

GRAZING BITES

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It might not seem like it much yet, but every day we are starting to get a bit more daylight. I like heading this direction again, but we are still a long way from spring. I like to use cold January days to catch up on reading and planning for the upcoming season.

One of the bigger challenges for this season is going to be fertilizer costs. If you have “stockpiled” some soil fertility in your pastures and hay fields, then you certainly look pretty smart right now.

Banking some fertility is easier to do on pastures than it is on hay fields. The majority of nutrients on pastures are returned to the soil for new plant growth with good grazing management. If hay is removed from a site, those nutrients in the forage leave the field – mechanical harvest of forages does deplete nutrients over time if not replaced.

Dr. Chris Teutsch of UK Research and Education Center recently released a short YouTube video with John Grove - “Ten Tips to Help Livestock Producers Weather High Fertilizer Prices.” Chris had ten really good points on the topic. I’ll provide a quick synopsis of those bullets and a few of my own thoughts. Ironically, I had already been thinking about concerns with increased fertilizer prices before I saw the video and, after watching it, decided to not to completely reinvent the wheel but just run with it.

1. *There are no silver bullets:* There are a lot of products out there now that promise a lot of things, and some allude to no fertilizer required. It is certainly possible to improve soil health with the microbic life of the soil to where some unobtainable nutrients are made more available, but it doesn’t happen overnight, and it isn’t a given. Good management of the forages is always key. Maintain good live cover, adequate rest between grazing events, and appropriate stop grazing heights.
2. *Soil sample pasture and hay fields:* Though some may argue that soil tests are not that beneficial, I disagree. A soil test provides a baseline to work from. If you don’t know where you are presently, then it is harder to figure out what direction you need to go!
3. *Add lime first:* The first priority item to address from your soil test is the pH. The pH indicates how sweet or sour the soil is. Most grasses prefer to be in the range of 6.0 to 6.4. A few legumes, like alfalfa for example, prefer a sweeter soil between 6.5 to 7.0. Lime is usually the best money first spent because if the pH is off too much, critical macro nutrients like phosphorus won’t be as available. If the pH is below 5.8, I’d recommend correcting the pH first and retesting after at least six months to assess everything else.
4. *Don’t apply P & K if in medium soil test range:* At moderate levels, you can maintain sufficient levels for a long time if only grazing. If you are taking hay off, especially multiple harvests during the growing season, then levels will reflect that and decline accordingly. If phosphorus and potassium are below the medium test range, then additional nutrients are beneficial for nutrition and yield.
5. *Rotate stocking:* The more livestock are rotated, or more precisely managed in such a way to get even distribution of manure and urine across the entire pasture, the better the redistribution of nutrients back into the soil and plants from where they came. Livestock that are allowed to roam bigger areas are much more likely to move nutrients from one part of the field to another. This is particularly true if water and mineral are a long walking distance. When this is the case, animals will tend to graze those distant locations for shorter periods and will then tend to ruminate and return nutrients closer to the water source, thus moving nutrients and creating low and hot spots in the process.



This might be a good year to only apply fertilizer if you really need it – when soil tests indicate below moderate levels.

6. *Capitalize on nutrients in hay:* There are a lot of nutrients in a bale of hay, especially good quality hay. If we can feed some of this hay where nutrients are needed, then we can save on replacement nutrients. Feeding it where it is needed also reduces the amount of manure that needs to be hauled, saving time and fuel. Manure can be a very good source of nutrients for both pastures and hay fields. If using manure from confinement buildings or lagoons, treat it like you are putting on commercial fertilizer, get the manure tested and apply according to soil tests and yield goals. If you are buying hay, then you are not only buying feed for the livestock, but you are also buying nutrients for the farm that should be taken advantage of.
7. *Add legumes:* The addition of legumes to both pastures and hay fields has several economic benefits. They add additional digestible protein and nutrients, and when mixed with grasses, provide valuable nitrogen to the system that boosts both yield and overall quality. The addition of legumes is usually the second-best dollar spent after lime. Legumes fix nitrogen in root nodules. Rhizobia bacteria in the soil enter the root. The correct rhizobium bacteria must be present for the species, thus the reason for making sure that you inoculate seed prior to planting legumes. Most legumes are fairly pH sensitive, therefore, the pH needs to be corrected prior to planting for best results.
8. *Frost seed clover:* Frost seeding is one of the least expensive ways to enhance the stand of legumes in your pastures. It is basically the process of broadcasting the legume seed onto the soil's surface during the winter dormant months. I usually say the ideal time is somewhere between Christmas and Valentine's Day. When I really have my choosing, I'll wait until there is a light snow on the ground and then do the sowing. The snow serves two good purposes. One, it helps "catch" the seed and transport it to the ground and two, it serves as a great marker for the tractor or ATV.
9. *Manage Nitrogen applications:* When nitrogen fertilizer prices are high, we need to be as efficient as possible with applications. Early applications of nitrogen can boost the yield of the first cutting of hay, but with long wet springs, it can also throw fuel on the fire and create stands of forages that are not only hard to dry if you are wanting dry hay, but also may be too competitive with legumes we want to maintain. Nitrogen applications are sometimes better utilized for secondary cuttings to boost yield and quality and or for stockpiled forage for fall and winter grazing. Apply any nitrogen when it can be utilized the most efficiently. If you have high amounts of legumes in the sward, then you may not need much or any additional nitrogen depending on your goals.
10. *Monitor Hayfields Closely:* Like mentioned already, hay removes a lot of nutrients that will have to be replaced eventually to maintain future yields. When nutrients fall into the low category, forage yield and quality both suffer and there can also be a shift in the sward to plants that are more adaptable to low levels of some nutrients. Broomsedge, yellow bluestem, is a good example of a low nutrient soil increaser. Fields used only for hay should be treated like a regular crop field and fertilized as needed to maintain at least a moderate fertility level.

May the rains sweep gently across your fields, may the sun warm the land, may every good seed you have planted grow abundantly and by late summer find you standing in fields of plenty – Happy New Year!

Remember, it's not about maximizing a grazing event, but maximizing a grazing season! Keep on grazing!

Reminders & Opportunities

More pasture information and past issues of *Grazing Bites* are available at <https://www.nrcs.usda.gov/wps/portal/nrcs/in/technical/landuse/pasture/>

“Ten Tips to Help Livestock Producers Weather High Fertilizer Prices” can be found at <https://youtu.be/sgIS2IBew0M> by Chris Teutsch and John Grove

Grazing Bites has changed. Please send comments or questions to grazingbites@gmail.com.