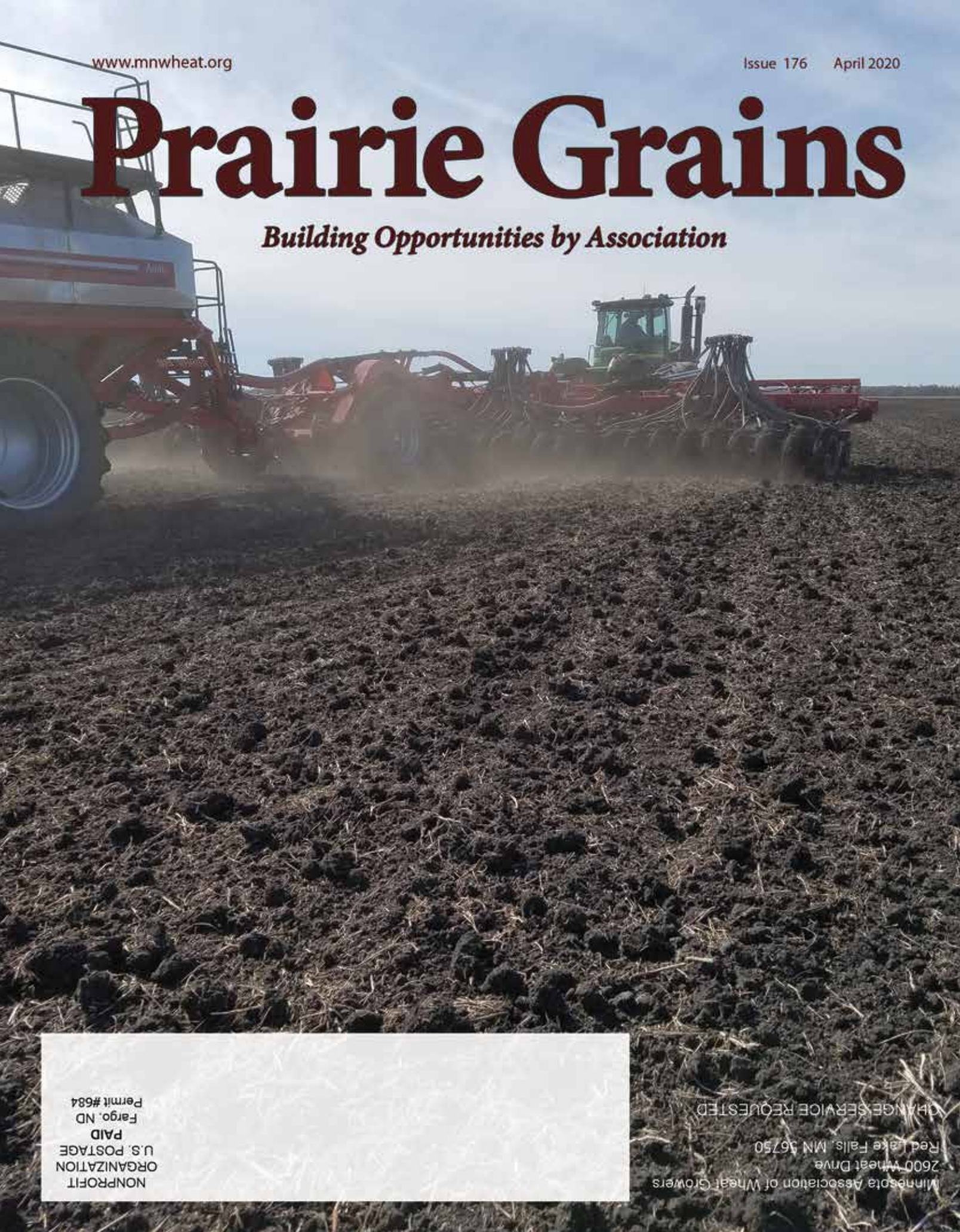


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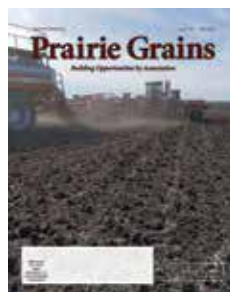
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PRAIRIE GRAINS

April 2020 | Issue 176

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On the Cover: As winter gives way to spring, farmers across the area are ramping up for the planting season. 2020 looks like it won't be the usual growing season. With the impact of COVID-19 on agriculture, food security, labor and more, farmers more than ever need to ensure that they can do their work this spring. The staff at Prairie Grains magazine wishes you a successful and safe growing year.



We're Still in the Fight

I feel like we are in the ninth round of a very long boxing match. We are trying to “Float like a Butterfly and Sting Like a Bee” but instead we are being punched from the left and right, any which way we turn. Chinese tariffs, COVID-19, wet spring, horrible harvests, low prices, test weight, falling numbers, it keeps punching us at every turn.

I am begging and pleading with you to understand the value of a marketing plan. We have no idea what will happen this spring, summer or fall, and you need to manage your risk. Prices can go lower. I am bullish by nature, and work hard to be optimistic and realistic at the same time.

Last spring everyone thought corn was going to 5, 6, 7 or even 8

Make some sales, spread out your risk, and live to fight another year.



dollars. The entire Corn Belt had delayed plantings. We were going to have severely reduced acres and yields. One farmer said it best this winter. “I planted extra corn because prices were so high and now look at it. My corn isn’t worth anything.”

If you need, read that quote again. I told him the market did its job, but he did not. I try to act sympathetic, but I am not a good actress. The market rallied and bought more acres, you planted more corn, but never managed your price risk. Not a single bushel sold.

One of my colleagues yelled at a farmer “You spill more than that” when the farmer proudly told him the teeny tiny bushels he contracted.

There is always a bullish or bearish narrative. Go find someone who tells you to store grain for two years. Go find someone who says price it all. Maybe we should start something like a dating service, only for farmers and market advisors. “Bullish farmer seeks bullish advisor to make him feel better about holding two years of crops. Must love rolling basis contracts and getting extra lines of credit at the bank.” Is that what your profile would say?

Here is my assignment for you in 2020. Look at your January 1 balance sheet and look at the crop values. For example, you have 20,000 bushels of spring wheat and it is worth 5 dollars. The total value is \$100,000. Now track those bushels through the year. Did you beat your balance sheet estimates? Or did your crop inventory lose value? We are looking

ahead to see how much money we can make during 2020, but I would like you to track inventory values as well. Grain inventory has been a very leaky bucket the past few years. We lose a little bit of inventory value whenever we keep holding grain unpriced.

I believe grain bins are a good investment. The ability to store grain and avoid harvest discounts can be very profitable some years. If you treat your grain bins like hope chests, you are using them wrong.

Sell your spring wheat for December delivery, put it in the bin at harvest to avoid all the discounts, and clean out your bins in November. Your bins can hold priced grain too, not just unpriced grain.

Price risk management must be a focus for 2020. During our spring rally, or perhaps our summer drought rally, take advantage of those pricing opportunities.

We are not done with this fight yet. We may keep getting punched, but let’s start punching back.

Make some sales, spread out your risk, and live to fight another year.

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Comments from the MN Wheat Executive Director

MAWG Members,

Covid-19 and the mitigation efforts are on the minds of everyone right now. I'm currently having conference calls on Monday, Wednesday, and Friday with the Thom Peterson, MN Commissioner of Ag and the other commodity groups throughout MN to keep updated on this fluid situation. If you are experiencing issues/difficulty as a result of Covid-19 let me know so I can relay the situation and help you find a solution. My email is cvogel@mnwheat.com and my cell phone is 701-381-9983. Please reach out.

Below is some information provided by the National Association of Wheat Growers regarding Covid-19.

COVID-19 STATUS UPDATES AND RECENT ACTIONS

- Secretary Perdue posted a "thank you" video for farmers.
- Guidance from SBA and Treasury: As we described in our Monday update, the CARES Act (the phase 3 relief bill) included some SBA programs that should be available for farmers and ag/rural businesses to help cover certain costs like payroll expenses and rent and mortgage payments, among others, given certification of economic impact from COVID-19. The Administration has posted information to its CARES Act page on the Treasury Department website, <https://home.treasury.gov/cares>

- High level information from the Administration about the Paycheck

Protection Program can be found at <https://home.treasury.gov/system/files/136/PPP%20-%20Overview.pdf>

- Economic Injury Disaster Loan (EIDL) program: Another SBA program we described on Monday (included below) was an expansion of the Economic Injury Disaster Loan (EIDL) program. The ag community's belief is that Congress intended for this program to be available to all small businesses, including farmers and farming operations. Guidance issued this week seems to exclude farmers from eligibility; as such, we joined with several other national ag organizations in sending the attached letter to the SBA explaining why farmers should be included and requesting that the guidance be changed.

- Ag Labor FAQ: The Department of Labor has announced that the Office of Foreign Labor Certification has released a 2 round of FAQs regarding COVID-19

addressing potential issues regarding the H-2A temporary ag labor certification.

- House Ag resource page: The House Agriculture Committee has developed a resource page with information about COVID-19 relief efforts which can be found here: <https://agriculture.house.gov/covid19/>

- OFW Law resource page: As a reminder, OFW Law also provides resources regarding COVID-19 on their blog at this link, <https://www.ofwlaw.com/agfda-blog/>

- Finally, you may also be interested in seeing a graphic put together by AFBF which shows the movement in prices of various commodities since the coronavirus outbreak was first confirmed in China (January 14th).

Please note that this was prepared in April and doesn't include price swings since that time.

These are trying times. However, Agriculture will always be a cornerstone of society and your efforts are needed and appreciated. Let us know if we can help, or what questions you need answers to. Thank you for doing what you do. We are proud to represent you!

Respectfully,



Charlie Vogel
Executive Director
Minnesota Association
of Wheat Growers

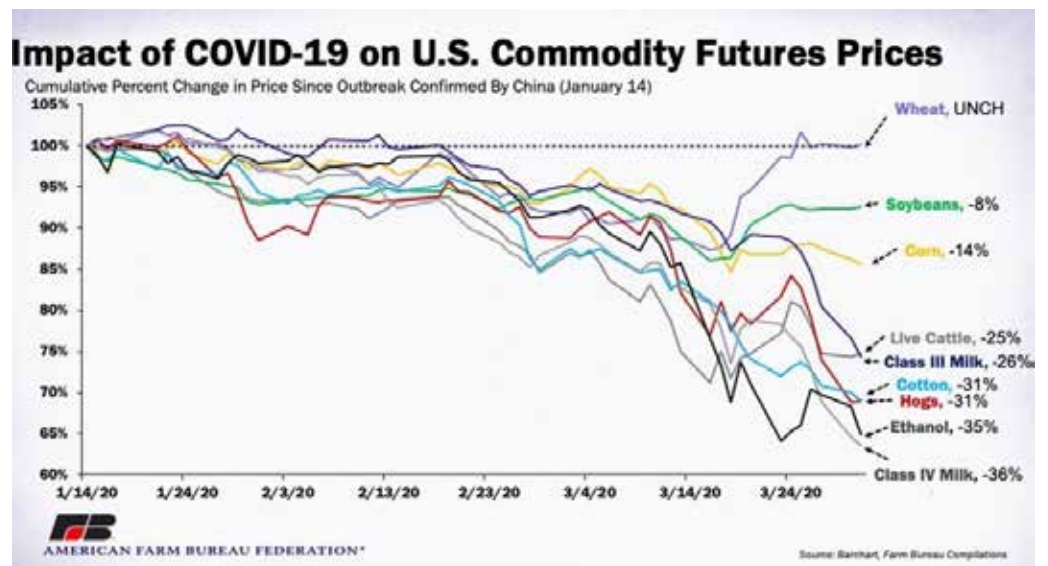
CORONAVIRUS INFORMATION

USDA

<https://www.usda.gov/coronavirus>

CDC Control & Prevention:

<https://www.cdc.gov/coronavirus/2019-ncov/index.html>



COVID-19 Virus Dampens Legislative Activity

By Bruce Kleven,
MAWG Lobbyist

The 2020 Minnesota legislative session began on Tuesday, February 11. This session was designed to be shorter in length than the 2019 session, which was the longer, budget-setting year. The plan was to adopt a few policy bills, a capital bonding bill, allocate the projected budget surplus, and then get out of Dodge.

But on Monday, March 16, the four legislative caucus leaders held a joint press conference to announce that the legislature would be moving to an "on-call" status due to the outbreak of COVID-19. Committees may meet if needed, and the House and Senate can meet in floor sessions only if all

four caucus leaders agree that a floor session is necessary to address an emergency. The leaders will reassess the situation on Tuesday, April 14, after the previously scheduled Easter break.

Until then, legislative members and staff will work using alternative means, such as email, phone, text, and social media. Members and staff will be working in their offices and at home but will not meet with members of the public without an appointment.

Going forward, the leaders stated they would only consider legislation that is: 1) related to the COVID-19 pandemic, 2) critical, such as a capital bonding bill, or 3) supported on a bipartisan basis. Most other issues

that have been moving at the legislature so far this year have been set aside and will probably not gain much traction again after the Easter break.

Prior to the COVID-19 outbreak, the State of Minnesota had a \$1.5 billion projected budget surplus. Since then, about \$550 million has been appropriated to the coronavirus response to date. The status of MAWG's top priority this year - Section 179 conformity in Minnesota - is unknown at this time. Section 179 conformity would cost about \$240 million, but with an expected contraction in the economy and a reduction in short-term tax receipts, the State could actually be facing a budget deficit rather than a surplus by the end of the second quarter on June 30. The rapidly changing financial picture could put the Section 179 effort in jeopardy despite wide bipartisan support.

In anticipation of a fertilizer storage crunch and a shortage of commercial truck drivers, Governor Walz issued an Executive Order that suspends the hours of service limitations for truck drivers for the movement of feed and fertilizer, unless the driver is



Bruce Kleven

fatigued or ill. The Order was issued on Friday, April 3 and is valid for 30 days.

A bill appropriating \$50 million to the Rural Finance Authority was passed by the legislature and signed by Governor Walz just before the legislature moved to on-call status. The bill allows the RFA to continue offering eligible Minnesota farmers affordable financing and terms and conditions not offered by traditional lenders. RFA programs are designed to help new farmers purchase land, restructure debt, invest in farm improvements, and finance livestock production facilities.

Because the shelter at home order has been extended until May 4, it is possible the legislature will not return to normal for the remainder of the session. In any event, the legislature is Constitutionally required to adjourn the 2020 session no later than midnight on Monday, May 18.



NDGGA Off to a Busy Start in 2020

For more than 50 years, the North Dakota Grain Growers Association has been a constant fixture of its state's agricultural landscape.

Despite decades of experience and a solid reputation as an organization that advocates for North Dakota farmers, the NDGGA isn't content to rest on its laurels.

Over the past year the NDGGA has ramped up its efforts to provide representation and inform policy on a national level. Since being elected to his first term as NDGGA president last December, Dennis Haugen has had a full schedule. "We spent time in Washington in January and February working closely with the USDA

and our legislators on a variety of issues," Haugen said.

Haugen says strong partnerships are vital to informing federal policy that affects farmers in North Dakota and its neighboring states. "We've been working with other commodity groups on expanding crop insurance coverage to growers with severe quality loss discounts, which also factors in to the WHIP+ program," he said. "Recently we've been very busy with H2A amid the COVID-19 pandemic. The travel bans that our foreign labor guests are experiencing is creating a huge agricultural labor shortage here in North Dakota and across the nation." Despite the economic

uncertainty the pandemic is causing, Haugen remains confident that the NDGGA is well positioned to provide the representation and advocacy North Dakota farmers need during these times.

"In addition to NDGGA members making frequent trips to Washington, we have a great lobbyist, James Callan, working on our behalf full-time in D.C.," Haugen said. "His experience and knowledge not only of the agricultural industry, but also the political climate in Washington has been a valuable asset as we've improved our focus on providing more national representation for North Dakota farmers. The biggest thing for us is just making



Dennis Haugen

sure that our state's farmers know we're out here doing all we can to ensure production agriculture remains a profitable endeavor."

By Dennis Haugen,
President, North Dakota
Grain Growers



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Living Ag in the Classroom

Members of the 2019 RRVAg Peer group spent the day at “The Wheat Booth” teaching students about all things wheat.

By Calli Feland, RRV AG Peer Group member

Living Ag in the Classroom is held each spring at the Red River Valley Fairgrounds in West Fargo.

The 2020 event reached out to over 2,300 students in North Dakota and Minnesota. The program teaches 4th and 5th grade students about agriculture and the process that puts food on their plates.

Each year MN Wheat staff, along with the North Dakota Wheat Commission host a hands-on demonstration booth at the event. This year, members of the 2019 Red River Valley Ag Peer group spent the day at “The Wheat Booth” teaching students about all things wheat.

The lessons covered types of wheat and what products they produce, as well as how wheat is harvested, sold, transported, milled, and how it ultimately ends up on our plates. The students

could see and touch Hard Red Spring Wheat (HRSW), Durum wheat, and pasta dough, as well as participate in some trivia on topics such as imports and exports. Students observed visual representations of “how much is a bushel” and how much money a farmer will get at the elevator for a bushel of wheat. (All students agreed, “That’s not enough!”)

This event helps elementary age students without a background in agriculture make the connection with our farmers and where our food comes from.

Here are a few Q & A that we asked the students:

Q: *What country imports the most Durum wheat from the United States?*

A: Italy

Q: *What country imports the most HRSW from the United States?*

A: The Philippines

Q: *How many loaves of whole wheat bread can be made from one bushel of wheat?*

A: 60 loaves



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These are tough questions that have one simple solution: Apply an 8.2 fl oz/A rate of Prosaro® fungicide at the early flowering stage (Feekes 10.5.1). Prosaro protects grain quality and yield for high profit potential. At the 8.2 fl oz/A rate, Prosaro has a long residual to fight profit-robbing diseases like Fusarium head blight (FHB), known as scab, and many other head and leaf diseases.

Optimal Timing for A Fungicide Application

North Dakota State University (NDSU) agrees the optimal time for a fungicide application is at early flowering.¹ NDSU says “applying a fungicide at this stage protects vulnerable florets from Fusarium damage during fertilization and the kernel during early grain-filling.”

The Bayer Cereal Experts concur. A timely foliar fungicide application is critical when conditions become favorable for disease development and to suppress scab before symptoms appear.

“The risk for scab is greatest during warm, humid and wet weather conditions often encountered during the flowering period of plant development,” said Kevin Thorsness, Bayer technical service representative and one of the Bayer Cereal Experts. “If scab is left uncontrolled, there will be a premature bleaching on a portion of or the entire head. You may also see mold growing at the base of the spikelets.”

Thorsness says applying Prosaro during these conditions at early flowering helps protect the spring wheat plant from a broad spectrum of diseases. But he warns that if a fungicide is not applied at the correct timing, the full benefit may not be seen.

“Applying a fungicide at earlier stages, like Feekes 10.3, compared to the recommended timing of Feekes 10.5.1, could result in lower yields and higher DON (deoxynivalenol) levels,” Thorsness said. “Applied at the proper early flowering stage timing, Prosaro reduces these risks, plus increases yield and profit potential.”

Optimal application timing on wheat

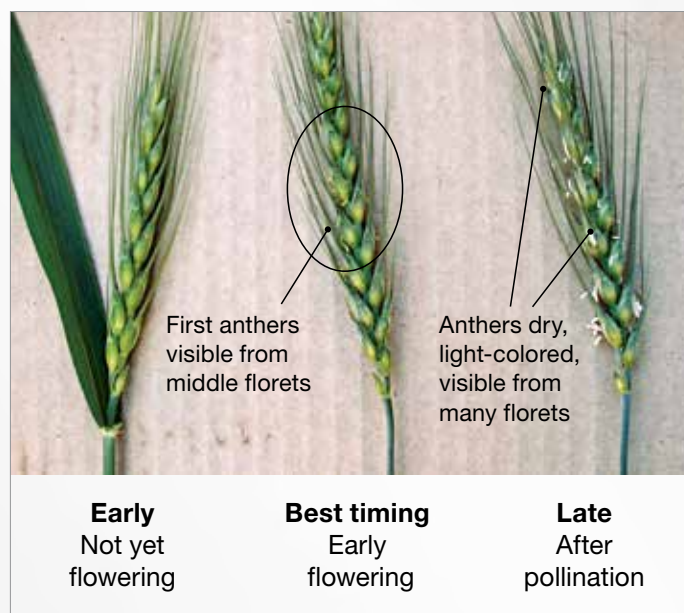


Photo courtesy of *Prairie Grains Magazine*

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The active ingredients in Prosaro protect against yield-robbing diseases and improve overall plant health. Prosaro also provides broad-spectrum control of head and leaf diseases and is highly effective in applications of wheat, durum and barley.

To learn more about the optimum timing for a fungicide application and the powerful disease control of Prosaro, visit Prosaro.us or contact your local Bayer Cereal Expert.

Reference: 1. Ransom, J. “Timing of Fungicides for Scab Control in Wheat and Barley.” North Dakota State University Crop and Pest Report, 2013.

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Tillage Practices Following A Wet Harvest

By: *Shawna Aakre, Continually Still*

There is nothing graceful about farming in the wetter than usual conditions many farmers experienced this past harvest season. Ruts and compaction become more likely, affecting future yields during already stressful times for farmers, and spring residues can pose planting challenges.

“My biggest concern this spring is trying to do residue management when it is wet,” said North Dakota State University Assistant Professor Aaron Daigh. “If we have typical rainfall this spring after last fall, it is going to be wet. And as a general rule, if its too wet to plant, it's too wet to till without smearing.”

He cautions that after the field dries up just enough for equipment to enter is unfortunately the most at-risk time for compaction to happen. For those hoping to utilize tillage to help dry the soils for planting, Daigh recommends holding off another day or two before entering the field with equipment.

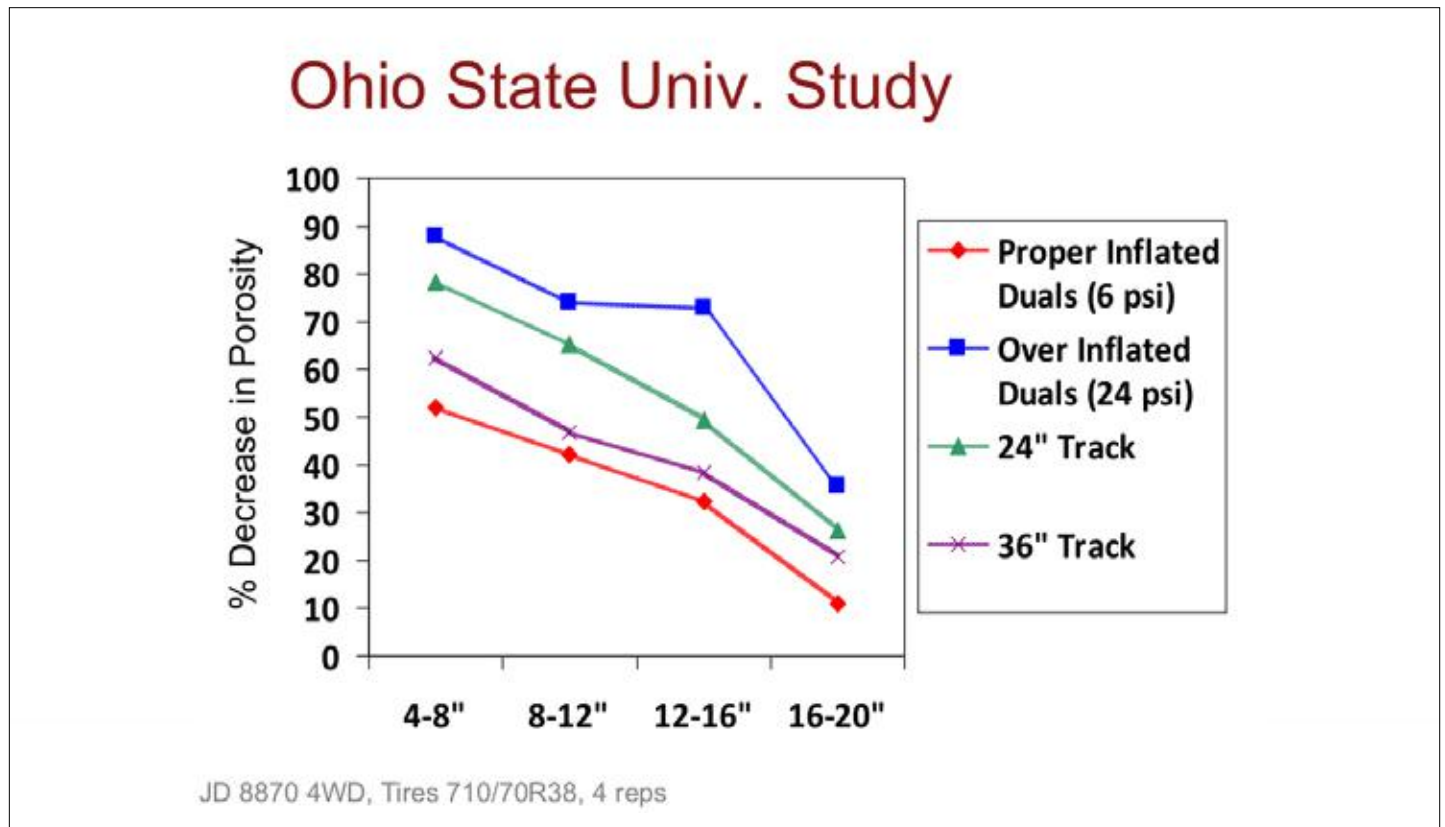
“One of the things with ruts and wheel traffic compaction is that the data is incredibly consistent almost everywhere and across different crops. You can pretty much expect in the first year or two following soil damage to have on average around a 15-20 percent drop in yields. And it takes a few years to recover from that,” Daigh said. “In some areas, the damage may



Aaron Daigh, Assistant Professor, North Dakota State University presents to growers at the Ruts, Residue and Regrets meeting.

show permanent yield reduction for at least as long as you are farming for. It may not be evident every single year, but it will on inclement weather years.”

Daigh points out that tillage may not be necessary for residue management. He said the rate of soil dry down under ideal evaporation conditions averages out



around eight days no matter what the thickness of residue or tillage type has been.

“So what this means is that, after snow is done, if we get two to three weeks of a dry spell with no spring rains, it may not matter how much residue you have out on the field. If we get weekly rainfalls, the data just resets from the start.

If we get rainfalls twice a week, it will matter more. So our spring rains will play a role in what we can expect for soils drying down.”

He said this season presents an opportunity for farmers to capitalize on their planter’s technology, since they can be fine-tuned to handle high-residue and wet conditions.

Jodi DeJong-Hughes, University of Minnesota Regional Extension Educator, echoes Daigh in the value of utilizing planters for residue management and avoiding extra tillage. Both are encouraging farmers to break out their manuals and get to know their planters more in-

timately this year to ensure good seed-to-soil contact.

“Get everything in shape and ready to go, know your planter inside and out better than ever before,” DeJong-Hughes said. “Slow down your planting and get out of the tractor to check on everything more often than usual to give that seed the best chance to survive. And to avoid excess compaction, get the largest tires you can, the most axles you can and properly inflate all tires. Proper PSI has big benefits, so use this to your advantage.”

DeJong-Hughes said if fields have deep or excessive ruts, it is best to fill and level them just enough for spring planting. She cautions that while every situation is different in specifics, there are times when tillage is useful.

The type of tillage being used can play a key role in the soil’s ability to foster plant growth. She said conventional tillage will deform the soil first, while no till and reduced till will not compact as easily. In the



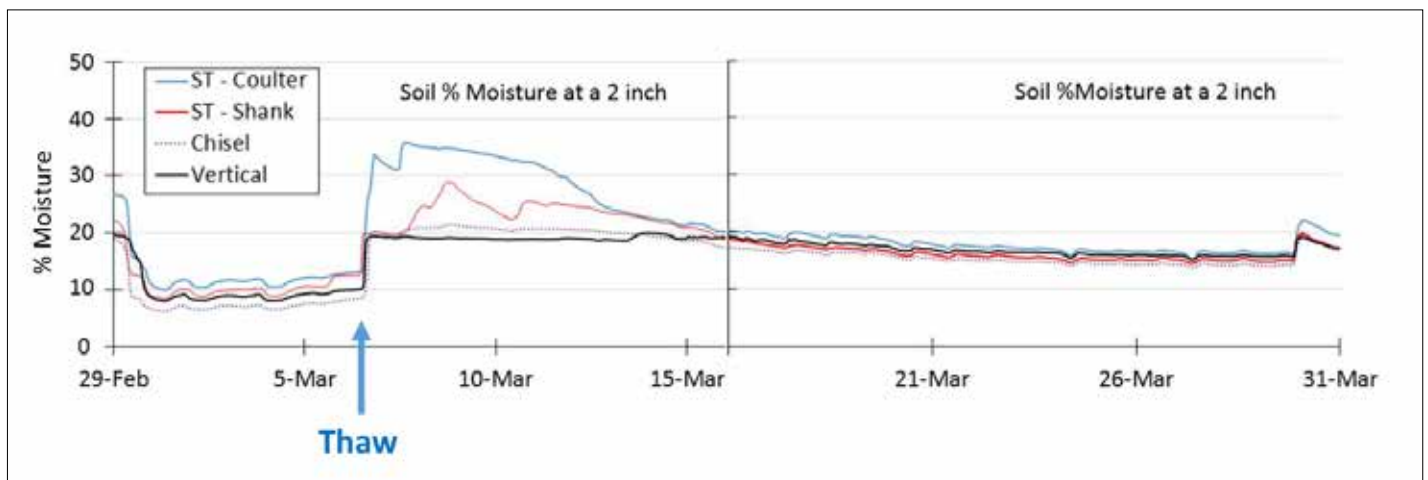
Jodi DeJong-Hughes, University of Minnesota Regional Extension Educator, recently spoke to growers in Moorhead, MN.

case of cover crops, DeJong-Hughes said high organic soils can naturally combat compaction and also act as a sponge to hold up to heavy traffic better in wet conditions. The trade-off is that it will take a few years before noticing the advantages.

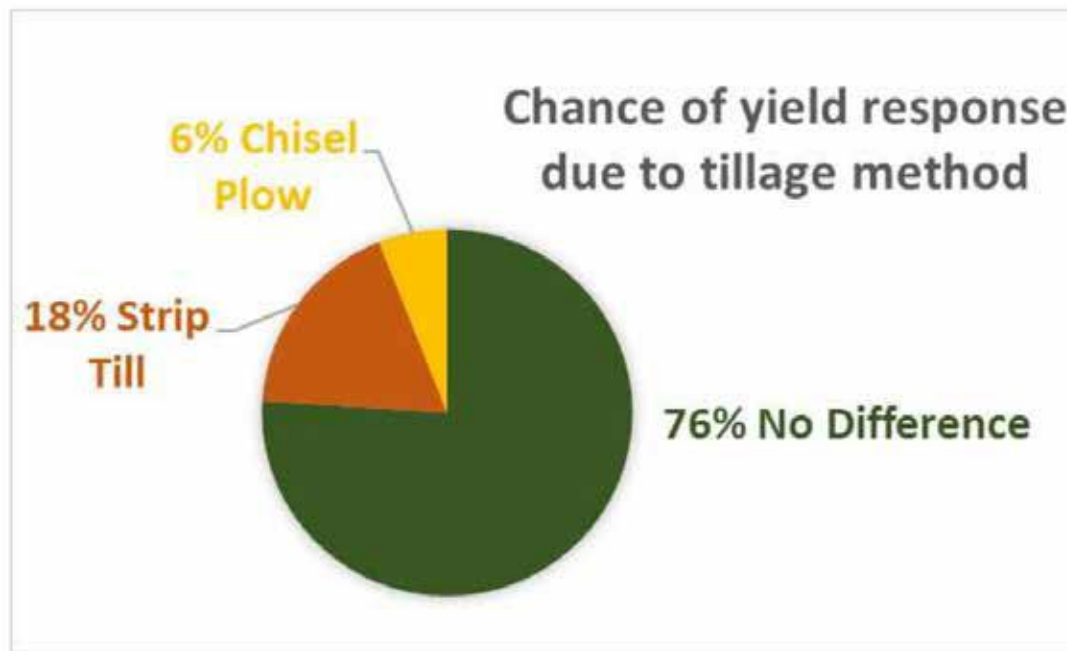
“This spring will show the importance of having good

soil structure and what our soils can do for us if we would put down cover crops and do less tillage. A lot of farmers will sink to the depth of their tillage out there this spring.”

continued on page 12



- After 1 week, all tillage is the same
- If it rains every week, then residue keeps soil wet



Soybean yield response to tillage for 17 site years in E. North Dakota and NW Minnesota (2005 – 2012)

Tillage ultimately homogenizes the soil and naturally makes it weaker or compacted. There is no effective mechanical means for creating a firm soil and fostering good drainage according to DeJong-Hughes and Daigh. They said that, when given

time, only nature works really well. But in cases where tillage must be used to smooth those ruts out a little, they are telling farmers to cut only a few inches deep to avoid soil smearing and till only where needed. Daigh points to a silver lin-

ing in this year's situation. He said that while it may not feel great going through this spring, it is a good opportunity for farmers to see what their equipment can do in high residue situations.

"You're paying for what-

ever it takes to pull across the field. And studies show there is almost no difference in yield for type of tillage. We used to think about the amount of residue being quite strongly indicating of yield potential on the year when you're in wet situa-

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tions. With the equipment, varieties and genetics we have these days, we just don't see it anymore. You think about all of our other tools and techniques that we use, its trying to moderate the weather effect on everything. Well, tillage affects the soil weather. So we've kind of erased that out by all the other improvements that have been done in our systems."

Overall, farmers can expect to see about a three year affect on yield from ruts and the same or more from compaction.

Farmers will have to consider the condition of the ruts, the types of crops they farm and the weather conditions to determine how best to work their fields with the equipment they own.

"Remember that letting the soil dry out a little bit

more is well worth the wait to avoid excess compaction," DeJong-Hughes said. "When it is wet, it is hard to do things gracefully, so we need to minimize loads and be patient."

UPPER MIDWEST TILLAGE GUIDE

Daigh and DeJong-Hughes, in March at the Ruts, Residue and Regrets meetings, answered farmers' questions about managing specific field situations.

For those with more questions about tillage, they recommend referencing the Upper Midwest Tillage Guide, which can be found at z.umn.edu/TillageGuide.



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Advertorial

Preparing for the Growing Season's Diseases

Planning for and responding to diseases in spring wheat

By Grant Mehring, WestBred® technical product manager, northern region

Only so many management decisions can be addressed during crop planning. In-season observations and subsequent management of the spring wheat crop can increase the yield ceiling and protect against the floor by responding to what the environment gives us. Specifically addressing preparedness for the most yield-robbing diseases is important to consider.

Diseases to Plan Ahead for in 2020

Getting the crop to a fast, healthy start is important for disease and pest avoidance. Starter fertilizer and seed treatments are recommended to give seedlings a boost and protect against early-season diseases and insects. Scouting the crop early is also essential for staying in front of any issues that may arise. Keep an eye out for the following this season:

- **Fusarium Head Blight (Scab)** – has long been the No. 1 wheat disease across the Northern Plains. Knowing the FHB rating of the varieties you plant is the first step. Next comes monitoring the free moisture (both rain and humidity) and temperature around the flowering period, which is typically within the month of July, but varies by region and planting date.
- **Bacterial Leaf Streak** – is the disease where cultural controls do not exist beyond selecting varieties with some level of resistance. This disease has incidence where rainstorms have brought wind and even hail, and is most damaging to the flag leaf and the plant during grain fill. 2019 showed us just how much yield loss is possible from BLS.
- **Tan Spot** – is our most common early-season wheat disease, starting from the early vegetative growth and working its way up the plant as the conditions allow. Wheat spike size is determined early in the plant's development, so keeping leaves free of tan spot early will keep yield potential high.

For additional information, contact Grant Mehring at 701-373-1591 or grant.mehring@bayer.com.

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Outreach Center a Long-Term Resource

By Dan Lemke,
Spirited Communications

For 125 years, northwest minnesota farmers have had a unique resource working on their behalf.

The Northwest Research and Outreach Center (NWROC) in Crookston delivers unbiased research on a range of agricultural topics—all with the goal of helping farmers make the best management decisions they can.

The Morrill Land Grant Act established the University of Minnesota in 1862, by 1887, the Hatch Act created the Agricultural Experiment Station. Ag Extension was created in 1914 through

the Smith Lever Act. Those developments were key to creation of the Northwest Experiment Station, which was established in 1895 and was Minnesota's first outstate experiment station. The name was changed to the NWROC in the late 1990s. Today, the NWROC is one of ten research and outreach centers (ROC) spread across Minnesota.

"All ROCs are strategically located," says Albert Sims, NWROC Director of Operations. "The NWROC is unique from the other ROCs for a number of reasons. Our landscape was determined by glacial Lake Agassiz, so we have some unique soils. Water flows north, so it has

international implications, and our cropping system has been largely small grains and sugarbeets."

Sims joined the Northwest Experiment Station in 1995 as a soil scientist, working in the areas of nutrient management, fertilizer and residue management. In October 2010, Sims became NWROC director of operations.

CHANGING TIMES

Over the course of the NWROC's 125-year history, the center's structure and capacity has changed, but Sims says the focus has not.

"Our value is providing independent research. It is funded research, but the ideas, direction and interpretation are not based on marketing," Sims explains. "Our role is to give farmers the best information possible for them to make decisions."

Sims says the ROCs provide people with the connection to resources available at the University of Minnesota.

"Farmers and agribusinesses know that if they need an independent view on data, they have a home at the University of Minnesota," Sims adds.

Research at the NWROC has largely focused on spring wheat and sugarbeet, with smaller efforts on potato, canola, edible bean, barley, and oats. In recent years, more corn and soybean research has entered the mix as a growing effort.



Dr. Albert Sims

FUNDING CHALLENGES

Sims says the University owns about 1400 acres of land and rents about 525 additional acres. About 250 to 300 acres are used for research plots. Sims says demand for addition research plot land is increasing. The NWROC has four faculty members, roughly four office staff, six operations workers and 11 research staff.

The NWROC has three primary avenues of funding. About one-third of the center's funding needs come from allocated funding through the University of Minnesota College of Food, Agriculture and Natural Resources. Sims says those funds, which have been reduced by 30 percent since 2001, are mostly used for key operations personnel and all-purpose research technical assistance.

The NWROC also operates a commercial farm, growing sugarbeets, spring wheat, soybean and corn to generate income. Income from



the NWROC farm provides necessary revenue to maintain their capacity to fulfill their mission of research and outreach/Extension.

“Without that income, we can’t maintain our mission,” Sims says.

Much of the research projects conducted at the NWROC require outside funding. Sources include private companies, commodity organizations, and state and federal agencies.

“To develop and maintain their research and outreach/Extension programs,” Sims explains. “Faculty at the ROCs, and most of the University, must seek outside funding sources.”

Sims says graduate students, technicians and research trials almost all require outside funding. That’s due in large part because public support has not kept up with expenses.

FARMER CONNECTIONS

Sims says interaction with farmers is an important part of what the NWROC offers. He encourages farmers to come to meetings and events presented by the NWROC to share their ideas and concerns.

“When we interact, we learn as much from the growers as they do from us,” Sims says. “Conversations with farmers have stimulated many research projects.”

While many of the research studies are supported with outside funds, Sims says researchers are able to maintain their objectivity because their focus is on delivering information to farmers.

“We are doing our best to help them make decisions by providing fair and unbiased information. We’re not here to market or sell a product, we’re here to develop and share information,” Sims contends.

Sims says the NWROC’s work impacts all citizens, especially in areas like water quality and soil health. Despite changing times, Sims expects the center will con-

tinue focus on small grains and sugarbeet research but is likely to expand to include nutrient and water management, and remote sensing technology in an ever-changing cropping system.

“In today’s financially challenging environment, we are doing what we can to maintain capacity for research, outreach and extension so that we remain valuable for agriculture in northwest Minnesota,” Sims says. “That is our goal.”

More information about the NWROC, including research results, is available at <https://www.nwroc.umn.edu/>.



Wheat Research to Address Gluten Sensitivity and Increase Demand

The Minnesota Wheat Research and Promotion Council, in partnership with the Agricultural Utilization Research Institute and the University of Minnesota, are currently pursuing a new study that could make a meaningful impact on the wheat industry. Together, these partners are investigating options to reduce wheat digestibility concerns by identifying naturally occurring anti-nutrient elements in specific breeds of wheat.

For thousands of years wheat has been a staple in human diets due to its unmatched nutrition profile. Although this fact remains undisputed, within recent years wheat has increasingly come under attack due to digestive difficulties for some consumers. These digestibility issues have contributed to an 11% decline in per capita consumption of wheat flour (product) between 1997 and 2017 [1]. On the other hand, experts expect gluten-free product sales to reach about \$1 billion in 2020.

For this reason, research into potentially reactive components negatively impacting consumers of wheat is underway. Fermentable sugars known by the acronym “FODMAP” (fermentable oligosaccharides, disaccharides, monosaccharides, and polyols) and certain proteins “ATI” (amylase-trypsin inhibitors) are the focus of this research. Researchers believe these reactive components are triggers of non-celiac gluten sensitivity and irritable bowel syndrome (IBS).

Not all consumers deal with digestive distress when eating cereal grains. Through insights gained in recent research into microbiology, it is also becoming apparent the human microbiome (the vast army of bacteria, fungi and other microbes in the digestive tract) plays a critical role in maintaining or disrupting our health. Research in 2019 showed ATIs kill or suppress good bacteria and enhance the bad bacteria, leading to imbalances in the gut [2]. Current research illustrates



Photo: Rolf Hagberg

that many individuals who suffer from digestive distress when consuming cereal grains may have an underlying dysbiosis (microbial imbalance or impaired microbiota). For such individuals FODMAPS may become reactive, causing diarrhea, abdominal pain, distention and bloating. Recent research indicates the majority of inflammatory diseases are related to microbiome dysbiosis [3].

The process of developing low reactive wheat food products is a combination of selecting the right wheat variety and alternative processing, such as sourdough fermentation, so that the ATIs and FODMAPs are substantially reduced. The current project funded by the Minnesota Department of Agriculture’s (MDA) Agricultural Growth, Research and Innovation (AGRI) program investigates the

level of ATIs and FODMAPs present in current and past Minnesota wheat varieties, as well as their anti-nutrient levels, after processing the wheat into a sourdough wheat food product.

Australian researchers and businesses have been actively pursuing FODMAP opportunities. Monash University in Australia is a leader in low FODMAP diets and certified low FODMAP food products testing. In addition, the Manildra Group, a major Australian flour milling company that also has facilities in the United States, launched a low FODMAP flour in 2018, which makes low FODMAP flour available in the United States. The flour is produced by Lo-Fo Pantry (Manildra Group USA).

The benefits of this research are three-fold. First, bread processors will gain valu-

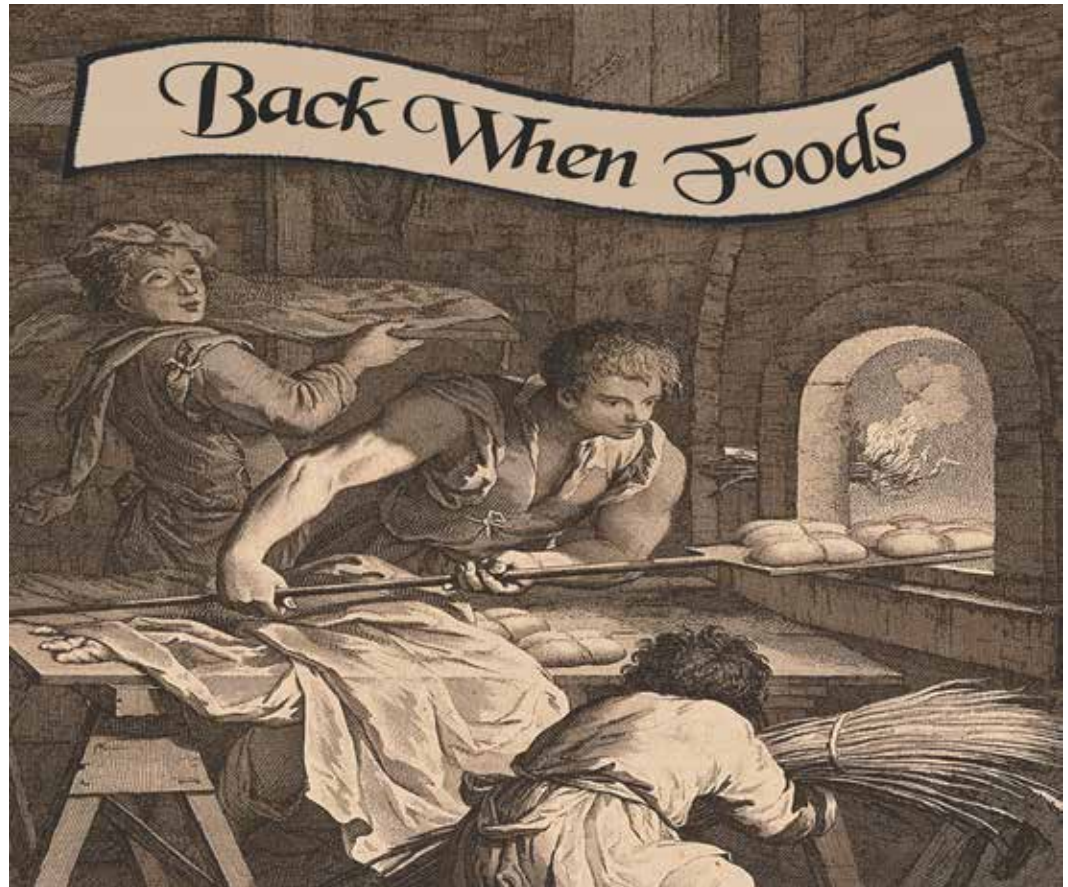


able information about processing techniques using fermentation that could reduce anti-nutrients in new wheat products that reduce human digestive issues in populations with FODMAP sensitivities. Second, consumers may start enjoying wheat products that have lower FODMAPs and anti-nutrients that cause digestive issues. For individuals with wheat sensitivity, less reactive wheat products can increase quality of life while enjoying the health benefits of wheat products. Third, Minnesota wheat farmers benefit. By spurring research for possible breeding efforts into new wheat varieties that help reduce wheat digestibility sensitivities, it is expected that consumer demand for wheat-based products will increase, thus resulting in expanded market opportunities to increase profitability for wheat growers.

Financial support for this project is provided by an Agricultural Growth, Research, & Innovation Crop Research Grant from the Minnesota Department of Agriculture. The AGRI program awards grants, scholarships, and cost shares to advance Minnesota's agricultural and renewable energy industries. For more information about the AGRI program, visit www.mda.state.mn.us/grants/agri. To learn more about AGRI Crop Research Grants, visit www.mda.state.mn.us/cropresearch.

CITATIONS:

[1]Data obtained from United States Department of Agriculture Economic Research Service: <http://www.ers.usda.gov/data-products/wheat-data/>



www.ers.usda.gov/data-products/wheat-data/ [2]"Dietary Wheat Amylase Trypsin Inhibitors Modify the Gut Microbiome by Antimicrobial Activity and Aggravates Experimental Colitis" Pickert, Wirtz, Heck, Thies, et.al. (2019).

[3]Fructans with a higher Degree of Polymerization (HDPI) produced more diversity (of bacteria) towards the end of the experiment, and that this effect was statistically significant against controls when more weight was attached to the more

abundant (or "highly effective") OTUs. "Effect of the Degree of Polymerization of Fructans on Ex Vivo Fermented Human Gut Microbiome" Asto, Mendez, Prado, Cune, et.al. June 7, 2019.

The Business End of Farming

It is an extremely difficult decision to close a farm business but closing a business while still solvent is the responsible thing to do.

By Lyle Benjamin, Montana Grain Growers Association

By now, many will have heard that I am closing my farm business and liquidating the assets. Many will be curious about the background and wondering, "How I am doing?" These are both good questions and not only should be asked, but honestly answered, as well. Too often in our farm communities we hesitate to ask out of respect for privacy (but at the unfortunate cost of not appearing to care).

Conversely, those who do "quit" often don't cathartically talk about the process out of stubborn pride or not wanting to discuss what can feel or look like personal failure. The background?

The simple picture is that several years of insufficient rain, combined with poor and declining markets, shrinking crop insurance guarantees, a balance sheet dominated by depreciable assets and some ill-timed equipment upgrades during the good years at the peak of the grain market

all combined to create a stressed financial picture that made continued operation a high risk proposition. Low equity going into this venture required decent crops and prices while I built a solid base.

As I looked at the numbers, we could continue to farm, but another year of poor crops and mediocre prices would wipe out what equity remained. That would have put us into or uncomfortably near bankruptcy.

One thing I refuse to do is leave local (or any other) vendors holding the bag on bad credit. Those businesses may have skin in the game, but ultimately the responsibility is mine to ensure that no harm accrues to those with whom I do business. That principle, combined with the polite decline by several banks to rent operating money to me for 2020, resulted in my pragmatic decision to liquidate our farm business.

Was my business a failure? No, but it was not returning a profit over several years. The trend was accelerating towards a possible failure. Within the farming community there is an uncomfortable tradition of not facing facts until all hope of salvage is lost. When a farm business fails at that point, the wreckage ripples across the community as debts are defaulted on and bills for tangible goods go unpaid with no hope of collection.

Closing a business while still solvent is the responsible thing to do. It is the community thing to do. One of the reasons I live where I do is that I like the friends and neighbors we have. As I view the problem, farm liquidation is only failure when it costs other people money. Success can be recognizing that fickle Lady Luck has shifted her attention to other ventures. One of the central elements of farm culture is the multi-generation heritage of the farm. Too often, the heritage itself is valued over other intangible things like what is good for the farmer's family. We tend to look back to a homestead year and sentimentally polish it as being the beginning of time. But how did the family happen to arrive on the homestead in that year? They left something else behind, either because it was not working out or because the new opportunity promised more than the old.

Our family was shipped out of Hesse, Germany in 1776 for a reason, left Missouri in the 1890s for a reason, and moved from western Idaho to northern Montana in 1911 for sound reasons. It was not failure that drove those moves, but a clear-eyed view of better opportunities in a new land or business. Each of those generations would understand and approve of selling out and moving on.

My point is, it is okay to make a life-altering decision



Lyle Benjamin

about your farm. It is okay to make that decision before it is forced upon you. You did not fail. Your neighbors and friends will stand by you and support you if you let them. As I have shared my circumstances and ultimate decision with my peers, friends, and neighbors, I have experienced universal support and even seen the expression of love – not something we expect in a typically stoic farm community, but exactly what we value in a good community. Thank you all, for making me part of this.

If my story keeps one farmer from bankruptcy or suicide, it will have been worth it. There is life after farming.

If you have questions or would like to discuss this further, feel free to reach out to me at Skookum-chuck.ag.lyle@gmail.com or 406-539-5953.



U.S. Wheat Associates Launches 40th Anniversary Campaign

On January 12, 1980, wheat farmer leaders with Great Plains Wheat and Western Wheat Associates officially merged to become one organization, U.S. Wheat Associates (USW), to focus on building overseas demand for U.S. wheat. To mark its 40-year anniversary in 2020, USW has launched an outreach effort to recognize and celebrate the people who produce the wheat and their enduring partnerships with the U.S. Department of Agriculture, wheat buyers and wheat food processors around the world.

“This anniversary is a platform for us to reinforce our authentic story—that

behind the world’s most reliable supply of wheat are the world’s most dependable people,” said Steve Mercer, USW Vice President of Communications. “In online media, new marketing materials and face to face with overseas wheat buyers, we are going to talk about the legacy of commitment from farmers and the important partnerships that are a unique and differential part of importing U.S. wheat.”

The primary component of the USW campaign is a new landing page on www.uswheat.org titled “Our Story.” The page includes historical background, and profiles of U.S. wheat

farm families and overseas customers. The campaign also features a new video that defines the value created by farmers, the U.S. wheat export supply system and the service the USW organization offers to flour millers and wheat food processors around the world.

“Many of the millers and bakeries USW works with overseas are also family-owned and going through the same generational changes as U.S. farm families,” Mercer said. “That is one reason why we will emphasize past and present connections between our farmers and customers in those stories, through our

Wheat Letter blog and in Facebook and Twitter posts as we continue to update content throughout 2020.”

USW’s mission is to “develop, maintain, and expand international markets to enhance wheat’s profitability for U.S. wheat producers and its value for their customers.” USW activities in more than 100 countries are made possible through producer checkoff dollars managed by 17 state wheat commissions and cost-share funding provided by the USDA/Foreign Agricultural Service.



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Reducing Tillage through Vertical Tillage

By Melissa Geiszler, MN Wheat Research and Promotion Council

Conservation tillage systems such as vertical tillage reduce compaction, leave more residue over the winter, reduce erosion, and retain more moisture in the soil profile. However, because north-west Minnesota has a shorter growing season, fewer frost-free periods, and cooler springs and falls, farmers are hesitant to adopt conservation tillage practices which can cause cooler soil conditions in the spring.

The flat landscape and strong winds lead to wind erosion in this region. Vertical tillage is one way of reducing tillage and leaving more crop residue on the soil surface in order to reduce soil erosion without fully committing to more complicated, management-intensive practices such as strip-till,

no-till, or cover cropping. A vertical tillage implement has fluted discs set 10-12 inches apart to cut and size residue, followed by a section of harrows to spread the residue, and then a set of rolling baskets for light surface incorporation of the residue with the soil.

MN Wheat's On-Farm Research Network worked with the MN Department of Agriculture through their Sustainable Agriculture Demonstration Grant to compare the effect of vertical tillage on spring soil temperature and moisture and crop yield compared to conventional tillage with a chisel plow and field cultivator on a field with clay-loam soils near Gently, MN, in a wheat-soybean rotation during the 2017-2019 growing seasons.

TRIAL SET-UP
The 'Conventional' tillage control treatment included two passes of a



Vertical tillage (left) and conventional tillage (right).

chisel plow with twisted shanks and one pass with the field cultivator in the fall, plus one field cultivator pass in the spring prior to planting if needed.

The 'Vertical Tillage' treatment included one pass of a Salford 570 RTS vertical tillage tool in the fall following soybean or two

passes following wheat, plus one pass in the spring prior to planting if needed.

Each treatment was replicated three times within the field. The established plant population was measured after crop emergence. Soil temperature and moisture content at 2 in-depth were measured one week before planting, at planting, and one week after planting. At harvest, one combine pass from each plot was weighed in a weigh wagon, and grain was sampled to measure test weight and moisture, protein, and oil content where applicable.

RESULTS

While there appeared to be some small differences in soil moisture between treatments, these differences were not statistically significant, and they did not affect fieldwork or planting (Figure 1).

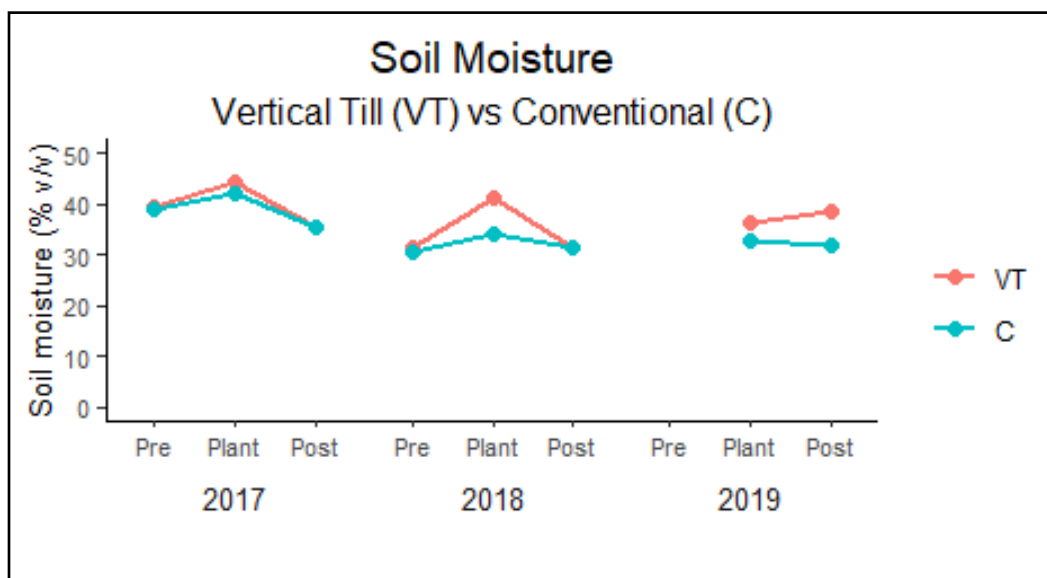


Figure 1. Difference in soil moisture between treatments. There were no differences between treatments at the 90% confidence level.

Soil temperature was significantly greater in the Vertical Till treatment at planting by 2.1°F in 2019 (Figure 2). However, at all other measured dates there were no differences between the two tillage types.

Reducing tillage from the Conventional tillage practices to the Vertical tillage practices did not reduce crop stand, grain yield or grain quality (Figure 3).

There were no major differences in soil conditions at harvest between the two treatments in the fall of 2019 (personal observation).

CONCLUSIONS

The evidence from this study leads us to the conclusion that reducing soil disturbance by using vertical tillage instead of conventional tillage with a chisel-plow and cultivator can save time and fuel by using fewer passes through the field and reduce soil erosion and disturbance by leaving more residue on top of the soil without affecting planting conditions or final soybean or wheat yield or quality at harvest.

Based on evidence from this project that reducing soil disturbance and using

continued on page 22

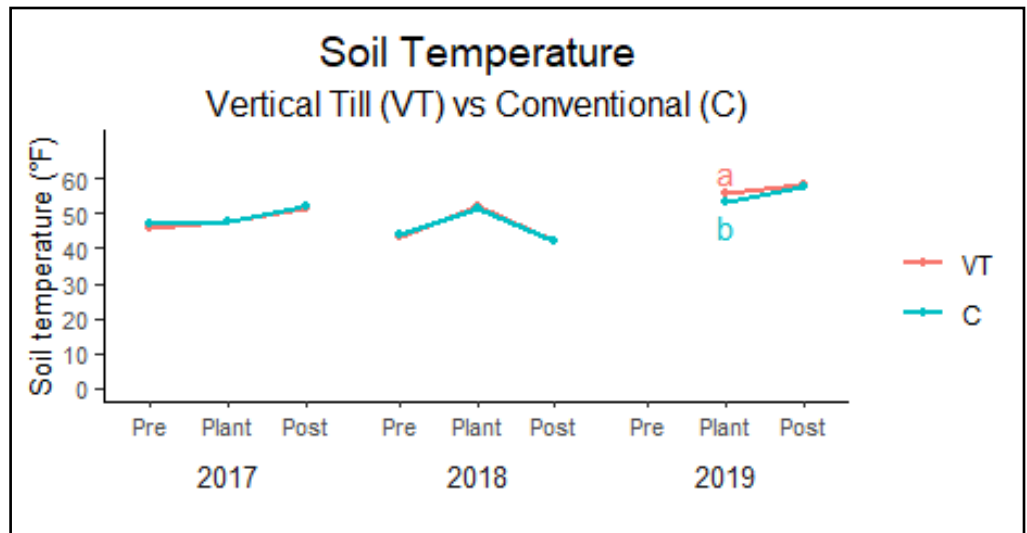


Figure 2. Soil temperature. Temperature was different between treatments at planting in 2019, indicated by differing letters at the 90% confidence level.

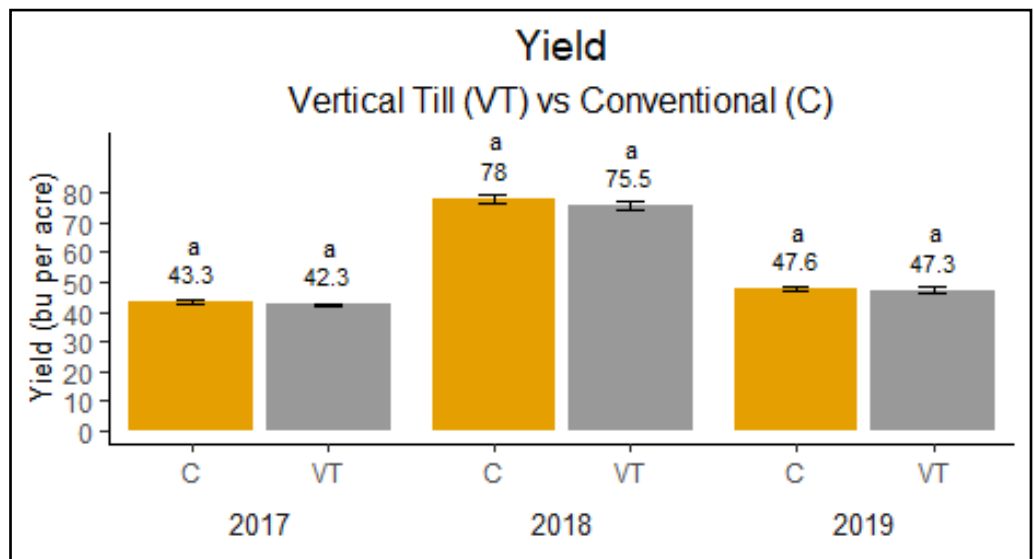


Figure 3. Yield results from 2017-2019 with the crop rotation soybean-wheat-soybean. There were no differences between treatments, indicated by the lack of differing lowercase letters at the 90% confidence level.



Test what works, and what doesn't, on your farm this season!

MN Wheat's OFNR is looking for wheat producers in Minnesota to participate in their 2020 research trials.

Several slots are available for producers who would like to learn something new about wheat and soybean production on their farm.

Choose a trial that interests you and could help increase field and farm profitability.

2020 Trials to choose from include:

- N-stabilizers
- P + K fertility
- Rye cover crop after wheat
- Flag-leaf fungicides
- Wheat seeding rates

If you would like to become a participant and have a trial on your farm, contact Melissa Geiszler at 952-738-2000 or mgeiszler@mnwheat.com

OFNR trials are made possible through support from: Minnesota Wheat Research & Promotion Council; MN Department of Agriculture; Agricultural Fertilizer Research & Education Council and Minnesota Soybean Research & Promotion Council

from page 21

few tillage passes does not affect crop quality or yield, the farmer-cooperator for this trial has transitioned his entire farm to reduced tillage with the vertical tillage implement to save time and money and reduce soil erosion.

This research was funded in part by the MDA Sustainable Agriculture Demonstration Grant and the MN Wheat Research and Promotion Council. Special thanks to Mary Hanks and MDA staff for editing assistance.

View the full 2019 MN Wheat online at <https://mnwheat.org/farm-research-network/> and the 2019 MDA Greenbook article at <https://www.mda.state.mn.us/greenbook>

ABOUT THE ON-FARM RESEARCH NETWORK
MN Wheat's On-Farm

Research Network receives funding from the Wheat Check-off to conduct field-scale replicated strip trials to answer production questions from MN producers.

Questions can be directed to Melissa Geiszler, On-Farm Research Coordinator, by email at mgeiszler@mnwheat.com or by phone at 218-253-4311 Ext. 8.



Salford 570 RTS vertical tillage tool.



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Wheat Growers and Farm Bureau Work Together to Bring Messages to Legislators

Nearly 20 Minnesota Association of Wheat Growers and Farm Bureau members from northwest Minnesota met with legislators on March 3-4.

Counties attending included: Clay, Grant, Mahnomen, Norman, East and

West Otter Tail, East and West Polk and Roseau.

Their message to legislators focused on conformity to Section 179 of the federal tax code; supporting proper funding for the Rural Finance Authority; addressing property tax

issues on land required to be placed into buffers and increasing Minnesota's existing biofuel standard.

"This trip is organized so well that we were able to connect with over 40 legislators on different challenges facing agriculture

and rural Minnesota," said Riley Maanum - Minnesota Farm Bureau Federation northwest area program director. "We were also able to have conversations with many important committee chairs and urban lawmakers. I really feel like we accomplished



First row: Rebecca Sip, Ada; Marissa Sip, Ada; Connie Gunderson, Bejou; Rachel Arneson, Halstad; Tate Petry, Ada; Katherine Petry, Ada; Kevin Meyer, Henning; Bruce Brenden, Rothsay;

Second row: Debbie Lacey, Wendell; Deb Whalen, Oklee; Riley Maanum, Moorhead; Mike Gunderson, Bejou; Paul Sip, Ada; Shayne Isane, Badger; Greg LeBlanc, Crookston; Charlie Vogel, Thief River Falls

Third Row: Mark Jossund, Moorhead; Brady Lee, Erskine

some valuable things for northwest Minnesota.”

On the first night of the trip attendees had a social with legislators from the Red River Valley, along with Thom Peterson the Commissioner of the Minnesota Department of Agriculture. They were also provided an update from Minnesota Wheat and Farm Bureau policy staff on the various issues that are being discussed in St. Paul. The following day members from both organizations were divided into teams for their appointments with legislators with seven meetings per group. Each group meeting was with legislators who lead committees that align with the organizations’ priority areas.

Charlie Vogel, executive director for Minnesota Wheat stressed the importance of this trip. "This is a great opportunity for growers to meet with their legislators who otherwise wouldn't have the chance. We are happy to work with Farm Bureau in order to make this happen for the growers."

“One of the great things about this year’s trip was the number of younger farmers that attended. We need upcoming leaders to be involved in this process,” said Shayne Isane - Minnesota Farm Bureau Federation State Board Director. “Northwest Minnesota can sometimes seem far away from St. Paul and making sure we have a voice well into the future is important. Thank you to everyone who was able to attend and help coordinate this event.”



(L-R) Mark Jossund, Moorhead; Paul Sip, Ada; Tate Petry, Ada; Rebecca Sip, Ada; Senator Kent Eken, Twin Valley; Katherine Petry, Ada; Riley Maanum, Moorhead; Marissa Sip, Ada; Rachel Arneson, Halstad.



(L-R) Charlie Vogel, Thief River Falls; Shayne Isane, Badger; Rep. Dan Fabian, Roseau; Greg LeBlanc, Crookston; Brady Lee, Erskine.

Report from the US Wheat Associates

The US Wheat Associates released their annual World Wheat Supply and Demand Situation report this past February. Below are some charts and graphs from the report. You can read the full report at www.uswheat.org.

Major data source: USDA World Agricultural Supply and Demand Estimates released February 11, 2020, unless otherwise indicated. Projections will change over the course of the year depending on weather.

HIGHLIGHTS OF USDA'S 2019/20 SUPPLY AND DEMAND ESTIMATES

2019/20 GLOBAL WHEAT PRODUCTION TO SET RECORD HIGH OF 764 MMT

- Wheat production in Argentina and Australia to fall from last year to 19.0 MMT and 15.6 MMT, respectively
- Ukrainian wheat production reached a record 29.0 MMT in 2019/20
- U.S. wheat production rose 2% from last year to 52.2 MMT

GLOBAL CONSUMPTION FORECAST IS 754 MMT, THE HIGHEST ON RECORD

- Brazilian domestic consumption to reach a record 12.1 MMT, up 4% from the 5-year average
- Domestic consumption in Indonesia to reach a record 10.7 MMT, up 12% from the 5-year average
- U.S. domestic consumption to total 31.7 MMT, up 5% year-over-year

WORLD WHEAT TRADE TO JUMP 6% YEAR-OVER-YEAR TO 183 MMT

- Exports from the EU to jump 25% from last year to 31.0 MMT
- Australian wheat exports to fall 10% year-over-year to 8.2 MMT due to prolonged drought
- U.S. 2019/20 exports to reach 27.2 MMT, 7% higher than last year and 10% higher than the 5-year average

HIGHLIGHTS OF USDA'S 2019/20 SUPPLY AND DEMAND ESTIMATES

WORLD BEGINNING STOCKS FELL 2% YEAR-OVER-YEAR TO 278 MMT, STILL 15% HIGHER THAN THE 5-YEAR AVERAGE OF 242 MMT

- Chinese beginning stocks of 140 MMT are 43% higher than the 5-year average and make up 50% of the global total
- Major exporter beginning stocks fell 13% from 2018/19 to 67 MMT
- U.S. 2019/20 beginning stocks of 29.4 MMT were down 2% from last year, accounting for 43% of total major exporter beginning stocks

GLOBAL ENDING STOCKS PROJECTED AT 288 MMT, 4% HIGHER THAN LAST YEAR AND 12% HIGHER THAN THE 5-YEAR AVERAGE

- Projected Indian ending stocks of 20.7 MMT are 18% higher than last year and 44% higher than the 5-year average
- Expected Australian ending stocks of 4.21 MMT are 18% lower than last year and 15% lower than the 5-year average
- U.S. ending stocks are expected to fall 12% from last year to 25.6 MMT, the lowest volume in 5 years

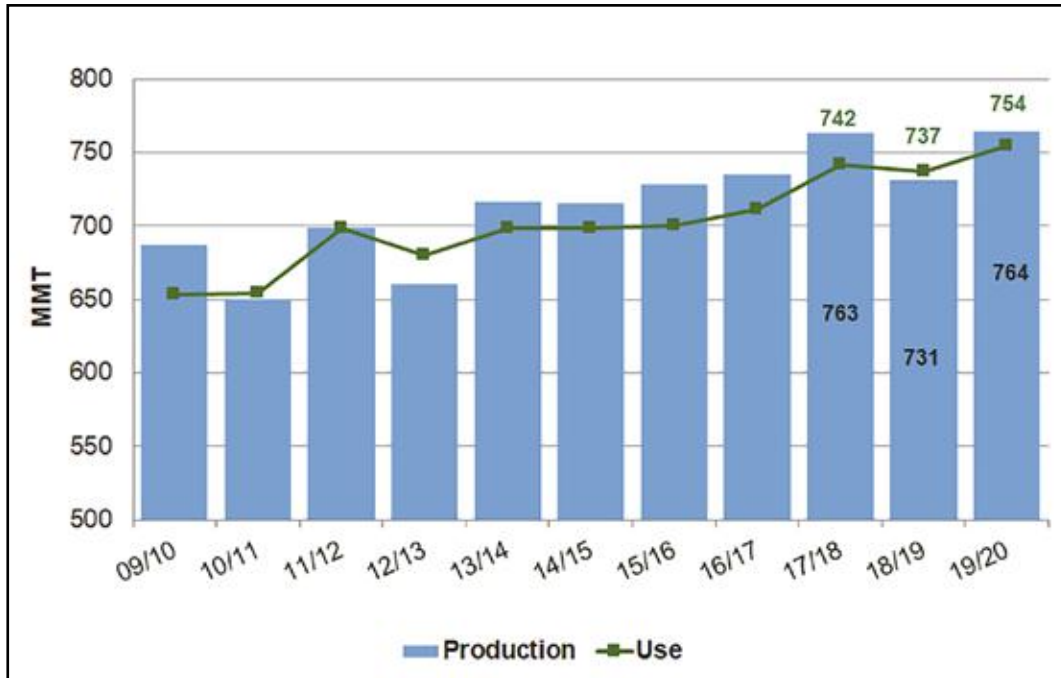
U.S. AVERAGE FARM GATE PRICE TO FALL 12% FROM LAST YEAR

- Projected average farm gate price to fall to \$4.55/bu* (\$167/MT) from last year's average of \$5.16/bu (\$190/MT)

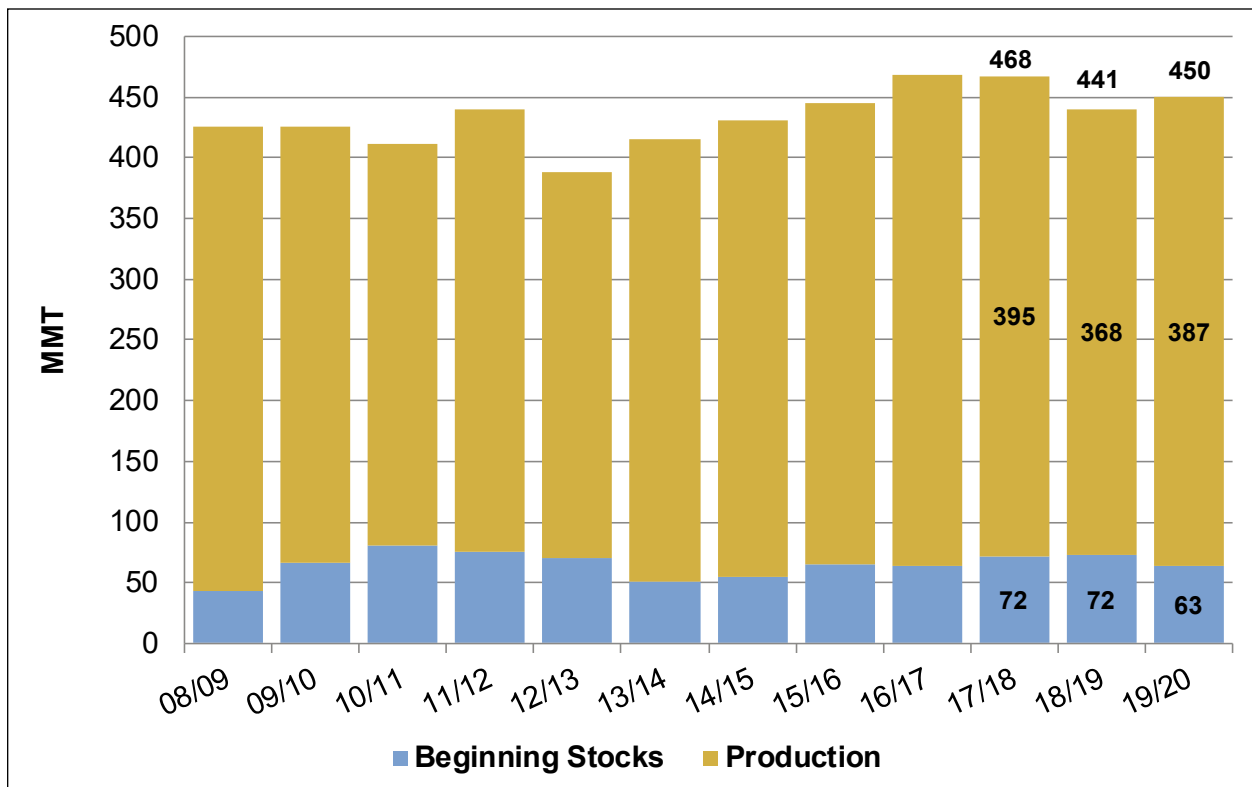
*Average U.S. farm gate price, marketing year weighted average



World Production and Use



Supplies in Top Exporting Countries*

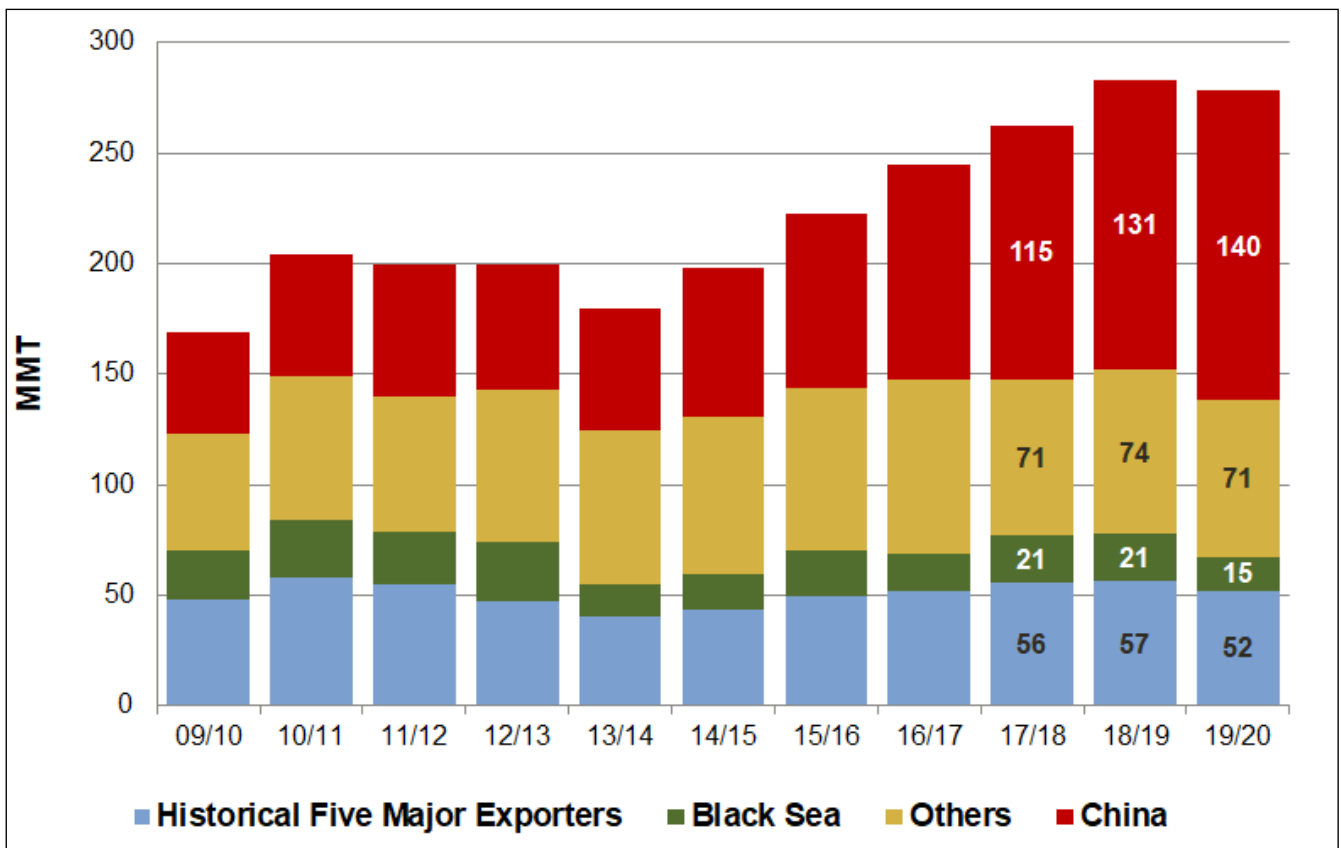


*Includes U.S., Canada, Australia, Argentina, EU, Russia, Ukraine and Kazakhstan

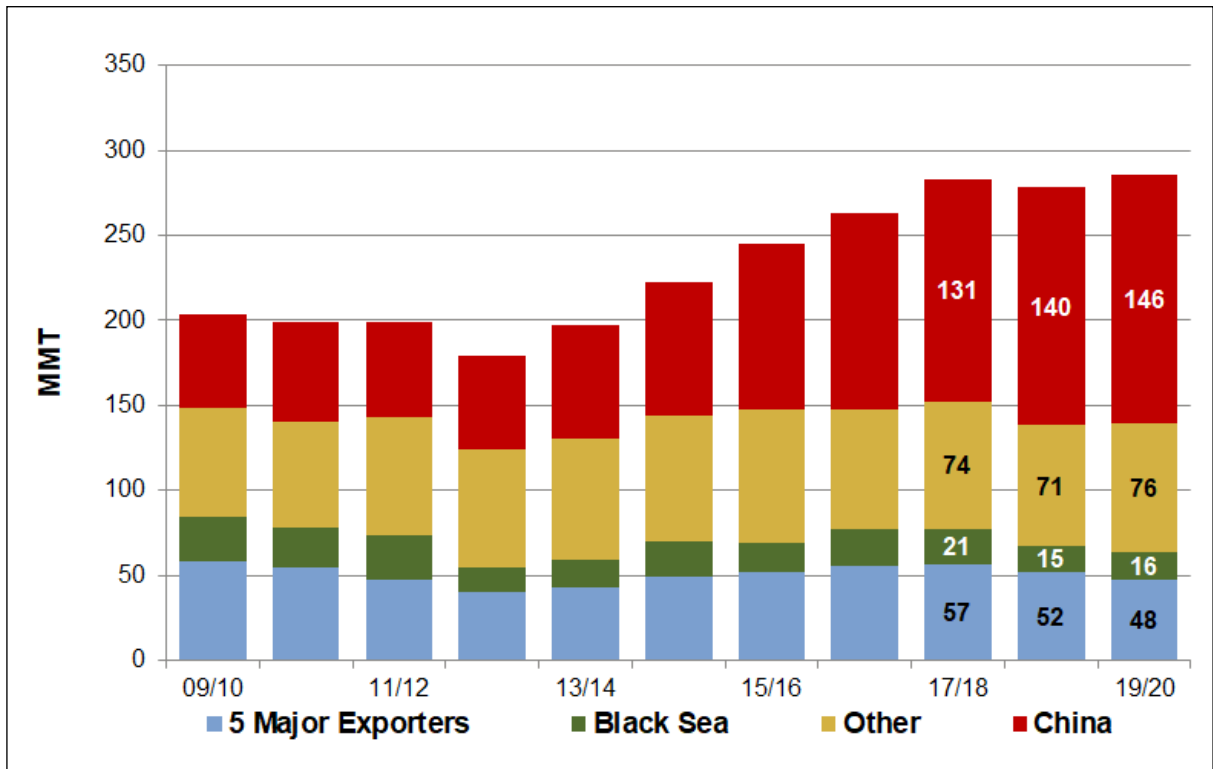
World Wheat Supply and Demand (MMT)

		<u>17/18</u>	<u>18/19</u>	<u>19/20</u>
SUPPLY:	Beginning Stocks	263	284	278
	Production	763	731	764
	Supply Total	1026	1015	1042
	Ending Stocks	284	278	288
TRADE:	Exports/Imports	182	174	183
DEMAND:	Food & Seed	595	597	606
	Feed & Residual	146	140	148
	Use Total	742	737	754

World Beginning Stocks



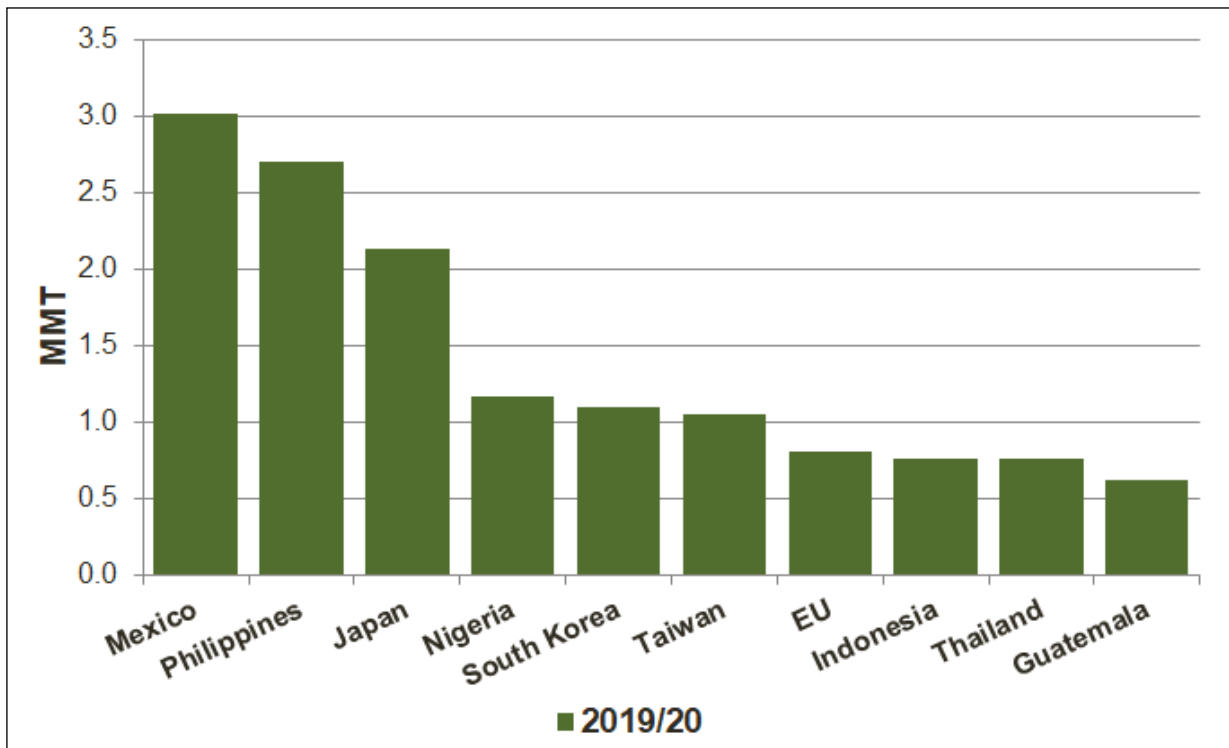
World Ending Stocks



Historical Five Major Exporters include U.S., Canada, Australia, Argentina and EU. Black Sea includes Russia, Ukraine and Kazakhstan.

Top 10 Customers for U.S. Wheat

Year-to-date



Source: USDA FAS export sales data as of January 30, 2020. Due to the 2018-2019 U.S. government shutdown, there are no year-over-year commercial sales comparisons for this time period. All year-over-year comparisons will resume in the March 2020 report.

National Wheat Yield Contest Winners

The National Wheat Foundation (NWF) announced the National Wheat Yield Contest winners to growers at Commodity Classic held in San Antonio, Texas in February 2020. The goal of the contest is to improve productivity of wheat growers in the U.S.

The contest offers growers the opportunity to compete with their peers across the United States and learn from each other innovative techniques to improve wheat productivity on their farms. The objectives are to drive innovation in the industry, enable knowledge transfer between growers, encourage the use of available technology and identify top wheat growers in each state. The contest features two primary competition categories: winter wheat and spring wheat. The top five winners from each category will be recognized nationally next year at the 2021 Commodity Classic to be held March 4-6, in San Antonio, Texas. Interested in entering the National Wheat Yield Contest? For rules and contact information, go to <http://yieldcontest.wheatfoundation.org/>.



First Place – Spring Wheat Dryland - % Increase

WINNER:

*Derrick & Alison Enos
Baker, MT
(Fallon County - 28 bu/ac)*

Yield: 94.95 bu/ac
Above Cty Avg: 239.11%

Variety: LCS Trigger (HRS)
Seed Treatment:
Stamina F4
Herbicides: Starane
Flex, Parady, Audit 4.1
Fungicide: Nexicor



Nitrogen: 100 lbs
Sulfur: 10 lbs
Quality: 1DNS; 63.9#; Tst
Wt; 12.3 Protein; 403 FN
Seed Dealer:
Russell Oberg

Second Place – Spring Wheat Dryland - % Increase

WINNER:

*Doug & Janelle Fitterer
New England, ND
(Adams County - 33 bu/ac)*

Yield: 96.07 bu/ac
Above Cty Avg: 191.12%

Variety: WestBred
WB9590 (HRS)
Seed Treatment: Rancona V
Herbicides: Latigo, RT3,
Justified, Barrage
Nitrogen: 117 lbs



Sulfur: 3 lbs
Quality: 1RS; 61 Tst Wt;
14.1 Protein; 188 FN
Seed Dealer:
Todd Kautzman

Third Place – Spring Wheat Dryland - % Increase

WINNER:

*Orin Knutson
Oslo, MN
(Marshall County - 55 bu/ac)*

Yield: 98.18 bu/ac
Above Cty Avg: 78.51%

Variety: WestBred
WB9590 (HRS)
Seed Treatment:
Seed Shield
Herbicide: Huskie
Insecticide: Warrior



Nitrogen: 228 lbs
Sulfur: 25 lbs
Fungicides: Tilt, Provaro
Quality: 1DNS, 64.5 Tst
Wt; 14.2 Protein; 291 FN
Seed Dealer:
Scott Weinlaeder

First Place – Spring Wheat Dryland - Yield Basis

WINNER:

*Trevor Stout
Genesee, ID
(Latah County - 73 bu/ac)*

Yield: 111.13 bu/ac

Variety: WestBred
WB9668 (HRS)

Seed Rate 1.1M: Harvest-
able Heads 1.9 M (44/sq
ft - 110 heads / 3 ft row)

Seed Treatment:
PNW Grandslam
Herbicides: Axial Star,
Ally Extra, and Brox M
Fungicide:
Propiconazole 2X)



Nitrogen: 195 lbs
Sulfur: 15 lbs
Quality: 1DNS; 61.8 Tst
Wt; 16.5 Protein; 270 FN
Seed Dealer:
Kyle Renton - PNW
Farmers Coop

Interested in Entering the 2020 National Wheat Yield Contest?

Contact Steve Joehl through email or phone. Email: sjoehl@wheatworld.org. Phone - 636-812-2709.

Or, go to their website at <http://yieldcontest.wheatfoundation.org/>.

First Place – Winter Wheat Dryland - Yield Basis

WINNER:

*Doug & Tammy Stout
Genesee, ID
(Latah County - 73 bu/ac)*

Yield: 181.93 bu/ac

Variety: WestBred Keldin (HRW)

Seed Treatment:

PNW Grandslam

Herbicides: Powerflex, Widematch, Wildcard extra

Fungicide: Propiconazole



Nitrogen: 175 lbs
Sulfur: 25 lbs
Quality: 1HRW; 64.3 Tst Wt; 11.1 Protein; 332 FN
Seed Dealer: Kyle Renton

Second Place – Winter Wheat Dryland - Yield Basis

WINNER:

*Jason Beechinor,
Walla Walla, WA
(Walla Walla County - 75 bu/ac)*

Yield: 167.95 bu/ac

Variety: LCS Artdeco (SWW)

Seed Treatment: Albaugh NWGG Custom Blend

Herbicides: Osprey, Huskie, Starane, Flex



Fungicide: Nexicor
Nitrogen: 275 lbs
Sulfur: 15 lbs
Quality: 1SWH; 63# Tst Wt; 10% Protein; 356 FN
Seed Dealer: Mike Klicker

Third Place – Winter Wheat Dryland - Yield Basis

WINNER:

*Nick Suwyn,
Wayland, MI
(Allegan County - 66 bu/ac)*

Yield: 165.65 bu/ac

Variety: AgriPro SY-100 (SRW)

Seed Treatments:

Cruiser Max/Vibrance
Extreme Cereal

Herbicide: Harmony Extra SG

Insecticide: Warrior II

Fungicides: Trivapro, Miravis Ace

Nitrogen: 150 lbs

Sulfur: 20 lbs

Quality: 1SRW; 61.2# Tst Wt; 10.7 Protein; 327 FN

Seed Dealer: Heasley Seeds



Second Place – Spring Wheat Dryland - Yield Basis

WINNER:

*Brian & Deb Lacey
Wendell, MN
(Grant County - 61 bu/ac)*

Yield: 103.04 bu/ac

Variety: WestBred WB9479 (HRS)

Seed Rate 1.7 M: Harvestable Heads 2.9 M (67/sq ft - 125 heads / 3 ft row)

Herbicide: Huskie
Fungicides: Priaxor, Prosaro

Nitrogen: 180 lbs



Sulfur: 10 lbs
Quality: 63.4 Tst Wt; 14.3 Protein; 391 FN
Seed Dealer: Scott Walker

Third Place – Spring Wheat Dryland - Yield Basis

WINNER:

*Jon & Sheri Wert
New England, ND
(Hettinger County - 40 bu/ac)*

Yield: 101.25 bu/ac

Variety: LCS Trigger (HRS)

Seed Rate 1.5M: Harvestable Heads 3.7 M (85/sq ft - 213 heads / 3 ft row)

Seed Treatment: Nipsit Suite Cereal

Herbicide: Huskie

Fungicides: Tilt, Prosaro, Tebustar

Nitrogen: 105 lbs



Sulfur: 5.6 lbs
Quality: 1DNS, 63.4 Tst Wt; 12.7 Protein; 376 FN
Seed Dealer: James Johnson



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