

The Latest Across the Plains

Unused Feed

“God never said that the journey would be easy, but He did say that the arrival would be worthwhile.” - Max Lucado

Save Money \$\$\$ Test Your Feeds

Tests are relatively inexpensive, usually costing less than \$21, for the information derived. Contact our office to set up an appointment to have us pull feed samples if we have not done so yet.

We want to hear from you...

Do you have a question you would like one of the nutritionists to address in depth in our newsletter? Just submit your question through our website www.GPLC-Inc.com and we will get to work

Timely Reminders

- ◆ Keep pens box scraped.
- ◆ Haul manure whenever possible.
- ◆ Have your calving facilities and OB equipment ready.
- ◆ Have the right mineral for your cows' stage of production.
- ◆ Prepare now so your Hi-mag and Fly control minerals are on hand.
- ◆ Semen check bulls and make sure they are in adequate body condition.
- ◆ If you are in a high anaplasmosis area, begin talking to your vet now about a VFD.
- ◆ Target a BCS of 5.0-5.5 on mature cows and 5.5-6.0 on heifers at calving.
- ◆ Be sure to adjust cow nutrition to match requirements as they calve.
- ◆ Make sure waterers are clean and in good working order.
- ◆ Decide which implant and vaccination program you will use on your calves.
- ◆ Have your synchronization and AI program plan laid out.

Making the Most of Your Grazing Acres

Emma Conway, M.S.

When determining your primary goal for maximizing your grazing acres, profit is a no-brainer, but one must also think about productivity of the animals as well as the forage, all with long term stability in mind. One of the best ways to efficiently graze acres is to use some type of grazing strategy, such as:

- Continuous Grazing: animals have access to the total area the entire grazing season.
- Rotational Grazing: animals have access to a certain paddock for a certain number of days and are rotated among those paddocks to let forage rest.
- Mob Grazing: heavily stocking paddocks and moving cattle multiple times a day to let forage rest.
- Strip-Grazing: flexible areas are allowed to be grazed each day, with back fencing.
- Sequence Grazing: grazing based on cool or warm season forage species.

One thing to keep in mind when determining your pasture grazing system is that grassland ecosystems promote diverse plant communities and are maximized when there is soil disturbance. This is incredibly important because this disturbance allows the forage to germinate, legumes and other forbs will start to appear depending on the grasses present or applied, along with benefits in soil moisture retention, pH, and fertility. Depending on the timing and degree of soil disturbance grass species populations can also increase or decrease. Why does this matter? Ultimately, in times of climate stress like drought, insect pressure, etc. a diverse plant population can provide some insurance that there will still be some grass to graze.

To design a grazing plan, first one needs to identify what the grazing goals are. Are they to have calves achieve a certain gain, have a high enough plane of nutrition to increase the lactating ability of brood cows, extend grazing days, increase stocking rate, or maybe increase the number of acres we would like to include in the grazing system. Production goals don't hold water unless there is some understanding of the economic implications. These economic goals may be a product of a level of cash flow or net profitability within a certain period of time or it could equate to dollar sales per acre of forage land. Change does equal risk and it is not a one size fits all when it comes to finding what works best for you. This can vary from farm to farm as well, depending on the resources available determined by the location.

Maybe you are happy with your current grazing situation but want to dip your toes into implementing some new practices in your system. Consider trying improved fertilization and weed management strategies. Another option to consider is implementing a limited rotational system for a few years as an experiment. This is less risky and allows time to learn the skills needed to manage the new system.

If wanting to take the step to implement a new grazing strategy, how do we know how many animals a space will hold? The rule of thumb to determine your Animal Unit Days of your forage supply is a 1,000 lbs cow will consume roughly 26 lbs of dry matter per day (adjust intake for size and milk production). Next step, grab some soil maps (local NCRS guides) and estimate the pasture productivity. By figuring out these two things, we can then determine how many paddocks are needed, the size of the paddocks, and finally the number of animals most appropriate to that system with the proposed frequency of rotation. Note that the size and number of paddocks are interrelated, meaning as the number of paddocks increases the size of the paddocks can decrease.

Design the paddocks with flexibility in mind. Try not to install or build anything that cannot be easily moved or shifted. Think about using existing fencing and water but also don't let that prevent a more efficient layout. Don't be afraid to invest in temporary fencing and water supplies in the early years of the project. Often times, producers find flaws or things they would like to change in their initial designs and are often times happy that some things are not permanent. Consider laying out a few paddocks with the intent to divide them further in the future. Install some main fence lines and lanes with permanent fence while using temporary options for internal divisions. This will be handy when it comes time to harvesting hay and applying fertilizer. Temporary internal fencing can also allow for variable-sized paddocks as the season and rate of forage regrowth allows. When shopping for fencing supplies, electric fencing is a great option and most fencing strategies can be adapted for electrification.

Another practice that should not be overlooked is incorporating a sacrifice paddock. By sacrifice, this means an area where the animals can be placed during times of generous rainfall, extended drought, or other events when having animals in that space could cause plant or soil damage. It will be beneficial to choose an area that has access to water and where supplementation can easily be delivered.

Implementing some of these strategies will help the long-term productivity of forage stand along with the fertility of the soil and water resources while ultimately optimizing the productivity of your grazing livestock system. While the amount of grazing land is drastically decreasing, the value of grazing land is drastically increasing, input costs are skyrocketing, it is essential to make the most of the resources we have. Incorporating a grazing system that allows the appropriate time for forage resting can provide the opportunity to increase stocking rates by 25% or more, all while decreasing fertilizer and supplemental feed costs. What kind of strategies can you implement this upcoming grazing season and what can be implemented in future seasons to capitalize on the land available to you?

“To have or not to have a mixer wagon, that is the question”

Jordan O’Neill, Ph.D.

New toys (equipment) are always exciting to obtain and play with around Christmas, right before the new year. Brand new mixer wagons and trucks are no exception for beef producers considering on expanding or looking to reduce feed cost. It is crucial to carefully consider the reasons for and accessory details associated with purchasing mixer equipment for your cattle operation. On numerous occasions, I interact with new producers who are considering buying a mixer wagon, and I think to myself ‘I am not sure if they are ready for one or even need one’. Please, do not get me wrong I really like mixer wagons/trucks and I think that a total mix ration or TMR is one of the most efficient and cost-effective ways of getting cattle fed, but if not fully prepared for, mixer wagons will fail to fulfill producers’ dreams, and cause buyer’s remorse.

The purpose of a TMR feeding method ensures that each bite of feed an animal takes contains its entire nutrient requirements. This is accomplished by mixing forages, grains (energy), by-products (protein), and mineral and vitamins in one complete mixture for delivery to specific cattle groups a ration was designed for. Benefits of TMRs include reducing forage waste, ability to use cheap bulk feedstuffs, improving ability to start cattle on feed and stabilize intakes, improving feed efficiency, and reducing cost of gain. However, my full support for the TMR feeding method does not mean it will work for all operations.

I am straightforward with producers and ask them a few questions to consider before they take the leap in purchasing a mixer:

- What type of mixer and other pieces of equipment will you need?
- How will you ensure you get the CORRECT amount of forage to cattle you are feeding?
- How do you plan to handle forage, bulk commodities, and mineral/vitamin storage?
- What is your strategy for delivering feed to cattle?

TMR equipment necessary

There are two main types of TMR mixers available, vertical and horizontal. And it is important for you to consider your beef cattle operation and goals when trying to pick one. Vertical mixers are best designed for cow-calf and growing cattle operations that will depend on forages as the main feedstuff. The large tub and vertical screw augers with knives better handle the greater volume and further processing required with hay. However, they are physically very heavy and not ideal for long distance and rough terrain feed delivery. They can also be very expensive, especially when you consider the necessity of a devoted tractor large enough to power a mixer (Ex. 180 hp tractor for a large twin screw vertical mixer) and fuel required to grind hay daily. Oppositely, horizontal mixers are best designed for feeding heavy growers to finish on a primarily silage and concentrate based ration. A horizontal mixer would take less energy and mixing time and create a more uniform mix with lower forage inclusion. However, you will need to consider alternative means of processing or separately grinding hay required in the ration. In both mixer styles a separate tractor or a skid steer with a front-end loader will be needed near the feedstuff area for adding ingredients to the mixer. How inconvenienced will you be to rely on tractors already used for other purposes? This is important to consider, because when it comes to feeding growing and finishing cattle it is imperative to feed them at a consistent time daily. Producers can also consider a stationary mixer powered by generators and other modes of feed delivery like a truck. This setup would work well for feeding cattle located at a distance from feedstuff areas or if having to mix multiple loads a day. There are so many equipment components involved with an efficient and successful TMR feeding method beyond a tractor and a wagon.

Forage handling strategy

More and more TMR mixers are being bought by producers with good intentions of reducing hay

waste and improving feed efficiency of fed cattle. However, I often catch producers incorporating the incorrect forage amount compared to what the balanced ration calls for. This is an inefficiency issue for cow-calf operations by not fully using forages available and potentially having to fill with other more expensive commodities to meet nutrient requirements. Sometimes producers will still provide free choice hay to make up for forage not put in the mixer wagon. Ultimately resorting back to the original dilemma of increased hay wastage associated with free choice feeding. Forage short-cuts are even more concerning for growing and finishing cattle as the forage needs to be accurate to optimize growth and maintain a healthy rumen with consistent intake. Too much hay and you're guaranteed to not meet the balanced rations gain targets. Too little hay could cause greater intake of high starch ingredients leading to increased risk of acidosis and inconsistent feed intake. The main excuse for this frustrating trend is the desire to and mental limitation of mixing batch loads based on a bale weight. But the producer almost always has either too many or too few head on feed to make it pencil just right. There are numerous creative ways of getting around this:

- Bale forages with baler conditioning knives to pre-process forages making them easier to fall apart when feeding.
- Consider bagging or packing grass forages (haylage) instead of baling.
- Grind bales in vertical mixer wagon and expel excess forage not needed for that feeding, but for use in future feedings.
- Grind forage separately in a bale processor for thorough and quick processing to be available for future feedings.
- Split bales in half using a bale splitter attachment on tractor. Allows use of portions of the bale during feedings.
- Unroll forage bales on the ground or above the mixer to desired amount for the batch load being mixed.

In addition to the correct amount of forage, it is also critical to pay attention to cattle sorting forages in the bunk. Sorting can cause acidosis, intake reduction, and ultimately inconsistent performance. Sorting can be controlled by forage grind length and TMR percent moisture. Forage stem length should ideally be approximately 2 - 4 in. long to increase palatability and reduce sorting. This can be accomplished by adjusting bale processors appropriately or increasing the grinding time in a vertical mixer wagon. Additionally, increased TMR moisture between 30 to 60% by using high moisture ingredients or adding water can reduce sorting by more cohesively adhering ingredients together. Proper forage use is one of the most critical details to an efficient TMR, but also one of the most incorrectly managed of all feedstuff ingredients in a TMR.

Feedstuff storage necessary

The lack of adequate storage space for outside feedstuffs limits producers from taking full advantage of the capabilities and feed cost savings associated with TMR feeding methods. Being able to take full truckloads of ingredients when they are available and at a lower cost can significantly reduce feed cost. The most ideal feedstuff storage includes a solid concrete floor and covered commodity shed with approximately 4 divided bays. Four bays should be in place for forage (preferably processed), energy feedstuff (corn, small grain, etc.), protein feedstuff (wet and dry distillers and corn gluten, etc.), and possibly mineral balancer. It is also important to consider storage for fermented forages such as flat packed silage, bunker, or bagged forages. Fermented forages take up a significant amount of space and should be considered regarding layout near feed loading and mixing facilities. Although mineral and vitamin balancers for TMRs can easily be handled in 50 lb. bags there is a significant cost savings of \$60-\$120/ton to have it delivered and stored in bulk. The top-of-the-line commodity shed, and silage bunker facilities are not always necessary. Some of my most thrifty and effective clients have their dry feedstuffs poured on a concrete or packed lime pad and covered with tarps or a layer of dry ground hay. It also doesn't get much cheaper than a 3-sided bunker built of hay bales and a tarp to contain ingredients in flat, open storage. Additionally, while it is nice to have all ingredients under roof, wet by-products are often feed up rapidly enough that covering isn't necessary. Producers implementing these resourceful setups can still take advantage of bulk feedstuff purchases without a lot of facility overhead cost. Producers must be creative and determined to capture cost saving opportuni-

ties whenever available.

TMR feed delivery

Lastly, it is important to consider how you intend to deliver the feed to cattle. These details should be implemented long before you get the mixer wagon bought. Considering feed bunk placement such as the ideal fence line feeding strategies allows you to reduce driving through rough terrain and mud, reduces time spent opening and closing gates, and reduces feed waste on the outside edge of the bunk. These considerations help with time savings and feed efficiency to make daily feeding quick and easy. Destruction of feeding areas just like watering areas are also inevitable. So, it is important to initially invest in a concrete feeding pad or skirt that extends no less than 8 ft behind the bunk. This will ensure a solid base for cattle to stand on for easy access to feed. It will also allow you to scrape the feeding pad regularly to clear mud build up. Adequate head space accessibility to the bunk is also crucial as TMR feeding is typically precise daily feeding unlike free grazing or a free choice feeder where cattle can come and go as they please. Because receiving or newly weaned cattle are timid, they need 24 in. of bunk space for the first few weeks on feed, as do calves on a limit-fed ration. However, once cattle are on full feed and all coming to the bunk, 12 in. is typically adequate, even for finishing cattle. If you try to cheat this bunk space requirement and pack more cattle in the pen; then it could result in all the heavier, aggressive cattle consuming majority of the feed and lighter, timid cattle getting behind in feed consumption and growth performance. Another overlooked component is feed bunk volume. Cow-calf rations require greater feed bunk volume due to greater inclusion of bulkier forage. Anticipate cow rations to taking up approximately 3.75 cubic ft per head and finishing rations to only taking up approximately 0.75 cubic ft per head.

Moving toward a TMR feeding strategy and opting to buy a mixer wagon or truck is a great way to improve your operation if you are wanting to expand and reduce feed cost. However, remember not to get too giddy at the thought of buying a new toy until you think of all the components necessary to make the technology change effective. This includes considering the pieces of equipment and infrastructure needed to feed efficiently, handle and store forages and feedstuffs, and the most effective means of feed delivery. Lastly, take some time to pencil this purchase out economically. Evaluating return on investment by comparing current feeding program cost to a TMR feeding method can help you make the best decision. Feel free to reach out to a GPLC consultant if you are trying to decide if a TMR is right for you. We can assist with feeding equipment decisions, feed storage dimensions and layout, feeding area design, and lastly balancing a TMR and reviewing return on investment to obtain your feeding cattle production goals.

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