

## MiG Basics: Why Grazing Pays

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What is the primary business of farming and ranching?

Depending on what enterprises you have on your operation, you might answer that question in a number of different ways. Producing grain, producing milk, producing beef, and the list could go on. While that may be what you produce, it is not your primary business. **The first and fundamental basis of farming and ranching is capturing solar energy.**

The more intermediate steps you put between solar energy and your final product, the less likely you are to be profitable. This is becoming increasingly apparent as costs for fuel, fertilizer, equipment, and labor costs all continue to rise. **The more iron and dead dinosaurs you put between the sun and what you sell, the more costly your product will be.**

Why is grazing such a viable alternative for many farms and ranches? In the most basic of grazing operations where meat is the salable product, there need be no intermediate steps between solar energy capture and the finished product. Many traditional farmers have a difficult time with this concept. If they aren't constantly doing something, they feel they aren't really farming. In some environments, human intervention may be necessary, but usually it is not nearly as much as we believe. Pastures and animals got along fine before we came on the scene.

Dairy production is quite a bit different from meat production due to the daily interaction of humans with their livestock. Because of the additional human intervention, a larger paycheck is needed so we do more things to try to make the paycheck bigger. Increased production almost always comes at increased cost. Sometimes it pays, sometimes it does not.

Let's look at some specific areas where managed grazing pays a better return than does conventional farming.

On conventional dairies and on many beef or sheep backgrounding operations, the majority of feed is harvested and hauled to the livestock. Increased fuel cost makes any machine operation more expensive than in the past. In our area, the custom rate for harvesting a ton of hay has increased from \$28 to \$42 in the past two seasons. Penn State University recently reported about \$36 machinery operating cost to harvest a ton of hay. Most of that increase is directly attributable to higher fuel prices. The more machine operations you do, the more it will cost you to produce a pound of beef or a gallon of milk.

Reliance on nitrogen fertilizer to support pasture production is unaffordable except in the most intensively managed grazing systems. Establishing and maintaining legumes in pastures is a far more cost effective means of providing N for pasture growth. University studies from as diverse environments as Texas to Oregon to Vermont have all shown cost per lb of gain on beef animals to be lower on grass-legume mixtures than grass + N fertilizer pastures. In the 23 years on our farm in Missouri, there were only three occasions that we ever used any N fertilizer. The rest of the time we

ran on legume N and an effective N cycle while carrying twice the county average stocking rate.

Almost all legumes thrive in well managed pastures. Lime, phosphorus, potassium, sulfur, and other micronutrients may be needed to really have legumes prosper, but those tend to be nutrients that will stay put on your farm compared to highly mobile N. A phosphorus molecule applied as fertilizer today may still be working in the same pasture 20 years from now, while the majority of N applied as fertilizer will be gone from your farm in a single season.

Well managed pastures typically have an effective nutrient cycle compared to hay fields or set stocked pastures. Grazing at higher stock density greatly improves annual manure coverage. Keeping taller residuals in the pasture can capture much more of the volatile N in urine compared to short grazed pastures. Consistently grazing higher quality forage produces manure that breaks down much more quickly than low quality pasture thus accelerating nutrient turnover rate. The right grazing management can keep your annual fertilizer costs to less than \$10/acre. There is no reason to be a serf to the fertilizer and chemical industries.

As hay prices continue to soar, the cost advantage of winter grazing over hay feeding continues to grow wider. It is very common for grazing to cost \$1 less per day for a mature beef cow compared to hay feeding. If you have 100 cows, every extra day of grazing can put \$100 in your pocket. Getting out of hay feeding completely and grazing year around could save \$12,000 for the farmer with 100 cows. In some areas of the country where hay is extremely pricey, the difference can be much greater.

Besides all the cost savings benefits associated with grazing, the value of pasture-based products is also at premium levels today. Three aspects of current consumer concerns all bring grazing to the forefront as the most socially acceptable venue for meat and milk production.

The human health benefits of many natural chemical components of pasture raised meat and milk are well documented with new studies being published with such regularity we can no longer even keep up with them. It only makes sense. Until post-WWII, ruminants basically did not eat starch in nature. Changing their basic diet would certainly lead to changes in their body composition. Changes that were as unhealthy for them as it was for us.

With increasing consumer concern for animal well being, taking stock out of feedlots and confinement facilities and putting them back on pasture has brought farmers back into a favorable light with many concerned citizens. We even have vegetarians returning to a normal, healthy diet of pasture raised meat and milk.

Overall concern for the environment also puts well-managed grazing into a more favorable light. Sound grazing management protects the soil, maintains water quality, and provides bountiful wildlife habitat. Grasslands provided these ecosystem services long before humankind ever domesticated the first cow. By basing our grazing management on a better understanding of ecosystem processes, we can do an even better job in the future.