also paid at the state level. Washington state imposes an estate tax on estates more than \$2.193 million per individual and \$4.386 million for couple.

However, if you meet the requirements for an ag exemption, your farm assets may be exempt from the Washington state estate tax. To qualify for the exemption, you must meet three important tests. First, more than 50 percent of the value of the estate must be ag-related assets. Second, at least 25 percent of the overall estate value must be attributed to ag real estate. Third, the decedent or qualified relative must be actively farming at the time of the decedent's death.

Gifting (amounts transferred prior to death) is at the top of the list to remedy estates that are close to taxable limits for Washington state

Sponsored by the Agricultural Marketing & Management Organization.

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purposes. Washington state allows for unlimited gifting; amounts gifted away during the taxpayer's life are not included in the estate at death. For example, a farmer with a \$20 million estate who has met all three requirements can gift away \$10 million before death and be below the \$2.193 million state exemption, resulting in \$0 tax owed to Washington state. Confusing, yes, and another reason why it is critically important to engage the advice of competent advisors to help navigate the complexities associated with strategic planning and assist in forming the road map for the future.

Planning for both the proposed changes to the federal estate tax and Washington's estate tax can be mind boggling. The good news is that there are many planning nuances awarded to farmers that are not commonly available to traditional taxpayers that can lessen the impact of these estate taxes. A proactive approach would be to take this opportunity to review current estate values and develop a plan for the future. Even if you have been significantly under the federal and state exemption for a taxable estate in the past, knowing where you stand today can help lay the road map moving forward. Seeking advice from a tax professional that works closely with farmers is most certainly essential to developing an overall plan.

Ryan Janke, CPA, is a shareholder in the firm of Leffel, Otis & Warwick, P.S. He works primarily with farm families and agrelated businesses out of the firm's Davenport, Wash., office.



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Canola fields in May in Lincoln County. Photo by Mary Gey-McCulloch.



Ryleigh Joanne Fletcher (2) waiting for a ride with daddy, Nathan Fletcher, while he seeds barley at ND Fletcher Farms in Dayton. Photo by Christina Fletcher.



Your wheat life...



(Above) Sunrise near Waitsburg. Photo by John McCaw. (Left) John Melcher (13) with Ferdinand. Photo by Jeff Melcher.

Email pictures to editor@wawg.org. Please include location of picture, names of all people appearing in the picture and ages of all children.



Brody Geissler (5) in a triticale field. He is the 5th generation on his family's farm in Davenport. Photo by Stacy Geissler.



Wheat harvest at Diksen Farms in Mansfield. Photo by Cal Diksen.



Travis Wagner with his kids, (from left) Tate (15), Treig (12) and Maddy (19), on the first day of harvest in Harrington. Photo by Haley Wagner.



Sunset over Benton County. Photo by Brady Smith.

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