

# Grazing Bites

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Grass is growing. The grass is really growing! I get a little impatient sometimes waiting for spring to get here; then once it is here the speed of life goes into full throttle and the grass in the yard suddenly requires twice the normal attention. I'm not going to complain about the extra mowing, I'm just glad it is green and growing. The pastures are also growing at record speed which requires a bit more of our attention to keep under control.

For the most part, most cool season grasses in this part of the country have a huge growth spurt in the spring. This growth spurt can account for roughly two-thirds of the season growth by mid-June. The grass plant wants to mature and produce seed. When this happens it is influenced by several things. The particular species itself makes a difference. Different cool season species produce seed in slightly different timeframes and quite a bit different than warm season species, such as big bluestem or indiangrass, which both mature late in the season.

The variety of the species also influences the time of seed production. Traditional hay varieties of orchardgrass will mature very early and have a heavy first cutting and slightly newer late-maturing varieties of orchardgrass are easier to keep in vegetative stages longer and are better for grazing. They are also better hay quality if used that way. High yielding early-maturing varieties cut for hay at the highest yield will have lower nutritional value as compared to a lower yielding less mature sward. That "quality" decision is a battle for most producers and one that is decided for them most years by weather, being busy planting row crops, or a combination of the two...especially if dealing with an early maturing forage. Back to the subject at hand, fertility and management also play a part in how quickly the forage will mature.

The timing of when fertilizer, especially nitrogen, is applied to pastures certainly influences the speed of growth. In a grazing system, if you speed it up too early, you just add fuel to the fire. If it is going to be a hay field, then early application of nitrogen will boost yield but can also make the sward so heavy and dense that it might be more challenging to dry, especially if we have a wet spring. If you are grazing it, the early spring flush of growth is hard enough to keep managed without making it grow even faster by adding a lot of nitrogen. If the pasture needs phosphorus or potassium and it wasn't applied the previous fall, then I would certainly still go ahead and apply these elements as needed and conditions are favorable, but I would hold off on the nitrogen to start with.

The phosphorus amendments, unless rock phosphate, will have a small amount of nitrogen in it. Diammonium phosphate (DAP) for example, contains 18% nitrogen and 46% P<sub>2</sub>O<sub>5</sub>. So if you put on 100 pounds of 18-46-0 per acre, you are applying 18 pounds of nitrogen. Most grasses are pretty efficient users of nitrogen and can use roughly 50 pounds of nitrogen per ton of dry matter. Some of that nitrogen comes from the soil organisms and flora, some from the atmosphere and some from nitrogen producing legumes, such as clover. Clovers and other legumes can produce the majority of the nitrogen needed and can easily provide 150 pounds or more if enough is existing and the proper rhizobium is present for the legume being grown. That is one reason why you always want to make sure to use the right inoculant when planting legumes, so you get the most you can from them. As far as any nitrogen application on pasture, and if strictly pasture, you are usually better off waiting until growth starts slowing back down to help boost summer production.

Our pasture forages can be divided fairly easily into three stages. Those stages are immature, vegetative and mature. The early growth that is high in water and nitrogen is immature and requires additional roughage to be utilized efficiently by the ruminant and utilizing it too early or harshly, can reduce plant vigor and production. The vegetative stage is more nutritionally balanced and is starting to contain increasing amounts of carbon/fiber thus accounting for more ideal crude protein and energy for meat and milk production. It is this stage that we need to try and maintain as long as possible. As the plant starts to transition from vegetative to reproductive

growth, more energy is put into stem and seed production than into leaf production and quality is quickly reduced. Though we can somewhat delay the reproductive stage with management, grass will still act like grass. It will work extra hard to make sure it thrives, and will set some seed especially if under any stress.

Management should be geared towards reducing seed head production and keeping the forage in that second stage as long as possible. If you can do this and maintain good cover and adequate stop grazing heights, you can slightly flatten that growth curve just a little and maintain forage quality a little longer into summer.

Keeping seed head production at bay can be done by grazing with some management or by clipping if needed. My definition of clipping here is topping with a bush-hog, mimicking high grazing rather than mowing for hay. Older tillers will work overtime to try and produce seed. If you can reduce seed head production to 30% or less, you are doing pretty well. I have seen stands, heavy with new tillers and not stressed, produce a very low percentage of seed heads even when left alone up into July...amazing!



When the grass is growing fast, graze fast. Rotating over the paddocks in your system and top grazing can really slow down seed head production and keep the grass in the vegetative stage longer. If it starts getting too much ahead of the grazing livestock, and it will if sufficient pasture is present, then you can start clipping some of the fields or leave them as is and accept a lower quality and strip graze later letting them consume the best and lay down the rest. Strip grazing can be a good soil builder on poorer soil sites or where the aspect is south-west or west facing and would benefit from additional cover and generally more organic matter.

The last option, which is not always the best option, is to cut some of it for hay. Mowing it for hay can really reduce the amount of regrowth, especially if going into a drier, hotter timeframe. However, it opens the field up for increased runoff, reduced infiltration of water and removal of nutrients that will need to be replaced. Hay should always be cut first where we can't graze and only cut where we can graze if absolutely necessary.

Once it has been grazed over at least one time, livestock should be moved according to the forage available and not by any set calendar schedule. The rest period needed varies depending on the time of the year. Shorter rest is required early in the spring and longer in the summer. Livestock should enter the paddock or allocation when adequate growth is present, generally 8 to 10 inches for cool season forages, and removed when the shortest forage is about 4 inches tall. Remember, it is really important to maintain that solar panel and keep that plant growing above ground and below.

Lastly, if your livestock are grazing lush forages, you should probably be feeding some high magnesium mineral to prevent grass tetany. Early spring growth that is high in water and potassium, and low in magnesium and calcium is the problem. Cows close to peak lactation are usually at the highest risk. High-mag mineral is a good insurance policy.

Keep on grazing!

## Reminders & Opportunities

**Grazing 102 to be held** – June 9-10, 2015 at SIPAC. Grazing 102 is a grazing school designed to help producers understand the main concepts of grazing management. For more information, contact Jason Tower at [towerj@purdue.edu](mailto:towerj@purdue.edu) or 812-678-4427.

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