

EXTENSION IS ON THE MOVE

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Extension and FSA to Host Farm Bill Education Meetings

December 2, 2019

1:30 p.m. to 4:30 p.m.

Community Center in Bloomfield, NE

No Cost – Pre-registration is encouraged

Call Nebraska Extension in Knox County at 402-288-5611 or visit

go.unl.edu/farmbill

Featuring information and insight from FSA specialists and Extension experts, as well as other relevant information from local agencies.

Nebraska Extension and the USDA Farm Service Agency in Nebraska will host a series of Farm Bill education meetings.

FSA County Executive Director Rod Repenning said the meeting is designed to provide important information to producers as they begin to make farm-bill related program decisions. The 2018 Farm Bill, signed into law last December, reauthorized the existing Agriculture Risk Coverage (ARC) and Price Loss Coverage (PLC) safety net programs that were in the 2014 Farm Bill, however producers will need to make new program enrollment decisions over the coming months.

The ARC and PLC programs under the new farm bill remain similar to the previous farm bill, but there are a few key program changes.

“During the meeting we will discuss these changes in order to assist producers with the decisions they will need to make at sign-up,” Repenning said. “Extension will be providing guidance on the usage of online tools to aid in the decision-making process.”

Meetings Scheduled for Northeast Nebraska

- Bloomfield - Community Center - December 2, 1:30-4:30 PM
- O'Neill - Community Center - December 3, 9 AM-12 NOON
- Columbus - Ag Park - December 4, 9 AM-12 NOON
- West Point - Nielsen Center - December 9, 9 AM-12 NOON
- Wayne - Wayne Fire Hall - December 16, (2 meetings) 1-4 PM or 6-9 PM
- Norfolk - Northeast Community College Lifelong Learning Center - December 18, 1-4 PM

ON THE RANCH

Leading Farm and Ranch Employee Seminar

December 17, 2019
Holt County Courthouse Annex
O'Neill NE

Cost: \$75 per person (includes materials, breaks & noon meal)
Register by December 10th
by calling 402-336-2760

Speaker: Dr. Bob Milligan,
Senior Consultant with Dairy
Strategies LLC and Professor
Emeritus from Cornell University

This seminar is designed to help agricultural employers learn techniques and leadership practices to help motivate and empower employees.

Tips to Improve Cow Performance While Consuming Low-quality Forages

Rob Ziegler, UNL MS Animal Science Student
Travis Mulliniks, UNL Beef Cattle Nutritionist, Range Production Systems



Because of the challenges faced last spring and this year's projected lower quality hay crop, supplementing cattle this year with protein will be an effective way to increase intake and digestibility of low-quality forages. Photo credit Troy Walz

Low-quality range pasture and cold wet winter left cows in thinner than normal condition coming into spring this year. The challenges of last summer and winter may have resulted in lower than average pregnancy rates in replacement heifers and young cows this fall, which may be due to the impact the cold and snow had on body condition. Much of the precipitation patterns through the winter continued into the spring and summer creating a challenging 2019 haying season. Widespread heavy rainfall across much of Nebraska made the haying season challenging, and in some areas, nearly impossible. In addition to the challenges the rain created to put hay up, it is likely that the quality of the 2019 hay crop may be less than average. Crude protein and total digestible nutrients (energy) are likely to be less than average because of early plant maturity and hay that may have been harvested with higher moisture content than optimal. Due to this, hay should be sampled and sent off for nutrient analysis. If you have several lots of hay, you can rank your lots based on quality from poorest to best. This will allow you to strategically feed your best hay when the requirements of your cows are the greatest such as late gestation, or early lactation. This can help minimize supplemental feed cost.

In most cases, cows consuming low-quality forages require additional protein. Protein supplements typically have a crude protein content greater than 20% and come in various forms including cubes, meals, pellets, and blocks. Supplementing with a high-quality protein source will increase forage intake and digestibility of the low-quality forage. Protein supplements can be offered to cows daily, three days a week, or as infrequently as once per week with adequate performance. As a rule of thumb, feeding 0.3 to 0.6 pounds of crude protein per day during late gestation to mature cows maintains cow performance and fetal growth.

If cows are thin after weaning or we have a wet, cold winter, a different supplementation strategy may be needed. This fall will be the best opportunity to improve body condition as their requirements will increase as calving approaches making it more difficult to increase body condition. Cows that need to gain weight, or young cows that are still growing may require energy and protein. Byproducts such as distillers grains are fiber-based supplements that are high in crude

protein and have high levels of energy. Supplements like cottonseed meal and alfalfa hay may not provide enough energy to increase body condition before calving. Starch-based energy supplements like corn will have to be fed every day and can cause a decrease in forage intake.

When comparing various supplements, it is important to price supplement alternatives on an equal nutrient basis. The [“Feed Cost Cow-Q-Lator”](#) offered by Nebraska Extension is a spreadsheet to aid in comparing feed costs.

Because of the challenges faced last spring and this year’s projected lower quality hay crop, supplementing cattle this year with protein will be an effective way to increase intake and digestibility of low-quality forages so cattle performance is not compromised. It is important to have your hay tested and understand the requirements of the cattle you are trying to feed. If there is a lacking nutrient, compare supplement alternatives on an equivalent nutrient (protein or energy) bases to find the most economical source. Identify the composition of your hay, understand the requirements of the cattle you are feeding, and price supplements on an equal basis of nutrients.

If you need assistance with diets or have nutritional questions, Nebraska Extension Educators and Specialists can help, please give us a call.

Source: Beef.unl.edu

SOYBEAN STUBBLE FOR COWS

Bruce Anderson, Extension Professor, University of Nebraska-Lincoln

After soybeans are harvested, cows sometimes are put out on the residues to graze. Some bean residues are even baled. But how good is this feed?

be up to 12 percent protein, it’s only around one-third digestible, so that’s not much help. In fact, protein digestibility is low in all bean residues.

We’re all familiar with the usefulness of grazing corn stalks, but I see more and more residue from soybean fields grazed every year. And cows seem to like licking up what’s left behind after combining. But frankly, I’m a little concerned that some folks may think their cows are getting more from those bean residues than what truly is there.

Energy is even worse. TDN averages between 35 and 45 percent for leaves, stems, and pods. This is even lower than wheat straw. As a result, cows fed only bean residue can lose weight and condition very quickly. Heavy supplementation is needed to maintain cow health.

The problem is a matter of perception. When most of us think of soybeans, we think high protein. So we expect bean residues will be a high protein feed, too. Unfortunately, the opposite is true; soybean residue is very low in protein.



Now, this doesn’t mean soybean residues are worthless for grazing or even baled. They can be a good extender of much higher quality hay or silage. But, cattle must be fed quite a bit of higher energy and protein

feeds to make up for the deficiencies in soybean residues.

Soybean stems and pods contain only about 4 to 6 percent crude protein, well below the 7 to 8 percent needed for minimum support of a dry beef cow. And even though leaves can

Don’t be misled into thinking bean residues are as good as or better than corn stalks. Otherwise, you and your cows will suffer the consequences.

IN THE FIELD

Conference for Women Managing Agricultural Land December 11th



The first-ever Women Managing Agricultural Land Conference will allow women to build relationships with each other, attend workshops and gain valuable knowledge. Three keynote speakers and 12 workshops will focus on helping Nebraska farmland owners and tenants navigate the challenges they face.

The full conference schedule and registration form are available at <https://wia.unl.edu/wmal>. A registration fee of \$45 per person covers materials, meals, and breaks.

An Illustration of Farm Program Decisions & Impacts

When the 2018 Farm Bill was signed last December, producers could look ahead to implementation and the coming decision between enrollment under the Agricultural Risk Coverage (ARC) program or the Price Loss Coverage (PLC) program. While the ARC and PLC programs carried over from the 2014 Farm Bill with relatively modest changes, the substantial drop in market prices and outlook since 2014 pointed toward a widespread shift in enrollment away from ARC and toward PLC due to the increased relevance of the price safety net.

However, with this year's extreme weather events, concerns over crop production, and hopes for improved trade prospects, there has been some recovery in commodity prices, at least as reflected in the October supply and demand reports from USDA. That could affect expected farm program supports or even eliminate them if higher prices were sustained through the marketing year. That, in turn, could affect producer preferences between the revenue-based support of ARC and the price-based support of PLC by the time the initial enrollment decision is due in March 2020.

Commodity Programs - The 2018 Farm Bill maintained the existing ARC program at both the county level (ARC-CO) and individual coverage level (ARC-IC) as well as the PLC program that were introduced in the 2014 Farm Bill. In 2014, producers faced a one-time election as to which program to use for the 2014 through 2018 crop years. The new farm bill made some improvements to the ARC program, including changes to the yield data and a trend-yield calculation that should improve the ARC guarantee. There were also modest changes to the PLC program, including a limited yield update and a formula to increase the reference price if market prices increase. However, the biggest feature of the new farm bill for ARC and PLC has to be a new enrollment decision, first in 2019 for 2019 and 2020,

and then annually beginning in 2021.

Payment Yields - Before analyzing which commodity program is best, the first choice for producers is whether or not to update farm program payment yields, given that they affect potential PLC payments. Each farm (FSA farm by serial number) has a base acreage that can't be updated and a PLC payment yield that can be updated and established going forward for the farm regardless of whether PLC or ARC is chosen. The update itself is a choice between keeping the existing payment yield or updating it to 90% of the 2013- 2017 average yield multiplied by a national factor equal to the ratio of the 2008-2012 national average yield divided by the 2013-2017 national average yield. This national factor allows a yield update to new yields, but adjusts everything backward for national yield growth since the last update in 2014. This effectively targets the benefits of an update to those producers that had below average yields or crop losses going into the 2014 update.

The national factor is limited to a range of 90% to 100% and the 90% factor holds for corn and soybeans according to data from USDA's Farm Service Agency (FSA). For grain sorghum and wheat, the factors are 90.77% and 95.45% respectively. Multiplying 90% of the 2013-2017 average yield times the yield factor essentially means the potential updated yield is equal to 81% (90% x 90%) of the 2013-2017 average yield for corn and soybeans (81.69% for grain sorghum and 85.91% for wheat). Using those percentages, producers can more readily assess the potential for updated yields by comparing the resulting percentage of 2013-2017 yields against existing PLC payment yields.

PLC - With payment yields determined, a producer can better analyze the PLC or ARC-CO program choice on a farm-by-farm, commodity-by-commodity basis. The PLC program provides income support when the effective price (the higher of the national marketing year average price or the national average marketing loan rate) falls below the effective reference price (the higher of the legislated reference price or 85% of the 5-year Olympic average of the national marketing year average prices, limited to no more than 115% of the legislated reference price). In equation form, the PLC protection is equal to:

Effective Reference Price = Min of [Max of (Reference Price or 85% x 5-Year Olympic Average Price) or 115% x Reference Price]

Effective Price = Max of (National Marketing Year Average Price or National Average Marketing Loan Rate)

PLC Payment Rate = Max of [(Effective Reference Price – Effective Price) or 0]

PLC Payment = PLC Payment Rate x PLC Program Payment Yield x Base Acres x 85%

With lower corn prices in recent years, the 5-year Olympic average price is also lower and the effective reference price remains at the legislated level of \$3.70/bushel. Based on the October World Agricultural Supply and Demand Report from USDA, the projected price for the 2019 corn crop marketing year is \$3.80/bushel, a level that would preclude any PLC payments. However, there is a great deal of uncertainty remaining around that projection. The September report from USDA had projected the price at \$3.60/bushel, a level that would translate into a \$0.10 PLC payment rate. That would translate into a \$15 PLC payment rate given an average of 150 bushel/acre PLC program payment yield in Nebraska (before any updates) or a \$12.75 PLC payment/base acre given payments on just 85% of base acres.

With price projections hovering around the reference rate, the difference between a substantial PLC payment and no payment would be a relatively small shift in market price levels. If one considers a stochastic (probability-based) estimate of the marketing year average price around \$3.80 instead of a deterministic (certain) estimate of \$3.80, you would still get an average price of \$3.80, but would also get some expectation of prices falling below the \$3.70 reference price level and thus, PLC payments as much as 40% of the time. This is the reason why any stochastic farm bill analysis such as the online decision tools from FSA will indicate an average PLC payment even when the projected price is above the reference price. If there is at least some probability that prices will fall below the reference price, then there will be some possible outcomes with PLC payments and they will show up in the average over all simulated outcomes even when the average price is above the reference price.

Of course, potential price changes also impact the underlying crop revenue, so a thorough analysis should be about more than just expected PLC payments and should include crop revenue, as well as the two, should be inversely related. Projections for 2020 also matter for the second year of programs affected by the initial decision, so a forecast for higher or lower 2020 prices could swing the analysis further one way or the other. There would be more uncertainty in the PLC program going forward based on price direction, but remember there will be an opportunity to revisit the decision annually beginning in 2021, so the long-term outlook is not particularly relevant.

ARC-CO – ARC-CO works as it did in the previous farm bill to provide county-level revenue protection for crops in the farm's base acreage. There are some changes to the primary source of county yield data and more significantly, a new trend yield adjustment in the benchmark yield that determines the ARC-CO guarantee. The trend yield factor by county, crop, and practice is the same one used for crop insurance for the trend-adjusted yield option. With the

move to an annual decision beginning in 2021, FSA chose to lag the history an additional year to ensure data and thus guarantees are known at the time of the expected March sign-up. Thus, the 2019 ARC-CO protection is based on the Olympic average benchmark trend-adjusted yield per planted acre and the Olympic average benchmark price from 2013-2017 multiplied together. The benchmark yield in each year of the history is the actual county yield per planted acre or 80% of the county transitional yield. The benchmark price for each year is the higher of the national marketing year average price or the effective reference price. The ARC-CO guarantee is then equal to 86% of that benchmark revenue and actual county-level crop revenue below the guarantee results in an ARC-CO payment up to a maximum of 10% of the ARC-CO benchmark. In equation form, the ARC-CO protection is equal to:

ARC-CO Benchmark Yield = 5-Year Olympic Average of [Max of (Trend-Adjusted County Yield or 80% of County Transitional Yield)]

ARC-CO Benchmark Price = 5-Year Olympic Average of Max of (National Marketing Year Average Price or

ARC-CO Benchmark Revenue = ARC-CO Benchmark Yield x ARC-CO Benchmark Price

ARC-CO Guarantee = ARC-CO Benchmark Revenue x 86%

ARC-CO Actual Revenue = Actual County Yield x Max of (National Marketing Year Average Price or National Average Marketing Loan Rate)

ARC-CO Payment Rate = Min of [Max of (ARC-CO Guarantee – ARC-CO Actual Revenue) or 0] or ARC-CO Benchmark Revenue x 10%]

ARC-CO Payment = ARC-CO Payment Rate x Base Acres x 85%

Assuming projected yields equal to the trend-adjusted benchmark yields, the ARC-CO guarantee effectively protects revenue equal to trend yields multiplied by 86% of the benchmark price. For corn, the benchmark price based on the 2013-2017 history is equal to \$3.70 and the ARC-CO guarantee at 86% would kick in around \$3.18/bushel assuming production at trend-yield levels.

If the county had an average trend yield benchmark of 185 bushels/acre (consistent with a 150 bushel/acre PLC program payment yield), the benchmark revenue would be \$684.50/acre (150 x \$3.70). The guarantee would be 86% of the benchmark or \$588.67/acre and the maximum ARC-CO payment would be limited to 10% of the benchmark or \$68.45/acre. If the county produced exactly its trend yield of 185, then any price above \$3.18 would produce revenue above the guarantee (185 x \$3.19 = \$590.15) and the ARC-CO payment rate would be \$0.

Of course, ARC-CO protects revenue losses, so any combination of yield losses below average trend yield or price losses below the benchmark price would be covered once they fell below the 86% ARC-CO guarantee. In that way, ARC-CO provides more comprehensive revenue protection than PLC, but wouldn't kick in as quickly if prices fell below current projections.

The above example illustrates substantial differences between PLC and ARC-CO for corn if prices were to move below current expectations, but it isn't sufficient to answer the question of which is better. PLC would kick in faster under lower prices, but ARC-CO would actually protect the combination of price and yield declines, so the answer of which one is better is not a simple choice. The online analysis tools available under the resource section on the FSA website provide the most thorough analysis of projected PLC and ARC-CO payments.

ARC-IC - A final option for producers is ARC-IC on a farm-by-farm (FSA serial number) basis. If selected, all of a producer's interests in any farms enrolled in ARC-IC are bundled together in a single pool for protection. ARC-IC generally works in the same manner as ARC-CO, but instead of the protection being tied to county results for the crop in the farm's base acreage, it is calculated from the farm's actual history by program crop in proportion to the farm's acreage mix in the current year. Thus, for example, a farm with a mix of corn and soybeans in 2019 would generate an ARC-IC benchmark revenue based on actual revenues (farm yields times the higher of national

marketing year average prices or the reference price) for each of the years from 2013-2017. Those crop revenues by year would be prorated in proportion to the current acreage mix and the resulting weighted revenues by year would be used to calculate the Olympic average revenue that creates the farm's revenue benchmark.

From that point, the ARC-IC guarantee is equal to 86% of the benchmark, just like ARC-CO. Actual revenue per acre is calculated from the actual planted acres on the farm compared to the farm's ARC-IC per acre guarantee. Then, if any payments are due, they are paid on 65% of the base acres instead of 85% as with ARC-CO in part due to the expected increased frequency of a farm falling below its guarantee as compared to a county.

The ARC-IC calculations are more complex than either PLC or ARC-CO and are not illustrated here due to space constraints. Owing in part to the complexity of the ARC-IC program as well as the lower payment rate, ARC-IC was not a common choice in 2014, particularly given the one-time decision for the entire 2014-2018 period. However, under the new farm program, ARC-IC may be more relevant on a year-to-year basis and may be particularly relevant for some producers in the 2019-2020 election period given losses that have already occurred in 2019. For producers facing substantial yield losses or prevented planting in 2019, ARC-IC may provide substantial support. If a farm (FSA farm serial number) was completely prevented planting in 2019 and certified as such with crop insurance & FSA, the farm's per acre revenue is calculated as \$0 against the farm's ARC-IC guarantee along with the results on all of the producer's other farms enrolled in ARC-IC and the resulting payment could be rather large.

If for example, all of the producer's farms enrolled in ARC-IC were 100% corn and 100% prevented planting for 2019, the farm would have \$0 revenue to count against the ARC-IC guarantee and qualify for a maximum payment. If the farm happened to have the same benchmark revenue guarantee as the county at \$684.50/acre, the ARC-IC payment rate would max out at \$68.45 per acre on 65% of the base acres for an effective payment of \$44.49 per base acre.

However, if only some of the farm's acreage were prevented planting and some of the acres were planted, the results of just the planted acres would count in the revenue calculations, negating the losses on the prevented planting acres for purposes of ARC-IC. While that is a potential downfall, any substantial yield losses on the remaining acres could still result in large or even maximum ARC-IC payment rates for 2019.

The ARC-IC decision is complicated by the technical details of the prevented planting calculation as well as the reality that the decision covers both 2019 and 2020. Potential large payment rates for 2019 could overshadow the likelihood of no payments in 2020 and make ARC-IC attractive, but would need to be compared to two years of potential support under PLC and ARC-CO. Depending on production conditions, ARC-IC could still be relevant in 2020 as well, so it may be premature to write of 2020 protection entirely.

Program Decisions - With similar programs as the previous farm bill, but substantially lower market prices and outlook for the new sign-up period, there was a widespread expectation among producers and policymakers that enrollment decisions between PLC and ARC under the 2018 Farm Bill would be relatively simple and would lean strongly toward PLC. The example above for corn shows that PLC may, in fact, provide more downside risk protection than ARC-CO. But, the illustration also shows neither would pay at current projected price and yield levels and demonstrates the need for further information and analysis before enrollment decisions are made.

Producers can now visit FSA offices and make PLC and ARC enrollment decisions for 2019-2020. However, there are still a few months before the announced March 2020 deadline to analyze the programs and the outlook, and the time and analysis may be valuable to producers before making a decision. The online decision tools are available to producers on the FSA website at https://www.fsa.usda.gov/programs-and-services/arcplc_program/index. Nebraska Extension and Nebraska FSA offices are also collaborating on a series of producer education meetings across the state in November and December to walk through program details and analysis and help producers make more informed decisions. Further details on the farm programs and the educational programs are available at <http://farmbill.unl.edu>.

Source: Cornhusker Economics

HEALTHY EATING

No-Crust Pumpkin Pie



Yield: 8 servings

Ingredients:

- 2 large eggs
- 1/4 teaspoon salt
- 1 (15 ounce) can pumpkin
- 1 3/4 teaspoon pumpkin pie spice*
- 1 cup non-fat dry milk
- 1/4 cup all-purpose flour
- 2/3 cup sugar
- 1 cup water

Directions:

1. Wash hands with soap and water.
2. Preheat oven to 350 degrees F. Spray a 9-inch pie plate with non-stick cooking spray. Set aside.
3. Crack eggs separately into a large bowl. Wash hands with warm water and soap. Add remaining ingredients except water and mix together.
4. Slowly stir in water until well mixed. Pour into prepared pie plate.
5. Bake for 45 to 55 minutes or until a knife inserted 1-inch from the center comes out clean.

Notes: Substitute 1 teaspoon cinnamon, 1/2 teaspoon ginger, and 1/4 teaspoon nutmeg for pumpkin pie spice if desired.



The Science behind Cheese

What do you get from combining milk and lemon juice? You guessed it, cheese! From a food science perspective, combining these two ingredients is an easy way for you to make a soft cheese at home. People have been making many varieties of cheese for thousands of years. Cheese offers many health benefits, such as vitamin A that supports *eye health*, protein for building muscles and wound healing, phosphorus to help calcium during bone development, and calcium to keep bones strong and healthy.

Explaining the Science: Lemon juice is an acid food and when added to milk it causes some milk proteins to coagulate, which can be observed by the clumping of the milk. The result is a separation of these proteins in the form of curds from the whey.

Soft Cheese - To make cheese at home you will need:

- 1 gallon of milk (makes about one pound of cheese)
- Juice of one lemon or 1/3 cup lemon juice
- Cheesecloth
- Strainer
- Bowl to be placed under the strainer
- Stove
- Something heavy (food cans on a small plate work great)



How to make cheese:

1. Wash your hands with soap and water.
2. Make sure everything is clean and sanitized to be as free as possible from harmful bacteria.
3. Unfold the cheesecloth and place it in the strainer. Place the strainer in a bowl.
4. Pour the milk into a large saucepan.
5. Bring the milk to a boil, stirring constantly to prevent scorching.
6. Turn the heat down to low and continue to stir gently while adding the lemon juice. The milk will start to get chunky, this is called curdling. Stop stirring.
7. Allow the milk to cool. Once the milk has cooled, pour the curds and whey into the cheesecloth lined strainer.
8. Gently pull the cheesecloth edges up to form a ball of curds. Secure the cheesecloth edges. Place a small plate on top of the cheesecloth covered curds, then place clean food cans on top of the plate. Let the cans press on the cheese for a couple of hours.
9. Add salt to taste and enjoy eating your cheese!

10. Cover and refrigerate any leftovers and eat within 3 days.

Source: food.unl.edu

TODAY'S FUTURE

Family meals allow your young child to focus on the task of eating and give you a chance to model good behaviors. It may take a little work to bring everyone together for meals. Start eating meals together as a family when your kids are young and it will become a habit. Plan when you will eat together as a family. You may not be able to eat together every day but try to have family meals most days of the week. A meal together doesn't have to be the evening meal. Sometimes lunch may work better for your family. Breakfast together can be a great way to start the day!



Safety Tips for Walking

Walking is good for your health, and it's good for the environment too. Below are tips and helpful reminders to make your walks both fun & safe.



Leave word. Tell somebody or leave a note at home about where you plan to go and how long you plan to be out.

Identify yourself. Walk with proper ID, and carry a cell phone with emergency contacts visible.

Don't wear headphones. You need to be able to hear approaching vehicles and be aware of your surroundings.

Use the sidewalk. If a sidewalk is available, walk on the sidewalk.

Face traffic. It's easier to see and react to oncoming cars. Drivers will see you more clearly too.

Make room. If traffic gets heavy, or the road narrows, be prepared to move onto the shoulder of the road.

Be seen. Wear high-visibility, brightly colored clothing. When out near or after sunset, reflective materials are a must.

Pretend you're invisible. Don't assume a driver sees you.

Watch the hills. When they crest hills, drivers' vision can suddenly be impaired.

Beware of high-risk drivers. Steer clear of potential problem areas like entrances to parking lots, bars, and restaurants.

Source: <https://food.unl.edu/free-resources/newsletters/family-fun-run/safety-tips-walking>

WORLD OF WORK

Starting a Business



In the simplest of terms, entrepreneurs are people or groups of people who start and/or grow businesses. If the idea of offering a business appeals to you, become informed.

- What are some potential needs of the people in your community?
- What products or services have you not been able to find or buy at this time?
- What businesses already fulfill those needs in the community?
- What is the potential customer base for the need?
- What is the potential for the customer base to grow or decline?
- What is the probability that the customer base could financially support your business?

Assistance in starting your business is available from:

[Center for Rural Affairs](#)
[USDA Rural Development](#)
[Rural Enterprise Assistance Project](#)
[US Small Business Administration](#)

proactive about selling. Sales deadlines ensure that you aren't continuing to incur storage expenses while prices decline. Target prices and sales deadlines work together to help you achieve a farm price in a range that helps you survive.

Commodity prices typically have a defined seasonal price pattern. Setting sales deadlines that correspond to periods when prices are traditionally highest will help make marketing easier. Price patterns vary by commodity. Corn prices are typically highest in the spring (March – June,) and

Writing a Marketing Plan for Your Stored Grain

The goal for any farmer holding grain in storage should be to obtain a better price for that crop in the spring or summer than the price offered at harvest.

Some farmers put grain in the bin looking to sell it by hitting a grain marketing "home run," i.e., selling all of their grain in storage at the highest price possible. This one-shot marketing approach is rarely a successful strategy because farmers either sell grain before the market high hits or wait too long and end up with a lower price than what was offered at harvest. Savvy grain marketers tend not to use this one-shot approach. The most successful marketers write a grain-marketing plan that guides them to sell smaller quantities of grain throughout the year. This approach allows the farmer to be more in control of the final farm average price. The following five steps describe how to write a grain-marketing plan.

Break the total amount of grain into smaller units - Instead of thinking of your marketing plan as selling all of your grain at once, sell your grain in smaller quantities. Most farmers think in 1,000- or 5,000-bushel quantities. This allows multiple sales to occur and therefore the opportunity to take part in unforeseen rallies (and further price declines).

Set price targets - When determining price targets after harvest, you will want to set targets above the price you could have obtained at harvest, plus any additional expenses accrued by storage. The longer the grain remains in storage, the higher the price target will need to be. Expenses to consider are bin rental/maintenance/repairs, insurance on grain in storage, potential quality deterioration, and additional interest expense on operating notes.

It is important that you set realistic price targets. Setting prices too high or too low may be detrimental to your plan. When your price targets aren't realistic, you either sell too quickly at a low price or hold grain too long, waiting for a price the market never reaches. Price targets can always be adjusted if market fundamentals change.

Set sales deadlines - If prices do not rise enough to meet your price target, you need to set sales deadlines to ensure you are

soybean prices are traditionally highest in summer (June – July). Don't forget to calculate storage costs when taking this approach.

Another consideration when selecting sales deadlines is your cash flow needs. Are there certain times of the year when you need to make sales to make payments? Plan and have this cash ready by setting sales deadlines ahead of payment dates.

Know your contracts - There are several types of contracts you can use to sell grain. You should work with your local elevator or broker to determine what marketing contracts are available to you and what contracts you should be using to achieve your price targets and sales deadlines. Typical marketing contracts offered by most local elevators are *cash sales, forward cash contracts, basis contracts, and hedge to arrive (HTA) contracts*. You can also work with a broker to establish hedges, and/or an options position.

Share your plan with someone else - Once you have written your plan, share it with someone else. Sharing your goals with your spouse, merchandiser, or banker will help keep you accountable to your marketing goals.

Marketing plans can become more complex. However, this basic outline will help you get started. Remember, the goal of the marketing plan is not to get distracted from your goals determined at the beginning of the crop cycle.

Source: Cropwatch.unl.edu



During the holiday season, we often think about the many things for which we are thankful. It might be family, friends, or a good job. It may also be our ability to keep ourselves healthy by eating good food and partaking in physical activity. Here are a few more ways to think about being thankful for health and physical activity.

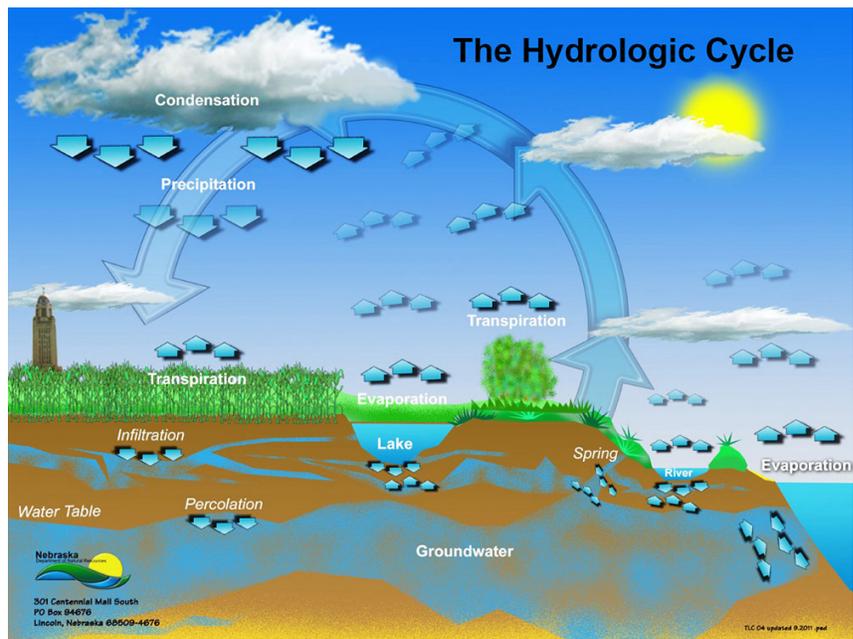
- If you are able to do physical activity outdoors, you might be thankful for the clean, crisp air that allows you to breathe. Walking outdoors in the sunshine increases your exposure to Vitamin D, which promotes calcium absorption, bone growth, immunity and decreases inflammation.
- Exercising reduces stress by releasing your body's endorphins which elevates your mood. People who engage in regular physical activity have fewer heart attacks and strokes, lower blood pressure and higher levels of HDL (healthy cholesterol) than non-exercisers. For some, it also improves quality of sleep and keeps you energized.
- Maybe you are thankful that physical activity helps you to maintain a healthy weight. Physical activity, especially walking, can be free and is relatively easy to do. By enjoying physical activity, we are able to strengthen the heart and lower disease risk. It also tones the arms, legs and torso. During the holiday season, you might be especially thankful for physical activity when you feel like you've eaten too many desserts, and now have a way to work those extra calories off.
- As you exercise, you might be thankful that you have a good friend to go with you. Maybe you have a spouse or child that likes to go and talk about their day. To be surrounded by friends and family and to be able to forget the stresses of the day may make you grateful for all you have.
- While you are doing physical activity, you can take a few minutes to think of all the things that make you thankful. And by doing so, you can live a healthy life.

Source: food.unl.edu

SPLASH INTO EXTENSION

Groundwater is vital to the “Good Life” in Nebraska. It maintains our agricultural economy, supplies water to streams and lakes, and provides drinking water to municipalities and rural households. Nebraskans pump groundwater out of the High Plains aquifer and many other aquifers across the state. The vast majority of groundwater is used for agricultural production.

Groundwater Protection: It's up to Everyone



If you think about the water cycle, you begin to realize the water we use every day, is in essence, recycled. There's no new water, we are drinking some of the same water the dinosaurs drank!

Keeping our drinking water sources safe begins with each of us. There are many things everyone can do to assist with groundwater protection whether you live in an urban or rural area.

Nebraska is often called “The Groundwater State” and for good reason — we sit atop the largest portion of the High Plains Aquifer, also known as the Ogallala Aquifer than any of the other states that it lies below. With this comes a critical responsibility that everyone can help with: groundwater protection.

Chemical and Medication Use/Storage/Disposal - The first thing everyone can do is always use and store household and outdoor chemicals according to the manufacturer's directions. Over application or improper use of these chemicals can be potentially harmful to you, our groundwater and the environment.

If you need to dispose of them, do so properly and safely. Lincoln/Lancaster County residents can drop off approved items for free at Lincoln's Hazardous Waste Center. For more information, go to <http://haztogo.com>. These chemicals include, but are not limited to: oil-based paints, solvents, cleaning products, petroleum products, fertilizers, pesticides and herbicides. For information about disposal sites outside the Lincoln area and links to helpful household hazardous waste information, please visit <https://www.knb.org/waste-programs/household-hazardous-waste>.

Proper disposal of unused/expired medications can also make a positive impact in groundwater protection. Many local pharmacies accept unused/expired medications. For further information, visit <http://nebraskameds.org>. Dumping chemicals or medications down the sink drain, storm drain or flushing down the toilet are not safe means of disposal.

Conservation - Everyone can help conserve our groundwater resources. Looking at how you and your family use water and implementing ways to conserve is not as hard as one might think. Easy steps in water conservation are:

- Check all faucets, taps and water using appliances both inside and outside your home.
- Fix any leaks or valves that won't shut off completely.
- Install water wise appliances such as low-flow shower heads, toilets, dishwashers, clothes washers and sprinkler heads.
- Mulch plants, water lawns/gardens in the early-mid morning hours, and only water when root zone moisture is needed.
- Choose landscape plants and lawn/turf options that are drought tolerant.

These tips not only help to conserve our groundwater resources, but can equate to a big impact in water usage. Thus, potentially helping to reduce your water bill if you are connected to a public water system or your power bill if you have a private well.

Private Well Ownership - Private well owners have additional responsibilities other than those previously discussed. Whether you own a domestic, irrigation or livestock well, you need to make sure all possible sources of contamination are kept away from your wellhead. The ground around your well head needs to slope away from it to aid in shedding water and potential contaminants away from your well.

Private wells, unlike public water system wells, are not required to be tested on a regular basis. It is highly recommended that private well owners, particularly owners of domestic wells, have their water tested on an annual basis for bacteria, nitrates and any other known contaminants of local concern. Your local Natural Resource District (NRD), whether it be the Lower Platte South NRD or Nemaha NRD (for Lancaster County residents), is a good place to inquire about the water quality in your area.

If you would like to order a nitrate, Coliform bacteria and/or other known contaminant test kit(s), you can call the Nebraska Public Health Environmental Laboratory at 402-471-3935. The Laboratory is located at 3701 South 14th St., Lincoln, NE 68502. There is a charge for each of these tests.

Abandoned Wells - If you own an abandoned well, you need to properly decommission it by hiring a Nebraska licensed Water Well Contractor. Abandoned wells are a potential liability and can be a direct conduit for contamination to the aquifer below. Many NRDs throughout Nebraska offer a cost-share program for decommissioning water wells. It is worthwhile to check with your NRD to find out more about their decommissioning cost-share program.

Protecting and conserving our groundwater resources is up to everyone. Small changes can add up to a big impact.

Source: water.unl.edu

IN THE DIRT

Become a Master Gardener

Classes are held once a year, beginning sometime between January and March. Contact your local county extension office to determine the training location closest to you. Enrollment may be limited based on available space.

Attendance is required for a minimum of 40 hours of education. Volunteers are considered Master Gardener Interns after they have completed the 40 hours of educational training and passed an open-book test with a 70% or better. A volunteer becomes a University of Nebraska Extension Master Gardener after 40 hours of volunteer activities is completed. This title is retained until the training sessions begin again the following year.

Winter Protection for Sensitive Plants

We've already had a fore taste of winter, both snow and cold temperatures, and we know there's only more to come over the next 4-5 months. While temperatures are still relatively warm, now is a good time to prepare your plants for winter to make sure they are healthy and beautiful next spring. Plants often suffer in winter from common problems such as winter desiccation, physical damage from a heavy ice and snow load, excess salt or wildlife damage.

Avoid Winter Desiccation - Winter desiccation is a common type of winter injury that occurs when the amount of water lost by the foliage exceeds the amount picked up by the roots. Browning of evergreen needles from the tip back towards the base is a typical symptom, as in the picture of white pine needles above. The key to preventing winter desiccation is to keep plants well-watered throughout fall and into winter. Monthly watering at times when the ground is not frozen can be very beneficial, including November and December, so don't put your hoses away too early. Be aware of plant water needs throughout winter, especially if we have another dry winter with little snow cover.

Another step you can take now to help conserve soil moisture for your plants throughout winter, is to apply a 3-6 foot diameter ring of mulch around the base of sensitive trees and shrubs, with 3-4 inches of an organic material like coarse wood chips.

Prevent Physical Damage - Wet snow and ice often results in a heavy load for tree and shrub branches, and can lead to limb

breakage. The heavy weight can also cause less obvious internal splits or cracks in trunks and limbs, which pose a risk long after the storm.

Arborvitae and pyramidal yew are two common shrubs benefiting from additional protection. One method that protects branches from breaking under heavy snow load is tying up each individual plant with heavy 3-strand jute twine. Start by tying the jute twine around the trunk at the base of the branches or to the base of one of the lower branches. Next, wrap the twine spirally up the plant, pulling the branches inward into a tight pyramidal shape, but don't pull the twine so tightly that you break any branches. The tighter conical shape created and extra support provided by the jute twine, helps plants shed snow more easily and prevents branch damage. Remove the twine in spring after danger of snow has passed. As the weather warms, branches will move back to their normal position.



When a heavy snow or ice load does occur, whether the plant has been tied up or not, let the ice melt naturally from tree limbs. If it is safe to do so, gently remove snow from limbs with a broom or rake. Hold onto the limb from below and gently brush off loose snow. Do not hit a branch to knock off snow or ice. Watch for falling limbs and ice from above. Do not try to dig snow away from shrubs as this leads to damaged limbs.

Protect Plants from Ice Melt Products - Snowblowers and shovels can't always remove compacted snow or ice on hard surfaces, so using a chemical deicer can be helpful including the common deicing compounds listed below. They may be used alone, or blended together to improve performance or reduce damage to concrete or landscapes.

Products are listed in order of potential plant damage, with the most damaging first.

- Sodium chloride is the least expensive product and commonly used on roadways. It has a high burn potential for landscape plants.
- Urea can harm landscape plants and cause runoff pollution in ponds and waterways.
- Potassium chloride, also known as muriate of potash, is less damaging than sodium chloride.
- Calcium chloride is the most effective deicing product at low temperatures, down to -25°F. Will not damage vegetation if used as directed.
- Magnesium chloride is sprayed on roadways before a snowstorm to prevent ice bonds from forming, making ice and snow removal easier. It causes very little damage to concrete or metal. It's also gentle on landscape plants and pet safe if used as directed. It also doesn't track into the house.
- Acetates can be found in three forms- calcium magnesium acetate (CMA), sodium acetate and potassium acetate. CMA is a salt-free product and is the safest product for use around pets and landscape plants. CMA is made from dolomitic limestone and acetic acid (the principal component of vinegar). Studies have shown the material has little impact on plants. It also has a very low level of damage to concrete or metal.

To protect your landscape and pets, look for products like:

- SafeStep Sure Paws, contains magnesium chloride/potassium sulfate
- Melt- Environmentally Friendly Blend Ice Melter, contains calcium magnesium acetate.

Also keep on hand products that improve your footing on slick surfaces, like sand, sawdust, or cat litter. They can be used instead of traditional deicing products, or blended with them to improve traction and limit deicer use.

Although salt is applied throughout the winter, most salt damage occurs in late winter and early spring when plants are beginning active growth and excess salts are pulled into the plant. So it is particularly important to protect plants during this time, and limit salt use in late winter.

Using the smallest amount of product needed to manage ice will also minimize landscape damage. Avoid piling snow containing salt around sensitive plants, such as redbud, hackberry, hawthorn, crabapple, pin and red oak, littleleaf linden, barberry, boxwood, dogwood, spirea, Viburnum, Balsam Fir, White Spruce, White Pine, Scotch Pine, Yew, Arborvitae and Hemlock.



Rabbit damage, bark stripping, on euonymus

Protecting Plants from Sunscald and Wildlife - Prevent sunscald on young, thin-barked trees by shading the south and west face of the tree's trunk with a white painted piece of wood, pounded into the ground in front of the tree. Or use a section of black drain tile, slit down the side, then fit around the tree's trunk.

Protect trees from rabbit and vole damage by wrapping the trunks with ¼ inch hardware cloth. The cylinders should extend higher than a rabbit's reach while standing on the expected snow depth, and stand 1 to 2 inches (2.5 to 5 cm) out from the tree trunk. Usually a height of 2-3 feet is sufficient. Bury the bottom edge of the cylinder 2-3 inches in the soil to prevent voles from going under it.

Note: Reference to commercial products or trade names is made with the understanding that no discrimination is intended. These products are listed as examples only. No endorsement by the University of Nebraska-Lincoln is implied. Source: <https://acreagenebraska.org/2019/11/06/winter-protection-for-sensitive-plants/#more-830>

EXTENSION
INSTITUTE OF AGRICULTURE AND NATURAL RESOURCES
Knox County

P.O. Box 45
Center, NE 68724-0045

Address Service Requested

November is Sweet Potato Awareness Month

Orange & Sweet Potato Pork

Makes: 2 servings – for additional servings it was easy to toss in an extra pork chop and add another sweet potato



- Ingredients
- 2 pork chops
 - 1 sweet potato (peeled)
 - ½ orange (sliced)
 - 1 dash cinnamon (optional)
 - 1 dash salt (optional)
 - 1 dash black pepper (optional)

Directions 1. Preheat oven to 350 degrees. 2. In a medium skillet, brown pork chops in a small amount of oil. 3. Cut sweet potato into 1/2-inch slices. 4. Place meat and sweet potato slices in a baking dish and top with orange slices; sprinkle with seasonings if desired. 5. Cover and bake for 1 hour until meat is tender. Pork is safely cooked when it has been heated to 145 degrees F, followed by a 3 minute rest.

Nutrition Facts: Calories, 270; Calories from Fat, 100; Total Fat, 11g; Saturated Fat, 4g; Trans Fat, 0g; Cholesterol, 65 mg; Sodium, 85mg; Total Carbohydrate, 17g; Dietary Fiber, 3g; Sugars, 6g; Protein, 25g.
Source: <https://food.unl.edu/documents/orange-pork-chops.pdf>