NOBLE COUNTY EXTENSION

Agriculture News and Updates
June 2022

Fuel prices in Hay Production

Scott Clawson, Area Ag Economics Specialist

The anticipation for hay season in eastern Oklahoma seems bittersweet this year. Eastern Oklahoma has largely worked its way off the drought map as we approach hay season and some concerns about forage production will be partially soothed by good growing conditions. Still, the operational costs for producing and getting hay in the barn is costly. We can easily observe the price of herbicides, pasture fertility and net wrap, but what specific impact will fuel price have?

In traveling across eastern Oklahoma this spring, I have been asked quite a few questions about how to price hay or the cost of custom baling services. To answer either of these, addressing our machinery and equipment cost is essential. The Mississippi State University Publication 3543 and the accompanying spreadsheet are a great tool to use to estimate machinery costs in the field. This publication discusses far more than just fuel cost which is the focal point here. With the recent trend of rising fuel prices, our diesel expenditures will be significant this spring and summer.

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Figure 1		Baling Fuel Cost Estimate	
	2021	2022	
	120	120	Tractor HP
(x)	0.044	0.044	Fuel use per hour per max PTO power
(x)	$ 3.00	$ 5.00	Fuel price ($/gal)
(=)	**$ 15.84**	**$ 26.40**	**Cost of fuel per hour**
(/)	25	25	Bales produced per hour
(=)	**$ 0.63**	**$ 1.06**	**Est. Baling fuel cost per bale**

We can take a small bite out of this spreadsheet to look at fuel cost itself. Specifically, how can we establish a conservative estimate on tractor fuel usage per hour or per bale? Of course, this is not exact. It is likely to be less than this number, but it does provide a conservative reference point. Figure 1 illustrates a fuel cost estimate on a per bale basis between 2021 and projected 2022. This is an easy calculation for producers to enter their metrics and budget from there. We also need to add in cutting and raking for a more complete fuel estimate. Figure 2 shows the differences in horsepower and fuel prices at different levels on a per hour basis. Field operations that can be accomplished with lighter horsepower equipment will be incentivized this summer.

Figure 2

Estimated Tractor Fuel Cost per Hour

$/gal	$ 2.00	$ 2.50	$ 3.00	$ 3.50	$ 4.00	$ 4.50	$ 5.00	$ 5.50	$ 6.00
80 hp	**$ 7.04**	**$ 8.80**	**$10.56**	**$12.32**	**$14.08**	**$15.84**	**$17.60**	**$19.36**	**$21.12**
120 hp	**$10.56**	**$13.20**	**$15.84**	**$18.48**	**$21.12**	**$23.76**	**$26.40**	**$29.04**	**$31.68**
150 hp	**$13.20**	**$16.50**	**$19.80**	**$23.10**	**$26.40**	**$29.70**	**$33.00**	**$36.30**	**$39.60**

Seasonality in the diesel markets

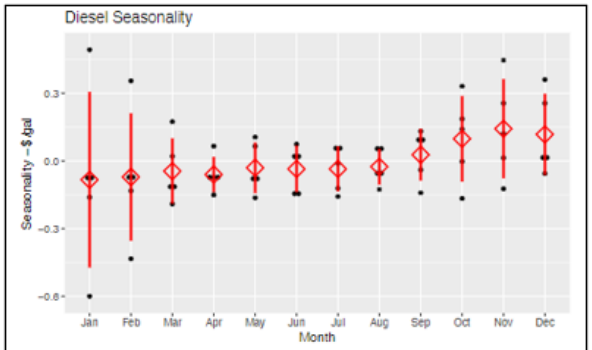

Figure 3. Diesel Price Seasonality (Based on Last 5 Years)

https://www.agmanager.info/production-economics/energy/fuel-price-outlook-2022

Is there a better time to bulk purchase diesel? Seasonality occurs when there are price trends that occur through the year. We are very familiar with this on the livestock side of the fence. For example, we commonly discuss the fall low in the calf market in Oklahoma. In January, Kansas State University released a report on fuel prices for 2022 (https://www.agmanager.info/production-economics/energy/fuel-price-outlook-2022). In this report, a graphic for seasonality in diesel prices shows us that the fall is the seasonal high price period. Another way to look at this is that our spring and summer period when we are in the hayfield are generally on the lower end of our annual average diesel price.

Altogether, the recalculation of farm and ranch cost estimates continue. 2022 is certainly going to enter the books as a year where operational costs are high. Being as deliberate and specific with these estimates will benefit our operations in numerous ways. Cash flow management and pricing of farm products may be two of the biggest benefits. Contact your local OSU Extension office more tools and information.

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Reference Links

https://extension.msstate.edu/publications/farm-machinery-cost-calculations

https://www.agmanager.info/production-economics/energy/fuel-price-outlook-2022

Time for Summer Crops

Josh Bushong, Area Extension Crops Specialist

With recent rainfall this past week and soon to be open wheat fields, I've had multiple discussions with farmers looking at options for this summer. Soybean, grain sorghum, feed, and sesame usually get mentioned the most. Hopefully drought, heat, and relentless winds will hold off until these crops can be established.

While driving throughout north central Oklahoma last week, I noticed significant acres of wheat that will not be taken to grain. I saw anywhere from 5 to 10 percent being grazed out closer to Enid, but as high as 30 or more percent going west to Woodward County. A few wheat fields were already laid down for hay and I assume more will soon be too. There were also a few wheat fields already chemically burned down in preparation of a summer crop.

Some soybean planting has already started and once the ground dries out enough to hold a planter up many more acres will follow. Mid to late May planted soybeans have shown to be relatively consistent for many in the region the past five or so years. We received 2 to 4 inches in north central and half an inch to 2 inches a little further west. Soil temperatures were rising prior to the rains and should be back to 60 degrees after this next wave of heat forecasted.

With the blessing of a rain and warm temperatures, unfortunately also come the weeds. Inadequate weed control is one of the most yield-limiting factors, as some research has shown losses as high as 79%. Certain herbicide programs may seem expensive but can still be economical if yields are protected. From soybean emergence to the V3 growth stage (third trifoliate) is the most critical period to limit weed competition to protect yield potential.

Certain herbicides are still in short supply and hard to obtain. As always, we recommend relying on residual herbicides instead of solely relying on traits that allow the postemergence applications of glyphosate, glufosinate, 2,4-D (Enlist) or dicamba (Xtend). ALS herbicides (such as Classic, FirstRate, and Pursuit) have good activity on many broadleaf weeds but can be weak on pigweeds and waterhemp. PPO herbicides (such as Cadet, Cobra, Reflex, Resource, and UltraBlazer) have activity on many problem broadleaf weeds and have also been a good option if some weeds are suspect of ALS resistance. Assure II, Fusilade DX, Poast and Select are some good options if grass control is needed.

Recent field trials by OSU have shown that pairing preemergent herbicides with postemergent herbicides resulted in higher yields (about 10-15 more bushels) and fewer weeds. These trials looked at planting date and postemerge application timings with and without a preemerge. Later planted soybeans generally benefited more from the pairing of a preemerge and postemerge.

To save yield potential, it is best to start clean and stay weed-free for the first few weeks of crop growth. Soybean producers must first decide which herbicide traits is best for their operation, develop a herbicide plan, and also make a backup plan if herbicide applications are delayed or fail satisfactory control. Weed control strategies need to consider future crop rotations and should also be a long-term investment in managing herbicide resistant weeds. Going cheap now may become much more expensive later.

To find out more information, contact your local OSU County Extension Office to visit with your Ag Extension Educator and review the Oklahoma Cooperative Extension Service factsheet PSS-2794, Meshing Soybean Weed Management with Agronomic Practices in Oklahoma and CR-2781, Components and Ratios of Pre-mix Herbicides for Use in Soybean.

A Bucket of Considerations for the Summer Beef Herd

Dana Zook, Area Extension Livestock Specialist

As I write this, my thoughts are swirling based on several inquiries I have had about maintaining cows through the current dry period. Every producer has experienced the increased costs of inputs whether it's for feed, chemicals, or any other supplies essential to running a livestock operation. I fear the reality of high inputs is here to stay but I think there is a challenge here. The challenge is to look at our operations in a different light. What changes, even small, could improve the livestock operation? Yes, we should critically evaluate our costs but instead of shortchanging the beef herd, let's look at things that can be applied to improve productivity. The topics I have listed below are not new. I have written about them many times, but I feel strongly these are small changes that can make a big impact.

1.) **Create a Relationship with your local Veterinarian.** Besides their essential advice during emergencies, vets can make a huge impact on your operation to prevent sickness and disease by working with producers to devise a herd health plan. Think pinkeye, foot rot, and summer respiratory issues – vets can work with you to prevent and/or create an effective treatment plan. Note, a

relationship with a vet should be more than the yearly call at 1AM to pull a calf. If you currently have a consulting vet, proceed to number 2.

2.) **Evaluate the Benefit of Deworming the Cow Herd.** Although not outwardly apparent, gastrointestinal parasites (worms) can cause a variety of clinical signs, such as weight loss, diarrhea and death. It's the less obvious signs of decreased weaning weights and lower reproductive rates that can quietly erode profitability on an operation. Anthelmintic products, commonly called dewormers, have helped to limit the clinical impacts on beef cattle. However, parasite resistance is increasing to these products. Keep in mind, a pour-on is no longer considered an effective dewormer. Consult your veterinarian to see if a targeted deworming plan would be a good choice for your operation.

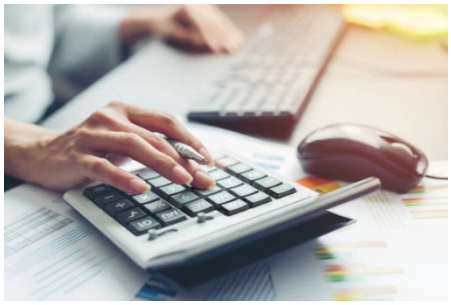
3.) **Consider Fly Control.** No fly will impact the herd more significantly than horn flies. At a threshold of 200-300 flies per animal, these insects cause stress on cows, reducing milk production in beef cows which can lead to reduced weight gain in calves. Many producers wonder if fly control is worth the cost. A 2017 collaborative research study between Kansas State and OSU determined stocker cattle with an insecticidal ear tag gained 0.21 more pounds per day compared to calves without fly control. At those gains, a cost of $2.00-$4.00 per tag would be a very cheap form of management. I recommend fly tags compared to a pour-on or spray just because once it's in the ear, no more applications are needed for 90 days. Keep in mind, proper chemical rotation in all fly control products is more important than when the tag or product is applied.

4.) **Gauge the Weight Gain Benefit of Implants.** In the recent Cow-Calf Corner Newsletter, OSU's Dr. Paul Beck said "Implanting preweaning is one of the most cost-effective ways to increase production for the cow calf producer". Cattle can be implanted after 45 days of age and research shows that calves in the "suckling phase" will increase weight gain by 0.10-0.12 pounds per day. Older calves in the stocker phase could respond with 0.20+ pounds per day. A local price of $1.27 for a Synovex C Implant will more than pay for itself in any operation. Producers should refer to product labels for approved timing of implants. Yes, "all-natural" is a thing these days. But, unless you are filing paperwork with a 3rd party to verify your calves all-natural, it's likely you are not receiving a premium for calves without an implant.

These are just a few inputs that will cost a bit of money, but the long-term return can be significant to beef operations. Contact your local OSU extension educator or local veterinarian for guidance on the chemical rotation of fly control products, implant use, deworming practices or any other form of management for the beef operation.

Adopt a Double Crop?

Trent Milacek, Extension Area Ag Econ Specialist



Recent comments by the Biden Administration have called for a larger U.S. crop to curb inflation and combat rising food costs. Preliminary suggestions include offering crop insurance on double-crop acres where they have been previously unavailable.

Farmers who are not familiar with double-cropping systems should understand that it can be a very risky proposition. Considering the moisture situation most of the state currently resides in, there is reason for concern that hot temperatures and untimely rainfall would hamper positive profits.

If double-cropping is a viable crop practice in your area, is it still a good idea? Rising input costs have decimated gains received from higher crop prices. In my budget calculations, a producer can nearly double previous crop production costs for the current year and expect to receive high crop prices only if the crop is hedged and can be produced.

Grain Sorghum suffers from its reliance on nitrogen. Soybeans, being a legume, allow them to harness nitrogen from the atmosphere that is virtually free after a farmer invests in relatively low-cost inoculant for the seed. Grain Sorghum will require 1-1.1lbs. of nitrogen per bushel of expected production. This could cost as much as 1.2/lb. or over a 400% increase compared to previous years.

I do advocate for producers to weigh the pros and cons of such an endeavor. Crop prices are very high and can be hedged. Crop inputs can be managed, and operating lines will need to be increased. Caution must be given to risk exposure and the number of acres that can be effectively managed. Running out of operating funds to purchase chemical for the crop could result in crop failure later in the season.

Crop inputs have been difficult to secure but not impossible. Producers should make these arrangements ahead of time in order to avoid missing timely application windows. Weather forecasts that are long range and of low accuracy indicate that a hotter and dryer summer could be upon us. It certainly has been a warm and dry spring resulting in a below average expected wheat yield. Consider if there will be left-over inputs from the current wheat crop and verify by using soil tests.

The future will be brighter if we manage our risks. Know your crop insurance coverage ahead of time and only plant the acres you can afford the crop inputs for. Summer crops

change daily, and pests can wipe out a promising crop in as much time. Remain vigilant and be a good manager by determining your operation's strengths to leverage a successful summer.

When is the Right Time to Castrate Bulls?

Jeff Robe, Oklahoma Quality Beef Network Coordinator

The practice of castrating animals goes back to ancient times. Egyptian farmers found castrating bovine bulls made the animal much easier to handle. It's doubtful the Egyptians were concerned about the value-added components of their animals. But today, adding value to market cattle is the name of the game and castration is a key component to any preconditioning program that can greatly influence market price premiums or discounts, especially in older bull calves.

Castrating bull calves has become common practice in U.S. beef herds. In 2017, the USDA-APHIS NAHMS Beef Cow Calf study indicated that 62% of commercial cow-calf herds used castration methods in their management practices. Castration has provided economic benefits to both the cow-calf producer and feedlot operators through increased market prices and meat quality. Castration also decreases unwanted pregnancy and increases the safety of workers and other animals.

There is a perceived notion that intact bulls have an advantage in body weight gains during the preweaning period and post greater weaning weights than calves castrated at or near birth. However, numerous studies have shown the weaning weights are similar for bulls and steers (approx. 600 lbs.). Advantages in calf weight gain due to testosterone production are presumably realized at a time following average weaning dates closer to puberty.

The timing of castration can influence weight gain and stress management. Studies examining how timing of castration effects average daily gains (ADG) in cattle castrated either in early life (birth to 2 mo.) or those castrated at weaning or postweaning (6-10 mo.) demonstrated higher ADG during the post-weaning period in the early castrated calves (approx. 0.30 lbs./day greater) than those castrated at or after. The period calves experience weight loss post-castration increases with age as does risk of disease susceptibility. The stress experienced is also related to the time of castration as the level of discomfort and trauma increases with the size of testicles. Calves castrated at 5 ½ months of age or later experienced a greater duration of stress than those castrated at birth or at branding.

Bull calves entering the stocker or feedlot segments of the industry have numerous health and performance factors associated with late life castration such as increased risk or morbidity and mortality, sick treatments and decreased ADG. Therefore, price

discounts for bull calves being sold at market can be substantial when compared to steers marketed in the same weight class. Lighter weight bulls (300-400 lbs.) are viewed as less risky, and discounts are generally minimal if any. As the weight of a bull increases, so does the risk. Discounts can average $6-12/cwt or $30-60 per head.

A herd management practice that dates to ancient times and still used today has clearly proven beneficial. Utilizing the practice and with a timing that makes sense may be the difference between dollars made or dollars lost.

Castration is an important part of adding value to your calves through preconditioning. For more details and to enroll in the OQBN program go to www.oqbn.okstate.edu

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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