BETTER FEED, BETTER RESULTS

LATE SUMMER 2022

Livestock Nutrition Center®
Better Feed, Better Results

NEWS

COMMERCIAL CATTLE PRODUCER NEWSLETTER

LNC-ONLINE.COM

FOCUS ON THE COW HERD

DRY FALL SEASON

By: Levi Trubenbach, Ph.D., Livestock Nutrition Center

As we approach the end of a summer season with relatively (historically, in some areas) dry conditions across much of our serviceable area, we have been receiving more calls than normal about supplemental feed for the cow herd. As always, our answer to the basic question, "What and how much should I be feeding my cows?" is straightforward – it depends.

Nutrient balance in a cow herd is an ever-moving target that seems to continuously wander around as forage conditions and production cycles change across the year. However, we focus on a science-based approach, quantifying both nutrient intake and requirements in real-time, to determine what and how much cows should be supplemented at any given time.

In a normal year, we typically think about supplemental feed being required at the first frost, when forage protein falls below an optimal threshold, at calving, as we approach a cows greatest nutrient requirements. However, this year's dry conditions – and subsequently poor forage quality will soon lead to deficiencies in nutrient intake and body condition loss if not corrected.

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LATE SUMMER CONTENT

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Our method for quantifying forage quality (Figure 1) using a 1-5 scale helps us accurately estimate nutrient intakes. In years with normal rainfall and temperatures, forage during August and September can often be described by, "3," on the LNC Forage Quality Scale (FQS). For both fall- and spring-calving cows, a FQS of 3 is mostly sufficient during this season. For fall-calving herds, a FQS of less than 3 (approximately 7.5% CP, 45 Mcal NEm/cwt; Figure 2) will typically require significant supplementation during this period, as requirements due to calving increase with fetal development. Spring-calvers may be able to manage adequate body condition during early fall on FQS of 2 (6.0% CP, 41 Mcal NEm/cwt; Figures 3 and 4), but if conditions worsen only slightly, nutritional intervention may be required.

	Forage	CP	NEM
Dormant	1	4.5	37
	2	6.0	41
Average	3	7.5	45
	4	11.8	55
Lush	5	16.0	65

Figure 1. LNC Forage Quality scale.

Aside from supplemental feed, we have also been recommending early weaning as a strategy for managing dry conditions for a couple of reasons. First, removing calves can alleviate significant grazing pressure. Calves can consume 1.5% of their body weight in forage; additionally, dry cows eat less than lactating cows. For each pair, the total forage conserved by early weaning could be as high as 25-30% of projected intakes. Secondly, removing the demands associated with milk production takes significant pressure off the cow herd when the nutrient balance is being challenged. Not only does milk itself require significant nutrient contributions, but also the physiological processes associated with making that milk increase maintenance energy requirements in the cow by approximately 10%. Overall, early weaning can reduce daily energy requirements by up to 40%.

Because production systems and forage conditions vary so dramatically across our serviceable area, developing a generic recommendation for, "what and how much," to feed is impossible. For support in developing an optimal drought strategy specific to your program, please contact a sales consultant at one of our LNC

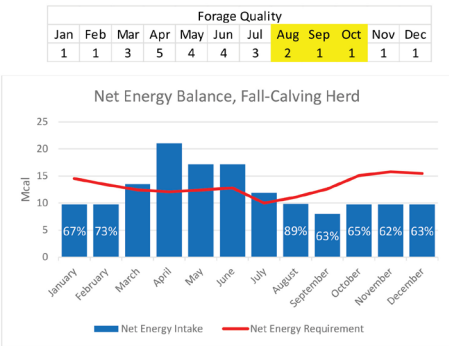

Figure 2. Net energy balance for a fall-calving herd in a dry fall season.

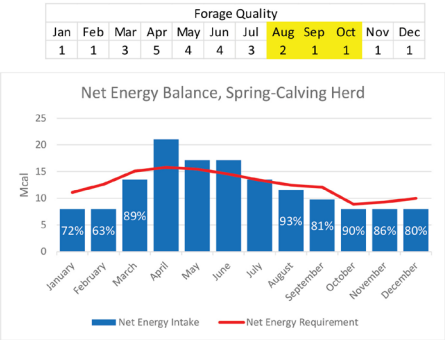

Figure 3. Net energy balance for a spring-calving herd in a dry fall season.

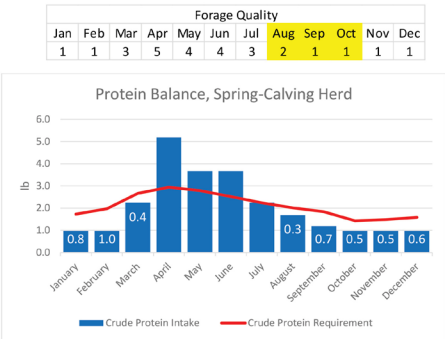

Figure 4. Protein balance for a spring-calving herd in a dry fall season.

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MEET THE TEAM

LNC takes great pride in sourcing our employees. Each issue we will introduce you to one of our own.

Jarred Shepherd
Regional Sales Manager

Jarred Shepherd grew up in western Oklahoma on a cow-calf, stocker cattle, and wheat farm.

In 2005, Jarred graduated OSU with Bachelors Degree in Animal Science with focus on production. Upon graduation he worked for Cattleman's Choice Feedyard, Inc. for 9 years. He worked his way up to Feed Yard Manager before departing for Livestock Nutrition Center.

Jarred has worked for LNC for eight years and currently resides in his role of Regional Sales Manger. Jarred oversees the sales side of the business for Altus, Chickasha, Guthrie, Hereford, Quanah and Garden City facilities.

Jarred and his loving wife Chelsea have been married for nine years and are expecting their third child next month. Jarred spends his free time working on their family stocker and backgrounding operation

JOIN OUR TEAM

Do you know someone that would be interested in joining our team?

At Livestock Nutrition Center we are always looking for qualified, hard-working individuals. All of our positions offer a competitive salary, full benefits and uniforms.
https://www.lnc-online.com/careers/

COMMODITY OUTLOOK

By: Jon Leonard, Director, Supply Chain Management

After the Russian invasion of Ukraine agricultural commodity futures quickly rallied to unprecedented levels. Given all the uncertainty, futures stayed elevated for the better part of four months, until the market could recognize the longer-lasting impact. Since then, most agricultural commodity futures have retreated to levels seen pre-invasion. Recently, we've seen a resumption in grain exports from Ukrainian seaports and though high-risk remains, the world is optimistic that the movement continues and helps to alleviate any immediate threat of severe food shortages and famine. Longer-term, the world still must grapple with how viable Ukraine can be to supply the region, and world, with grain exports until the conflict with Russia is resolved.

Despite starting the planting season at a historical slow pace due to weather, U.S. farmers caught up quickly in late May. Since then, growing conditions in the Eastern Corn Belt have been good, but the Western and Northwest Corn Belt have struggled all season with above normal temperatures and below normal precipitation. Regarding the Northwest Corn Belt in particular, it does bear watching what the potential negative impact could be from near-record late planting on actual harvested acres and real yield. From here, the radar will be closely watched as rains at this point can still impact our soybean crop, while in the case of corn, August rains can help to hold yield together through test weight by impacting ear fill. All too obvious to our customer base is the fact that this too has impacted hay and forage production. By this time of year, there's little chance of meaningful improvement to catch up, and we expect supplies of all qualities of roughage to remain highly priced and in tight supply for the foreseeable future.

In our territory, we have continued to see more demand for feed because of poor and deteriorating pasture conditions. Over most of Oklahoma and Texas, rainfall has been scarce and excessive heat has only helped to make matters worse. Though the Texas Panhandle has seen some localized improvement, most of the rest of Texas, Oklahoma, and Kansas have been chasing a rainfall deficit for most of the last 6 months. Consequently, demand for feed ingredients never set back due to abundant green grass, and prices have stayed firm all summer long as buyers looked to replace corn with any alternatives. When looking to New Crop, ingredient pricing shows very few obvious signs of value, and generally points towards higher corn inclusion in most cattle diets.

USDA released their August Crop Production and World Agricultural Supply and Demand Estimates (WASDE) on August 12th. There were no major surprises outside of expectations, but the report did re-establish a baseline. In corn, USDA 2021/22 balance sheet revisions were limited, only reducing corn demand for ethanol by 25 million bushels, increasing corn for food usage by 5 million bushels, and leaving export projections in-line with prior estimates. Based on relatively few changes in demand, historically strong basis levels lead many to believe that last year's crop may have been overstated. Regarding the 2022/23 U.S. Corn crop, USDA gave us a 14.359 billion bushel, 175.4 bushel/acre estimate, a decline from previous, but in-line with the average trade estimates.

Given the current crop conditions being below last year in early August, the estimate wasn't as low as many thought possible when last year's August yield estimate was 174.6 bu/acre. Especially considering that crop conditions have deteriorated since the data was taken, one would have to consider that future revisions would be to the downside in terms of yield, and therefore production. For the world, no changes were made in South America, but USDA did raise Ukrainian production from last month, while lowering EU corn production again due to ongoing drought. In total, 2022/23 world corn ending stocks were lowered 6.2 million metric tons, all due to decreased U.S. and EU production. Since no major changes were made to the demand-side, and the fact that bias remains for yield to decline from here, this report can be viewed as cautiously supportive to corn prices. In soybeans, very few revisions were made, slightly raising carryout for 2021/22 by 10 million bushels via a reduction in exports.

For 2022/23, USDA did put forth an estimate of 51.9 bushels/acre - widely considered optimistic as it is well above last year, despite identical crop conditions for the current period. With no major changes to new crop demand, USDA only slightly raised new crop soybean ending stocks by 15 million bushels from last month to 245 million bushels. Wheat production and balance sheet revisions were within expectations with very few changes made. Harvest is now complete, and Hard Red Winter wheat production was down 180 million bushels from last year, resulting in supplies that are the lowest in 16 years.

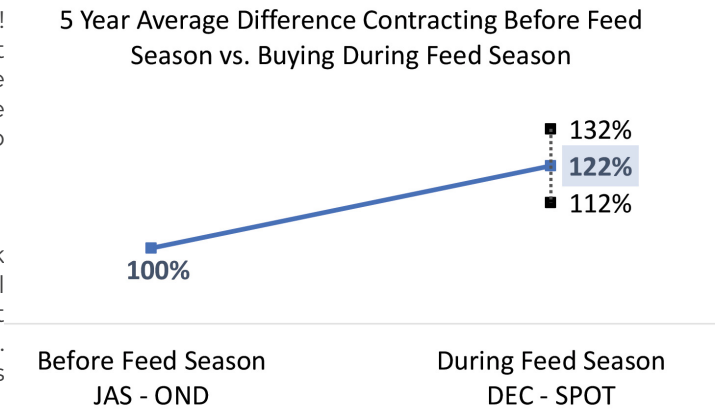
We continue to expect grain and feed prices will remain high at least through the end of the calendar year. Though there is concern over demand destruction due to continued high prices, and more locally, drought within our region impacting cattle numbers, there are simply too many questions around current supply and production for prices to decline. We had been optimistic that the U.S. would raise a trendline crop, but at this point that appears to be out of reach. The current USDA forecast for both corn and soybean carryout leave little room for disruption, at a time when we still have questions around Ukraine's corn export capacity being severely limited, and EU corn production is down significantly. Any major breaks in prices will be well supported until we see better weather for crop development, or real yield reports develop to give market participants reason to breathe a sigh of relief.

CONTRACTING FEED:
MOST FREQUENTLY ASKED CUSTOMER QUESTIONS

By: Alex Jansen
Director of Sales, Livestock Nutrition Center

At Livestock Nutrition Center, we take a science-based approach to not just our nutrition, but also our business decisions. When we get asked questions by customers, we look at all the available data to understand the most likely scenario.

Question: When is the right time to contract my feed?
Answer: It's important to contract before feed season! While every year is different, looking at data from the past five years we see the same feed cost on average 22% more in-season versus contracted ahead of time. The difference between July-September pricing for October-December to December spot pricing ranged from 12% to 32% higher!



Question: When can I contract my feed?
Answer: Any time. Unlike most feed companies, we will work to get you a contracted price at any time. Our professional procurement team is constantly analyzing ingredient markets to understand how ingredient prices will change. This first-hand expertise and our network of locations gives us confidence to quote a price at any time.

Question: Does it make sense given high feed prices?
Answer: It's important to understand your projected breakeven and cost of gain numbers given the contracted values. We help customers everyday work through their profit projections. Higher cattle prices are allowing for many of our customers to maintain a profitable outlook for 2022-23.

HAY STRETCHERS: ARE THEY FOR ME?

By: Henry Hilscher, Ph.D., Livestock Nutrition Center

WHAT ARE SIGNS I NEED A HAY STRETCHER?

With the hot dry conditions and lack of rainfall lately, hay production has been in serious decline in the central southern US. This is putting on a strain on current forage availability, and also winter forage supplies as most producers in this geography rely on a winter hay feeding program. As you are evaluating pastures we always try to get customers to put into 25% increments the level of forage "shortage"... as estimating forage quantity is very difficult to visually appraise. Therefore, do we need to replace 25, 50, 75 or 100% of the forage? Since pasture conditions and forage quantity can be so fluid ... guessing at 25% increments is about as accurate as you could expect to get to. Additionally, looking a hay inventories and what will be available this winter will be a good indication of a need for a forage/hay stretcher. It is much easier to stretch forage/hay earlier than later and conserve what you have than to run out and be forced to feed 100% of the diet or sell cows.

HOW WILL A HAY STRETCHER BENEFIT MY OPERATION?

Hay/forage stretchers are designed to fill in the gaps when forage/hay quantity and quality are inadequate. Using a hay/forage stretcher can help in these scenarios and also allow for improved efficiency in your operation, by utilizing a stretcher you could incorporate a vitamin and mineral package into the feed to decrease costs over free choice minerals. Additionally, the incorporation of an Ionophore into the feed to allow for a decrease in feed intake while maintaining BCS (body condition score). Lastly it may be an opportunity to sort cows into feeding groups, allowing for better targeting of cow needs by stage of production, BCS and age.

HOW MUCH WILL I NEED TO USE?

LNC will work with you to come up with the best solution to you forage/hay needs. We can target different feeding rates based on stage of production and the amount of forage availability. Typically forage/hay stretchers can be feed from 1 to 2% of BW depending on the situation.

LOOKING INSIDE FORTIGRAZE® MINERALS SOURCE OF TRACE MINERALS

Henry Hilscher, Ph.D., Livestock Nutrition Center / Chance G. Farmer, Ph.D., MicroNutrients

Many forage bases fall short in meeting much of cattle's mineral requirements. Trace minerals are needed in much smaller amounts daily, but are just as important as macro minerals for the proper health and performance of cattle, including breed back, fiber digestibility, and bull fertility.

The primary goal of trace mineral supplementation should be to meet the requirement of the animal in an adequate, efficient, and cost-effective way. Not all sources of copper, zinc, and manganese have the same ability to do this. FortiGraze® minerals are made with Intellibond® hydroxy trace minerals because they provide the best value to our customers.

IMPACT OF TRACE MINERAL SOURCE DIFFERENCES

Characteristics of Trace Mineral Types			
Trace Mineral Type	Sulfate	Organic	Hydroxy
Affordability	$	$$$$	$$
Stability / Weather Resistance	+	++	+++
Bioavailability	++	+++	+++
Fiber Digestibility	+	+++	+++
Palatability	+	++	+++

STABILITY. The core advantage of hydroxy minerals is their low solubility in settings containing humidity, rain, dew, saliva, and even the rumen environment of grass cattle. This is a result of their strong covalent bonding. On the other hand, sulfate sources of copper, zinc, and manganese are highly soluble and typically fall apart regardless of pH because of their ionic bonding. Hydroxy copper, zinc, and manganese leached out of mineral supplements to a much lesser degree after 2, 4, and 6 inches of rain compared to sulfate and organic sources.

> **IMPACT:** You could be pouring a mineral supplement with sulfate sources into the mineral feeder that is 6000 ppm zinc today, and after 4 inches of rain, it is now 3000 ppm zinc, yet you paid for 6000 ppm! Hydroxy trace minerals remain more stable during natural environmental occurrences.

BIOAVAILABILITY. Hydroxy copper and zinc have been proven to be more bioavailable to beef cattle than sulfate alternatives.

> **IMPACT:** Hydroxy trace mineral improvement in bioavailability has led to 1) improved status and higher pregnancy rates to artificial insemination when compared to a sulfate: organic combination source. 2) improved embryo quality when compared to sulfate organic combination source. 3) enhanced bull fertility when compared to sulfate.

FIBER DIGESTIBILITY. In grass cattle scenarios, the primary goal is to maximize forage utilization and optimize cattle performance. In a 2019 study, with medium-quality grass hay as the basal diet, beef steers had greater fiber digestibility when supplemented with hydroxy minerals as compared to sulfate sources of copper, zinc, and manganese.

> **IMPACT:** Hydroxy trace mineral improvement of fiber digestion can lead to increased ADG on medium-quality forage bases compared to sulfate trace mineral sources.

PALATABILITY. The most well-balanced mineral formula in a supplement will not amount to much if the cattle do not eat it! Supplements containing hydroxy minerals like Fortigraze® are preferentially consumed by beef calves over that of sulfate and organic sources.

> **IMPACT:** Improvement in mineral supplement palatability allows for more predictability in a mineral supplementation program.

The trace mineral source used in a mineral supplementation program matters. The trace mineral source should be bioavailable, palatable, allow for fiber digestion, and be stable enough not to diminish the nutritional integrity of the supplement. FortiGraze ® loose minerals and tubs are made with IntelliBond® hydroxy minerals because they provide the best value (impact to cost) for our customers.

FortiGraze® VITAMIN & MINERAL SUPPLEMENT

IntelliBond® a Selko product

CUSTOMER *Affirmations*

"I really like RangeMax Cubes from LNC. You feed less and get the same results. You get what you pay for!"

Al Wright
Horatio, Arkansas