

GRAZING DONE ALL BASSACKWARDS? OR, NOT....?

by Will Winter, DVM

Dang. Just when I thought I had figured out the *Main Rule of Rotational Grazing*, it seems that there is one spectacular exception. You see, with all my new-found knowledge about modern-but-old artisanal grazing, I'd been telling people that, no matter what, we ALWAYS rotationally graze, and that there are no exceptions. So, now I find someone who proves the exception to the rule. And, to top it off it was a Texan, no less!

It turns out that there is a grass that grows throughout the South that is the rule-breaker. Most ranchers there, even many professors at the revered A & M will insist that this grass is a "native", but really, even the name is a tip-off that we have an import. We are talking about Bermuda grass, which, we find out, is not even originally from Bermuda, but actually from Africa. There are many African imports in the grass kingdom, some perhaps "good" some deemed "bad", take Bahia, (please! some might say) and many would be the first in line to wish Bermuda grass back to its original home. The old joke in the south is that the most assured way to get Bermuda grass off your farm is "plant Bahia"! There is some truth in that joke.

VIOLATING "THE RULE OF THE SECOND BITE"

The problems with Bermuda include its ability to sneak into your vegetable garden or orchard and wreak havoc, that's true. But even worse than that is the poor quality and poor palatability of Bermuda when it gets to 8-12 inches in height or when it's dried for hay. The protein levels average in the single digits, with low TDN and it's usually hard to raise the pre-grazing or cutting Brix levels above 3-4 units. Cows have to chew on this cardboard all day just to get something to digest and are so busy chewing they never have time to chew their cud.

But I digress. What I'd originally stated was that Bermuda is the only known class of grass in the world that functions best when it is "grazed wrong"! And that means it's a grass that, in a nutshell, almost demands to be punished by being hammered daily with constant grazing, that is, in violation of the "Rule of the Second Bite". For those who are new to rotational grazing, we like to say that no matter how much grass we take off with a grazing session in the rotation, which can vary wildly depending upon the situation, from just the upper third, to a more extreme of taking over half and even stomping down the remaining cover, the basic rule is that we don't let the livestock "backgraze". This can also be defined as going back to the same plant for a "second bite". For virtually all grazing situations besides the one we are discussing, that is what may damage, stunt, stun or even kill the crowns of the desirable grasses. This is the most common causation of destruction of a pasture or prairie by what is commonly known as 'set stock' or non-rotational grazing. The good grass is nibbled, and nibbled and nibbled

until it's eventually killed off, meanwhile the "weeds", woody shrubs and less-desirables overtake the field. You see this ruination in close to 99% of the pasture land in the US.

The reason that Bermuda grass "loves to suffer" can be found by examining the geographical and meteorological roots of the grass., Exhibit A: The Serengeti Plains. This is a place that varies between monsoon-like extreme rainfall over a short season, followed by savage droughts for a long season. As soon as the deluge begins, Bermuda, and presumably all the plants that grow along with it, explode into a frenzy of growth. The blazing sunlight and torrid temperatures of Africa are also key factors in this growth pattern. Co-evolving with the savanna plant life are a plethora of herbivorous animals, everything from tiny mice to elephants, with an enormous and almost unimaginable biomass that devours the newly-sprouted Bermuda grass almost as quickly as it grows. When you see photographs of the Serengeti you will see hundreds of thousands of wildebeests grazing almost shoulder-to shoulder. Technically, this IS rotational grazing because they are only there until it quits raining, which it always does. But what is stunningly different is that the intense mob grazing goes on so long and that the grazing always punishes the grass hour after hour, day after day, month after month. Go figure, the grass loves it.

THE "BERMUDA WHISPERER"?

So, I mentioned a Texan and so it is that one man down there, an agronomist and plant scientist by training and by profession takes us back to the true roots of this plant. If we are going to make meat and milk and therefore money from Bermuda, he says we must punish it as it needs to be punished. This man is SABINO CORTEZ of Hico, Texas. In 1977, Sabino also founded and currently heads, along with his two sons, Erath Earth, Inc. a business that sells compost, compost teas, and compost tea brewing machines. More about that later. By the way, Erath is the county in Texas where Sabino and his family live and work. I ran into Sabino several years ago at various conferences and have since visited him on numerous ranches where he has launched demonstration plots as well as large-scale production fields of what he, very appropriately calls "Serengeti Grazing" (SG). When done according to his rather strict protocol it's virtually guaranteed to produce results far beyond your wildest expectations, far beyond your previous grazing history.

The most amazing facet of SG is the stocking density of the technique. At the Stevens Ranch, owned by Ted and Pat Stevens, near Herne Texas any visiting farmer can see something that you just plain can't believe otherwise (Texans are known for their "tall tales" after all!). But this is real, I can assure you. For example, you will see six or more butterball-fat 1000# steers finishing on every acre of SG Bermuda! And they can remain at that intense mob stocking density for up to 4-5 months. No moving. They are content and full, and, as if that weren't enough, the grass only gets better with each passing year of production. SG Bermuda averages a stunning 24-26% protein with Brix indexes that can get into the 20's. Watch it literally regrow overnight, every night.

For the sake of simplicity, I will make you a list of the basics that will be necessary to

achieve this seemingly impossible style of grazing: Sabino warns that when people try to short-change the list or skip a step that it's not very likely to work. So, you have been warned. Note too that Bermuda needs a growing season with extreme heat, therefore this grazing style can only be accomplished in the southern-most and hotter coastal areas of the US, which, of course is now inching northwards. Long periods of 100 degree days are essential to make Bermuda turn on the afterburners. This is one reason why SG is a survival plan for drought and extreme heat. No shortage of that lately either.

MASTERING SERENGETI GRAZING

1) To begin you'll need to jump start the process with a one time application of 3-5 tons of good compost per acre. We will talk more about what constitutes good compost but let's just say that if you are stuck with compost containing herbicide or GMO it will still work. Don't put it on your garden because the poisons could kill broadleaf produce for years, but fortunately it will not kill grass. This infusion of mixed carbon sources is only done once. Incidentally, it's highly recommended that you do a soil test before you start anything. These tests might give you some shocking information about horrible deficits or excesses, but more than anything it's important to know where you started. This for bragging rights if nothing else. Making good soil from bad dirt is one of the true joys of sustainable farming. Incidentally the TPSL is the only soil lab in the US that uses the Carbon Extraction technique to evaluate the levels of minerals in the soil that are truly available to the plant. They work with soil and plant tissue from around the globe so you can send them samples no matter where you live.

2) You must be prepared to survive the now-inevitable periods of no rain by installing some form of irrigation. Thinking that you can roll the dice and gamble with rain, just until you get started, is planning to fail. If the SG Bermuda dries out even once your SG plans are over with for that season. Regular soaking of roots is essential. That having been said, it doesn't take much water at all, the trick is in the style of irrigation. To save money, diesel and water, Sabino usually recommends drip tape or drip tubes buried underground at about 10" deep at 32" intervals. Since virtually 100% of the water from drip irrigation is captured by the grass roots, very little water is required especially when compared to pivots or guns. The average watering can be done by irrigating in zones, and can be done with a low-pressure, small horsepower pump. Sabino says you can also save money by having professionals engineer the hardware onto the site, don't try this one yourself. On average, you will need to provide the equivalent of about 1" of water/acre/week.

Since the equipment for this form of irrigation will set you back a bit financially, only bite off the size field you will be able to afford to equip for SG. It will cost you about \$1500-2000 per acre but that investment will serve you well. It's not uncommon for drip irrigation gear to last you 8 or even 12 years with minimal care and preventative maintenance, for example, lines must be flushed occasionally and in frost zones, drained for winter. A good injection pump such as the double-piston models in the 3/4-1 horsepower range, as well as the Amiad line filters for fertigation use, can be purchased

from reliable sources such as the company Swish out of Stevensville Texas. They service all of Texas and surrounding areas and are considered by Sabino to be very reliable. They also do on-site engineering for any farm or ranch.

3) If you want to plant a new or spotty plot with Bermuda, use about 5# of seed per acre. The seed must be kept sopping wet for 4 days until it has sprouted and begins to come up. After that, normal water or, hopefully, rainfall will take over. In most southern areas planting can proceed as soon as the soil warms up to 65+ degrees which is usually April or May. Earlier seeding in cold ground won't develop properly, but get it in as soon as soil temperature permits. Everything we are talking about works best with what is known in most parts as "common" Bermuda, even though success can be had with lesser strains such as Coastal, Teff or Jiggs. Common Bermuda actually makes a viable seed whereas most hybrids are sterile.

4) Then you need to bring on the livestock. Most of the time you don't need to wait a year to do this, quite often the mob grazing can begin as early as 30 days post-seeding. How many? Well, let's just say a lot! The guiding rule is that the grass must never be allowed to grow beyond 4" inches in height. If you do, it's not the end of the world, but everything we are saying here, the magic, will not work. The usual number to begin with will be 5-6 head/per acre and that could even go upwards year by year as you thicken your sward and deepen your root mass. The phenomenal part of this program is that the 100 degree heat, raging summer sun and the regular application of a bit of water creates an insane level of growth! With adequate water and manure it will regrow overnight. There is also an insane level of manure that needs to go away. I mention this because the "farm workers" required to do this are millions of dung beetles. Obviously, if you are still worming livestock with chemicals you will never be able to achieve the desired results. (since you read SGF, you shouldn't be worming anyway! See the archives about how to avoid that). On the SG fields of the Stevens farm, the bees produce an enormous volume of manure (cattle average 50 bowel movements a day, and about 25 urinations). With adequate dung beetles, that mass of manure is literally gone in a day! Again, something you have to see to believe. While cattle on hay have relatively dense and fibrous manure that is slow to disappear, the manure from SG is more liquid, so with the hard-working beetles and ramped-up biology it disappears virtually overnight. It seems impossible but the fields are almost perfectly cleared off each day, there is no accumulation. Increased biology in the soil speeds decomposition even more. All this carbon, nitrogen, phosphorus and mineral load is like gasoline on the fire for the growth of the grass. This is Mother Nature at her finest!

5) SG is only valuable for a set period of time, for the most part from June to September. Then it's time to get the animals off and get them to the rest of your farm. Here's the beauty of that.... while the Bermuda has been your workhorse all summer long, the other 80-90% of your farm has been doing something else....resting, producing seed and allowing you to skip baling it for hay. You should now have tons of grass to serve your September till next June feeding purposes. What is best of all is that this rest includes the July-September summer window is when many cool season and warm season grasses need to have the grazing pressure lightened. Now these plants

are ready to get back to rotational grazing or stockpiling for later use. Hopefully following this plan will eliminate your need to produce hay at any time during the year. If you still need to feed some winter hay, it is permissible to feed it over the SG Bermuda. Since this manure will be more firm, you may need to rake it apart in the spring.

6) The last step to complete your SG project involves foliar feeding or introducing liquid nutrients via your irrigation water, the latter being far easier. This is best done using compost tea preparations that you make yourself using a small amount of native compost mixed with other nutrients. The application rate is 25 gallons per acre of the tea concentrate and we start by doing it every two weeks. The need for this level of frequency actually drops with time as you will be building a strong colonization of natural bacteria and fungal biology in the ever-strengthening soil. The Stevens ranch, for example adds compost tea via fertigation only 3-4 times a year.

GO GET 'EM, TIGER!

So that's what it takes. A bit of start up in the beginning but you get going fast and it works every time. Sabino has been doing this sort of work since the 1980's. He is always willing to help every single person who is willing to get started. He also provides access to the right advice about making compost and making and using compost tea. These products are also appropriate, desirable and useful for every other part of the farm.

WHERE TO FIND RESOURCES:

ERATH EARTH, INC.- Your one-stop-shop for compost, tea brewers and more. 410 E. Blackjack St. Dublin, TX 76446 254-485-3560 contact@eratheart.com
www.eratheart.com Talk with Sabino, Paule, or Joaquin Cortez.

SWISH INC. For irrigation systems 970 Co Rd 351 Stephenville, TX 76401
254-965-4505 swish@irrigationdistributors.com Distributors in many states.

TEXAS PLANT & SOIL LABS- For testing of soil and plant samples. 5115 Monte Cristo Rd Edinburg, TX 78541 956-383-0739 www.TexasPlantAndSoilLab.com Worldwide testing. The only Carbon Extraction lab

GRASSFARMER SUPPLY, INC Home of Will Winter for livestock and pasture consulting and related products, feeds, minerals, vitamins and tools. Cannon Falls, MN grassfarmersupply.com, 612-756-1232

In PART 2 of this article, I will go into complete detail about building compost and the entire rationale and processes involved with making good, simple and affordable compost tea. This is truly a technique that can be achieved by just about anyone with an open mind and a desire to farm biologically.

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