THE NORTH DAKOTA
Soybean
GROWER MAGAZINE
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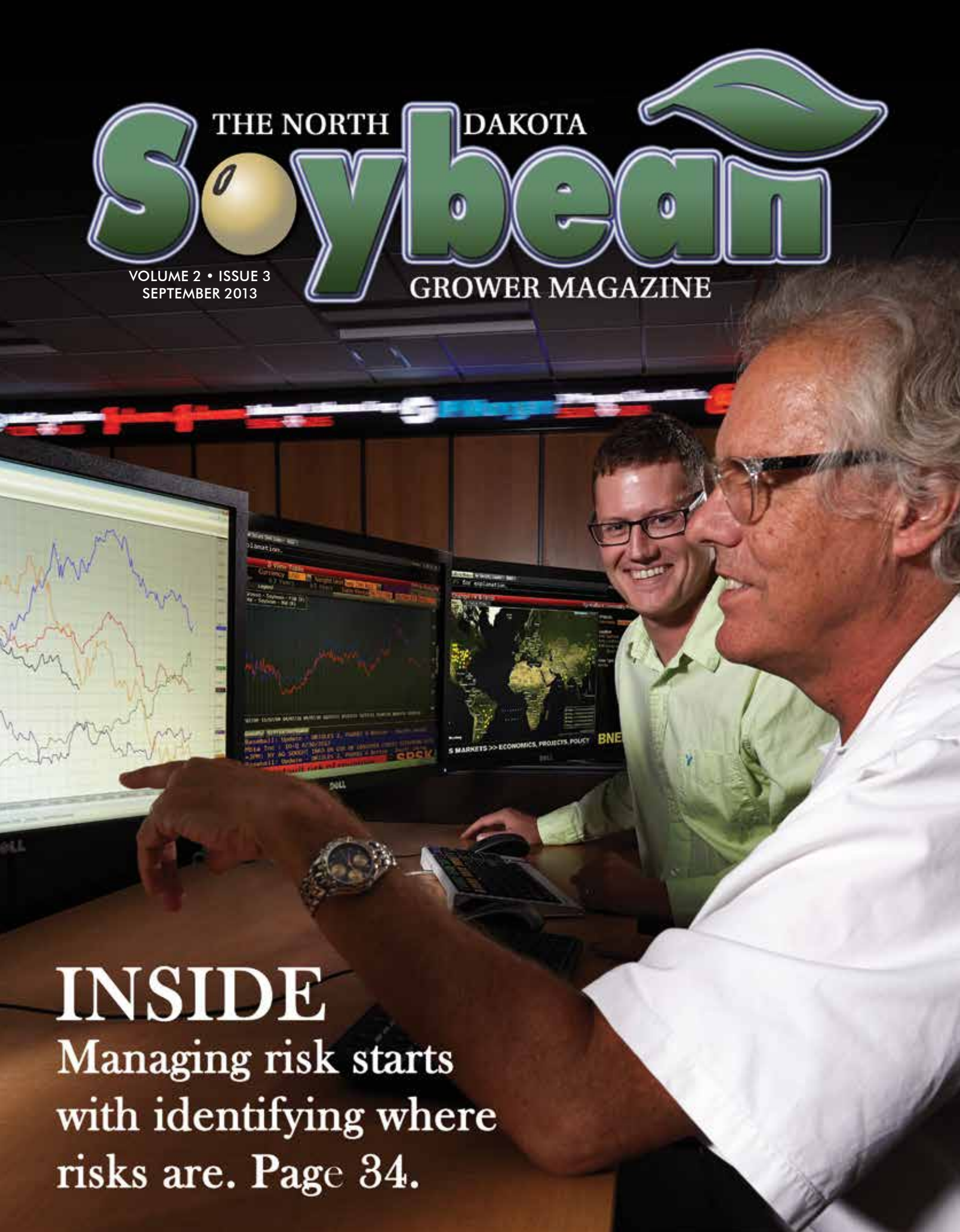


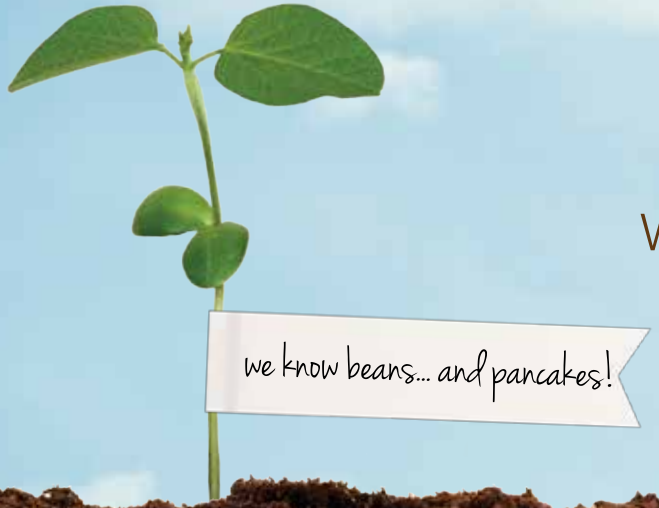
INSIDE

Managing risk starts with identifying where risks are. Page 34.

You're Invited to a Free Pancake Breakfast!

At the Big Iron Farm Show

Join us in the West Horse Barn at the
Big Iron Fairground for free pancakes!



Tuesday, September 10
7:30 a.m. - 10:30 a.m.

Wednesday, September 11
7:30 a.m. - 10:30 a.m.

NorthStar GENETICS

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THE NORTH DAKOTA Soybean GROWER MAGAZINE

Contents

Departments

On the Cover: *Bill Wilson, university distinguished professor, department of Agribusiness and Applied Economics, NDSU and Kris Skadberg, an NDSU grad student, review some of the charts used for Skadberg's thesis about soybean arbitrage. They are working in the commodity trading room at Barry Hall. For more information about the trading room, visit http://ndsoybean.org/checkoff-at-work/international-marketing*

Value of Membership

To reward growers for their choice to support the North Dakota Soybean Growers Association with a three-year membership, Novozymes offers 100 units of either Optimize® LCO Promoter Technology® for soybeans or TagTeam® LCO for soybeans. When growers renew a membership for three years or become members for three years, they receive a voucher for this product that is delivered to their dealer of choice.

Optimize provides the crop-enhancement benefits of LCO Promoter Technology delivered in an elite inoculant. TagTeam LCO is a MultiAction® inoculant that combines nitrogen-fixation, phosphate-solubilization and LCO Promoter Technology.

Casselton soybean grower Harvey Morken, who chairs the North Dakota Soybean Growers Association's membership committee, is excited that Novozymes is continuing the popular Optimize program for growers who renew their three-year membership or become a new member for three years. "The value of this product is more than the cost of the membership, so growers are really rewarded by this program. On behalf of the association, we'd like to thank Novozymes for their long-term support," says Morken.

This year, Morken's committee started a new program to provide producers with another incentive to become three-year members of the association. A number of seed companies have generously agreed to give growers a $100 discount for a pallet or tote of soybean seed. According to Morken, "This is the kind of support that helps us do policy advocacy work in Bismarck and Washington, D.C. We look forward to working with these companies during the coming year."

This program has been very successful for

HARVEY MORKEN

associations and seed companies in other states because it provides members with a tangible benefit and helps to encourage their continued membership.

The vouchers are valid from September 1, 2013, to August 15, 2014. NDSGA will offer the $100 seed vouchers as a benefit to members who join for three years or renew their three-year membership beginning in September at Big Iron. Members receive $100 off the cost to purchase a pallet or tote of soybean seed and redeem the vouchers with their local dealer.

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MANAGING RISK, THROUGH POLICY

Jason Mewes,
President
North Dakota Soybean
Growers Association

As you may have noticed, the theme for this issue of the "North Dakota Soybean Grower" is "Risk Management." As farmers, this topic is something that we think about every day. We try our best to manage our risk by using crop rotations, futures markets, crop insurance, etc. We do our best to put our farms in a position to survive when things go wrong. Unfortunately, there are still too many things beyond our control.

The North Dakota Soybean Growers Association (NDSGA) has had the opportunity to take part in a number of discussions related to writing a new farm bill. Our state's Washington delegation has done a great job of getting all our agriculture groups together to discuss the issues that are important to us. The delegates have received the message loud and clear that crop insurance is, by far, the most important issue for our state and that they must do everything they can to protect it. While we certainly agree that crop insurance is important, we do not believe that focusing solely on crop insurance is a good way to manage our policy risk.

We have been told many times that direct and counter-cyclical payments, ACRE and SURE are not going to be included in any future farm bills due to budget constraints and that crop insurance may be the only program that is offered. We fully understand the financial situation our nation is in, and we are willing to make some sacrifices. However, we question whether we should be so willing to take more than our share of budget cuts. We fear that we may be left in a vulnerable position.

The Federal Crop Insurance program has worked extremely well for the last 10 years or so, and we believe that it can be an effective risk-management tool. The program works well to cover production losses that result from natural disasters or crop failures. What it does not do is provide a stable safety net in the event of sustained market collapses. Although you may be able to insure some level of revenue, there is no guarantee that your revenue will be anywhere near your production cost. As we know, input costs are quick to rise and slow to fall. We feel that, if we rely solely on insurance for our safety net, we are not managing our risk well.

Although we face an uphill climb, we feel that an effective farm program must include more than just crop insurance for it to provide our growers with a true safety net. A strong risk-management strategy for our nation's farmers should provide a soft landing in the event of crop failures or market collapses. We fear that we have become too accustomed to a strong Ag economy and that we have lost sight of just how hard times can be. There is an entire generation of young farmers who have not yet experienced a true downturn in the Ag economy. We need a farm program that we can depend on when times are tough, not just when things go well.

We feel that, although it is flawed, the current system of crop insurance, direct and counter-cyclical payments, ACRE and SURE is the best path forward for our growers. We believe that the synergy among the programs provides a strong risk-management strategy for our growers. We believe that the current system is the best way to manage risk, through policy.

Jason Mewes and the NDSGA Board of Directors

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Interim Legislative Action Begins

The North Dakota Legislative Interim Committee work started in earnest the last week of July. Work will focus on the Budget Section, Government Finance, Taxation, Economic Impact, Energy Development and Transmission, Water Topics, Agricultural and other committees as specific topics call for attention.

Scott Rising, legislative director for the North Dakota Soybean Growers Association (NDSGA), says a clear goal during this interim period is to work toward a much better understanding of North Dakota water policy. "Water is North Dakota's No. 1 resource," says Rising. "We must know its policy history, nuances, understand the opportunities and pitalls, funding mechanisms, and influencers."

According to Rising, there is a need and potential to deliver good water to every corner of North Dakota, and there are the fiscal resources to execute well-constructed plans that benefit every sector of the economy, especially agriculture. "North Dakota's agriculture community is critical to the long-term success of water right retention, allocation and distribution across North Dakota," says Rising. "We are the least irrigated state among Western states, and we have the potential to use the Missouri River to irrigate in several places."

Rising's so-called "biennium reload" starts with a commitment to ensure that rural roads are rebuilt and that the intended maintenance is accomplished. "Additionally, we are exploring opportunities to increase load capacities and reducing trips, with an eye toward reducing road damage and thus long-term costs," according to Rising.

SCOTT RISING

Probing opportunities to initiate soybean processing in North Dakota is also very high on the legislative priority list. Rising says NDSGA's basic view is that we are always one customer short of the desired market for North Dakota soybeans.

Minimize Harvest Losses

Late-planted soybeans have the potential for increased harvest losses. Greg Endres, North Dakota State University Extension area agronomist, lists several concerns with late-planted soybeans. "We have less time for the plant to develop vegetatively early in the season, kind of build the factory, if you will, before it goes into the reproductive stage."

Another concern with later planting and an abbreviated early season is the stature of the plants being shorter than normal and, most importantly, where the pods are going to be on the lower part of the plant. "We're anticipating there'll be more seeds and pods closer to the ground, and that could pose more of a challenge when we get to harvest," says Endres, whose office is at the Carrington Research Extension Center.

NDSU EXTENSION AREA AGRONOMIST GREG ENDRES SAYS LATE-PLANTED SOYBEANS MAY RESULT IN MORE HARVEST LOSSES.

Asgrow/Dekalb territory agronomist Jerad Liedberg says that this year's soybeans are shorter and that the internodes are a little bit more stacked, resulting in a more compact plant type. "Because soybeans are both day length and heat sensitive," Liedberg says, "they know the calendar date, and they know when they need to flower and when they need to make pods." There is a bigger concern where soil moisture is short and the crop is stressed. According to Liedberg, we've always combined short beans before, and this shouldn't be anything new.

NDSU Extension Agronomist Hans Kandel says soybeans planted the second or third week of May develop and get a trigger to start blooming when the nights become longer, which happens after June 21st. The more time there is before the plant is triggered to flower, the taller the plant gets. The shorter the period between planting and that trigger, the shorter the plant is going to be.

"Then, once the plant is growing, it has to start allocating resources to both the development of the plant and to the bloom and pod fill," says Kandel. "So if you share energy, that means there is less energy for the canopy development, and they tend to be a little shorter."

Shorter plants do not necessarily mean a lower yield, but data do indicate that, the longer the growing season is up front, because the end day is basically determined by photo period, you will see you'll have a little higher yield, according to Kandel. "Earlier planting tends to give a little bit more yield potential," says Kandel. "But we have to realize beans are made in August, so you have the potential and the realization of the potential, which are two different things."

With shorter soybean plants, Kandel says the bottom pod is typically closer to the ground, but pod height also depends on a few other factors. One is the row spacing and the plant population. "If you have two plants that are closer together, they kind of help each other to compete, and we see that the pod is set a little bit higher on the plant."

Therefore, in 30-inch rows, the plants next to one another are closer and tend to have a higher

Continued on Next Page

pod set compared to 20-, 14- or seven-inch rows. The wider the rows, the more likely it is that the plants will be a little taller and that the lowest pods will also be set a little higher off the ground. Also, with a higher plant population, the plants are closer together, which increases the pod set.

Growers can select varieties that are more upright, but Kandel says yield is the determining factor. "The lowest bean does not always determine if you have the highest yield. In other words, if you have a lot of pods and you lose one, you're still better off with the plant that has higher yield."

ROGER AND BROCK GUSSIAAS HAVE BEEN ROLLING THEIR BEANS FOR SEVEN OR EIGHT YEARS.

Another management move to minimize harvest losses that a number of North Dakota soybean growers make is rolling their soybeans after planting. This action allows the combine's cutter bar to be closer to the ground and to retrieve as much seed as possible.

Endres has conducted some research on rolling soybeans, particularly post-emergence rolling, to determine the best time to roll. "We found that early is better," says Endres.

ASGROW/DEKALB TERRITORY AGRONOMIST JERAD LIEDBERG IS SEEING A MORE COMPACT SOYBEAN PLANT THIS SEASON.

"Ideally the unifoliate stage when we have more growing points present but when the crop is still quite small." In his research at the CREC, when the crop got to the first trifoliate stage and beyond, Endres saw quite a spike in injury levels. According to Endres, "that didn't translate into yield losses, but it opens the door for bad things to happen, such as lodging later on in the season, disease entry in the stems or other parts of the plant that may have been cracked."

Endres recommends rolling fields before the soybeans emerge. He encourages farmers not to roll during emergence.

While his research did not indicate that rolling provides an agronomic yield advantage, Endres thinks growers would see a mechanical advantage by being able to retrieve a pod or two. "Maybe a pod per plant would be a bushel, or near a bushel an acre" Endres reasons.

Endres thinks essentially everyone outside the Red River Valley is rolling beans.

Carrington farmers Roger and Brock Gussiaas have been rolling their soybeans for the last seven or eight years. "Short beans and the combine doesn't make a very good rock picker," Brock explains. "It just pushes the rocks in the ground." Brock says late-season beans are quite a bit shorter, which he expects this year. In addition to a later year, Roger says a drier year, especially earlier in the season, also results

in shorter beans. "I don't know if the beans are going to be so short this year because we've had pretty good subsoil moisture."

"Rolling pushes rocks down and allows you to combine almost like on a kitchen floor," says Brock. "The combine head is real close to the ground and you're not picking up dirt." Roger, Brock's dad, says that the elevators don't like the dirt and that food-grade soybean processors want nice, clean beans as well.

Beans are rolled once, at about 7 to 10 mph. Have they seen a yield advantage? According to Roger, "We do a little custom seeding for some neighbors, and we do some of their harvesting too, and we really recommend they do the same thing [rolling]." Brock says, "Not only are you going to have a yield advantage, but if you do take a rock into the combine, it'll do a lot of damage; it's going to cost money, and it's going to cost time, and time is going to cost money too."

In addition to rolling, the Gussiaases will use a new John Deere combine with a draper flex head this fall, which have become popular the last couple years. "Instead of a reel-type header," says Brock, "you're using a draper like on a swather, which takes the beans into the combine right away instead of having the reel do the work, and there's some shatter loss from that."

Roger recalls always having problems with drapers on swathers, and it was really nice to get away from them and use the flex heads. "You didn't want a draper, but now, we're going back to it again, and it just seems like it's going full circle and it's probably the way to go."

The Gussiaases should know which head will capture the most beans this fall. They plan to run two combines, one with a draper head and another with an air bar.

Arthur, N.D., soybean grower Greg Gebeke has been rolling his soybeans for about four or five years, and thinks that more farmers in the Red River Valley are rolling their beans all the time. "We started mainly to improve the harvest ability of the soybeans, so we lost less beans out there," says Gebeke. "I think rolling's especially important if you rotate soybeans and corn. By rolling after planting, you push those corn root balls down; you get a smoother surface on top; and you can harvest a lot closer to the ground and have less soybean loss."

Gebeke and his brothers started farming in 1978. They formed the Gebeke Brothers Farms partnership in 1982.

Gebeke has never done a side-by-side yield comparison, but he estimates that rolling adds a half-bushel to one bushel per acre in yield. After the first year he rolled his beans, he saw less stubble, which meant he was cutting the beans shorter and saw fewer beans on the ground. The Gebeke Brothers Farms' soybean rotation is almost all on corn ground, but even the beans-on-beans are rolled.

Besides a possible yield advantage, Gebeke is able to increase the ground speed of his combine on rolled ground. "You can combine, I would say, a half to a mile-an-hour faster because your header isn't bouncing," says Gebeke. "We run two 40-foot draper flex heads; they're MacDon made; they're Case IH heads; and we're real satisfied with the cutting job after the rolling."

Gebeke has used the draper heads for at least three years and says the real advantage to the draper flex head is that

GREG GEBEKE SEES A YIELD ADVANTAGE FROM ROLLING HIS SOYBEANS.

Continued on Next Page

they feed so nice. "The draper canvas feeds those beans in so steady and so smooth, you don't have that bunching; you don't plug your throat nearly as often; you can cut a little bit faster; everything just goes smoother."

Gebeke saw what some neighbors were doing with rolling, which convinced him to try it. His advice to farmers thinking about it is to have a tractor set up with auto steer. "It's way more efficient to roll that way. You're not double-rolling; you can set it right out to the end; and it's a lot let stressful on the operator driving at 12 to 13 mph."

Another advantage of rolling is pushing stones down below the surface which reduces damage to the sickles and, therefore, downtime. You also reduce the chance of doing any damage to your combine by putting a stone in the throat.

By reducing the corn root balls, Gebeke feels he's harvesting cleaner soybeans, too. "Our foreign material dockage is less than one; usually, we're at a .5 or .6, so we're very happy with that."

Gebeke also thinks that he gets a better stand in his soybean fields by rolling them, thanks to a better seed-to-soil contact. He tries to be in the same field with the roller behind the drill or the planter. If not, he tries to roll within several hours of planting.

While rolling his soybeans allows him to combine at a higher speed, Gebeke says that, with short beans, you can go a little bit too fast sometimes, especially if the beans are super dry. Another thing some growers have done that the Gebekes have not is using an air reel. "Some people in this area have moved over to them. We used to have one, maybe 10 years ago, but we didn't like it; it seemed like it used a lot of power. I think these newer air reels have that issue figured out; and on real short beans, some guys swear by them."

One other management recommendation is to try to combine when the pods are a little tougher, such as early in the morning or late at night. Kandel also says that, the more accurate the combine is set, the less loss there tends to be.

Another possible yield impact with later planting is frost. Crop maturity will be pushed back, particularly compared to last year when a lot of people were harvesting by Labor Day. "This year," says Endres, "it's probably going to be the last half of September before we get serious about harvest."

While there is still the potential for very good yields, Endres says they may not be as high as last year because growers may have been forced to plant shorter-maturing varieties which are, inherently, a little bit lower yielding.

Consider Equilibrium Moisture Values for Soybeans

After last year, when a lot of very dry soybeans were harvested, NDSU Extension Agricultural and Biosytems Engineer Ken Hellevang published tips on how to recondition soybeans that went into the bin as low as 7 to 8 percent moisture.

According to Hellevang, "One issue we face maybe more so than other areas is how rapidly soybeans dry down. We've struggled with soybeans, waiting to harvest until they're 13 percent moisture, and all of a sudden they drop to 7 to 8 percent."

One thing Hellevang has encouraged is to harvest earlier, at say 15 percent, and then use natural air drying to bring the moisture content down to 11 to 13 percent.

In a dry fall like 2012, farmers can use natural air drying to bring outside air with average relative humidity into the bin to increase the moisture content. How long it takes to dry the beans depends on the relative humidity and the air flow rate, but Hellevang estimates that it will take as long as it takes to dry grain, probably a month to six weeks.

It's important to look at the equilibrium moisture content table in the "NDSU Soybean Production Field Guide." Otherwise, Hellevang says you could end up with a layer of wet beans in the bin.

Another concern is how swelling that accompanies reconditioning will increase the stress on bin walls, especially for newer, larger bins. Hellevang says no research has been done on big bins.

EQUILIBRIUM MOISTURE VALUES (PERCENT WET BASIS) FOR SOYBEANS

	Relative Humidity (percentage)				
Temp.	50	60	70	80	90
32	10.0	11.8	13.7	16.2	19.8
40	9.8	11.5	13.5	16.0	19.6
50	9.5	11.2	13.2	15.7	19.4
60	9.2	11.0	13.0	15.4	19.1
70	8.9	10.7	12.7	15.2	18.9
80	8.6	10.4	12.5	15.0	18.7

DEAR VALUED SOYBEAN PRODUCERS:

Diana Beitelspacher
Chief Executive Officer
North Dakota
Soybean Council

I recently had the privilege of traveling to Ecuador with individuals from the U.S. Soybean Export Council and qualified state soybean boards to represent you in building relationships and engaging in dialogue with representatives from:

- PRONACA: the largest animal integration company in Ecuador. In 2012, the company used 160,000 metric tons (MT) of U.S. soybean meal because of the essential amino-acid content.
- Bioalimentar Plants and AVICOLA AGOYAN: one of the five largest feed producers for poultry, swine, dairy cattle, aquaculture and pets in Ecuador. The company buys almost exclusively U.S. soybean meal.
- Asociación de Fabricantes de Alimento Balanceado (AFABA, Feed Manufacturers Association): The association buys all of its soybean meal from the U.S. (217,000 MT in 2012). So far, 140,000 MT have been purchased in 2013.
- Andipuerto Guayaquil S.A. (Port of Guayaquil): There were 120,000 MT of soybean meal unloaded this month alone!
- Alimentsa New Feed Plant: It focuses on shrimp production.
- Produmar Polyculture Farm: Thirty percent of its feed is soybean meal.
- Asociación de Productores de Balanceados (APROBAL, Balanced Feed Association): the second largest feed association in Ecuador. This group (comprised of 10 companies) represents 24 percent of the feed market in Ecuador.

Many Ecuadoran importers purchase soybean meal exclusively from the U.S. because they like the quality, even though it is generally more expensive. (The U.S. has 80-85 percent of the soybean-meal market share.) Other interesting statistics are as follows:

- Ecuador imports $474 million of U.S. exports. U.S. soybean meal is 54 percent; $360 million is soybean based: 64 percent meal and 35 percent soybean oil
- This year, soybean meal imports from the U.S. have increased 25 percent.
- Ag products exported to the U.S. are about $1.9 billion.
  - -- Shrimp is $560 million because the U.S. is the main buyer of Ecuadoran shrimp.
  - -- Bananas are second at $400 million.
  - -- Flowers (roses) are $171 million. Flower production is huge in Ecuador because the country sits on the equator. The sun hits straight down, so flowers grow perfectly straight. The country also exports other tropical flowers.
- Ecuadoran imports of soybean meal from the U.S. in 2012 are 517,000 MT ($250 million).
- So far this year (January – May), $118 million of soybean meal have been imported ($95 million from the U.S.)
- A total of 236,000 metric tons has been imported so far this year, of which 186,000 MT (79 percent) is from the U.S.
- Soybean oil could be the next big market. It is currently a $140 million market.
- There are no soybean crushing plants in Ecuador; only soybean meal is imported.
- Potential markets in South America for U.S. soybean meal, in order of largest to smallest, are as follows: Colombia, Venezuela, Peru and Ecuador.

Your Soybean Council continues to work hard to promote your commodity, both domestically and internationally, to increase demand and market share. Watch for future articles about progress being made in this area on your behalf!

Variety Selection for Heavy-Clay Soils with a Neutral pH

If you have heavy-clay soils on your farm, such as a Fargo Clay, NDSU has data that can help you choose the best Roundup Ready® soybean variety for a wet year when a lot of fields have been subjected to too much moisture. Farmers need to target different soybean varieties to different fields. If a field has a high pH, then a grower needs to identify a soybean variety that is tolerant to iron-deficiency chlorosis. If a grower has a Soybean Cyst Nematode (SCN-) infested field, then the grower needs to plant a SCN-resistant variety on that field. NDSU provides iron-deficiency chlorosis ratings and yield data for sites that have a past history of iron chlorosis symptoms. NDSU also provides yield data for about 40 different Roundup Ready® varieties on SCN-infested sites.

However, there are many fields where iron-deficiency chlorosis does not occur because the soil type is more of a neutral (7.0) pH and because the field is not infested with SCN. NDSU also provides data for heavy-clay soils that do not have a history of iron-deficiency chlorosis or SCN infestation. Research funded by the North Dakota Soybean Council (NDSC) has shown that the poor soybean yields and stunting that are common with a Fargo Clay soil of neutral pH is explained by damage caused by Phytophthora root rot on varieties that are susceptible to this pathogen.

In 2012, based on a grant from the NDSC, NDSU researchers evaluated 39 private-company Roundup Ready® varieties on a Fargo Clay soil with a pH of 6.7. Iron-deficiency chlorosis was not present on this field, and the field was not infested with SCN. NDSU researchers applied excessive moisture by overhead irrigation on six replicates, and another three replicates were on a dryland area. The company variety with the highest yield in the area that was irrigated to simulate a wetter than average year was Legend Seed LS03R2, with a yield of 44.6 bu/A. The variety that yielded the least on the irrigated area of the field had a yield of only 10.3 bu/A. The difference between the best and the worst varieties was 34.3 bu/A. Varieties with either major gene resistance or tolerance to Phytophthora root rot have a much better chance of recovering from excessive soil moisture.

GENETIC DIFFERENCES AMONG VARIETIES FOR TOLERANCE TO PHYTOPHTHORA ROOT ROT ON A FARGO-CLAY SOIL IN A WET YEAR.

SIMULATING A WET SUMMER ON A NEUTRAL-PH, FARGO-CLAY SOIL FOR A REPLICATED ROUNDUP READY® VARIETY TRIAL.

Although 2012 was a dry year, NDSU researchers were able to simulate a wet year by using excessive overhead sprinkler irrigation. This finding means that, even in a drier than normal year, you can look at the NDSU data and make decisions that will help you choose the best variety for your heavy-clay soils that do not have iron-deficiency. These data are available online at www.ndsoybean.org/checkoff-at-work/research and are available as a hardcopy in the "North Dakota Soybean Variety Trial Results for 2012 and Selection Guide (A-843-12).

Contributed by Ted Helms, NDSU professor and soybean breeder.

Soybean Cyst Nematode and Weeds

As most growers know, soybean cyst nematode (SCN; Heterodera glycines) is becoming a serious problem for growers in our northern soybean-production area. Years ago, people thought it might not be as serious in our colder northern area, but as we have seen, SCN is well adapted to the northern area and can cause major yield reductions. Indeed, the cold soil temperatures during much of the year protect the nematode in the soil from degradation by other soil microbes.

There are only two major crops affected by SCN, soybeans and dry beans. Our other major crops are not hosts of the nematode. There are a few specialty crops, however, such as crambe, Cuphea and borage, where the nematode reproduces in small amounts.

There is another group of plants that can also be hosts to SCN: the weeds. Recently, the North Dakota Soybean Council and the State Board of Agricultural Research and Education funded a project to determine if weed species in this area were hosts of SCN. This study is important because weed species are a common problem in soybean fields and could help maintain SCN populations, especially during crop rotations to non-host crops. When soybeans are not planted in an infested field for many years, growers might expect that the SCN would be eliminated or reduced to extremely low levels. Weed hosts, however, could interfere with the intended results of crop rotation. Although some weeds have been tested, there are a number of weed species in our area that have not been tested to determine if they are SCN hosts. Another interesting fact about weeds is that one ecotype of a weed species (i.e., collected at one specific location) might be a host while another ecotype may not.

THE SECOND-STAGE LARVA OF SCN SHOWING THE STYLET (ARROW) IN THE HEAD WHICH IS USED TO PUNCTURE ROOTS CELLS AND TO GAIN ENTRANCE TO THE ROOT TISSUE.

Of the 51 weed species examined, researchers found that 49 species were not SCN hosts or supported very little reproduction on the roots. Only two weeds, field pennycress and henbit, supported a fair amount of reproduction, not as much as soybean but still enough to add eggs back into the soil. Those two weeds had previously been shown to be SCN hosts. It is important to remember that 29 weed species had a few females on their roots which means that, in production fields, there are weeds that can maintain the SCN population even when the field is planted with non-host crops. Therefore, weedy fields may be more prone to higher SCN levels even when in rotation with non-host crops.

SCN has developed remarkable methods of survival and will be around our area as long as plants grow in fields. SCN management is essential once you have an infested field. Keep in mind that the symptoms of SCN may be very subtle, and they often go unnoticed until major damage occurs. This fall, get fields tested for SCN, and if you have it, start a management plan!

Contributed by Drs. Berlin Nelson, Jr., Plant Pathologist, and Greta G. Gramig, Weed Scientist, NDSU.

North Dakota Soybean Council Offers First "See for Yourself" Trip for North Dakota Soybean Farmers to visit the Pacific Northwest

NEW EXPORT GRAIN TERMINAL IMPRESSES NORTH DAKOTA FARMERS

The North Dakota Soybean Council (NDSC) hosted its first "See for Yourself" mission trip and sent 15 North Dakota soybean farmers to the Pacific Northwest (PNW) July 9-11 to see firsthand how their soy checkoff is put to work.

"NDSC sponsored this 'See for Yourself' trip to show soybean farmers the logistics required to bring their soybeans to the point of export," said Suzanne Wolf, NDSC Communications Director. "The farmer-participants had the opportunity to see how their checkoff is paying off for them, and learn what happens to their soybeans after they unload them at their local elevator."

Each year, approximately 95 percent of North Dakota's soybean crop is transported by rail to the Pacific Northwest, where it is shipped overseas to international customers. BNSF Railway is an important partner

PARTICIPANTS OF THE "SEE FOR YOURSELF" PACIFIC NORTHWEST EXPORT FACILITY MISSION AT EGT IN LONGVIEW, WASH.

North Dakota Soybean Council Names Stephanie Sinner as Marketing Director

Stephanie Sinner has joined the North Dakota Soybean Council as director of marketing. Stephanie assumed her role in June in the Council's Fargo office.

"We are excited to welcome Stephanie to our team and are confident that, under her leadership, we will be able to expand market opportunities for our soybean producers and grow our industry well into the future," says Diana Beitelspacher, NDSC Chief Executive Officer.

STEPHANIE SINNER

A native of Colorado, Sinner has a Master of Science degree in International Studies, with an emphasis in International Agriculture Trade and Development, from Oklahoma State University. She holds a bachelor's degree in Spanish from Fort Lewis College in Durango, Colo. Most recently, Sinner was an international marketing specialist with the North Dakota Department of Agriculture in Fargo where she coordinated and managed international marketing events and trade missions, both domestically and internationally. Her background also includes policy analysis along with grant and contract management. Sinner lives in Fargo with her husband Scott.

"I'm thrilled to be part of the North Dakota Soybean Council team, and I'm looking forward to new challenges and opportunities that will come with the position," says Stephanie. "I am eager to work with the Council on future projects to promote North Dakota soybeans here at home and around the world."

for soybean farmers because BNSF transports the largest volume of soybeans in the U.S. From North Dakota to Portland, Ore., the rail-rate estimation is $61 per ton. BNSF committed $4.1 billion in investment during 2013 to improve service, $550 million of which is for terminal, line and intermodal expansion.

On July 10th, the group had the opportunity to tour Export Grain Terminal (EGT) in Longview, Wash. EGT loads bulk cargo ships bound for markets in Asia with soybeans, corn and wheat. It can also handle soybean meal and distillers' grains.

EGT is a new $200 million terminal built by Bunge, along with its Japanese and Korean partners, on the Columbia River. It loaded its first ocean-going vessel in February 2012. EGT is the first export grain terminal built in the U.S. in more than 25 years and is largely automated and controlled by an extensive computer bank. Robots even open and close shuttle-train gates as the trains move over grain pits.

EGT can unload a shuttle train in 5 to 6 hours and can handle six 110-car shuttle trains at any given time without decoupling the locomotives. There is room on the EGT's 200-acre site to hold 14 shuttle trains at a time. When a shuttle is unloading, it never stops, moving over the dump pit at about one-third mile per hour. Robots open and close the shuttle-car gates, and unloading augers with 1,000-hp motors carry soybeans on a 6-foot wide air conveyor.

The whole soybeans handled by EGT almost exclusively come from North Dakota, South Dakota and Minnesota.

"You are in the sweet spot" for exporting soybeans to the growing Chinese market, EGT Facility Manager Jerry Gibson told the North Dakota farmer-participants. North Dakota and South Dakota are closer to the PNW ports than any other growing region, and the PNW is closer to China than ports on the Gulf of Mexico.

Thank you to Lon Tonneson, editor of the "Dakota Farmer" for contributing to this article.

JEFF OLSON (LEFT) AND DALLAS LOFF (RIGHT), SOYBEAN GROWERS FROM COLFAX, N.D., TALK TO EGT FACILITY MANAGER JERRY GIBSON ABOUT THE 6-FOOT WIDE, AIR-CUSHIONED BELT CONVEYOR THAT UNLOADS SHUTTLE TRAINS AT THE PACIFIC NORTHWEST PORT. THE STATE-OF-THE-ART CONVEYOR THAT RIDES ON A CUSHION OF AIR TO REDUCE WEAR AND TO MINIMIZE DUST IS POWERED BY 1,000 HP ENGINES.

Vanessa Kummer Recognized

In late June, the North Dakota Soybean Council and the North Dakota Soybean Growers Association recognized and honored Vanessa Kummer of Colfax, N.D., for her years of leadership within the soybean industry by having a celebration dinner in Fargo. Kummer was not only president of the North Dakota Soybean Growers Association in the late '90s, but she also served as a director on the United Soybean Board (USB), including one year as chair. Kummer was the first North Dakotan to chair the USB and the first woman ever to hold that position. North Dakota Soybean Council Chairman Scott Gauslow presents Kummer with an appreciation plaque.

North Dakota Soybean Council CEO Visits Ecuador with USSEC

North Dakota Soybean Council (NDSC) CEO Diana Beitelspacher, along with U.S. Soybean Export Council (USSEC) representatives and other Qualified State Soybean Board (QSSB) representatives, visited Ecuador from July 14-19 for a closer look at the USSEC's implementation of educational programs and marketing in Ecuador. The U.S. market share for soybean meal in Ecuador is 80 percent, an amount which has grown dramatically over the past few years.

The team traveled to the cities of Guayaquil and Quito, meeting with some of the country's largest users of U.S. soybean meal. The group visited the APROBAL (Asociación de Productores de Balanceados [Balanced Feed Association]) and AFABA (Asociación de Fabricantes de Alimento Balanceado [Feed Manufacturers Association]) feed associations; the PRONACA, BIOAlimentar and Avicola Agoyan animal integrators; the Alimentsa New Feed Plant; and the Produmar Polyculture Farm, a large shrimp and tilapia producer. The team also toured the Port of Guayaquil and met with USDA Foreign Agriculture Service (FAS) Marketing Specialist Andres Barahona.

"Meeting some of the top buyers, importers and users of U.S. soy meal in Ecuador was the opportunity of a lifetime," says NDSC CEO Diana Beitelspacher. "They value our soymeal because of its high quality and are willing to pay a higher price because of the difference it makes in the quality of their end products," she adds.

In 2012, Ecuador was the fifth largest importer of U.S. soybean meal, importing 517,000 metric tons (MT) of U.S. soybean meal that equaled approximately $250 million. The 2013 projections show that U.S. soybean meal exports are up as much as 25 percent and are on pace to set a record. The market for Ecuador is expected to continue its rapid expansion as the country's middle class continues to grow and the projected $140 million market for soybean oil for food and industrial applications takes shape. Ecuadoran importers prefer the quality of U.S. soy to soy from other origins, allowing the U.S. to gain its superior market share in the country.

The USSEC currently has educational programs in this region for poultry, swine and aquaculture in addition to Regional Animal Production Courses (RRPC) offered by the USSEC for these customers. Other USSEC programs in the region include topics such as import duties and management, risk management, how and when to buy U.S. soybean meal, and aquaculture demonstrations aimed at increasing the consumption of soybean meal in fish diets.

Addressing Herbicide Resistance in North Dakota

The number of herbicide-resistant weeds and herbicide-resistant weed species continues to increase in North Dakota. Strategies to control herbicide-resistant weeds are complicated and must be planned well to be successfully implemented.

North Dakota State University (NDSU) weed scientists have conducted surveys to confirm weed resistance to glyphosate and other herbicides. The documented cases of herbicide-resistant weed species include glyphosate- (Roundup) resistant ragweed, waterhemp, horseweed and kochia. Indications are that common lambsquarter populations also have some glyphosate resistance.

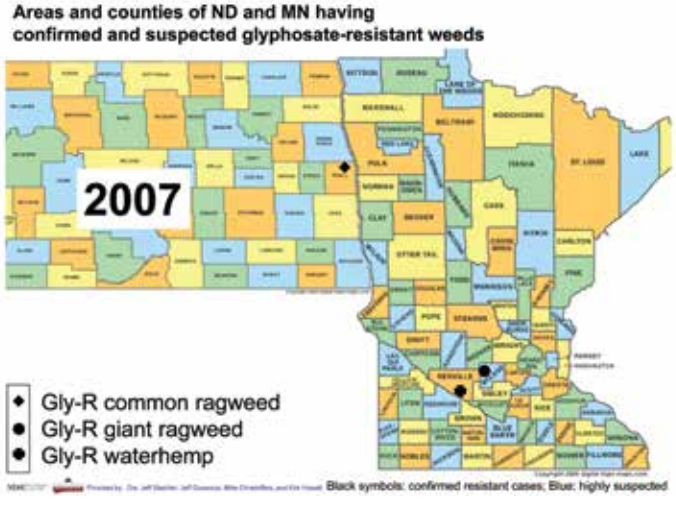
Strategies to control herbicide-resistant weeds are complicated and must be planned well to be successfully implemented.

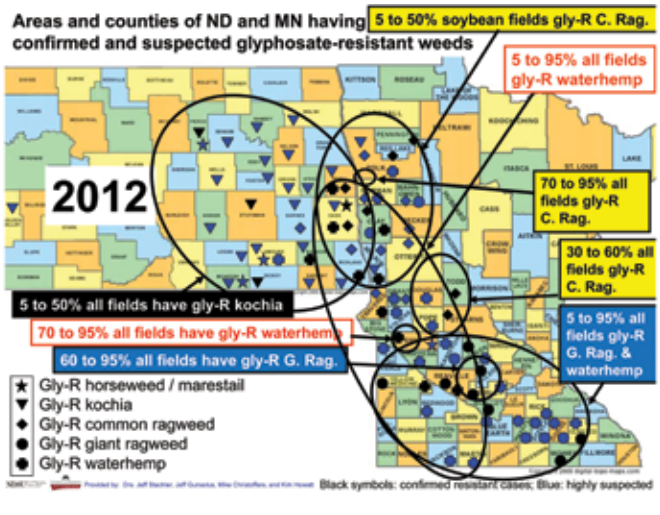
NDSU weed scientists have conducted a substantial amount of research to identify solutions to help growers manage glyphosate-resistant weeds and volunteer glyphosate-tolerant canola in soybeans. The management strategies suggested include critical timing for herbicide applications and growing Liberty Link soybeans to provide a more diverse weed-control program. When implemented, these strategies can help delay herbicide resistance.

The data from the research are available in the North Dakota Weed Control Guide. In addition to the written publications, NDSU weed scientists have developed a multi-colored mode of action chart to identify the different active ingredients used in North Dakota. Educational videos have been produced to assist farmers in managing these difficult-to-control weeds. For more information, check out this website: www.ag.ndsu.edu/weeds/herbicide-resistant-weeds

The EPA's increased concern about drift control and the understanding that Liberty (glufosinate) is more efficacious with finer spray droplets have encouraged research efforts to identify a spray quality and adjuvant combination that address both areas. This past year, research has also been conducted to identify tankmix partners and to correct the application timing for both Roundup Ready and Liberty Link soybean systems.

Contributed by Angela Kazmierczak and Richard Zollinger, NDSU.





North Dakota Soybean Council Strengthens Ties with Chinese Soybean Industry Association

North Dakota Soybean Council (NDSC) board members and staff met with members of the Chinese Soybean Industry Association (CSIA) on June 23. The Fargo meeting was held to promote understanding of the U.S. soybean industry and to establish positive relations between the two groups.

"Our meeting provided an ideal opportunity to explore ways of creating and expanding demands for U.S. soy in China," says Diana Beitelspacher, NDSC CEO. "We are in a relationship-focused business," she adds. "Engaging in dialogue with our international customers to better understand their needs and expectations is the perfect way to build those relationships and generate greater interest in our commodity."

Ten members of the CSIA visited the Fargo area as part of their United States visit which was sponsored by the NDSC and facilitated by the United States Soybean Export Council (USSEC).

The Chinese delegation also traveled to Traill County and visited Brent and Jennifer Kohls at the Newman Farm near Clifford, N.D. Brent, the vice president of the North Dakota Soybean Growers Association, provided the group with an overview of his farming operation and answered many questions from group members regarding soybean production and farm operating costs.

"It's imperative as producers to showcase the efforts we put forth to provide our customers a high-quality product, and I feel trade visits like this truly help differentiate our soybeans from competing countries," says Brent Kohls. "It was a great privilege to help the group gain a better understanding of the business side of American farming and host the delegation from China, the number one importer of North Dakota and U.S. soybeans."

BOARD MEMBERS AND STAFF OF THE NORTH DAKOTA SOYBEAN COUNCIL WELCOME CHINESE SOYBEAN INDUSTRY ASSOCIATION MEMBERS TO THEIR OFFICE IN FARGO, N.D.

BRENT KOHLS OF MAYVILLE HOSTS MEMBERS OF THE CHINESE SOYBEAN INDUSTRY ASSOCIATION AT THE NEWMAN FARM, NEAR CLIFFORD, N.D.

Fueling Your Farm

Many fleets and farmers have been using 20% biodiesel blends in mild weather. Harvest season is a great time to use B20. Current economics make it possible to save money while using B20 vs. straight #2 diesel, and biodiesel provides excellent lubricity for fuel and can help extend engine life by reducing wear on moving parts. Using biodiesel also helps soybean farmers get a good return on investment for their crops.

As you prepare for the harvest season, take some time for routine maintenance on fuel systems to minimize trouble. Problems associated with storage and tank maintenance are more common since the introduction of ultra low sulfur diesel (ULSD).

Over time, water can accumulate in tanks when there is excess head space and when temperatures fluctuate greatly. Water from the air condenses at night when the temperature falls. Water accumulates as this process occurs over time.

When sulfur levels are high, water at the bottom of a fuel tank does not present problems. Sulfur is a natural antimicrobial. Microbes live in the interface between the fuel and the water, using the fuel for food and the water for oxygen. The contamination can cause fuel filters to plug and vehicles to stop.

Today's diesel fuel is less stable, resulting in shorter shelf life. Without stability additives, the shelf life of most fuel is six months to one year. Minimize exposure to air. Take a few moments to run through the checklist to minimize fuel-related problems this harvest season.

- Always install a dispenser filter on a storage tank. This step will keep contaminants from reaching the vehicle tanks. It is a good idea to change the filter before the busy harvest season.
- Check hoses, filling caps and gaskets for leaks.
- Visually check tanks monthly for free water by obtaining a tank-bottom sample.
- Check the fuel-containment area for water on a regular basis. Remove water when necessary.
- Before colder weather comes in the fall, check tanks for water and microbial contamination.
- Transition to a lower biodiesel blend for the winter months.
- Fuel tanks should be kept as full as possible to reduce the amount of air that enters the tank. Fill the fuel tanks after harvest.
- Use a cold-weather additive package, and/or use No. 1 diesel in the winter months.

If you have any fuel-related questions or need help troubleshooting a fuel-related problem, contact the Regional Diesel Helpline: 800-929-3437.

Contributed by Lisa Pedderson, MEG Corp Fuel Consulting.

NDSGA Secretary is an Agronomist

Reynolds, N.D. soybean grower Luke Kuster always knew he wanted to farm. After working as a sales agronomist for CHS Ag Services in Grand Forks, Kuster got his wish. For the past eight years, he's been farming the farm his great-grandfather moved to in 1943.

The Secretary of the North Dakota Soybean Growers Association (NDSGA) Board of Directors says, "It was just a matter of time and the stars kind of aligned. Some land opened up, I saw the opportunity and took it." Kuster raises corn, soybeans, sugarbeets, navy beans and wheat.

Kuster has served on the NDSGA board of directors for four years, since being introduced by former board member Jason Nelson, who needed a replacement when seeking a position with the American Soybean Association.

Being an agronomist and a farmer has its pluses and minuses, according to Kuster. "It is nice to know that side (agronomy) of things; it gives you a little more perspective of what a salesman thinks and what a farmer thinks. You can wear both hats at the same time. So, yeah, it definitely has its advantages."

LUKE KUSTER ALWAYS KNEW HE WANTED TO FARM.

Are there times when the farmer thinks differently than the agronomist? "Oh absolutely," says Kuster. "You look at the prices of these chemicals, and you're thinking wow, that's too much. On the agronomy side you're like, well, if I could save four or five bushels of wheat, maybe it's worth it."

Kuster has been raising soybeans all eight years that he's been farming. He says it's been a consistent crop over the years, and thinks it's a little easier crop to raise than some other crops. "Soybeans are good for the soil, put nitrogen back into it, and as of late, the new varieties have really been pushing the yield."

Kuster raises Roundup Ready soybeans but is excited about some new Liberty Link varieties. Glyphosate-resistant weeds are one reason he's considering Liberty Link soybeans. Another is Roundup Ready canola volunteers, even though Kuster's farm is nowhere near where canola is grown. Kuster explains how that happens. "A semi hauls a load of canola and then brings back some fertilizer. If the box isn't cleaned out, it's incorporated into the fertilizer. The canola is tough to get rid of since it's resistant to glyphosate."

Asked about his production practices, Kuster said he's been applying MAP the last four years prior to planting his soybeans. Some plant growth regulators have also helped.

Kuster admits he probably could not have picked a better time to return to the farm. "My dad always said there were some tough times in the '80s and '90s and said 'you don't really know what tough times are.' I would have to agree with him." His dad, Lloyd, is a crop insurance agent with Bremer Bank in Grand Forks.

Luke farms with his uncle Lauren and his grandfather Gerald. Gerald Kuster says, "We need him here; he's an agronomist." But Grandpa Gerald is not sure about the three green tractors that have mostly replaced the blue line he was so loyal to.

Fessenden Grocer Supports Soybean Growers

As a small-town grocer, Jerry Klein is as concerned as the farmers he serves about whether it's going to rain or not rain, or whether his area had a wind or hail storm. The owner of Jerry's Jack and Jill in Fessenden has served in the North Dakota Senate since 1997.

Spending time in Bismarck for nine sessions not only brings him closer to the Zeeland farm where he grew up, but also where he worked at a grocery store to put himself through college. Klein graduated with an accounting degree from the University of Mary in 1973, but when he couldn't find a job, he continued to work at the grocery store that was owned by Nash Finch Company, which is his wholesaler today.

Klein's District 14 covers five counties in central North Dakota: Kidder, Sheridan, Wells, Pierce, and most of Benson. Klein served as the senate's president pro tempore in 2009-2011. He has chaired the Business, Industry and Labor Committee, and he has served as vice chairman of the Senate Agriculture Committee, which he has been on during all of his nine sessions in Bismarck.

Klein has been in the legislature when the state didn't have any money and was forced to shrug off its opportunity to provide adequately for some of its infrastructure needs. That has changed. "The last couple sessions, agriculture's been doing extremely well; the oil has been doing extremely well; eastern North Dakota has been doing extremely well," says Klein. "So the state has really been firing on all cylinders, so now we're in a position where now we have some money."

Klein calls the amount of money the legislature has put into roads during the 2013 session "historic, over $2 billion. We've been able to provide some money for our counties and townships so they can address some of the needs resulting from recent record flooding." Klein hopes that we've turned the corner and that the roads can get back to where they need to be during these busy agricultural times.

PHOTO COURTESY OF: GLASSER IMAGES

SEN. JERRY KLEIN

There is an opportunity to continue focusing some money on roads, according to Klein. He doesn't foresee the legislature cutting back on bringing all the infrastructure to where it should have been. "We've got roads; we gotta continue to work on bridges, but then we also have issues with water across the state," says Klein. "Now, with the formula that was developed with the oil revenue, the Resources Trust Fund had $536 million for water projects throughout the state. Without water, the roads really lead to nowhere."

Klein expects a massive amount of money to be spent on various water projects that he thinks are long overdue. "It's hard to listen to some of the folks in the southwest, like ranchers in the Hazen area, who have waited 25 years for good water. And now, they can see the pipeline coming." Water is also critical for North Dakota's oil production because of its use in fracking.

Klein believes all systems are go. "We haven't been held back by the federal government as far as oil production. I still believe we're gonna have a lot of money and that's gonna be used to address a lot of these infrastructure needs one way or another." Klein thinks the Upper Great Plains Transportation Institute has done a lot of work, and if the state can just chip away at a lot of those issues, the future's going to be really bright here.

Bowman Rancher Supports Agriculture

Bowman rancher Keith Kempenich needs a reliable pickup to cover his district. His district is the size of some states, covering six counties and a portion of a seventh, and includes the city of Killdeer. "That's just under 10,000 square miles," says Kempenich. "If you travel from Lemon to East Fairview, it's just under 300 miles." Kempenich has served in the North Dakota House of Representatives since 1993.

Kempenich has supported the North Dakota Soybean Growers Association on a number of rural issues, including infrastructure. He recalls a meeting 12 years ago when legislators were told it would take an extra $200 million just to maintain the roads we had, and this was before the oil boom in western North Dakota. "Of course, we didn't have an extra $200 million laying around, so that never materialized outside of what we got from federal programs and gas and excise taxes," says Kempenich. "What extra money we did have went into dealing with the building up roads flooded by excessive rains. And then when the oil started booming, we were playing catch up, and that's what we're still doing."

During the 2013 legislative session, lawmakers approved $100 million for non-oil producing counties and townships, and started projects in the western oil-producing counties. Going forward, Kempenich said that another $120 million will be going out in 2014 to non-oil producing counties. There was also some bridge-money language in the legislation. Kempenich was hoping to reverse the curve that the state's been on. "Going forward, maintenance will help, but in this phase, we're basically rebuilding a lot of them," says Kempenich. "These roads were never built for triple-axle, tandems or semi's that are being used today. As long as we have funds available, we're hoping to keep doing this."

REP. KEITH KEMPENICH

Asked why he supports infrastructure needs in the non-oil producing counties, Kempenich thinks elected officials have to look at the state as a whole because the entire state is going to carry everybody into the future. "Agriculture's still our biggest economic driver, and you have to look at how things work. It's not us or them; you have to look at the state as a whole and everybody's got to move forward."

Kempenich thinks infrastructure is the best way to manage the state's resources and get to something that people can actually see. "One thing about North Dakota, it's a medium-sized city with long streets."

Kempenich shares the NDSGA's opinion that water management will be another important issue going forward. The population centers remain along I-29. "We're still going to wind up pumping water east."

Out west, Lake Sakakawea is the freshwater supply for rural water projects, and the demand is growing with the expanding oil industry. According to Kempenich, "there's going to be 800 to 1,000 gallons a day that they require just to maintain those wells. You start taking that times 30,000 wells or whatever the number winds up to be, that's a lot of water. Water's going to be an ongoing issue."

Kempenich says water rights are already being bought and sold on the Missouri River south of the dam for oil development. He expects that a fine line will need to be walked on water for a long period of time unless some other type of technology comes along to replace the oil development. In eastern North Dakota, water management will be continuous because tiling is becoming more important, and this isn't going to end, according to Kempenich.

Applicants Sought for 2014 DuPont Young Leader Program

PROGRAM APPLICATION DEADLINE OCTOBER 1

The North Dakota Soybean Growers Association (NDSGA) is seeking applicants for the 2014 American Soybean Association/DuPont Young Leader Program.

The program is designed for soybean farmers, married or single, who are interested in developing their leadership skills. Spouses are included in all aspects of the program, and the knowledge gained is beneficial in any setting – whether on or off the farm. Young Leaders become valuable, active members of agricultural organizations and volunteer groups at local and state levels.

Many graduates of the program go on to become officers of state and national soybean association boards. Since the program began in 1984, many North Dakota program graduates have gone on to become state board members and officers.

A challenging and educational two-part training program, the 2014 class of DuPont Young Leaders will meet for the first time at Pioneer's headquarters in Johnston, Iowa, Nov. 19-22. The program will continue Feb. 25-March 1, 2014, in San Antonio, Texas, with training held in conjunction with the annual Commodity Classic Convention and Trade Show.

The ASA/DuPont Young Leader Program offers the opportunity for participants to strengthen and build upon their natural leadership skills, to meet and learn with other young leaders from around the country, and to expand their agricultural knowledge.

Applications are being accepted online at www.SoyGrowers.com/dyl.

SELECTION CRITERIA

- Up-and-coming, innovative soybean farms who are looking to participate in a leadership program that will give them the building blocks to take on bigger leadership roles.
- Active support of agriculture and interest in serving as a NDSGA board member.

THE 2013 ASA/DUPONT YOUNG LEADER CLASS. JAY GUDAJTES, DIRECTOR FROM MINTO, REPRESENTED NORTH DAKOTA. HE IS IN THE SECOND TO BACK ROW, THIRD FROM THE RIGHT. HIS WIFE LISA IS IN THE SECOND ROW, FAR LEFT.

Raised Seedbeds

Water-saturated soil, commonly known as soil waterlogging, has long been recognized as a major production constraint for raising soybeans in the Red River Valley. During prolonged periods of soil saturation, soybeans can experience negative physical and chemical changes in plant structure which can result in the loss of plant population and yield reduction. One method to reduce excess water stress is to use raised seedbeds.

Raised seedbeds are a common tillage strategy throughout the flat, alluvial delta soils of the Mississippi River Valley. Scientists in the Mississippi Valley noticed an increased soybean grain yield when growing crops on raised seedbeds. One of the contributing factors to increased yield was the presence of more established plants on raised seedbeds early in the season after excessive rainfall created flooding and anaerobic conditions. These same conditions killed the germinating seeds in the (non-raised) flat seedbeds. In poorly drained soils, crop production yields worldwide are higher with raised seedbeds than on traditional, flat seedbeds.

Raised seedbed formation is described as ridging soil with intentions to have the seedbed raised on poorly drained soils. Raised seedbed designs can vary in height, width and the number of crop rows planted on each bed. Raised seedbed or ridge systems are beneficial in flat or gentle sloping areas with soils that possess poor internal drainage.

In 2012, raised seedbed (ridge-till) research was conducted at North Dakota State University. The soybean research at NDSU consisted of 10 soybean varieties that were selected based on differences in tolerance to excess water and the level of resistance to iron-deficiency chlorosis. Raised seedbeds were created in the fall of 2011. Research locations were at Prosper, and Fargo, N.D., with three additional sites on producers' fields in Minnesota near Hitterdal, Barnesville and Rothsay. The average raised-seedbed height was 7.5 inches from the top of the ridge to the bottom of the furrow; seedbed bases were approximately 20 inches wide; and the surface tops of the raised

IN WET CONDITIONS, THE SOYBEANS ON TOP OF THE RAISED SEEDBED WILL BE OUTSIDE THE SATURATED ZONE.

COMPARING RAISED SEEDBEDS WITH FLAT SEEDBEDS.

EQUIPMENT TO MAKE EXPERIMENTAL RAISED SEEDBEDS.

seedbeds were approximately 4 inches wide.

Although below-average rainfall occurred during the 2012 growing season, there was no indication that soybeans grown on raised seedbeds were less vigorous. When results were combined over the five 2012 locations and analyzed, no significant difference in stand count, vigor, height, thousand kernel weight, test weight or yield occurred between soybeans grown on raised seedbeds and soybeans grown on flat land (Table 1). At one location where iron-chlorosis deficiency was prevalent, soybean yield was significantly higher on raised seedbeds. On average, the soil temperature was significantly warmer in the raised-seedbed treatments at Fargo and Hitterdal by 0.4 and 0.8 °C, respectively.

When averaged across variety and environments, dried root mass was 0.4 g higher per root for soybeans grown on raised seedbeds. The research continued in 2013, and significant higher stands were observed in the raised beds after the early season's wet conditions.

Contributed by Aaron Hoppe and Hans Kandel, NDSU Extension Agronomists.

TABLE 1. Agronomic characteristics of 10 soybean varieties averaged across the raised-seedbed effect and five locations during the 2012 growing season.

SEEDBED	STAND COUNT	IRON-DEFICIENCY CLOROSIS[1]	HEIGHT	1000 KERNEL WEIGHT	TEST WEIGHT	YIELD
	PLANT/A	(1-5)	(INCH)	(GRAM)	(LB/BU)	BU/A
FLAT	126,832	1.6	30.0	131.9	56.3	44.5
RAISED	125,990	1.5	29.8	132.5	56.5	44.5
LSD	NS	NS	NS	NS	NS	NS

[1]Based on the visual scale from 1 being completely green to 5 being most chlorotic with dying tissue.

Weeds Cost, but Proper Management Pays

DEVELOP A WEED-MANAGEMENT PLAN TO HELP SAVE TIME AND MONEY

Herbicide resistance in weeds is spreading rapidly, costing farmers both time and money. What once was a problem in the south is now moving to all soybean-producing regions of the United States.

According to North Dakota State University Extension Weed Specialist Richard Zollinger, farmers can avoid the lost yield that weeds cause by adopting a weed-management plan.

A weed-management plan can help farmers strategize and prepare better for this problem. Zollinger offers farmers the following five suggestions to implement a plan:

1. Use multiple herbicide modes-of-action.
2. Use foundation-residual, soil-applied herbicide treatments.
3. Scout fields for individual or small patches of new herbicide-resistant weeds.
4. Scout field borders and bare soil in fields where herbicide weed infestations can begin.
5. Kill all herbicide-resistant plants before they go to seed because dead weeds cannot produce seed.

"Some farmers may not want to make certain changes because of the costs associated," Zollinger says. "However, if farmers look at the long run, planning for weed management will give them better weed control, better land values, make them better land stewards and allow for greater profitability because there will be fewer weeds competing with the crop."

For additional help developing a weed-management plan specific to your farm, contact your local extension agent or crop advisor to discuss recommendations.

Ask For and Use America's Advanced Biofuel

Throughout the growing season, soy checkoff farmer-leader Joel Thorsrud encourages soybean farmers to ask for and use biodiesel to fuel their farm equipment.

"Biodiesel is a quality fuel that can be made from U.S. soy oil, so it supports U.S. soybean farmers," says Thorsrud, a soybean farmer from Hillsboro, N.D., who fuels most of his equipment with a 5 percent biodiesel blend. "It also adds extra revenue to the price of soybeans and a boost to your engine. That's a win-win for all U.S. soybean farmers."

Quality and an extra revenue boost aren't the only benefits of using biodiesel on the farm. Biodiesel is a domestically produced, advanced biofuel that supports thousands of jobs and reduces our country's reliance on foreign oil. Biodiesel is also great for engines. It blends as low as 1 percent and can add as much as 65 percent lubricity to an engine. The fuel has comparable characteristics to petroleum diesel fuel, providing excellent horsepower, mileage and lubricity. Most equipment manufacturers cover biodiesel in their warranties.

For individuals interested in using biodiesel on their farms, Thorsrud says there's only one way to start: Ask your fuel distributor to start carrying it. "Don't be afraid to ask for biodiesel," says Thorsrud. "Agree on whatever biodiesel blend works best for you and the distributor."

MARK YOUR CALENDARS!

2014 Northern Soybean Expo

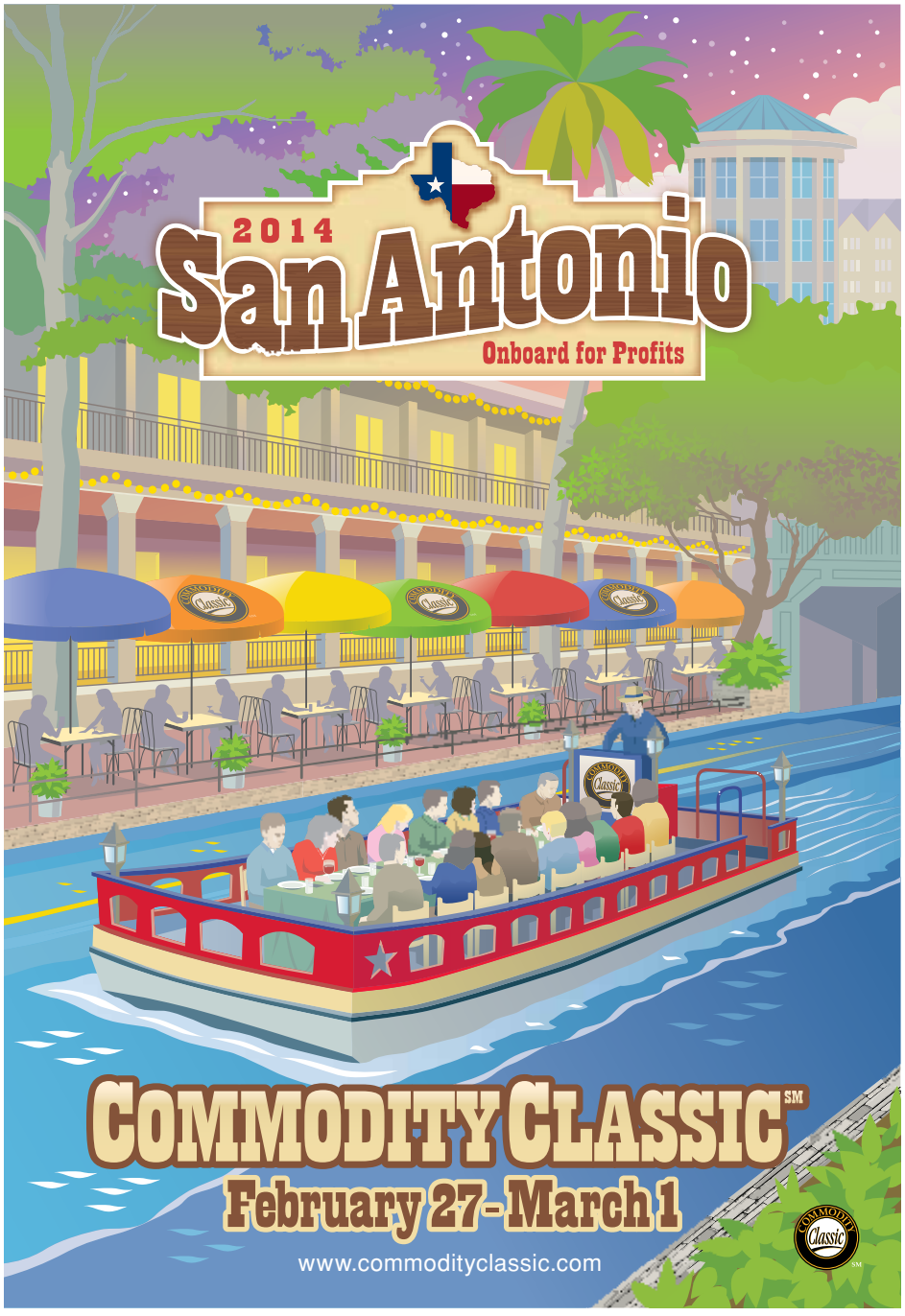
February 18, 2014, Holiday Inn, Fargo, N.D.

SPECIAL GUEST SPEAKERS INCLUDE

- **PETER ZEIHAN** -- An internationally known economist, geopolitical strategist and forecaster, Peter Zeihan combines topography, economics, demographics, history and culture to craft the future.
- **DREW LERNER** -- As President and Senior Agricultural Meteorologist of World Weather, Inc., Drew Lerner has been forecasting international weather for 31 years. He supports the agricultural industry by providing detailed short- and long-range weather predictions for each major crop area in the world.
- **JOHN PHIPPS** -- John Phipps is managing editor and television host of U.S. Farm Report. He will share strategies to not only endure, but also to prosper from an unpredictable agriculture future by understanding which risks are worth worry.

What is the Big Difference?

The difference between the North Dakota Soybean Council (Council) and the North Dakota Soybean Growers Association (Association) is a common question. The Council and the Association are two different organizations with one focus: to ensure the success of North Dakota soybean farmers.



Both groups serve this purpose in different ways. The Council collects and invests soybean checkoff dollars in areas such as production research, producer education, and programs designed to increase demand and expand markets for soybeans and soy products.

The Association is a statewide, member-driven organization that focuses on state and national policy issues which, by law, the checkoff cannot do. The association conducts legislative activities in Bismarck, N.D., and Washington, D.C., to improve the profitability of its members and the entire soybean industry.

Paying the checkoff does not make one a member of the North Dakota Soybean Growers Association and the American Soybean Association.

For more information about the North Dakota Soybean Council, log on to ndsoybean.org. For more information about the North Dakota Soybean Growers Association, visit ndsoygrowers.com.

MEET WITH SUCCESS

Commodity Classic is where America's farmers meet with success. Commodity Classic is the once-a-year, can't-miss event for America's soybean farmers. You'll see the latest innovations first-hand. Hear game-changing ideas from the people who created them. Meet growers and Ag leaders from across the nation. Talk one-on-one with top agribusiness representatives at the trade show. If you're passionate about agriculture, you need to be here because Commodity Classic is all about your success.

Funded by the **North Dakota** soybean checkoff.

Not All Iron Fertilizers Are the Same

Iron deficiency chlorosis (IDC) is a common nutrient deficiency in North Dakota soybeans. IDC yield losses generally range from 20 to 60 percent, depending on the IDC severity, but in some instances, the IDC is so severe that it can kill the plant.

Variety selection remains the best IDC management strategy. However, in-furrow applications of FeEDDHA at planting can also help to reduce IDC in soybeans. FeEDDHA is the iron chelate fertilizer that is the most effective soil-applied fertilizer to manage IDC common to high pH, calcareous soils.

Most FeEDDHA fertilizers available in the U.S. market today contain 6 percent total iron, but FeEDDHA sources can differ in quality and effectiveness. Only one isomer of FeEDDHA is the "good" isomer, the ortho-ortho isomer; the rest is mostly "junk" iron that quickly precipitates into the soil. Commercial products vary widely in the amount of that 6 percent that is found as this "good" isomer. The higher the percentage of iron chelated to the ortho-ortho FeEDDHA isomer, the more effective the IDC control is. Figures 1 and 2 show pictures of soybeans suffer-

FIGURE 1. SOYBEANS SUFFERING FROM IDC IN A GREENHOUSE EXPERIMENT. THE CONTROL TREATMENT ON THE LEFT HAD NO FEEDDHA APPLIED. THE MIDDLE POTS WERE TREATED WITH 10 MG OF FEEDDHA AND SIMULATED A FIELD RATE OF APPROXIMATELY 1 LB. PER ACRE. THE POTS ON THE RIGHT WERE TREATED WITH 20 MG OF FEEDDHA AND SIMULATED A FIELD RATE OF APPROXIMATELY 2 LB. PER ACRE. APPROXIMATELY 42 PERCENT OF THE IRON IN THIS FEEDDHA FERTILIZER WAS CHELATED TO THE ORTHO-ORTHO FEEDDHA ISOMER.

FIGURE 2. SOYBEANS SUFFERING FROM IDC IN A GREENHOUSE EXPERIMENT. THE CONTROL TREATMENT ON THE LEFT HAD NO FEEDDHA APPLIED. THE MIDDLE POTS WERE TREATED WITH 10 MG OF FEEDDHA AND SIMULATED A FIELD RATE OF APPROXIMATELY 1 LB. PER ACRE. THE POTS ON THE RIGHT WERE TREATED WITH 20 MG OF FEEDDHA AND SIMULATED A FIELD RATE OF APPROXIMATELY 2 LB. PER ACRE. APPROXIMATELY 80 PERCENT OF THE IRON IN THIS FEEDDHA FERTILIZER WAS CHELATED TO THE ORTHO-ORTHO FEEDDHA ISOMER.

FIGURE 3. THREE SOIL EXTRACTS FROM SAMPLES TREATED WITH DIFFERENT FEEDDHA PRODUCTS. THE PRODUCT IN THE MIDDLE HAD LESS SOIL-STABLE FE THAN THE OTHER TWO PRODUCTS THAT WERE TESTED.

ing from IDC that were treated with FeEDDHA fertilizers that had different concentrations of ortho-ortho FeEDDHA. Two different FeEDDHA rates, 10 and 20 mg, were applied to the pots. These rates simulated field rates of approximately 1 and 2 lb. per acre. It is easy to see that the poor-quality FeEDDHA product (Figure 1) did not correct the chlorosis as well as a higher-quality FeEDDHA product (Figure 2).

The best FeEDDHA products on the market contain at least 80 percent of the iron as ortho-ortho FeEDDHA (80 percent of 6 percent Fe = 4.8 percent Fe), as shown in Figure 2. There is a chemical test specific for the ortho-ortho isomer, but no lab in the U.S. offers this test. NDSU research developed a simple test as an alternative. The iron fertilizer in question is dissolved in water, applied to a calcareous soil and incubated for a week. Almost all of the "good" ortho-ortho stays in the solution, and almost all the "junk" iron precipitates from the solution. What remains soluble after a week is called the "soil-stable Fe." Differences in quality are easily seen (Figure 3). Because almost all the FeEDDHA is manufactured overseas, NDSU is making soil-stable Fe tests available to the local fertilizer industry in order to help companies select the best FeEDDHA sources to sell to North Dakota farmers.

The use of FeEDDHA to combat IDC needs to be taken in perspective, however. Selection of a resistant variety will always be the most important control measure. However, if variety selection is not enough to prevent chlorosis, NDSU recommends 2 to 3 lb/A of a high-quality FeEDDHA product, dissolved in water and applied in-furrow at planting. The wider the row spacing, the more effective the FeEDDHA will be.

Contributed by Sarah Lovas and R. Jay Goos, Soil Science Dept., NDSU.

"Like" Us… on Facebook

The North Dakota Soybean Council has a Facebook page! Please take a moment and "Like" us on Facebook.

www.facebook.com/NDSoybeanCouncil

The North Dakota Soybean Council Facebook page features the most up-to-date/real-time news and current events of the North Dakota Soybean Council, along with great photos, useful articles and insightful posts.

Those who do not have a Facebook account can still see our Facebook news posts by visiting the website: www.ndsoybean.org. On the front page of the website, in the lower-left corner, our Facebook posts can be viewed and read by everyone, even individuals who are not on Facebook.

Stay up to date with the North Dakota Soybean Council through Facebook, and recommend our Facebook page to all your friends!

Karolyn Zurn Brings Story of Ag to North Dakota Consumers with CommonGround

Family farms in North Dakota, and across America, have helped build the safest and most affordable food supply in the world. Women from these farms play a vital role in running the farm and growing the nation's food supply.

Therefore, the North Dakota Soybean Council continues to support the CommonGround movement in North Dakota.

CommonGround is a grassroots movement to foster conversation among women — on farms and in cities — about the origin of our food. The National Corn Growers Association, the United Soybean Board and their state affiliates developed CommonGround to give farm women the opportunity to engage with consumers through a wide range of activities.

Local soybean and corn farmer Karolyn Zurn has been the volunteer-coordinator of North Dakota's CommonGround for the past two years. "The goal of CommonGround is to foster conversations about the food we grow and eat," said Zurn, a farmer from Callaway, Minn. "We want real dialogue between women from America's farms and women making food choices in our cities and towns."

COMMONGROUND NORTH DAKOTA VOLUNTEER-COORDINATOR KAROLYN ZURN

Zurn is a California girl, but life took an unexpected turn when she married a farmer in 1972. Fast forward a few years, and Zurn is now a retired farm wife, mother to five and grandmother to 10.

For Zurn, it is important to dedicate her time to ag advocacy, and she definitely does not have any trouble staying busy. Currently, she serves as chairwoman of the Northern Crops Council, along with serving on the boards of Minnesota Soybean, Minnesota Ag in the Classroom and Minnesota Agri-Women. When she is not "agvocating," Zurn enjoys visiting with her grandchildren, motorcycle riding and making soybean candles.

Zurn was excited to start the CommonGround movement for North Dakota because she lives

IN MAY, KAROLYN AND HER HUSBAND, BILL, HOSTED THIRD- AND FOURTH-GRADERS ON THEIR FARM. KAROLYN TAUGHT THE CHILDREN HOW THEIR FOOD IS RAISED AND DISCUSSED THE COMMONGROUND PROGRAM WITH TEACHERS AND PARENTS.

IN OCTOBER 2012, ZURN AND THE SORORITY SISTERS OF SIGMA ALPHA HOSTED A CORN MAZE EVENT DURING NDSU'S HARVEST BOWL WEEKEND. KIDS AND PARENTS ENJOYED THE CORN MAZE, A PUMPKIN PATCH AND COLORING ACTIVITIES WHILE LEARNING ABOUT THE TRUE STORY OF AGRICULTURE – THAT THANKS TO MODERN AMERICAN FARMERS, U.S. FAMILIES ENJOY THE SAFEST, HEALTHIEST AND MOST AFFORDABLE FOOD CHOICES IN THE WORLD.

so close to the border and enjoys telling others about her farm and family.

With the help of other volunteer farm women and the NDSU sorority sisters of Sigma Alpha, Zurn and her team organize events and programs in North Dakota throughout the year. These events are used to dispel myths about modern agriculture and to build trust in farming communities and farm families.

"All of my children and grandchildren eat the food purchased in our local grocery stores," said Zurn. "The food I buy at the market is healthy and safe, and I never pay more because of marketing scares."

KAROLYN ZURN TALKS TO A MOTHER AND HER CHILD AT THE RED RIVER VALLEY FAIR IN WEST FARGO ON JULY 13TH ABOUT COMMONGROUND AT THE NORTH DAKOTA SOYBEAN COUNCIL'S EXHIBIT. BEHIND ZURN IS A "SOYCOW" ON DISPLAY. A "SOYCOW" IS A PROCESSING SYSTEM THAT CAN GRIND AND COOK WHOLE SOYBEANS INTO SOYMILK.

For more information on CommonGround North Dakota, check out the blog at www.commongroundnorthdakota.wordpress.com, or find the organization on Facebook at www.facebook.com/CommonGroundNorthDakota. CommonGround is funded through the soybean checkoff.

Throw Soyfoods into Your Fall Lineup

September is the time for big plays and winning combinations. One combination that is a winner year round is soyfoods and men's health. September is Prostate Cancer Awareness month, and the Soyfoods Association of North America (SANA) believes it is a perfect time to remind Americans of the facts about men's health and soyfoods.

According to the American Cancer Society, one in six men will get prostate cancer during his lifetime, and one in 36 will die of this disease. The good news is that there are safe, low-cost preventative measures that can be taken to help protect against this cancer. According to Omar Kucuk, M.D., of the Emory University Winship Cancer Institute, consuming a diet that is more plant based is believed to play a large role in decreasing the risk of prostate cancer. In addition to Dr. Kucuk's research, consensus is mounting among researchers that active ingredients in soybeans, known as isoflavones, help prevent prostate cancer.

Often, when men think about prostate cancer, they also worry about their hormones and reproductive health. Recently, Dr. Jill Hamilton-Reeves completed a large review of the available research about the effect of soy on testosterone and other reproductive hormones. Hamilton-Reeves examined 32 studies and concluded that neither soy protein nor soy isoflavones affect reproductive hormone concentrations in men.

In addition to prostate cancer, men should also be protecting themselves against heart disease. In 1999, the FDA authorized a health claim for soy protein's role in heart health, and the research continues to show that soyfoods, especially the protein content, modestly lowers LDL (bad) cholesterol while keeping HDL (good) cholesterol intact. Adding soyfoods to a low-cholesterol, low saturated-fat diet is a tasty and smart choice.

With the wide variety of soyfoods available today, there are many great options for adding soy to any gameday meal. Soy can be used in dips, chips, burgers, veggie dogs and chili—all great for tailgating. Substituting soyfoods for popular favorites will provide your guests a heart-smart punch of protein energy. That change is a winning play!

Three-Bean Chili

- 1 ½ cups chopped onion
- 2 tsp soybean oil
- 1 can (15 ounce) soybeans
- 1 can (15 ounce) black soybeans
- 1 can (15 ounce) red beans
- 2 cans (14.5 ounce) diced tomatoes
- 1 can (15 ounce) tomato sauce
- 1 tsp black pepper
- 2 tsp ground cumin
- 2 Tbs minced garlic
- 1 Tbs chili powder

Heat oil in a large pot over medium-high heat. Sauté onions until soft. Drain and rinse three beans, and add to onions. Stir in all remaining ingredients. Bring to a boil, and then reduce heat to low. Simmer for 30 to 45 minutes.

Yield: 8 cups (6 servings). Serving size: 1⅓ cups. Per serving: 410 calories, 12 g fat, 1.5 g sat fat, 31 g protein, 45 g carbohydrate, 1170 mg sodium and 0 mg cholesterol.

For more soyfood recipes and additional information, contact the North Dakota Soybean Council at 1-888-469-6409 or by email at swolf@ndsoybean.org.

ASA ANNOUNCES LEADERSHIP AT ITS BEST PARTICIPANTS

ASA is pleased to announce the 2013-2104 participants in its Leadership At Its Best program, co-sponsored with Syngenta. This year, ASA recognized participants from 16 states and began the 22nd year of the leadership program in early August.

The Leadership At Its Best program is the distinguished and specialized training curriculum that develops state and national leaders who can effectively address Congress and the media on policy issues that impact soybean growers.

This year's Leadership At Its Best class includes Craig Olson from Colfax, N.D.; Mike Skaug from Beltrami, Minn.; and John Horter from Andover, S.D.

BRAZIL WEATHER WATCH

About the same time that soybean market analysts are watching yield reports here in the U.S., they will be watching the weather forecasts for South American soybean-growing areas. Drew Lerner, Senior Ag Meteorologist with World Weather, Inc., is watching the El Nino/La Nina oscillation to see what happens there because it has been very wet in southern Brazil in recent months. Lerner says the pattern is anomalous and that nature is going to want to swing the other direction at some point. "The drier bias could happen in their spring season, or it could happen later in the summer," says Lerner. "If we get another El Nino or La Nina to develop, it's going to sway that pendulum one way or the other, so we'll know a lot more a little bit later." Argentina has had a dryness problem in the west, but Lerner expects a more normal weather pattern in September and October.

EPA FINALIZES RFS

The EPA has finalized the 2013 percentage standards for four fuel categories that are part of the Renewable Fuel Standard program. The final overall volumes and standards require more than 16.5 billion gallons of renewable fuels to be blended into the US fuel supply, a 9.74 percent blend. Specifically, the standard requires 1.28 billion gallons of biomass-based diesel, 2.75 billion gallons of advanced biofuels, and six billion gallons of cellulosic biofuels. According to the National Biodiesel Board, the EPA's decision to maintain a strong 2013 Advanced Biofuel requirement under the Renewable Fuel Standard, will help consumers, create jobs and reduce emissions. The National Biodiesel Board notes biodiesel is the first and only advanced biofuel under the program to reach commercial-scale production nationwide - and the first to break one-billion gallons in annual volume.

ASA COMMENTS TO APHIS

The American Soybean Association has submitted comments regarding the USDA Animal and Plant Health Inspection Service's plan to prepare additional environmental impact statements for soybean, corn and cotton crops designed to tolerate the 2,4-D and dicamba herbicides. ASA opposes the decision, saying the studies would place additional and unnecessary barriers between farmers and the tools they need to remain sustainable and competitive while feeding a growing global population.

EU BIODIESEL USE TO BE LIMITED

European Union efforts to limit the use of crop-based biofuels have won parliamentary backing. The vote in the European Parliament's environment committee will be followed by a plenary vote that is expected in September. The votes will also require endorsement by EU member states which are deeply divided on the issue. Biofuel producers and their suppliers are furious at the sudden turn in policy. The say the proposed limit of 5.5 percent of total transport fuel use is far too low and will lead to plant closures and job losses. In 2008, an EU target was introduced to get 10 percent of the transport fuel from renewable sources by 2020.

U.S. SOY RELIES ON QUALITY AND INFRASTRUCTURE TO COMBAT BRAZIL'S BUMPER SOY CROP

The U.S. Department of Agriculture (USDA) estimates that Brazil's successful growing season puts that country neck and neck with the U.S. for soybean production. The USDA estimates that Brazil will harvest more than 3.012 billion bushels of soybeans this year, compared to nearly 3.015 billion bushels harvested in the U.S. last fall.

U.S. soybean quality and the U.S. transportation infrastructure offer a competitive advantage over Brazil. U.S. soybean farmers enjoy the overall reliability and efficiency of the U.S. transportation system while Brazil continues to struggle with clogged ports and roads. According to the Bloomberg news service, soybean vessels have waited as long as 39 days to load at the Brazil's main port of Santos.

Managing Risk Starts with Identifying Where Risks Are

"One risk is in production; another is in pricing; and another is the input availability and cost," says North Dakota State University Extension Farm Management Specialist Dwight Aakre. "They can all have a significant impact on the bottom line for the producer from one year to the next, and if you're going to manage risk, I think you've got to deal with all of them."

Aakre recommends starting with the easiest risks to deal with and then moving from there. "It may not be widespread, but I think we have seen a degree of too much of one crop following each other, in other words, mono-cropping. Soybeans have been one of those crops in recent years in parts of the state, so I think one needs to take a look at the rotation and make sure it's working and isn't causing increased weed, insect or disease problems."

If growers can diversify their rotation to reduce mono-cropping, Aakre says it will potentially lower their costs and potentially increase yields, therefore increasing their income. He also says farmers need to look at their capacity for handling the acres they have. "And here's a case where diversification can help you handle more acres because you spread the workload out, you spread the harvest and planting windows out over a longer period of time." Diversification allows better utilization of machinery and labor capacity.

Crop insurance is also a major tool in managing risk, but Aakre says producers need to keep evaluating the insurance options and looking for the product that will do the best job for them. More and more, we're seeing producers elect revenue protection as opposed to yield or revenue with harvest price exclusion.

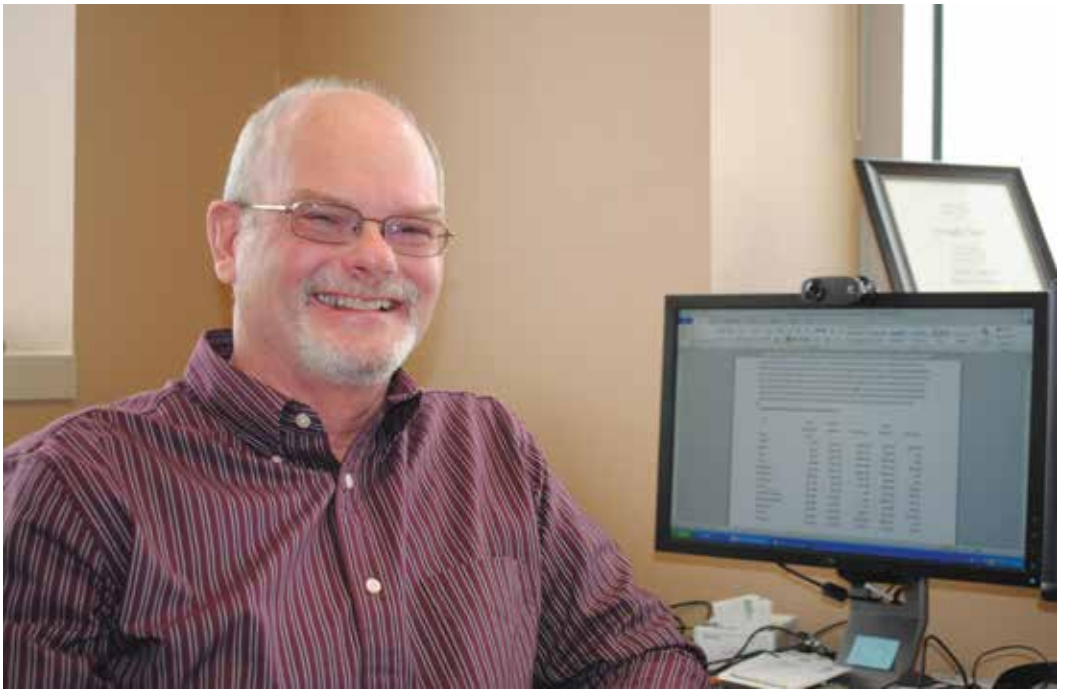
According to Aakre, each type of insurance policy has a different cost and potentially can pay off somewhat differently. "Producers need to look at that and follow the changes because, every year, there are some minor changes in the crop insurance program."

Pricing strategies are extremely important, and what worked last year probably won't work this year. NDSU Extension Crops Marketing Economist Frayne Olson thinks there has to be a recognition that we are in a different environment. "We're not going to have another crop failure like last year, and I think the $2 price decline in late July was a wakeup call for a lot of farmers to pay a lot more attention to what's going on."

PRICING STRATEGIES ARE EXTREMELY IMPORTANT, SAYS FRAYNE OLSON, EXTENSION CROPS MARKETING ECONOMIST, NDSU.

From a risk management standpoint, Olson says there are two things growers need to be thinking about: the first one is what causes the risk, which he defines as the variability of net income. The second one is what happens if there is an adverse event, if something happens where you take some losses. "We've always had yield volatility. We've always had uncertainty with weather, and production," says Olson. "We've got a very good crop insurance program to help us manage those kinds of risks. We also have those things that are kind of bundled into the financial risk category, such as uncertainty, and changes in volatility in interest rates and lending practices."

The area Olson focuses on that has also dramatically increased the last



IDENTIFY YOUR RISKS -- NDSU EXTENSION FARM MANAGEMENT SPECIALIST DWIGHT AAKRE

couple years has been the volatility in prices. "In the old days, a 10-cent move in the corn market was a big thing. In today's world, a 10-cent move in the corn market is kind of a slow day," says Olson. "So we're looking at a completely different level of volatility and not only in a day-to-day sense, but also in a year-to-year sense."

As Olson looks into his crystal ball going forward, he thinks we'll see volatility in both areas of risk management. He expects movement from very high prices in a general sense to very low prices in a general sense. "We just don't have the inventories either domestically or worldwide to compensate for big production problems," says Olson. "So, if we have a good production year, I think we're going to be looking at relatively low prices, and farmers will struggle a bit to find profitable price levels and pricing opportunities, followed by a sudden spike in prices where there's going to be all kinds of profits. And that's a much different environment for managing risk than we've seen in the past."

According to Olson, this type of risk is new water for a lot of people, and it's going to take some time to adjust. How to respond becomes a bit more problematic. From a pure marketing standpoint, Olson thinks one of the things that farmers will want to learn more about is how to price multiple years' worth of production, to take advantage of those years when there are very high prices and to work through years with low prices. Futures contracts and cash marketing tools are some ways to manage risk.

"Another key is managing the financial part of it," says Olson. "To have some financial reserves built up, to not only be able to refinance losses using land and machinery assets, but also to think about managing inventories of grain which can get to be very expensive, as well as working capital. It's not only cash in the bank, but also that inventory you can turn over very quickly if you need additional cash flow."

Another source of risk Olson thinks a lot of farmers haven't thought about yet is crop insurance. It's a very good tool which was originally designed to help farmers manage yield volatility. "We now have revenue policies that have become very popular, but they're based off of the futures market," says Olson. "They work very well and are a good buffer for losses if we have high commodity prices. But if we go into a year, or a couple years in a row where we have much lower commodity prices, suddenly those revenue products don't have the type of financial support that we normally think of and have become accustomed to the last couple of years."

Even with yield-only policies, price elections for any kind of loss are based on the futures market price, so if we go into a timeframe where we have much lower commodity prices, from a financial standpoint, Olson says the amount of support and coverage from crop insurance are also going to be lower.

Given the current, very low interest rates, Olson thinks farmers would be wise to consider fixed interest rates rather than variable interest rates. To lock something in on a fixed rate, even though you'll pay a little bit more interest, is a very smart move when it comes to volatility, according to Olson who expects higher interest rates as we move forward in time.

Probably the other big risk that producers face is the cost and availability of land. "There's been an awful lot of increase in land values and land rents," says Aakre. "And it's because we've had

Continued on Next Page

very good years; the crops we've been growing on the land have been profitable." If that changes, if prices drop or you have back-to-back poor years, Aakre says the ability to pay rent or to buy land goes down.

Aakre says growers need to take a look at their rental agreements. "Do they have any flexibility in them, and does the flexibility go both ways? Landowners like to see it go up, but there needs to be something in it for the operator. Share rents can be another option, particularly for the under-capitalized farm operator."

As to why we've seen so much planting of beans-on-beans, Aakre thinks it's because the entire state was primarily small grains and producers could switch to soybeans and pretty much use the same equipment, so that was an easy switch. "And then where soybeans have turned out to be readily adaptable, which turned out to be probably at least half the state," Aakre says, "they were more profitable. We had some bad years for wheat diseases; consequently; wheat yields were down. And weather conditions that caused the problems in wheat were beneficial to soybeans."

Wheat production and profitability were going downward while soybeans were going up, so producers decided to take a chance and plant more soybeans. The lower input costs for soybeans were another factor.

Aakre thinks corn has been a factor behind the increased land rents. "There's a greater amount of revenue produced there (corn) to the extent that, as land rents get bid up, some producers found that the only way there was going to be enough margin to pay that kind of rent was to grow corn. So, you ended up with increased corn acres, and you had to come back with corn-on-corn."

Aakre doesn't think too many producers are bidding up land rents foolishly, but there's pressure to expand given the machine capacity. "Most producers have excess capacity today because of the good years we've had," according to Aakre. "So it's not that difficult to take on a little bit more land. Probably the only things that hold them back would be cash flow and labor supply, and the increased machinery capacity, to some extent, has solved the labor supply."

With the prices and insurance levels where they have been, the cash flow has been readily available, which Aakre says has made bidding up land rents a low-risk gamble for a lot of producers.

Given the higher input costs and the projection of lower commodity prices, Aakre sees increased risk from two sides. "One, just because revenues go down doesn't mean that costs have to come down, at least right away. If revenues stay down for an extended period of time, many of the cost of production items will decline, but I think they'll be slow to decline, and they may not decline enough to hold margins steady."

Another aspect is from the safety-net perspective. Aakre says farm policy appears headed toward relying on crop insurance as the primary safety net. "Crop insurance prices (guarantees) are now set in the marketplace, and we've enjoyed the luxury the last five years of rising prices, and generally high during the month of February, and so we've had very high insurance prices, therefore a very good safety net."

If we get to an extended period, two or more years, of falling prices, Aakre says that safety net is simply going to be inadequate for a lot of producers. With lower prices, even if you produce the crop, there's no price protection in the safety net when the market is falling.

Crop insurance not only protects production, it also protects price. As both a market analyst and affiliated agent, Randy Martinson, at Progressive Ag, helps growers manage their risk. Once the prices are set in February, producers can figure out roughly what their yields will be, and they know what they're going to take for coverage. Martinson explains, "The best way to figure it out is you know how many acres you're going to plant; you figure out your guaranteed bushels; then you start doing pricing against that. Once the guarantees are known, you can sell up to what you know the insurance will cover in case you have a disaster or a production shortfall."

Anything you do above that, Martinson says, it's nice to use put options or some other mechanism that isn't as cash sensitive because, if you don't have the production, you don't have product to deliver, and you will be stuck buying it on the market to deliver against what could be higher prices.

The spring crop insurance prices have been very good, especially the last two years. Coupled with good yields, those prices have allowed producers to lock in guaranteed profits. "We've been able to prove the yields up," says Martinson, "especially with some other tools the Risk Management Agency has come up with, such as personal T-yields."

Martinson says things can always change. "What's been nice is we've had stocks-reducing years the last couple years, so prices have remained high. This year, it looks like that could change. A two billion bushel carryout in corn means that prices will have to drift a little bit."

That carryout means producers might not be guaranteed profits from the crop insurance program going into next year. According to Martinson, "At least it's going to help take care of the majority of the costs, which is the primary reason for crop insurance."

Martinson adds, however, that if prices continue to fall, your bushels are increased because of the dollar value that you're guaranteed. "It also helps on the revenue side which is what most producers, and most bankers, like us to protect. Anybody getting an operating loan, if they don't have enough backing, the crop insurance is definitely something you have to look at."

Crop insurance does more than help repay the loan. "If a disaster happens," says Martinson, "not only does it help you get through that year, but if there's some sort of government assistance program, it's usually based off of what you get from crop insurance."

Changes Needed for Crop Insurance

While the federal crop insurance program has become widely accepted by farmers, a North Dakota crop insurance agent sees ways to improve it. Doug Johnson, an agent and co-owner of TCI Insurance, with offices in Wimbledon, Enderlin and West Fargo, says that because the crop insurance program is a public/private relationship, the government loses touch that it is an insurance policy. "They treat it like a farm program," says Johnson. "The SURE program, for instance, I've never actually seen anything documented for it. There's papers out there but is there actually an official set of rules for the SURE program? But if you buy an insurance policy, you're buying a known for an unknown, and if an unknown happens, you know what you have, and that's what crop insurance is."

What Johnson really likes about crop insurance compared to other options, such as the ACRE program, counter-cyclical payments, and ad hoc disaster programs is its rapid response. "If we have a hailstorm today in Sykeston, he (the farmer) can have a check in two weeks. If he has a hail loss and it goes to production, he'll be paid most likely before the end of October."

"60% OF OUR RATE LOAD IS BASED ON PROJECTED LOSSES FOR PREVENTED PLANTING. SO, A $50 PREMIUM ON AN OPTION UNIT FOR CORN SHOULD IMMEDIATELY BE REDUCED TO $20, IF WE GET RID OF PP."

DOUG JOHNSON
TCI INSURANCE.

While the crop insurance program is the preferred option, Johnson says it is not perfect but thinks it could get better. He likes the private delivery. "The Farm Service Agency and Risk Management Agency systems don't talk, they're not compatible." Johnson thinks the crop insurance industry should administer the program and then send a memo to FSA which could then just deliver the check.

Despite pledges to go to single reporting, Johnson says farmers are still dual reporting, to their crop insurance agent and to FSA. "When we look at risk management and the farm bills as they're drafted today, if direct payments disappear and the ACRE payment disappears," Johnson says, "you wonder why you're reporting acreages to this agency-what are they using them for?" If federally subsidized crop insurance disappears, Johnson thinks we certainly cannot continue without insuring these crops. If there's a need for it, there will be a private product.

Johnson likes the shallow loss concept that has been proposed to take the place of an ACRE-type payment. "At the minimum, crop insurance is a 25 percent deductible. And it's probably more than that because we use historical averages to create a guarantee. Some yields are sometimes 10, 12 or 15 years old, so that deductible may be more like 30 or 35 percent. Policies don't pay until we get a 26 percent loss."

While a lot of time is spent arguing about the crop insurance premium subsidy, Johnson does not think it's real money. "Direct payments are a subsidy-you get a check. With the SNAP program, there are actual funds that are advanced on the card. In crop insurance, no one receives the subsidy portion. The 70 percent level and the 65 percent level are subsidized at 59 percent, so the farmer pays 41 percent of the premium. But that 59 percent doesn't go anywhere. It just says on the bottom of the policy 'your policy has been subsidized.' It should be called a discount."

Johnson also points out that before the Risk Management Agency paid out an estimated $17 billion for losses in 2012, $6-$8 billion was absorbed by private reinsurance and AIP's, or crop insurance companies. "Plus," asks Johnson, "how much premium has been collected since the mid-90s; are we plus or are we minus? That's where I think Sen. Dorgan is appropriate where he told me crop insurance is solvent. It's not costing anybody any money."

Asked about his ideas for solving the problems associated with prevented planting, Johnson had a quick response. "Just get rid of it. I've been doing this since 1999 and we really haven't moved the peg on prevented plant, and it's gotten much more emotional. Johnson says he has been told that 60 percent of our rate load is based on projected losses for prevented planting. "So if a grower's premium is $50 on an option unit of corn, and if 60 percent of that is attributed to prevent plant, and we eliminated prevent plant, we should immediately be able to re-rate the

policy, reduce it by 60 percent, and now that acre of corn would cost $20 rather than $50."

The costs of the crop insurance program would also come down without PP, according to Johnson. The administration and operating subsidy that goes to companies, the commission that's paid to agents, the adjustment expenses paid for losses would all come down, along with compliance audits and expenses, and Johnson thinks the majority of arbitration, litigation and mediation has to be related to PP. To get rid of PP, Johnson says that it would have to be done on a state-by-state basis, because the rates vary by county. Johnson thinks another benefit would be to take the money saved by reducing crop insurance costs and use it to manage water.

Howard Olson, Senior Vice-President of Financial Services with AgCountry Farm Credit Services, thinks everyone agrees there could be improvements in prevented planting coverage so it is not as ambiguous. However, Olson does not think eliminating the coverage is the right option. "I think the Towner County or Cavalier County farmer that only got 50 percent of his acres planted needs some insurance coverage to help him with the expenses he's already incurred on that land," says Olson, who also disagrees with those who say the PP coverage provides too much incentive to claim prevented plant. "I think most farmers would tell you they'd rather have the crop," says Olson. "If there's too much incentive to PP, then reduce the PP coverage to perhaps 40 or 50 percent of the liability instead of 60 percent."

Another change Olson recommends is to remove the ambiguity from the Special Provisions and create a clearly defined criteria for what qualifies as PP. For example, if you've planted it in two of the last five years and you can't get it planted this year because of a new covered peril, it should qualify for a payment. "We shouldn't have to ask the companies to define "normally available for planting" or have the adjusters determine if it is "normally available for planting," according to Olson.

Johnson thinks limiting crop insurance premium subsidies according to a farmer's adjusted gross income, or size of operation, is a mistake. "Insurance really depends on spread of risk, and the crop insurance program was not doing so good back in the early 1990s because we didn't have a lot of participation," says Johnson. "Now we have fantastic participation. These 30, 40, 50,000-acre farmers are paying a lot of premium that's covering losses of these 200-, 300-, and 400-acre farmers." He says if farmers start absorbing a 15 percent jump in their premium, their coverage levels would decrease.

The Senate farm bill reduces the farmer premium subsidy for farmers that have an Adjusted Gross Income over $750,000. Olson agrees there should not be a subsidy limit because of a farmer's income. "A basic premise of insurance is the pool of large numbers," says Olson. "The more people that participate in an insurance pool, the better the loss results and the lower the premium for everyone. Means testing will start to eliminate some people from the pool and will eventually increase the loss experience and drive up the premiums."

Since it appears that crop insurance will be about the only safety net in future farm programs, Olson says it's important for farmers to watch what happens with the farm bill and specifically with crop insurance. "They need to be active with their grower groups like the Soybean Growers to voice their opinions and make sure they're heard in Washington for this farm bill and in the future." Olson says there's too much volatility and too much risk in farming today to be able to farm without a good crop insurance program.

AT THE NORTHERN SOYBEAN EXPO, THERE WAS A MEMBERSHIP DRAWING FOR $500. THE DRAWING WINNER, ED ASKEGARD, FARGO (CENTER) IS WITH ED ERICKSON, JR., (RIGHT) SPONSOR OF THE DRAWING AND HARVEY MORKEN, MEMBERSHIP CHAIR (LEFT).

Farm Bill Flurry

With September 30 fast approaching, it looks like the farm bill will, once again, come down to the wire.

House Majority Leader Eric Cantor's nutrition-bill working group has agreed on a nutrition bill that would cut spending by $40 billion over 10 years. House Agriculture Committee Chairman Frank Lucas says the bill will be brought up in September but is not predicting if it'll get the necessary 218 votes to pass. Lucas also suggests agreement for a final conference report on the nutrition title would probably require intervention from on high.

Senate Agriculture Committee Chair Debbie Stabenow says the House proposal to double the cuts in food stamps makes a farm bill more difficult and preempts House-Senate negotiations during the August recess. With the farm bill due to expire on September 30 and only 9 congressional days scheduled in September, Stabenow calls the situation a "ticking time bomb."

House Agriculture Committee Ranking Member Collin Peterson agrees. "They (House Republicans) want to pass this even though the Senate is not going to, in any way, consider this; the President would never sign it. All this is gonna do is

"THERE IS STILL MUCH WORK TO BE DONE," SAID DANNY MURPHY, ASA PRESIDENT.

alienate people on both sides of the aisle and make it much more difficult to pass a (farm) bill."

Stabenow also has concerns about getting another extension for the 2008 farm bill. She joined Arizona Senator Jeff Flake in voicing opposition to any continuation of direct payments in the farm bill conference.

Senate Majority Leader Harry Reid and Minority Leader Mitch McConnell have named a dozen senators who will serve on the farm-bill conference committee. They include Minnesota Senator Amy Klobuchar and North Dakota Senator John Hoeven.

On July 11, in a party-line vote of 216-208, the House passed a stripped-down version of the 2013 Farm Bill, containing only farm programs; there is no nutrition title. The House farm bill also eliminates the 1949 permanent farm law.

Minnesota Congressman Collin Peterson is the Ranking Member on the House Agriculture Committee. He thinks House Speaker John Boehner really wants to get the farm bill done by the end of September. "He's (Boehner) said he doesn't want to get this caught up in the government shutdown/end of the (fiscal) year drama that's coming for sure."

Peterson blames Majority Leader Eric Cantor for the cumbersome farm-bill process in the House. "He's listening to some of these right-wing groups, like the Heritage Foundation, that want to eliminate all farm programs and crop insurance."

The American Soybean Association was initially relieved that we will finally see a conference on the farm bill. However, the House's approval of a partial bill will mean nothing if we can't get a bill back from conference that both chambers will pass. "In that sense, there is still much work to be done," said ASA President Danny Murphy.

ASA is also opposed to replacing the permanent law with whatever legislation may result from this process.

In a late July letter to leaders of the House and Senate Agriculture Committees, the American Soybean Association, the National Corn Growers Association (NCGA), and the U.S. Canola Association (USCA) made it clear that their position in favor of more market-oriented farm policies would not change as both chambers prepare the respective bills for a potential conference in September and that the organizations would oppose any bill containing a risk-manage-

SENATE AG COMMITTEE CHAIR DEBBIE STABENOW.

ment program that would tie planted acres to fixed reference or target prices.

In the letter, ASA, NCGA and USCA made it clear they would oppose any program that would distort planting decisions in years when prices fall below support levels, resulting in surplus production of certain commodities, reduced acreage for smaller crops, depressed domestic and international market prices, and potential World Trade Organization (WTO) actions against the U.S.

ASA President Danny Murphy said soybean farmers simply cannot afford a farm bill containing a risk-management program that, through its own design, could actually create more risk for growers by distorting market signals. "We can't let the need to pass a farm bill be an excuse for policies that place farmers at greater risk," said Murphy.

The House version of the farm bill raises target prices for major commodities and ties them to planted acres, rather than base acres, for those particular crops. The Senate bill sets reference prices at 55 percent of a rolling Olympic average of market prices, and ties payments to base acres, not to planted acres.

USSEC Urges the USDA to Develop a Farm Bill Contingency Plan

The U.S. Soybean Export Council (USSEC) is urging the U.S. Department of Agriculture (USDA) to begin crafting contingency plans to maintain foreign-market development programs in the event Congress fails to agree on a farm bill this year.

Last year, Congress failed to pass a farm bill or extension before Fiscal Year 2013, leaving USDA cooperator groups scrambling to "keep the lights on" in foreign offices during the legislative uncertainty.

"This lack of predictability for export program funding is negatively impacting our ability to plan and implement programs that promote food safety, food security and trade capacity building with our trading partners," said ASA Executive Committee member and USSEC Chairman Randy Mann. "We have asked Secretary Vilsack to be ready to respond with a short-term fix again if a farm bill remains out of reach before October 1."

Wahpeton Firm Explores Soybean Oil in Rubber Belting

WCCO Belting, Inc., Wahpeton, was awarded $25,000 from the North Dakota Agricultural Products Utilization Commission to defray the testing and development costs of newly formulated rubber compounds for belting applications using soy or other bio-oils in place of petroleum-based oil. At least two field trials will be required for testing various compounds to evaluate characteristics for wear, abrasion and UV resistance.

The WCCO request was one of seven projects awarded a total of $376,490 at APUC's quarterly meeting on July 18 in Mandan, N.D. APUC is a program of the North Dakota Department of Commerce which administers grant programs to research and develop new and expanded uses for North Dakota agricultural products. The grants can be used for basic and applied research, marketing and utilization, farm diversification, nature-based agri-tourism, prototypes and technology, and technical assistance.

Some of the other requests that were awarded include the following studies:

Northern Food Grade Soybean Association, Casselton, will receive funding of $35,000 to defray the costs associated with soybean-grower education and outreach through radio, print, digital advertising, social media outposts, websites, video production, trade show booths and media tour.

Renuvix, LLC, Fargo, will receive funding of $91,000 to defray the costs related to obtaining market information and customer contacts for product sampling. This information will be used to accelerate the process of market and customer discovery of a bio-based resin and polymer technology.

Ultra Green Packaging, Inc., Devils Lake, will receive $74,880 to defray the costs to attend trade shows, create booth graphics, re-design its website, design cost of brochures, catalogs and sell sheets, and product samples.

The next APUC board hearing will be held November 21 in Harvey. Applications for the November meeting must be received by October 1. Prototype and Technical Assistance grants must be received by September 1.

APUC is an office within Economic Development and Finance, a division of the North Dakota Department of Commerce. For additional information, please visit www.NDAPUC.com.

ERIC BROTEN
DAZEY, N.D.

TELL US ABOUT YOUR FARM, CROPS RAISED, ETC. We raise corn, soybeans and barley in Barnes and Griggs Counties.

WHY ARE YOU A PART OF THE NDSGA? I feel it is very important for producers to be involved in making policies that regulate our industry, and the NDSGA is a great way to do that.

WHY ARE SOYBEANS A PART OF YOUR CROP MIX? Soybeans work very well in our rotation with corn and barley. They also help spread out the workload in the spring and during harvest.

IF YOU COULD ADD ANY NEW EQUIPMENT OR TECHNOLOGY TO YOUR FARM, WHAT WOULD IT BE? A side-dresser.

WHAT'S THE ONE PIECE OF TECHNOLOGY OR FARM EQUIPMENT THAT YOU WOULDN'T WANT TO BE WITHOUT? The monitors we have in our equipment. They allow us to manage our farm so much easier. They would be hard to lose.

WHAT CHANGES DO YOU EXPECT TO SEE ON YOUR FARM IN THE NEXT 5 TO 10 YEARS? How we put on fertilizer and the efficiency at which we can do it.

HOBBIES? WHAT DO YOU DO FOR FUN? Being outdoors hunting and fishing.

WHAT'S YOUR FAVORITE MEAL/FOOD? Anything from the grill.

ANY VACATION PLANS ON THE SCHEDULE? My wife and I will try and do something with our children after small-grain harvest.

WHAT'S THE BEST PART OF FARMING? WHY DID YOU GET INTO THIS BUSINESS? Growing up on a farm, farming gets into your blood. I can remember riding in the tractor with my dad and grandfather as a kid and thinking it was the best. Now, seeing how excited my kids are to be in the field and to ride in the tractors is my favorite part of farming.

DUSTY LODOEN
WESTHOPE, N.D.

TELL US ABOUT YOUR FARM, CROPS RAISED, ETC. I've been farming for 10 years after working as a loan officer at Farm Credit Services in Minot for six years. I raise barley, wheat, canola, corn, soybeans and sunflowers. I also sell crop insurance for the Artz Agency, an independent agency in Westhope.

HOW LONG HAVE YOU RAISED SOYBEANS? Six years. They've performed well here, northeast of Minot, right on the Canadian border.

HOW LONG HAVE YOU BEEN ON THE NORTH DAKOTA SOYBEAN COUNCIL? I am serving on my first term. I wanted to get involved and learn how it works more than anything.

IF YOU COULD ADD ANY NEW EQUIPMENT OR TECHNOLOGY TO YOUR FARM, WHAT WOULD IT BE? Oh, probably a newer, more precise planter; probably a CCS John Deere 1770 no-till. It's got the center fill; it doesn't have all them boxes. It'd have an automatic shut-off at the end of the field so you wouldn't over-seed.

IS THERE A PIECE OF TECHNOLOGY OR FARM EQUIPMENT THAT YOU WOULDN'T WANT TO BE WITHOUT? Probably my Gates coulter. It makes a good seed bed, and I can adjust the gangs on it to different degrees, and you can go fast-8 or 9 mph, and you can get it as black as you want or as light as you want on the go.

WHAT CHANGES DO YOU EXPECT TO SEE ON YOUR FARM IN THE NEXT 5 TO 10 YEARS? Other than lower profit margins, I don't know. Expenses have gotten so out of control. Not so much land rents, but more so the fertilizers, the machinery, and everything. I mean $6 winter wheat for next year at a 50-bushel yield is breakeven.

HOBBIES? WHAT DO YOU DO FOR FUN? Golf.

FAVORITE FOOD? Steak.

ANY VACATION PLANS ON THE SCHEDULE? I like Florida. I go there for a week every year.

WHAT'S THE BEST PART OF FARMING? WHY DID YOU GET INTO THIS BUSINESS? I just love the idea of being my own boss, and I love watching crops grow, too.

Richland
IFC, Inc.

in bringing
food grade soybeans
to market

- **Total production contracts**
- **Industry leading premiums**
- **Flexible pricing options**
- **Wide range of maturity options available**

Contact: **Matt Bohn**
Crop Production Manager
100 N 10th St
Breckenridge, MN 56520
218-643-1791 | 701-640-2279
matt@richlandifc.com | www.richlandifc.com

Seed Voucher Program Launched at Big Iron

MORE REWARDS FOR NEW OR RENEWING MEMBERS

Launched at Big Iron, the $100 Seed Voucher Program is another benefit that you receive when you become a three-year member. New members or current members who renew or extend their membership are also eligible for this voucher program that is sponsored by a number of leading seed companies.

The vouchers are valid from September 1, 2013 to August 15, 2014 on pallet or tote of soybean seed. Redeem the voucher with your local dealer. Stop by Booth C7 in the Expo Center at Big Iron to learn more about this program and other benefits of membership in the Association.

Also at Big Iron, new or renewing one-year members will receive a coupon for 25¢ off per gallon of soy diesel, up to 20 gallons per visit. Soy diesel is available at various Petro Serve locations in the Fargo and Bismarck area. For exact locations, go to petroserveusa.com.