

MIG: Will it Work?

A review of the benefits offered by management intensive grazing (MIG).

By Lori Frederick, representing the Southern Section of SRM

"There aren't many people around here who use management intensive grazing (MIG)," I said as I sat down at the kitchen table with my dad to discuss hay production and weight gains on our beef and dairy cattle.

"No, there's not, and there won't be either," he replied.

"Why not? Don't you know that MIG is better?" I asked.

"I've heard that, but who has the time to build the fences, and then what are you going to do about water? You can't have a pond in every pasture. Face the facts it's just simpler to leave them in one pasture and check them every now and then," he said.

I asked Dad what the yield was on the hay acreage. He said some yielded good, but on the other parts of the farm, where the soil was thinner and rainfall less, it hadn't yielded as well.

"That didn't answer my question," I continued.

"Well, since the hay and pasture is marketed through the beef and dairy cows, then their production is the pasture and hay's production," he said.

"In other words, Dad, you don't really know how much production we are getting from our pasture and hay, do you?"

As producers we treat our pastureland as secondary production. Granted the production is most often cycled through cattle or sheep, and maybe some bison and elk. But if we don't know the production capability of our land that is devoted to pasture and hay, how can we fertilize for a given yield?

Do we know the best type of forage to use? Is a monoculture better than a mix of grass and legumes? Are warm season or cool season grasses better? Are native or introduced varieties better? Is management intensive better than continuous grazing? These aren't age-old questions, but rather the questions that need to be addressed by producers and land grant researchers.

We must know the production of our pasture and

rangeland in terms of yield. If a pasture isn't yielding to its potential, then changes should be made to better the operation.

A Closer Look

The predominate pasture that we have in Missouri is fescue. Not only does fescue have the ability to survive on the thin soils of the Ozarks, it can be stockpiled and not lose its nutritional value during the winter months. This cool season, introduced grass has its place, but not to the extent that it is used.

This grass has an entophyte problem. This fungus infestation can and will cause poor weight gains and could cause reproductive failure. A good way to solve this problem is to mix in some type of legume. The legume will increase gains, increase the amount of production and extend the grazing time, particularly during the early summer months when the fescue stops growing. After much research new varieties of entophyte free fescue have been developed.

Fescue has been grown for so long that many producers have forgotten that other grasses exist. Other monoculture species that have been used include smooth brome grass, orchardgrass, and Kentucky bluegrass. Most producers have planted a mix of cool season grasses, trying to capture the beneficial aspects of several species. Common legumes that are often planted with the cool season grasses include birdsfoot trefoil, white and red clover, and common lespedeza.

In recent years, Missouri producers have started to look at the value of native grasses. These warm season grasses have the ability to use the fertility of the soil without any added nutrients and still produce several tons per acre. These special grasses, including big and little bluestem, Indiangrass, and switchgrass, once covered the southwest corner and most

of the northern half of Missouri prior to the introduction of the moldboard plow. Now these plants are making a comeback on their own. We see them growing along the gravel roads and also in some of the land devoted to CRP.

Extension research has proven that these plants are palatable to livestock, animals like to eat them, and gains are just as good on these grasses, if not better than their cool season counterparts. However, the problem with cool and warm season grasses is that they don't mix well together. Cool season grasses require a higher soil PH and need to be fertilized in order to do well. Also the fertilized cool season plants will crowd out the native plants grown in the same pasture. In order to do well, the two grass types have to be grown separately.

A Case For MIG

The grazing method used by the majority of the U.S. producers is continuous grazing. This means we turn the cows out to pasture, let them consume all there is, and move them when we feel like. However research has proven that management intensive grazing or rotation grazing is by far the best grazing method. This method is better for the livestock, better for the land, and better for the producer, for reasons other than pure economics.

Under continuous grazing the livestock will continue to attack the same location, eating the younger, more tender growth, while other locations in the pasture will grow and mature and become unpalatable to livestock. The stock will lie in the same location; defecate in the same place, utilizing only 35% of the vegetation.

In contrast, management intensive grazing will yield 65%! In other words a producer could in fact manage twice the livestock on the same acreage or continue with the same number of stock and use only half of the acreage for grazing. A producer has to move the livestock quite often, forcing the cows to eat just what is available to them because they are contained in a limited space. Most producers who use this system are able to take cuttings of hay off some paddocks prior to the livestock being moved into them. As the livestock are moved, so is the manure that is produced. Instead of being piled underneath the cow's favorite tree it gets scattered out as the cows are moved from paddock to paddock. This will also break up the worm cycle that

would be contained in heavy manure infested areas. The cows are allowed only to eat the grass down to eight inches before being rotated, generally every 3 to 7 days.

Pasture types could be planned so that grazing cool season grasses takes place during the cooler months and grazing warm season grasses takes place in June, July, and August. Moving the stock so often forces the producer to see his stock aiding in the detection of health problems earlier.

Most producers will say this all sounds beneficial, but there is the problem of new fences and the availability of water. Fortunately, fences don't have to be six strands of barbed wire. One good electric wire will serve the purpose. The stock will get used to it, and it's ok if the younger calves get under and forage the better growth. Water could be more of a problem, but farmers and ranchers have come up with some good ideas over the years. One example is the wagon wheel system, which uses a central water source.

In the end, what works well for one producer may not work well for another. But the solution is clear; we must increase the production of our grassland and rangeland in order to survive the times ahead. Recently, many western producers were forced to liquidate their herds because of dry conditions. The ideas I suggest cannot combat drought, but if we managed our operations more economically, the westerners could have shipped their cattle to Midwest producers for grazing until the rangelands could support the herd once again.

In conclusion, a mix of cool season and warm season grasses, coated with a good legume component managed under intensive grazing will generate more income for the producer and make them a better manager in the long run.

Lori Frederick, from Memphis, Missouri, was selected as the third place winner for her presentation in the High School Youth Forum at the 2003 SRM Conference in Casper, Wyoming.