

Case Study – Managed Intensive Grazing (MIG)– (Beef Cow/Calf)

Location: South Central Ohio

Resource Setting: Primarily a crop farm with 600 acres of cropland used for corn – soybeans – small grain – and hay and 17 acres of permanent pasture for cow/calf operation. The soils are moderately sloping and moderately well drained.

Pasture Resource Problem/Concerns Before Treatment: The 17 acres of permanent pasture was overgrazed, there was a shortage of pasture, the cattle required extensive supplemental feed and hay. The carrying capacity was low.

Before Treatment System and Effects:

Actions Before Treatment (Kinds, Amounts, Timing of the benchmark system)	Effects Before Treatment (Effects of continuing the benchmark system)
Pasture 17 acres:	
Continuous grazing in May and June by 20 cows with calves	<ul style="list-style-type: none"> • Cattle consumed all early spring growth until overgrazed • Cattle selectively grazed, leaving clumps • Required annual mowing
During the summer and fall months cattle use the pasture intermittently	<ul style="list-style-type: none"> • Cattle utilized existing hay fields for forage and were supplemented by hay • Rotated to wheat stubble/seeded to grass and legume fields • In the fall cattle grazed corn stalks and were supplemented with hay
Cattle grazed from May 1 to December 1	<ul style="list-style-type: none"> • Limited grazing time, required housing and supplemental feed
Winter feeding, the cattle were kept in the barn and feed hay	<ul style="list-style-type: none"> • Required supplemental feed • Required a lot of hay • Required a lot of straw for bedding • Created a large quantity of manure for hauling and spreading (3-4 days)
Nutrient Management 60 lbs of N applied in spring	<ul style="list-style-type: none"> • Improved spring growth • Cost approximately \$15 acre
Soil testing and no “P” or “K” needed	Did not waste money on unneeded inputs
Water system – cattle got water at the barn	<ul style="list-style-type: none"> • Cattle had to walk up to ½ mile
Fencing – only a permanent perimeter fence was used	<ul style="list-style-type: none"> • No rotational grazing • Selective grazing • Easy to manage

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Conservation practice standards are reviewed and updated periodically. To obtain a current version of this standard contact the Natural Resources Conservation Service or the NRCS Web Site (www.oh.nrcs.usda.gov).

Why a change was considered: The goal was to improve the carrying capacity of the pasture and improve income from the pasture resources. Wanted to utilize more of the cropland hay for sales purpose.

Resource Management System Applied and its Effects

Actions	Effects
Pasture 17 acres:	
MIG begin April 1 st and rotate until mid July then pasture wheat stubble/seeding on the farm.	Feeds 26 cows with calves and 4 heifers for April, May, June, and part of July. Pasture some hay fields. No hay is feed during the summer
Planned Grazing System: 17 acres divided into 12 paddocks with polywire	Cattle graze all the forage in each paddock, no clumps or weeds left. Facilitated a lane for cattle to get to water. No need to mow pasture or paddocks.
Varies the start point on the paddocks each year	Allows grass to recover from early grazing stress.
Move cattle through all paddocks quickly in early spring.	Eats all grass in its most nutritious stage. Does not allow grass to over mature.
Pasture from November through December	Extended the grazing time Reduce hay consumption More hay for sale
Pasture Management: Pasture is allowed to rest from mid August to November	Allowed pasture to recover and produce forage for late fall. Cattle graze wheat stubble/seeding and some hay fields during the early fall
With MIG more clover is appearing in the stand and fescue is grazed with the bluegrass	Bluegrass, fescue, and clover provide a higher quality and more vigorous stand.
Nutrient Management: Continued soil testing	No longer top dress with "N" in the spring... Save \$15 acre per year
Pest Management: Weeds controlled with MIG	No need to mow to control weeds

Impact of Applied Resource Management System

Impacts After Treatment (Change from the before treatment to the applied treatment)	Decisionmaker Evaluation (+) Feels Positive about the change (-) Feels a drawback about change
Planned Grazing System:	
MIG system with 12 paddocks on 17 acres increased with carrying capacity from 20 cows with calves to 26 cows with calves.	+ More income from same acres (6 more feeders at 500-600 lbs to sell)
Takes 5-20 minutes to move fence every 2-3 days	- Requires time + Get to provide better management to the herd and cattle are easier to manage/handle
Paddocks are pastured at peak quality	+ Cattle get consistent high quality forage
Pasture Management: Pastures/paddocks are given regular rest periods	+The stand is more vigorous +The forage regrows faster +More tolerant to weather stress
Bluegrass, fescue, and clover all grazed uniformly	+No more clumps of fescue +No low quality stems to graze the next time through the paddock
Earlier spring grazing and later fall grazing extended the grazing season by 6-8 weeks	+Cheaper feed, less hay required +Healthier cattle and calves +Better feed +Less housing time, bedding, and manure +More hay is available for sale
Nutrient Management: Less (no) fertilizer applied because cattle uniformly spread manure	+Less expense +Environmentally friendly
Pest Management: No annual mowing to control weeds and brush	+Less labor required +Forage stand more uniform - Father lost mowing job

Summary: The producer is very pleased with the results of his MIG system. Although he has increased his carrying capacity by 6 plus (increased the number but still feeds less hay), the producer feels he can increase the herd by about 4 more cows with calves.

The producer warns that it takes time to evolve into the MIG system. Don't start with permanent internal fences. Use flexible polywire for all internal fencing until you determine where permanent fences are needed. Because of the more intensive grazing there seems to be a problem with more worms in the cattle requiring treatment. This is a minor inconvenience considering the overall benefits.

The producer feels that more of his cows are having breech births now. He and the vet feel that it might be that the cows are pasturing some of the steeper slopes during their third trimester. He is going to try to limit pasturing to the less sloping areas during the final trimester.

The producer has invested about \$300 for fencing and \$400 for a water system.

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Summary:

The producer is happy with the results of the MIG system. Carrying capacity of the farm has increased allowing more sheep to be grazed on the same amount of acres. The producer has concluded that the economy of such a system is positive because of the low cost of feed and increased carrying capacity. Although the daily rate of gain is less than when sheep are feed a high concentrate feed in the barn, the farm can produce more pounds of sheep at a lower cost. When developing a MIG system the producer warns that one must be flexible until you have the system fine tuned to your needs. Worms and foot rot are two problems that may increase with the pasturing of sheep. Taking precautions and good management these problems can be kept to a minimum.