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5 Commandments for Bale Grazing in the East

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Bale grazing in the eastern U.S. has its challenges compared to traditional, more Northern regions where the system is used. To be successful in areas with more moderate winters, you need to do a few things differently. In my experience, there are a number of fundamental concepts that need to be followed to make bale grazing work well here.

I have had many people tell me they tried bale grazing and that it will not work under conditions such as those found in Kentucky. In just about every case where they explained how they were implementing bale grazing, they were not adhering to one or more of the following fundamental concepts, which I will frame as the “Five commandments for bale grazing in the East.”

1) Thou shall not feed more than 2 tons of hay per acre.

The biggest problem I see with bale grazing in the eastern U.S. is feeding at densities that are much too high for our winter conditions. This typically results in pastures that are severely pugged.

Why do so many people make this mistake? If you do an internet search for videos or images of bale grazing, the odds are good you will find something from the Great Plains or Canada. This is where bale grazing first became popular and is a common form of wintering cattle today. This region is characterized by cold winters, where the soil is frozen solid for months, and significantly lower levels of precipitation compared to the eastern U.S. These two factors combine to provide a long window of prime feeding conditions of either dry or frozen ground that results in minimal soil disturbance from bale grazing. This allows animals to be fed at high densities, and pugging is rarely an issue.

This same high-density bale grazing will not work well in most of the East. Sometimes, you will get lucky and conditions will be dry or frozen for a period of time, and the bale grazing will go reasonably well. But at some point, the soil will become saturated, the sod will start falling apart, and pastures will turn into mud holes.

What is the ideal hay density to avoid severe pugging?

The answer will depend on the soil type, management skills, cattle size, and other factors. For beginning bale grazers, I like to see a maximum of around 2 tons of hay fed to the acre, which is roughly four 5x5 bales or five 4x5 bales. Except with the most extreme weather or with poorly drained soils, this will generally keep pugging to acceptable levels. There are many situations where 4 tons

per acre would likely be fine, but you will not know this until you have gained experience. For the majority of farms, 2 tons per acre is a good place to start.

2) Thou shall not allow cattle unfettered access to a pasture.

The only way I have seen bale grazing work well in the East is by using temporary electric fencing and rotational grazing techniques to ration out the hay and to make sure the cattle are constantly getting fresh pasture every one to seven days.

I have seen farms try to implement bale grazing without using temporary electric fencing. They either set hay out every few days, gradually spreading the bales around the pasture, or put out four to eight bales at a time in a few large pastures. They then rotate cattle from one pasture to the next and do it all over again when they get to the end. I have not seen even one of these situations turn out where the farmer was happy with the results. Usually, there is a lot more pugging than they were expecting.

Why is this? With well-managed bale grazing, cattle will always be getting “fresh” ground every time the fence is moved forward, which, if planned correctly, hasn’t seen a cow hoof since early to mid-fall. This unimpacted ground will be a lot more resilient compared to ground that cattle have been walking over for weeks or months at a time.

Cattle that have unfettered access to a large pasture are going to tend to wander, especially if they get hungry. It is during these times of aimless walking that the cattle are causing the most damage. Sometimes the damage is not obvious in that there is not much mud, but the sod becomes weakened from all of the hoof traffic. When you then drive over that ground with a tractor or feed a bale in that location, the sod will come apart much quicker compared to “fresh” ground.

Where the fence is constantly being moved forward, cattle will spend the vast majority of their time on that new strip of pasture with the new bales of hay. The ground will be cleaner and drier than the pasture they previously had access to. As a general rule, they will spend a lot less time walking around, even though they have access to the areas they have already bale grazed in that pasture. The end result is much less damage to pastures compared to cattle having unfettered access to the pasture.

3) Thou shall not set out hay piecemeal.

A major benefit of well-planned bale grazing is a significant reduction in machinery and labor costs compared to any other form of winter hay feeding. This benefit is made possible by setting out a large percentage of the winter hay needs at one time. It should be obvious that setting out a wagon or trailer load of hay will be more efficient than setting out one to two bales at a time. But what might not be as intuitive is why setting out multiple wagon or trailer loads of hay can be much more efficient than setting out just one at a time.

Once you have the equipment ready, the more hay you can move before that equipment is put away, the greater the efficiencies will be. You are spending less time per unit of hay moved hooking up equipment, opening and shutting barn doors, inflating wagon tires, getting yourself and your helpers ready, and then putting everything away when you are finished. These are “setup costs,” and it doesn’t matter if you move one load or 10 loads of hay, they will be the same.

The other reason that setting out a large portion of your hay at one time is generally more efficient is that it allows you (with proper planning) to wait for soil conditions that are near optimal to move hay — either dry (best) or frozen ground. Hay can be moved more efficiently in these conditions compared to even slightly wet conditions. For example, I can pull a fully loaded wagon of hay with a medium-sized

pickup truck about anywhere on either of my two farms when conditions are dry, but I struggle to pull a wagon with even a few bales when the soil is saturated.

When both of these efficiencies are combined, it is amazing how quickly you can move hay. My favorite example is with a farm I'd been working with that was starting into their third year of bale grazing. Up to that point, they were putting hay out mostly one load at a time. That third fall, with some encouragement, they set out all the hay they needed for a 40-cow herd in just under four hours (two people with a tractor-loader and pickup with trailer). The hay lasted from late November until early March. During that time, they never had a tractor on that farm. They moved the cattle every five to seven days, spending an hour on average moving the fence and four hay rings to the next set of bales. I could not believe how drastic a time saver it turned out for them.

You don't have to set out this much hay at a time, but I generally advise setting out at least a third of your overall hay needs. This will capture the bulk of the cost-saving efficiencies compared to setting out hay piecemeal. Just don't wait until you are within a week of running out of hay. In most of the East, you can easily have two- to three-week periods where ground conditions are constantly wet.

4) Thou shall not bale graze the same pasture more than once per winter.

About six years ago, I was helping a farm implement bale grazing and they underestimated how much hay they would need to get the cattle through the winter. They bale grazed over the entire farm and still had two to three weeks left to feed hay.

They set out more hay on the first pasture they bale grazed. I suspected that pasture would be set back a bit, but I was completely surprised by the severity: A month into the growing season, the pasture still did not look like it was thick enough to graze. By early summer it looked fine, but much of the spring growth potential was lost. I have seen the same thing happen on other farms after this experience, and thus my general recommendation is that you should never bale graze twice in the same pasture in a given winter.

The only exception to this rule is if you are purposely trying to set back the pasture for something like overseeding clover. In this case, setting the pasture back temporarily can be a benefit for the establishment of developing forage seedlings and their ability to compete with the existing sod.

5) Thou shall not let your cattle go hungry.

This really is a rule that should apply to any feeding method. As the old saying goes, "You can't starve a profit out of a cow." But it can be particularly important with bale grazing because cattle can and typically do have access to large areas of pasture. With well-managed bale grazing, cattle will spend the vast majority of their time on the new strip of pasture they have with the current bales they are eating. This is assuming they have adequate feed in the strip of pasture (hay and possibly stockpiled forages).

However, if the cattle are hungry, they are going to wander around the pasture, and that is going to be when most of the damage occurs. You do not want your cattle to move around the pasture, especially when it is wet. You want them content and either actively eating or lounging on the clean and dry section of new pasture. Making sure your cattle don't go hungry will go a long way in keeping bale grazing damage to a minimum.

It can be done.

There are some really wet-natured soils that, even if following these rules, you will still have pugging problems with when the soils become wet and saturated. On most farms, however, following these rules will help avoid the bulk of the pitfalls that can cause bale grazing to be a bad experience in the eastern half of the U.S. Don't let the challenges of bale grazing in this region scare you off from implementing this winter feeding technique. It can be done effectively; you just need to learn a few fundamental concepts to make it work well.

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