

WHEAT LIFE

The official publication of the Washington Association of Wheat Growers

JANUARY | 2023

Welcome

Idaho Grain Producers Association
Oregon Wheat Growers League
Washington Association of Wheat Growers
present:



**TRI-STATE GRAIN
GROWERS CONVENTION**
IDAHO • OREGON • WASHINGTON

IN THIS ISSUE:

2022 Tri-State Grain Growers Convention

2023 Legislative Pullout

Finding foodprint harmony

2022 spring wheat variety testing results

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President's Perspective



Join us in investing in our future

By Andy Juris

I'm fortunate to be old enough to have grown up in the age before cell phones, personal computers, the internet, social media and "Tic Tac," or whatever they call it. My media entertainment was primarily relegated to the static-prone, antenna-received Northwest Public Broadcasting (NWPB) channel we had beamed in; Channel 31, I think it was. From NWPB I got to learn about science, math, the MacNeil/Lehrer Report and the Saturday night ritual of the

Lawrence Welk Show (Google that one kids). Among all these shows, I remember watching one called "The Frugal Gourmet." Maybe some of you remember it. Each week, I got to watch Jeff Smith make supposedly fancy food out of frozen vegetables, chicken gizzards and bone broth. Dad would always announce "Hey, the cheap cook is on." Entertainment was obviously few and far between in Bickleton back in the 1980s, so The Frugal Gourmet it was!

A show like The Frugal Gourmet has a certain appeal to farmers, I think. For one, we all like food, better yet if it's cheap ... er, I mean frugal! Frugality is near and dear to our hearts; in a way, it must be as we have to risk so much every year. Risk demands we be frugal with what we have at our disposal. But many of us would be averse to being known as cheap! That's a word more appropriate for that miser of a neighbor who won't roll dice for coffee in town ... we all know who that is. No, frugal connotes being careful, wise and discerning with what we have. A term much easier on the ego!

Another thing farmers are frugal with is time. The demands of our job are many, and time is a precious commodity. Farming is never done. There is always another mayday around the corner. Thus, we (and I mean myself) risk being cheap and overlooking things that are important, which brings me to Olympia Days.

Grandpa once told me "There are no free rides in farming," and boy, was he right. And just as you can't starve a profit out of a cow, we simply cannot starve ag-friendly legislation out of Olympia. When we ignore the political side of our industry, we will absolutely find ourselves, well, ignored as well! "Nothing I do will ever change things" is a mantra I've heard from many, including myself. The frustrations are understandable, but it's simply not true. I've been amazed at the reception I've received from folks from both sides of the aisle. It's always interesting to see what happens when people get together and talk about what's important to them. I've left these meetings feeling great. I've also left feeling disappointed, but in every case, I've left feeling we have done our job and brought the issues you all feel passionately about to the attention of our leaders. It's an excellent, economic, frugal investment of your precious time.

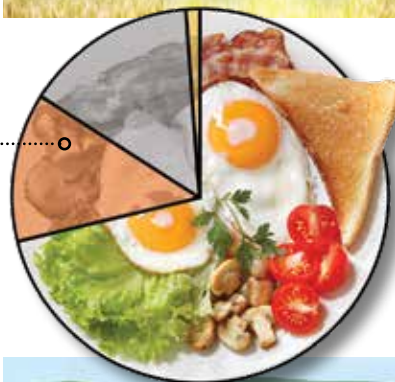
So this year, I ask our membership to consider making an investment with me in engaging with our legislators in Olympia. Let's together resist the temptation to be cheap with our time and invest a little in all of our futures. And like The Frugal Gourmet, make something good out of that small investment. Together, we can and will let our leaders know that Washington wheat growers care enough about the issues to meet with them, seek common ground, and find a way forward for all of us. So, I hope to see you all in Olympia with us on Jan. 22-24. Call the WAWG office at (509) 659-0610 for more information.

Whelp, I've gotta get out of here. Locals are starting to come into the café, and they'll be pestering me to roll for coffee. ■

Cover photo: See our 2022 Tri-State Grain Growers Convention coverage on pages 24-38 and page 49. All photos are Shutterstock images or taken by *Wheat Life* staff unless otherwise noted.

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WAWG MEMBERSHIP FORM

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- ☐ Student \$75 ☐ Family \$200 (up to 2 members)
☐ Grower \$125 ☐ Partnership \$500 (up to 5 partners)
☐ Landlord \$125 ☐ Convention \$600
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Family \$200 (2 family members)	X	X	X			X
Partnership \$500 (1-5 family members)	X	X	X	X		X
Convention \$600 (2 individuals)	X	X	X		X	X
Lifetime \$2,500 (1 individual)	X	X	X	X		X
Non-Voting Membership						
Student \$75	X	X	X			
Industry Associate \$150	X	X	X			

WAWG's current top priorities are:

- ✓ Preserving the lower Snake River dams.
- ✓ Fighting mandatory climate/carbon regulations.
- ✓ Lobbying the state Legislature for a seasonal overtime exemption.
- ✓ Maintaining a strong, reliable safety net by preserving crop insurance and making sure farm commodity programs work.
- ✓ Maintaining a safe, sound transportation system that includes rail, river and roads.

If these priorities are important to you, your family and your farm operation, join WAWG today and help us fight.

More member benefits:

- Greensheet ALERTS • WAWG updates
- Voice to WAWG through opinion surveys
- National Wheat Grower updates
- State and national legislative updates



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Outreach has been focus of last 6 months

Happy New Year!!

We just wrapped up the 2022 Tri-State Grain Growers Convention last month, and what a SUCCESS! Our attendance was better than it's been for many years. It was great to be back networking with farmers. The convention featured highly acclaimed national speakers and quality educational break-out sessions that covered, among other things, the supply chain picture, a global market update, a long-term weather forecast. I also felt this was the first time everything was "back to normal" since COVID-19 hit. What a great way to celebrate wheat growers and appreciate them for growing safe, reliable food.

We have two new amazing wheat ambassadors — Shaley Tiegs and Angelina Widman, both from Spokane County — that I look forward to spending more time with starting with our trip to Olympia later this month.

I am thankful for the wonderful staff we have at the Washington Association of Wheat Growers (WAWG). KayDee Gilkey is our new outreach coordinator, and we are excited to have her on board, along with Katie Teachout who has been working for WAWG for a year now as administrative assistant. We have an amazing *Wheat Life* team with Trista Crossley as our editor and Lance Marshall as our *Wheat Life* ad manager. Without these team members, WAWG could not function successfully, so I extend a big thank you for their service to our industry.

As wheat, WAWG and the Washington Grain Commission (WGC) work diligently together for our growers. I would like to provide kudos to a job well done and congratulate Glen Squires on his retirement and many years of service to our industry. We welcome Casey Chumrau as the new WGC CEO and look forward to working with her and her team to continue our productive relationship to benefit our industry.

Reflecting on the past six months, the Washington Association of Wheat Growers (WAWG) has really been focused on outreach for various issues the industry faces. From meetings to coalitions to tours, they are all equally important. We were involved with a House Agriculture Committee listening session in Carnation with Rep. Kim Schrier (D-Wash.) and House Agriculture Subcommittee Chair Rep. Stacey Plaskett (D-U.S. Virgin



Michelle Hennings
Executive Director
*Washington Association
of Wheat Growers*

Islands) to share perspectives on how the farm bill can be improved for farmers. Climate and conservation are big buzz words in D.C., currently, and we always stress the importance of voluntary, not regulatory legislation to benefit farmers and protect their farms.

WAWG also attended a roundtable in Wenatchee with Transportation Secretary Pete Buttigieg, Rep. Schrier and Sen. Maria Cantwell (D-Wash.). Our focus in this meeting was the importance of all three modes of transportation to the wheat industry, and how important our Snake River dam infrastructure was to our region and economy. I was encouraged that when we discussed the issue, the secretary acknowledged that he understood the importance of the system for clean energy and agriculture transportation.

Along with attending those meetings, we also sponsored and spoke at multiple dam tours and a legislative farm and food tour in the Skagit Valley. During the tour, we talked to legislators on how farmers are good stewards of the land, and how harmful legislation would negatively affect our farms and hamper our ability to feed the world. One of the highlights on the tour was when we showed legislators a field that was planted with flags, illustrating how much land last year's proposed buffer bill would take out of production. The flags also demonstrated how the buffers would split the farmer's fields into pieces and make it pretty much unfarmable.

Ican't stress how vital it is to be at these meetings and tours and be proactive in educating everyone we can on farming. We all know there are many misconceptions about farming, and the more we get out there vocally and tell our story, the better. I always hear comments like, "it doesn't make a difference," or "they don't listen." I disagree with those statements. We may not change everyone's minds, but we know they will come away with a fact or two, maybe even a "wow, I didn't know that."

There are a lot of new faces in Olympia, and we have our work cut out for us to get into their offices and have those conversations.

The buffer bill isn't the only major threat to farming's viability that we are watching. If you've attended a county or state wheat growers' meeting last year, you've probably heard me talk about the Washington State Department of

Natural Resources' (DNR) solar farm mapping effort. We are concerned that the majority of solar farm development is taking place only on the east side of the state and removing viable farmland out of production. Early last year, we met with DNR representatives who explained their efforts, and we discussed the impacts of solar mapping and siting solar farms on Eastern Washington farmland. We were able to relay the fact that many farmers rely on their DNR leases to stay in business and that we oppose taking the land out of production. DNR says they are focusing developers' attention on unleased parcels, but the threat is still there. I urge growers with leased DNR land to check out DNR's map and to watch this situation closely. The map can be found at dnr.wa.gov/cleanenergymap.

WAWG is working vigorously to up our game at both the state and national level with relationship building and to establish that we are the organization to come to for wheat information. Coalitions have been of great importance to our strategy. Uniting with other ag groups at both the state and national level provides a bigger voice for farming. Over the past year, we have joined twice as many coalitions than we have in the past and find it very valuable for specific issues on which we can join together.

One of our most valuable partnerships is with the National Association of Wheat Growers (NAWG). That organization focuses on wheat issues nationally, taking direction from its member states. One of the big projects NAWG is working on, besides the farm bill, is a life cycle assessment (LCA) of wheat, which will assess environmental impacts associated with all stages of a wheat plant's life. The study will measure the impact from the production of seed, pesticides and machinery to planting, harvest and transportation to the first point of sale/farm gate. The goal of the LCA is to compare the full range of environmental effects assignable to products and services by quantifying all inputs and outputs of material flows and then assessing how these material flows impact the environment. The info can be used for policy development and understanding the impact of production methods.

As you've probably gathered, the Snake River dams have taken up a lot of our efforts and time. Fortunately, the Murray/Inslee report, which was released in August, concluded that the essential services provided by the dams currently cannot be replaced. However, in his proposed budget, Gov. Inslee has included funding to study alternatives to the dams' power generation and to look at what needs to happen to the transportation system if barging wasn't available. WAWG remains committed to working alongside government officials and the broader stakeholder community to achieve science-based solutions that facilitate a healthy salmon population and support the viability of family-owned farms and businesses.

Transportation is vital to our operations, and rail, river and roads all need to be utilized so farmers can affordably and reliably get their products to market. There are many moving parts to the issue that we continually monitor at both the state and national level. With recent reports from NOAA and statements from the Administration seeking to recover salmon populations to harvestable and sustainable levels, we must continue to educate Congress and our state legislators on the transportation benefits of the river system. We also keep the system at the forefront of our conversations and continue to build coalitions across the U.S. as this is not only a Pacific Northwest issue, but it's a national issue. After all, wheat, corn and soybeans from as far away as the Midwest travel down the Columbia-Snake River System to export terminals in Portland and Vancouver.

We have a lot of issues on our plate this year, and it's vital for membership to be involved. Please watch for our calls to action to comment on bills this coming legislative season as we need to speak loudly and clearly to Congress and the state Legislature on what is needed to be an efficient, successful farmer. As always, if you have any questions or comments, please feel free to reach out to the WAWG office at (509) 659-0610. ■



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WAWG at WORK

ADVOCATING FOR THE WHEAT FARMERS OF EASTERN WASHINGTON

Members honored, work conducted at 2022 convention

While the 2022 Tri-State Grain Growers Convention had plenty of opportunities to socialize and learn the latest in research, equipment and technology, Washington Association of Wheat Growers (WAWG) members also took care of business by participating in a strategic planning work session, updating resolutions and honoring their fellow farmers.

The strategic session, led by Ray Ledgerwood from Board Works by Ledgerwood, gave board members and staff the opportunity to review and update goals from previous strategic sessions and set “measures of success” for the goals. The goals included greater state and national influence; more active county organizations and members; relationship building with newly elected officials and urban legislators; and increasing membership with an emphasis on younger members. Ledgerwood urged growers to focus on where they want WAWG to be in the future.

“You steer where you stare,” he explained.

“Reviewing our goals set previously showed that we have made progress in certain areas, such as representation at the national level and in our media outreach,” Andy Juris, WAWG’s president said. “Sometimes it’s hard to see progress until you step back and look at the whole picture. I’m proud of the work WAWG has done, but we need to keep pushing forward.”

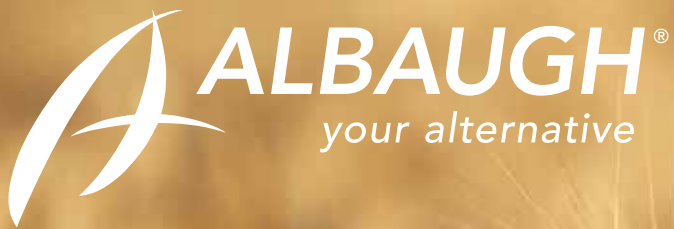
WAWG members also participated in an all-committee meeting, where they heard updates from U.S. Department of Agriculture agen-



The annual convention ushers in a change of leadership for the Washington Association of Wheat Growers. The 2022/23 WAWG leaders are (from left) Michelle Hennings, executive director; Howard McDonald of Douglas County, past president; Andy Juris of Klickitat County, president; Anthony Smith of Benton County, vice president; and Jeff Malone of Douglas County, secretary/treasurer.



Washington Association of Wheat Growers leaders and staff took part in a strategic planning session during convention to review and update goals from previous sessions. The session was led by Ray Ledgerwood from Board Works by Ledgerwood.



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At the convention, the Washington Association of Wheat Growers welcomed two new wheat ambassadors, Shaley Tieg (left) and Angelina Widman, both from Spokane County.



During the annual Washington awards banquet, growers honored Glen Squires (left) for his nearly three decades of service to the industry. Squires retired in November as CEO of the Washington Grain Commission. The award was presented by Andy Juris, WAWG president.

cies, including the Farm Service Agency, the Risk Management Agency, the National Agricultural Statistic Service and the Natural Resources Conservation Service. Following state and national legislative updates, growers began reviewing and updating the association's resolutions. See page 16 for new and changed resolutions. A complete set of WAWG's resolutions can be found at wawg.org/about-us/.

"Every year we ask members to review our resolutions to make sure leadership and staff are

Sponsors, exhibitors help make 2022 convention possible

The wheat organizations of Idaho, Oregon and Washington want to thank everybody who made the convention possible, especially our sponsors, industry supporters and exhibitors. Join us next year back in Coeur d'Alene, Idaho, Nov. 14-16, 2023, for the 2023 Tri-State Grain Growers Convention.

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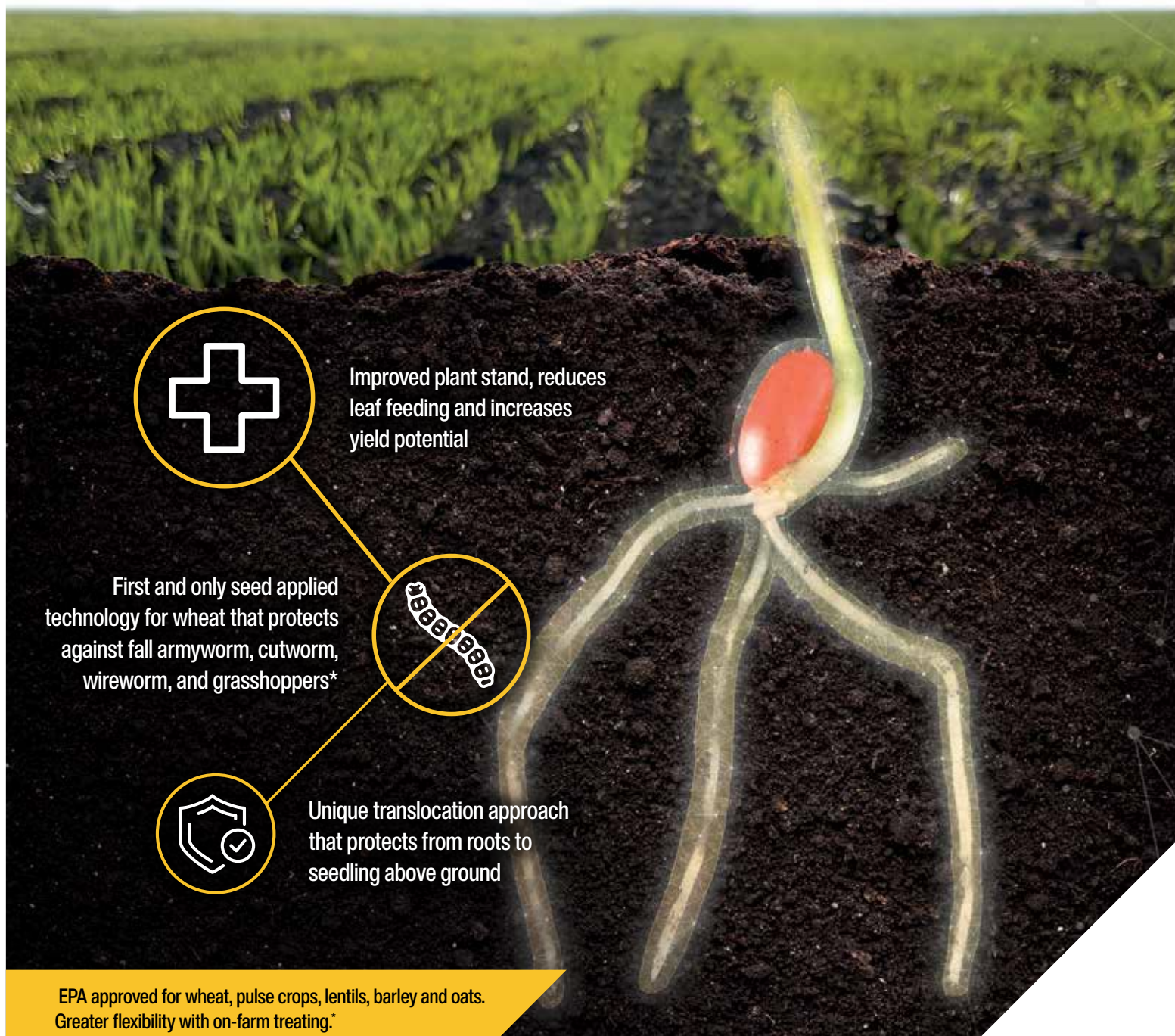
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moving in the right direction,” said Michelle Hennings, WAWG’s executive director. “Then, during convention, we discuss the changes and vote on them. The resolutions help highlight the issues growers are most concerned with, and where they want us to spend our time and energy.”

The annual convention is also the occasion when WAWG’s leadership changes. During the state banquet, outgoing president, Howard McDonald of Douglas County, handed the gavel over to incoming president, Andy Juris of Klickitat County. Anthony Smith of Benton County became the new vice president, and Jeff Malone of Douglas County was nominated and approved as the new secretary/treasurer.

Several honors were handed out as well. Ryan Poe of Grant County was named WAWG Member of the Year. Asotin County was named WAWG County of the Year.

Growers also honored Glen Squires for his nearly three decades of service to the industry. Squires retired in November as CEO of the Washington Grain Commission. WAWG also welcomed two new wheat ambassadors. Shaley Tiegs and Angelina Widman, both from Spokane County, gave presentations

to the crowd as they vied for scholarships from the Washington Wheat Foundation. Widman was awarded \$5,000, and Tiegs received \$4,500. The ambassadors will represent Washington wheat farmers at various civic and community events and will also participate in an advocacy trip to Olympia this month.

WAWG is a member-driven, volunteer-led organization that depends on membership dues and contributions to help fund its advocacy efforts. The Legislative Action Fund is one way members can donate to WAWG. As a thank you, members that contributed to the fund were entered into a drawing for prizes donated by county associations, including Adams, Benton, Columbia, Douglas, Franklin, Grant, Lincoln, Walla Walla, Whitman and



Howard McDonald (right), outgoing Washington Association of Wheat Growers president, hands the gavel to incoming president, Andy Juris of Klickitat County during the state awards banquet at the 2022 Tri-State Grain Growers Convention.



During the 2022 Tri-State Grain Growers Convention, several awards were handed out by Washington Association of Wheat Growers’ (WAWG) leaders. (Above) Asotin County was named WAWG County of the Year, which was accepted by Leif Claassen, state board member for Asotin County. (Below) WAWG President Andy Juris (left) awards Ryan Poe of Grant County the WAWG Member of the Year award.



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Yakima/Klickitat counties This year's Legislative Action Fund drawing winners were:

- Valerie Hughes, Yeti cooler.
- Brent Leha, Apple iWatch.
- Edward Leahey, Cabelas \$200 gift card.
- Hit Inc., gun safe.
- Harold Cochran, Ring doorbell system.
- Scott Woodside, security system.
- Patricia Myer, \$200 Coastal gift card donated by Leonard Van Buren and Franklin Co. Wheat Growers.
- Greg and Julie Hart, Blackstone Grill.

WAWG would like to thank all the members and industry supporters who attended this year's convention. Feedback is always welcome. Contact the WAWG office at (509) 659-0610. The 2023 Tri-State Grain Growers Convention is scheduled for Nov. 14-16 back at the Coeur d'Alene Resort in Coeur d'Alene, Idaho. ■

DNR releases interactive map for clean energy development

The Washington State Department of Natural Resources (DNR) has launched an interactive map to responsibly site clean energy development on state trust lands.

The mapping project gives DNR the opportunity to use existing detailed information about the lands it manages to improve outreach to stakeholders, protect habitat and tribal heritage, and better serve the needs of utilities and clean energy developers. The tool is Washington's first published map for locating potential properties for solar and wind energy development.

"Using our public lands to create clean energy is one of the most effective ways Washington state can help fight climate change," said Commissioner of Public Lands Hilary Franz, the elected official who oversees DNR. "But this work must happen in partnership with our Tribes and local communities. I am proud of my team for creating this clean energy siting map, which will allow us to reduce barriers and help reduce costs for projects while siting wind turbines and solar panels in appropriate areas to protect wildlife habitat and cultural resources."

Features of the map include:

- Distance from DNR-managed lands to infrastructure such as transmission lines and substations.
- Elevation, slope, aspect and soil corrosiveness of DNR parcels.
- Whether the site is in military airspace.

- Expiration date for current lease of parcel, if any.

The clean energy siting map will support the Clean Energy Transformation Act, the 2019 state law that mandates that all energy supplied by utilities in Washington state must be carbon-free by 2045. This law, as well as prior legislation and the plummeting cost of solar technology, has shifted the energy market toward favoring renewable sources, making development of state trust lands an appealing option for utilities.

To view the mapping tool, go to DNR's website at dnr.wa.gov/cleanenergymap. ■

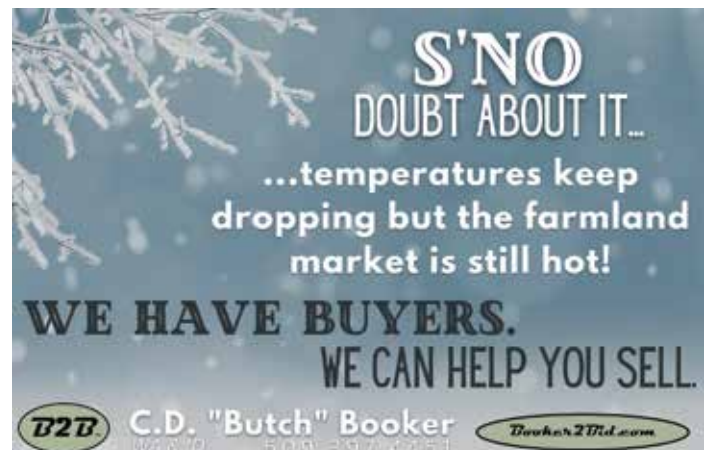
2022 Census of Ag is here

Late last year, the U.S. Department of Agriculture (USDA) mailed survey codes to all known agriculture producers across the 50 states with an invitation to respond online to the 2022 Census of Ag at agcounts.usda.gov. Paper questionnaires followed in December.

The ag census is the nation's only comprehensive and impartial agriculture data for every state, county and territory. By completing the survey, producers across the nation can tell their story and help generate impactful opportunities that better serve them and future generations. It is a powerful voice for U.S. agriculture.

You need only respond once, online or by mail. The online option offers timesaving features ideal for busy producers. All responses are due Feb. 6, 2023. Farm operations of all sizes, urban and rural, which produced and sold, or normally would have sold, \$1,000 or more of agricultural products in 2022, are included in the ag census.

The data not only influence business and supply chain logistics, they inform policy and program decisions that directly impact producers, ag operations and communities across the U.S. For the latest news and updates about the Census of Agriculture, visit nass.usda.gov/AgCensus. ■



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WAWG membership expands state legislative resolutions

During the annual meeting at the 2022 Tri-State Grain Growers Convention, the Washington Association of Wheat Growers (WAWG) membership updated and approved the 2023 resolutions that direct policy for the next 12 months. New resolutions are listed here. For the complete set of revised resolutions, visit wawg.org.

NATIONAL LEGISLATION COMMITTEE

- WAWG supports the retention of federal appointees while new administrations consider new position appointments.

RISK MANAGEMENT

- WAWG supports the expansion of RMA margin protection insurance products for winter and spring wheat to all producing counties.

RESEARCH

- WAWG supports efforts of the Washington State Crop Improvement Association (WSCIA) to control jointed goat grass and noxious weeds and urges growers to use caution when purchasing seed from questionable sources.
- WAWG encourages other states to adopt a zero tolerance for jointed goat grass in certified seed and to enforce existing standards for all noxious weeds.

NATURAL RESOURCES COMMITTEE

CONSERVATION PROGRAMS

- WAWG supports programs that pay producers for their ongoing climate farming practices.
- WAWG supports the development of a Life Cycle Assessment (LCA) analysis on wheat.
- WAWG supports NRCS adding additional enhancements that would help wheat growers be eligible for Inflation Reduction Act (IRA) funds and other NRCS programs.

ENERGY

- WAWG supports development of alternative sources of energy that benefit small grain producers if they are not more expensive than hydropower, or cause rates to go up.

RESEARCH COMMITTEE

- WAWG supports the research and deployment (commercialization) of a rapid, reliable, quality test method to replace the existing falling number test and its adoption as the grading factor for "falling number" in wheat.

RESEARCH FUNDING

- WAWG supports continued funding at or above inflation-based levels for USDA-ARS and USDA NIFA/AFRI, the primary sources for federally funded agricultural research.

STATE LEGISLATION COMMITTEE

LEGISLATION

- WAWG supports the state taking all possible steps to avoid economic and environmental leakage from carbon laws and regulations to protect Washington's existing manufacturing jobs and infrastructure. WAWG supports ongoing efforts by Energy Intensive, Trade Exposed businesses, such as food processors, to have a compliance pathway based on economic and technological feasibility.
- WAWG opposes bans to restrict the use of existing energy sources, including natural gas. Ensuring power reliability should be prioritized over meeting arbitrary reduction targets.
- WAWG opposes the creation of any qui tam (private right of action) enforcement powers in labor and employment statutes.
- WAWG supports any reforms to Washington's Paid Family and Medical Leave program must preserve the program's basic premium share and benefits structure.
- WAWG supports the repeal or reform of the Long-Term Care Act through meaningful, equitable and financially responsible legislation.

STATE AGENCIES (DEPARTMENT OF ECOLOGY)

- WAWG supports the use of the peer reviewed mapping of streams in Washington state for fish passage.
- All practices implemented to improve water quality and reduce soil erosion should be voluntary. DOE must agree to let perennial commodity crops to be included in plans for soil erosion control.
- WAWG opposes local, state, and federal programs that take agricultural land out of production without just compensation for the period that the land is out of production.
- WAWG supports a science-based approach to determining agriculture and water quality issues.
- WAWG supports full funding of the Voluntary Stewardship Program (VSP).

TRANSPORTATION COMMITTEE

- WAWG supports the repeal of the law tying Washington to California's vehicle emission standards which phases out gas powered vehicles and trucks. ■

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POLICY MATTERS

WAWG eyes overtime, transportation issues in Olympia

By Diana Carlen
WAWG Lobbyist

On Jan. 9, 2023, the Washington State Legislature will be back in session and returning to mostly normal operations for the first time since the pandemic hit in March 2019. It will be a welcome change to see a bustling capitol campus after it has been mostly closed to the public for almost three years. Interest groups are expected to once again descend on Olympia in droves to hold their annual lobbying days. One positive from the pandemic is that the Legislature will now provide the option for the public to testify either in-person or remotely for people who cannot travel to Olympia.

The 2023 session is scheduled to last 105 days. The primary job of the Legislature will be to pass operating, capital and transportation budgets for 2023-2025.

Politically, Democrats slightly expanded their majority in both the state House of Representatives and the Senate by adding a seat in each chamber. There will also be a lot of new faces in Olympia as there were an unprecedented number of legislators who did not seek re-election. This means wheat growers will need to do a lot of outreach to new members and build relationships.

To kick off the budget development process this session, Gov. Inslee released a proposed \$70 billion operating budget, which is roughly a 12% increase in spending from the current 2021-2023 budget. While the proposed budget does not propose any new tax increases, the budget does reflect two new sources



Washington Association of Wheat Growers members, leaders and staff will be traveling to Olympia at the end of the month to meet in-person with state legislators to talk about the issues wheat growers are facing. This will be the first time since 2020 that in-person visits to legislators' offices will be allowed.

of money passed by Legislators in 2021: a capital gains tax (which is currently being challenged in the Washington State Supreme Court) and revenues raised by a cap-and-trade program set to go in effect in January.

In addition to releasing his proposed budgets, the governor released his policy priorities for the 2023 session, including a plan to deal with homelessness by proposing the state raise \$4 billion by issuing bonds outside the state's debt limit to build thousands of new affordable housing units over the next few years. This would require legislative approval and a vote of the people.

The Washington Association of Wheat Growers (WAWG) will also be actively engaged in discussions regarding the governor's proposed salmon recovery efforts. This past fall, WAWG has been actively engaged with the work of the governor's riparian taskforce in developing measures to improve and protect riparian areas across the state. WAWG supports the funding in the governor's proposed budget to continue the work of this taskforce. WAWG also continues to support voluntary incentive programs, like the Voluntary Stewardship Program, instead of regulatory approaches.

Earlier this year, Gov. Inslee and Sen. Patty Murray (D-Wash.) released a study determining that the lower Snake River dams could not be removed until clean energy alternatives can be developed to replace the power these dams generate. The governor's proposed budget provides \$5 million to develop a detailed replacement plan for the power. Inslee also proposes an additional \$5 million for the Department of Transportation to conduct an analysis of highway, road and freight rail transportation needs and options to accommodate the movement of goods that currently move by barge through the lower Snake River dams. ►

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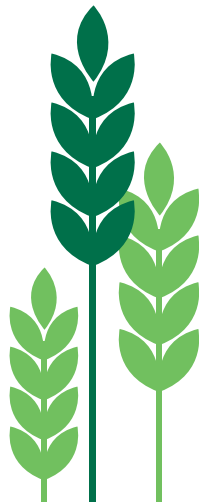
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WAWG is disappointed that the state is again pursuing costly studies that focus on breaching the dams instead of whether the dams should indeed be breached. The issue has been thoroughly studied, and dam breaching has been repeatedly rejected. The removal of the four lower Snake River dams would cost the U.S. billions of dollars over the long term and lead to significant additional carbon emissions that contribute to climate change and jeopardize health, safety and livelihoods in already economically fragile local and regional economies.

This session, WAWG will continue to work on legislation to provide seasonal flexibility from paying overtime for agricultural workers. Two years ago, the legislature passed legislation to phase in overtime for agriculture workers, but it does not offer any seasonal flexibility for harvest. Proposed legislation would allow an agricultural employer to select 12 weeks a year where a farm worker would work up to 50 hours a week without the employer having to pay overtime.

WAWG will be hosting their annual Olympia days Jan. 22- 24. Wheat growers will visit as many legislators as possible, from both sides of the aisle, to discuss wheat industry priorities, such as riparian buffers and the overtime issue. Growers will also hand out cinnamon rolls in the Capitol Building to help celebrate the industry. Legislators prefer to hear from their constituents, so it is important that we have growers and landlords from as many districts as possible participate. Please contact the WAWG office at (509) 659-0610 for more information. ■

Education needed as new congressional session looms

By Trista Crossley
Editor, Wheat Life

At one of the break-out sessions at the 2022 Tri-State Grain Growers Convention, growers got an “inside the beltway” perspective of the 118th Congress and potential impacts of the 2022 elections on wheat industry priorities.

Congress will begin the new session divided. There are slim majorities in both chambers with the Republicans holding the House and the Democrats holding the Senate. Leadership in the House is new, and many of the “old guard” on the Democrats’ side are stepping down, leaving untested minority leaders. From a farm bill perspective, 20% of senators are new to farm bills. In the House, that percentage is higher, at 46%. The Senate Ag Committee is expected to stay mostly the same, but there’ll be a change of leadership on the House side.

“There’s a lot of education we are going to need to do,”



Taylor Williamson (left), government relations representative for the National Association of Wheat Growers (NAWG), and Jake Westin (right), NAWG’s vice president of policy and communications, gave an “inside the beltway” perspective of the 118th Congress at a break-out session during the 2022 Tri-State Grain Growers Convention. Also shown is Mariah Wollweber, NAWG director of communications and partnerships.

said Taylor Williamson, government relations representative for the National Association of Wheat Growers (NAWG). “There’s a lot of people that we don’t really know how they will react when we are bringing in different bills.”

Williamson was joined by Jake Westin, NAWG’s vice president of policy and communications. Westin said lawmakers on the House side have spent the past year holding field hearings and title-by-title hearings. He expects that with the change in House leadership, much of that work will be redone. The Senate side is just getting underway with farm bill hearings. NAWG expects that once the new Congress has been sworn in and committees have been assigned, both ag committees will kick off farm bill work in earnest, probably in late January or early February.

The current farm bill is set to expire Sept. 30, 2023.

In the wheat industry, work on the farm bill has already ramped up. For the past year, NAWG has been testifying in farm bill title hearings. In September, the organization did a fly-in, bringing nearly two dozen producers to meet with more than 55 congressional offices. The industry has also set priorities that include:

- Protect and enhance crop insurance, and refine the program and make it work better for wheat growers.
- Raise the Price Loss Coverage reference price. “It’s been \$5.50 for a long time and hasn’t kept up with the cost of production and inflation. It needs to be more reflective of price and input costs,” explained Westin.
- Continued funding for voluntary, cost-share conservation programs and maintaining current compliance.
- Increased funding for the export development pro-

grams, the Market Access Program and the Foreign Market Development Program. Westin said two marker bills have been introduced that would double funding for these programs.

“Many of these asks will cost money,” Westin said. “NAWG has been making the rounds of all four corners of the ag committees on how to get additional resources in the farm bill so we aren’t fighting other groups.”

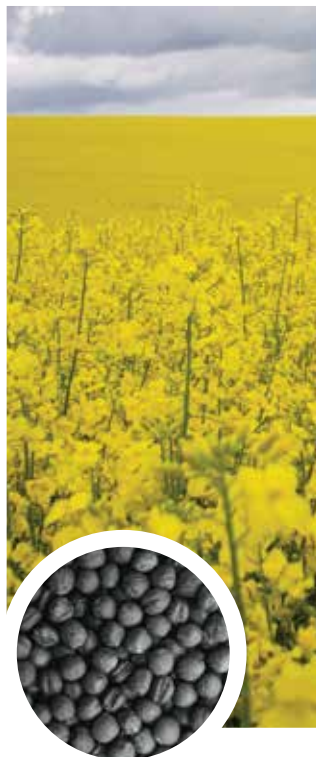
NAWG is expecting to have to fight budgetary constraints, even though most of the farm bill funding will go to SNAP, and there’s usually talk of splitting the nutrition title off of the farm bill. Westin pointed out that keeping the nutrition title as part of the farm bill helps maintain a broad coalition and connects the urban/rural divide. There is also expected to be external attacks against the legislation from both the left and the right, such as the Environmental Working Group and the Heritage Foundation. Looming over everything is the 2024 presidential race.

“If they don’t get it done next winter, as you get into 2024, it probably won’t get done on time,” Westin said. “If they don’t pass a long-term farm bill, then the most likely outcome is a one- or two-year extension to get past the next presidential election.”

Besides the farm bill, other legislative and policy issues facing the 118th Congress include:

- The Pesticide Registration Improvement Act (PRIA). PRIA is also set to expire in 2023.
- Inflation Reduction Act (IRA) implementation. Westin said a big focus of the U.S. Department of Agriculture and the Natural Resources Conservation Service is to get prepared to spend the funds allocated in the IRA.
- The debt ceiling. This issue is expected to come up in March.
- There are still a number of high-level ag positions that haven’t been filled. ■

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In America, we are also privileged to eat mostly on a local level. In Washington state, we are especially fortunate to have more than 300 commercially-grown foods grown within a day's drive. There are more than 60 farmers markets throughout the state, and our gro-

cery store shelves showcase sales on healthy choices year-round. We have more than 35,000 farms that are organic, traditional, urban, rural, big and small. We grow so much food in this state that we have excess after feeding Washington and our neighbors around the U.S.

Not every nation in the world has food security. Not every nation can grow food for themselves. The American farmer, especially those in Washington state, farm for those nations as well as ours. The U.S. makes up only about 4% of the world's population, but we help feed the other 96%.



Trade is vital to our Washington farmers and the countries they feed.

Washington exports roughly 30% of its food and agriculture products annually, valued at roughly \$6.7 billion. Specifically to grains, Washington exports roughly 80% of its wheat annually. Much of it goes to the Pacific Rim and Mexico.

Why is wheat so important? Outside of the U.S., wheat is a staple source of protein. Only about 30% of the world's protein comes from animal sources. Most humans don't eat meat regularly like Americans.

"Wheat is the source of 20% of the world's caloric intake and a dietary staple worldwide. It is an excellent source of energy, providing complex carbohydrates, fiber, B vitamins and iron," according to U.S. Wheat Associates. Wheat accounts for roughly 20% of all the protein eaten around the world. But most nations cannot grow wheat themselves. Nations like Japan, the Philippines, Vietnam and Thailand simply cannot raise wheat. Their climate and landbase does not allow for it, so they rely on our Washington farmers. We are fortunate to have ports along the Pacific Coast to keep transportation to these trade partners cost effective and efficient.

When trade disruptions such as war, port delays and politics shut down exports from Washington, we all suffer. The farmers rely on exports to keep their businesses viable. The global consumers rely on Washington to supply their markets with necessary food they cannot grow.

Although international relations can get complicated, trade is still a simple concept. And especially for the Washington wheat industry, trade is vital. We are fortunate to be able to eat locally in Washington, but we must continue to think globally about our responsibilities and commitments to feed the world. ■

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Wheat well met

2022 EVENT LIGHTS UP WINTER AS GROWERS GATHER TO CELEBRATE INDUSTRY

It might have been frightful outside, thanks to a massive winter storm, but inside the Coeur d'Alene Resort, all things were merry and bright as farmers, exhibitors and industry stakeholders gathered to celebrate the Pacific Northwest wheat industry at the 2022 Tri-State Grain Growers Convention.

"Despite the weather, we had one of the most well-attended conventions in years. It was a perfect way to open the holiday season, by celebrating our industry with family and friends," said Michelle Hennings, executive director of the Washington Association of Wheat Growers. "There was a huge amount of work that went into planning this event, and it wouldn't have been possible without support from the Idaho, Oregon and Washington industry groups. Staff from all three states worked incredibly long hours making sure everything ran as smoothly as possible."

Attendees gathered at the Coeur d'Alene, Idaho, resort Nov. 29-Dec. 1, 2022, to hear noted national speakers discuss the battle between foodies and farmers, address global food insecurity through innovation, and a long-term weather outlook. Industry stakeholders held panels that covered the fight over the lower Snake River dams (see page 32); supply chain issues (see page 28); and how global events are impacting grain prices (see page 49). Comedian Scott Bloom emceed the convention.

Educational break-out sessions covered national policy issues, in-

FOOD FOR ALL. Julie Borlaug, granddaughter of Dr. Norman Borlaug, is dedicated to ending food insecurity across the globe. She pointed out that the most food insecure countries are also the most volatile, because "when you don't have food, you don't have your basic needs met." Borlaug said agriculture needs to collaborate and better communicate. For example, talking about productivity could translate to the public as more fertilizer, more destruction of the environment. Instead, it needs to be a climate sustainability conversation. "You can craft the same argument, but you have to do it in a way the public understands." Agriculture also needs to beware of a new strain of "fact-resistant" humans. She explained that there are some people who are putting forward a utopian picture of agriculture, and "that's just not how agriculture works." There's also popular misconceptions that need to be rebutted, such as GMO beef and family farms that are also corporations. "Communications are how we move ahead in agriculture," she said.



cluding the farm bill (see page 20); nitrogen and sulphur fertilizer management; updates from the Natural Resources Conservation Service; updates on falling numbers research; a wheat market outlook; outlooks in climate-smart farming; taxes; and stress management.

Washington growers participated in an all-committee meeting to review and update resolutions, followed by an awards banquet (see pages 8 and 16). Carissa Schmitz of Washington won a free registration to the 2023 convention as winner of the photo contest. See page 26 for photos of the convention.

Unlike previous years, this year's convention didn't wrap up with a last morning long-term weather forecast session. Instead, the growers closed out the event with the dinner and auction. Growers got in some early Christmas shopping during the silent and live auctions while raising funds for the three states' foun-

2022 TRI-STATE GRAIN GROWERS CONVENTION

dations. Former Washington FFA state president, Tucker Cool, ran the live auction, which included tickets to Shania Twain, vacation getaways and other big-ticket items. All of the auction items were donated by growers and industry supporters. Entertainment was provided by Cara Pascalar who used song parodies to celebrate the shared joys and frustrations of being involved with agriculture.

The wheat organizations of Idaho, Oregon and Washington want to thank everybody who made the convention possible, especially our sponsors, industry supporters and exhibitors (see list on page 10). Please join us at next year's convention, which will also be at the Coeur d'Alene Resort on Nov. 14-16, 2023. ■

WILL WINTER WEATHER WANE?

Perennial favorite weather forecaster, Eric Snodgrass, predicted a cold, snowy winter for the Pacific Northwest thanks to a third year of La Niña. That La Niña is expected to fade at the beginning of 2023. Other areas of the country, especially the central Plains, are still very dry, but Snodgrass said that could change quickly if an El Niño develops. He explained that

in order to figure out what the weather will look like in the Pacific Northwest, growers should watch the weather over Japan. The position of the jet stream is also critical in bringing moisture to the region. He pointed out that in general, "If the jet stream won't leave you alone, you'll be cold and wet. If it does leave you alone, you'll burn."



FOOD FIGHT. National agriculture policy expert Ray Starling spoke to convention attendees about a growing battle between those involved in the agricultural industry and those who say the food system is broken and want to reform it. He said there are intelligent, coordinated outside forces advocating for reshaping the industry, but that their assumptions are wrong. Most people are two to three generations removed from the farm and haven't been around a production system. For many of today's younger generations, they simply hit a button, and what they want shows up within a couple of days. "People are looking for meaning or something meaningful," Starling explained. For many of them, food has given them a purpose. What can agriculture do about it? Be honest and admit when things need to be improved and compete in the information space. Above all, Starling said, remember that the best reason to push back is because of food insecurity. "We won't make progress by dismantling the current food system."

See you
in 2023 back
in Coeur d'Alene!
Nov. 14-16, 2023



2022 TRI-STATE GRAIN GROWERS CONVENTION



2022 TRI-STATE GRAIN GROWERS CONVENTION

Supply chain break down

CONVENTION PANEL EXAMINES FUEL, FERTILIZER, EQUIPMENT, ECONOMY

By Trista Crossley
Editor, *Wheat Life*

While pressure on the supply chain has eased somewhat, producers are still paying high prices for inputs and struggling to find parts and supplies. Four experts broke down what's happening with fuel, fertilizer, equipment and the economy during a break-out session at the 2022 Tri-State Grain Growers Convention.

Fueling the industry

Greg Zanavich, senior manager of business development at Tidewater Barge Lines, told growers that while it's a very competitive market, there is adequate fuel available.

Crude oil from Alaska, Canada and the Dakotas is brought to refineries in Montana, Seattle and Salt Lake City (among others) and then moved to fuel terminals throughout the Pacific Northwest by pipeline, water, rail and road. Part of Tidewater's business involves barging fuel from Portland to their terminals in Pasco and Umatilla.

"The good news is, there's a lot of supply that's coming in here. If you're worried about the pumps going dry, it's not a huge concern, at least in our opinion, at this point," he said. "In the summertime, we usually get busy with fuel because it's a high demand time. The pipeline will dry up coming out of Salt Lake City, so we fill the gap. Fuel supply is like the proverbial balloon. You push in one side, and it comes back out the other side. It's all about making supply work."

The market is mostly price driven, and Zanavich explained that it's a math equation. When the price in Boise is low, Tri-Cities customers will pay higher transportation costs to load tankers in Boise and bring the fuel back. The reverse is also true. When prices in Boise are too high, Boise customers will buy fuel in the Tri-Cities to bring back to the Boise market.



"These things happen and change on a moment's notice because it's a very competitive market out there. This supply is just a whirling vortex that is going around chasing the best market price," he said.

Ethanol, biodiesel and renewable diesel are also coming into the region. Tidewater unloads 96 to 110 car trains of ethanol in Pasco and then barges much of it down to Portland. The company is also watching the renewable diesel market, which Zanavich said is being partly driven by carbon credits.

Counting up black swans

Craig Chatterton, director of crop nutrition at The McGregor Company, mapped out some of the causes behind the rise in the cost of fertilizer. These causes, which Chatterton called "black swan events," began in mid-2020 when two North American phosphate companies went to the Federal Trade Commission (FTC) and accused Russia and Morocco of manipulating the cost of fertilizer. Chatterton said on the day they filed that petition, all imports of MAP and DAP (and some liquid phosphate fertilizer) essentially stopped.

"All of sudden, you see this rise, about \$300 per ton on phosphate fertilizer, as the courts figured out if this is real or not real," he said.

The next black swan event happened in January of 2021. The U.S. Department of Agriculture lowered the yield estimate on corn and increased ethanol demand. Corn farmers realized they needed to grow more corn, which increased demand for nitrogen, urea, ammonia and UAN. In February, a deep freeze hit the Mississippi River region and wiped out almost all of the nitrogen production in North America, most of which happens within about 20 miles of the river.

"You've got this pent-up demand to grow more corn to



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make more ethanol, just in time for us to shut down all of our nitrogen markets. So fertilizer prices tick up again," he said.

The next thing that happens is CF Industries, which is the largest producer of UAN in the U.S., filed an FTC petition against Russia and Trinidad and Tobago in June 2021. That stopped most UAN imports and caused a "lack of competition on all things nitrogen." In September 2021, the Indian palm oil market took off and sucked up what little bit of potash was still available.

"If all that wasn't bad enough, you have, all of a sudden, the mother of all black swan events, and Russia invades Ukraine," Chatterton said. "That's kind of a history of how we got to where we are on this high-priced fertilizer."

Fortunately, there has been some demand destruction as growers around the world reacted by using less fertilizer. Both anhydrous ammonia and urea prices have dipped a bit, but Chatterton expects them to continue to be high until the Russia/Ukraine situation is resolved. UAN dropped in mid-2022, but then started climbing again. International DAP and potash prices are both slowly declining internationally, but not so much in the U.S. as manufacturers are trying to hang onto the higher prices.

Chatterton highlighted several things producers should watch, including:

- European natural gas. They don't have the infrastructure to quickly offload natural gas from marine vessels to replace what they'd normally get from Ukraine and Russia.
- China, which is normally a large exporter of nitrogen and phosphate, has been nonexistent in the market since before the Beijing Olympics.
- At some point, the Russia/Ukraine war will end, and things will go back to some semblance of normalcy.
- Recent India tenders for urea showed that there was still available product on the market.

Economic outlook

Lawry Knopp, vice president of funding and hedging for Northwest Farm Credit Services, said 2022 has been a very unusual economy, with two quarters of negative GDP growth followed by a 2.9% growth in the third quarter (most forecasters were calling for a .5% GDP rise in the fourth quarter).

"Looking into the first half of next year, I think we will probably see growth that's barely positive or barely negative," Knopp said. "It's possible we could see a repeat

of what we saw this year, based on what happens with growth and potential recession."

The latest report put inflation up at about 7.7% year over year. The outlook for the Consumer Price Index is between 5% and 6% for the first half of the year, moving down to between 3% and 4% by the end of the year. Knopp expects the Fed to look for a sustainable, downward trend in inflation before they stop hiking interest rates.

As far as a recession goes, Knopp said there are several indicators strongly signaling a recession, including an inverted yield curve, where the two-year treasury yield is higher than the 10-year treasury yield, and the equity market.

"Every time we've had a 20% decline in the S&P 500, we've either been near a recession or in recession," he said.

Equipment supply breakdown

Mike Meads, an account manager for RDO Equipment Company, said they've felt supply chain constraints in all of their regions, and parts continue to be a struggle for dealers to get. RDO has locations in the U.S., Australia, Russia and Ukraine.

"My advice would be if there are parts you use during the year that you know you're going to use, one, they will never be cheaper than they are today, and two, stockpile them in your own shops," he said. "Both whole goods and parts wise, the days of going to the dealership and thinking, 'I'll just run in when I need it and pick it up,' unfortunately, for the foreseeable future, those days are gone."

Meads advised growers to prebuy everything they can



and to take advantage of manufacturers' early order programs if possible. Most deliveries for new equipment are a year out. In addition, dealer allocations have been cut, and internet sales teams are selling from lots across the U.S., meaning the days of seeing equipment on dealers' lots are gone.

"The pipeline is empty. We thought when the Russia-Ukraine war came, we would be able to get their allocation of equipment for the U.S. market," Meads said. "They are still farming over there. I think a lot of people thought the war was basically going to shut the countries down. Our stores are open every day in both of those countries."

The new equipment situation has put a strain on the used equipment pipeline, as has the international appetite for lower-hour used equipment. Most experts say the used equipment industry is three to five years away from stabilizing — if things were to turn around today. While some used equipment is getting easier to find, Meads said four-wheel drive tractors, sprayers and anything with tracks are still very popular.

"Stay in good communication with your representative from whatever dealer you work with. Communication is key on both new and used equipment," he said. ■

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Three industry stakeholders joined Michelle Hennings (right), executive director of the Washington Association of Wheat Growers, on a panel discussion covering the lower Snake River dams at the 2022 Tri-State Grain Growers Convention. From left are Heather Stebbings, executive director of the Pacific Northwest Waterways Association; Tom Kammerzell, a commissioner with the Port of Whitman; and Alex McGregor, chair of the board of directors for The McGregor Company.

Delving into the dams

'SEA CHANGE' IN ADMINISTRATION'S STANDARDS FOR OPERATION OF SYSTEM

Growers at the 2022 Tri-State Grain Growers Convention had the opportunity to hear a panel of ag industry stakeholders share their perspectives on the fight to preserve the lower Snake River dams.

Sitting on the panel were Alex McGregor (AM), chair of the board of directors for The McGregor Company; Heather Stebbings (HS), executive director of the Pacific Northwest Waterways Association; and Tom Kammerzell (TK), a commissioner with the Port of Whitman. The panel was moderated by Michelle Hennings, executive director of the Washington Association of Wheat Growers.

Q. What got us here legislatively and in the courtrooms in regards to the dams?

HS. Our salmon issues began back in the 90s when we started to see the listing of salmon under the Endangered Species Act. With those listings, the U.S. Army Corps of Engineers now had to start operating the dams with respect to the fish. They had an overlay of their operations,

saying "how do we make sure we are not jeopardizing the future existence of salmon and steelhead populations?" As part of those plans, the National Oceanic and Atmospheric Administration Fisheries issued biological opinions for how to do that. Each one of those plans has been litigated. In 2020, the Administration released a new plan, and it was litigated right away. This time, however, things shifted a little bit. The Administration came out last year and said, "We are really tired of being in the courtroom, and we want to take a pause in this litigation and see if we can negotiate a settlement with the plaintiffs on how to move forward." They extended that stay through August 2023.

We have now entered the mediation phase of the discussion. As part of this, the Administration has laid out a number of commitments that they are going to adhere to throughout the process, and one of them is to give a hard look at dam breaching. We have not seen an administration do this in the past. This is a sea change, and they've

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gone from making sure we are not jeopardizing the existence of the species and switched to how can we get to harvestable and abundant populations. That's a very different standard than we've been litigating about.

We've also have had a number of processes in the government relations realm. We had Congressman Simpson (Rep. Mike Simpson, R-Idaho) a few years ago come out with a plan to breach the dams and to try to look holistically at an agreement to do that. The price tag was \$34 billion. We saw Sen. Murray (Sen. Patty Murray, D-Wash.) and Gov. Inslee (Washington Governor Jay Inslee) go through a significant process last year. Ultimately, the recommendation they came out with was that dam breaching was not viable at this time, but that they do want to look at ways to make investments today and over the next several years to get to a point where dam breaching might be a viable option should the region want to take that action. It's really concerning to have some of our top leaders making big shifts in how they are approaching this issue.

AM. The Endangered Species Act was developed, as its title indicates, to make sure a species would no longer be endangered. Choosing to abandon that and go instead for "abundant" levels begs the question, compared to what? Some breaching advocates claim salmon and steelhead numbers have fallen 90% and that, before Meriwether Lewis and William Clark canoed down the rivers, 7.5 to 16 million fish traversed the streams every year. No one knows; there were no fish counting stations until the first dam, Bonneville, was built in the late thirties. And fish were aggressively harvested with salmon canneries galore and gillnetting before the dams existed. Fish counts at the newly built Bonneville were usually in the range of 600,000 per year. When the Pacific, where salmon spend most of their lives, is in a periodic cool cycle the numbers reach 1.4 million or more, as they have in two such cycles since 2000, with a third one underway. When it warms, we fall back toward where we started. The dams can't fix damage done before the dams were here nor can they cool warm ocean waters.

TK. The other piece that's concerning to me is decisions are being discussed without looking at scientific data. It's being emotionally driven.

Q. Sound science has always been crucial to agriculture. Can we bring more science to bear to find a rational way to resolve this issue, and how can we make the case for healthy rivers and a healthy economy?

AM. Absolutely. Yes. There is sound science available. The biggest challenge we face is losses of salmon dur-

ing the three years they are out in the ocean. Significant dollars were set aside in the infrastructure package of last year and in the so-called Inflation Reduction Act. There are 157 projects in the state of Washington, fisheries projects just east of the Cascades, that are waiting for funding. It's a great opportunity to move forward and get real science to address these problems.

It was interesting that NOAA fisheries in their Seattle research office has done a lot of looking at salmon issues. The key one they came back with is returns on salmon through our dam system are very high, in the upper 90s at each one of them. There are other things we need to do to really make progress. Habitat offers hope. If we can have money go to improving the habitat we have, if we can have money go to culvert improvement and other things, and above all, money going to science, we are going to come up with something. I've believed for a long time we can have healthy rivers and a healthy economy.

TK. In Washington state, the maximum water temperature is 68 to 70 degrees for the salmon. There's a problem when the water coming in from Idaho is between 74 and 76 degrees. You can't cool it, and the dams are being blamed for the warm water. The Corps of Engineers has temperature data that they took between 1952 and 1957, and it shows the maximum water temperatures exceeded the Washington standards each and every year, with the maximum temperature being 79 degrees in 1956, and it stayed over that maximum for 80 consecutive days. The key? There were no (lower Snake River) dams. You've got to look at the science.

The other thing they keep talking about is using the rail system in lieu of the river system. The Washington Joint Transportation Committee did an analysis of rail traffic. By 2035, rail traffic coming from Spokane down to Pasco is predicted to be 130% of capacity.

We have a chokepoint along the north side of the Columbia River where there's only one track, and there's no room for expansion. The river and the rail are about 30 feet apart. The rail to the road is about 30 feet, and the road to the basalt bluffs, which are 400 feet tall, is 30 feet. So, you'd have to drill and blast 30 feet, but I'm pretty sure the Tribes and the historical groups aren't going to be in favor of that.

HS. I agree, it would be very difficult to build the infrastructure needed to move all the barged cargo to rail and truck. Just on the Snake River, it would be about 40,000 additional rail cars. When we look at the trucking side of things, it would take 162,000 semitrucks to replace barg-

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ing. Just this past year, the American Trucking Association released information that said we have a shortage of 80,000 truckers in the U.S., and that will go to a 160,000 shortage by 2030, so we wouldn't even have the truckers to move a lot of that cargo.

Related to the fish, when we look at the Snake River, those are only four runs of fish that are endangered — four out of the 14 in the entire Columbia River Basin. You are not going to address all the issues for salmon by breaching the Snake River dams.

What we've been trying to advocate for is the fact that there are a lot of things we know, based on the science, that will work. If anybody has gone to Bonneville Dam or out to Astoria, you've seen the sea lions ready to eat the buffet of salmon that is coming back, so addressing predator issues, making the habitat improvements, that's where we've been trying to focus our efforts. How do we work together to get that low hanging fruit in place?

Q. For years, hydropower has produced clean, renewable and affordable energy in the Northwest. We've heard that hydropower generated by the Snake River dams can easily be replaced with other types of green energy. Is that the case?

HS. The short answer is no. Hydropower is extremely flexible and adaptable. It's the only green energy source that can essentially go from 0 to maximum output extremely quickly. If you want to flip on your light switch, hydropower can support that immediate need. Everybody comes home from work at 5 p.m. and wants to turn on the air conditioner (in the summer). There's a high, high demand for that power. Hydropower is what provides that additional flexibility.

We all know the sun doesn't always shine, and the wind isn't always blowing. There's no real way to store the green energy produced from those other energy sources yet. The technology just isn't there. Hydropower provides 80% of the renewable energy in the Northwest. It provides 50% of the total energy we use. If we remove the dams, there's no green way to replace that. We look at the new climate goals coming down the pipe, both state goals and federal goals, we are looking at the electrification of essentially everything. We have a big power surge we are going to need to address as we work to electrify our region.

AM. The energy loss if we don't have these hydropower sources is enough to serve the energy needs of the homes in Seattle, Portland, Spokane and Boise all put together. In addition, when you think of alternative sources, one wind turbine takes 900 tons of steel, 2,500 tons of concrete and 45 tons of plastic. The Benton County wind farm is

proposed to have 244 turbines. That's 72,428 acres or 113 square miles.

TK. A good example of green energy is California. They are the green state for solar and wind, but if one's memory goes back to just September when they had a little warm spell, 51% of their energy was coming from the Columbia-Snake River System. That's when they were asking their electric vehicle owners to not plug them in. The quickest, most efficient, carbon-friendly battery is that water behind the dams.

HS. The technology (for alternate green power sources) will get there because there are tons of people working on doing that right now. But you are kind of trading one issue for another issue when you are building wind towers. There's no way to recycle wind blades. Where's the balance with that? We are looking to build solar panels. What about the copper and all the things needed for the batteries? For the build-out component, if you were to double the rate of building out our wind towers and our solar arrays and things like that, we still would not meet the climate goals of Washington state until 2070. The goal of the governor is 2045.

Q. We've been worried about the dams for many years, yet they are still here. Breaching seems so far-fetched and irrational, maybe it will fade away. Do we need to keep fighting this notion, and what can farmers do?

AM. I think it is folly to assume that storm clouds looming on the horizon will be ones you can just wait out, and there will be clear skies after that. I think we have an opportunity to be part of our own future, part of our own destiny, but we won't get there being quiet. Yes, absolutely, there are more issues. And yes, absolutely, we will have to kick it up again, and we've been doing it for a long time. I first testified on this 25 years ago. It's been a long fight for everybody, but I think we've held our own as agriculture, and I think we are helping people get a better understanding. Most people really aren't that familiar with us anymore. They are three generations or more removed from the farm. Most people are willing to listen. We just have to get out and reach them. We can't just assume this will go away, or others will do their best to ram through ideas harmful to agriculture, jobs and the economy. When we pull together, we win the day. Takes a while sometimes, but we hold our own. We should accept nothing less.

TK. Two percent of the population is feeding the other 98%. We've got to remember that. I just looked at my check for some wheat we just sold. Thirteen percent was going to transportation and fuel costs. If the dams were to go away, it would not be a far stretch to think that could double if

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you only have the rail system. If you remember back a few years on the Bakken crude, railcars that were \$350 went to \$3,500 because they didn't want ag products on the rail. We have the highest quality wheat in the world. We need to feed the world if possible, and we need those transportation costs to stay down. The only way to do that is to keep the dams, the river system, the river freeway.

HS. I don't believe this issue is going anywhere. There've been quiet times, there've been loud times, but I'd say those quiet times are getting smaller and smaller. There is a solid, steady drip coming from environment groups and the Tribes about the dams. They've had the long game in mind. We need to be collectively thinking about the long game, and we need to continue this steady drip of information to our legislators.

We need to think about new and different ways to tell our story. Things have become so polarized on the right and on the left, and we have less and less people in the middle ground who are willing to work together. Unfortunately, the west side wants to make decisions for the east side. We have to try to resonate with them in some way, whether it's how they get their food and local food sources, or whether it's the greenhouse gas piece. We've also been trying to find different and new ways to partner with the Tribes, to help move their salmon restoration and hatchery investments forward. Thinking about the salmon issues in new and different ways takes a lot more brain power, creativity and collaboration than we've had to do in the past. It is not business as usual any longer, and we need to be driving the solutions going forward. ■

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Break-out session roundup

STRESS, FALLING NUMBERS, HERBICIDE RESISTANCE: CONVENTION HAD IT COVERED

The break-out sessions at the 2022 Tri-State Grain Growers Convention had something for everyone. Here are summaries of three of them.

When Stress is More than a Season

Lesley Kelly wants to spread seeds of hope and love across North America. The Canadian farmer and founder of the organization, High Heels and Canola Fields, provided growers with ways to identify and address stressors that have the potential to impact mental health.

Kelly discussed ways to show family and neighbors, rather than just telling them, that they have a community and resources through the acronym “Weathering the S.T.O.R.M.” Her main takeaways are that any person’s stress is real and valid and may be different from someone else. No matter where a person is in their journey, honor it. Process conflict with empathy, curiosity, gentleness and open communication.

PNW Herbicide Resistance Initiative

The nature of weed resistance is very insidious, and weed management strongly affects the long-term environmental and economic sustainability of Pacific Northwest (PNW) farmers. Strong support and advocacy efforts from PNW grain growers contributed to securing \$2 million annually to address herbicide resistance. Drs. Ian Burke, Washington State University (WSU); Steve Young, U.S. Department of



Lesley Kelly, founder of High Heels and Canola Fields, provided growers with ways to identify and address stressors that have the potential to impact mental health at the 2022 Tri-State Grain Growers Convention.

Agriculture’s Agricultural Research Service (USDA-ARS); and Judit Barroso, Oregon State University, presented on their coordinated efforts to improve weed management systems for PNW growers. Their vision for managing herbicide resistance is centered on collaborative, multistakeholder, region-wide action integrating multiple situation- and location-specific management practices. Their main objective is to develop a decision support system for growers to adopt integrated weed management into their ongoing farm management.

Low Falling Numbers in Wheat: An Update

Drs. Camille Steber, USDA-ARS; Amber Hauvermale, WSU Crop and Soil Sciences; and Alison Thompson, USDA-ARS, provided an update on the progress of falling numbers research. Their collaborative projects are working on wheat breeding for genetic resistance to low falling numbers and developing a rapid alpha-amylase enzyme immunoassay as an alternative to the falling numbers test. The rapid test, based on the same methodology used for vomitoxin (DON), will soon begin field beta testing. The first iteration of the test should be able to give growers a quick “low” or “high” indication, so that they will know if there is the presence of a low falling numbers issue so the grain can be separated and tested further to get an exact number.

Thompson provided discussion on potential sources of improvement of the rapid test in the future, drawing from her experience with similar quality testing processes that are used in the cotton industry. ■

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Legislative launch

GROWERS TO BEGIN 2023 ADVOCACY WITH OLYMPIA, D.C. TRIPS TO MEET WITH LEGISLATORS

The Washington Association of Wheat Growers (WAWG) is gearing up for some heavy legislative lifting in 2023. There's a lot of big issues on the state agenda, including amending the state's agriculture overtime rule to include a seasonal exemption, protecting against restrictive riparian buffer rules, and continuing to advocate against breaching the lower Snake River dams.

Wheat growers will be heading to Olympia for the annual Olympia Days advocacy trip Jan. 22-24, 2023. Growers will meet with as many legislators from both sides of the aisle as possible to talk about the state's wheat industry and the issues growers are facing. With a return to in-person meetings, WAWG is putting out the call for growers and landlords, especially those who live on the west side, to participate.

"Legislators like to meet with members of their own districts, so it's important that we include WAWG members from as many districts as we can in our Olympia Days trip," explained Michelle Hennings, WAWG's executive director. "Many urban legislators probably don't realize that they have ties to agriculture on the east side through retired farmers and landlords. It can be eye-opening for urban legislators to see how something like a riparian buffer implemented hundreds of miles away may negatively affect their constituent because that constituent happens to be an agricultural landlord."

Growers will visit legislators' offices in small groups, armed with talking points and handouts on wheat industry priorities. WAWG will also be handing out cinnamon rolls and coffee in the Capitol Building during the trip. WAWG members who want to participate in the Olympia

Days event should contact the WAWG office at (509) 659-0610 for more information.

See page 18 for a preview of the 2023 Washington State Legislative Session.

On the federal front, work begins in earnest on the 2023 Farm Bill. WAWG will be working with the National Association of Wheat Growers (NAWG) to make sure the wheat industry has a seat at the table. Priorities for the wheat industry include making sure crop insurance continues to work for wheat growers, raising the Price Loss Coverage (PLC) reference price to better reflect the cost of growing wheat, and continued funding for voluntary conservation programs.

WAWG leaders and staff will be traveling to Washington, D.C., at the end of this month to participate in NAWG's winter conference. While there, they will spend a day on the Hill, meeting with members of Washington state's federal delegation.

"As the dust settles from the 2022 elections, we expect to see both the House and the Senate ag committees ramping up hearings and discussions on the 2023 Farm Bill," Hennings said. "We are working with NAWG to find additional resources to help fund our priorities, especially raising the PLC reference price as we know it's a big ask. Some of our other federal priorities include protecting and expanding our markets, keeping conservation programs voluntary and incentive-based, and making sure growers have access to the inputs they need to grow a crop."

For more on the wheat industry's 2023 Farm Bill priorities, see page 20. ■



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	Shelley Kloba	D-Kirkland		Paul Harris	R-Vancouver		Mia Su-Ling Gregerson	D-SeaTac
2	Andrew Barkis	R-Lacey	18	Stephanie McClintock*	R-Vancouver	34	Emily Alvarado*	D-West Seattle
	J.T. Wilcox	R-McKenna		Greg Cheney*	R-Battle Ground		Joe Fitzgibbon	D-Burien
3	Marcus Riccelli	D-Spokane	19	Jim Walsh	R-Aberdeen	35	Dan Griffey	R-Allyn
	Timm Ormsby	D-Spokane		Joel McEntire	R-Cathlamet		Travis Couture*	R-Allyn
4	Suzanne Schmidt*	R-Spokane Valley	20	Peter Abbarno	R-Centralia	36	Julia G. Reed*	D-Seattle
	Leonard Christian*	R-Spokane Valley		Ed Orcutt	R-Kalama		Liz Berry	D-Seattle
5	Bill Ramos	D-Isaiah	21	Strom Peterson	D-Edmonds	37	Sharon Tomiko Santos	D-Seattle
	Lisa Callan	D-Isaiah		Lillian Ortiz-Self	D-Mukilteo		Chipalo Street*	D-Seattle
6	Mike Volz	R-Spokane	22	Beth Doglio	D-Olympia	38	Julio Cortes*	D-Everett
	Jenny Graham	R-Spokane		Jessica Bateman	D-Olympia		Mary Fosse*	D-Everett
7	Jacquelin Maycumber	R-Republic	23	Tarra Simmons	D-Bremerton	39	Robert Sutherland	R-Granite Falls
	Joel Kretz	R-Wauconda		Drew Hansen	D-Poulsbo		Carolyn Eslick	R-Sultan
8	Stephanie Barnard*	R-Pasco	24	Mike Chapman	D-Port Angeles	40	Debra Lekanoff	D-Bow
	April Connors*	R-Kennewick		Steve Tharinger	D-Sequim		Alex Ramel	D-Bellingham
9	Mary Dye	R-Pomeroy	25	Kelly Chambers	R-Puyallup	41	Tana Senn	D-Mercer Island
	Joe Schmick	R-Cofax		Gynda Jacobsen	R-Puyallup		My-Linh Thai	D-Bellevue
10	Clyde Shavers*	D-Oak Harbor	26	Spencer Hutchins*	R-Gig Harbor	42	Alicia Rule	D-Blaine
	Dave Paul	D-Oak Harbor		Michelle Caldier	R-Port Orchard		Joe Timmons*	D-Bellingham
11	David Hackney	D-Tukwila	27	Laurie Jenkins	D-Tacoma	43	Nicole Macri	D-Seattle
	Steve Bergquist	D-Renton		Jake Fey	D-Tacoma		Frank Chopp	D-Bremerton
12	Keith Goehner	R-Dryden	28	Mari Leavitt	D-University Place	44	Brandy Donaghy	D-Everett
	Mike Steele	R-Chelan		Dan Bronoske	D-Lakewood		April Berg	D-Mill Creek
13	Tom Dent	R-Moses Lake	29	Melanie Morgan	D-Parkland	45	Roger Goodman	D-Kirkland
	Alex Ybarra	R-Quincy		Sharlette Mena*	D-South Tacoma		Larry Springer	D-Kirkland
14	Chris Corry	R-Yakima	30	Jamila Taylor	D-Federal Way	46	Gerry Pollet	D-Seattle
	Gina Mosbrucker	R-Goldendale		Kristine Reeves	D-Federal Way		Darya Farivar*	D-Seattle
15	Bruce Chandler	R-Zillah	31	Drew Stokesbary	R-Auburn	47	Debra Entenman	D-Kent
	Bryan Sandlin*	R-Zillah		Eric E. Robertson	R-Buckley		Chris Stearns*	D-Auburn
16	Mark Klicker	R-Walla Walla	32	Cindy Ryu	D-Seattle	48	Vandana Slatter	D-Bellevue
	Skyler Rude	R-Walla Walla		Lauren Davis	D-Shoreline		Amy Walen	D-Kirkland
						49	Sharon Wylie	D-Vancouver
							Monica Stonier	D-Vancouver

*Freshman Representative

Washington State Senators

1	Derek Stanford	D-Bothell	17	Lynda Wilson	R-Vancouver	33	Karen Keiser	D-Kent
2	Jim McCune	R-Graham	18	Ann Rivers	R-Vancouver	34	Joe Nguyen	D-West Seattle
3	Andy Billig	D-Spokane	19	Jeff Wilson	R-Longview	35	Drew C. MacEwen*	R-Union
4	Mike Padden	R-Spokane Valley	20	John E. Braun	R-Chehalis	36	Noel Christina Frame*	D-Seattle
5	Mark Mullett	D-Isaiah	21	Marko Lias	D-Mukilteo	37	Rebecca Saldaña	D-Seattle
6	Jeff Holy	R-Spokane	22	Sam Hunt	D-Olympia	38	June Robinson	D-Everett

Find contact information

for your legislator at leg.wa.gov

U.S. Senators

Patty Murray (D)	murray.senate.gov • (202) 224-2621
Maria Cantwell (D)	cantwell.senate.gov • (202) 224-3441

U.S. Representatives

Suzan DelBene (D) District 1	delbene.house.gov/ • (202) 225-6311
Rick Larsen (D) District 2	larsen.house.gov/ • (202) 225-2605
Marie Gluesenkamp Perez (D) District 3	Contact information not available
Dan Newhouse (R) District 4	newhouse.house.gov/ • (202) 225-5816
Cathy McMorris Rodgers (R) District 5	mcmorris.house.gov/ • (202) 225-2006
Derek Kilmer (D) District 6	kilmer.house.gov/ • (202) 225-5916
Pramila Jayapal (D) District 7	jayapal.house.gov • (202) 225-3106
Kim Schrier (D) District 8	schrier.house.gov/ • (202) 225-7761
Adam Smith (D) District 9	adamsmith.house.gov/ • (202) 225-8901
Marilyn Strickland (D) District 10	strickland.house.gov • (202) 225-9740

Congress in 2023:

U.S. House of Representatives

213(D)

222(R)

U.S. Senate

48(D)

49(R)

3(I)

State Legislature in 2023:

State Senate

29(D)

20(R)

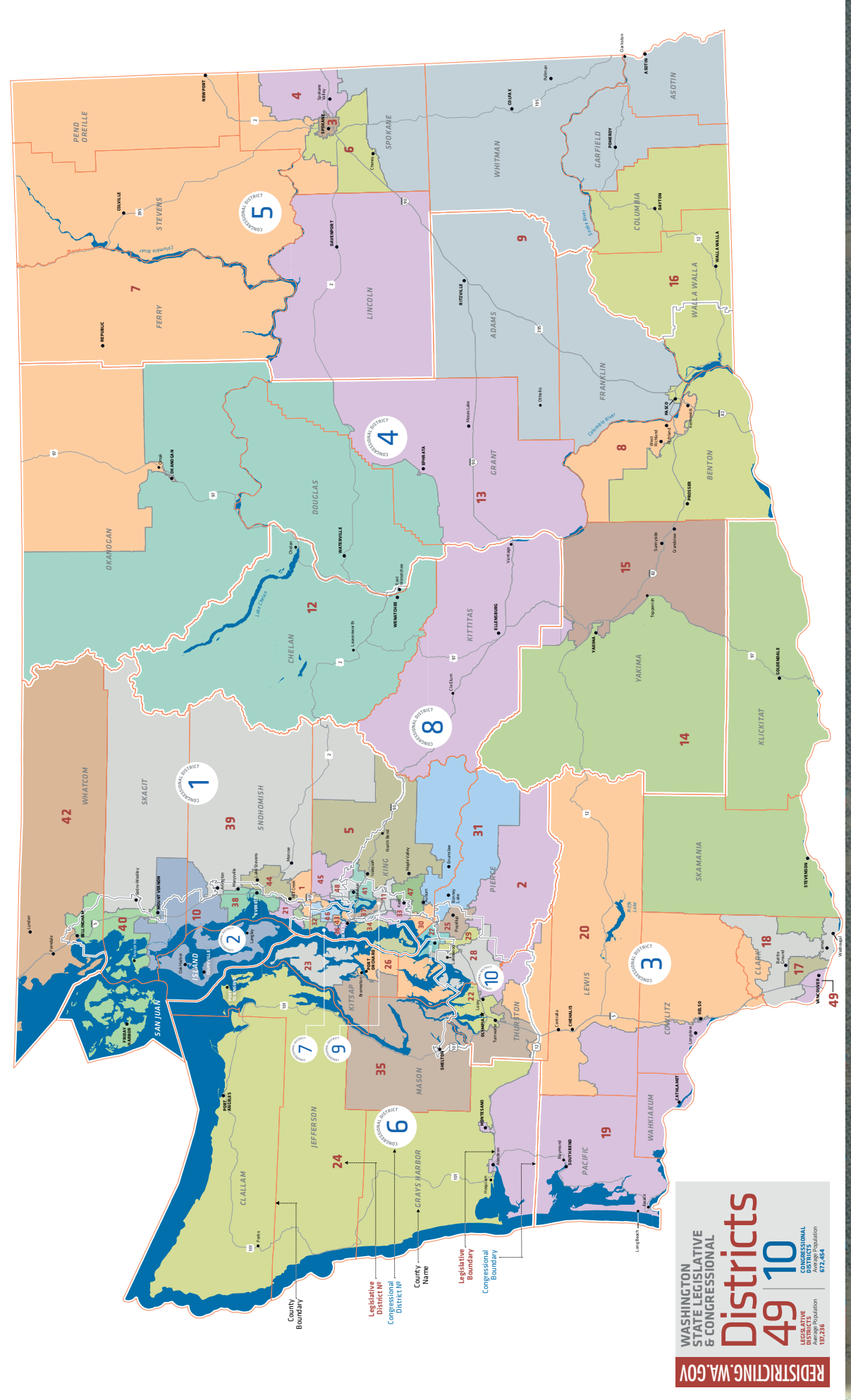
State House of Representatives

58(D)

40(R)

7	Shelly Short	R-Addy	23	Christine Roifes	D-Kitsap County	39	Keith L. Wagoner	R-Sedro-Woolley
8	Matt Boehnke*	R-Kennewick	24	Kevin Van De Wege	D-Sequim	40	Elizabeth Lovelett	D-Anacortes
9	Mark Schoesler	R-Ritzville	25	Chris Gildon	R-Puyallup	41	Lisa Wellman	D-Mercer Island
10	Ron Muzzall	R-Oak Harbor	26	Emily Randall	D-Bremerton	42	Sharon Shewmake*	D-Bellingham
11	Bob Hasegawa	D-Seattle	27	Yasmin Trudeau	D-Tacoma	43	Jamie Pedersen	D-Seattle
12	Brad Hawkins	R-E Wenatchee	28	T'wina Nobles	D-Fircrest	44	John Lovick	D-Mill Creek
13	Judy Warrick	R-Moses Lake	29	Steve Conway	D-South Tacoma	45	Manka Dhingra	D-Redmond
14	Curtis King	R-Yakima	30	Claire Wilson	D-Federal Way	46	Javier Valdez*	D-Seattle
15	Nikki Torres*	R-Pasco	31	Phil Fortunato	R-Auburn	47	Claudia Kauffman	D-Kent
16	Perry Dozier	R-Walla Walla	32	Jesse Salomon	D-Shoreline	48	Patty Kuderer	D-Seattle
						49	Annette Cleveland	D-Vancouver

*Freshman Senator





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CHAIRMAN

WASHINGTON GRAIN COMMISSION

By Mike
Carstensen



Last month's article ended wishing you the best "Sandwich Season." Now that you've eaten your sandwich (Grandpa Henry enjoyed his Billy Burger), we hope you have a healthy, happy and prosperous New Year. It's time to reset from the last season to this coming year. Bear with me as I consider the topics that quickly come to mind for W.H.E.A.T.

W: Washington, naturally, and our friends at the Washington Association of Wheat Growers (WAWG).

Thinking of WAWG, it was good to see so many participated in the Tri-State Grain Growers Convention in Coeur d'Alene, Idaho. There were many outstanding speakers discussing the current economic landscape and what it means for Pacific Northwest farmers. Keep in mind, WAWG is a great platform for lobbying, educational and grassroots efforts to influence policy.

H: Herbicide resistance. I've been impressed, so far, regarding the Pacific Northwest Herbicide Resistance Initiative

from Washington State University (WSU, also another "W") and the U.S. Department of Agriculture. Its first objective is to develop a decision support system for growers to adopt integrated weed management into their ongoing farm management. Read more about this topic in the June issue of *Wheat Life* at <https://bit.ly/3yJ5hDc>.

At the WGC, we understand that research is a primary avenue to accomplish our mission of enhancing the long-term profitability and competitiveness of Washington grain farmers. Join us on Feb. 15 for the research review, where growers can guide the research we all want and need. This is a critical feedback loop for the WSU research and crop improvement programs. Please consider attending if you are able.

E: Education and Extension. The WGC increases grower and constituent education efforts through grower meetings, print media and Extension efforts. Some examples are this magazine, Wheat Week, the Variety Testing Program plot field days, and internal and external market crop update presentations. This also includes public

relations efforts and collaboration with industry partners to benefit all of us. Hosting and participating in trade team visits, as well as coordinating media interviews, are additional examples. Concerning Extension, I know there was some distress with several unfilled Extension positions. I should mention WSU is working diligently to fill these if they already haven't.

A: AMMO. Thinking of education, watch for WAWG's Agricultural Marketing and Management Organization (AMMO) grower workshop schedule that will likely be released this month. These are great opportunities to acquire knowledge that could help your operation thrive.

T: Transportation and trade. Two big things on transportation are 1. Fish and farmers can coexist, and 2. In early December, we all kept an eye on the looming rail strike. As I write this, it is yet to be determined how the railroads will handle continued struggles with worker shortages as supply chains remain backed up. Our friends at WAWG continue to monitor transportation issues that could impact Washington grain growers. This is one more example of why your WAWG membership is so important.

On the trade front, The WGC participated in two international crop quality tours with U.S. Wheat Associates in November to South America and South Asia. Many topics were covered that resulted in a deeper technical knowledge for our customers and many good project ideas on the WGC side. WGC Commissioners Gary Bailey and Ben Barstow were active, engaged and valuable participants on these trips. Their presentations provided important messages regarding sustainable production and thoughtful decision making that ensures a high-quality, safe food supply. Continuing these types of activities allows the WGC to provide critical information to customers and provides an opportunity for U.S. participants to learn about the needs and challenges of customers. These trips are key to strengthening our relationships with overseas customers and help demonstrate the transparency and reliability of the U.S. export system, leading to increased market opportunities.

While this is my initial W.H.E.A.T. list, I hope you have your own as you begin the new year. Next month's column will be penned by a new chairman, as your WGC officers will rotate this month. It has been a pleasure to serve the wheat farmers and landlords who make the WGC and its activities possible. Thank you for your support. Again, I wish everyone a happy, healthy and prosperous New Year. ■

You Are Invited!

What: WSU Research Review

When: Wednesday, Feb. 15

Where: Pullman

Growers are invited to engage with WGC-funded scientists on their current research progress. The event will run mid-morning through the end of the day. Full details will be posted to wagrain.org and social media.

Finding foodprint harmony

How can industry reconcile with less carbon and more plant-based foods and food variety?

By Jennifer Ferrero
Special to Wheat Life

The carbon footprint refers to the amount of fossil fuels a person or entity uses to live or generate something. The foodprint is how much energy or power it takes to make, transport and consume food. More people are thinking about the impact of the foodprint, and how it plays into eating, cooking and ordering from our favorite restaurants.

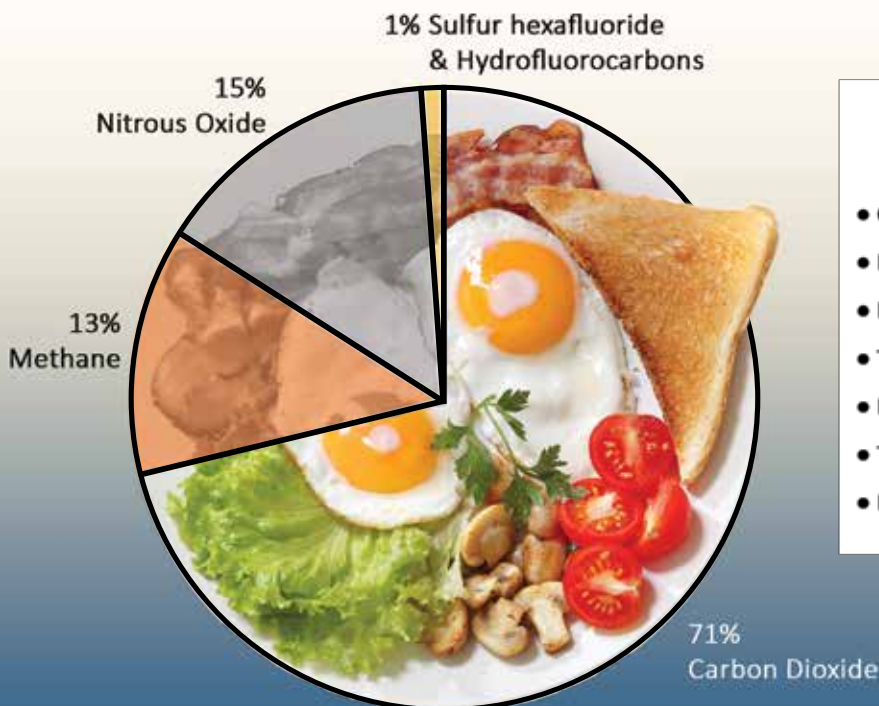
Bananas on the produce shelf in January in Spokane, Wash., have likely been transported from Costa Rica, over 4,000 miles away. In contrast, apples on the shelf may have come from Wenatchee to Spokane, 171 miles away.

What's included in a carbon foodprint? Carbon dioxide, methane gas (decomposition), nitrous oxide (fertilizer), and electricity. It includes emissions from food, electricity, agriculture, transportation and decomposing trash. Is using less energy through transportation and production better for the foodprint of a product and the planet? Let's dive in to find out what a restaurateur, chef consultant and food scientist think of the foodprint and its impact.

THE RESTAURATEUR

Adam Hegsted is a well-known regional chef with seven restaurants, a brewery, a catering company and a commissary. He has been in restaurant ownership for

**Food contributes to up to 25% of Americans' total annual carbon footprint.
Of that, your carbon FOODprint is made up of:**



**YOUR CARBON FOODPRINT
includes emissions from:**

- Crop fertilizer & production exhaust
- Packaging
- Livestock digestion & manure treatment
- Transportation exhaust
- Electricity (refrigeration, A/C)
- Trash or recycling leftovers
- Decomposition of food

Source: Barb Stuckey, Mattson, Wheat Foods Council Future of Food Forum, April 2022

nine years and the industry for 27 years. His eateries have food themes like French, Mediterranean, Spanish, modern American classic, brunch and European pub.

The varieties of food are endless, but the regionality of the food is specific. When Hegsted thinks about the foodprint, he said, "It's what it takes (emissions wise) to get food or drinks to our doorstep to where the food/drinks end up going."

Because of his awareness of food procurement, Hegsted pays attention to the food community and his patrons.

When developing a new restaurant, he said, "We start with the vision and the direction of the restaurant, then we start with what's local and seasonal. We take those two things and develop ideas from a combination of our experiences and the outcome of the food or drinks. Sometimes it's a traditional idea that we add modern techniques to or vice versa, take a modern technique and add elements of the traditional dish. The idea is to create something with a unique thumbprint for that restaurant in a particular time and place."

He said that these considerations set them apart from other chains or competitors. He wants patrons to have an Inland Northwest experience when they visit.

"So, when they come to our restaurants in the fall, they will find things grown or harvested in the northwest. Whether it's Mediterranean or American cuisine, it reflects the region through the ingredients we are using," Hegsted added.

Another facet of menu creation is understanding food trends and what will interest patrons. He said that to incorporate vegetables or plant options, chefs traditionally add tofu to the plate or make vegetables as a side dish. It is usually more of an accompaniment, not a main dish. However, now with the option of tapas with small plates, it is easier to focus on the vegetables as the main dish. He also suggested that because people are more excited about global cuisines, that is opening more locally grown, plant-based options. He noted that

Chef **Adam Hegsted** just purchased Laughing Dog Brewery, "so that's where my mind is, but the magic created using the combination of wheat and hops is astonishing. With subtle and not-so-subtle transformations to both, we can create a wide range of brews. Then there are all the different breads and pastries. Pizzas, empanadas, tortillas. Just so many things to choose from."



public support of ethnic restaurants like Thai or southern Indian "can demonstrate that people are responding to them, which reflects the public's openness to try new things and their awareness of specific regions and flavors in a certain country."

THE CHEF CONSULTANT

Charlie Baggs of Chicago, owns and operates Charlie Baggs Culinary Innovations with his wife, Kathy. They've owned the business since 1999 and serve food ingredient manufacturers, associations and restaurant groups with menu and product development.

His customers ask, "What are 24 things you can do with barley?" He said they could work on soups, sauces, poke bowls, something Japanese, Chinese, Thai or Italian, and "we might go through Mexico and pick up a few regions" of culinary ideas.

Chef Baggs consults with about 1,500 companies per year with product development. He said that food science is the foundation.

"If you want to replicate something, you must understand its science. You can measure viscosity, color, taste, aroma and texture — science gives us tools to understand 'why is this craveable?' When we see patterns, you can make food more craveable."

He added that food science will always be a foundation of manufacturing. "Food science combined with culinary is the trend we are seeing."

The carbon footprint is something that Baggs has thought about in detail. But he said that reducing a carbon footprint can be confusing.

"When you choose a food in January or February in Chicago, was it grown in a hot house or transported from Mexico?" ►

Chef **Charlie Baggs** says, "Probably the biggest thing is educating the consumer on gluten and protein; it is so versatile it pairs well with almost anything else."



He prefers the idea of seasonal foods and foods that people can preserve.

He said that restaurant owners might pick bamboo plates, for example, when thinking about reducing a carbon footprint. But he said when they are recycled, they still produce methane gas (decomposition).

"Something that always happens is people think they are being green when they use bamboo plates. People are curious about how to help the earth."

THE FOOD SCIENTIST

Barb Stuckey is the chief innovation and marketing officer for Mattson, a food science company in California. She works with food and beverage clients, including some startups; mature multinational companies; commercial ingredient and food service suppliers. She said their role is to help with product innovation.

"The food system that we live in is not static. There are constant changes to the way people eat and think about eating. There are changes to the way we eat and live. Food must adapt to those changing behaviors," she reflected.

Stuckey works to launch new products that will solve problems for consumers. She also watches for innovations in agricultural technologies that may result in higher nutrition levels or provide convenience to consumers.

"Many (food companies) are mission-driven for reasons of animal welfare or environmental concern. But also, selling food that's healthy is important," she said.

There are also sustainability issues, leveraging fossil fuels and whether manufacturers can upcycle products like green banana peels into flour. She said that the most significant trend in food science is consumers are advocates for health. However, she doesn't think this means the end of convenience food.

"Sometimes people want to eat delicious, indulgent food. It's comforting. It's a form of escapism. This isn't going to go away. Cooking with nutritious foods can be inconvenient and expensive, so I think cheap, easy and unhealthy food will always exist. At least I hope it will! I can't imagine life without kettle-cooked potato chips!"

She remarked that people buy food based on ingredients and labels and "on personal belief and different dietary and convenience needs."

Another consumer trend is "being more mindful of the things in your life, and how they impact health, emotion and footprint. Some recognize intolerances to food or that the food that they've loved is not a sustainable

product. A lot of Gen Z are concerned about the environment and are making purchase decisions on sustainability," she said.

Scientist **Barb Stuckey** says "I would like more consumer education on how magical and special wheat is! It contains protein, and I don't think people understand this. Very few people have gluten intolerances, but it gets so much press! We love gluten at Mattson. We couldn't develop products without it. And who doesn't love pasta, pizza, bread and noodles?"



She said that much of carbon footprint is related to food.

"Our estimates are 15-25% of your personal greenhouse gas emissions is related to your foodprint. This starts at the agricultural level and how foods are distributed. There is water usage and fertilizer usage; there is more distribution to get them to market; refrigeration or freezing where foods are stored or held, which is a huge carbon foodprint."

Last, she said that keeping food fresh and food waste are two big contributors to the foodprint. "It goes from the consumer's home into a restaurant; there are more greenhouse gas emissions there from growing to consuming change. The largest percentage share of food waste happens at the consumer's household level — more is wasted at the household level than anything else."

IN SUMMARY

Food scientists, restaurateurs and chefs are working to understand consumer preferences and trends. Creating new technologies to reduce the "foodprint" through more seasonal and sustainable food impacts farmers, families and restaurants. But there is also much going on with new food development to encourage better health, fewer food allergies and other preferences. Personal beliefs and biological/nutritional factors are at play in developing fresh foods and what is served on our plates, bamboo or otherwise. ■

Convention panel provides marketing insights

Volatility in supply and demand are affecting grain marketing and prices across the globe, and these are important factors that play into farm management decisions for local producers.

Opening keynote panelists provided insights on the regional and global grain market at the 2022 Tri-State Grain Growers Convention in Coeur d'Alene, Idaho, on Wednesday, Nov. 30. The panel was moderated by Britany Hurst Marchant from the Idaho Wheat Commission.

Dr. Antonia Broyaka, a Ukrainian ag economist currently working at Kansas State University, provided an overview of the agriculture sector in Ukraine. Agriculture makes up a little more than 10% of the country's gross domestic product, but war has brought destruction to much of the ag infrastructure needed to get grain to the export market. This includes the soil in the fields, where in some places have been mined and in others are already scarred by bombs to the point where fieldwork is not possible.

"Farmers in the field wear bulletproof vests," Broyaka said.

More than 50% of the energy system has been destroyed, and it will take an estimated \$750 billion to rebuild and modernize Ukraine's economy, Broyaka said. In the meantime, Ukrainian farmers continue to harvest and sow. Next year, being able to source inputs needed for crops will be critical, she added.

Dr. Randy Fortenbery, the Thomas B. Mick Endowed Chair in Small Grain Economics at Washington State University, pro-



(From left) Dr. Randy Fortenbery, the Thomas B. Mick Endowed Chair in Small Grain Economics at Washington State University; Brian Liedl, the director of merchandising for United Grain Corporation; and Dr. Antonia Broyaka, a Ukrainian ag economist currently working at Kansas State University, took part in a global marketing panel at the 2022 Tri-State Grain Growers Convention. Britany Hurst Marchant from the Idaho Wheat Commission moderated the panel.

vided some insight on the global market landscape, where the war in Ukraine was not the only thing that was happening to the white wheat market.

According to Fortenbery, U.S. wheat was already very expensive compared to other exporters when Russia invaded Ukraine. COVID-19 lockdowns in Shanghai and poor crop conditions in 2021 are additional factors that contributed to "every cost of delivery going up," which created a premium for U.S. wheat in the global market.

"Make sure you have a plan that works for you, and don't chase headlines when making selling decisions," Fortenbery said. "As we move forward, look at the trends over the last several years."

Brian Liedl, the director of merchandising for United Grain Corporation and a commissioner on the Washington Grain Commission, provided a perspective on the industry side. Destruction of grain storage facilities in Ukraine has caused a severe loss in capacity. According to Liedl, with the main grain exporting hubs no longer available to Ukraine, the expectation was the U.S. would step in to pick up the slack, but that hasn't happened. The confluence of events, including the war in Ukraine, rise of inflation and strengthening of the U.S. dollar, means our goods are more expensive.

"We have a lot of great facilities, but all these things cost money. This has made it hard for the U.S. to be competitive in the world market," Liedl said.

When asked if the panel could provide a comparison to give attendees perspective on the damage in Ukraine, based on Broyaka's overview, Liedl did some quick mental math.

"That's (Ukraine's lost storage capacity) the entire storage available in the Pacific Northwest," Liedl said. ■

2022 WSU spring variety trial results

HELPFUL NOTES FOR VARIETY SELECTION

By Clark Neely

Extension Agronomist and Cereal Variety Testing Lead, Washington State University

The pendulum continues to swing back and forth for Washington spring wheat yields. After bumper yields in 2020 and historic drought in 2021, we saw a return to excellent yields for much of the state again in 2022. Yields and test weights were up across the board compared to 2021, which is no surprise. In fact, many yields in the high rainfall regions were competitive with the record yields seen in 2020. Some areas in the intermediate zone did miss out on some of the spring rains and therefore saw yields in those trials closer to average instead of above average. In the hard red spring trials, we saw grain protein between 0.2 and 1.1 percentage units higher compared to 2020. Walla Walla came in with the highest average trial yield at 98 bushels per acre, while Lind came in at the lowest with 29 bushels per acre. However, Lind did produce some impressive test weights, averaging 63.5 pounds per bushel, while Lamont came in with the lowest at just 56.5 pounds per bushel.

The dryland soft white spring trial consisted of 14 named varieties and 10 experimental lines while the hard red spring trial included 15 named and nine experimental lines in 2022. Of the named varieties, four were spring club wheats, one of which was named Roger (previously WA8325) in 2022. Roger is a Washington State University (WSU) variety that is the first spring club wheat with Hessian fly resistance. Roger will be available for commercial production in 2024.

The only other new named variety in the soft white spring trial in 2022 was TMC Lochaven from The McGregor Company, previously designated as TMC 2021. In 2022, TMC Lochaven generally landed near the trial average for both yield and test weight and more often than not had above-average grain protein. With the exception of the high rainfall zone, it tended to rank higher in 2021 for both yield and test weight as it held up to the dry conditions a little better than most, but grain protein remained higher than average.

In 2022, Tekoa, Ryan and Seahawk continued to dominate the over-16-inch precipitation trials. Variety rankings were inconsistent across the soft white spring wheat trials in the 12-to-16-inch precipitation trials in 2022, and hence, there was very little statistical difference among varieties when averaged across all sites. Not surprisingly, AP Coachman, Tekoa, Melba, Louise and Ryan rounded out the top five in the lowest rainfall zone. UI Cookie had a notably good performance in the 16-to-20-inch zone, tying Ryan for the top spot. Roger outyielded Melba by three to four bushels per acre in the 12-to-16-inch and 16-to-20-inch precipitation zones, though Melba took the top spot for spring club wheats in the greater-than-20-inch and the less-than-12-inch precipitation zones.

Table 1. 2022 WSU Extension Spring Wheat

Precipitation Zone=Irrigated						
VARIETY		MOSES LAKE	2-YEAR AVG. YIELD	AVG. TEST WEIGHT	AVERAGE PROTEIN	LODGING
SOFT WHITE SPRING		Yield (Bu/A)	Lb/Bu	%	%	
	IDO1902S	139	132	64.5	11.7	0
	IDO1702S	137	140	64.1	11.5	3
	UI Cookie	135	139	63.0	11.9	0
	WA8327	133	135	62.9	12.6	32
	WB6121	133	134	63.5	12.7	3
	YSC-603	132	131	62.5	12.2	3
	WA8354 CL+	131	135	63.2	12.3	0
	Tekoa	131	133	62.7	12.3	13
	WB6211CLP	129	126	60.0	12.8	0
	TMC Lochaven	129	134	62.7	12.1	0
	Roger (WA8325) ¹	129	135	64.0	11.0	13
	YSC-605	127	128	62.5	12.3	10
	WA8351	127	132	63.7	11.9	58
	IDO1404S	122	125	61.6	11.7	3
WA8321	95	117	61.4	11.8	92	
C.V. %	7	7	0.7	1.7	59	
LSD (0.05)	15	8	0.9	0.5	29	
Average	122	132	62.7	12.0	28	
HARD RED SPRING		Yield (Bu/A)	Lb/Bu	%	%	
	CP3099A	131.5	--	60.7	13.2	0
	Kelse	129	110	63.0	15.1	0
	WA8342	128	124	62.2	14.1	0
	AP Renegade	124	115	62.9	15.0	0
	CP3530	122	--	61.3	14.2	10
	SY Gunsight	119	114	61.1	13.9	3
	CP3055	119	--	63.2	15.0	23
	WB9662	119	116	62.4	15.2	0
	WB9623	117	--	59.3	15.3	57
	WA8356	116	117	61.1	15.2	23
	WA8359	115	116	61.4	14.0	0
	Buck Pronto	114	107	62.6	16.1	3
	AP Venom	114	110	60.3	14.3	0
	WB9668	114	109	62.2	15.6	0
	Glee	107	112	60.9	14.6	30
	Alum	106	99	61.4	14.8	27
Jefferson	99	--	61.1	14.5	73	
C.V. %	4	8	0.9	1.4	84	
LSD (0.05)	10	6	1.2	0.5	17	
Average	117	112	61.7	14.6	12	

Precipitation Zone=Fall-Planted Irrigated							
VARIETY		MATTAWA	MOSES LAKE	AVERAGE YIELD	2-YR AVG. YIELD	AVERAGE TEST WEIGHT	AVERAGE PROTEIN
HARD RED SPRING		Yield (Bu/A)	Lb/Bu	%	%		
	SY Gunsight	174	156	165	144	60.4	12.6
	Dayn ²	152	166	159	140	62.8	13.7
	AP Venom	153	155	154	140	60.3	13.6
	WB4303 (HRW Check)	153	153	153	141	61.2	12.9
	WB9662	142	135	139	126	62.0	14.5
	AP Renegade	139	136	138	131	61.8	14.8
	Kelse	124	143	133	122	62.0	15.1
	Jefferson HF	140	115	127	--	62.5	13.6
	WB9668	124	128	126	114	62.8	15.1
	C.V. %	6	10	8	5	0.8	1.8
	LSD (0.05)	18	32	13	5	0.6	0.3
	Average	142	134	142	132	62.0	13.9

at Variety Trial Summary

Precipitation Zone=>20"										
VARIETY	FAIRFIELD	FARMINGTON	PALOUSE	PULLMAN	AVERAGE YIELD	2-YR AVG. YIELD	AVERAGE TEST WEIGHT	AVERAGE PROTEIN		
	Yield (Bu/A)						Lb/Bu	%		
Tekoa	68	100	93	88	88	65	62.2	11.3		
Ryan	71	100	98	91	88	66	60.1	10.6		
WA8321	63	95	97	86	87	65	62.1	10.5		
Seahawk	71	94	97	86	87	64	61.7	12.0		
WA8354 CL+	70	87	88	84	86	64	62.8	11.2		
Melba ¹	69	98	90	81	86	60	61.4	11.1		
YSC-605	68	99	90	92	85	62	61.5	11.3		
UI Cookie	68	95	88	86	84	60	60.7	11.4		
IDO1902S	70	92	85	80	83	61	62.9	11.2		
Hedge CL+ ¹	68	90	90	77	81	60	63.0	12.0		
JD ¹	68	95	90	74	81	60	62.7	11.6		
Roger (WA8325) ¹	62	96	89	91	81	60	62.8	10.4		
TMC Lochaven	70	88	89	84	80	60	61.6	11.5		
WB6211CLP	57	88	89	78	80	59	60.1	11.7		
Louise	65	96	81	71	78	58	60.8	11.0		
AP Coachman	65	88	80	75	77	60	59.3	11.0		
WB6121	61	85	87	79	77	57	61.4	11.9		
AP Mondovi CL2	59	92	79	77	77	57	60.3	12.5		
C.V. %	5	3	4	5	7	6	1.4	5.0		
LSD (0.05)	6	7	8	8	5	3	0.7	0.5		
Average	67	94	90	83	84	61	61.7	11.2		
	Yield (Bu/A)						Lb/Bu	%		
Hale (WA8315)	43.3	41	46	44	44	64	60.0	14.2		
WA8330 ²	42	47	42	40	43	62	59.7	14.2		
Net CL+	37	45	44	37	41	58	59.0	14.5		
Glee	40	42	40	37	40	59	58.9	13.8		
Chet	33	42	46	38	40	55	59.9	15.0		
Alum	38	38	40	39	39	58	58.8	14.1		
SY Gunsight	36	39	38	35	37	59	58.1	14.0		
AP Renegade	35	37	39	35	36	57	56.9	14.3		
Lanning	31	42	36	37	36	--	55.8	14.8		
Kelse	34	38	37	35	36	53	57.7	14.9		
WB9668	36	35	35	35	35	54	57.6	15.7		
WB9662	33	37	37	34	35	52	57.8	15.1		
WB9303	30	39	31	34	33	53	58.5	15.2		
C.V. %	6	7	6	5	6	7	1.5	2.5		
LSD (0.05)	4	5	4	3	2	2	0.7	0.3		
Average	37	40	40	37	38	57	58.2	14.6		

¹Club Wheat ²Hard white wheat

There has been substantially more change in the hard red spring trial lineup in 2022. Croplan entered new varieties CP3055, CP3099A and CP3530, while WestBred entered WB9623, and the University of Idaho entered Jefferson. WB9662, Lanning and SY Gunsight were all dropped out of the dryland locations.

As we look at each of these new varieties in 2022, CP3099A and WB9623 stood out as having the best yield potential, landing in the top group in two out of four dryland precipitation zones. Both landed below average in most cases for test weight; however, WB9623 main-

Precipitation Zone=16-20"										
VARIETY	DAYTON	MAYVIEW	PLAZA	ST. JOHN	WALLA WALLA	AVERAGE YIELD	2-YR AVG. YIELD	AVERAGE TEST WEIGHT	AVERAGE PROTEIN	
	Yield (Bu/A)							Lb/Bu	%	
Ryan	55	55	76	65	110	72	49	59.8	11.3	
UI Cookie	58	53	78	66	100	71	47	59.7	12.0	
WA8354 CL+	58	48	73	68	102	70	46	61.1	12.1	
Seahawk	53	51	71	68	104	70	47	60.3	12.0	
YSC-605	57	54	64	68	109	70	46	59.9	12.0	
Roger (WA8325) ¹	58	53	65	65	99	68	45	61.7	11.0	
Tekoa	50	42	83	62	102	68	46	60.1	11.9	
WA8321	51	54	71	59	97	66	45	60.8	11.2	
AP Coachman	50	45	74	63	91	66	48	58.1	10.9	
WB6121	52	44	66	63	100	66	44	60.7	12.5	
Melba ¹	49	51	66	59	94	65	43	60.4	11.2	
TMC Lochaven	56	48	64	58	95	65	45	60.4	12.6	
IDO1902S	51	52	77	58	92	64	44	62.0	11.8	
AP Mondovi CL2	47	45	70	59	92	62	43	58.7	13.1	
Hedge CL+ ¹	42	44	72	64	92	62	44	60.9	12.2	
WB6211CLP	45	42	64	56	91	60	41	58.1	12.6	
Louise	40	40	67	56	89	60	43	59.0	11.7	
JD ¹	42	40	66	59	87	58	40	60.9	12.2	
C.V. %	5	6	7	5	4	7	8	1.8	3.8	
LSD (0.05)	5	6	9	6	6	3	2	0.8	0.3	
Average	52	49	71	63	98	66	45	60.3	11.8	
	Yield (Bu/A)							Lb/Bu	%	
WA8330 ²	30		31	27	26	29	56	60.7	15.7	
Alum	29		34	26	25	28	51	60.6	15.6	
Hale (WA8315)	25		28	25	26	26	55	60.5	16.3	
Chet	24		27	27	24	25	48	60.9	16.4	
Net CL+	22		29	26	24	25	51	60.8	16.3	
Kelse	28		26	24	23	25	50	60.0	16.1	
AP Renegade	29		23	25	21	25	53	58.0	15.4	
Glee	21		25	29	21	24	53	60.9	15.5	
SY Gunsight	27		18	23	21	22	47	59.5	15.6	
WB9668	22		24	22	21	22	49	59.9	18.1	
WB9662	25		20	24	19	22	47	59.8	16.8	
Lanning	22		14	19	29	21	--	58.7	16.5	
WB9303	14		13	17	16	15	44	60.2	17.5	
C.V. %	9		13	12	10	11	10	0.9	2.3	
LSD (0.05)	5		6	5	4	2	2	0.5	0.3	
Average	24		25	25	23	24	50	59.8	16.2	

tained grain protein near average, while CP3099A was last in all zones. CP3055 had a good showing in the less-than-12-inch zone, while Jefferson was near the top in the 12-to-16-inch zone, but both were only average or below average in the other zones. Jefferson had consistently average test weight and protein, while CP3055 generally had one of the lowest test weights and at or below-average grain protein. CP3530 was generally last for yield in most cases and had below-average test weight. Under irrigation, Jefferson had some significant lodging as well as WB9623. Straw strength seemed decent to good on the

remaining new varieties.

Hale, the most recent WSU hard red spring wheat release, was No. 1 in both the greater-than-20-inch and the 16-to-20-inch zones and was at or above average in the other two low precipitation zones. This made it the most consistently high-yielding variety in 2022. Seed for Hale should be widely available in 2024. Other varieties such as AP Renegade, Glee, Kelse and WB9303 were in and out of the top grouping and only rarely below average in the intermediate and higher rainfall regions. Net CL+, Chet and Alum continue to be reliable choices for the lowest rainfall regions as well.

At Moses Lake (the sole 2022 irrigated site), both AP Venom and SY Gunsight, which have dominated the irrigated trials the past three years, did not perform as strongly in 2022, with both landing within two to three bushels per acre of the trial average, while Kelse and AP Renegade landed at the top.

This was just the second year the variety testing program has conducted fall-planted hard red spring wheat trials. These trials reflect the latest trend in acres towards fall-seeded spring wheat following late potato harvests. On the two year average, SY Gunsight and AP Venom tied the hard red winter wheat check WB4303 and hard white spring wheat Dayn for the best yielders. Of these, AP Venom and Dayn had about 0.5 percentage units higher grain protein. WB9668 came in last for yield on average. Severe cold damage occurred at the Mattawa irrigated site in 2022, which the wheat eventually grew out of, but gave an excellent opportunity to take cold tolerance ratings, which were very consistent across replications. SY Gunsight stood out as the most tolerant, showing no noticeable cold damage and was indistinguishable from the WB4303 hard red winter wheat check. AP Venom, WB9662 and AP Renegade all showed some minor damage, while WB9668 was mostly killed off back to the crown.

Looking into the future, there are a number of promising WSU experimental lines undergoing seed increases and are under consideration for future release. WA8354 CL+ would be a direct replacement for AP Mondovi CL2, which is the only other two-gene Clearfield soft white



Growers talking by the Washington State University spring wheat variety trials following the Moses Lake field day in June.

spring wheat tested, excluding Hedge CL+ club wheat. WA8354 CL+ generally yields three to seven bushels per acre more than AP Mondovi CL2 in the higher rainfall areas with two pounds per bushel better test weight and 1 to 1.5 percentage units lower grain protein. WA8321 has been in the trials for two years and commonly yields in the top group, along with above-average test weight and low protein. While 2022 was the very first year WA8351 was tested in the program, it ranked number one in every single precipitation zone last year, along with having the No. 1 or 2 test weight in every zone as well.

Results from the 2022 high rainfall and irrigated regional summaries can be found in Table 1, while the low rainfall summaries can be found in Table 2. When possible, growers are always encouraged to view multiple years and multiple locations of data for making varietal comparisons to better estimate the stability in varietal performance across environments. A good variety is one that can reliably perform well across multiple environments. This article includes a two-year average for most entries, but three and five-year averages are available for some at smallgrains.wsu.edu/variety.

In coordination with other programs at WSU, University of Idaho and USDA-ARS, entries in the WSU Variety Testing Program are screened for disease resistance, insect resistance, acid soil tolerance, falling numbers, and end-use quality, among others. Be sure to check out these ratings in the final 2022 technical report on our small grains website (smallgrains.wsu.edu) or through our web-based variety selection tool at

Table 2. 2022 WSU Extension Spring Wheat Variety Trial Summary

Precipitation Zone=12-16"								
VARIETY	ALMIRA	ENDICOTT	LAMONT	AVERAGE YIELD	2-YR AVG. YIELD	AVERAGE TEST WEIGHT	AVERAGE PROTEIN	
SOFT WHITESPRING	Yield (Bu/A)				Lb/Bu	%		
	Roger (WA8325) ¹	46	59	59	52	35	61.1	10.7
	Ryan	55	55	56	52	36	57.8	11.2
	WA8354 CL+	45	56	53	51	34	61.2	11.5
	AP Mondovi CL2	45	52	46	50	34	58.4	12.2
	WB6121	49	52	47	49	33	59.4	12.2
	Seahawk	41	55	49	49	33	59.3	11.3
	YSC-605	46	54	54	49	32	58.8	11.8
	WA8321	38	61	47	49	34	59.6	10.7
	Hedge CL+ ¹	38	56	47	49	32	60.5	11.7
	UI Cookie	41	49	52	49	32	57.5	12.0
	Tekoa	46	54	48	48	33	59.1	11.7
	AP Coachman	38	60	40	48	34	55.1	10.3
	TMC Lochaven	45	50	47	48	34	58.5	11.8
	Melba ¹	38	56	46	48	32	58.3	11.2
	Louise	41	52	44	47	34	57.4	11.2
	JD ¹	34	55	44	45	31	60.0	11.9
	ID01902S	38	52	48	44	31	60.1	11.5
	WB6211CLP	37	51	40	43	31	55.8	11.8
	C.V. %	9	8	8	13	12	2.2	5.5
	LSD (0.05)	8	9	7	6	2	1.2	0.6
Average	42	55	48	49	33	58.7	11.4	
HARD RED SPRING	Yield (Bu/A)				Lb/Bu	%		
	Jefferson	42	64	54	55	--	59.8	13.9
	WA8355	45	53	57	54	34	60.9	13.2
	Kelse	39	57	57	52	33	59.1	14.5
	WA8330 ²	41	63	52	52	34	59.6	13.9
	Hale (WA8315)	46	56	56	51	33	60.7	13.7
	WB9303	41	51	59	50	31	61.4	15.0
	AP Renegade	37	55	54	50	32	60.0	14.2
	Glee	43	56	52	49	32	59.5	13.3
	Alum	37	58	47	49	32	59.2	13.6
	WA8356	38	56	52	48	32	58.4	14.5
	CP3055	35	59	50	48	--	54.3	13.8
	Net CL+	39	57	46	47	30	60.2	13.9
	Chet	36	51	51	47	31	61.1	14.2
	WB9623	38	57	50	47	--	58.3	14.1
	WB9668	42	48	51	45	29	60.2	15.2
	WA8357	36	50	50	44	28	61.6	14.4
	CP3099A	32	52	48	43	--	55.8	13.1
	CP3530	33	48	46	40	--	57.0	14.3
	C.V. %	9	10	6	12	12	3.0	7.2
	LSD (0.05)	7	11	6	6	2	1.6	0.9
Average	39	55	51	49	32	59.2	14.0	

Precipitation Zone=>12"								
VARIETY	BICKLETON	HORSE HEAVEN	LIND	AVERAGE YIELD	2-YR AVG. YIELD	AVERAGE TEST WEIGHT	AVERAGE PROTEIN	
SOFT WHITESPRING	Yield (Bu/A)				Lb/Bu	%		
	AP Coachman	37	33	32	34	22	60.4	10.4
	Tekoa	34	32	31	32	22	62.7	11.1
	Melba ¹	31	32	32	32	21	62.0	10.6
	WA8321	35	30	29	32	21	62.6	10.8
	Louise	34	33	29	32	21	61.5	11.1
	Ryan	35	31	29	32	21	62.7	11.2
	YSC-605	34	28	30	31	20	62.1	11.0
	Seahawk	32	30	29	31	20	62.1	10.9
	AP Mondovi CL2	34	31	26	30	20	61.5	12.6
	Hedge CL+ ¹	33	30	30	30	19	63.2	11.7
	TMC Lochaven	34	33	25	30	20	62.8	12.5
	ID01902S	33	26	28	30	19	63.4	11.6
	Roger (WA8325) ¹	33	26	28	29	19	63.0	10.9
	JD ¹	32	26	28	29	19	63.2	11.4
	UI Cookie	32	29	27	29	18	61.7	11.8
	WB6211CLP	31	28	25	29	19	61.1	12.0
	WB6121	33	28	25	28	18	62.7	12.3
	WA8354 CL+	27	29	25	27	18	62.8	11.7
	C.V. %	4	10	7	10	9	0.8	3.5
	LSD (0.05)	3	6	4	3	1	0.5	0.4
Average	34	30	29	31	20	62.4	11.3	
HARD RED SPRING	Yield (Bu/A)				Lb/Bu	%		
	CP3055	35	32	31	33	--	58.6	12.0
	CP3099A	34	32	32	32	--	59.2	11.8
	WB9623	32	31	26	30	--	62.3	13.3
	Net CL+	33	27	27	28	18	63.5	13.5
	WA8355	32	22	27	28	18	63.3	13.0
	Chet	28	26	27	27	18	63.7	14.0
	Glee	32	23	23	27	17	63.6	13.4
	Alum	30	24	26	27	18	63.0	13.5
	Hale (WA8315)	31	26	23	27	18	63.4	14.2
	Kelse	30	23	24	26	17	63.0	14.2
	Jefferson	25	26	26	26	--	62.5	13.6
	WA8356	31	22	23	26	17	62.8	13.8
	AP Renegade	31	24	23	25	16	62.1	15.1
	WA8330 ²	29	23	23	25	17	63.3	13.8
	CP3530	28	22	25	24	--	61.4	13.6
	WA8357	27	22	21	23	15	64.1	15.0
	WB9668	27	16	22	21	13	62.6	16.5
	WB9303	21	17	15	18	11	62.7	15.9
	C.V. %	8	9	7	10	10	1.0	4.3
	LSD (0.05)	5	5	4	2	1	0.6	0.6
Average	30	25	25	27	17	62.5	13.7	

¹Club Wheat ²Hard white wheat

varietyselection.cahnrs.wsu.edu/ or on the WSU Variety Selection tool mobile app. The Washington Grain Commission also publishes a Preferred Wheat Varieties brochure at wagrains.org/publications/ with end-use quality ratings for commercial varieties. If you have any questions or concerns, please feel free to contact me at clark.neely@wsu.edu or (509) 335-1205. ■

Acknowledgements: Funding for supplies, travel and technical support for the WSU Extension Cereal Variety Testing Program is provided by the Washington Grain Commission. Facilities, salary, and equipment are provided by WSU administration. We are grateful for the many on-farm cooperators we partner with. They are essential for producing quality data and their donations of land, time and resources are appreciated.

2022 WSU spring barley variety trial results

TRIALS INCLUDE PROMISING NEW VARIETIES TO WATCH

By Clark Neely

Extension Agronomist and Cereal Variety Testing Lead, Washington State University

After a three year decline in barley acres, Washington saw a small 2% bump to 85,000 planted acres in 2022, while Idaho and Oregon continued to see small declines. The cool temperatures and relatively wet spring for most led to a rebound in barley yields from 2021. On average, yields were up between 124 and 445%, and test weights improved anywhere from 1.1 to 6.6 pounds per bushel across the variety trials.

The spring barley variety trials consisted of 18 named varieties and five experimental lines. Of the named varieties, 12 were malt varieties, and six were feed varieties. While 12 spring barley variety trials were planted and harvested across three precipitation zones in 2022, data is only published for nine of them. High variability among the trial at two sites and herbicide drift at another site prevented three of the trials from being published — all of which occurred in the less-than-16-inch precipitation zone. Yield, test weight and protein results from the remaining barley locations are summarized in Table 3.

BC Lexy and KWS Willis were two new malt varieties

added in 2022. BC Lexy had a strong showing in 2022, landing in the top yielding group at most locations; however, KWS Willis had a phenomenal year in 2022. It was No. 1 at five of the locations and in the top group at the remaining sites. It did particularly well in the highest yielding sites. KWS Willis tended to have test weight slightly below the trial average, and protein was generally lower too. There was some mild lodging at Walla Walla, but straw strength for KWS Willis seemed good with a similar rating as Claymore. BC Lexy showed no lodging, comparable to Oreana. BC Lexy had similar protein to KWS Willis, but had slightly lower test weight on average. Both BC Lexy and KWS Willis are of similar height, averaging four inches shorter than Lenetah. KWS Willis and BC Lexy are also one and two days longer maturity compared to Lenetah.

ACC Connect, ACC Synergy and CDC Copeland were also added in 2022, but mostly serve as malt quality checks. As expected, they all yielded near the bottom at most locations.

Highland Specialty Grains has also submitted experimental line HO516-579 to the trials for the past three years. It, too, has been one of the highest yielders in the



Spring barley variety trial at Dayton, Wash.

Table 3. 2022 WSU Extension Spring Barley Variety Trial Summary

Precipitation Zone=>20"								
VARIETY	FAIRFIELD	FARMINGTON	PALOUSE	AVG. YIELD	2-YEAR AVG. YIELD	AVERAGE TEST WEIGHT	AVERAGE PROTEIN	
MALT	Yield (Bu/A)					Lb/Bu	%	
	KWS Willis	4620	6890	7080	6070	--	50.5	10.4
	BC Lexy	4580	6780	6250	5960	--	50.4	9.8
	KWS Jessie	4610	6690	6470	5950	4070	51.0	10.3
	KWS Amadora	4350	6330	6380	5810	3940	52.1	10.3
	BC Ellinor	4190	6610	6130	5710	--	49.7	10.8
	BC Leandra	4260	6230	6450	5680	3940	50.1	10.9
	LCS Odyssey	4060	6810	6180	5540	3860	51.4	10.8
	LCS Opera	4260	6790	5720	5540	3880	50.4	10.4
	CDC Copeland	3950	6180	5730	5200	--	51.4	10.8
	Palmer	4180	5910	5560	5200	3560	51.8	11.9
	ACC Synergy	3950	5920	5570	5060	--	50.7	11.2
	ACC Connect	3750	5440	5760	4990	--	51.1	11.8
FEED	Claymore	4570	6590	6510	6000	4060	51.8	10.6
	Altorado	4570	6630	6500	5810	3930	52.8	11.1
	H0516-579	4480	6610	6240	5790	4000	52.3	10.7
	Oreana	4550	5920	6520	5730	3950	52.2	11.0
	Lyon	4520	6480	5930	5640	--	52.1	10.8
	Lenetah	4580	5720	6020	5330	3640	53.0	11.2
	Survivor	3890	5680	5830	5160	3750	52.6	11.7
	C.V. %	6	6	5	8	7	1.3	5.0
	LSD (0.05)	500	690	570	400	240	0.6	0.5
	Average	4280	6250	6130	5560	3880	51.5	10.9

Precipitation Zone=16-20"									
VARIETY	DAYTON	MAYVIEW	ST. JOHN	WALLA WALLA	AVG. YIELD	2-YEAR AVG. YIELD	AVERAGE TEST WEIGHT	AVERAGE PROTEIN	
MALT	Yield (Bu/A)						Lb/Bu	%	
	KWS Jessie	5370	5140	5370	6800	5750	4370	50.6	10.9
	KWS Willis	5390	5010	5140	7320	5670	--	50.7	11.0
	BC Lexy	5190	4840	4840	6880	5460	--	48.9	11.3
	KWS Amadora	4990	4600	4970	6960	5430	4250	51.9	11.2
	BC Leandra	4880	4270	4940	6140	5070	3790	49.7	11.3
	BC Ellinor	4190	3930	5260	6480	5060	--	48.0	11.3
	LCS Opera	4510	4280	5010	6120	5030	3900	48.9	10.7
	LCS Odyssey	4040	3810	4880	6840	4890	3720	49.2	11.9
	Palmer	4310	3250	4820	5660	4530	3570	51.6	12.9
	ACC Synergy	4040	3320	4450	5910	4440	--	51.6	12.1
	CDC Copeland	3870	2760	4390	6180	4360	--	49.5	12.5
	ACC Connect	4280	2890	3990	5790	4160	--	51.9	12.6
FEED	Oreana	5380	4470	5700	6910	5620	4200	52.0	11.2
	H0516-579	4640	4270	5670	7040	5510	4110	50.6	11.4
	Claymore	4860	4040	5260	7150	5280	3980	50.4	11.5
	Altorado	4960	3780	5510	6740	5270	4040	52.2	12.1
	Lyon	4680	3970	4970	6260	4960	--	51.8	11.8
	Lenetah	4810	3640	5130	5930	4760	3530	52.8	12.0
	Survivor	3880	3300	4820	5460	4340	3360	52.7	13.2
	C.V. %	8	6	10	2	8	8	1.9	6.3
	LSD (0.05)	690	440	1090	240	330	280	0.8	0.6
	Average	4620	3900	4910	6410	4960	3900	50.9	11.8

trial with acceptable-to-good test weight and average protein. It is one of the shortest varieties in the trial with average maturity.

In the low rainfall sites, Oreana and KWS Amadora led the trial for yield on the two-year average. Both had similarly good test weight and low protein. In the 16-to-20-inch zone, KWS Jessie, KWS Amadora and Oreana topped the trial. KWS Amadora and Oreana had the better test weight of the three, while KWS Jessie had the lower protein. In the high rainfall zone, there was very little statistical segregation among varieties for yield. Only Palmer, Lenetah and Survivor stood out as having lower yield than everything else on the two-year average. Altorado, Lenetah, and Survivor all had the best test weight.

As always, growers are encouraged to spend more time looking at multiyear data for a better representation of variety performance. Additional information and yield data can be found at our website, smallgrains.wsu.edu/variety. If you have any questions or concerns, please contact me at clark.neely@wsu.edu or (509) 335-1205. ■

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Precipitation Zone=<16"					
VARIETY		ENDICOTT	2-YEAR AVG. YIELD	AVERAGE TEST WEIGHT	AVERAGE PROTEIN
MALT		Yield (Bu/A)	Lb/Bu	%	
	BC Ellinor	5280	--	49.9	9.7
	KWS Willis	5190	--	51.0	9.4
	KWS Jessie	5170	2460	50.1	9.1
	KWS Amadora	5060	2630	52.0	9.8
	LCS Odyssey	5020	2450	51.4	9.0
	LCS Opera	4950	2460	50.9	9.4
	BC Leandra	4780	2330	50.2	9.2
	BC Lexy	4770	--	50.0	8.8
	Palmer	4590	2310	51.7	10.3
	ACC Synergy	4440	--	50.5	9.6
	CDC Copeland	4130	--	50.6	9.4
ACC Connect	3890	--	50.4	10.8	
FEED	Oreana	5420	2640	52.4	9.4
	Altorado	5060	2420	52.2	9.8
	H0516-579	4890	2540	52.1	9.2
	Claymore	4820	2350	51.9	9.3
	Lyon	4540	--	51.1	10.6
	Lenetah	4540	2470	52.6	8.9
	Survivor	4540	2430	52.1	9.8
	C.V. %	8	11	1.1	5.1
LSD (0.05)	730	160	1.2	1.0	
Average	4740	2460	51.3	9.6	

*Other trials not included due to high variability or herbicide drift

WHEAT WATCH

WASHINGTON GRAIN COMMISSION

Grain market headwinds still in place



By Mike Krueger
President and Founder, The Money Farm

Wheat markets continued to soften into the month of December. The pace of U.S. wheat export sales has not improved. Russia continues to aggressively sell every bushel of their record wheat crop at levels well below U.S. wheat values. They will export a record quantity of wheat despite the Black Sea conflict. The Russia/Ukraine war has had little impact so far on Russia wheat exports.

Canada and the EU have also been eager sellers. Australia is finishing harvesting a huge wheat crop. A significant percentage of their crop on both sides of the country was damaged to some extent by heavy rains early in the harvest. Estimates of feed wheat range from 6 to 8 million metric tons (mmt) out of a total 36.6 mmt crop.

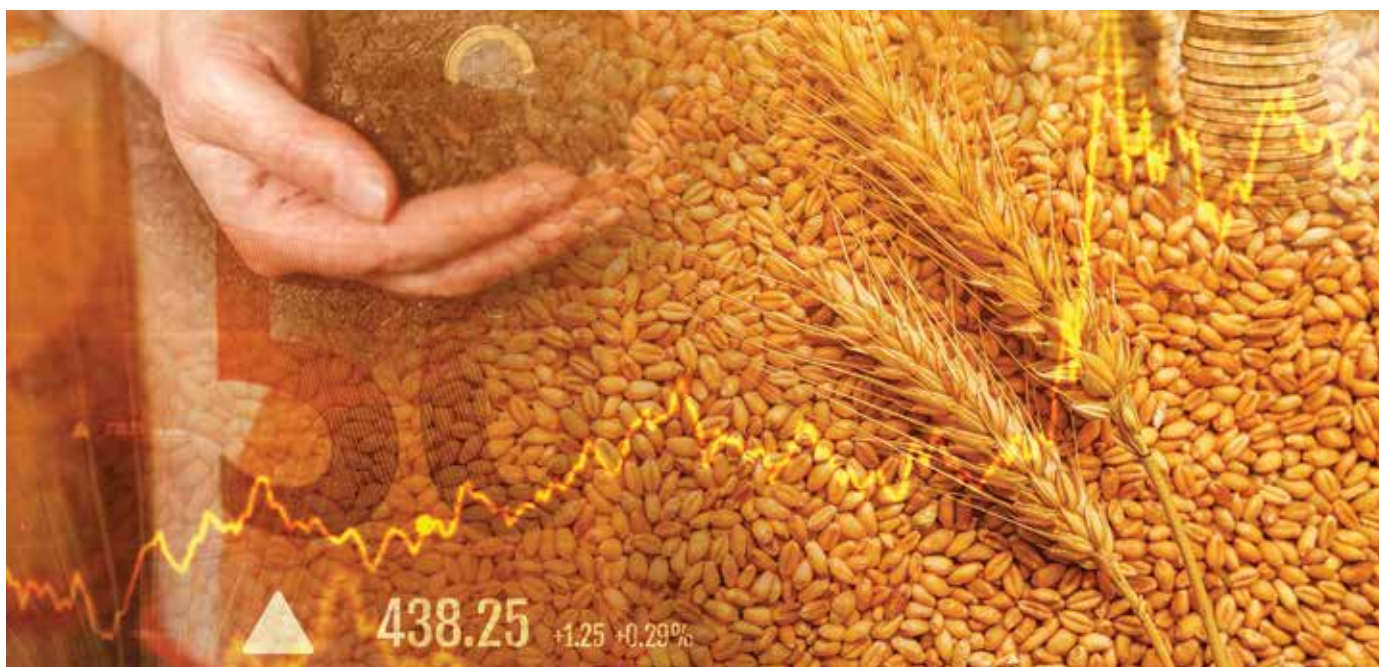
The wheat crop in Argentina is a disaster. Several months of severe drought have cut the crop size by 60% or more. Argentina will not be a factor in world export markets.

Ukraine continues to export wheat through the Black Sea “export corridors.” The U.S. Department of Agriculture (USDA) increased its forecast of Ukraine wheat exports to 12.5 mmt in the December World Agricultural Supply and Demand Estimates (WASDE) report. Ukraine’s wheat exports in recent years have been 15 to 16 mmt. Russia’s record crop will more than offset Ukraine’s smaller wheat production and exports. The chart below shows the precipitous drop in Kansas City March wheat futures.



The December WASDE was a nonevent report. That is typically the case in December. They made no changes to the U.S. wheat outlook, leaving ending supplies unchanged from the November report at 571 million bushels. That is the smallest ending supply number since the 2007-08 marketing year. The USDA reduced the corn export forecast, as expected, and increased ending supplies accordingly. The pace of corn export sales is well behind last year. Brazil has been a heavy exporter of corn. Brazil can’t supply all the demand, especially with EU corn imports projected to set a new record because of their drought-reduced 2022 crop. U.S. corn ending supplies are now forecast to be 1.257 billion bushels, the second smallest in a decade. The U.S. soybean numbers were also left unchanged from November. Analysts were looking for a reduction in the export forecast, but that didn’t happen. China was a significant buyer of U.S. soybeans the first two weeks in December. The ending supply forecast is 220 million bushels. That is tight.

The La Niña weather pattern is still in place for the third consecutive year. It is expected to fade over the next 30 to 60 days. Argentina is still in the grip of a major drought. Some analysts are already starting to trim their estimates of Argentina’s corn and soybean production. The USDA reduced Argentina’s wheat production estimate, but left the corn and soybean estimates unchanged. The world is expecting a record soybean crop in Brazil, in excess of 150 mmt. Brazil’s



growing season is off to a good start.

The soybean oil market took a major hit in early December when the Environmental Protection Agency (EPA) announced their proposed renewable fuels mandates. The lack of any push to increase the renewable diesel mandates was the most bearish of the numbers. The ethanol market is mature, and we are up against the blend wall. The renewable diesel market is just starting to roll. The EPA (which is proposing the new targets) used old renewable diesel production capacity in their assessment. The U.S. produced 280 million gallons of renewable diesel in 2017 and had the capacity to produce 2 billion gallons in August. The EPA used the capacity estimate from February 2022 of 1.5 billion gallons. That number was out of date by 500 million gallons. The final decision on these mandates will be made in June 2023. There will be a public comment period over the next several months. The oilseeds groups will be mounting an all-out effort to get these mandates changed. Huge money is being spent now to expand existing soybean processing plants in the U.S. and build new ones to handle the expected surge in demand from the renewable diesel industry. Oilseed processors and the petroleum industry have partnered on a number of these projects. They will produce renewable diesel regardless of the EPA mandates.

The U.S. hard red winter wheat crop got off to a very poor start. It has been super dry across 40% to 50% of the southern Plains' hard red winter wheat region. The crop entered dormancy with the lowest crop ratings in decades. The question is always whether or not a return to a more normal weather outlook in the spring can sal-

vage an "average" yield. The market (so far) believes that is still possible.

The major impediment to higher prices over the next several months is the slow pace of U.S. wheat and corn exports sales and shipments. The bears are betting the pace will stay below expectations, plus the assumption that Brazil will produce a record soybean crop in 2023. The bulls believe world wheat and corn buyers will have to come back to the U.S. over the next three to six months because of tight supplies elsewhere. The USDA has U.S. wheat exports pegged at 775 million bushels. That is down 25 million bushels from the last marketing year. Total wheat sales and shipments as of mid-December were 6% behind last year's pace. The wheat marketing year ends May 31, 2023.

The market volatility should continue until a big crop in South America is assured. The other market headwinds are also still in place. Inflation hasn't been tamed. Interest rates are expected to move higher. China's demand for everything, but especially soybeans, is still a question mark because of their handling of COVID-19 with lockdowns. The dollar is still strong. The good news is that the Mississippi River seems to be recovering from record low levels, and ocean freight rates have been dropping. Any disruption of shipments from Ukraine or Russia will immediately push prices higher. ■

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.

Making an impact in harvest weed seed control

Chuck Schmidt, owner, North Pine Ag Equipment

By Trista Crossley
Editor, *Wheat Life*

Chuck Schmidt has spent his career championing the air and water quality benefits of direct seeding, both as a business owner and as a farmer. Now he's widening that focus to include harvest weed seed control.

Schmidt, owner of North Pine Ag Equipment in Rosalia, Wash., grew up farming in Spokane County. After attending Washington State University, Schmidt spent his time working on the family farm and began selling sprayers and other farm equipment in the 1980s. He worked with Horsch-Anderson, a German farm equipment manufacturer, to design a seed drill specifically for Pacific Northwest (PNW) farmers. Schmidt and his father, Dick, had been direct seeding on their own farm as far back as the mid-1970s, and one of their biggest hurdles, Schmidt said, was crop residue management. In the 1990s, they bought a Redekop chopper and with the factory's help, modified it to fit their combines.

"What my dad and I were trying to do on the farm and other farmers were trying to do, we had grassy weeds, we had herbicide-resistant weeds, we had problems that chemicals were not the cure for everything. During those years of farming and different combines and putting Redekop choppers on, I felt with their fine cut chopper, that I was getting some weed control, but not enough to really document it," Schmidt explained.

Flash forward to the late 2010s. Schmidt began hearing from his Redekop contacts that something "beneficial to farmers" was coming. At a 2018 farm show in Saskatoon, Saskatchewan, Schmidt was able to see one the company's harvest weed seed control impact mills.

"Right then and there, I told them I wanted to be part of this program," he said.

Impact mills are installed on the back of a combine and destroy weed seed by funneling chaff through the device. There are other types of harvest weed seed control, including chaff lining and baling the chaff and straw. More information about harvest weed seed control can be found at smallgrains.wsu.edu/herbicide-resistance-resources/.



Schmidt had to jump through some hurdles before he could start selling the units. He got his first one in 2019 and ran it for a full year, getting pictures and documenting the benefits. He said there are about 25 of these units being used in the PNW currently, and he expects those numbers to grow as farmers become more aware of the benefits of harvest weed seed control.

There are some limitations to the Redekop impact mill. For one, the device can cost upwards of \$70,000 to \$90,000 depending on the model of the combine. In addition, the devices only fit newer combines. Schmidt says farmers need to think outside of

the box and look past the sticker shock; early data shows a potentially quick return on investment if they look at the whole picture, including the savings on volunteers, savings on chemicals, getting noxious weeds under control, increased yields and less greenbridge.

Overall, he said the technology is well accepted and well suited to the PNW. It also has the potential to work hand in hand with a precision spraying system, such as the Weed-It system.

"Every farm is its own little situation. Every individual has to look at the picture to fit their operation," he said. "In the years coming, it's going to be more accepted because of chemical costs, fuels costs, Roundup costs, resistant weeds that chemicals don't touch. This is another tool in the toolbox."

Over the years, Schmidt says he's seen some big changes in his business. The cost of everything has gone up, and there's been big technological and electronic changes. Another big change for Schmidt was his decision to give up farming and lease his land three years ago.

"My heart was always in equipment sales," he explained. "I'm fulfilling a lifetime dream right now. I love going out and working with farmers and growers, doing meetings and actually going to their fields and helping them with seeding, straw management, weed management. Every day is an education."

For more information about North Pine Ag Equipment, contact Schmidt at cschmidt@att.net. ■

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THE BOTTOM LINE

Honest retirement considerations for farmland

By Tim Cobb

Owner, Farmland Company

Ask an ag producer what three things they consider key to the overall success of their farming operation, and the prevalent response will be hard work, honesty and family relationships.

There isn't a day that goes by that your farming operation doesn't rely heavily on each of these key components in some way: the crop needs harvested ahead of the rain, a late correction to a grain division error in favor of your landlord or partner after it is delivered to the elevator, or extra effort put in by members of your family who personally sacrifice to build a lasting legacy.

These same keys are required for a successful retirement transition. As a producer starts to see the sunset coming, there are important questions to ask, most of which will require hard work in thought as well as action and an honest consideration of what the best course of

action will be. Some of the hardest and most far-reaching questions (specifically when it comes to family relations) revolve around the direction of the underlying farmland and the necessary steps to ensure it will continue to provide for generations to come.

Let's focus on two important farmland questions:

- Will the farmland be leased?
- Will the farmland be sold?

If the best path forward during retirement includes leasing the farmland (to a family member or outside farm tenant), determine what a fair lease arrangement will be to ensure the farmland is cared for properly. These arrangements include:

- **Determining if cash rent or crop share is best.** Both scenarios have market implications and risk, however, it will be clear to the knowledgeable producer that the land can only produce rental commensurate with outside market conditions. Proper lease structure provisions can be incorporated into the document to ensure the rental terms adjust to up or down movements in the market. *Our recommendation to landowners is to be realistic in rental income type and projections since each year, market factors will trend up or down.*
- **Length of lease agreement.** This determination is one of the most challenging questions to answer for landowners and farm tenants if both sides intend to work long term together. However, the encumbrance of a long-term lease on the underlying farmland can be detrimental to overall farmland value as well as the ability for both sides to shift quickly enough to respond to ever-changing market conditions. *Our recommendation to landowners and farm tenants is to earnestly enter into lease agreements in durations of three to no more than five years. This allows for enough commitment and flexibility to be extended to each party.*
- **Maintenance considerations.** Many farms have improvements such as buildings or irrigation equipment that will continue to age into the future. Determining who will care for the upkeep and replacement of these components will maintain durability and safeguard peace of mind. *Our recommendation to landowners is to annually fund a capital reserve account apart from other funds to care for landowner farm improvements.*

An honest look at question #2 may cause most of us to recoil at the thought of selling any farmland. It just isn't in the nature of most farm families to sell something that took so much time, effort and sacrifice to acquire. Yet, if we are working hard to be honest with ourselves and our family, the reality of the financial requirements that may come in retirement may include selling a portion of the farm to accomplish and thrive in this new phase of life. Important things to consider when selling farmland include:

- **Financial debt.** Depending on current liabilities, selling farmland may be necessary to manage or eliminate various forms of debt into retirement. Continuing any form of debt/leverage into retirement — even if the pay-

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ments can be made from leasing activities — will add unnecessary risk to the overall financial plan. *Our recommendation to landowners is to pay off all debts during the transition phase into retirement and shift the risk of leveraged ownership to another.*

- **Tax Implications.** With time and planning, the tax implications of owning and selling farmland can be reduced, but in all honesty, they will likely not be eliminated. The transition period to the next generation or another form of investment can also be a time

to reduce overall tax liability. *Our recommendation to landowners is to ensure there is a capable and active tax accountant on your team prior to retirement.*

- **Alternative Investments.** Consider how to replace the income stream that is currently coming from the farmland. The options for investment of the proceeds that come from the sale of farmland are many and could include financial instruments such as stocks, bonds or other types of real estate investments that yield residuals such as rental income. *Our recommendation to landowners is to be careful to only invest in things that have a proven track record and that operationally you understand and can effectively manage.*

Working hard to determine the answers to important farmland questions may prove challenging, however the rewards for honestly moving forward will, in the end, yield the greatest benefits to you and your family. ■

Tim Cobb is a farm kid from Eastern Washington and is the owner of Farmland Company, based in Spokane, Wash. Farmland Company specializes in direct farmland management, real estate brokerage, and consulting across the Pacific Northwest. For more information, visit the company's website at farmlandcompany.com.



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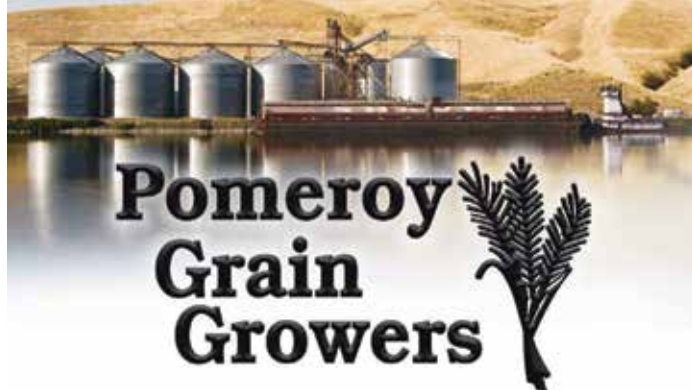


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Your wheat life...



Pat Dixon and grandson, Jace Dixon (6), working on the header during harvest. Jace is the 5th generation to grow up on the family farm in Garfield County. Photo by Ashley Dixon.



The best harvest helpers at Rebel Creek Farms in Endicott are Eric (6), Kaylee (4), Duke (4), and Boone (20 months). Photo by Goldie Johnson.



Jacob Heitstuman (2.5) "patiently" waiting for harvest to begin in Pomeroy. Photo by Stephanie Heitstuman.

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



Kanin Koller (7) helping his great-grandpa, Larry Koller, with harvest in Pomeroy.
Photo by Ashley Koller.



Grain bins at Century Farms in St. John. Photo by Wes Nicol.



(Above) Lincoln Cook (3) making sure her Uncle Z (Zane Brown) gets every head of wheat into the combine. Photo by Jordyn Cook. (Right) Charlotte Welker from Spokane made it down to Whitman County to ride in the combine with grandson Zane Brown who farms in the Oakesdale area. She is pictured with great-granddaughters Briar Brown (16 months), Lincoln Cook (3) and Bayler Cook (4 months). Photo by Emma Brown.



HAPPENINGS

As of press time, the events listed here are being planned. However, you should check prior to the event for updates. All dates and times are subject to change.

JANUARY 2023

10 WAWG BOARD MEETING. Meeting starts at 10 a.m. at Washington Wheat Foundation Building, Ritzville, Wash. (509) 659-0610, wawg.org.

10-11 2023 CROPPING SYSTEMS CONFERENCE. Three Rivers Convention Center in Kennewick, Wash. Registration and more info at directseed.org/events/annual-conference/.

13-22 LAKE CHELAN WINTERFEST. An event for the whole family! Ice sculptures, fireworks and more! Chelan, Wash. lakechelan.com/winterfest/.

14. WINTERFEST. Experience the excitement of winter games in Deer Park! A community celebration with events for the whole family. Deer Park, Wash. facebook.com/DPWAKiwanis/?fref=tag.

18-19 2023 NORTHWEST HAY EXPO.

Three Rivers Convention Center, Kennewick, Wash. For more info visit wa-hay.org/northwest-hay-expo.html.

FEBRUARY 2023

7-9 SPOKANE AG SHOW. The largest farm machinery show in the Inland Northwest. More than 250 agriculture suppliers and service companies all under one roof. Held at the Spokane Convention Center. agshow.org.

14 WAWG BOARD MEETING. Meeting starts at 10 a.m. at Washington Wheat Foundation Building, Ritzville, Wash. (509) 659-0610, wawg.org.

15 RESEARCH REVIEW. Washington growers are invited to engage with WGC-funded scientists on their current research progress. More details will be posted at wagrain.org. Courtyard by Marriott Hotel, Pullman. Contact mary@wagrain.org.

23-26 HOME AND YARD SHOW. Features hundreds of displays and demonstrations of home and yard-related

products, services and improvements. Spokane Fair and Expo Center, Spokane, Wash. custershows.com.

MARCH 2023

3-5 SPRING ARTS AND CRAFTS SHOW. Professional artists and crafters from across the Northwest will display and sell their fine art, hand crafts and specialty foods. Spokane Fair and Expo Center, Spokane, Wash. custershows.com.

17-19 SPRING ARTS AND CRAFTS SHOW. Professional artists and crafters from across the Northwest will display and sell their fine art, hand crafts and specialty foods. HAPO Center, Pasco, Wash. custershows.com. ■

Submissions

Email listings to editor@wawg.org. Include date, time and location of event, plus contact info and a short description.



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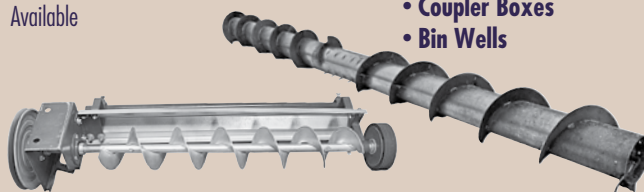


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