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# OREG®N WHEAT

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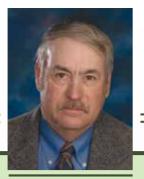
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Cover: Harvest After the Fire – Logan Padget, Grass Valley.



Brent Cheyne President

# Fire Invades Hot, Dry, and Windy Wheat Country

In my last article I mentioned there had been few fires with little damage to wheat fields. That, however, changed dramatically on Tuesday, July 17th. I was in Sherman County running a combine when we saw smoke boiling up into the sky. We soon learned that it was in Wasco County, but it did not stay there for long. As the fire grew at a nearly incomprehensible rate, I became very impressed with the way the Sherman County residents responded to this growing threat and organized to fight it. The Wasco County residents had no time to prepare; they were going about their daily activities when the fire exploded in their midst. It was pure hell in Sherman County, so I cannot even begin to fathom what it must have been like in Wasco County, the fire roaring across the County

Across the Deschutes River in Sherman County they knew the fire would in all likelihood jump the canyon and had several hours to plan, a luxury that Wasco residents didn't have. As a person who is only a part time resident of the area I was very impressed with everyone's ability to organize and work together. The fire was the common enemy that was to be defeated and failure was not an option. I saw many people I knew at the fire, but most I met for the first time, all

with residents having little to no warning.



Harvest in Sherman County – Brent (driving front combine) farms in Sherman and Klamath Counties. Photo: Liz Cranston

working side by side to beat the fire. Some farmers were cutting fire lines through their ripe wheat, sacrificing some crop to stop the fire's advance.

The economic losses suffered in these fires were huge, but the biggest loss by far was the tragic death of John Ruby, who was killed in the fire while working to protect his neighbor's farm. While there is no way to make up the loss to the

# "Money and Wisdom seldom travel together."

Ruby family, it has been heartwarming to see the community rally around them in support.

Insurance will keep most of us whole enough to farm another day, but the potential for profit is gone; a bin buster up in smoke. The wheat that I saw burn was a very good crop which could have paid a lot of bills. I guess that is what next year is for.

Fortunately, as I write this, there are some encouraging signs in Wheat Country. The fires are largely (I hope) behind us. The wheat price is (or was) climbing. The tariff relief announced by USDA will bring some dollars to growers and the NAFTA negotiations with Mexico appear to have been successful. Finally, growers are getting ready to plant next year's winter wheat, perhaps the most encouraging sign of all.

All in all, it is still, in my opinion, a fine time to be involved in the agricultural industry. I feel that there are still many great opportunities out there for today's farmers and ranchers and for those who wish to join us in the future. I have never one time wished that I were involved in another business and am very fortunate to have been able to live my dream. Let's be happy that we are on the verge of surviving 2018 and are (hopefully) going to have a great 2019.

See you all at Tri-State!



# Soft White Wheat Headed for Yemen

### Blake Rowe, CEO, Oregon Wheat



With little initial fanfare, seven bulk grain ships slipped into Port of Portland grain export terminals in late-July and August to load millions of bushels of soft white wheat for shipment to Yemen. Located at the southern end of the Arabian Peninsula in the Middle East, Yemen

is home to the world's biggest humanitarian crisis. After decades of civil and governmental turmoil and three years of open civil war, 22 million of Yemen's 29 million people need some form of humanitarian aid, 18 million are food insecure, and 8 million live in extreme hunger, entirely dependent on external assistance for their daily food needs.

The United States has been a leader in donating some of our agricultural bounty to meet humanitarian needs since as early as 1812. The Food for Peace Program (FPP), created in 1954, is our oldest and largest current food donation program and it is administered by the US Agency for International Development (USAID). The funding for the wheat headed to Yemen came from FPP, and USAID partnered with the United Nations World Food Program (WFP), to arrange for its shipment and delivery. WFP works with over 30 other partners on the ground in Yemen, including Mercy Corps, to distribute wheat and other aid to those in need.



Yemen is home to the world's biggest humanitarian crisis.

# Why Does This Matter?

- Humanitarian relief saves many lives
- SW to Yemen helping offset impacts from current tariffs
- Many of our best current markets were partly developed through past wheat donations

The seven grain ships, mostly smaller tonnage vessels, will move a total of 176,000 metric tons of wheat (approximately 6.5 million bushels) worth about \$40 million at current prices for soft white, to Yemen. The ships, unnamed due to security concerns, will deliver to three different ports in Yemen. Once delivered into Yemen, the wheat will be milled into flour and bagged, before being distributed by truck to local areas. Soft white wheat is preferred in Yemen because of how it performs in local bread products. The resulting bread and other products will provide enough food to meet the needs of 7 million people for two months.

To raise public awareness of the importance of the US food donations, USAID and WFP held a small press



Speakers: (L-R) Mike McLane, Mohamed Alyajouri, Stephen Anderson, Johnell Bell, and Danielle Mutone-Smith.

conference on the riverside deck at the Albers Mill Building in Portland, with one of the Yemen-bound vessels loading at the Temco grain export facility in the background. Speakers included Oregon Representative Mike McLane, Johnell Bell with senator Jeff Merkley's office, and Stephen Anderson, the WFP's leader for efforts in Yemen. Anderson noted that there was no improvement in conditions in Yemen and that only true solution will be "an end to the conflict". He expressed

his special thanks to the people and the government of the US, to all those involved in getting the wheat to those in need, and to the PNW wheat growers.

The event was covered by a variety of local and PNW media; a good news story and a reminder of how many people in need depend on the wheat we grow and the food donation programs in the Farm Bill.

**P** 

# U.S. Food Aid

### **Shawn Campbell**

Can you name the top fifteen buyers of U.S. wheat exports? If asked, most people can probably come up with some of the big ones: Japan, Mexico, the Philippines, Indonesia, Colombia, and China. How many people, though, would say the United States government? Each year the U.S. government purchases around 16.5 million bushels of wheat for donation to countries where food security is an issue, with Ethiopia standing as the largest recipient.

The United States has a long history of providing food aid to countries in need, stretching back to 1812 when president James Madison sent food to aid earthquake victims in Venezuela. However, it didn't become a permanent piece of U.S. policy until the end of World War II. Starting with the launch of the Marshall Plan in 1949, which amongst other things supplied Western Europe with large amounts of food, the U.S. began seeing the donation of food as part of its Cold War strategy to limit the expanding power of the Soviet Union. In 1954 president Dwight D. Eisenhower signed the Agricultural Trade Development and Assistance Act, which established the Food for Peace program, the first permanent overseas food assistance program. At the time the U.S. agricultural sector was producing large surpluses, and it was hoped that the new program would not only provide foreign aid to countries in need, but also help deplete the surplus wheat inventories, while at the same time building long-term trading partners. Today, the U.S. government annually spends approximately \$2.9 billion on food aid, accounting for 7 percent of all U.S. foreign aid.

Though many different food aid programs exist today, the Food for Peace program remains by far the largest with an annual budget of \$1.6 billion. Reauthorized as part of each Farm Bill, Food for Peace is administered by the U.S. Agency for International Development (USAID). Originally the program operated via selling grains from government stocks; today it works by providing grants to private and international non-profits, who buy the food for either emergency or non-emergency donation. In order to be eligible under the program, all of the food purchased



Danielle Mutone-Smith, USAID, Washington, DC addresses the crowd as a ship is loaded with wheat in the background, across the river.

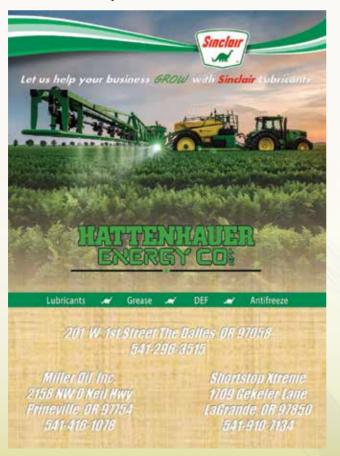
must be produced in the U.S., and 50 percent must be shipped via privately owned U.S. registered commercial vessels. In addition to these requirements, the non-profits are also allowed to "monetize" their food donations. This means that once the food arrives, it can be sold (monetized) on the local market to generate funds in local currencies, which can then be used for further community development projects.

The second largest U.S. food donation program is the Emergency Food Security program (EFSP). The EFSP is a cash-based food assistance program first created in 2010, which is also administered by USAID. Similar to Food for Peace, the EFSP provides grants to private and international non-profits. However, the EFSP allows the money to be used to purchase food from local or regional sources, provide people with food vouchers, or even to make direct cash transfers to people and groups in need. Under the program, grants can only be used for rapid response to the highest priority emergency food security needs. Syria has been a large, recent recipient of grant funds from EFSP. The program is dependent upon annual appropriations, but over the past few years has had a budget of over \$1.0 billion.

- continued on page 6

In addition to Food for Peace and the EFSP, there are several smaller donation programs. The Food For Progress program, established in 1985 with an annual budget of \$150 million, is administered similarly to the Food for Peace Program, but is controlled by the USDA Foreign Agricultural Service (FAS) and includes caveats that qualifying countries must have made commitments to reforms towards privatizing agriculture. The McGovern-Dole International Food for Education and Child Nutrition program (IFECN). created in 2002, is a \$165 million program targeting school meals and childhood nutrition. The Local and Regional Procurement program (LRP), created in 2008, was an experimental program used to test cashbased donations similar to the EFSP. Though still on the books, it has been unfunded since 2014. The Bill Emerson Humanitarian Trust (BEHT), created in 1998, is not a food aid program per se, but rather a cash-based reserve fund to help meet unanticipated humanitarian food needs in developing countries. The BEHT was last used in 2014.

Throughout the last several presidential administrations, there has been a growing debate about the Food for Peace program, and indeed the future of all U.S. foreign food aid. The biggest debate has been centered on the Food for Peace requirements that food donations be produced in the U.S. and at least 50



percent hauled by U.S. flagged ships. Proponents of reform argue that these requirements result in a higher cost for donations and lower the overall amount of food that could be donated. Reformers would much rather see a cash-based program, where food could be purchased from local and regional markets, which they claim is less disruptive to the agricultural sectors of the affected countries. Supporters of the current approaches argue that without such requirements, support of producers and U.S. flagged shipping interests would drop, resulting in lower appropriations for food donation programs. Supporters also contend that cash-based programs have a much higher likelihood of loss due to corruption and graft, that the opportunity for local purchases is limited in countries facing food security issues, and that U.S. taxpaver dollars would more likely be spent buying food from our major competitors (U.S funds being used to buy cheap wheat from the Black Sea for example). Interestingly, these debates have not been divided by party line, but rather state and district economics and interests. However, despite several attempts at reform legislation, to date no significant reforms have occurred.

Another area of contention with the current U.S. food aid policy is the use of monetization. Proponents of the practice contend that it allows the U.S. to effectively get more bang for its food donation buck. Not only is more food introduced into the local market. lowering food costs for the general population, but it also allows the non-profits to generate income for further community and economic development programs. Opponents of the practice argue that it disrupts local economies, adds unneeded costs, and is far less cost effective than just providing cash to fund food security programs. Similar to the requirements of Food for Peace, though no longer allowing monetization has long been discussed, no reform regarding the practice has been put in place. However, it is interesting to note that many non-profits, who have relied on monetization for a large part of their funding, have been increasingly moving away from the practice.

While the debates on the "right" approach to food aid programs will certainly continue, it is hard to argue with the record of results generated by the different approaches. The ability to select the approach that best fits each situation has value. Millions of hungry people in famine and conflict-torn parts of the world have been fed, crop surpluses have been used, jobs have been created in our production and transportation industries, and local economic and community development efforts have been funded. The results speak for themselves



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CLEANER FIELDS. HIGHER YIELDS."

# Seven Out-of-the-Box Facts about Shipping Containers



Portside - Port of Portland, August 7, 2018

Most of us are familiar with the containers used to transport a variety of cargo – from consumer goods to agricultural products. Last month, Terminal 6 received a special delivery: more than 400 empty containers that were the cargo – new boxes put into circulation as part of the global supply chain.

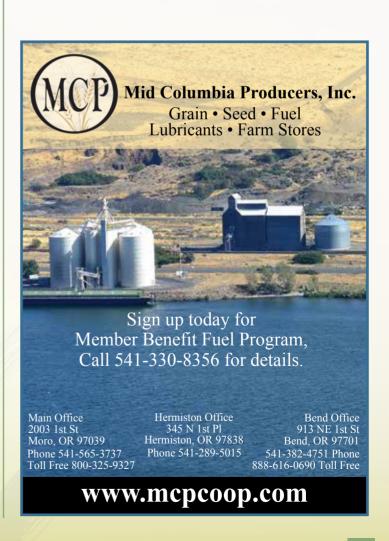
These containers are for domestic shipping, moved by rail, and are 53 feet in length, unlike the standard TEU or 20-foot-equivalent unit container used for international ocean shipping.

Here are seven more facts you may not know about container shipping:

- 1. Moving products by rail is environmentally friendly. Rail can move one ton of freight an average of 468 miles on a single gallon of fuel.\*
- **2.** Approximately 97 percent of shipping containers are made in China.
- **3.** Every single shipping container has its own unique identification number just like a license plate. This allows containers to be tracked wherever they travel.
- **4.** If a shipping container receives regular maintenance, it can stay in circulation for about 20 years.\*\*
- **5.** Containers are made of corrugated steel for strength and can be stacked up to six high.

- **6.** The intermodal containers delivered in this Portland shipment will stay in the U.S. for domestic cargo, making the rounds across the country via Union Pacific Railroad.
- 7. Fun fact: Singapore was so thankful for the creation of the shipping container, it was featured on the country's \$1,000 bill until 1999.\*\*\*
- \* Source: Association of American Railroads
- \*\* Source: Container Auction
- \*\*\* Source: Quartz

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# Fire, McNuggets, and Marketing

## **Darren Padget, Oregon Wheat Commission, Grass Valley**



Author's note: I am pinch hitting for Wally this month, so the following article may have stronger than usual opinions and language some may find offensive. (So, what's new, right?) You have 5 seconds to turn the page and find something more to your liking. Ready?

5....4....3....2...1... If you are still with me, then read on at your own risk.

Why am I filling in for Wally? Two reasons: first, fire, which has been at the forefront in Wasco, Sherman, Gilliam, and Kilickitat Counties this summer. The most recent fire affected Wally's area directly and he had been on the fire lines for 5 days. And second, as things were winding down, he had obligated to travel to Malaysia for the North Asian Buyer's Conference at the end of August, so he got off the tractor and onto a plane for 20 hours. Fun, fun. Hence, I was asked to dust off my keyboard and fill in. It has been a hell of a summer in North Central Oregon, but you already knew that.

This is an appropriate place to offer condolences to the family of John Ruby of Wasco County. He lost his life battling the Substation Fire – such a needless tragedy. To add insult to injury, it was most likely caused by an arsonist. If they ever catch the son of a b\*\*\*\*, a tall tree and a short piece of rope are in order. If any of you are still with me at this point, and think those feelings are a bit harsh, that's too d\*\*\* bad. I will attempt to stay more PG from here forward.

Something many don't know, is that whoever is setting these, was particularly busy at this point. The Substation Fire was set on a Tuesday afternoon, and Wednesday was the day from hell. There was no clearcut strategy, as the winds were howling, and the fire line stretched some 20 miles. Sometimes you just did not know where to be or what to do. The Belshe ranch got a double whammy at this time. Marty and Molly lost almost 800 acres of what was likely to be 90 bushel plus wheat that Wednesday. The fire was pretty much out Thursday afternoon and was in the mop up stage. We all finally were going to get what we thought would be full night's sleep. The Bat Signal sounded at midnight

that night. The arsonist had gotten busy east of Moro in the Monkland area, and did his dirty work. Belshes lost another 90 acres of good wheat plus another amount of stubble and pasture. Fortunately, the youth crowd was out socializing and spotted the flames and got a hold of Belshes. Had they not, it would have burned right to their house. Marty said when he answered the phone, the hills across the road from their headquarters were brightly lit from the flames. Please refer to my earlier tree statement.

These are rough figures, but within a 30-air mile radius of where I live, 300,000 plus acres have torched off, some by nature, some by accident, some intentional.

I am writing this at the end of August, but it will not be in your hands till late September, so a relevant subject can be difficult. Not so much this time, as the markets have surged, tariffs are at the forefront of many conversations, and, as usual, the unknown is the biggest question mark.

McNuggets and marketing, what the heck does that have to do with selling wheat? Well, everything. When it comes to selling grain, I have made most every mistake you can think of, many multiple times.

In June, Brenda and I were heading to Portland for a meeting. As usual, I decided I needed some "snackage" along the way to "tide me over to dinner". We whipped into McDonalds in The Dalles for this purpose, as I was ordering my McNuggets and a drink, I asked Brenda if she wanted anything, at which time she stated she was good. She possesses will power that I do not. As



Mount Hood through the smoke and dust of the fire. (Darren Padget)

I collected my tasty morsels and exited the drive through, Brenda stated, "Those look pretty good, can I have a couple?", as McDonalds and opportunity disappeared in the rearview mirror.

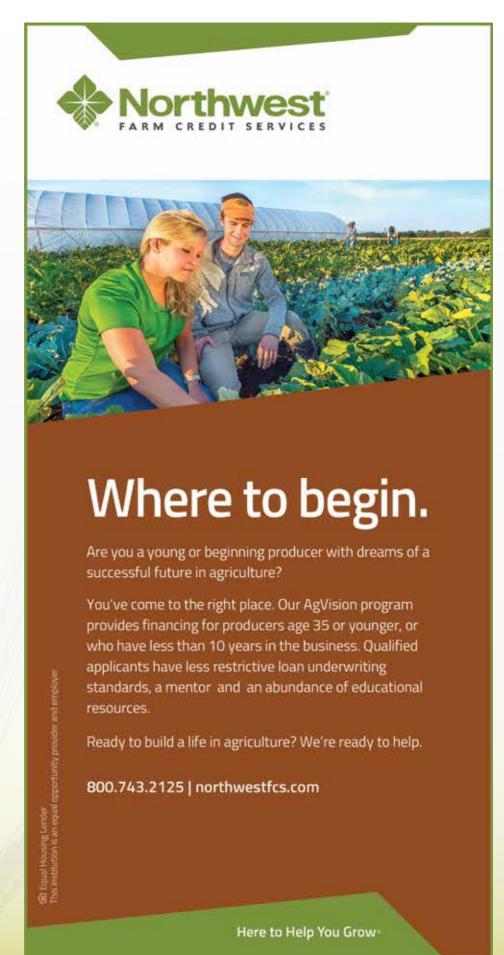
It was at this point I realized the similarities between selling a crop and McNuggets. How many of you reading this have had the opportunity to sell at an opportune time, only to see the chance disappear in your rearview mirror? Then stated that, "When it gets back to the level it was, I will sell". How has that worked out? I know I have never done that! Or, in this case, go back around through the drive thru for another order of McNuggets?

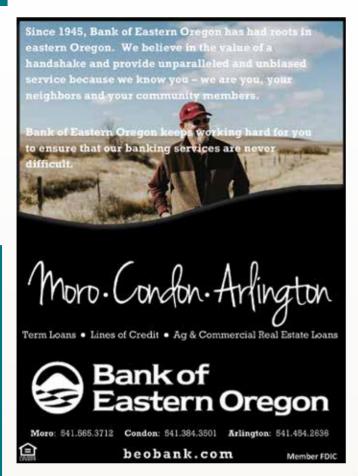
Bottom line, it is all psychological mostly. Ask Dan Steiner, Joe Carlon, or any of your friendly local neighborhood grain merchandisers, and I doubt you find much disagreement with this analysis. Dealing with a person's emotions and fear of missing the peak of the market are, more than likely, at the top of the marketing paralysis chart for most of us. Nobody wants to do the wrong thing.

There are always requests for meetings, so that we can get together and learn how to use the marketing tools available in our areas. Truth be told, very few will follow through and use what they have learned. What is really needed, is the couch you see in the psychologist's office in the movies, or a visit to Lucy's advice stand for 5 cents. Like anything tough in life, a person REALLY needs to want to make a change to break old habits. It is no different for marketing your wheat.

I know one phrase that has helped me over the years, and I say it every time I hedge, forward contract, or do any kind of sale. That would be, "I hope this is the cheapest wheat I sell this year". Sometimes it is, but generally, a lot of the time it is not. How many times have you hit the

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peak of the market? I am going to guess, not very often. How many times have you hit the bottom range of the market? In my case, more often than I would like to admit. But I am sure you are much better at this than I, or are you?

The bottom line today is this, and this is worth everything you paid for in reading this article, there are reasons to be optimistic in this market. There is finally some dryness and quality issues in the world after 3-4 years of near perfect growing conditions around the globe. Demand continues to rise. Estimates are, we will cut into surpluses some to meet global needs. Will we see \$8-\$10 wheat? More than likely not. Will we see a strong \$6 market? Looks pretty likely. Sell a few bushels here, a few bushels there, you don't have to sell huge chunks at a time. Political issues are probably the darkest cloud on the horizon at this time.

In the "Marketing world according to Darren", it is not about hitting the peak, much as we would like to, it is about avoiding the valleys, and believe me, I know how to find the deepest canyons.

One of the gems Raleigh Curtis used to say to me, quite regularly, was "Don't let the Greedy Bird s#\*t on you". (Sorry, I think I just detoured from my PG rating). I can tell you from lots of experience, that bird can drop a pretty big load on you sometimes. I have tried to avoid that bird as much as possible as I have gotten older. Most of the time it has worked, but once in a while he catches up with me, to drop a little reminder to keep my marketing emotions in check. The problem is, as large as the Greedy Bird is, he is extremely stealthy. He can fly in, drop a big steamy load on you, and depart without you seeing him, in an extremely short period of time, before you realize what hit you.

In closing, if you haven't turned the page to the relative safety of other parts of the magazine, you can usually turn around and go back for more McNuggets. The commodity markets rarely, if ever, give you that opportunity. Reward the unexpected rallies with a sale of some kind, especially if it happens for a nonfundamental reason. As for me, next time I am ordering the 20-piece meal! May your furrows be tall and crisp, as well as a black streak behind you this planting season.

Best regards, Darren



The Jack Knife Fire in Sherman County started the fire season early this year in late June.

# Selecting for Quality 2018: Falling Number Revisited, 30 Years On

# Dr. Andrew Ross, Professor, Oregon State University



Although I have worked for Oregon State University for the last 17 years, September 2018 marks the 30th Anniversary of my association with the Pacific Northwest wheat industry. In September 1988 I travelled from Australia to Pullman

WA where I was greeted by the then director of the USDA Wheat Lab, Dr. Gordon Rubenthaler.

My specific task on arrival was to demonstrate new equipment that we had developed in Australia that would do a better job of assessing preharvest sprout (PHS) than was possible with the Falling Number (FN) technology. The new equipment, the Rapid Visco Analyzer (RVA), was and remains, in my interpretation of the data, a more precise way of assessing PHS. However, the advantages of the newer technology were not sufficient to displace the FN, which, even by the 1980s, had become entrenched in the trade. However, despite its precision, the RVA still showed variability in assessing the level of PHS when testing serial subsamples of the same grain lot.

This gave the research community a look at test variability independent of the FN test and indicated that at least some variability in both FN and RVA testing accrues from the samples, and sampling strategies, and not entirely from imprecisions in the tests, a factor that needs to be kept well in mind with any new tests. Interestingly, Dr. Rubenthaler indicated that PHS, at the time the only known inducer of low FN, was considered "a one-in-ten year event" in the PNW, and not high on his list of priorities. Nonetheless, he and Art Bettge and Doug Engle welcomed me, even if Gordon thought I was on a fool's errand, and I forged, with Art and Doug, lifelong professional and personal relationships.

Fast-forward 30 years and a "one-in-ten year" occurrence of low FN is no longer the case, as is well documented by Dr. Camille Steber's group (http://steberlab.org/project7599.php), and

unfortunately experienced by too many growers. In the intervening period the cereal science community also identified one other enzymatic source of low FN in late maturity amylase (LMA), mostly as a result of the pioneering work of Dr. Daryl Mares' research group in South Australia.



A younger version of the author conducting preharvest sprout testing research at an elevator in Australia, around 1986.

As part of a larger strategy to mitigate the FN problem and make identifying the level of damage (PHS or LMA) more effective, the OSU Cereal **Ouality** and Wheat Breeding programs have entered into a

cooperative agreement with USDA to address issues related low FN either from LMA or PHS. Both parties are or have been actively engaged in research projects to reduce problems associated with low FN in U.S., PNW, and Oregon wheats. The coordinated nature of the objectives in this project should create synergy in the ongoing research on both end-product impacts and testing of LMA and PHS. Funding of \$100,000 has been allocated to OSU and this is shared between the breeding and quality programs.

Dr. Zemetra's breeding work addresses objectives aimed at developing new wheat germplasm with increased resistance to low FN, in winter wheat, whether caused by LMA or PHS. Dr. Zemetra's team will use advanced breeding techniques, and may be helped by the very recent announcement of a fully annotated wheat reference genome by the International Wheat Genome Sequencing Consortium (http://science.sciencemag.org/content/361/6403/eaar7191).

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The quality lab has objectives that leverage our extensive experience in assessing the impacts of enzyme loads on product quality, including products of importance in the export market. This includes examining the role of grain protein content and composition on low FN, and how these factors may buffer against, or accentuate poor product quality. Also, from the testing perspective, we have the task of determining the potential of differences in protein content and flour protein composition (gliadins, glutenins, and protein polymerization [e.g. during storage]) to alter low FN caused by either PHS or LMA. We have agreed to examine whether higher protein content and/or gluten alleles associated with stronger dough can reduce the negative effects of PHS and LMA on the FN test and on wheat product quality. We have also agreed to examine if enzymes found in the grain, including proteases, oxidoreductases, xylanases, in addition to amylases expressed during PHS but not during LMA, are the reason that PHS has an apparently more profound effect on end-use quality than LMA. If so, research will be done to examine whether additional enzymatic or other measurements on flour or meal can be used to develop a practical analytical method to distinguish PHS from LMA, which, if successful, may later be adapted to the market stream.

We are not the only team member engaged in assessing ways of distinguishing LMA and PHS in accessible, market-stream-compatible tests. We have already been in correspondence with Dr. Stephen Delwiche of the USDA ARS in Beltsville MD, on his alternative approach to the same objective. We will need samples for this work, so, in the cooperative agreement the USDA ARS has agreed to induce LMA and PHS to wheat samples under controlled environmental conditions and to supply these samples to the cooperators. From the PHS perspective the OSU wheat breeding program will make a timely harvest of half drill-strips of a wide number of soft and hard varieties to glean ungerminated grains and then leave the unharvested half of each drill-strip out in the field until there is a sufficient rain event to induce PHS.

If successful, these samples will enable us to have appropriate quantities of grain to manufacture products at full size, for at least the PHS component of the study. Full-sized products are an important component of correctly assessing the impact of enzymes on product quality, because product dimensions determine the exact time/temperature profile, a factor which is key to understanding the windows of opportunity for enzyme action during cooking and baking.

Not only does this new initiative leverage the expertise of the OSU cereal quality lab, it also leverages earlier work done in the quality lab, using funding from the OWC, that identified the impact of grain protein levels on FN results in ungerminated grain, and other OWC funded work on the impact of grain storage on FN results. The new work aims to refine and confirm these earlier studies and take it into new areas of understanding.

### **FUNDING HISTORY:**

2015-16	. \$86,322
2016-17	. \$67,200
2017-18	. \$65,000
Request 2018-19	. \$65,000

#### **ABSTRACT:**

The OSU cereal quality laboratory (Q-lab) provides benefit to Oregon grain growers by assessing the quality of cereal varieties bred at OSU. The Q-lab has requested funds for this enterprise for over fifteen years. In this iteration, the funding request focuses on core business, which is servicing the selection needs of the wheat and barley breeding programs. The scope of Q-lab activities is aligned with the reduction in funds since the 2016-17 funding cycle. For 2018-19. Q selections for the wheat breeding program are the primary focus. This includes early generation screening for polyphenol oxidase in all wheat classes and dough strength & bread-baking potential in the hard nurseries. For the objective, "improving selection protocols", we will establish trials aimed proving the concept of very high-throughput analysis of hardness at early generations. Additionally, we have deployed the micromilling procedure for early-generation high-throughput screen for milling Q in soft white nurseries developed in the previous funding cycle. This protocol will reintroduce leverage in screening for soft wheat quality at early generations that was reduced in effectiveness after we were successful in making effectively the entire OSU soft wheat germplasm base softer than the SW target for grain softness. The Q-lab will continue its commitment to supporting other OSU cereal research that requires Q testing at no additional cost to the OWC or the companion programs, other than the costs of specialized consumables.

# Soilborne Wheat Mosaic Virus: Yield Loss, Distribution, Genetic Resistance

Christina H. Hagerty, PhD, Columbia Basin Agricultural Research Center, **Oregon State University** 



Soilborne wheat mosaic virus (SBWMV) is an emerging disease in the inland PNW it is vectored by a soil-borne fungal-like organism. The virus can spread any possible way soil can move on equipment, dirty boots, animals, or on other crops (e.g.

transportation of potato tubers). The first report of SBWMV in Oregon was identified in 1993, in a field of 'Madsen' wheat near Scappoose, OR by Oregon State University (OSU) Plant Clinic diagnostician, Melodie Putnam. Since this first report by Putnam.

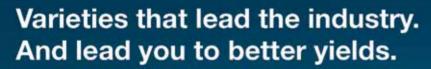
# Why Does This Matter?

- SBWMV causes major yield loss in susceptible varieties
- More resistant varieties needed before disease spreads to new areas

SBWMV has not spread or become a problem in the Willamette Valley.

This is not the case for SBWMV east of the Cascades – with support from the Oregon Wheat Commission, we have documented the spread of the virus, as well as significant yield loss. The virus was identified in Umatilla County in 2005, and in Walla

- continued on page 16



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Chlorotic patches due to Soilborne wheat mosaic virus in IU Magic. Spring 2018.

Walla County in 2008. Last season we documented an increase of the virus distribution in the Milton-Freewater/Walla Walla Valley area to span a 25-mile radius from south of Milton-Freewater, OR to north of Dixie, WA. While most estimates suggest SBWMV will continue to spread throughout the PNW, it is nearly impossible to predict the rate of spread and future distribution.

Given the uncertainty of SBWMV spread and distribution, an ongoing effort to screen for genetically resistant material in the field is important. Public and private wheat breeding programs are working to develop more options for PNW-adapted varieties that carry resistance. There is a major gene for resistance to SBWMV and we have good evidence to suggest this source of resistance is stable. Breeding programs can utilize marker assisted selection to test varieties for resistance. Many markers used to detect resistance to SBWMV have very good accuracy in detecting the presence of the resistance gene. However, in very rare occurrences, a variety can test positive for the marker in the lab, but lack the actual resistance gene, thus failing under disease pressure in the field.

While markers are a very powerful screening tool to expedite the wheat breeding process, in-field validation of genetic resistance to SBWMV is an important step before a variety can be recommended as "resistant" to a producer. OSU has an established SBWMV nursery that allows us to verify resistance. SBWMV disease pressure this season was light, and

we did not document any spread of the virus outside the known affected area running from south of Milton-Freewater to north of Dixie. Due to low disease pressure in the SBWMV nursery this season, several varieties will need to be screened for resistance for a second season.

Although options for genetic resistance are limited at this time; additional options from many breeding programs are in the pipeline. A current list of resistant cultivars can be found here: http://agsci-labs.oregonstate. edu/cerealpathology/variety-selectiontools/

We conducted the second year of our Oregon Wheat Commission funded study to quantify yield loss associated with SBWMV under dryland conditions. Yield loss

estimates in both years of the study were conducted in commercial winter wheat fields planted to the very susceptible variety 'UI Magic'. Results from this season were remarkably consistent with last season. Average yield loss combined from the 2017 and 2018 seasons was 34.8 bu/A (p< 0.001), or 36.2 % loss. We had OSU Branch Experiment Station intern, Lynze Schonneker, working hard on this project all summer. Her results will be available this fall and will be presented at both CBARC and the main OSU campus.

This time of year, I am finalizing the design and entries of our winter wheat trials. We will continue to screen new varieties for resistance to SBWMV and we are excited to expand our work on cultural controls for the disease.

In addition, we will continue our work on many other projects, including: trials to understand the economics of SDHI fungicides for stripe rust control; Fusarium crown rot trials in Morrow County; the relationship between soil acidity and disease dynamics; the effect of tillage on disease pressure; and fungicide resistance monitoring and management. In addition to field trials, we have initiated several exciting lab-based projects related to the wheat microbiome.

Many thanks to the Oregon Wheat Commission for funding several research projects in my program, and many thanks to the farmers who hosted trials this year. Have a great planting season!

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# What does the OWGL do for you?

- Serves as your voice at the State and National levels of government during the creation and implementation of new laws and regulations.
- Partners with the National Association of Wheat Growers (NAWG) and other wheat states to lobby Congress on critical wheat issues.
- Represents Oregon's interests on the NAWG Board of Directors and NAWG committees. (www.wheatworld.org)
- Builds relationships with state and federal agencies to bring favorable changes to administrative rules and/or the creation of new programs.
- Partners with other organizations such as Oregonians for Food and Shelter, Associated Oregon Industries, PNW Waterways Association, and many others on agriculture and business policies.
- Member of the Wheat Foods Council, the national wheat education association, to promote the benefits of wheat based foods (www.wheatfoods.org).
- Publishes regular member communications: the biweekly newsletter, and the bi-monthly magazine (which is also mailed to all assessment-paying wheat growers, regardless of membership status).
- Identifies and trains future industry leaders.
- Organizes educational seminars and county grower meetings, and partners with Idaho and Washington for the Tri-State Grain Growers Association.
- Provides staff support for the Oregon Wheat Foundation and Oregon WheatPAC.
- Maintains the industry website and social media sites.



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Questions? Call the OWGL office: 541-276-7330

# Up in Smoke - Oregon Wildfires are Deadly and Devastating

## Sally Christensen, OWGL staff

"God had to have somebody willing to ride the ruts at double speed to get the wheat in ahead of the rain clouds, and yet stop in mid-field and race to help when he sees the first smoke from a neighbor's place. So God made a Farmer" (Excerpt from Paul Harvey commentary)

Haze was an every-day weather reality for much of the summer in Oregon as winds carried the smoke from fires in Southern Oregon, Northern California, Central Oregon, Washington, and even Canada across the state.

### "High temperatures, brisk winds, and low humidity are the 'perfect storm' for fire season."

Fire season started ever earlier this year – in late June, the lightning-caused Jack Knife fire started in heavy sage brush, juniper, and grass in southern Sherman County. Charring over 15,000 acres, the fire came dangerously close to wheat farms, but was fought back by farmers, ranchers, and fire fighters.

Just three weeks later, on Tuesday, July 17th, fire exploded through Wasco and parts of Sherman County as farmers and firefighters scrambled to mobilize their efforts to combat the Substation Fire, named so because it was started near a substation power plant near The Dalles. It is assumed to be human-caused, and is being investigated as possible arson. This fire, fueled by 30-45 mile per hour winds, took people by surprise, raging through wheat fields, grazing lands, over ridges and through canyons to Sherman County.



John Ruby, Sherman County

Burning nearly 80,000 acres, the biggest loss was the 'bin-buster' unharvested wheat that farmers hoped would help them recover from the past several years of low wheat prices and mediocre harvests. Losses were compounded when 64-year old John Ruby was overtaken

by the fire in his tractor while trying to help cut a firebreak for a neighbor's field.

Our office continued to receive updates from OWGL members who sustained losses from the fire.

The Substation Fire was not even fully contained before a new fire ignited in Sherman County. The Long Hollow Fire broke out near Dufur on July 26th, started by farm equipment. Jumping the Deschutes River, it consumed an additional 33,400 acres as winds shifted from consistently northwest on Friday, to due west on Saturday the 28th. The Long Hollow Fire was still active when the South Valley Fire started and burned another 20,000 acres. In every fire, farmers and ranchers were called on to assist in the firefighting effort.

In August, lightning ignited yet another series of fires in South Gilliam and Wheeler Counties. The Stubblefield Fire, Lonerock Fire and Jennie's Peak fires devastated almost 110,000 acres of primarily rangeland and forest. The good news, if there is such a thing with wildfires, is that virtually all the wheat ground that burned had already been harvested.

#### No Rest - Back to Business at Hand

As each fire was contained, farmers resumed their wheat harvest and left the mopping up of fire-ravaged land to the expertise of firefighters. Those who sustained losses hurried to submit their insurance claims within the 72-hour window after the fire. It will take much longer to assess the full impact of the physical damage to fields, homes, and structures, and there is no



Bryan Cranston, Sherman County, cuts a firebreak in the 'farmer's fire engine'. (Hunter Kaseberg)



Too close for comfort. (Cynthia Kortge)

telling how long before the emotional scars of this loss will heal.

After consulting with other agencies and local representatives, the Oregon office of USDA's National Agricultural Statistics Service (NASS) reduced their projected Oregon harvest acreage by about 15,000 acres to account for the fire losses. Doing the math: wheat harvested in nearby fields post-fire yielded 70 bu/acre (although many had estimated 90-bushel wheat on much of the prime ground before the fire). This equates to an estimated \$6.3 million loss at current prices.

The OWGL staff and leadership have been working with USDA Risk Management Agency (RMA), with great help from the National Association of Wheat Growers, on post-fire issues such as erosion of the topsoil, and the temporary opening of unburned CRP ground that can be used as grazing land for cattle and livestock whose pastures were burned.

# "Wednesday was a day from Hell." - Darren Padget

Our sincere sympathy and condolences go to the family of John Ruby, who gave the ultimate sacrifice while helping protect a neighbor's farm.

We also extend our sincere thanks to OWGL members and friends who shared updates on the



Topsoil erosion just 3 days after the fire (Theresa Peterson, Dufur)

fire and provided the voice of the wheat industry to the media:

Alan von Borstel, Darren Padget, Jeff and Cynthia Kortge, John McManigal, Theresa Peterson, and many more. A compilation of news articles, videos, photos and post-fire resources are available on the Features and Updates page of the OWGL website at www.owgl.org/.

Brent Cheyne and Darren Padget shared their personal perspectives of the fire in their columns on pages 3 and 10, respectively.



Favorite landmarks were also lost. Here, before and after photos of an old farmhouse and windmill. (Theresa Peterson, Wasco County)



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## Chad Prather, Emcee

Chad Prather is known for his way with words. He is a comedian, armchair philosopher, musician, and observational humorist, often recognized from his fast-talking, rapid fire rants from the front seat of his truck. Chad calls the Fort Worth, Texas, area home. He grew up working with horses and is often recognized by his ever-present cowboy hat. He is one of the country's fastest rising and talked about comedians and entertainers.





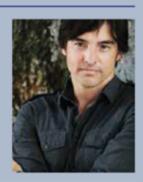
# Ambassador Gregg Doud, Undersecretary Ted McKinney (invited)

Gregg Doud serves as the Chief Agricultural Negotiator in the office of the U.S. Trade Representative. His past experience includes president of the Commodity Markets Council, senior staff member of the Senate Agriculture Committee and chief economist for the National Cattlemen's Beef Association. Ted McKinney oversees trade and foreign ag issues at the USDA. He grew up on a family grain and livestock farm in Tipton, Ind., and was formerly the Indiana Ag Director. As Undersecretary, McKinney works with the U.S. trade representative and secretary of commerce to ensure that American producers are well equipped to sell their products.



# Keni Thomas, keynote

As a member of Bravo Company of the 3rd Ranger Battalion, Keni was deployed to Mogadishu, Somalia. The fire fight that ensued would later be recounted in the book and movie "Blackhawk Down." He was recently inducted into the VFW Hall of Fame for his dedicated work on behalf of veterans and military families. Now a Nashville recording artist, Keni will share his story and redefine your understanding of what it means to lead the way.



# Dr. Randy Fortenbery, keynote

Dr. Randy Fortenbery's research program focuses on agricultural price performance in local and national markets and the impact of futures price action on the stability of cash prices. Dr. Fortenbery has held the Small Grains Endowed Chair at Washington State University since 2011.



# **Breakout session topics:**

- Climate forecast
- · Navigation, transportation
- QuickBooks

- 2018 Farm Bill
- Wheat Marketing Center and export tours
- Baking demonstration
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# **Auction and Dinner**

Auction and Dinner is Friday, Nov. 16, at 6 pm. Social hour starts at 5:30 pm. Donation forms can be found at wawq.org.





# While you are in Portland, take in the sights and do some Christmas shopping!

Convention attendees will have easy and convenient access to the train that runs from the Portland Airport to downtown Portland. Besides shopping, Portland offers fantastic restaurants, museums, art galleries, the Oregon Museum of Science and Industry, the Oregon Zoo, Powell's Bookstore, farmer's markets and Japanese gardens. Portland is also home to a huge craft brewing industry.

# World Wheat Trade Dynamics Dominate 2018 Latin American and Caribbean Buyers Conference

### Blake Rowe, CEO, Oregon Wheat

Almost 100 people from 16 countries participated in the 2018 edition of the biennial U.S. Wheat Associates (USW) Latin American & Caribbean Buyers Conference July 18 to 20 in Rio de Janeiro, Brazil. Apprehension about a growing number of trade policy issues as the conference started was quickly replaced by enthusiasm for the abundance of opportunities available from the 2018 U.S. wheat harvest and USW's tradition of service.

Change was the overall theme of this year's conference and was apparent from the start with the introduction of the newest USW South American Region colleagues: Miguel Galdos as the next Regional Director and Andres Saturno in a new regional position as Technical Specialist. Regional Vice President Alvaro de la Fuente has announced plans to retire in October and USW recognized his 41 years of service at the conference.

USW President Vince Peterson added perspective to the theme with a presentation illustrating the changing dynamics of the global wheat trade and increased competitiveness from Russia and other non-traditional importers into the region. Mark Fowler, Vice President of Overseas Operations, then highlighted how expansion of technical service will increase value for our U.S. wheat customers in the Mexican, Central American and Caribbean region and in the South American region.



Participants of the 2018 Latin American and Caribbean Buyers Conference heard from Blake Rowe, CEO, Oregon Wheat, who spoke on "Soft White: Quality, Value, Access."

# Why Does This Matter?

- Latin America one of two major growth regions in world for PNW wheat
- In depth discussions key to relationship building with customers
- Opportunity to meet and educate new USW staff in Latin America.

Galdos provided an overview of the Latin American and Caribbean baking industry while Marcelo Mitre, Technical Specialist, USW/ Mexico City, and Casey Chumrau, Marketing Manager, USW/Santiago, shared several examples of how technical support has benefitted USW buyers and wheat food processors. U.S. participants also provided a wide-ranging look at the supplies and quality of U.S. hard red winter (HRW), soft red winter (SRW), hard red spring (HRS), soft white (SW) and durum during the conference.

Additional guest speakers included: Alejandro Daly, Executive President of ALIM, the Latin American Millers Association covering how labeling laws affect consumption; Ambassador Rubens Barbosa, President of Abitrigo, the Brazilian Millers Association, focusing on Brazil's wheat production and national policies; Irineu J. Pedrollo, Owner of I&MP Consulting Associates, presenting on the experiences of a U.S. wheat buyer; Dr. Glenn Gaesser, Arizona State University, presenting on the nutritional challenges of a gluten-free diet; Mara Isabel Perdomo, Broker-Managing Director with Marita Freight and Trade. speaking on freight market dynamics; Dr. Romulo Lollato, Extension Wheat Specialist at Kansas State University, spoke on the importance of the Agricultural Extension Service on improving wheat quality; and USW Chairman Chris Kolstad, a wheat farmer from Ledger, Mont., covered the economics of wheat growing.

In addition to the wheat buyers from milling companies at the conference, U.S. wheat producers

- continued on page 22

from seven states either attended or provided financial support for the conference. USW thanks the Idaho Wheat Commission, the Oregon Wheat Commission and the Washington Grain Commission for their sponsorship and participants from the California Wheat Commission, Kansas Wheat Commission, Montana Wheat & Barley Committee, North Dakota Wheat Commission and Oklahoma Wheat Commission for their support to make the conference a continued success. Additional funding was provided by USDA's Foreign Agricultural Service.

The Pacific Northwest was represented by Walter Powell, Chair of the Oregon Wheat Commission, Blake Rowe, CEO of Oregon Wheat, Joe Bippert, Program Director of the Washington Grain Commission, and Janice Cooper, Managing Director of the Wheat Marketing Center (WMC). Rowe made the soft white wheat presentation for the conference, emphasizing the consistent quality characteristics that help our wheat deliver value to our customers, and briefly covering this year's crop conditions and updates to our wheat quality program since the 2016 Conference. He noted some recent research results from the WMC that demonstrated the successful use of soft white wheat in making saltine crackers suitable for the Latin American market and encouraged customers to make greater use of the WMC to test new products and formulations. His presentation concluded with





Apprehension about a growing number of trade policy issues as the conference started was quickly replaced by enthusiasm for the abundance of opportunities available from the 2018 U.S. wheat harvest and USW's tradition of service.

the "Thank You" video assembled with the help of Bippert, with many clips of PNW growers expressing appreciation for our customers in Latin America. The video was very well received.

Mixed into the many Conference sessions, the PNW representatives had opportunities to meet with customer representatives from many countries. In addition to the expected conversations on farming, wheat supplies and prices, trade policies, end use markets, etc., we also had some very interesting discussions on pesticides use, pesticide residues and testing, possibilities for identity preserved shipments, and how we might define and document sustainable practices in wheat production. It was fascinating to hear how customers are wrestling with these issues, not having easy answers, but knowing the concerns will need to be engaged to satisfy their consumers. We also had a chance to get to know Galdos and Saturno, the new staff in the South American office in Santiago and provide them some first hand information on the PNW and soft white wheat

Our time in Rio was very enjoyable and USW should be commended for putting together another well attended conference with an excellent program. We are well positioned and staffed for growth in the Latin America and Caribbean region.

Note: USW has posted presentations from the 2018 Latin American, Caribbean and South American Buyers Conference on its website here: <a href="https://www.uswheat.org/marketing/2018-latin-american-and-caribbean-buyers-conference/">https://www.uswheat.org/marketing/2018-latin-american-and-caribbean-buyers-conference/</a>.

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