

# MANAGED INTENSIVE GRAZING IN SOUTH FLORIDA WITH ANGUS CATTLE

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My family has been raising citrus and cattle in south central Florida for several generations. Our cattle business consists of a commercial crossbred herd which is mainly 90% English cross, and a registered Angus herd. In the beginning, the pastures consisted of mainly large acreages of Bahia grass which was established in the early 1960's, and the cattle grazed the large pastures for weeks at a time. The cattle were supplemented with high protein syrup and a lot of hay in the winter. The stocking rate was one cow per five acres. The cattle having such large pastures to graze would eat the grass that they liked and leave the grass they didn't. I call the grass they liked the "ice cream grass" because they would go to it first every day. Eventually the "ice cream grass" began to die out. Every day the cows would clip off the leaves of their favorite plants, the plant would grow another leaf and it too would be clipped off. Eventually because the plants leaf is not able to do its job through photosynthesis, the roots and the plant begins to die and weeds began to grow in their place.

Fifteen years ago we had a epidemic of mole crickets that totally devastated the Bahia grass, in part from being weak from overgrazing. We had to do something fast to get grass established again. We are very fortunate that the University of Florida Range Cattle Station is located in our county. The research center is dedicated to the introduction and testing of new grasses and forages that will be beneficial to the Florida cattlemen. After these new grasses have been thoroughly tested and evaluated by the University they are then released to the public to be planted. This process can take as long as twenty years. After many visits with the different professors about the types of grass to plant, we settled on three main types. Because of south Florida's high rainfall and mild winters, we chose the following types of grass: Star Bermuda, a fast growing high protein grass that is established vegetatively, Hemarthria Floralta, a type of limpo grass that has lesser protein but is good for standing hay as well as grazing, which is also established vegetatively, and a few acres of Bahia, which has fair protein, but will take a lot of abuse, and is established by seed. In the case of the Bermuda and the limpo grass, green plant material is spread on the surface of the soil, using an implement called a slinger. This scatters the grass evenly in a small area behind the tractor. Immediately following the slinger, we use an implement we refer to

as a "pizza cutter", which is basically a rolling drum with colter blades spaced 6-8 inches apart, which literally pushes the runners of the grass into the soil. A large roller is pulled behind to pack the soil and hold the moisture. Both of these varieties being joint grasses, the roots and foliage sprout from each joint to establish a new plant. In the case of the Star Bermuda, beginning from a clean field, I have grazed cattle seventy-two days after establishing the new pasture. During the summer months the star-type Bermuda grasses will literally grow as much as 6 inches per day and have runners eight to ten feet long that the cows will actually trip over. The Bahia grass is seeded in July with the summer rains and

*Illustration 1: Cattle grazing Rye grass*



takes nearly a year to establish with intermittent grazing. A new grass we have began to plant the last few years is a type of Bermuda called jigs, another high protein, fast growing tropical grass that is also established vegetatively. Because the Bahia and Star grass varieties tend to go dormant in the winter, they fit into our rye grass program as they do not compete with the rye seed.

I also decided now would be a good time to try managed intense grazing that I had been reading about from New Zealand. We started breaking some of the pastures up into a minimum of ten acre paddocks that were mostly square, using high tensel electric wire and 1" PVC pipe with a hole drilled through it where the wire would go for posts. We started moving the cattle every three days the first year, and I quickly found out that there were improvements we could make. We

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realized the cattle had more grass than they needed and took too long to eat it. They were still picking the grass they liked best. The pastures were then cut in half to five acres and made into long rectangles instead of squares to better utilize the walking motion in which cattle graze. I found that we needed to increase the stocking rate to one cow per acre, and shorten the time to

*Illustration 2: Ready to go into new plot*



twenty-four hours for each move to utilize all the grass. This system worked the best and the cattle are now on a thirty-two day turn around. We also changed from PVC post to metal post with insulators because with Florida's high rainfall (fifty to seventy inches), the PVC pipes would fill with rainwater and short the fence out, another strand of wire was also added to control the movements of the calves that were going under the fence.

The water troughs are placed in a connecting lane about six hundred feet from the the pastures. The cattle walk this distance and defecate along the way, thus eliminating such a nutrient load at the water trough. Any further distance and they would be spending too much of their time walking and not eating.

In the beginning, changing the cattle every twenty-four hours was a lot of work. However, once the cattle moved to a new pasture every day and had fresh grass that had not been grazed in over thirty days, they seemed to look forward to moving every morning. Cattle being creatures of habit, they know what pasture to go to next. When I open the gate, ninety percent of them will go in to the next plot and the remaining ten percent are pushed out with the aid of an ATV and our Australian Shepherd dogs. The cattle will move to the new plot without any problem and begin grazing. They tend to walk the entire length of the pasture, eating and moving, eating and moving, until they get to the end of the run and then turn around and head back up. The cattle consume the entire

field of grass including what few weeds that may be present.

In mid-October, rye grass is over seeded in the irrigated pastures and we will start to graze around mid December. The pregnant cows, as well as the developing heifers and background steers, are fed the rye grass three hours daily, after which they are removed and allowed to spend the rest of the day in the standing hay pastures. The standing hay pastures are the *Hermathia* grass plots that were mentioned before, but are cut into smaller sections horizontally across the plot utilizing portable electric fences. This way the small acreage of the standing hay is grazed completely before a new section is opened up, thus allowing the standing hay to be completely consumed without being trampled or laid on. It takes approximately ten minutes with the use of the ATV and step-in plastic fence posts to move the electric wire for another day of grazing. The standing hay pastures are set up so that when the cattle utilize the standing hay entirely, it will be the middle of spring and hopefully the Bermuda and Bahia grass will have begun to grow again. We test the soil for pH as well as micro and macro elements every year and amend as needed. We like to keep our pastures pH between 5.5 to 6.5 which results in the addition of one ton of high calcium lime per acre approximately every four years.

The cattle are vaccinated two months prior to calving for IBR, BVD, and Blackleg. The calves

*Illustration 3: Jiggs Bermuda 30 days after*



receive a booster four months after birth. Free choice mineral is available year round and mineral containing the element selenium is fed to the pregnant cows two to three months before calving.

A few years ago we over-seeded clover into some of the pastures to add additional nitrogen to the soil, as well as high protein grazing for the cattle to transition the

time between the rye grass and the summer grass growing season. Toward the end of grazing season I allow the clover to seed out before the cattle are allowed to graze it. After grazing the clover and consuming the clover seed, the cattle are moved to a pasture where additional clover is needed and the cows do the additional planting for me. After several years of this practice most of the fields have good stands of clover in them.



*Illustration 4: Calf grazing new plot*

Over the years we have noticed that the pastures containing the fast growing Bermuda type grasses are the most productive the first eight years after planting, they tend to bounce back quicker after grazing, and begin growth earlier in the spring. After the tenth year the pasture starts to get compacted and the grass becomes root bound and production and tonnage start to decline. Because of this we began rejuvenating pastures every ten years on a rotational basis.

After the rye grass season is complete, around the first of May, Florida is usually well along in its seasonal drought. At this time, the pastures that are due to be rejuvenated are completely plowed and allowed to bake in the hot Florida sun with an occasional disking now and then to make sure all plant material is eliminated. Usually around the first of July, Florida's wet season begins and the new clean pasture is planted, thus starting another ten year cycle of productive pasture. The amount of grass production in the early years of the pastures life and its value to the operation, versus the pasture becoming older and less productive in the ensuing years far outweigh the cost of planting.

The many benefits we have enjoyed from the managed intense grazing is we now stock at a rate of two cow calf pairs per acre year round, and went from eighty percent to ninety-five percent calving rate because of better body condition, which remains between five and

seven. With the greater number of cows per acre, which deposit manure in a more even manner instead of here and there as in the past, we have been able to cut our fertilizer use by over eighty percent. Because I see the cattle every day I can catch a health problem early and treat it before it can get out of hand. We don't have to supplement with feed or hay in the winter. In fact, because we have so much excess grass in the summer, we cut and wrap the grass and sell it in the winter to local cattlemen, and still have time to grow more grass before the fall.

*Illustration 5: bulls grazing Star Bermuda*



In addition to better calving rates and more profit, we have eliminated the need to herbicide the pastures because weeds do not compete well with lush healthy grasses. We normally would mow the pastures during the summer to remove the tough stubble that had accumulated since the Spring, but with the mid Summer cutting of hay the need for mowing has been eliminated. Another benefit, because the grasses are at least a minimum of six to eight inches high year round, ground nesting birds such as Meadowlark, Sandhill Cranes, and the Osceola turkey have begun nesting in the pastures. It's not uncommon every morning and afternoon to see twenty-five to thirty turkeys in a flock in the pastures.

*Illustration 6: Osceola turkey in pasture*



Also, because grass is covering the entire pasture area, when Florida's heavy rains come, we have reduced soil loss to a minimum due to runoff. The greatest benefit of all is that our cattle operation has become more profitable and we feel we have minimal environmental impact. We feel this is important because as cattlemen, we have an obligation to provide a nutritious product to the consumer while protecting our land from any harm. After all, farmers and ranchers are the original environmentalists.