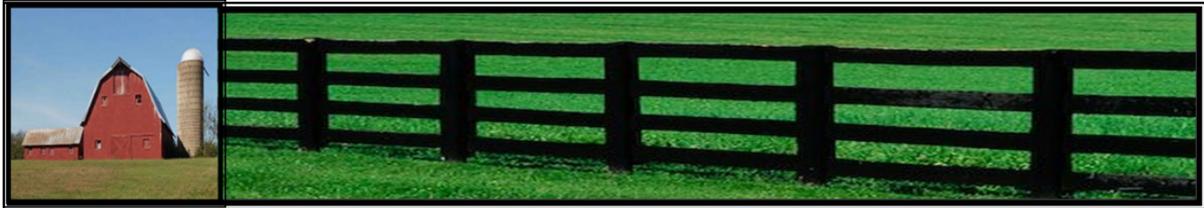




# NOBLE COUNTY EXTENSION



## Agriculture News and Updates December 2021

### Evaluating Fees on a Cost per Unit of Protein and Energy Basis

Dr. Mark Z. Johnson, OSU Extension  
Beef Cattle Breeding Specialist

Oklahoma has finally received much needed moisture and a break from summer heat, finally it feels like fall! From a nutritional standpoint, cattle basically need protein, energy, vitamins, minerals and water.

Assuming free choice vitamin/mineral and water is in adequate supply, most nutritional supplementation and feeding focuses primarily on the crude protein (CP) and energy (TDN) needs of cattle. Furthermore, nutritional needs of cattle vary by age, size, stage of production, environmental conditions and weather, gender, breed and other factors. In any nutritional program it is imperative to determine the objective of why we are feeding or supplementing. Are we trying to grow light weight calves in a dry lot until wheat pasture is available? Are we maintaining condition on pregnant cows until calving season or do cows need to gain some condition before calving season? What size are our cows? What is the nutritional content of the standing forage or hay we have on hand? These are just an example of answers needed to determine the goal of our nutritional program. That being said, we take a look at evaluating feed based on nutrient content as opposed to just looking at price per ton or bag.

At the time of this writing, 38% CP, 70% TDN range cubes are available at a bulk price of \$425/ton, the same commercial feed mill has 20% CP, 70% TDN cubes priced at \$312/ton. Protein and TDN content are on an "As Fed" basis. If we are in a situation

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requiring protein supplementation of cows grazing warm season grass this fall, either of these protein supplements could meet our needs, but which is the more cost-effective alternative? At a glance, \$312/ton strikes most of us as a more cost-effective feed. So, what are we actually getting?

At a cost of \$425, one ton of 38% cubes contains 760 lbs. of CP and 1,400 lbs. of TDN:  
For example: 2,000 lbs. x .38 = 760 lbs. and 2,000 x .70 = 1,400 lbs.  
The cost per unit of CP is \$.56/lb., the cost per unit of TDN is \$.30/lb.  
For example: \$425/760 lbs. = \$.55921 and \$425/1,400 lbs. = \$.30357  
At a cost of \$312, one ton of 20% cubes contains 400 lbs. of CP and 1,400 lbs. of TDN:

For example: 2,000 lbs. x .20 = 400 lbs. and 2,000 x .70 = 1,400 lbs.  
The cost per unit of CP is \$.78/lb., the cost per unit of TDN is \$.22/lb.

For example: \$312/400 = \$.78 and \$312/1400 = \$.2228  
So, we have determined the more cost-effective source of CP is the 38% cubes and the more cost-effective source of energy is the 20% cubes.

What is the most cost-effective feed? Depends on our objective. What we are we feeding/supplementing and why?

## References

Beef Cattle Manual. Eight Edition. E-913. Oklahoma Cooperative Extension. Chapter 16

## ***Weed ID & Winter Broadleaf and Grass Herbicide Options***

DATE: Tuesday, December 7, 2021

LOCATION: Noble County Fairgrounds Concession Area

TIME: 7:00 am to 8:00 am

Please contact Noble Co. OSU Extension if you plan to attend at  
[chad.webb@okstate.edu](mailto:chad.webb@okstate.edu) or 580-336-4621.

*1 CEU available*

Coffee and Donuts provided by Helena Agri-Enterprises, Blackwell OK

## **OKLAHOMA HOME AND COMMUNITY EDUCATION (OHCE)**

Consider joining OHCE! For questions about a community club near you, visit the Noble County OSU Extension office for information regarding the long withstanding local, county and state organization.

## ***2021 Noble County Fall Fair Premiums***

Fair checks (void date 12/31/21) are available in the Noble County OSU Extension Office which is located on the 1<sup>st</sup> floor of the Noble County Courthouse. The Noble County Courthouse and OSU Extension Office will be closed December 23<sup>rd</sup>, 24<sup>th</sup> and 31<sup>st</sup>. Please pick up your check soon and tell others who participated in the 2021 Fair.



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## Urea: Navigating High Prices

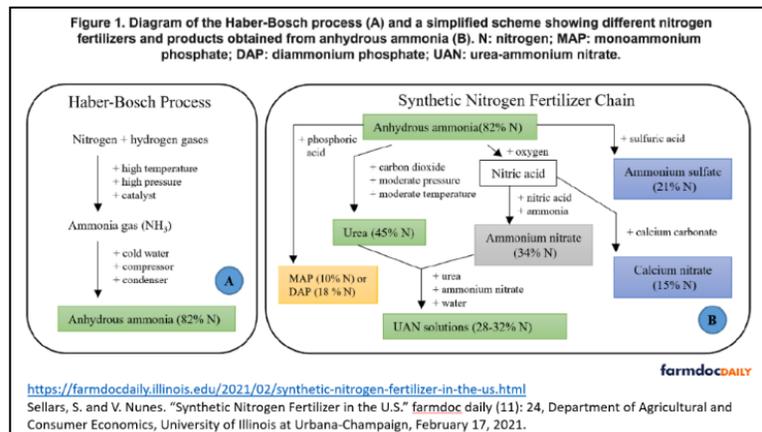
Scott Clawson, Area Ag Economics Specialist

The livestock business is always interesting. Normally, the cattle and beef markets are intriguing enough. There is plenty to discuss on that front, but other issues might be more impactful to our bottom line in the near term. One of those issues is pasture fertility. For eastern Oklahoma, we are fortunate to have a bulk of forages that respond to nitrogen. Yet, this sets the stage for a reliance on fertilizers to allow dense stocking rates and maximum hay production. As fertilizer prices continue to rise

(specifically urea for this discussion), it seems like a good time to understand the development of the product and some of the workings of the current market.

### *Development of Urea and Market Factors*

Urea is the most popular form of nitrogen for most forage producers in eastern OK. Price hikes for urea and other nitrogen options are mostly the result of complications in the input markets and production processes. Anhydrous ammonia (AA) is the parent product to urea. AA is very popular in many of our row crop producing areas, and we still see it in parts of NEOK. Yet, urea being much easier to haul, store, and apply is more heavily leaned on in pasture situations. The box on the left of Figure 1 illustrates the development of AA. Natural gas (NG) provides the hydrogen and is the energy source behind the temperature and pressure demands to get to Ammonia gas. As a result, NG prices are very important in our fertilizer markets. Figure 2 shows the current trend of NG prices here and abroad. The highest point on the graph refers to NG prices in Europe but even US prices have risen. Numerous factors have led to NG prices increasing across the globe leaving fertilizer markets in a bind. These issues include production plants halting production, countries protecting their domestic inventory, environmental disruptions, and everything in between. Corn prices and production are also important. Nitrogen is required to push yields. This increases the demand for nitrogen and increases nitrogen prices. The combination of corn, NG, and even oil prices all play a part in the price of nitrogen fertilizers.



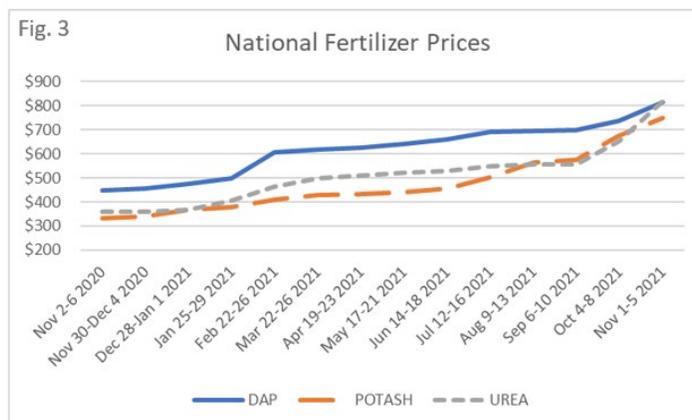
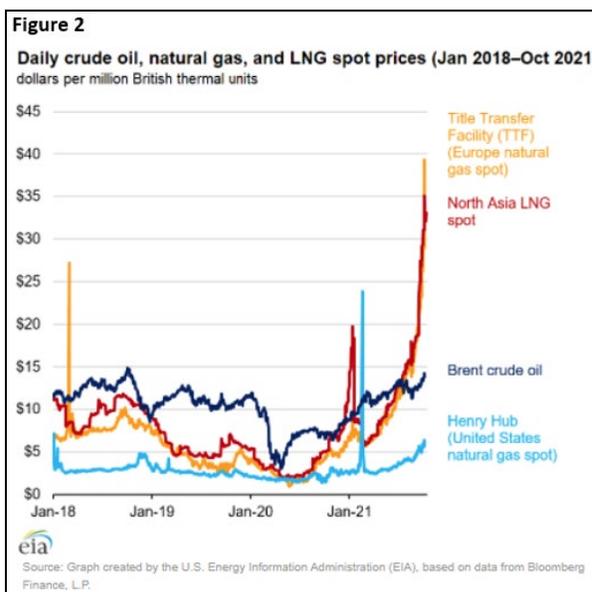
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## What Should We Do?

Livestock and hay producers in our corner of the world will need to adapt but we do have time before the spring. We can do a little preparation now to see just how we might need to respond.

1. Do a forage budget. Based on your stocking rate and forage production, dive into how much forage we really need to produce to support our operation. Don't forget about your hay demand as well in the calculations.  
<https://extension.okstate.edu/fact-sheets/forage-budgeting-guidelines.html>
2. Access to capital. If there is wiggle room on your operating line or liquidity on the balance sheet, then we may be able to proceed with some regularity.
3. Take Inventory of physical assets. It's not uncommon to see old web truss poultry barns in eastern OK filled with hay. Many producers like to keep some hay stored as a risk management tool against drought. Years like this we might need to add high fertilizer prices to the list of reasons to break into the stockpile. We could also look at our machinery or equipment line up and liquidate some less utilized items to free up capital. Similarly, is it time to get a little leaner with respect to the cowherd?
4. Inventory your soil. Soil samples are an inexpensive way to check where you sit on NPK. There are some levels of efficiency that can be found by focusing on maximizing production on our best ground in comparison to applying low levels of fertilizers over many acres.

My crystal ball never works as planned. Hopefully when the grass greens up again we will be back to dealing with \$350/ton urea. Until then, developing a plan will at worst give you an analysis of the current operation. Keep an eye on NG, corn, and oil prices this winter and reach out to your local OSU Extension Ag Educator if you need assistance.



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## Access Farm Management Resources 24/7

Brent Ladd, Extension Assistant

Producers seeking to gain new financial management skills will find educational resources on the e-Farm Management website. This site contains videos, publications, software tools and webinars for use by farmers and ranchers. Viewers will find information on financial, production, marketing, and risk management topics.

One example is the Landowner Rights: Surface Damage Agreements video. This video explores several issues a landowner may consider when leasing their land for non-agricultural uses. It discusses steps for a landowner to take including drafting a surface use agreement and an exploration agreement. Lastly, it suggests including restoration steps in the agreement.

To find this video and additional resources on landowner rights, go to:  
<https://extension.okstate.edu/programs/farm-management-and-finance/e-farm-management-training/landowner-rights/index.html>.

More information on this and other farm management topics may be found three ways: 1) contact your nearest Extension Educator 2) visit the e-farm management website (<https://extension.okstate.edu/programs/farm-management-and-finance/e-farm-management-training/index.html>) or 3) visit the OSU Ag Econ YouTube Channel (<https://www.youtube.com/user/OkStateAgEcon>).

### Extension Experience – Insights into Oklahoma Agriculture

The Northwest Area Extension Staff would like to announce the creation of our new podcast *Extension Experience*. The *Extension Experience* podcast is brought to you by Josh Bushong, Trent Milacek, and Dana Zook. Each week they provide perspective on Agriculture topics and offer insight from our experience working with Extension Educators and Producers across Oklahoma.

The *Extension Experience* podcast is available on Spotify, Google Podcasts, and Apple Podcast platforms. You can also access the episodes on spotlight,  
<http://spotlight.okstate.edu/experience/>.

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Coordinator 405-744-9154.



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