

Case Study – Managed Intensive Grazing (Sheep)

Location: East Central Ohio

Resource Setting: Primarily pasture/hayland on steep to gently rolling hills with some bottomland.

Resource Problem Before Treatment: Prior to purchase, the farm had previously been in row crops and farmed up and down the hill. The soil was severely eroded with little to no top soil left.

Actions Before Treatment (Kinds, Amounts, Timing of the benchmark system)	Effects Before Treatment (Effects of continuing the benchmark system)
Pasture Management – grazed cattle (cow/calf) on one pasture all year, rotated sheep between two pastures.	<ul style="list-style-type: none"> • Cattle selectively grazed leaving clumps and multiflora rose • Required annual mowing • Ample pasture for livestock
Watering system – livestock went to creek to drink or water was hauled to them.	<ul style="list-style-type: none"> • Water quality problems from direct drinking from the creek • Time and labor involved in hauling water • Livestock create path to creek that eroded
Fencing – used existing woven wire perimeter fence.	<ul style="list-style-type: none"> • Kept livestock contained - Low cost
Nutrient Management – no regular fertility program, would occasionally fertilize. Was concerned about calcium.	<ul style="list-style-type: none"> • Low grass production • Lower grass quality • Needed lime
Pest Management – sever problem with multiflora rose	<ul style="list-style-type: none"> • Must mechanically or chemically control the rose problem

Why was a change considered: The producers interest in Managed Intensive Grazing (MIG) began somewhat accidentally as a casual observation. While using sheep to clean up some brushy areas, it was observed that when the sheep were removed the grass grew back quicker than usual. If it works this way in a brushy area how would it respond in a pasture? After some research on the issue the producer decided to move toward implementing a MIG system on his farm.

With the adoption of the MIG system the producer decided to no longer raise cattle and would concentrate just on raising sheep.

Resource Management System Applied and its Effects

Actions	Effects
<p>Planned Grazing System – MIG adopted, 68 Ewes and wethers (120-140 lbs.) on a 7 ac. pasture. On pasture from mid March through mid November. During this time livestock rotated through the area 8 times. Maximum grazing time on each paddock is 3 days. No hay cut on pasture unless pasture gets ahead of the grazing. Time between grazings is 20 days in April – May and increases as pasture growth slows to 40 days between grazing.</p>	<ul style="list-style-type: none"> • Paddocks fully grazed • Worms controlled • Increased forage production • Higher quality forage • Better distribution of animal waste
<p>Pasture Management: Manage pasture for bluegrass rather than orchard grass.</p>	<ul style="list-style-type: none"> • Clover will start to come back • Higher weight gain • Higher quality forage
<p>Winter Grazing Nine acres are used for winter grazing. Pastured from November to mid March. Hay is baled during the summer and bales are left in the field for winter feed.</p>	<ul style="list-style-type: none"> • Year round pasturing reduces problem of storing and hauling animal waste. • Provides adequate winter forage supply • Sheep stay outside all year • No hay storage facility required • Low labor requirement
<p>Watering System Plans to develop a cistern system, gravity fed to provide water to each paddock.</p>	<ul style="list-style-type: none"> • Improved water quality • Reduced travel time to get water • Cost to develop new system • Better waste utilization and distribution
<p>Fencing As the woven wire perimeter fence breaks down it is replaced with a four strand electric fence. The three bottom wires are hot for lambs. Woven wire gates are used. Use a portable electric fence to divide the paddocks.</p>	<ul style="list-style-type: none"> • Costs to replace fence • Labor required to replace fence • Does not keep does out (electric fence minimizes problem) • Lower cost than woven wire • Low quantity forage under all fences due to double grazing.
<p>Nutrient Management No fertilizer used. Stockage rate is still less than carrying capacity.</p>	<ul style="list-style-type: none"> • No fertilizer cost
<p>Pest Management MIG reduces both weed and multiflora rose infestation and competition.</p>	<ul style="list-style-type: none"> • Low cost and labor • Improves forage quality and quantity

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
MIG with year round grazing	(-) Potential worm problem (-) Potential foot rot (+) Increased quality of forages (+) Increased 2 to 4 times in carrying capacity (+) Significantly cheaper feed source (+) Increased efficiency of feeding (-) Reduced rate of gain from 1 lb/day (in barn on high concentrate feed) to 1/3 lb/day on year round grazing (+) No manure to haul (-) Dog problem around wood areas (minimized with an electric fence)
Watering System	(+) Cleaner drinking water (+) More dependable water supply (+) Reduced soil erosion (+) Reduced travel to water (-) Cost of installing the watering system
Fencing – High tensile	(+) Cheaper than woven wire (-) Labor to construct fence on the contour (+) Contains the livestock (-) High tensile does not keep dogs out
Nutrient Management	(+) Better distribution of animal waste in paddocks for source of nutrients. (+) No cost for fertilizer
Pest Management	(+) Grazing controls multiflora rose

Additional Producer Comments :

Ideally sheep should be grazed on a grass that can withstand being grazed low to the ground. Many of the traditional pasture grasses such as Bromegrass are not tolerant of this type of grazing. This introduces the possibility of seeding pasture areas to a lawn grass mixture not only because they are tolerant of this type of grazing but because they are higher in protein.

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.