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BeanGrower

INSIDE

The Engstroms Enter the Popcorn Business

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VOLUME 26 ISSUE 5

STARTING POINT

HARVEST PRESSES FORWARD, EVEN DESPITE CORONAVIRUS

As the harvest season progresses, my thoughts go back to the past 18 months on the farm. In 2019, we had a late planting season. The crops went through a tough time last year with drought, followed by too much water and an October snowstorm. I think a biblical plague of locusts was the only thing we missed out on.

This spring, we had another late start, and in many cases, we didn't get all our edible beans planted. Yet, USDA's August crop report is estimating 2020 planted acres at 790,000 acres in North Dakota and 255,000 in Minnesota. That compares to 615,000 planted acres in North Dakota and 210,000 acres in Minnesota in 2019.

The planted acreage in the North Dakota/Minnesota combination may be a record. It's baffling to see the dramatic increase in acres when seed was short and the crop was planted late. The coronavirus pandemic only adds to the uncertainty.

With the crop situation a year ago, your Northarvest Bean Growers Association board took a conservative approach to all budgeting decisions. That philosophy has kept us in a strong financial position.

COVID-19 resulted in an initial surge in consumer buying for staples, like dry beans. Pantries are full and we want to move those beans out of the pantry and onto the table. A social media campaign is in place to reach consumers and promote dry bean recipes and menu ideas.

Let me wish all of you a safe and productive harvest run.

David Dickson, President
Northarvest Bean Growers Association

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From the Archives of the Northarvest Bean Growers Association

1 YEAR AGO: FALL 2019

Goehring Takes Over as NASDA President -- North Dakota Ag Commissioner Doug Goehring was just taking over as president of the National Association of State Departments of Agriculture. In an interview with the *BeanGrower* magazine, Goehring said there was significant turnover within state agriculture departments across the country.

A lot of my former colleagues in the Midwest went on to serve at United States Department of Agriculture as undersecretaries or directors of some sort," he explained. "It's challenging, but one of the things that I will continue to do and work on is to maintain the culture and the credibility of our organization."

Trade Issues Discussed During Perdue Visit to MN -- Agriculture Secretary Sonny Perdue defended the Trump Administration's trade strategy during a visit to Minnesota in August. While at Farmfest, which takes place in Redwood County, Perdue joined House Agriculture Committee Chairman Collin Peterson and a handful of other lawmakers for a listening session.

5 YEARS AGO: FALL 2015

Dry Bean Production Holds Flat -- USDA forecasted 2015 dry bean production at 29.3 million hundredweight, up less than one percent, or 81,000 hundredweight from last year. Planted acres were up 43,500 from June, and 33,500 above last year. Harvested acres were up 45,100 from June and up more than 36,000 from 2014. The average yield, at 1721 pounds, was down 32 pounds per acre from a year ago.

Compared to last year, USDA estimated pinto bean acreage to be down five percent; navy bean acreage down eight percent; black bean acreage up 36 percent; pink bean acreage down six percent; small red acreage up 41 percent. Light red kidney bean acres were up 24 percent from 2014; dark red kidney bean acreage up 38 percent; and Great Northern acres down 55 percent.

Zero Tolerance for Soybeans in Dry Bean Shipments -- Some dry bean canners have adopted a "zero tolerance" policy for soybeans in dry bean shipments. That means even one soybean in a truckload of dry beans can result in canners rejecting that load or discounting the price of those dry beans. Deon Maasjo, manager of Kelley Bean Company in Oakes, North Dakota, said volunteer soybeans are being seen a year or two years later because they're Roundup resistant. As a result, a few scattered soybean seeds are found in farmer loads of dry beans.

10 YEARS AGO: FALL 2010

A Pilot Project Proposed for Dry Bean Insurance Product -- Northarvest has submitted a non-futures CRC crop insurance product to the Federal Crop Insurance Corporation. This is a pilot project for Minnesota and North Dakota. If approved, the pilot project will likely last for four years. The biggest hurdle will be the price discovery aspect.

As it stands now, spring pricing

would need to be completed by March 1st. The forecast for fall pricing would need to be wrapped up by November 30. If all goes well, the CRC product for dry beans could be available in 2012. Challenges remain, but rest assured, Northarvest is working closely with the Risk Management Agency to deliver the best product possible.

Bresciani Takes Over as NDSU President -- Dean L. Bresciani was named North Dakota State University's 14th president on May 24, 2010. A native of Napa Valley, California, Bresciani was vice president for student affairs at Texas A&M University in College Station from 2004 to 2008. He was at the University of North Carolina at Chapel Hill from 1998 to 2004 in positions including interim vice chancellor for student affairs. From 1992 to

1998, he worked at the University of Nebraska at Kearney. In an interview with the Bean-Grower magazine, Bresciani said the potential for agriculture in the state is "limitless."

15 YEARS AGO: FALL 2005

Green Valley Bean Has New Ownership -- A group of local growers, management and Walhalla Bean Company recently acquired the assets of Green Valley Bean from Red River Commodities. The new company will operate as Green Valley Bean, LLC with offices located in Park Rapids, Minnesota. Sales and administrative duties will be handled out of Walhalla Bean Co's Grand Forks office

Falkirk Elevator Approves Specialty Plant -- Members of the Falkirk Farmers Elevator near Underwood, North Dakota has voted to spend $2 million to build a specialty plant to clean and bag peas, dry edible beans, lentils and sunflowers. Elevator manager Ron Hefta says that growers in the area have been planting more of these type of crops in recent years, and the elevator wants to expand into processing them.

NASS Dry Bean Acreage Assessment

USDA's National Agricultural Statistics Service (NASS) provides its assessment of dry edible bean acreage throughout the year. In March, NASS offers its forecast for planted acreage. That figure is adjusted in the June report and again in July. These charts provide USDA's perspective on crop size nationwide.

A future issue of the BeanGrower will include the January 2021 NASS report, determining the size of the 2020 crop for each bean class.

MARCH 2020 USDA PROSPECTIVE PLANTINGS REPORT

Growers intend to plant 1.37 million acres of dry edible beans in 2020, up 7 percent from the previous season's 1.29 million acres (Table 1). Planted area is expected to be above last year in all estimating States except California.

Dry edible bean acreage intentions in North Dakota are estimated at 650,000 acres, up 6 percent from 2019. In Minnesota, acreage intentions are estimated at 215,000, up 2 percent from the previous year.

JUNE 2020 USDA ACREAGE REPORT

Area planted for dry beans in 2020 is estimated at 1.59 million acres, up 23 percent from last year (Table 2). Area harvested is forecast to total 1.53 million acres, up 30 percent from last year. Eight out of nine estimating States show an increase in total dry bean planted acres compared to last year.

Planted area in North Dakota is expected to be a record high. Dry edible bean planted acres are estimated at 810,000, up 32 percent from last year. Harvested area is estimated at 790,000 acres, up 44 percent from a year ago.

In Minnesota, dry edible beans planted acreage is estimated at 200,000 acres, down 5 percent from last year and down 15,000 acres from the March intentions. Dry edible bean acres harvested is forecast

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Table 1: Dry Edible Bean Area Planted - States and United States: 2018-2020

[Excludes beans grown for garden seed. Beginning in 2019, chickpeas are excluded]

State	Area Planted			
	2018	2019	2020[1]	Percent of Previous Year
	(1,000 acres)	(1,000 acres)	(1,000 acres)	(percent)
California	48.0	27.4	16.0	58
Colorado	42.0	37.0	45.0	122
Idaho	185.0	47.0	48.0	102
Michigan	195.0	185.0	200.0	108
Minnesota	185.0	210.0	215.0	102
Montana[2]	395.0	(NA)	(NA)	(X)
Nebraska	140.2	120.0	145.0	121
North Dakota	635.0	615.0	650.0	106
Texas[2]	20.3	(NA)	(NA)	(X)
Washington	218.0	25.0	26.0	104
Wyoming	31.0	21.0	27.0	129
United States	2,094.5	1,287.4	1,372.0	107

(NA) Not available.
(X) Not applicable.
[1]Intended plantings in 2020 as indicated by reports from farmers.
[2]Estimates discontinued in 2019.

Table 2: Dry Edible Bean Area Planted and Harvested - States and United States: 2019 and 2020

[Excludes beans grown for garden seed and chickpeas]

State	Area Planted		Area Harvested	
	2019	2020	2019	2020[1]
	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)
California	27.4	32.0	27.4	32.0
Colorado	37.0	53.0	33.8	49.0
Idaho	47.0	65.0	45.0	63.0
Michigan	185.0	220.0	180.0	217.0
Minnesota	210.0	200.0	201.0	191.0
Nebraska	120.0	150.0	97.0	135.0
North Dakota	615.0	810.0	550.0	790.0
Washington	25.0	31.0	25.0	31.0
Wyoming	21.0	27.0	17.3	25.0
United States	1,287.4	1,588.0	1,176.5	1,533.0

[1]Forecasted.

at 191,000 acres, down 10,000 acres from last year.

AUGUST 2020 USDA CROP PRODUCTION REPORT

Updates to area planted and harvested were made in this monthly report (Table 3). Production of dry edible beans is forecast at 32.8 million hundredweight (cwt), up 58 percent from 2019 (Table 4). Area planted is estimated at 1.63 million acres, up 3 percent from the June forecast and up 26 percent from 2019. Area harvested is forecast at 1.57 million acres, up 2 percent from the June forecast and up 34 percent 2019. The average U.S. yield is forecast at 2,088 pounds per acre, an increase of 319 pounds from last season.

In North Dakota, production is forecast at 13.9 million cwt, up 80 percent from last year. Harvested acreage is estimated at 770,000, up 40 percent from a year ago. The average yield is forecast at 1,800 pounds per acre, up 400 pounds from last year.

Dry bean production in Minnesota is forecast at just under 6.1 million cwt, up from last year's 4.1 million. Harvested acreage is estimated at 244,000, up 43,00 acres from 2019. The average yield is forecast at 2,480 pounds per acres, up 440 pounds from last year.

Area planted by commercial class is referenced in Table 5.

Table 3: Dry Edible Bean Area Planted and Harvested - States and United States: 2019 and 2020

[Includes updates to planted and harvested area previously published. Excludes beans grown for garden seed and chickpeas]

State	Area planted		Area harvested	
	2019	2020	2019	2020[1]
	1,000 acres			
California	27.4	26.0	27.4	26.0
Colorado	37.0	53.0	33.8	49.0
Idaho	47.0	41.0	45.0	39.0
Michigan	185.0	258.0	180.0	255.0
Minnesota	210.0	255.0	201.0	244.0
Nebraska	120.0	140.0	97.0	126.0
North Dakota	615.0	790.0	550.0	770.0
Washington	25.0	41.0	25.0	40.0
Wyoming	21.0	24.0	17.3	22.0
United States	1,287.4	1,628.0	1,176.5	1,571.0

[1]Forecasted.

Table 4: Dry Edible Bean Area Harvested, Yield, and Production - States and United States: 2019 and Forecasted August 1, 2020

[Excludes beans grown for garden seed and chickpeas]

State	Area harvested		Yield per acre[1]		Production[1]	
	2019	2020	2019	2020	2019	2020
	1,000 acres		pounds		1,000 cwt	
California	27.4	26.0	2,660	2,300	729	598
Colorado	33.8	49.0	1,840	2,020	623	990
Idaho	45.0	39.0	2,370	2,350	1,067	917
Michigan	180.0	255.0	2,030	2,300	3,662	5,865
Minnesota	201.0	244.0	2,040	2,480	4,101	6,051
Nebraska	97.0	126.0	1,940	2,300	1,883	2,898
North Dakota	550.0	770.0	1,400	1,800	7,691	13,860
Washington	25.0	40.0	2,660	2,700	665	1,080
Wyoming	17.3	22.0	2,250	2,490	390	548
United States	1,176.5	1,57	1,769	2,088	20,811	32,807

[1]Clean basis.

Table 5: Dry Edible Bean Area Planted by Commercial Class - States and United States: 2019 and Forecasted August 1, 2020

[Excludes beans grown for garden seed and chickpeas]

Class and State	2019	2020
	1,000 acres	
NAVY		
California	-	(D)
Colorado	-	(D)
Idaho	1.3	1.0
Michigan	55.0	87.0
Minnesota	39.3	46.9
Nebraska	(D)	(D)
North Dakota	75.0	96.0
Washington	(D)	(D)
Wyoming	(D)	0.7
Other States[1]	1.9	2.6
United States	172.5	234.2
GREAT NORTHERN		
California	-	-
Colorado	(D)	1.6
Idaho	3.7	3.2
Michigan	(D)	(D)
Minnesota	(D)	(D)
Nebraska	48.0	42.8
North Dakota	4.4	4.0
Washington	0.7	1.3
Wyoming	1.3	1.5 :
Other States[1]	4.4	7.4
United States	62.5	61.8
SMALL WHITE		
California	-	-
Colorado	(D)	-
Idaho	1.2	0.9
Michigan	(D)	(D)
Minnesota	(D)	(D)
Nebraska	(D)	(D)
North Dakota	-	-
Washington	(D)	(D)
Wyoming	-	-
Other States[1]	4.0	4.7
United States	5.2	5.6
PINTO		
California	-	-
Colorado	25.5	36.0
Idaho	14.0	17.0
Michigan	3.5	2.5
Minnesota	11.4	18.2
Nebraska	51.0	64.6
North Dakota	368.0	532.0
Washington	7.0	13.7
Wyoming	15.0	17.0
Other States[1]	-	-
United States	495.4	701.0
LIGHT RED KIDNEY		
California	(D)	(D)
Colorado	5.6	8.6
Idaho	2.0	2.0
Michigan	6.6	8.0
Minnesota	20.1	22.8
Nebraska	11.0	15.7
North Dakota	(D)	(D)
Washington	(D)	(D)
Wyoming	-	(D)
Other States[1]	3.3	4.2
United States	48.6	61.3
DARK RED KIDNEY		
California	(D)	(D)
Colorado	-	(D)
Idaho	3.4	3.1
Michigan	3.0	3.0
Minnesota	65.8	81.8
Nebraska	(D)	(D)
North Dakota	(D)	7.7
Washington	(D)	(D)
Wyoming	-	-
Other States[1]	6.1	2.8
United States	78.3	98.4
SMALL RED		
California	-	-
Colorado	-	(D)
Idaho	3.5	2.2
Michigan	11.0	21.0
Minnesota	(D)	(D)
Nebraska	-	(D)
North Dakota	11.5	13.8
Washington	2.7	5.4
Wyoming	(D)	-
Other States[1]	2.2	2.4
United States	30.9	44.8
BLACK		
California	(D)	-
Colorado	(D)	1.1
Idaho	5.4	2.3
Michigan	95.0	125.0
Minnesota	55.1	65.5
Nebraska	(D)	5.6
North Dakota	130.0	126.0
Washington	5.0	5.8
Wyoming	(D)	1.5
Other States[1]	6.2	-
United States	296.7	332.8

First Ever Virtual USDBC Summer Meeting Hits the High Notes

The U.S. Dry Bean Council (USDBC) wrapped up its annual summer meeting that should have taken place together with the U.S. Dry Bean Convention in Nashville. Instead, it took place on Zoom.

Participation was high and discussion was lively and productive as USDBC unveiled several plans for the coming months and year ahead, capitalizing on the popularity of and interest in dry beans.

Some of the meeting highlights include:

- Several MOUs will be signed in the coming months with global food and nutritional initiatives looking to collaborate on greater use of dry beans and bean ingredients for nutrition and well-being in food insecure nations.
- Trade team delegates have been chosen for 2021 travel opportunities, but things will be in flux until the dates get closer due to COVID concerns.
- USDBC will look to engage in a new social media campaign and will work to develop an RFP.
- A D.C. Congressional fly in is planned for some time in early spring 2021.
- A presentation from new partners in Innovation, CIA (Culinary Institute of America) Consulting, reviewed the approach to begin the work of developing new bean ingredient formulations.
- Planning for the inaugural global dry bean buyer event, BeanCon21 is on track for March 2021. A back up plan in under review should the event need to go virtual.

This has been an extremely busy and exciting time for the U.S. dry bean industry. The summer meeting helped define priorities for the remainder of 2020 and outline several important new initiatives for 2021 and beyond.

BEAN BRIEFS

RESIDENTS RECEIVING UNKNOWN SEEDS FROM CHINA

Residents in North Dakota and Minnesota are receiving unsolicited packages containing seeds from China. Agriculture officials in other states are also reporting similar instances, and the motive behind this action is not known at the time. The foreign seeds may be invasive and introduce diseases harmful to plants and/or livestock. Anyone receiving unsolicited seeds in the mail should retain the seeds and packing, including the mailing label. Then, the State Department of Agriculture should be contacted to report the incident and receive further instruction.

NEW GLOBAL DRY BEAN SUPPLY/ DEMAND REPORTING AVAILABLE

The U.S. Dry Bean Council (USDBC) is developing a new series of reports on global dry bean supply and demand. This information is being developed to provide insight on dry bean intentions and production to allow for improved global strategy response and important business decisions for members.

The reports will be developed for each major exportable bean type, with the first of the series focused on black beans. This production outlook covers the harvest period in the main black bean producing countries taking into account that tropical and subtropical countries, such as Guatemala and Brazil, have three crops per year, while temperate countries have one crop per year and Mexico has two. Additionally, the report looks at global exports from the main black bean producing countries.

The full report is available on the USDBC members only website and by request.

FOR FIBER, NOTHING BEATS BEANS

According to studies of eating habits, Americans get too little fiber. Since dietary fiber is linked to better weight control and can lower risk for heart disease, diabetes and cancer, eating more fiber-rich foods should be a priority for everyone.

Beans are unmatched in their fiber content. A ½ cup serving provides about 8 grams of fiber, which is just a little less than one-third of what experts recommend for the day. It's also four times the amount of fiber in ½ cup of brown rice and twice what you get from ½ cup of other fiber superstars like berries.

Those concerned about fiber can eat more beans. Just one serving every day can ensure plenty of this health-promoting nutrient.

USMCA ENTERS INTO FULL FORCE

On July 1, the United States-Mexico-Canada Agreement (USMCA) entered into force, replacing the decades-old North American Free Trade Agreement. USMCA was signed into law by President Donald J. Trump on January 29 after it received overwhelming bipartisan support in Congress. USMCA advances U.S. agricultural interests in two of the most important markets for American farmers, ranchers, and agribusinesses.

Key provisions for the dry bean industry include:

- Sanitary/Phytosanitary Measures: The three countries agree to strengthen disciplines for sci-

ence-based measures that protect human, animal, and plant health while improving the flow of trade.

- Biotechnology: For the first time, the agreement specifically addresses agricultural biotechnology – including new technologies such as gene editing – to support innovation and reduce trade-distorting policies.

This high-standard agreement builds upon existing markets to expand U.S. food and agricultural exports and support food processing and rural jobs. Canada and Mexico are the first and second largest export markets for U.S. food and agricultural products, totaling more than $39.7 billion food and agricultural exports in 2018. These exports support more than 325,000 American jobs.

Bean CON21
A Global Dry Bean Conference

SAVE THE DATE: BEANCON21

The U.S. Dry Bean Council is excited to announce the inaugural, global conference focused entirely on dry beans: BeanCon21. This event will bring together dry bean buyers and stakeholders from all over the world March 2-4, 2021 in Las Vegas. Participants at the event will hear from U.S. growers, global influencers, food service experts, corporate leaders, government officials and more. Visit BeanCon21.com to learn more.

USDBC and CIA Consulting Collaborating on Bean Innovation Initiative

In July, the U.S. Dry Bean Council (USDBC) kicked off a collaborative initiative with CIA Consulting, a business unit of The Culinary Institute of America (CIA) focused on innovative ways to utilize dry beans.

Beans have long been recognized for their nutritional value, variety and sustainability. While consumption of dry beans has been stable in the United States, renewed interest in plant-forward eating and a desire for shelf-stable, healthy foods sparked by the COVID-19 pandemic have pushed beans into the spotlight both here and around the world.

"Dry beans are having a moment and we are looking forward to exploring, in depth, all of the ways including bean ingredients in foods can add flavor, fiber and nutrition," noted Rebecca Bratter, executive director, USDBC. "This initiative is a critical component of our goal to increase U.S. dry bean consumption in the U.S. and around the world."

In the last few years, many different food product companies have begun utilizing dried beans to make flours, snack foods and pastas. "By investing in a focused, industry-wide strategy and partnership, we hope to see this scaled up and promoted in the U.S. and in many of our critical export markets," added Greg

Rebecca Bratter, executive director, U.S. Dry Bean Council

Ackerman, Vassar, Michigan farmer and USDBC Bean Innovation Committee chairman.

With the rollout of this program, the Council will be expanding to some export markets in the longer term during this first phase of the work plan.

"We are proud to work with the U.S. Dry Bean Council on this project," said Brad Barnes, director, CIA Consulting and Industry Programs. "Dry beans have limitless potential to enhance the nutritional befits of the foods people eat every day, and our team looks forward to creating new and unexpected ways food product companies can use them."

For more information please contact the US Dry Bean Council at info@usdrybeans.com.

Seeking Solutions

Michael Ostlie enjoys designing experiments to answer farmer questions.

By Jessie Topp-Becker

North Dakota native Michael Ostlie grew up on his family's farm near Northwood, raising sheep and a diversity of crops, including navy and pinto beans. Ostlie's interest in agriculture was cultivated through his involvement in the day-to-day work on the farm, as well as by his involvement in 4-H and FFA. It seems the research agronomist was destined to be a researcher from a young age.

"I had small 'test plots' behind the shop with all sorts of odd crops just to see what they looked like," he says. "Little did I know that I would professionally be doing something very similar one day."

Ostlie attended North Dakota State University where he earned his bachelor's and master's degrees in plant sciences before attending Colorado State University where he earned his doctorate in bioagricultural sciences. A career in research was not part of Ostlie's original plan.

"I didn't exactly know where I would best fit during college," he says. "My original plan was to work as an extension agent, but the further I got into that training, the more I realized I liked doing the research more than anything."

Ostlie never really saw himself as a scientist. "When I started graduate school, I questioned whether it was the right move. But after I finished my first study and saw the hard work turn into numbers and then into recommendations, I was hooked."

In 2012, when Ostlie graduated with his doctorate and started looking for a job, he came across the listing for a research agronomist at the Carrington Research and Extension Center (CREC).

"When I read the job description for my current position, it sounded like it was a really good way to continue to do applied research and work with the growers in the state," he says.

Having the ability to think creatively and develop connections with growers, is one of Ostlie's favorite aspects of his position at CREC. "There have been numerous studies initiated as a result of a simple question posed by growers," he explains.

While the questions growers ask are sometimes simple, they also ask more difficult questions from time-to-time that require Ostlie to think outside the box to find answers to their questions.

"What keeps me going is the process of designing a study to answer the questions and knowing that the answer has a direct impact for an operation," he says.

Over the last 8 years, Ostlie has enjoyed observing the interconnectedness of the environment and agriculture.

"Specifically, we are learning so much about soil biology and plant-plant interactions each year now," he says. "With this knowledge we can more confidently add biological tools to our agronomic toolbox, including

Mike Ostlie is a research agronomist at the Carrington Research Extension Center.

cover crops, intercropping, residue management and more."

In recent years, Ostlie has observed the growing number of specialty classes of dry beans, as well as a growing interest in dry beans, especially from gardeners.

Dry bean growers are accustomed to facing many potential problems year to year, including weed and disease management, but Ostlie thinks the biggest long-term concern is top soil.

"As a low residue crop, reducing winter/spring erosion is continually on my mind."

Ostlie is currently involved with several dry bean research projects. The first involves managing the dryland and irrigated variety trials at CREC. He takes this role very seriously because he understands that variety selection is the most important annual decision producer's make.

For the last several years, Ostlie has also been working to understand the role of pollinators in dry bean production, specifically about whether enhancing pollinator habitats could have a beneficial effect on dry bean yields.

"The idea is about whether pollinator plantings could be placed on low productivity/saline areas to actually increase

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One of several dry bean trials located at the Extension Center.

productivity in other parts of the field," he explains. "We hope to know more soon."

One of the last projects he is working on involves a collaboration with Greg Endres, cropping systems specialist at CREC, to better understand how relay cropping with winter rye should be used in dry bean production.

Although Ostlie is still in the early stages of his career, one of the most impactful experiences thus far was a visit to Thailand last year as part of a research exchange with Chiang Mai University.

"I had the opportunity to visit with farmers in the area and hear about their own struggles, which were both different and similar to ours," he explains. "It really opened my eyes to the potential for learning from each other, even with vastly different cropping systems."

Ostlie is grateful for his supportive wife, Lindsay, and two young sons, who keep the couple very busy. In his free time, he and his wife run a small farm where they grow garlic, hops, several herbal teas and u-pick juneberries.

Pollinator habitat on the margins of a dry bean field.

Grain Storage and Safety Tips

Having grain at an appropriate storage moisture content is very important to store grain safely during the summer and early fall. The maximum moisture content for warm-season storage is 13% to 14% for corn, 11% to 12% for soybeans, 13.5% for wheat, 12% for barley and 8% for oil sunflowers.

Mold growth will occur if the grain exceeds the recommended moisture content. The allowable storage time for 15% moisture corn, for example, is only about four months at 70 degrees and two months at 80 degrees.

Controlling grain temperature is more important for low-quality grain. Low test weight, immature grain with damaged kernels has a shorter allowable storage life, so it should be a percentage point drier than good-quality grain.

Checking the grain moisture content is important because moisture measurements at harvest may have been in error due to moisture gradients in the kernel, grain temperature and other factors. In addition, the moisture may have changed while the grain was in storage due to moisture migration or moisture entering the bin.

CHECK STORED GRAIN

Stored grain should be monitored closely to detect any storage problems early.

Check stored grain at least every two weeks. While checking on the grain, measure and record the grain temperature and moisture content. Rising grain temperature may

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indicate insect or mold problems. Insect infestations can increase from being barely noticeable to major infestations in three to four weeks when the grain is warm.

"Grain temperature cables are a wonderful tool, but do not rely on them to replace inspecting for insects or crusting and detecting odors or other indicators of storage problems," says Ken Hellevang, agricultural engineer, NDSU Extension.

WORK SAFELY

Make sure everyone, including family and employees, working around stored grain understands the hazards and proper safety procedures.

"Too many people ignore safety practices and suffer severe injury or death while working around grain," Hellevang says.

Never enter a bin while unloading grain or to break up a grain bridge or chunks that may plug grain flow. Flowing grain will pull you into the grain mass, burying you within seconds. Use the "lock-out/tag-out" procedures to assure equipment will not start before entering the bin

Bridging occurs when grain is high in moisture content, moldy or in poor condition. The kernels stick together and form a crust. A cavity will form under the crust when grain is removed from the bin. The crust isn't strong enough to support a person's weight, so anyone who walks on it will fall into the cavity and be buried under several feet of grain.

Determine if the grain has a crust before any grain has been removed. If work needs to be done with a crust, it must be done before any grain is removed.

To determine if the grain is bridged after unloading has started, look for a funnel shape on the surface of the grain mass. If the grain surface appears undisturbed, the grain has bridged and a cavity has formed under the surface. Stay outside the bin and use a pole or other object to break the bridge loose.

If the grain flow stops when you're removing it from the bin, a chunk of spoiled grain probably is blocking the flow. Entering the bin to break up the blockage will expose you to being buried in grain and tangled in the auger.

If grain has formed a vertical wall, try to break it up from the top of the bin with a long pole on a rope or through a door with a long pole. A wall of grain can collapse, or avalanche, without warning, knocking you over and burying you.

Never enter a grain bin alone. Have at least two people at the bin to assist in case of problems. Use a safety harness and rope that prevents you from descending rapidly more than a couple of feet when entering a bin.

"Take time to think of all options before entering a bin," Hellevang advises.

Source: NDSU Extension

The Engstroms Enter New Endeavors

Brian and Kim Engstrom are known in the dry bean industry, but recently expanded their offerings to include a tasty snack food.

By Megan Overby

There was never a doubt in Brian Engstrom's mind that farming was in his future. "I was probably six years old and knew I would be a farmer someday."

He didn't venture far from the farm for college, just 20 miles from home, attending Lake Region State College for two years. Brian then planned on attending North Dakota State University. "I had the opportunity to rent three quarters of land, so I started farming instead."

Brian and his wife, Kim, are the fourth generation on the Engstrom family farm near Leeds, North Dakota. The duo farms alongside their daughter and future son-in-law. While Brian's dad, James, is retired from farming, he still plays a role in Engstrom Bean & Seed.

The bean company's current product line consists of black beans, pinto beans, pink beans and dehulled/pearled barley. "I've grown kidney beans and Great Northern beans in the past. We've also handled navy beans and split our own peas."

Engstrom Bean also deals a variety of dry bean seed. The warehouse is split in half: one part for seed and the other for packaging.

Grown in Colorado, Popped in North Dakota -- In 2013, Brian expanded within the bean business and purchased Jack's Bean Company in Holyoke, Colorado with Kurt Bollingberg. The facility in the western part of the state processes pinto and light red kidney beans, along with popcorn.

"We could have easily given up the popcorn portion of the business, but decided to do something with it," he says. "Popcorn is a tricky crop to raise because it has to be grown on the proper parallel.

Continued on Next Page

Kim and Brian Engstrom

In my opinion, the flavor of the popped product is better with the proper climate. Colorado has that."

The popcorn growing process begins with the proper variety selection in the spring and continues until the harvest season is complete. From start to finish, the Jack's Bean team has close contact with their growers.

"We use mushroom popcorn varieties that give us a large pop. This type of popcorn is well suited for our unique blend of coatings and seasonings," explains Brian. "The staff checks on the crop several times during the growing season and even tells the farmer a specific day to harvest the crop."

Brian struggled with finding a market for the popcorn at first. "We continued to search for a way to diversity and decided to enter the business of pre-popped, flavored popcorn. That's when the Colorado Jack name was formed, paying tribute to the bean plant in Colorado."

The raw kernels are grown in Colorado and western Nebraska and then shipped to North Dakota for popping, flavoring and packing. One tote of raw kernels produces 35 totes of product, which equates to approximately 4,000 packages of popped and flavored popcorn.

"Because of the large quantities produced and the equipment needed to do so, we purchased an old pasta plant in Devils Lake, ND in March 2019," says Brian. "The space and equipment can also process and package dry beans, peas, lentils, rice and oatmeal, just to name a few."

Dry beans packaged at the CoJack facility in Devils Lake.

CoJack Pack & Snack was established in January 2020 because of this purchase.

Specially, the pinto, black and navy beans are triple cleaned and packaged into one-, two-, five- and ten-pound bags. "We use our own CoJack brand, along with co-packing and processing private label brands. This also gives local farmers a new market to sell their crops."


The popcorn is mixed with flavoring in a steel drum.

GIVING BACK

Brian and Kim's son, Cullen, began having epileptic seizures at one month old. The seizures were frequent and occurred daily for five years until he underwent surgery to remove a section of his brain. At eight years old, Cullen was diagnosed with disruptive behavior disorder and autism.

He then moved to the Anne Carlsen Center, a

non-profit organization that provides housing, creative therapy and assistive technology to people with disabilities, in Jamestown, ND.

"We always intended to have a place for Cullen to be involved in the family business," says Brian. "We were looking for the next step in Cullen's life after the Anne Carlsen Center and decided on the Open Door Center (ODC) in Valley City."

The ODC provides long-term housing options, educational services, community integration and assistance to people with disabilities.

"Before the popcorn distribution center in Valley City was a thought, Cullen had already helped with jobs at the center that required packaging, labeling and sweeping," says Kim. "That's when Colorado jack decided to partner with ODC. It truly is a top-notch place."

In 2015, the Engstroms developed the Colorado Jack Giveback program to create both work and fundraising opportunities. They purchased all supplies and equipment needed to set up a small, distribution center for flavored popcorn.

"We know how important it is for people with disabilities to have meaningful work opportunities," explains Kim.

"With this work, they feel like they've accomplished something at the end of day," adds Brian. "Plus, popcorn is fun to make and it is sure tasty, especially Colorado Jack popcorn."

In addition to creating jobs for ODC residents, the giveback program also offers a 50 percent return to fundraising groups. The remaining 50 percent of sales provides wages to residents and staff and covers operating expenses.

"It's a win-win situation," Brian concludes. "We would eventually like to offer this type of an opportunity here in our own community of Devils Lake."

BUILDING A BIGGER AND BETTER BUSINESS

Colorado Jack has around 30 fulltime employees, which includes the Engstrom's daughter, Chace. Not only does she help with daily operations at the Devils Lake facility, but she also has a marketing degree and plays a crucial role in promoting the CoJack brand.

Continued on Next Page

Kim and Brian pictured with their son, Cullen (center).

The family spends countless hours meeting with potential customers and promoting their brand at major food and sweet shows.

"Dry beans were our foot in the door because of our established relationships in the business," says Brian. "Now, we're trying to push our other snack food brands and products out with the beans to major retailers."

The business philosophy is centered around the phrase 'you get what you pay for.'

"The compliment we typically get is on our packaging. The biggest challenge is getting people to try our popcorn because of the price point," explains Brian. "One they try the popcorn, the customer comments on the tremendous flavor. Then they're usually hooked."

Not once did the Engstroms consider selling one product or the other. "It's certainly a lot of moving pieces, but once they work together, it is well worth it," says Kim.

Brian adds that both popcorn and dry beans are fun to grow. "The best part is it's rewarding to make and sell a product people enjoy."

Kim, Chace and Brian promoting the Colorado Jack and CoJack Pack & Snack brands at a trade show.

Five flavors of popcorn are made and sold by Colorado Jack. Pictured are Sea Salt & Butter and Caramel.

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WHITE BEAN PANCAKES

INGREDIENTS:

- 1 - 15-ounce can cannellini beans (about 1¾ cups), rinsed and drained
- 1½ cups all-purpose flour
- 1 cup whole milk
- 2 large eggs
- 1½ teaspoons baking powder
- 1 teaspoon vanilla extract
- ½ teaspoon kosher salt
- 1 tablespoon unsalted butter
- Optional: 5 ounces frozen spinach (about 1 cup), thawed and drained

DIRECTIONS:

1. Add the beans, flour, milk, spinach (if desired), eggs, baking powder, vanilla and salt to a blender. Blend this mixture until it is smooth.
2. Next, add the butter to a large skillet over medium heat. Once the pan is hot, pour about ½ cup of the batter into the pan. This will make one pancake about 4 inches in diameter.
3. Cook the batter until bubbles start to pop on its surface. Then flip the pancake and cook it until the other side is also brown and the edges are dry - about 3 to 5 minutes per side. Repeat with the remainder of the batter.
4. Serve with extra butter, syrup, fruit or whatever you like!

NOTES: If you prefer fluffier pancakes, separate the yolks and whites of the eggs. Rather than following Step 1 as written, add the beans, flour, milk, spinach (if desired), egg yolks, baking powder, vanilla. and salt, to a blender. Blend this mixture until it is completely smooth, then transfer to a large bowl. Meanwhile, beat the egg whites in a medium bowl with a handheld electric mixer on medium-high until they are white and fluffy and have soft peaks (they should be about 4 times larger than their starting size - about 2 minutes. You could also whisk by hand or do this in a stand mixer. Gently fold the whipped egg whites into the bean and flour mixture, deflating them as little as possible. Then proceed to Step 2 as written above.

SOURCE: *Nikki Dinki Cooking*

A Recap of the 2020 Growing Season

This year's growing season brought too much moisture to some areas of North Dakota and Minnesota, while others could've used a few more inches of rain. The late start to the spring planting season also had some acres in flux. Below you will find a recap of the 2020 growing season told by farmers, agronomists and seed dealers in the region.

MAY 2020

Gilby, North Dakota: Dry bean seed shortages showed up as farmers made their acreage decisions this past spring. "If seed would've been readily available, I believe dry edible beans would have picked up a lot of acres coming out of corn or soybeans," said Dylan Karley,

Dylan Karley

general manager, Johnstown Bean Company. "But unfortunately, that seed supply was basically sold out nationwide." A lot of that stems from a fixed capacity of seed that is produced on a yearly basis.

"Given the wet soil conditions this spring, certain dry bean growers made the call that they were not going to plant all of their intended dry bean acres," explained Karley. "That meant from time to time we did have cancelations on some of the seed. That was then moved to farmers who could really use it."

Crookston, Minnesota: The planting season was a struggle for farmer Eric Samuelson. Conditions were wet. "Last year's corn and sugarbeet ground was a battle to get planted, but we ran the gamut." Seed supplies were short to start, but not all the acres intended for dry beans were planted. "On our farm we were able to source enough seed to get our acres in. If guys had the seed they tried to get their dry beans planted, however some were up against the calendar."

JUNE 2020

Perham, Minnesota: Farmers in the area were able to start planting the dry edible bean crop several days earlier than normal. "The 2020 crop was planted quickly because there were very few weather delays," said Brad Guck, agronomist, Profes-

Continued on Next Page

Brad Guck

sional Agronomy Services. "Planting was nearly wrapped up by the second week in June."

Guck thought the acreage mix in the Perham area was up slightly this year for dry beans. "Acreage for kidney beans was up and each year there is more of a market for black beans." The region was dry throughout much of the planting season, which may have reduced the effectiveness of pre-emerge herbicides. "There was early weed pressure, so farmers were in the field early and often scouting for any weed escapes."

Lakota, North Dakota: Dry bean planting wrapped up the third week of June in northeastern North Dakota and most of the crop was emerged. "I would say most of the acres intended for planting did go in the ground, but some did go to prevent plant," said Mark Huso, owner, Huso Crop Consulting. "The crop that did get mudded in certainly didn't have as good of stands. Overall, I'm happy with how the edible beans look." Moisture-wise, field conditions were variable most of June, some too wet and others too dry. "Grasshoppers were already found (in mid-June) in Walsh County starting to hurt the pinto bean crop. Since it was drier, it's common for area farmers to be very cautious of that insect."

JULY 2020

Thompson, North Dakota: Farmers in the Red River Valley were inundated with rain during both the planting and growing season. Brevant Seeds dealer Tim Schumacher took one of the hardest hits. "It's anywhere from minor damage to 100 percent damage. To put a number on it, maybe a 40 percent loss?"

Schumacher didn't see one good handful of dry bean fields all summer long that weren't damaged to some degree. "That crop was surely hurt the worst by poor planting conditions and excessive moisture."

New York Mills, Minnesota: There were nearly ideal growing conditions for the kidney bean crop in the area. "We got the crop planted in a timely manner, minus a few hiccups with seed supplies," said farmer Cordell Huebsch. However, the growing season did bring several severe storms in Lakes Country. That did cause some blight to show up.

"Other than the blight, we've had the heat and sun. Our window for spraying was complicated by a really windy timeframe at the end of June." Huebsch is in a region that grows a lot of kidney beans. At the end of July, some of the crop planted on lighter soil was already starting to turn color. With harvest in sight, an average crop is expected. "I don't expected much above average because of the disease issues."

Cordell Huebsch

AUGUST 2020

Portland, North Dakota: In the east central part of the state, farmer Greg Thykeson finished spraying fungicide on dry beans for white mold. With winter wheat harvest done, black bean harvest is the next item on Thykeson's list. "I'm guessing by mid-September they will be ready to harvest, depending on the weather. If it stays damp and cool in the morning we may have to spray more for white mold."

Greg Thykeson

Thykeson said, overall, the crop looks really nice. However, there are areas that drowned out. "Planting conditions weren't ideal, so I don't anticipate a huge edible bean crop this year."

Rugby, North Dakota: The growing season in north central North Dakota started out dry for farmer Steve Fritel. Come July that story did change, and the area started receiving rain. "Then the row crops started to take off. The beans have gained a lot of growth and are getting lots of pods on them," said Fritel. ", we could use a shot of rain now (mid-August.) That would really help them finish."

Global Dry Bean Production Updates

CHINA:

An initial survey of China's prospective dry bean planting reveals that production in 2020 is estimated to be down by 9 percent, with a total volume of 174,500 metric tons (MT). Planting area is also estimated to be down 9 percent, with a total sowing area of 110,400 hectares.

Growers have been active planting light speckled kidney beans (LSKB), red speckled kidney beans (RSKB) and purple speckled kidney beans (PSKB) due to increased market demand. However, farmers have less interest in growing black beans and white beans this year, which have been basically been planted for export markets.

As a result, sowing area for black beans has declined this year, but the sowing area for LSKB, RSKB and PSKB is roughly at the same level as last year.

ARGENTINA:

A late spring frost damaged about 5 percent of the bean crop in some of the Argentine planting areas. Weather is expected to be good for the remaining harvest. To date, quality is good for kidney beans and alubias, estimating increased production. Black beans will be mixed due to the wider production area and frost damage. For cranberry beans, this was not a good year and most beans available are small sized and regular quality.

The 2020 crop is already being shipped, especially black and light red kidney beans. Exporters are still cautious when it comes to offering alubias and kidneys because beans are just getting to the processing facilities, but exports are following a healthy pace to date.

RYAN PETERSON
Clear Lake, Minnesota
Crops raised: kidney beans, corn, soybeans, rye and alfalfa

What's your family history on the farm? How did you get into farming? I am a fourth-generation farmer, as my great-grandpa, my grandpa and my dad all farmed. My ancestors came to America in the late 1880s and settled here in Minnesota. My uncle actually lives on the original farmstead and rents those acres to me. My great-grandpa moved to our current farmstead in the 1920s.

Right out of high school there wasn't a spot for me to farm, so I went and built houses for eight years. When my grandpa was ready to retire, I came back to the farm fulltime in 2012.

How long have you raised dry edible beans? What classes of beans do you grow and why? I do believe my dad started with edible beans in that 1990 to 1991 timeframe, raising navy beans, light red kidney beans and dark red kidney beans. The markets for kidney beans eventually were more stable, so he cut out the navy beans. Now, we raise strictly dark red kidney beans. All of the beans are grown on irrigated land; 1,500 of the 1,600 acres we farm have irrigation.

What's your favorite piece of farm equipment? I would have to say anything with GPS because it makes the equipment more convenient to run. When the driving part is being done for you, I can keep a closer eye on the planter or combine header. Equipment is very large now-a-days, so I feel like I have to concentrate on more moving parts.

If you could add any new piece of equipment, what would it be? My choice would probably be a swather or another pickup header for the combine. Those are both items we would like to have. However, we're not exactly sure if we need to buy it right now because of the price tag.

Do you have any hobbies? What do you do in your spare time? In our local community, I am a volunteer firefighter. I also play baseball in my spare time and so do my three boys.

What's the best piece of advice you ever received? Just take life as it comes and live in the moment; don't rush. It seems like with farming we're always trying to hurry up and wait, but things will get done. Try not to work too late all time and spend some time with your family.

What's the best part about being a farmer? Family - of course there are two sides to that coin when working with family, but I am thankful to spend time with them. Agriculture is also a big community thing. We take pride in being part of a community and amazingly our little community can be a big impact in the world. That's definitely the best part about being a farmer.

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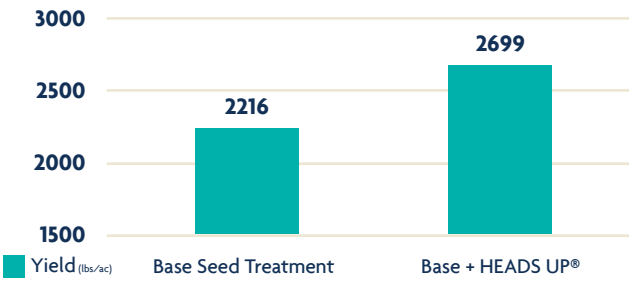

STUDY DETAILS
Location: Merrill, MI
Elevation: 660
Current Crop: Dry Beans, Navy
Previous Crop: Continuous Beans
Plot Size: 6' x 25', 4 reps, Harvest 3'x15'
Planting: 6/17/2019 – Late
Maintenance: 16oz Basagran, 4oz raptor, 8oz reflex, 12oz select max, 1% crop oil, 2lbs AMS, 9oz asana
Late Season: 70-75lbs N as Urea white mold & insect control sprayed at full bloom

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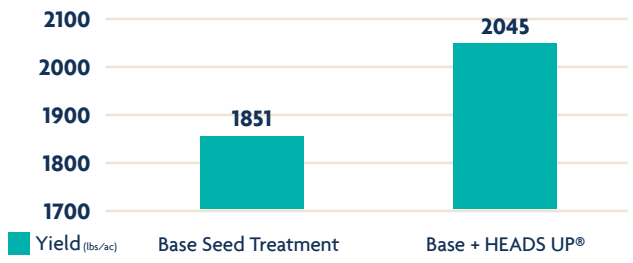

STUDY DETAILS
Location: Carrington, ND – NDSU Research Station
Elevation: 1,562
Current Crop: Dry Beans, DRK
Previous Crop: Spring Wheat
Plot Size: 5' x 30', 5 reps
Planting: 5/17/2019
Inoculum: Plots inoculated in-furrow with Rhizoctonia/Fusarium-infested proso millet and wheat, and Pythium-infested sorghum

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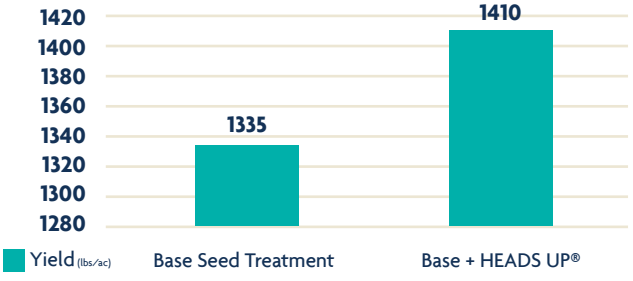

STUDY DETAILS
Location: Jerome, ID
Elevation: 3,672
Current Crop: Dry Beans, Cranberry
Previous Crop: Spring Wheat
Plot Size: 5' x 30', 4 reps
Planting: 6/11/2019

Data adapted from The McGregor Company 2019 Research Compendium

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Grady Thorsgard (right), a longtime Northarvest Bean Growers Association and Dry Bean Council member, was recognized at his final board meeting by Northarvest President David Dickson (left). The plaque reads, "In recognition of your service as District II Council member, Ag Coalition representative for the North Dakota Dry Bean Council and representative on committees for the Northarvest Bean Growers Association, 2011-2020." Thank you Grady for your years of service to the Northarvest dry bean industry!