

FARMERS COOPERATIVE

INVESTING IN OUR OWNERS' SUCCESS!



COOPERATIVE NEWS MARCH 2018



Ron Velder
CEO

Our Goal has Always been Helping Our OWNERS SUCCEED in Their Farming Operations.

Over the years Farmers Cooperative has considered several ways to improve strategy for our farmers for their future operations. Moving forward, we need to make tough assessments of our older locations and challenging decisions in choosing what to do with them. As we review which locations provide value and fit into our long-term vision, we need to determine which ones do not meet our expectations and divest of those assets. Furthermore, some locations will be closed due to cost-prohibitive upkeeps needed to maintain safety compliance. Our goal is to improve safety and keep all of our facilities in compliance to reduce cost and long-term debt. We must continue to make our assets work harder and return more profits to our company.

I want to thank each and every producer who continues to support your cooperative and make it stand strong during these challenging years. American farmers will continue to grow and maintain their status as always being the best. Have a safe spring and thanks for your support.

YOUR EQUITY AND WHY IT IS WORKING FOR YOU.



Stan Mitchell
Chief Financial Officer

The principles of Cooperative finance have long been studied and discussed. Since the early development of Cooperatives, capital needs have been a challenge. The key financial principle of a cooperative is commonly called the user-owner principle. Most agricultural cooperatives obtain equity by requiring members to purchase a share of stock and then by distributing a portion of the cooperative's profits in the form of equity credits as part of a patronage allocation. The stock and deferred equity credits become the Patron's ownership in the Cooperative. The distributed equity is eventually redeemed by the cooperative based on the Board of Directors equity revolvment program. The second key cooperative principle is the member-benefits principle which allows profits to be distributed in proportion to use. Therefore, the profits or benefits from the cooperative go to those who use its services.

The stock and allocated equity held by the members as well as a portion of long term equity held collectively by members, called surplus, help fund the operations of the cooperative. Other financing for seasonal and long term borrowing is provided by CoBank. At the fiscal year end August 31, 2017, the equity balance or patron ownership for your Cooperative was \$231,938,449. This represents the investment that you have made in the assets that serves you, the member.



BOARD ELECTION RESULTS 2018

Farmers Cooperative's Board of Directors hosted the 2017 annual meetings in January. Ron Velder, CFO, shared the highlights from 2017, pictures of new fixed asset additions along with the audited financial statements from August 2017.

The Board of Director Election results were announced and all were elected to four year terms. They are Max Larson - Southeast at Large, Alan Dorn - Southeast at Large, Darren Meinke - Northeast at Large and Brian Schwartz - Kansas District. With the addition of a Kansas board seat, Farmers Cooperative now has a total of fourteen Board Members.



Front Row: Neal Onnen, Darren Eberspacher, Mike Nohavec, Galen Kuska, Ron Holst, Alan Dorn, Max Larsen **Back Row:** Michael Busboom, Dan Tiemann, Darren Meinke, Mike Pracheil, Tom Hueske, Ryan Holtmeier, Brian Schwartz

The Board of Directors elected new officers this year with Galen Kuska of Milligan as Chairman, Mike Nohavec from Crete as Vice Chairman and Ron Holst of Odell as Secretary.

Farmers Cooperative is looking forward to another strong year in 2018 and would like to thank our patrons.

2018 PRODUCER MEETINGS



Dennis Kenning
Sales & Marketing Mng'r.

Nine Producer Meetings were held during January and February and all of these meetings were highly successful with good attendance. During one of the meetings a patron asked, "Do you guys get tired of putting on all of these coop meetings?" Absolutely not, because we had great turn-outs and that makes it worthwhile. More importantly, we hope you the producer found the meetings to be worthwhile. So why do we conduct these series of meetings?

First, it's a great opportunity for our company to connect to you, our member owners. This allows both patron and staff to put a name with a face. These meetings allow department heads, managers and staff to meet you and see the owners of the company.

Second, who doesn't like "Show and Tell?" This allows our staff of specialist to present new information to our patrons. For example, before the start of our Producer Meetings, I didn't know that mineral costs were going up because of a worldwide vitamin shortage.

In some cases our cost to the Farmers Cooperative has increased more than 10 fold. The Grain Department discussed the old crop carry over and what crop

production is taking place in South America. Wesley Hedges our Precision Ag Manager did a really great job of showing how we could increase yields using the same amount of inputs through the proper placement, utilizing variable rate application. It's about getting the right amount of product on the right acre. We had many growers sign up for our new accounting programs such as "MyGrower" and we think this will be a real advantage for our patrons.

Third, we want these meetings worth attending because of the value they bring to our patrons. That's why we try to provide special offers, coupons, or savings to reward our customers. With the next growing season around the corner, we work to provide savings for things you're going to need.

Finally, and most important, it's our way to say thank you. We appreciate your business with the Farmers Cooperative and look forward in working with you into the next growing season. Going back to the question, are we tired of nine producer meetings? No, because we are here to serve you, our Owners! We hope to see you at the Producer Meetings next year.



FIGHT WEED RESISTANCE WITH A SEED TREATMENT



Scott Heinrich

Agronomy Sales Mgr.

Yes that's right, good weed control starts with a Seed Treatment like CruiserMaxx Vibrance. Healthy soybean plants with a vigorous root structure shortens the days to canopy closure thus increases your chances to control resistant weeds in your fields. No matter the technology in the bag you have chosen to control your weed spectrum, there is no substitute for a good stand from the start and quick canopy closure.

With weeds being such a large threat to soybeans, it's important to start managing them before they begin to grow. Weeds usually germinate with the soybean plant, which makes it difficult for the soybean plant to outgrow the weed. When weeds are present, they compete with your soybean plants for nutrients, which can ultimately lead to decreased yields. Utilizing a good

burndown and pre-emerge residual herbicide is critical. Start with a clean field.

In addition to using an effective herbicide program, planting treated seed can help promote a faster speed-to-canopy from the start. This will give your soybeans a fighting chance to absorb the necessary nutrients for growth before weeds have the opportunity to takeover.



CruiserMaxx® Vibrance® Beans seed treatment, a combination of separately registered products, contains 4 proven active ingredients. These active ingredients are engineered to help your soybeans establish a strong defense system from root to leaf in their critical early-growth stages. CruiserMaxx Vibrance Beans is boosted with the Cruiser® Vigor Effect and the unique RootingPower of Vibrance fungicide to help increase soybean plant speed-to-canopy.

Before you treat your soybeans ask one of our agronomist about our complete line up of seed treatments. As always, know what treatment is on your seed before you plant.



SAUSAGE-HASH BROWN BREAKFAST CASSETROLE

INGREDIENTS

1 Pound Mild Ground Pork Sausage
1 Pound Hot Ground Pork Sausage
1 (30-ounce) Package Frozen Hash Browns
1 1/2 Teaspoons Salt, Divided

1/2 Teaspoon Pepper
1 Cup Shredded Cheddar Cheese
6 Large Eggs
2 Cups Milk

Instructions

Step 1: Cook sausages in a large skillet over medium-high heat, stirring until sausage crumbles and is no longer pink. Drain well. **Step 2:** Prepare hash browns according to package directions, using 1/2 teaspoon salt and pepper. **Step 3:** Stir together hash browns, sausage, and cheese. Pour into a lightly greased 13- x 9-inch baking dish. **Step 4:** Whisk together eggs, milk, and remaining 1 teaspoon salt. Pour evenly over potato mixture. **Step 5:** Bake at 350° for 35 to 40 minutes.

*Combine frozen hash brown potatoes with sausage, eggs, and cheese for a hearty, 5-star-rated breakfast or brunch casserole that can be prepped ahead and baked the next morning. Sauté one large onion and one bell pepper in the pork drippings for extra flavor and color. **Tip from the recipe developer:** To make mini frittatas, cook in 6-inch cast-iron skillets for 30 minutes at 375. Top with sliced avocados, pico de gallo, and a dollop of sour cream and sprinkle with green onions.*

TAKE FULL ADVANTAGE

of Your Planter's Capabilities this Season



Wesley Hedges

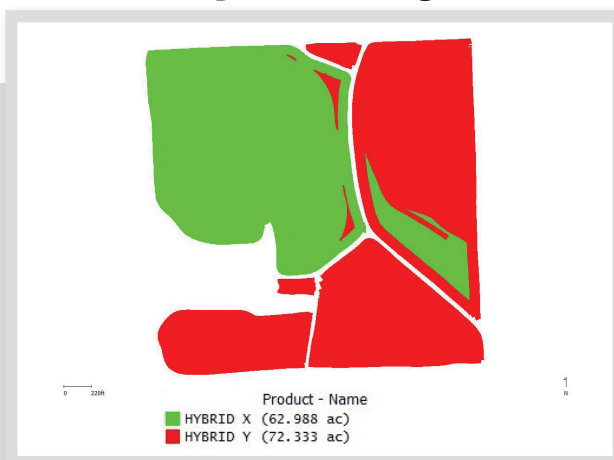
Precision Ag Manager

Planting season will soon be in full swing. You already have your planter ready to go. You have replaced worn parts, aligned closing wheels, greased every zerk, lubricated every chain and inspected any remaining square inch of your planter that you could possibly check. You want your planter to plant as close to perfect as possible but don't forget to take full advantage of your planters capabilities by variable rate seeding and tracking hybrids with your monitor. We all know getting the right seed, in the right place, at the right time and at the right rate is critical to a good start of the season.

Variable Rate Seeding

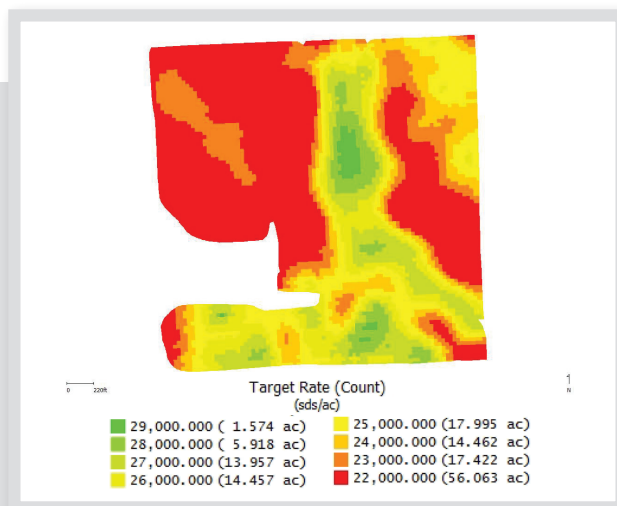
One of the many benefits of the modern planter is the capability to variable rate seed. Variable rate seeding corn has the potential of increasing yields 5 bu/ ac on average. Variable rate seeding soybeans has a fit in situations where lodging may be an issue but to see a yield response, management zones, seeding rates and hybrids/varieties need to be carefully selected. Creating accurate management zones involves choosing the right data sources, along with correctly delineating the data and addressing errors in the data. Also, seeding rates depend on hybrids. Some hybrids need to be pushed to higher populations whereas others don't.

Hybrid Tracking



Tracking your hybrids and varieties on your monitor during planting can be one of the most beneficial things you do all planting season. Having record of the exact location of the hybrids you planted will allow you to track them throughout the season. As soon as you finish planting we can put together a hard copy and digital copy of your planting data so you can easily access your data. If you use Climate FieldView, we can make sure all your data is online and organized into the correct field. After harvest, we can do an in-depth yield by hybrid analysis.

We are here to help you take advantage of today's precision ag technology. Our goal is to help you be as efficient with your inputs as possible while still striving to increase yields. Please contact me or one of our local agronomists with any questions. We appreciate your support!



Planter Monitor Preseason Checklist

1. Create multiple backups of any data on the memory card and monitor.
2. Make sure the monitor's memory card is in good working condition.
3. Clear any previous years data from monitor to maintain monitor performance.
4. Pre-populate field names, boundaries, guidance lines and hybrid names.
5. Setup equipment settings and gps offsets.
6. Load and convert planting prescriptions to the monitor.

GOVERNMENT REGULATORY AGENCIES



Doug Salmon
Safety Director

Your Farmers Cooperative is required to abide by the rules and regulations of an alphabet soup of government agencies including; OSHA, EPA, DOT, PHMSA, FDA, Homeland Security, NDEQ, KDHE, State Fire Marshal's Offices, State Departments of Agriculture, as well as county and city regulations.

To maintain compliance with these agencies' regulations results in considerable expenditure of time and resources by our location personnel, Safety Leaders Team, and Safety & Compliance staff. These expenditures of time and money include everything from maintaining written records of grain elevator housekeeping to the purchase of safety equipment.

An example of required safety equipment required by OSHA is grain bin rescue equipment. Farmers Cooperative has recently completed a project to provide grain bin rescue cofferdams for each grain location. The cofferdams will aid rescue efforts in the event of a grain entrapment or engulfment.

The cofferdam project was initiated by our Safety Leaders Team with team members Les Blythe and Eliot Bohling taking the lead. Eliot and other employees at Burchard, cut handholds, painted and stenciled five hundred 2'X4' panels to complete the project.

Thanks to everyone that assisted with this project!



BUDGET BILLING for House Propane Customers

Rob Blahauvietz, Credit Department Manager

Are you interested in a budget-billing program for your purchases of house propane? This would allow you to make 11 equal monthly payments throughout the year instead of making large payments in the winter months.

Together we will estimate your total house propane purchases for the upcoming 2018-2019 season. Then we will divide that figure by 11 and set up monthly payments starting in June 2018. Settlement date will be in April 2019 when we will settle your account by payment or refund and/or adjust your payments for the next year.

Whether or not you go on the budget program or one of our other contracts, you can still be on a "keep full" basis. This will avoid the possibility of you running out of propane. The number one reason for propane related accidents is when your tank runs out of propane. If this occurs, a leak test is required which will cost you an additional fee and possibly an after hours fee as well. If you want to be on "keep full", **please contact our propane order department at 800-473-4579.**

If you were on the budget program this past season, we will automatically send new contracts to you. There is no need to contact the office to be on it this year.

If you are interested in the budget program, you must contact Rob Blahauvietz in the Dorchester office by **May 15, 2018 at 800-642-6439.** If you do not go on this program, you will be required to pay according to our normal credit terms.



HERE TO SERVE YOU BETTER



Brent Colgrove
TBA Manager

Have you had a chance to get on the Farmers Cooperative new website yet? It is so easy to use, especially with your smart phone or tablet! The tire department has 3 websites links available for you to check out and become familiar with.

The Nebraska tire website is a very tire specific site. We use it every day to show tread designs and prices on tires that we have

on hand. For our agriculture customers, this is the best link that we have for you. The Co-op owns this website and we ship tires all over the country out of our Firth tire location.

History Note: This was one of the first tire websites ever created!

The FC tire location is also a tire website where you can go search tire catalogs and look at new styles of tires that are available to you that we can. We get daily deliveries from three different warehouses so these will get to you in a timely manner.

The third and final website we have here for you to use is the Mr. Tire website. This website is geared more towards a customer who has no idea where to buy tires or where to even start looking. You can search for a tire store on here. If a customer has tire trouble on the road, they can search out a Mr. Tire store in a given area for warranty work.

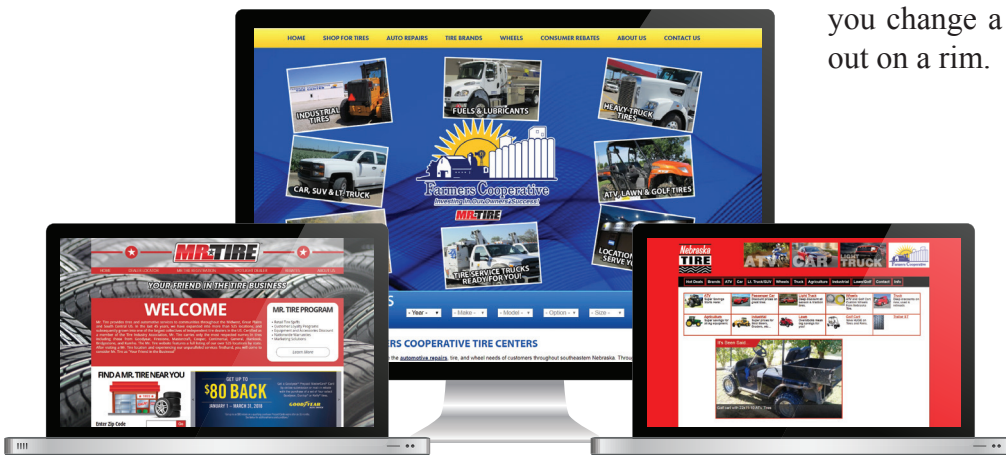
We have the three websites here at the co-op that

deal with tires to serve you better and make sure we are fulfilling your tire and service needs.

If you purchase your tires here at the coop we will mount and balance your tires for free for the life of the tire. As always, the price we quote you for new passenger and light truck tires is always mounted and balanced.

YOUR QUICK REFERENCE FOR TIRE ROTATIONS

- Recommended rotation patterns for your vehicle can be found in your owner's manual, routine tire rotations equalize and enhance front to rear and side to side tire wear.
- Remember a tire rotation will not prevent wear issues caused by bad wheel alignment or worn parts.
- Try to rotate your tires every 6-8000 miles.
- Balance tires as necessary.
- Out of balance tires will vibrate or bounce down the road mainly at higher speeds and will cause the tire to develop bad wear patterns if not corrected.
- Try to rebalance tires every other oil change or just do it when you have your tires rotated or sooner if you develop a vibration. You also need to rebalance a tire if you change a tire out on a rim.





EMPOWERING MODERN GROWERS



Brian Bohling
Controller

If you are looking for an easier, faster and more reliable way to both obtain and make payments with Farmers Cooperative; then the automatic deposit and payment plan are just for you. Today, instead of relying on traditional payment and transaction solutions the process is moving to automated clearing house (ACH). The concept of ACH isn't new; it has been around for more than

40 years and is federally regulated. The automatic deposit and payments simplifies your life by giving you peace of mind. Deposits and payments will be made no matter where you are – no more worrying about remembering to pay your bill or a payment being lost or stolen. It's no secret that identity theft is a concern for you and Farmers Cooperative. You may feel uncomfortable providing a bank account number. However, when you provide this information to make an ACH payment, it is entered into a secure system and encrypted. When sending a paper

check you provide the same information required for an ACH payment. The difference is that paper checks exchange multiple hands in processing and run the risk of being left out in an unsecure area – something that doesn't happen when transferred electronically.

Once you sign up you won't have to write a check for the monthly balance again nor run to the bank to deposit a check for a grain settlement. With direct deposit, you will still receive a complete copy of your grain settlement, but your money will be automatically deposited into your account the next business day after settlement. This authorization will apply to all of your grain checks except

for deferred payments or any patrons who have liens on their grain. With direct payment, while you will still receive a statement each

month, your payment is automatically taken out of your bank account. You will be able to take advantage of all offered discounts but your payment will not be taken until the **15th of the month after the statement.**

If the financial institution is not open then the payment will be the next business day. If you ever have questions regarding an invoice, you still have ample time to call and resolve your concerns.

Another way Farmers Cooperative is moving modern

**“... access
real-time
information
on contracts,
proof of yield,
crop input and
more.”**

Mygrower



growers to the rapidly evolving tech landscape is a mobile solution that enables growers to easily access real-time information on contracts, proof of yield, crop input and more. MyGrower mobile app allows users to view tickets, settlements and deliveries on their smartphones, tablets or your personal computer. This key data is now available at your fingertips and eliminating the need to make calls to gather account information which allows you to see and make informative decisions on the spot or at your convenience 24/7. Other significant features include prepay balances by category, monthly statements

and access to run reports based on your criteria that can be exported for your accounting records.

To access ACH forms or sign up for MyGrower you can visit our website www.farmersco-operative.com. Use the Departments drop down menu to select Accounting and follow the links for ACH forms or sign up for MyGrower. If you have additional questions or want more information you can contact Brian Bohling, controller, bbohling@farmersco-operative.com or Sherri Harre, grain accounting, sharre@farmersco-operative.com.

IRRIGATION ENGINES: Propane vs Diesel

Roger Kreifels, Propane Manager

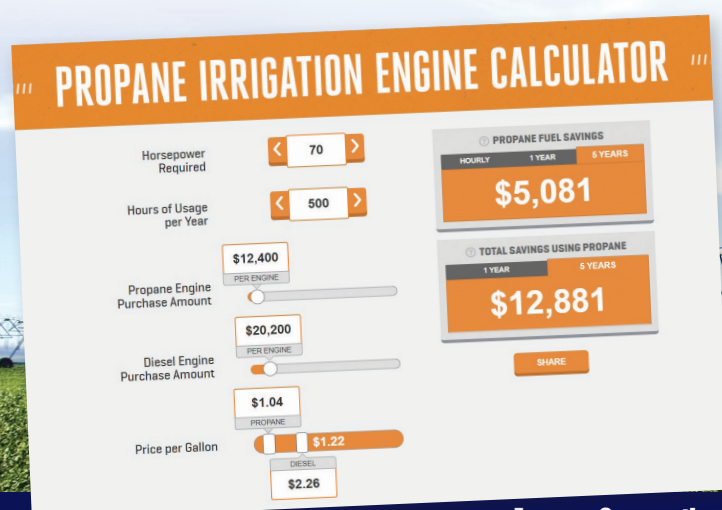
With the economy where it is today, now is the time to find where you can minimize your input costs. One of those places is your irrigation engines. If you are looking to put in a new well or replace any of your existing irrigation power units, propane is by far your best option. Just like all of your other equipment, today's propane irrigation engines are not the same as they were 20 years ago. Propane got a bad rap many years ago as having no power and being very inefficient. Because of new technology, today's modern Certified Propane engines are much more efficient and powerful than their counterparts from the old days. This allows them to be a much more cost effective solution for your irrigation engine needs. In addition to the operating cost savings, they are also considerably less expensive to purchase compared to a diesel engine. Below is a cost comparison example using a typical 5.7 liter engine with 70 horsepower.

Initial Cost of Engine: Certified Propane engine MSRP \$14,825, minus National PERC incentive of \$300.00 per

liter/\$1710.00, minus an additional flat fee incentive of \$750.00 regardless of engine size from Nebraska PERC leaves a net cost of \$12,365.00. Diesel engine MSRP \$20,150.00. No incentives. This means \$7,785.00 stays in your pocket right up front.

Cost of Operation: On February 19, 2018, the current 100% prepaid contract prices for summer 2018 irrigation usage are propane at \$1.04 per gallon and diesel fuel is at \$2.26 per gallon. Based off 500 hours of annual operating runtime, propane would save you \$1,016.00 per year and \$5,081.00 over 5 years. Include the initial savings on the purchase of the engine and your total savings over a 5 year period would be \$12,881.00. Remember, this is for one well only. Multiply that by however many wells you need to upgrade power units for or possible new installations and the cost savings is pretty astronomical.

These numbers are based off of an average engine and usage. To see how much money you can save for your particular needs, go to www.usepropane.com. Click on the Agriculture tab, then on the sub headings for that tab you'll find the Calculator. Select the version that works best for you and put your specific numbers in to see how much money stays in your pocket by choosing propane for your irrigation needs.



PREMIUM DIESEL FUEL



Chuck Swerczek

Petroleum Sales & Mktg.

Farmers' Cooperative is an authorized Cenex Ruby Fieldmaster/Roadmaster XL Premium Diesel dealer. These products are recognized as the industry's leading premium diesel fuel powering the demands of high-tech engines with an enhanced product formulation.

Cenex Ruby Fieldmaster/Roadmaster XL contains a special additive package to meet the 2014 Tier 4 engine technologies & EPA Mandates to reduce emissions. Today's engines use high pressure common rail (HPCR) direct injection technology to provide significantly greater efficiencies than conventional diesel engines. These engines operate under high temperatures and pressures that can literally "cook" typical #2 diesel fuel, resulting in injector/filter problems, reduced efficiency and costly repairs.

No other premium diesel contains a more complete balanced additive package that helps avoid the hassle of splash blending or top treating with aftermarket products.

Ruby Fieldmaster is a true premium diesel that is formulated to handle the rugged challenges of farming. It is an investment that pays for itself, plus it is backed by the best warranty of its kind in agriculture. Users of RubyFieldmaster can purchase a "Total Protection Warranty Plan" that will cover new equipment for up to 10 years or 10,000 Hours and used equipment up to 8 years or 8,000 Hours.

Putting your needs first and "Investing in Our Owners Success!" Farmers' Cooperative is offering Fuel Contracts March 1, 2018 thru November 30, 2018.

Contact your Location Branch Manager for more information or call Chuck at 402-580-7562.



PREMIUM DIESEL BENEFITS

Cenex Premium fuels are "Smart Injected" at the terminal while loading fuel to ensure all quality specifications are met.

Lubricity Improver - Reduces Wear of the engine parts and the injection system and provides 10-15 % better protection.

Detergent - Cleans the Injectors and the system. Maximize Horsepower up to 4.5 % & Improves fuel economy by as much as 5 %.

Injection Stabilizer - Prevents Oxidation Problem which often leads to injector failure. Prevents injector fouling in new engine technology.

Cetane Improver (Typical 48+) - Better Ignition, Quicker Starts and a smoother running engine. Better cold weather start up.

Demulsifiers - This carry the water to the bottom of the tank, reduces filter plugging and allows easy drainage and removal of the water.

Corrosion Inhibitors - Prevents Fuel Line Leaks due to corrosion and rust. It slows down the Diesel Fuel Degradation caused by Oxygen.

Storage Stabilizer - This reduces gum & varnish buildup extends the storage life 3-6 months.

SOUTH AMERICAN WEATHER PRODUCTION CONCERNS



Doug Lewis

Grain Originator

Today, March corn prices have increased \$0.20 since Mid-January while March beans have increased \$0.75 cents. Recent increases can be attributed in part to ongoing dry weather concerns in Argentina. Rain amounts over the 3 day Presidents Day weekend were minimal to non-existent in key growing areas of Santa Fe and Cordoba in Argentina. Private estimates for corn/bean crop size continue to be lowered while Argentina remains on pace

to have the driest February since 1980. Estimates for the bean crop in Brazil are trending higher.

Given current growing conditions, considerable market interest will be given to weather forecasts in the key growing regions in Argentina. Corn and soybean crops are at an important point in their production cycle where temperatures and moisture can have a large impact on final yields. Northern areas of Brazil, in the state of Mato Grosso, have had an overabundance of moisture. Rains in these areas have slowed harvest considerably and delayed the planting of the second crop of corn (safrinha).

Here are two pictures of highway BR-163 in northern Brazil. These pictures were taken by Laercio Romao from TV Central America and were published in Noticias Agricolas. The picture on the left with the line of

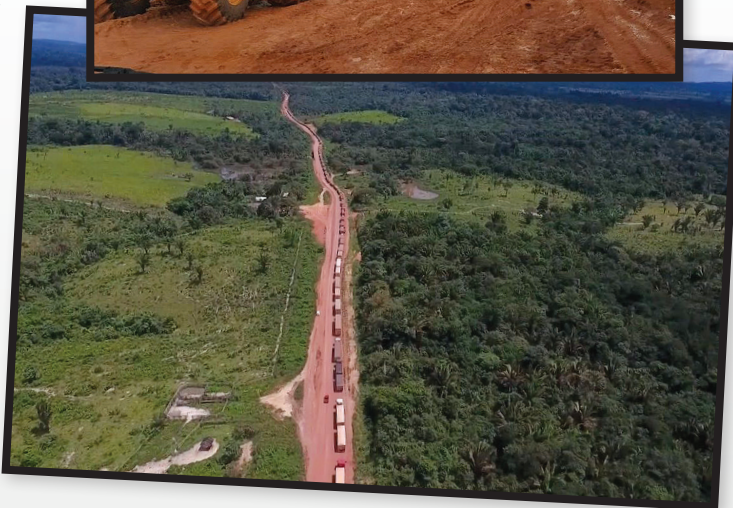
trucks, is looking north toward the Amazon River. That mountain range off on the horizon is where the problem was last week. The second picture shows some of the effort needed to get one truck up that mountain range.

USDA recently raised U.S. ending stocks 60 million bu to 530 million bu for the 2017/2018 crop year due to a reduction in exports. Using historical shipping patterns, a decline in the Argentine crop to 50 MMT could boost U.S. exports by as much as 215-220 mbu for the September - January period while there are still sufficient supplies (subject to producer selling) to boost old crop (2017/2018) exports slightly above last year.

Taking in to account this weather uncertainty, one needs to maintain perspective on the markets. It's impossible to know if the current rally has run its course or prices will continue to work higher. One thing that is known at this time, however, is that current ample supplies of corn and beans will provide a buffer to potentially smaller South American crops. The market will soon begin to focus on the progress of the 2018 U.S. crop.

Incorporating options into marketing commodities can help control emotions by utilizing a more disciplined approach to risk management. For example, having a put or call option in place allows a producer to manage higher or lower markets.

This is in sharp contrast to an approach that is characterized by hoping the market will continue to move higher or rebound after experiencing a setback—such as what we all have seen recently in stocks. Options give us the flexibility to manage through these unknowns and can be a valuable piece of a comprehensive risk management plan.





Dennis Kenning, Sales & Marketing Manager

The Farmers Cooperative's Young Member retreat was held January 27 at the Embassy Suites in Lincoln, Nebraska. The retreat included over 40 participants from across the trade territory.

The event included a meeting, tour of Memorial Stadium, dinner at Misty's and tickets to the Ice Box for a Stars Hockey Game. Some of the meeting topics included; the importance of our young member owners, how cooperatives work, overviews of departments and what "Investing in our Owners' Success" means to our member owners.

The retreat provided us the opportunity to meet with our younger patrons, explain our company and provide information about our projects. The retreat can also serve as a recruitment tool for open positions on our board of directors. We also seek and value the input of the participants about our company.

At Farmers Cooperative we realize that our company's success is dependent on our patrons, both now and in the future. We appreciate all those who attended the retreat and encourage other young patrons to consider attending the Farmers Cooperative Retreat next year. Again, thank you to all our participants.

The Farmers Cooperative Presents

Ladies NIGHT

DINNER & ENTERTAINMENT

Thursday, April 19, 2018

**Saline County Fairgrounds
4-H Building**

(13th & Tuxedo Road, Crete, Nebraska)

Doors Open at 5:15 pm

Event Starts at 6:15 pm

Performances by:
UNL Bathtub Dogs
& David Ferrell, Comedian

RSVP'S Required (Space is Limited)

Seats are Available from

March 1, 2018 - April 10, 2018

call 800-642-6439 or email at
sharre@farmersco-operative.com

www.farmersco-operative.com

2018 | SPRING MINERAL



Kevin Wittler

Feed Dept. Manager

Spring is just around the corner and we need some moisture. So far, calving season has gone very well. Once again, we're offering your **Spring Mineral and Creep Feed Booking Program**. The extreme shortage of vitamins due to regulatory enforcement in China in combination with plant fires in Germany and India, already have and continue to impact availability and pricing. Supply allocation

surfaced following a Force Majeure declaration by BASF. Suppliers and manufacturers are unable to quote extended pricing on products, such as minerals, which include higher vitamin inclusion levels. In order to provide booking discounts this spring, for every 1,000 pound (1/2 ton) of mineral that is contracted, we're offering a \$25 gift card through May 30, 2018 (while supplies last) with a pull period through September 30, 2018. Spring Mag, Breeder and Fly Control Minerals will be offered in either bagged loose or cooked molasses tubs. Your spring calving cows are currently in a stage of production that requires additional mineral supplementation. A cow's requirement for phosphorus has increased and remains high pre-calving through breeding. Calcium is required in large quantities as the cow progresses through her lactation stage. Calcium, along with magnesium supplementation, helps to prevent grass tetany as we approach the early grazing season. Additional minerals and vitamins are critical to high fertility and fetal development and are essential for the immune system. The roles minerals play are numerous and essential for optimum productive

performance. Please remember to visit with your Veterinarian, prior to contracting, if you plan on utilizing Aureomycin in your mineral program. We are prohibited from transferring ownership to you without a valid VFD. Please keep the nutritional needs of your momma cows in mind as we move into spring and be sure to contact your Beef Specialist or nearest Farmers Cooperative location and take advantage of the savings to be offered through May 30th on your mineral needs.

New calves hitting the ground also means that spring calf creep feed season is just around the corner. Hopefully we are receiving ample moisture and with warmer days on the horizon, grass will get off to a great start. Creep feed supplementation later in the season can take some pressure off your pastures as well as your momma cows. Each additional pound of gain is certain to pay needed dividends.

If you want to utilize your cooperative creep feeder programs and have not reserved a rental, rent-to-own or purchase option, please reserve those as soon as possible. Each year our available supply becomes very tight during the prime feeding period and forecasting those needs allows us to most closely fulfill your requests. Availability of feeders allows your cooperative to help you, as our producer owners, capture the many benefits creep feeding your calves offers. We would certainly appreciate the opportunity to discuss those programs with you and provide a recommendation on what best fits your needs and performance goals.

We wish everyone a safe and successful season and sincerely appreciate and thank you for your business.



HOW THE RIGHT ENGINE OIL MIGHT (SOON) SAVE YOUR ENGINE



Chris Force
The Oil Guy

Since the late 1990's, gasoline direct injection (GDI) engines have become increasingly common in passenger cars and pickups. GDI engines differ from standard fuel-injected engines in the way gasoline is introduced into the combustion chamber. Whereas conventional fuel injection sprays gasoline into the intake where it is mixed in the air flowing into the combustion chamber, GDI technology sprays fuel at high pressure directly into the combustion chamber.

GDI technology offers some very attractive advantages over old-school conventional fuel injection. The direct high-pressure spray of fuel achieves a more complete burn and allows for lower cylinder temperatures (improving compression ratio), providing more power, better fuel efficiency and lower emissions. GDI is a big reason why a lot of these newer cars with small displacement engines can sip gas but produce so much power for their size. As Consumer Reports recently reported, "engine technology supplier Bosch says that direct injection can return a 15 percent gain in fuel economy while boosting low-end torque as much as 50 percent." This is impressive and when GDI is paired with a turbocharger, you have a real force multiplier under the hood. Ford's EcoBoost® and GM's Ecotec® are familiar examples of powerful and fuel-efficient Turbocharged Gas Direct Injection (TGDI) engines on the road today in domestic automobiles.

There is so much good news about GDI engines that I almost hate to report anything negative. Here's the rub, according to engineers at Phillips 66/Kendall: "[GDI] technologies have resulted in a condition known as low-speed pre-ignition (LSPI). LSPI is a premature ignition of the air-fuel mixture in the combustion chamber. Other terms used for LSPI include "super knock," "mega knock" and stochastic pre-ignition."

Now, LSPI isn't your plain old "engine knock" and cannot be corrected by adjusting spark timing. LSPI is something entirely more sinister. Again, according to the experts at Kendall, "the low speed in LSPI (which refers to the speed of the engine, not the speed of the vehicle) occurs in the 1200 to 2700 rpm range. This low-speed pre-ignition is very violent and causes over-pressurization of the combustion chamber that can lead to damage and failure of the piston, rings, valves and other internal components. During LSPI testing, pressures as high as 1595 psi were observed in the combustion chamber. Normal combustion in this test yields a maximum pressure of 623 psi. That is a spike of 256% in pressure!" If your car has one of these hot little engines and you hear something knocking, it's time to visit a good mechanic who is up-to-date on the LSPI phenomenon.



Interestingly enough, research shows that the motor oil in use can be a contributing factor to episodes of LSPI. According to leading additive manufacturer Oronite, "the most noticeable impact has been from the detergent chemistry. Oils with higher concentrations of calcium, which is found in many detergent systems, have been shown to increase the

frequency of LSPI.” Testing indicates that detergency additives like magnesium do not seem to contribute to LSPI and molybdenum has been shown to decrease LSPI when used in high levels. After reading all this, anyone familiar with the lubricants business won’t be surprised that a whole new classification of passenger car motor oil formulas is on the way.

For the past couple years, the industry has been anticipating the appearance of a new API (American Petroleum Institute) classification to surpass the current API SN, signaling the development of advanced passenger car motor oil chemistries to address a number of issues including LSPI. I won’t go into all the acronyms and bore everyone even further, but suffice to say this process is far behind schedule. The first proposed licensing date for manufacturing the new motor oils was January 1, 2015; and if things had gone well, we’d already see “API SP” printed in the little “donuts” on bottles of motor oil in our stores. Here we are in 2018 and the industry development committees have been unable to agree on a host of issues.

The delay has brought things to a head. LSPI has become such a threat to engine reliability in a growing number of vehicles already on the road that an intermediate classification is in the works. Auto makers, chemical companies, engine manufacturers, and lubricant blenders are scrambling to find agreement on a stop-gap measure that will be known as API SN-Plus. This new generation of passenger car motor oil will require standards identical to the current SN classification with the single additional requirement that the formulas must address LSPI. Hopefully by now, API SN-Plus has been approved by the industry and at least in production in plants across the country.

In the meantime, it is important to note that Farmers Cooperative carries two products which are formulated to address LSPI in General Motors engines. Readers who change their own oil will be familiar with the green-and-white dexos1™ logo displayed on Cenex’ Maxtron® and Kendall’s GT-1® dexos1™ products. Both of these products are formulated and licensed to meet GM’s dexos1™ Gen2 specification. The Gen2 moniker denotes upgraded chemistry tested to address LSPI in GM Ecotec® TGDI engines.

Rest assured that as soon as API SN Plus products become available, Farmers Cooperative will move quickly to acquire inventory. Looking out for you and your car or truck is just one more way we are *Investing in Our Owners’ Success*.

LET’S PROMOTE

**AG
SAFETY**



Does your 4-H Club, FFA Chapter, or Civic group want to promote Farm Safety? Farmers Cooperative is here to help. We have several Farm Safety Instructional Units available for your club or group. These units can be borrowed anytime throughout the year on a first come, first serve basis.

These units include a short simple lesson and a participant activity.

We have Four Safety Units for Grain:

1. Don't get caught in moving grain!
2. Find the Grain Safety Problem
3. Grain Handling and Equipment Safety
4. Can you pull yourself out of grain?

We have Two Safety Units about Machinery Safety:

1. Be safe around PTO's
1. Can you react fast enough? (Reaction Timer)

And we have One Unit about Chemical Safety:

1. The Chemical Look-A-Like Game

These units can be borrowed free of charge, we just ask that you handle with care and return them in good shape. As you well know, Farming is one of the most dangerous occupations in the world. There are hazards literally everywhere you look around the farm.

If you would like to check-out a unit for your next club or group meeting, please contact Dennis or Kristin at the DeWitt Campus at 402-683-2176 or email: dkenning@farmerscooperative.com. Remember, keep it safe!



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NEBRASKA & KANSAS WONDROUS & CURIOUS PLACES

Carhenge - Alliance, NE

A curious replication of Stonehenge. Jim Reinders became so enthralled by the beauty of the famous Stonehenge in England that he had to recreate it.

Toadstool Geologic Park - Harrison, NE

Other-worldly rock formations and ancient fossils abound in this unique stretch of Nebraska badlands

Old Lincoln Highway in Omaha - Omaha, NE

The longest surviving brick-paved section of the historic coast-to-coast highway.

Nebraska State Capitol Mosaic Floor - Lincoln, NE

An ornate Art Deco tile mosaic representating Nebraskan life, both modern and prehistoric.

The Hastings Museum Kool-Aid Exhibit - Hastings, NE

Hastings, Nebraska is where Edwin Perkins invented Kool-Aid. Discover the Dream is a nostalgic and comprehensive collection of all things Kool-Aid. The only thing missing is a chance to actually imbibe the drink itself.

Sioux Army Depot - Potter, NE

The U.S. Army's Sioux Ordnance Depot was established in western Nebraska on March 23, 1942. It was the only Army ammunition depot in Nebraska during WWII, the Korean War and the Vietnam War.

OZ MUSEUM - WAMEGO, KS

You don't have to wait for a tornado to whisk you away to the magical land of Oz thanks to the Oz Museum.

THE GARDEN OF EDEN - LUCAS, KS

One of the "Eight Wonders of Kansas Art," the Garden of Eden is a home and sculpture park built by civil war veteran Samuel Dinsmoor.

1950S ALL-ELECTRIC HOUSE - OVERLAND PARK, KS

This retro-future model home is packed to the gills with electrical oddities

AMELIA EARHART BIRTHPLACE MUSEUM - ATCHISON, KS

In July 1897, famed aviatrix Amelia Earhart was born here, at the Gothic Revival cottage belonging to her mother's parents.

WORLD'S LARGEST CZECH EGG - WILSON, KS

Towering 20 feet into the air, the egg is painted in the fashion of Central-Eastern Europe's famous eggs. The pattern on this egg is a traditional Czech design.

BUFFALO BILL MONUMENT - OAKLEY, KS

Near the site of his hunting contest for the right to be nicknamed "Buffalo Bill," this statue of Cody and an American bison is sixteen feet high and sculpted with 9,000 pounds of bronze.