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District Extension Agent, Crops & Soils

### What's Your Corn Nitrogen Number?

If pricing Nitrogen (N) for the 2026 corn crop is on your to-do list, commodity prices likely are as well. Unfortunately, that combination of price points might leave you feeling 'pinched' and looking at options to reduce fertilizer input costs. With fertilizer making up approximately 20 percent of the total costs of the 2025 NE Kansas Non-Irrigated Corn Budget, it can be an easy target for cuts – but only if it's warranted. Part of determining if it's warranted can come with a deeper dive into where your nitrogen rate numbers come from.

Where *does* your corn N rate number come from? Is it based on a factor you've used forever? Have you adjusted rates over time or run N trials of your own to evaluate rate response? Is it a number from a soil test or the one that fits a budget? None of those may be wrong, but they might deserve additional validation as well.

You don't have to run your soil tests through the K-State Soil Testing Lab to utilize KSU corn N rate recommendations. They're publicly available in MF2586: *Soil Test Interpretations and Fertilizer Recommendations in Kansas* ([https://bookstore.ksre.ksu.edu/pubs/soil-test-interpretations-and-fertilizer-recommendations\\_MF2586.pdf](https://bookstore.ksre.ksu.edu/pubs/soil-test-interpretations-and-fertilizer-recommendations_MF2586.pdf)) and can be used to 'test' your N rates against a nitrogen rate formula based on multiple years of N rate response trials.

The formula:  $N (lb/a) = (ie/fe) EY - (se) Profile N - (Percent SOM \times 20) - Manure N - Other N Adjustments + Previous Crop Adjustments$  – means little without an understanding of the formula's factors (see page five of the publication). In short, the formula uses an expected yield (EY) times crop (ie) and fertilizer (fe) efficiency factors to come up with a starting N rate. Credits for profile N, soil organic matter, manure, and previous crop are then subtracted from the starting value to come up with a final N rate number. It can take some studying to know when to apply certain efficiency factors or how to accurately account for credits, but it can also help you validate your N rate number against University replicated N response curve research.

Interested in running some numbers to see where they sort out? Drop me a line and we'll schedule time to compare traditional N rates to those using these formulas. It may mean your N rate is spot on and needs little more than some fine tuning. Even if the numbers are drastically different, it may not mean a change to your N application rates. Use a number you trust and feel comfortable with. Where the comparison can help most is in providing a calculated value for comparison purposes to the formula or value you already using, to make sure you're hitting the sweet spot of spending for your fertilizer dollar.

If you want to run numbers on your own, the K-State Soil Testing Lab has a number of tools available for download/use you might want to take a look at: <https://www.agronomy.k-state.edu/outreach-and-services/soil-testing-lab/recommendations.html> .

Ross Mosteller  
District Extension Agent, Livestock & Natural Resources

## Conscientious Culling

Amongst the back-to-school first day photos that have been popping up on my social media, there have been photos of processing calves prior to or at weaning from folks across the United States. Typically, this time of year the discussion around weaning stems from a lack of forage and ways to manage cows and calves on limited resources. The abundance of summer rainfall puts us in a different position now, but markets have had record prices, making one wonder if this isn't a good marketing window to capture value in? My focus today will be on the cow side of this discussion, particularly the cows need to be considered for culling at weaning.

It is no secret that the nation's cowherd is at historically low levels. Many of the top economists in the business don't see this trend turning around soon for several reasons, such as higher slaughter weights, heifer retention numbers and geographic weather conditions ranging from drought to flooding. All of this might make you wonder what to do with the current cows within your herd. Weaning time is a good time to assess and make management decisions.

The high value of slaughter and bred cows right now might make you think differently about a cull cow marketing strategy, but some basic considerations should still guide decisions. One of old adages around cull cows is utilizing the rule of "O's". This has been expressed with slight differences in discussion groups but basically revolves around culling out females that fall within one or more of the following categories: Open, Old, Ornery, Oddball/Out/Off.

One of the single most important links to profitability in a cow/calf operation is having bred cows that raise and wean a live calf each year. Those cows who are found to not be pregnant are the first category to cull against. Marketing strategies include selling the cows at weaning time, feeding them to increase body condition and potentially breeding them to sell as later bred females. There are pros and cons to each decision that vary by operation.

Cows will reach prime production between 4 and 5 years of age. Additionally, research has shown that a cow needs to produce 4 or 5 calves to get to a place of profitability, which makes getting cows to and through "middle age" a goal. Although cows can live and produce calves for 15 or more years, by age 10 most start to wean smaller calves, are more likely to come up open and have health issues. Therefore, older cows become a second culling criteria.

Bullfighters may enjoy dealing with ornery cattle, but those cows with bad disposition, who are aggressive and hard to work with, need to be considered for culling. No matter how good her calves are, keeping an aggressive cow around is not worth the risk of injury. This is especially true for operations with older producers or young children. Disposition is a moderately heritable trait, so keeping daughters of ornery cows often propagates this issue.

The final culling criteria is for anything that doesn't fit the remainder of the herd or is a potential problem. This can be bad feet, bad legs, bad udder, bad eyes, missing teeth, poor health history, late breeder, hair coat diluter, doesn't shed hair, can't handle summer heat or really anything that is non-conforming to the rest of the cowherd? Culling out these issues makes the cowherd better in the long-term.

Utilization of cow production records can help make culling decisions. Checking pregnancy status, weighing calves and cows each year at weaning has several long-term benefits. The top cows wean off the highest percentage of their mature weight each year. These more productive cows are those that combine genetic potential to conceive/calve early in the season, avoid health issues and have appropriate mature weight and milk potential relative to their production environment.

Laura Phillips  
District Extension Agent, Horticulture

### **Prepare your soil for spring**

As fall creeps closer, it is a perfect time to evaluate and improve your soil health. Your garden will thank you in the spring! The first step in evaluating your soil health is to do a soil test, especially if you have not done one in the past two years. Performing the standard gardener soil test through K-State can tell you about your soils' pH, organic matter, phosphorus, potassium, and nitrates. With this information you can make adjustments that optimize your soil for plant growth.

When evaluating soil health, one of the first things to look at is the pH. Soil that is too acidic or too basic can wreak havoc on your garden. Even if you have sufficient nutrients, an extreme pH level will essentially lock those nutrients in place, making them inaccessible to plants. While not all plants require the same pH range to thrive most, vegetables and ornamentals will grow well with a pH somewhere between 6.0 and 7.0. If your soil test indicates that your pH is too high, you can incorporate sulfur to lower it. If your soil pH is too low, you can incorporate lime to raise it. In Northeast Kansas, many gardeners have slightly basic soils (a pH just above 7.0) and need to incorporate sulfur into their garden.

Adding lime or sulfur to your soil, however, will not alter the pH overnight. In fact, it can take over a year for these amendments to fully react with your soil and alter your pH. Rather than waiting until spring to mess with your soil pH, make those changes now so that the amendments have time to react with the soil before your next spring planting.

Next you want to look at your organic matter content. Organic matter refers to decaying plant materials or animal waste, which can offer numerous benefits. Beyond providing nutrients, it can improve the soil structure, increase water infiltration and retention, and increase the amount of nutrients available to your plants. If you have low organic matter content, consider applying a thin layer of organic matter to your garden in the fall. This will allow it to break down and incorporate into your soil over the winter. It is important to note that not all compost is equal. Depending on the source of the decomposing matter, it can alter your pH or have high amounts of nutrients your soil already contains. Make sure you are adding organic matter that is suited for your soil.

Once you have added any pH amendments and organic matter, cover your soil for the winter. You can do this either with mulch or cover crops. Bare soil is prone to erosion, nutrient leeching, and damages the soil structure. Additionally, both cover crops and mulch will provide additional organic matter to your soil.

Lastly, you want to look at your soil's nutrient values. You can compare your soil nutrient results to our K-State *Fertilizing Gardens in Kansas* to determine how much phosphorus, potassium, and nitrogen your specific plants will need. You can apply these fertilizers in the spring either before planting or as you plant, and make sure to water them into the soil.

If you have any questions about working with your soil, or need to get a soil test done, reach out to one of our offices for more information.

Teresa Hatfield  
District Extension Agent, Family and Community Wellness

### **What is the Annual Notice of Change Notice?**

The Annual Notice of Change (ANOC) notice from your Medicare Prescription Drug Company or your Medicare Advantage Plan should be arriving shortly. This notice should arrive in your mailbox or your email box in September and by the 30<sup>th</sup> at the latest. The notice should come from your insurance company in which you hold your prescription plan or your Medicare health plan.

It is important to take a careful look at this information. Every year your plan can make changes that will go into effect in January. Look over the costs of your plan for the next year, including premium, deductibles, co-pays, and co-insurance. Your plan can also change the formulary or the list of medications they cover. Your medication may be covered this year but might not be covered for next year. You will also want to make sure your pharmacy is still in the network.

You may want to consider a plan comparison even if you are happy with your plan's changes for next year. Many people have been able to save significant amounts of money by changing their Medicare plans.

### **Upcoming Important Medicare Dates**

- September 30—Annual Notice of Change notice must be received by Medicare beneficiaries. If you have not received your letter, contact your plan.
- October 1—Get ready for Open Enrollment Review any notices from your current plan about cost and benefit changes for next year. Make a point to compare to find and compare plans that meet your needs.
- October 15—Open Enrollment begins This is the one time of year when everyone with Medicare can make changes to their health and drug coverage for the next year. If you are unsure of how to compare Medicare plans, call K-State Extension-Meadowlark District for an appointment with a trained Senior Health Insurance for Kansas (SHICK) Counselor.
- December 7—Open Enrollment ends In most cases; this is the last day you can change your Medicare coverage for next year.
- January 1—Coverage begins If you switch to a new health or drug plan, your new coverage starts January 1. If you keep your current coverage, any changes to benefits or costs for the new year also start on January 1.

### **Need Help Paying for Your Medicare Costs?**

The Medicare Savings Program helps people with limited resources and assets cover the costs of the Medicare Part B premium, and potentially the Medicare Part A premium, co-pays, co-insurance, and deductibles. Eligible Medicare beneficiaries can complete an application to submit to KanCare to see if they qualify. The Meadowlark Extension District has the application for the Medicare Savings Program.

Extra Help helps people with limited income and resources pay for Medicare drug coverage (Part D). You can apply at [SSA.gov/extrahelp](https://www.ssa.gov/extrahelp). The Extra Help program helps pay for Part D premium, deductible, co-payments and co-insurance for Medicare Part D drugs.

For questions about Medicare or help with applications contact: Teresa Hatfield, [thatfield@ksu.edu](mailto:thatfield@ksu.edu) or 785-364-4125.



Cindy Williams  
District Extension Agent, Food, Nutrition, Health and Safety

#### **4-H Fair Winning Recipes Revealed**

The 2025 4-H Fair has come and gone, so it is time to share the "winning" or "Overall Grand Champion" and "Reserve Overall Grand Champion" food recipes. This is a tradition that I started many years ago and a way to recognize some 4-H members in the foods project.

Our first Overall Grand Champion Food winner was Lillyan Lloyd of Valley Falls. She is the daughter of Chasity Lloyd, and a recent graduate of Valley Falls High School. Lillyan is a 12-year member of the Prosperity 4-H Club. She has been involved in several projects during her 12 years in 4-H. Some of these projects include Leadership, Photography, Poultry, Shopping in Style, Horticulture and of course, Food and Nutrition. Lillyan entered a Raspberry Filled Chocolate Cake with White Chocolate Buttercream Frosting. (This recipe has three parts to it Raspberry Filling, Chocolate Cake and Buttercream Frosting.)

##### **Raspberry Jam Filling**

5 cups of raspberries  
7 cups of sugar  
1 box Sure Jel

Wash raspberries and put them in a 5-quart pan. Crush. Add 1 box Sure Jel and bring to a rolling boil, stirring constantly. Add sugar. Bring to another full rolling boil and boil one minute. Cool until ready to prepare cake or put into prepared jars and refrigerate.

##### **Hershey's "Perfectly Chocolate" Chocolate Cake**

2 cups of sugar	2 eggs
1 $\frac{3}{4}$ cups all-purpose flour	1 cup milk
$\frac{3}{4}$ cups cocoa	$\frac{1}{2}$ cup vegetable oil
1 $\frac{1}{2}$ teaspoons baking powder	2 teaspoons vanilla
1 $\frac{1}{2}$ teaspoons baking soda	1 cup of boiling water
1 teaspoon salt	

Cream together the sugar and vegetable oil; add all dry ingredients, sift together and add to creamed mixture. Carefully add eggs beating after each egg. Then add milk and beat. Then add boiling water until mixture is well combined. Pour into greased and floured cake pans.

##### **White Chocolate Buttercream Frosting**

12 oz. white chocolate	$\frac{1}{2}$ cup heavy cream
2 cups of butter	1 teaspoon vanilla extract
10 cups of powdered sugar	$\frac{1}{2}$ teaspoon salt

1. Melt chocolate in microwave, stirring every 20 seconds until mixture is smooth. Beat butter on medium speed for 1 minute, then add sugar. Add white chocolate to butter and sugar mixture. Add cream, vanilla and salt. Beat for one minute.
2. Assemble cake by putting raspberry mixture between the cake layers. Frost with White Chocolate Buttercream Frosting.

Another Overall Reserve Champion was made by young man, Lane Coppinger from Winchester. He is the son of Lucas and Andrea and is a 7th year member of the Winchester 4-H Club. Lane will be an 8th Grader at Jefferson County North High School. Among his other projects, Lane is involved in Market and Breeding Beef and Leadership. One of the things that Lane shared with me is that he really likes lemon and tries to bring a lemon recipe every year to the fair. He also shared that he didn't care for the filling that originally came with this recipe, so he used a family favorite instead. Now for that "winning" recipe called Lanes Lemon Sandwich Cookies.

### **Lanes Lemon Sandwich Cookies**

16 tablespoons unsalted butter, softened	1 teaspoon vanilla extract
1 ¼ cups sugar	2 2/3 cups of flour
2 small lemons, zested	1 teaspoon of baking soda
1 egg, room temperature	1 teaspoon of baking powder
3 tablespoons lemon juice, separated	¼ teaspoon salt

For the filling:

1 cup shortening	1 teaspoon vanilla extract
5 1/8 cups powdered sugar	1 teaspoon lemon juice
½ cup water	

For the drizzle:

1 cup powdered sugar  
3 Tablespoons milk

To make the cookies, preheat oven to 350 degrees. Line a large cookie sheet with parchment paper. In a medium bowl, beat together the butter, sugar, and lemon zest until smooth. Add the egg. Squeeze both lemons that were zested and measure out 1 and ½ Tablespoons of lemon juice. Slowly add the dry ingredients and beat at a low speed until combined. Chill dough for 10 minutes. Using a small or medium ice cream scoop, portion the dough and roll into balls. Place on cookie sheet, leaving about 2 inches between each cookie. Bake for 5 minutes then flatten the cookies with the back of a spoon or a measuring cup. Bake for another 5 minutes or until done. Remove from oven. If desired, use a round cookie cutter to trim the cookies into perfect circles. Transfer to a cooling rack. To make the filling, combine all ingredients and mix until smooth. Transfer filling to a piping bag, pipe it onto the bottom of a cooled cookie, and top with another cookie. To make the drizzle and put it over the cookie sandwiches.