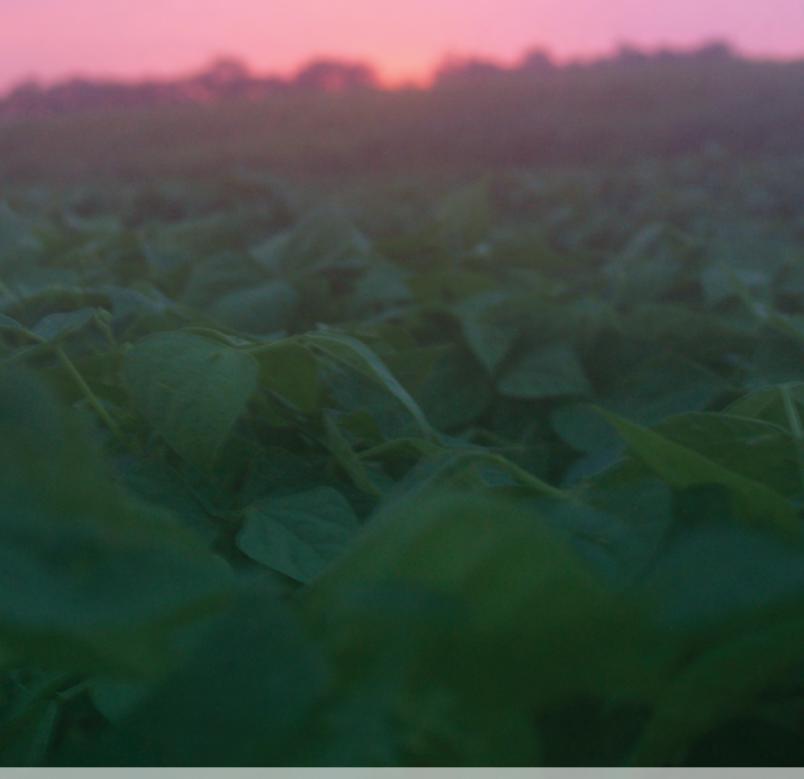
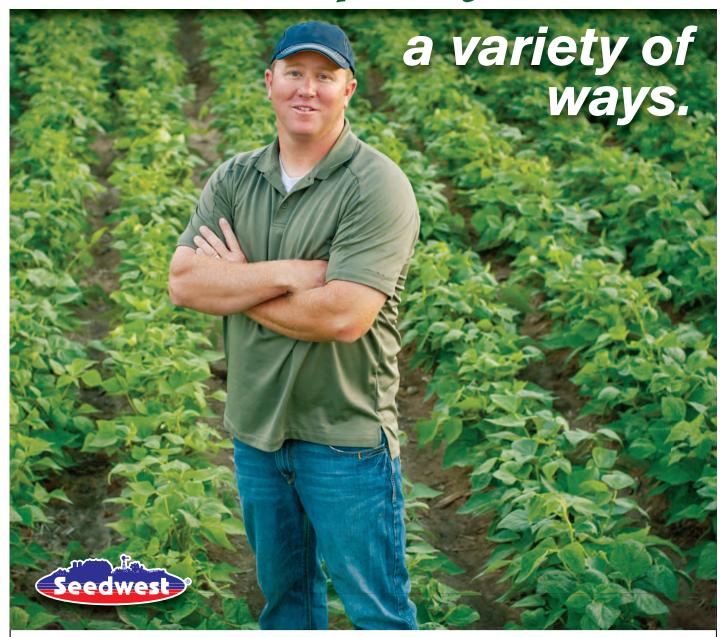
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The Northarvest Bean Grower is published five times a year by the Northarvest Bean Growers Association, 50072 E. Lake Seven Road, Frazee, MN 56544, Phone: (218) 334-6351, Website: www.northarvestbean.org, Email: nhbean@ loretel.net.

Send editorial materials to Don Wick or Mike Hergert, Ag Information Services, Inc., 1407 24th Avenue So., Suite 235, Grand Forks, ND 58201, don@rrfn.com or mike@rrfn.com. Send advertising materials to Marlene Dufault, Prairie Ag Communications, 2604 Wheat Drive, Red Lake Falls, MN 56750, 218-253-2074, mdufault@gvtel.com. Publication of editorial or advertising material in the Northarvest Bean Grower magazine does not imply endorsement by the Northarvest Bean Growers Association. Check agronomic advice with local sources and always read and follow product labels.

VOLUME 22 ISSUE 3

STARTING POINT

Getting Ready for Spring

Remember three or four years ago when just about any crop we grew turned out to be profitable? In fact, many crops looked profitable before we planted, and in many cases turned out to be even

more profitable as the marketing year progressed. My how times have changed! I think most growers spent all fall and winter, and even into this spring, trying to decide what they could grow that either gave them the best chance for a positive return, or that would lose the least amount of money.

Thanks to the team effort of your Northarvest Bean Growers Association, the North Central Bean Dealers Association, and the support of the four U.S. Senators from North



Dakota and Minnesota, USDA recently announced a rather large purchase of pinto beans. That, combined with some fairly strong demand from Mexican importers, the result of damage to the Mexican bean crop due to a hurricane and a frost, has given our dry bean markets a little life.

February and March proved to be very busy months for Northarvest, which was represented in no less than six countries. We sensed some increased interest among bean importers at the U.S. Dry Bean Congress in Cancun, and in the Dominican Republic, where bean crops have been shortened by drought and other problems each of the last two years. Northarvest was also part of the North Dakota Trade Office's latest mission to Colombia in early March, and was in Dubai for Gulfood, one of the largest food shows in the world. India and Zambia were also visited by members of your Board of Directors.

Whether it's traveling around the world to promote the beans we grow, or sitting around the conference room table to develop our 2016-2017 programs for research, promotion, development and communications, I continue to be impressed with the serious manner in which the Northarvest Board of Directors does its work on your behalf.

Hopefully, this spring issue of the *BeanGrower* will get you ready for the field. I wish you all a profitable 2016!

Signing off as NHB president for the last time,

Joe Mauch, President
Northarvest Bean Growers Association



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BEAN BRIEFS

NORTHARVEST ELECTS OFFICERS

The Northarvest Bean Growers
Association has elected new officers. Grafton, North Dakota bean
grower Tom Kennelly is the new
president. The new vice president
is David Dickson, from Gilby, North
Dakota. Crookston, Minnesota
farmer Eric Samuelson was elected
treasurer. Scott Mund, from Milnor,
North Dakota is Northarvest's director to the U.S. Dry Bean Council,
with Joe Mauch, from Hankinson,
serving as alternate.

NORTHARVEST DIRECTORS RE-ELECTED

Northarvest Bean Growers Association directors David Dickson (District 2), Joe Mauch (District 5), and Jon Ewy (District 8) have all been re-elected to the Board of

Directors. Dickson farms at Gilby, North Dakota, Mauch at Hankinson, North Dakota, and Ewy at Deer Creek, Minnesota.

NCBDA BOARD

The 2016 officers of the North Central Bean Dealers Association are Brad Stevens, with Fessenden Co-op, President; Dan Fuglesten, Central Valley Bean Cooperative, Vice President; and Treasurer John Berthold, Walhalla Bean Company. Dwight Spear, with ADM Edible Bean Specialties, is a new director. Other board members include Brian Schanilec, Jim Kirkeide, Dean Nelson, and Rick Harpestad.

N.D.BEAN STOCKS

According to the semi-annual survey of North Dakota dry bean

dealers, done by the Upper Great Plains Transportation Institute, there were a little more than 5 million cwt of pinto beans in storage as of December 31, 2015. That is 6.5 percent less than the previous year. There were 1.4 million bags of navy beans stored in North Dakota at the end of last year, 9 percent more than the previous year. Black bean stocks totaled just over a million bags, 61 percent more than at the end of 2014. North Dakota elevators also reported holding 131,526 bags of pink beans and 81,451 bags of small red beans.

SPECIALTY CROP BLOCK GRANT APPLICATIONS SOUGHT

North Dakota Agriculture Commissioner Doug Goehring has announced that applications are now being accepted for 2016 Specialty Crop Block Grants. USDA's Agricultural Marketing Service has allocated \$2.5 million to North Dakota for specialty crop block grants. The application deadline is May 11. Apply at www.nd.gov/ndda/program/specialty-crop-block-grant-program.

In anticipation of \$1.2 million in federal funding, the Minnesota Department of Agriculture is seeking proposals for Specialty Crop Block Grants. The applications are due by April 29. Apply at www.mda.state. mn.us/grants/grants/specialty.

USDBC MEETING

Despite the heavy snow in late January, U.S. Dry Bean Council members were able to get into Washington, D.C. for their annual winter meeting. New officers elected include Lynn Preator, Preator Bean Co., in Burlington, Wyoming, President; Deon Maasjo, Kelley Bean Company, Oakes, N.D., Vice







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President; and Mark Thompson, with New Alliance Bean and Grain Company in Alliance, Nebraska, Treasurer.

The USDBC board and officers discussed several new initiatives for 2016 to continue to build global demand for U.S. dry beans. In addition to the momentum this year from the International Year of Pulses. USDBC is looking at several new demand-building activities around the world as export markets seek to promote plant-based proteins and processed products such as bean flours and fried snacks. This will be coupled with a strong domestic program to address new regulatory challenges concerning zero tolerance issues and to support research programs that look at increasing dry bean production and yield.

NEW BEAN INSTITUTE WEBSITE LAUNCHED

The new Bean Institute website (beaninstitute.com) went live in mid-December. According to Amy Myrdal Miller and Megan Myrdal, at Farmer's Daughter Consulting, the new site contains a lot of new features including: beautiful bean photography, and a recipe database that includes dishes made with all 10 types of beans grown in the Northarvest region. Recipes can by searched by bean type, cuisine, day part, and meal part.

The easiest and most fun way to search is to simply scroll through the beautiful photos that are all labeled with the recipe names. Farmer's Daughter Consulting completed nutrition analyses for all of the recipes that appear on the site. You can view the recipe database at www.beaninstitute.com/recipes.

The Culinary and Foodservice Professionals page links directly to the CIA World Bean Kitchen site: www.beaninstitute.com/foodservice. The five new school foodservice recipes are also on the site, but due to their unique format, they are not included in the recipe database. The contents of the new Culinary Bean Toolkit are on the site, in the Nutrition and Health Educators section, available at www.beaninstitute.com/culinary-bean-toolkit.

DIETARY GUIDELINES RELEASED

The Agriculture and Health and Human Services Departments have released the 2015 Dietary Guidelines. The key recommendations include consuming a variety of vegetables from all of the subgroups -- dark green, red and orange, legumes (beans and peas), starchy and other. The report recommends fat-free or low-fat dairy products.

Oils from plants, including canola, soybean and sunflower oils, are considered healthy. The Guidelines also recommend consumers should consume less than 10 percent of calories per day from added sugars. The report recommends fat-free or low-fat dairy products.

In tandem with the Dietary Guidelines, Americans of all ages should meet the Physical Activity Guidelines for Americans to help promote health and reduce the risk of chronic disease.

USDA MARKET NEWS 2015 SUMMARY

According to the USDA Market News 2015 annual dry bean summary, USDA purchases of dry beans, peas and lentils for export, under the PL 480 program, were 17 percent above the previous year, but 12.5 percent below the fiveyear average. U.S. dry bean exports in the year ended in September 2015 totaled more than 10 million hundredweight, a 41 percent increase over the previous year. USDA purchases of dry beans, peas and lentils for use in domestic feeding programs were up 22 percent from the previous marketing year, while USDA bought 13 percent less canned or frozen beans, peas and lentils for domestic feeding programs. Through the first five months of the current marketing year, grower prices per cwt have averaged \$19.78 for pinto beans, \$19.61 for navies, \$21.76 for black beans, and \$32.67 for dark red kidneys here in Northarvest.

BRAZIL DAMAGE

U.S. Dry Bean Council representative Randy Duckworth reports that the Government of Brazil says above average rains in the main producing areas of southern and southeastern Brazil has affected two of the main staple foods of Brazilians: rice and dry beans. This is already starting to be reflected in the price of these products at the supermarket. Carioca beans, which are the most popular type in Brazil, increased by 20 percent in price early this year and were expected to continue rising. Rice has risen by over 15 percent. According to Brazilian analysts, Brazil will have to import over 100,000 metric tons of black beans through April, before the next crop enters the market.

LESS BEANS IN CANADA IN 2016

Agriculture and Agri-Food Canada forecasts Canada's dry bean acres to decrease almost three percent this year, or about 7,000 acres. Dry bean production is forecast at 230,000 tons, down eight percent from last year. Canada's acreage of lentils and dry peas is expected to increase 13-14 percent from a year ago.

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USDA Buys Pintos, Great Northerns

USDA recently bought \$13.4 million worth of pinto and great northern beans for distribution to child nutrition and other related domestic food assistance programs.

The purchase includes almost 182,000 bags of pinto beans and 112,000 bags of great northerns, to be delivered between April 1 and August 30. More than 60,000 bags of pintos and 7,300 bags of great northerns were not awarded due to no bids received or constraints.

This purchase is being made through Section 32, which allows the government to buy surplus commodities, and was prompted by a request last July from Northarvest Bean Growers Association President Joe Mauch and Pat King, co-owner of P.W. Montgomery, representing the North Central Bean Dealers Association. The Nebraska dry bean industry made a similar request for the purchase of great northern beans.

King calls the purchase a winwin deal. "At the time, prices were pretty depressed here, so Joe and I got together and tried to figure out a way to help growers and dealers get some beans into food programs because at the time, pintos were

one of the cheapest beans on the planet, very good nutrition, and good bang for the buck for the government. It's distributed all over the country in 2-pound packages, so it'll go into a lot of domestic feed-

ing programs," says King. "It helps the growers, dealers and it helps the consumer; it's just a really good deal, I think."

King and Mauch both gave credit to North Dakota and Minnesota senators for supporting their request to Agriculture Secretary Tom Vilsack. "All four of them backed us and thanks to them," said Mauch. "We couldn't have done it without them. I give them all the credit." King says North Dakota Senators Heidi Heitkamp and John Hoeven were very instrumental in getting Minnesota Senators Amy Klobuchar and Al Franken on board, "They just took the ball and I'm proud of them. They did a heck of a job."

Tim Courneya, Executive Vice President of the Northarvest Bean Growers Association, said when the request was made to USDA last July, the estimated carryover of pinto beans was large, so this purchase will help alleviate some of the carryover stocks that have been with us for a while, and help stabilize the market. "We are so happy to have our Senators get behind this," says Courneya. "They emphasized to Secretary Vilsack that this was good for our food chain in the United States. Secretary Vilsack and the **Economic Research Service should** also be complimented. They're doing something good -- there's a lot of nutrition here being fed to the U.S. consumer through the pur-



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Black Bean Production Tops Navies

For the first time in modern history, U.S. black bean production exceeded navy bean production in 2015. Last year's black bean production totaled nearly 5.6 million bags, a 45 percent increase from the previous year, while navy production increased seven percent, to 4.5 million bags.

North Dakota's black bean crop jumped 66 percent last year, but fell slightly short of the navy crop. Minnesota growers grew 49 percent more navies than blacks last year. Michigan's black bean crop jumped 42 percent last year and was 73 percent larger than the state's navy bean production.

What's driving the trend toward more black beans and less navies? Kelley Bean Company senior merchandiser Larry Sprague answers by referring to a recent *Successful Farming* article titled, "Meet Your New Bosses", which cites solid research that shows the millennials and food bloggers are setting the trends for food consumption.

Sprague says navy beans are at best "stable," but conversations with canners indicate that, generally speaking, consumption of navy beans is probably down 20 to 30 percent from normal in the last 5-6 years. "The biggest item for usage of navy



Larry Sprague, Kelley Bean Co.

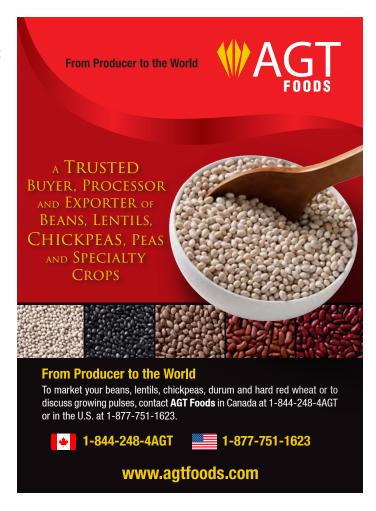
beans is baked beans.
They're tasty and have a lot of nutritional value, but if you look at the nutritional label on a can of baked beans, you'll see they contain a fair amount of sugar," says Sprague.
"The new products that contain black beans have a very low sugar content.
That trend is also driving demand for great northern and cannellini beans."

While navy beans are not a regular side choice in most restaurants, Sprague says you're seeing a lot of black beans as a side dish. "People like the taste of black beans and are searching for recipes, and a lot of food bloggers are using recipes for black beans as well."

Sprague expects this trend to continue. The Food and Drug Administration has announced that it will now do random testing of foods for glyphosate. "People are concerned about what they eat, but may not take the time to do their own research, and instead get their input from someone on TV." That breeds concern for such things as GMOs, caged hens and sows, and sugar.

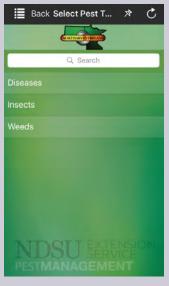
Sprague says the product usage of black beans is different than navies, which are primarily consumed as canned baked beans. Most growers, when they're looking at navy beans, it's a contract product because there are so few volume buyers. "So you have very little fluidity on pricing," according to Sprague. "Black beans are used by more companies and for more products, more foodservice and in more countries; so we have a more fluid market, with more opportunity, and a more diverse marketplace."

The shift from navies to blacks in North Dakota comes despite a yield drag. The state average yield for black beans was a little over 12 bags per acre in 2015, compared to an average yield of over 17 bags for navy beans.



Digital Diagnosis

Looking for ways to manage rust or white mold in your dry beans? Find the best disease, weed and pest management strategy for your farm on the updated North Dakota State University Pest Management App. The free tool combines information from the NDSU Extension Weed, Disease and Insect Management Guides to help





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Anhydrous Ammonia Becoming Extinct?

The omnibus spending bill passed by Congress at the end of 2015 temporarily suspended an OSHA policy rule that would have forced all retail fertilizer facilities that sell anhydrous ammonia to comply with Process Safety Management (PSM) rules which were historically aimed at manufacturers.

According to the Agricultural Retailers Association, OSHA's July, 2015 memo does not adequately explain what changed and is contrary to two decades of OSHA enforcement. It is unclear as to why ag retailers are now

all of the sudden subject to PSM. OSHA's stated justification is the West Fertilizer explosion in April 2013, but the compound in question there was ammonium nitrate, not anhydrous ammonia. In fact, the ammonia that was present at the West site had no issues with leaks or tank integrity despite being immediately adjacent to the ammonium nitrate detonation.

North Dakota Agriculture Commissioner Doug Goehring says the intent by Congress is to stop OSHA from applying its rule until they go through the rulemaking and a new North American Industry Classification System Code for farm retailers is in place. Goehring continues to call on OSHA to repeal the policy.

A court challenge is pending in Federal Appeals Court by the Agricultural Retailers Association (ARA) and the Fertilizer Institute. The ARA is also seeking support from the House Appropriations Committee for language to defund OSHA's retail exemption memo in the 2017 appropriations bill.

There was language in the fiscal year 2016 appropriations bill which clearly directed OSHA to go through a rulemaking process, but instead, OSHA pushed the compliance date to October 1, 2016. If ag retailers are required to comply with the additional regulations, the ARA says it will take substantial time and financial resources to come into compliance.

Ag Retailers Association CEO Daren Coppock thinks OSHA's actions are a totally inappropriate application of process safety management. "So it's going to increase the cost of anhydrous ammonia, it's going to cause retailers to close ammonia installations that are too expen-

Continued on Next Page



sive to bring up to the new standard, and not provide any safety benefit," says Coppock. "Farmers are going to be faced with less availability, higher prices, more transportation costs in trucks over longer distances, just a less than ideal situation for both the retailer and the grower."

Richard Gupton, the Senior Vice President for **Public Policy and Counsel** for the Ag Retailers Association, says ARA members had been exempt from the OSHA Process Safety Rules since their inception. "Because of that guidance change by OSHA, it will cost our members a minimum of over \$100 million. and it could be into the hundreds of millions of dollars if you're talking about equipment changes," says Gupton.

Reynolds (N.D.) United Co-op general manager Paul Coppin says OSHA needs to understand that a local anhydrous ammonia dealer is not a gasification plant and should not be treated as such. "Retailers can't afford to spend \$30,000 or \$40,000 to upgrade their facilities, and then so much every year. I think the cost to upgrade these facilities is so great that we may lose half of the anhydrous retailers," says Coppin. "For farmers who feel they need to put anhydrous on, are they going to want to go 50 miles to get a 2-ton tank of anhydrous, use it for a couple hours



Reynolds United Co-op General Manager, Paul Coppin.

and return for another one? It doesn't make economic sense for them; I think anhydrous may go by the wayside."

According to the ARA's Gupton, ag retailers are already subject to extensive regulations from OSHA, EPA and the Department of Homeland Security that helps ensure a safe and secure work environment for employees and local communities. Anhydrous ammonia, in particular, is already covered by EPA's Risk Management Program. Gupton estimates the average initial cost per retail facility to comply with OSHA's PSM guidance memo is \$27,500, which far exceeds OSHA's estimate of \$2,160.



Keep Soybeans Out of Dry Beans

Soybeans in loads of dry beans are becoming a bigger and bigger problem. Deon Maasjo, plant manager at Kelley Bean Company, Inc. in Oakes, North Dakota, told growers at Bean Day that soybeans are one of the big 8 allergens on the Food and Drug Administration's list. And in today's environment with everyone eating healthy, it's becoming more and more of a problem.

Maasjo said the bean dealers need the growers' help. "With the world needing more food from you, the farmer, you're being required and asked to raise this food," said Maasjo. "So to meet this demand, you are forced to tighten your crop rotations, which may result in cross contamination of grain products. Those tighter rotations may also cause disease pressure in regards to quality."

Maasjo said the cost of

having soybeans in dry beans to the grower is a \$4 per hundredweight grade discount on the grading tables. Growers could also have their dry beans rejected by the bean processor, which would add freight costs and time during the busy harvest season. "The worst case scenario is the product may need to be destroyed, but worst of all, your neighbors in the coffee shop will be talking about it," says Maasjo.

USDA's Agricultural Marketing Service recently amended its commodity specification for purchases of canned dried beans. The specification now says all canned dried bean products shall be processed and packaged using equipment that is separate from equipment used for any products containing major aller-

Maasjo said we're all in this together so we

need to work together to accomplish the disappearance of soybeans in our edible beans. He gave growers a few tips to keep volunteer soybeans out of their dry bean fields.

When choosing fields that are getting planted to dry beans, make sure they haven't been planted to soybeans.

If at all possible, choose fields where you won't have flooding problems from soybean fields.

When hauling fertilizer, make sure the trucks are clean. This can happen as growers haul soybeans to the Twin Cities and return with fertilizer.

When preparing to plant, make sure the planter is clean.

Scout fields during the growing season. If you see soybeans, get them out of there. The easiest way is to rogue the field.

At harvest, make sure combines and trucks are clean, and try not to switch between edible

that dry beans are classified as a food ingredient, not as a farm commodity. He said processors can install all the \$300,000 color sorters they want and still not solve the problem. "No piece of equipment can guarantee 100 percent clean product," according to Maasjo.

If a canning company finds a soybean in a shipment of dry beans, the real cost to the processor of a rejected load is \$6,000 or more, just in freight to move the load back home again. "If the product has been soaked, ready for canning, or worse yet, already in the can, we're talking serious dollars," according to Maasjo. "Lost freight, lost production, potential lost product and the biggest is the production from the canning companies."

The big unknown that Maasjo says we never want to have to find out is what happens if a consumer goes into anaphy-"That would be a major devastation and bring the Maasjo.





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Dry Bean Planting Rates

By Hans Kandel, NDSU **Extension Agronomist** and Greg Endres, NDSU **Area Extension Agrono**mist

In the Northarvest Bean **Growers Association** region of North Dakota and Minnesota, the four most common market types of dry bean grown are pinto, black, navy and kidney at 43%, 22%, 19% and 12%, respectively (2015 dry bean grower survey, NDSU Extension Service). Other market types produced with 2% or less of total dry bean acreage include red, pink,

Table. Dry bean seeds per pound and established plants per acre.

Туре	Average seeds per lb	Plants per acre
Black	2,300-2,800	90,000
Great Northern	1,200-1,600	70,000
Kidney	800-1,000	70,000
Navy	2,200-2,800	90,000
Pink	1,600-2,000	90,000
Pinto	1,200-1,500	70,000
Small Red	1,400-2,000	95,000

great northern and cranberry. The 2015 survey indicated that 9% of the dry bean acres had plant emergence and stand as the worst production problem. This article will briefly review NDSU's recommendations for dry bean planting rates.

Dry bean planting rates

vary from 35 to 70 pounds per acre, depending on market class, percent of pure live seed, percent of field loss, and seed size. Populations of 70,000 plants per acre for pinto bean are recommended (Table). Pinto bean ranges from 1,200 to 1,500 seeds per pound. Planting rates

suggested for pintos are 50 to 65 pounds per acre of pure live seed. Populations of 90,000 plants per acre for black and navy bean are recommended. With seed size for these small-seeded market types ranging from 2,200 to 2,800 seeds per pound,

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suggested planting rates are 35 to 45 pounds per acre of pure live seed.

Recent NDSU dry bean planting rate studies confirm the above recommendations on established plant populations. Slightly higher planting rates are suggested with narrower row spacing (less than 30 inches) and irrigated fields.

Dry bean planting rates should be adjusted for germination percentage and soil conditions during planting and seedling emergence. To obtain desired plant population, overseed the number of live seeds by an additional 10 to 15% to compensate for losses during seed germination and seedling emergence.



Greg Endres, NDSU Extension area agronomist

EXAMPLE

With a target of 70,000 established pinto bean plants per acre; seed germination is 95%; and anticipated difference between live seeds and established plant density is 15%: 70,000/0.95/0.85 = seeding rate of 86,690 seeds per acre. With a seed lot of 1,250 seeds per pound, the planting rate should be 86,690/1250 = 69.4 pounds of seed per acre.

Endres has also studied the impact that row widths may have on dry bean yields. "With the small-seeded market types, navy and black beans, we're trying to fine-tune the planting rates along with row spacing," says Endres. "We think there may be potential to increase yield by



Emerging pinto been seedlings.

increasing planting rates but certainly, narrow rows will increase yields for growers."

In 2014 and 2015 at three locations, Endres researched 14, 21 and 28-inch rows and plant populations of 90,000, 110,000 and 130,000 per acre. "We don't know what that combination is yet but we're most excited about narrower rows-that looks like maybe a nocost for growers to push up the yields with narrower rows," says Endres. "Somewhere at 22 inches or less looks very feasible."



Pinto bean with evenly distributed plants within a 30-inch row spacing.

Controlling Bacterial Diseases

North Dakota State University Extension plant pathologist Sam Markell says the 2015 dry bean crop not only had rust and white mold issues, but bacterial leaf blight as well. "My colleague Julie Pasche and her team surveyed fields last August and virtually every field had bacterial blights," says Markell. "We had a little less white mold than we've had in the past few years but we had a lot more rust."

Markell says bacterial blights are favored by infected seed. "If you have bacterial blight in your field and you put that seed back in, you're at risk for bacterial blight," says



Sam Markell, NDSU Extension plant pathologist

Markell. "If you have bacteria in your seed or you have it nearby, then it's an environmental issue. It's hail, wind-driven rain, it's basically thunderstorms

that could kick that off."

Blights are tough to manage once they start. Common blight was common in 2015 and there was also some halo blight. The problem with bacteria, according to Markell, is that it can get onto the pods and then eventually into the seed. Management tips for bacterial blights include planting clean seed, and some varieties are better than others.

Markell says he gets
a lot of questions about
fungicides and cupric hydroxide, like Koside, which
he says don't work all that
well in our environment.
However, Markell says
University of Nebraska
plant pathologist Bob
Harveson is testing a lot of
unusual compounds for
bacterial control. "A couple
products being used for

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Goss's Wilt on corn are working pretty well on beans," says Markell. In fact, with some of the best treatments, dry bean yields actually doubled. These are mostly experimental products used with multiple applications.

Markell thinks it's time to start testing some of these products at NDSU, but cautions this is not a silver bullet. "Harveson also had a couple of trainwrecks."

Concerning white mold, Markell told growers at Bean Day they have some resources, including the canola risk map, developed by NDSU with funding from the Northern Canola Growers Association and the Minnesota Canola Council. Markell thinks dry bean growers can take advantage of the canola risk map to help them decide whether or when to apply fungicides. The other resource that is probably more important is the Carrington Research Extension Center.

"They have a phenomenal white mold disease program, led by Dr. Michael Wunsch," says Markell. "He's determined that multiple chemistries can be effective for white mold, rate responses are common, and that the strobilurons and triazoles are generally not as effective."

Wunsch has taken 12 site years of data to come up with a stronger data set. "With Endura at an 8-ounce rate compared to



Michael Wunsch, NDSU Extension plant pathologist.

the non-treated control, you only had 19 percent severity of white mold compared to almost 50 percent with no treatment," says Markell. "That translates into a 60 percent difference in disease, and more importantly a yield difference of about 600 pounds, or about 30 percent." Similar results were seen over 10 site years of data with Topsin, Omega and ProPulse.

Wunsch has also usually seen a rate response over time. Topsin at 30 ounces shows about a 34 percent yield advantage over the untreated check. That compares to a 9 percent yield boost for Topsin at 20 ounces. ProPulse also reduced white mold disease and increased yield with a 10.3 ounce rate versus a 8.6 ounce rate.

Markell advises growers to search the Carrington Research Extension Center and look at the plant pathology page for information on white mold chemicals. "It is arguably the best resource on white mold in North America for dry beans," says Markell.

Rust was also common in 2015, found in about 60 percent of the fields. It's very different than white mold. It likes it warm and dry. Rust doesn't need rain, like white mold. It needs dew. "Because of the white mold applications, I think you're getting a lot of protection against rust early," according to Markell. "But if it gets dry, I think you scout for rust and be prepared to spray if you find it."

Rust comes in in hot spots, and when you find it, you need to consider spraying for it. Markell says triazoles and strobilurons work well.

One emerging problem Markell mentions is soybean cyst nematode. "As soybean cyst expands in the dry bean growing region I think it's important to pay closer attention to it," says Markell. "And if you haven't sampled your dry beans for soybean cyst, I would encourage you to do that in 2016."







*Potential number of soil- and/or plant-borne microbes that may exist in a field. Actual numbers may vary based on field size and crop. Individual results may vary, and performance may vary from location to location and from year to year. This result may not be an indicator of results you may obtain as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible. ALWAYS READ AND FOLLOW LABEL DIRECTIONS. Monsanto BioAg and Design™, and TagTeam® are registered trademarks of Monsanto Technology LLC. All other trademarks are the property of their respective owners. Individual packaging may vary. ©2016 Monsanto Company.

Health Professionals Learn About Beans

The Northarvest Bean Growers Association sponsored the 2016 Healthy Kitchens, Healthy Lives annual leadership conference at the Culinary Institute of America (CIA) in St. Helena, CA. Northarvest sponsored the conference at the Copper Level and was among seventeen sponsors. Megan Myrdal, registered dietitian, nutritionist and research and education associate for Farmer's Daughter Consulting, represented the bean growers throughout the event.

Healthy Kitchens attracted over 400 health professionals from various backgrounds. Throughout the four day event, sponsors engaged with attendees at two evening receptions, two lunch exhibits, and various programming activities. The Northarvest Bean Growers/Bean Institute exhibit table was in a great location to engage with attendees and was good exposure for bean literature and recipes. Myrdal and Chef Lars Kronmark, a professor at the CIA, shared six delicious recipes with attendees during the meal exhibit times, including Smokey Tomato and Great Northern Bean Soup, Spiced Black Bean Burgers, Pinto Bean & Quinoa Burgers, Brown Rice & Kidney Bean Salad,



Megan Myrdal and Chef Lars serving up beans at Healthy Kitchens, Healthy Lives 2016.

Red Quinoa & Navy Bean Salad, and Pinto Bean Hummus.

Three of the recipes were provided to attendees on newly-developed recipe cards, which included a photo of the dish they just tasted. In addition to the recipe cards, Myrdal also shared a newly-created Bean Institute website driver that encourages visitors to check out the newly redesigned Bean Institute website and also highlights the Culinary Bean Toolkit as a resource for patient/ client education.

Myrdal, who spent time talking with attendees about the various website resources, received many favorable comments about the handouts addressing gas/flatulence, as well as the guidelines for intro-

ducing beans to babies.

Northarvest also sponsored a Cuisinart Pressure Cooker that was raffled during a happy hour reception. This pressure cooker was used in a kitchen demonstration earlier that day. Also during the happy hour, Northarvest had a booth where seven

varieties of dry beans were placed in white bowls with note cards. In order for attendees to get their passports stamped, they had to match the correct beans with the note cards. Many commented that they had no idea so many beans were grown in this region of the country.

In addition to the exhibit opportunities and sponsor recognition, the Copper Level sponsorship provided Northarvest two additional conference attendees. Beth Schatz Kaylor, a food blogger from Bismarck, N.D., helped Myrdal in Northarvest's booth, communicating the delicious culinary applications for beans and good flavor profiles to complement certain bean varieties. Schatz Kaylor, manages the blog "Rhubarb and Venison", plans to write a blog about her experience and some of the interesting ways to feature beans.



"Pinto Bean Hummus with Vegetable Crudite" served at Healthy Kitchens, Healthy Lives 2016.

Seed Treatments ROI

The history of where seed treatments have been and where we are today is an interesting story, according to Mike Erickson, Seed Treatment Specialist with The McGregor Company. The original seed treatments, such as Captan, Allegiance and Thiram, were older, harsher chemistries, and while some of those are still used, we're using much safer products today.

In the 1990s, Syngenta introduced its Apron or Maxim products for use on dry beans and other crops. "It was interesting at that time because they were competing against Captan and Allegiance, and in order for Syngenta to compete, they put on what they called a white paper, a half rate of Apron or Maxim," recalls Erickson. "Where you had a very mild disease pressure, that probably carried the day, but when you got into some of the tougher disease areas, like Perham, Minnesota and other irrigated ground, that was sadly falling short of controlling some diseases like Pythium, Fusarium and Rhizoctonia."

A few years ago, Syngenta came out with new LSV (large seeded vegetable) custom blends, which included Apron and Maxim at labeled rates as well as Dynasty. Then a couple years later, Syngenta registered a new product called Vibrance which Erickson calls the new standard in Rhizoctonia control. "And the final piece which I think made the most difference," says Erickson, "was they included Rancona, which works on both Fusarium and Rhizoctonia." So, at the end of the day, Erickson says with this "cocktail" blend of multiple products we

end up with a lot of horsepower on those big three diseases.

This blend has three different modes of action for both Fusarium and Rhizoctonia, and two modes of action for Pythium. Erickson calls it resistance management in a package. He estimates somewhere around 80 to 90 percent of the dry bean seed today is treated.

The McGregor Company has had trials at Perham and this year will add trials at Carrington, North Dakota to try and get a read on the difference between the higher disease scenario at Perham versus a dryland scenario, where Carrington may give a better read for some of the larger acres. North Dakota State University plant pathologist Julie Pasche does all that work at Perham, and NDSU plant pathologist Michael Wunsch will

do the work at Carrington.

There are a couple new players in the market. "Last year, we had a couple surprises at Perham," says Erickson. "There's a product called EverGol Energy from Bayer, and it actually topped the trial, exceeding the typical Syngenta custom blends for the first time. Closely behind EverGol was a product called Obvius from BASF, which has a new active ingredient called Xemium, along with some older products -- Stamina and metalaxyl."

EverGol Energy has three active ingredients which provide a little more control for Rhizoctonia, Pythium and Fusarium. Obvius has two modes of action on Rhizoctonia, Pythium and Fusarium.

Erickson says the cost of these seed treatments

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Untreated Check Treated

are relative to the value that they create. The cost ranges from \$2 to the mid-\$4 range. Last year at Perham, Erickson says the untreated check was the worst treatment in the trial, yielding 1,621 pounds per acre. "Every seed treatment in the trial yielded 200, or more, pounds than what the untreated check did," says Erickson. "So a couple hundred pounds, even at today's prices, adds \$40 to the bottom line minus the cost of the seed treatment at \$2-\$4. The top seed treatments, EverGol and Obvius, protected the yield that was available to the tune of over 400 pounds per acre."

Some of the seed treat-

ments have slightly dropped in price, which amounts to about 20 to 30 cents per hundredweight.

Erickson will also have plots in Perham and Carrington this year to identify biostimulant products -- everything from fertility placed on the seed to bacteria or fungi that have fungicidal properties for control of Fusarium. Pythium and Rhizoctonia. Erickson has been surprised with how much effect nutrients, in particular zinc, have on performance in the field. A product called AgroFuze, from HydroGro, not only produced a greater initial stand, but it maintained that stand going into the seed production stage of

growth.

In 2014 at Perham, Pasche counted an initial plant stand of 53,500 after a seeding rate of 70,000 seeds per acre. Two weeks later, the plant stand improved to 59,000. The next best biostimulant treatment had an initial stand of 49,000 and a final stand count of 52,000, so roughly about 7,000 fewer plants per acre. Yields with the zinc treatment were as high as 19 bags per acre versus some of the other treatments with yields as low as 16 bags.

"This year, AgroFuze came in third, but statistically was the same as anything else, so this zinc seed treatment really does look like it has some benefit to establishing stand and helping the crop to yield better," says Erickson. Other things that were in that trial included bacterial fungicides, inoculants and molybdenum.

Erickson says one trial, in one year at one location, really doesn't teach us much. "If you truly want to know if a product is going to increase yield, in my mind you have to do that for three years and you have to have a consistent response and we're starting to see that as we're in our third year now," says Erickson. "So I think that's an opportunity growers in this area should take advantage of."



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Fertilizer Facts

Fertilizer recommendations for dry edible beans are different than for other crops such as spring wheat or corn. In fact, North Dakota State University Extension soil specialist Dave Franzen says dry beans are the only crop that has three sets of recommendations for nitrogen, based on past grower experiences.

"There are farms that have been in a dry bean rotation for a very long time that have deep, well-drained, well-cared for soils that are not particularly droughty. You can reach down almost



Dave Franzen, NDSU Extension soil specialist.

to your elbows and grab a root ball of plant and you'll have hundreds of nodules on it," says Franzen. "Those fields do not need additional nitrogen and they certainly don't need any help with inoculation."

Franzen says there are also fields where growers have had good luck with inoculation previously, which tend to be deeper soils that don't have a lot of drought or water drainage issues. "Inoculation there works just fine, and then, there are fields that have problems with drought and/or problems with drainage and plants just don't hold onto their nodules well at all," says Franzen. "Those are the ones we have the nitrogen recommendations for, up

to 60-70 pounds of nitrogen per acre, and then you subtract any credits from that, like soil test nitrogen."

Franzen calls dry beans a very "odd" crop, and he encourages growers to look at their past. The only exception to that would be on deep, irrigated sands, such as the Larimore, N.D. area, for example, where they're growing navy beans that may have 3-4,000 pound yield potential. "There, you would spoon-feed nitrogen based on a formula through the growing season," according to Franzen.

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A Pulse Celebration

The Northarvest Bean Growers Association is helping build demand for dry beans by celebrating the International Year of the Pulse. The International Year of the Pulse highlights the nutritional value and sustainability of all pulses: lentils, beans, peas and chickpeas. The USA Dry Pea and Lentil Council kicked off America's celebration with a media party in New York

City, followed by several other influencer events across the country.

North Dakota dry bean grower Leann Schafer attended the west coast launch of the International Year of the Pulse on behalf of the Northarvest Bean Growers Association, who helped sponsor the event. The Northarvest BeanGrower magazine caught up with Schafer to learn more about the cel-

ebration.

Q: Tell us a little bit about the west coast launch of the International Year of the Pulse. What was it like?

A: The west coast launch was in California in January. Forty foodies from across the country attended the launch. These foodies included the media: food editors and bloggers, as well as nutrition experts, like registered dieti-

tians. A group of us went to the Culinary Institute of America at Greystone where the chefs helped us prepare pulse-based dishes.

Q: What bean foods did the chefs help the group cook?

A: We got to work hands-on with beans and bean products. We broke up into groups to cook. We would pick out a dif-

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Jeff and Leann Schafer, New Rockford, North Dakota.

ferent dish to make. The chefs used whole beans, bean flour and bean juice in each dish.

Q: Wait-Did you just say bean juice?

A: Yes I did. Once we soaked the dry beans, the chefs drained off the excess water, called "juice," and whipped it into foam to make chocolate mousse. So, here you had chocolate mousse with the health benefits of beans: fiber, vitamins and minerals. It was great to see the chefs play up the versatility of the bean.

Q: Why do foodies like pulses so much?

A: The health benefits of pulses are fantastic. Dry beans are protein dense and are low in carbohydrates. It touches so many different health benefits people need in their diets. When they can get this from a bean, they see it as a powerhouse food. Foodies also really value sustainable food.

Q: What do nutrition experts want from dry beans?

A: The nutrition experts who participated in the event found value in experience, because they want health tips and knowledge to share with the public on blogs, publications or in person. During the launch, the experts learned that everyone can get value out of pulses. Pulses can be easily incorporated into their diets without changing the taste or texture of food.

Q: What was it like to see consumers interacting with your product?

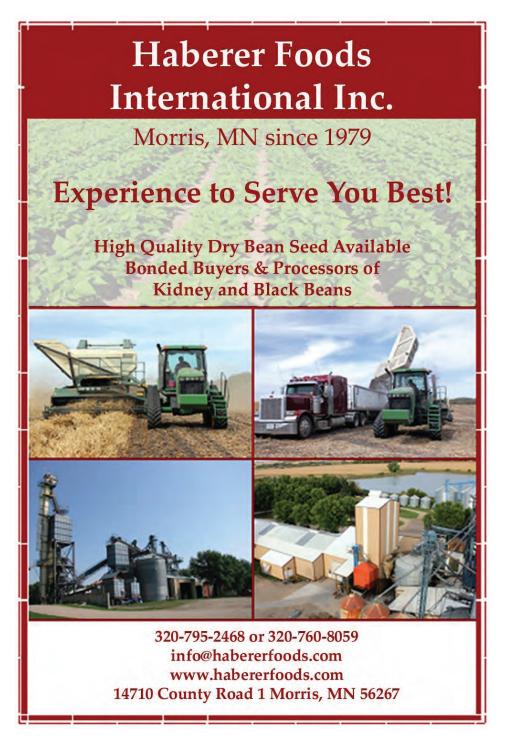
A: It was a learning experience from both sides. As a farmer, we raise the whole bean and sell it to the elevator. The bean goes on from there for further processing. It was interesting to learn what happens to the bean beyond the elevator. On the other hand, consumers don't always understand what goes into

raising dry beans, but they can see the availability in their community. They asked lots of questions about availability of pulse-based products. For example: where do I get bean flour from? I do think it is important for dry bean growers to understand connecting with these influencers helps expand the market for dry beans.

Q: The American Pulse Associa-

tion is partnering with the USA Dry Pea and Lentil Council and Pulse Canada to celebrate the International Year of the Pulse by asking consumers to take a Pulse Pledge. What can you tell us about the pledge?

A: It's easy: just commit to eating pulses once a week for ten weeks. Little steps like that can lead to a healthy lifestyle.



Dicamba-Tolerant Soybeans

Monsanto Company has announced its commercial launch plans for its Roundup Ready2 Xtend soybeans after it received import approval from China. Monsanto's U.S. Soybean Marketing Manager Miriam Paris expects more than 70 soybean products to be licensed to more than 100 seed brands in 8 maturity groups.

Although Roundup Ready2 Xtend soybeans are tolerant to both glyphosate and dicamba herbicides, the use of dicamba herbicide over the top of Roundup Ready2 Xtend soybeans remains in late stage of EPA review and is not currently approved by the EPA.

BASF says it expects EPA approval of its new Engenia herbicide in 2016. The company's website says Engenia will be a technologically advanced dicamba formulation that provides an additional site of action for control of broadleaf weeds in dicamba-tolerant crops, including soybeans and cotton.

North Dakota State University Extension weed specialist Rich Zollinger says offsite movement of dicamba may not be a large problem. "We thought glyphosate might be when Roundup Ready crops went viral but

cases of injury are relatively few," says Zollinger. "Glyphosate is not volatile but the new dicamba formulations have very low volatility so movement from particle drift may be a non-issue if growers follow best management practices with each new Enlist and Xtend technology. There may be more concern with crops that are highly susceptible such as grapes and ornamentals."

According to Zollinger, there are many in weed science that consider poor sprayer tank cleanout as a more probable cause

of crop injury. With the short time span to spray weeds (when they are small) some may cut short the complete tank cleanout process. Zollinger's Master's student Theresa Reinhardt's data clearly shows that dry beans are more susceptible to dicamba than glyphosate. "I think growers will steward these technologies to preserve them," says Zollinger. "Whether they overuse them so we end up with resistant weeds may be another issue."

Zollinger says, historically, dry bean growers use more soil-applied her-

bicides than in any other commodity, except maybe sunflower. Lack of Roundup Ready dry beans allows dry bean growers to use many other herbicide modes of action and NOT use glyphosate to achieve excellent weed control and reduce the weed seed bank of herbicide-resistant weeds. "We cannot stress enough that crop and herbicide diversity are key to weed management and that depleting the weed seed bank is the first step to manage herbicide resistant weeds," said Zollinger.

WEED MANAGEMENT COMMANDMENTS

Farmers have seen the 10 Commandments of Weed Management and know that accurate information is out there. NDSU weed scientists have actually added two more:

- 1. Scout fields before and soon after herbicide application. Correctly identify weeds. Use effective herbicides, hand-weeding, cultivation/tillage, and other methods of weed control to kill weeds that escape or germinate after chemical application. Scout fields at the end of the season and draw field maps to denote locations of weed species, weed density, and weed escapes. Save maps as a field record.
- 2. Diversified crop sequences with different life cycles e.g. winter annual crops (winter wheat), perennial crops (alfalfa) and summer an-

nual crops (spring wheat, corn or beans) results in different planting and harvest times, more herbicide options, and decreased risk of herbicideresistant weeds.

- **3. Consider weed biology and ecology.** Use tillage, crop sequence, soil fertility, planting date, crop competition, weed seed longevity, and response to herbicides to increase successful weed management.
- 4. "Don't forget the PRE". Apply effective PRE herbicides at full rates and include multiple mechanisms of action. PRE herbicides will reduce weed emergence and allow flexibility in POST herbicide timing. Residual PRE herbicides applied to soil and early POST (if labeled) will suppress weed emergence through canopy

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closure, particularly those with a long germination pattern (waterhemp). Use PRE herbicides that will effectively control problem weeds.

5. Apply effective POST her**bicides.** Apply herbicides that include multiple mechanisms of action in tank-mix or in sequential applications. Two or more herbicides in mixture must have activity against potentially resistant weeds to be effective. Herbicides in most commercial mixtures do not target the same weed species. Effective tank-mixtures on weeds will reduce selection of herbicide-resistant biotypes more successfully than rotating herbicide modes of action. Antagonism may occur with some mixtures, especially between contact and systemic herbicides.

6. Use high herbicide rates and effective adjuvants. Full rates kill weeds with low-level resistance and dead plants cannot produce resistant progeny. Reduced rates allow plants with low-level resistance to survive, hybridize, and produce progeny with elevated resistance. Hybrid plants (>1 resistance gene) express a higher level of resistance and require even higher herbicide rates to kill the plant. Dead weeds mean zero tolerance (no

seed production, zero resistant progeny) and is effective resistance weed management.

7. Spray small annual weeds. Generally, small weeds (<3 inches) are more susceptible to herbicides than large weeds. Even weeds with low level herbicide resistance are more susceptible at 1 inch than at larger growth stages.

8. Practice Zero Tolerance.

Scout fields after row closure and kill uncontrolled weeds. Seed from escaped weeds will contribute to the weed seedbank and will require diversified weed management strategies of mowing, cultivation/tillage, and hand weeding to achieve near 100% weed control. Timely cultivation can improve weed control and hand-pulling is effective for single plants or small patches.

9. Control weeds in field perimeters, drown out, and non-crop areas. Weeds surviving a partial herbicide dose on field borders can be a repository for the introduction of resistant weeds into a field. Control weeds in all areas of the field where crop is not growing, including field edges, fence lines, waterways, ditch banks, and areas where crop has either not been planted or has been destroyed.

10. Rotate herbicides with different mechanisms of action in consecutive years.

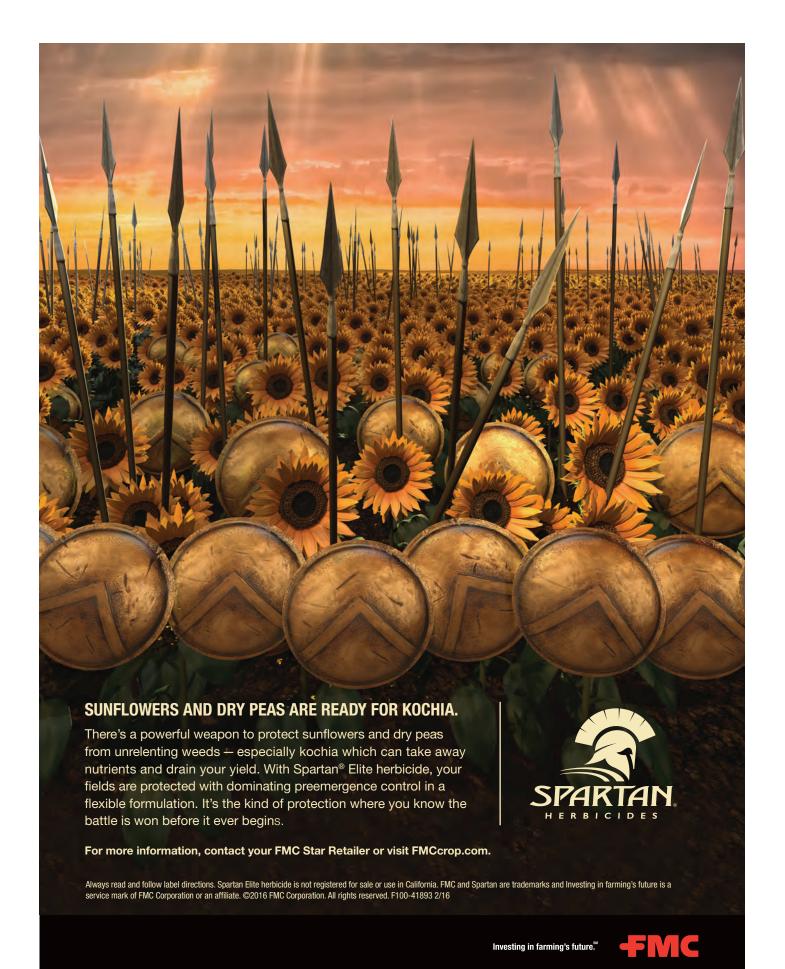
Diverse crop rotations can introduce herbicides with different mechanisms of action to delay herbicide resistance. A mix of dead plants, unaffected plants, and plants showing intermediate responses indicate herbicide resistance has occurred.

11. Clean tillage and harvest equipment to ensure weed seed will not be transported between fields. This is particularly important in crops that are harvested with a platform header-equipped combine.

12. Evaluate weed management at the end of each season and revise to improve weed control the next year.

"For me, changing human behavior is the hardest thing I have dealt with as an Extension Weed Specialist. Growers know but will not change; most only change after allowing resistant weeds to take over some fields. Growers can 'Pay now or pay later." Using herbicides with diverse modes of action will naturally cost more than just using Roundup but using other herbicides delay the development of resistant weeds." Rich Zollinger, NDSU Extension weed specialist





Promoting Beans Worldwide

In the span of less than a month, bean growers and dealers from Northarvest travelled to Colombia, Dubai, the Dominican Republic, India, Mexico, and Zambia. The purpose, as always, was to assess current consumer preferences and determine the potential for future sales of dry beans. We focus here on Mexico, the DR, and Colombia.

MEXICAN CONGRESS

Northarvest Bean Growers Association vice president Tom Kennelly heard everything from the Mexican government owns beans in an effort to boost the market, to the beans actually aren't there. Kennelly, along with fellow Northarvest board members Joe Mauch and Scott Mund, were among some 200 participants and guests at the 2016 International-Mexico/U.S. Dry Bean and other specialty crops Congress, February 11-13, 2016 in Cancun, Mexico.

In addition to the general session, the Congress featured almost 350 one-to-one business meetings. This year's Congress was particularly important for two reasons: the celebration of the International Year of Pulses and analyzing the Mexican bean harvest numbers and potential demand.

Kennelly heard from

two different sources that a major bean buyer in Mexico City had bought \$16 million worth of black beans late last year because he thinks the shortage in Mexico is worse than what the government is reporting.

Mauch, the Northarvest president, heard one Mexican buyer say he doesn't trust the government's numbers. "They trust the U.S. numbers for Mexico -- that was a little eye-opening," said Mauch, a grower from Hankinson, N.D. "Growers hold beans on the farm and don't have to report anything."

Kennelly said it seemed like nobody wants to pay for the beans because the carryout numbers on paper are high, but it seems like nobody can get their hands on them. "So, in my opinion, it's a conflicting report," said Kennelly. There was some interest from some of the buyers at the Congress, but some of the processors were reluctant to offer a price. Most of the buyer interest was for black beans, in particular, splits for use as refried beans.

This was the fifth Bean Congress Mund attended. He says attendance was up, and interest among buyers was up significantly from the last two years for pinto and black beans, with much of the discussion centered on

U.S. Dry Bean Council Executive Director Rebecca Bratter says USDBC staff in Mexico reports the Mexican government has announced the opening of a quota for the import of dry beans from other, non-NAFTA origin countries (China and Argentina). According to USDBC's consultant in Mexico, Raul Caballero, the unofficial announcement indicates that the quota will be for 150,000 metric tons, 50,000 tons more than the regular quota, and will be valid starting April 1 through November 30, 2016. The quota increase is due to the estimated 23.4 percent reduction in production in the 2015 Spring-Summer cycle (around 200,000 tons).

price. If Mexico continues to buy, and with 2015 grower prices now behind us, Mund thinks the U.S. pinto producer still holding beans should expect better prices as 2016 matures.

This year's Bean Congress included importers from Mexico, Colombia, Peru, Chile and some countries in Central America.

DOWN TO THE DR

A delegation from
Northarvest had some
timely meetings with importers and growers in
the Dominican Republic
in late February. Cavalier,
North Dakota grower Roger Carignan, Northarvest
Bean Growers Association
Executive Vice President
Tim Courneya, and bean
dealers Rick Harpestad
from SRS Commodities,
and Dylan Karley from
Johnstown Bean Compa-

ny, had about 10 meetings with importers and also visited with producers in the countryside, and came away encouraged by what they were told.

In the past year, sales of pinto and black beans were heavy to the DR. Annual consumption of all pulses is estimated at 80,000 cwt per month with 70% of that usage for dry beans.

The 2015 DR crop, which was harvested last January and February, was hurt badly by drought, and the locals in the San Juan Valley production area said the 2016 harvest was worse. Drought, purple mosaic virus and a white fly took its toll on the crop this year. Local co-ops were looking to source beans to cover their own demand as well. "So, are we to expect big volumes of beans being bought by the



The Northarvest delegation visited a farmers' market in the Dominican Republic.

Dominicans this year?" asked Courneya. "Yes, we are. It's going to happen, it's just a matter of when."

Most of the immediate needs are covered from 2015 imports, but Courneya expects the Dominicans to be after more beans this year. Instead of importing non-NAFTA beans at a high tariff rate from the U.S., the DR is importing black beans from Nicaragua with no tariff, which, according to one importer, are mostly destined for Haiti. The amount of blacks left for purchase in Nicaragua is not known. Under DR-CAFTA, the import permits were issued between February and April and shipment of import product must be delivered by December 31, 2016.

According to Courneya, the color of Northarvest pintos was acceptable but lacked the most desirable size. Importers are aware of the slow darkening pinto and understand it will become part of our production, but Courneya reminds growers that size is important too. The Northarvest delegation did discuss additional promotional activities for Northarvest to consider for the DR.

COLOMBIA UPDATE

Agricultural Commissioner Doug Goehring and seven North Dakota companies travelled to Colombia in early March to participate in an ambitious trade mission to increase North Dakota's market share in Colombia's food sector by appealing to consumers and major importers alike.

The North Dakota
Trade Office (NDTO)
partnered with the North
Dakota Department of Agriculture and Lac Market
of Bogotá, Colombia to
introduce North Dakota's
specialty crops to Colombian buyers in Bogotá
and Medellín. The trade
mission culminated with

the inaugural Colombia-North Dakota 'Better for You Food Ingredients' Conference & Exhibition in Medellín.

Goehring said there was a great deal of interest in North Dakota's pulse flour. He said such a product appeals to the emerging middle class, but also to local governments and municipalities looking for nutrient-rich food for impoverished populations.

The trade mission introduced Colombian food buyers across three market segments to the taste and health benefits of North Dakota specialty crops. Targeted sectors were consumers, wholesalers, and large importers. Mission delegates attended meetings with potential buyers in each sector, including two of the largest food suppliers in Colombia. Trade mission participants also collaborated with six Colombian stores to hold instore promotional events,



Food samples made with North Dakota pulses are handed out during in-store promotional events.

offering recipe books and samples of local dishes cooked with North Dakota pulses.

The Colombia-North Dakota 'Better for You Food Ingredients' Conference & Exhibition was attended by approximately 75 guests from 30 Colombian companies. North **Dakota State University** dry bean breeder Dr. Juan Osorno presented an educational program on North Dakota peas, lentils, dry edible beans, and borage to an audience of Colombian buyers, food producers, and research and development specialists. Following the educational program, a renowned Colombian chef carried out a live preparation of Colombian recipes using North Dakota ingredients.

North Central Dry
Bean Dealers Association
members Rick Harpestad,
from SRS Commodities,
and Bill Thoreson, from
North Central Commodities, made the trip, along
with Chris Adams, representing Adams Family
Farm, and Northarvest
Bean Growers Association
Executive Vice President
Tim Courneya.

On this, his fourth trip to Colombia, Courneya finally saw U.S. dry beans in the markets in Bogota and Medellin. "Pinto, black, navy, dark red kidney, great northern, and some light red kidney beans were seen on the shelves. Some of the blacks came

Continued on Next Page

from Bolivia, and some of the kidneys were from other sources," said Courneya. "But we did see U.S. product in their bags. That in itself was rewarding."

Harpestad has also been to Colombia four times, and this was also the first time he got to see North Dakota pinto bean samples being served in supermarkets, and on the store shelves. "That was pretty nice to see. That's something we hadn't seen yet and we finally got to see actual pinto beans stocked on the shelf and consumers buying them and taking them home,"

says Harpestad. "On the stand it said "Dakota del Norte" on it, which meant product of North Dakota, so we're making a little headway I think."

Harpestad says the Colombians are familiar with big red beans, so the pinto bean is something different, but once they try them, they like them. "We knew it would take a while, but we're starting to see the fruits of our labor after this trip," said Harpestad. "I think it (Colombia) will be a growth market, I'm very optimistic. Pintos are a great source of protein at an in-

expensive cost, their local beans are expensive, so it's a perfect fit right now.

Courneya thinks Colombia will be buying more beans because heat and drought have affected their local production. One of Courneya's priorities was to visit Grupo Exito, a major grocery outlet in Colombia that has not yet purchased U.S. dry beans.

North Central Commodities sales manager Bill Thoreson says the delegation had the opportunity to meet with buyers of dry beans, peas and lentils, and flaxseed. "We got to see some promotional bags of dry beans on the shelf with "Product of the U.S.", and "Beans for Health" on the label," says Thoreson. "Pinto beans are a new market down there and we've seen it grow in two years from nothing, to 10 containers, and now 40 containers, and it does look like it has the potential to grow."

One thing that could slow our sales of dry beans to Colombia is the recent decline in the Colombian peso, which has made U.S. pinto beans considerably more expensive than they were a year ago.





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USDA Grant's Goal is to Expand Bean Market Via Bean Ingredients

"Innovating Beans: Linking Agronomic Aims with Functional Attributes to Increase Dry Bean Consumption for Human Health" has been funded by USDA-NIFA's Specialty Crop Research Initiative. The money will be disbursed to USDA Children's **Nutrition Research Center** in Houston, Texas, and the grant will be administered by Dr. Michael Grusak.

Grusak says the goal is to bridge the whole value chain between the growers, the processors, the food industry, and consumers, and bringing researchers in throughout many aspects of the program. The idea is to get more people consuming beans to have a positive impact on public health, while at the same time help move more beans through the market.

"We're finding that the food processors have a strong interest in using bean ingredients in their products, but there seems to be a little bit of uncertainty on their part in terms of how best to use the bean products, and how they're going to work with the other products they're making," says Grusak."They (food

processors) are very much interested in helping to expand protein and fiber levels in their products and some of the minerals that are strong in beans, like potassium and magnesium. But, at the same time, they don't want to have a product that doesn't taste as well as it could so people will want to eat it."

Grusak thinks consumer demand is already there for bean ingredients, and says a lot of small companies that are more nimble are experimenting with bean ingredients. "They're trying to react to

what people are looking for. Obviously, there's a lot of interest in wholesome foods-the whole protein aspect is a strong pull in products," says Grusak. "And I think, particularly in the snack market, people are looking for healthy snacks. They know beans are healthy, they also think there's a positive issue with the non-GMO aspects of beans, so there's just a lot of positive attributes of beans." Dry beans also have a "clean label," good fats and carbohydrates, fit into vegan diets and are nonallergens.

This planning grant gives



SRS Commodities - Mayville



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Buyers and Processors of Pinto and Black Beans

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SRS Commodities - Falkirk



Grusak and his team until this fall to put a 3- to 5-year project proposal together, with the potential to ask for up to \$2 million per year. "We're looking at a multi-institutional program that would bring together the food technologists, manufacturers, and processors with a lot of academic scientists, to understand how these bean ingredients might perform. We also plan to do some work in consumer acceptability -- we want to make sure these bean ingredient products are tasty," says Grusak.

Dr. Grusak also wants to bring this project all the way back to the dry bean breeders and the production end as well because he sees opportunities to develop new bean varieties targeted for bean ingredient use.

Grusak expects to have some type of planning meeting in June and then submit a pre-proposal in December. "So by then we need to have all our ducks in a row with respect to a budget, the partners on the project and the objectives, and then in early 2017 the full proposal would be submitted."

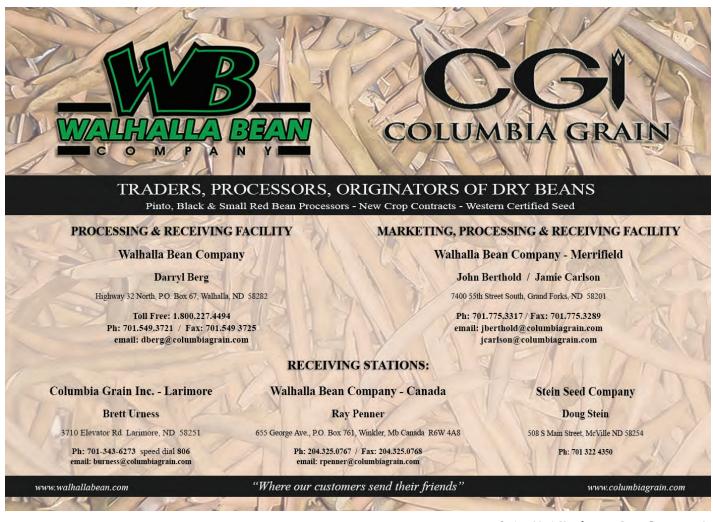
USDA human nutritionist Dr. John Finley's interest in this project is taking an agricultural product, in this case beans, and bring it into something that can really impact public health. He thinks beans have a real opportunity to do that. "The target that's probably the best chance of success is heart healthy, changes in cardiovascular disease risk factors," says Finley. "There's also a fair amount of work on diabetes management and the emerging evidence on satiety and weight loss."

Finley is proposing a study to pick one of these health targets and actually show that it has an impact on public health. Another reason to study the health benefits of beans is to have the evidence necessary to back up label claims and

advertising. According to Finley, the preliminary data suggests that as little as a third of a cup of beans a day makes a very large impact on cholesterol.

Dr. Janice Rueda, with ADM Edible Bean Specialties, Inc., co-chairs the project team and looks forward to hearing from members from every part of the bean value chain throughout this process.

The Northarvest Bean Growers Association was one of the industry groups that provided support in getting this USDA planning grant funded, and will continue to be a stakeholder in the discussions moving forward.



Pulse of the Industry



TIM KOOSMANN Appleton, Minnesota

How did you get into farming? I started farming in 1978 with my father, Orville Koosmann. We farmed together until he retired in 1995. I've been farming for 37 years. My wife Natalie is the bookkeeper on the farm. Our son, Mitch, joined the family operation in 2014. Our daughter, Allison, also helps on the farm during harvest.

How long have you raised dry beans? Our operation has grown edible beans for about 25 years. Over the years, we've grown pinto, navy, cranberry, white kidney, light red kidney, dark red kidney and black beans. Presently, we grow black beans.

What's the one piece of equipment you wouldn't want to be without? The computer along with excel spreadsheets are some of my most powerful tools.

Do you have any hobbies? I enjoy fishing, hiking, camping and traveling with my family.

If you could win a vacation anywhere, where would you want to go? If I could win a vacation anywhere, I would choose India. I think it is an interesting culture and country. I've had an opportunity to travel overseas before. This past March, I went to the Republic of Congo visiting farms and school feeding programs. It was a great experience.

What's the best part of your job? I like living a rural lifestyle and working outdoors. This fall, I had the pleasure of watching our son running combine and our daughter operating the grain cart during harvest. It's great to be able to work together with family.



KARL JODOCK Northwood, North Dakota

How long have you been farming? I'm the fourth generation to farm in my family. I farm with my dad. We grow wheat, soybeans, corn, navy beans, pinto beans, barley and field peas.

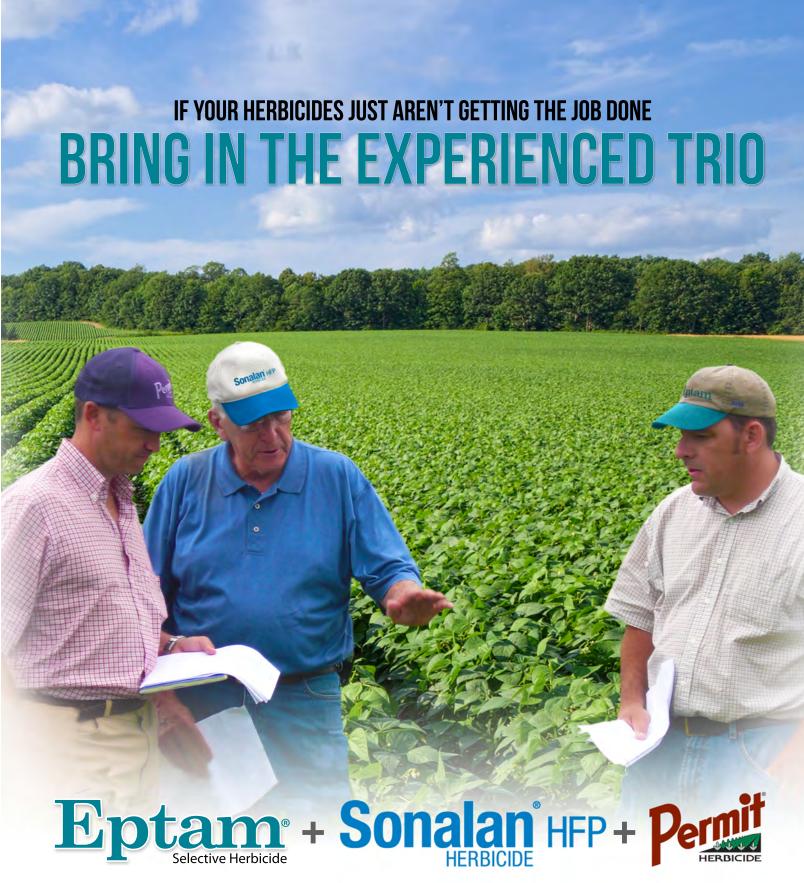
What's the best part of farming? The best part of farming is the variety of work it offers. It's amazing to step back and look at what we deal with throughout the year. Also, during harvest, you can see a product that goes right to a consumer's plate.

If you could add any new technology to your farm, what would it be? We're experimenting with no-till and cover crops. Beyond that, we're looking at variable rate fertilizer application.

What changes do you expect to see on the farm in the next five years? I think food will become more traceable from farm to market. In the dry bean industry, they want to know your planting history and what chemicals you use. I think that will be the future of all crops down the road: consumers want to know where their food comes from.

How do you think millennial farmers will impact the next generation of agriculture? From my perspective, farming is still a way of life, but it's still a business. Our generation has to be more aware of who the consumers are and what they are looking for in their food.

Do you have any hobbies? I enjoy traveling. I've been to Europe four times, because a good friend of mine lives in Holland.



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