

## Case Study – Managed Intensive Grazing

**Resource Setting:** A 300-350 acre farm with about half in a bottom land area and half in a moderately sloping upland area in East Central Ohio.

**Resource Problem Before Treatment:** Falling profits on the cropland areas. The cropland was making less profit and something had to be done to keep the operation profitable. Crop yields were falling due to the weather, and the high quality baled hay was difficult to sell.

The current method of operating the farm was not making the profit it should for the time invested. A change was in order, but what changes should be made? After attending a grazing seminar, the producer decided that implementing a Managed Intensive Grazing (MIG) system was the change that would be made.

**Before Management System:** 300-350 acre of a C-SB-WX-Alfalfa(hay) (2-4 years) rotation. Soil erosion was within the “T” value. Most crops were no tilled.

**Description of Treatment:** Change to a Managed Intensive Grazing system on some alfalfa acreage initially, then on permanent pasture. This system was designed to bring a profit back to the farm by optimizing the use of the hay and pasture resources.

**The first year** of change was 1985. Starting with 80 head of 300-500 lbs feeder calves on a 8 acre alfalfa pasture in mid May and the MIG system was started. The alfalfa had a perimeter fence so all that was needed was an internal fence. Two polywire fences with posts were used internally. The front fence was moved each time the cattle were moved (2-4 times per day); the back polywire fence was moved every 2-3 days. For water the cows still had to travel to the barn.

The first year the alfalfa was allowed to be grazed close to the ground. The cows were given a limited amount of new alfalfa 2-4 times a day. The size of paddocks was determined by trial and error. The cows were rotated through the system five times during this summer. The alfalfa was supplemented with 300-400 bu corn during the year.

**The second year** 1986 ushered in several changes. This year between 50 and 60 head 500-600 lbs each were pastured on 8 acres. The pasture management system also changed. Keeping the temporary fence approach but changing the way the alfalfa was grazed. Instead of grazing it close to the ground, a 6-8 inch stem was left, the assumption used was that the best grazing was at the top of the plant and this may improve regrowth and vigor.

Using this approach the rate of gain per animal jumped to 2.4 lbs a day but profit per acre dropped (1,200 lbs beef per acre). In addition the alfalfa did not do as well. The alfalfa would regrow from where the stems were eaten off and not from close to the ground as it would do if

NRCS – Ohio  
December 2002

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grazed closer. This flagging effect seemed to hurt the vigor of the plant. This problem was corrected by mowing off the stems after the cows were pulled out. Once this practice was adopted the vigor and quality of the alfalfa improved.

**At the end of the third year** a decision was made to move into the dairy cow business. The logic was to go for the maximum return on your most expensive asset, the land. Instead of feeding a cow to get one calf why not feed a cow to get a calf as well as milk.

In 1988 a \$10,000 investment was made to convert into a dairy operation. A grade B dairy operation was set up. In the first year 25 cows were milked. In 1988 the cows grazed the same alfalfa that had been used in previous years and a 80 acre pasture which was divided into 1.25 ac. paddocks. The perimeter fence was already in place so all that was needed was a single strand hot wire to divide the paddocks. All excess forage was baled into wet bales and used for feed when needed. The milking cows were pastured on an area first and then followed by the dry cows and heifers. During the second year of milking the number of dairy cows were increased to 50. From 1989 to the present the number gradually dropped back to 27.

The dairy cows were moved to new grass after each milking. Alfalfa hay was made into “wet round bales.” It cost \$6.50 per bale to wrap. However, the quality of the baled forage was excellent. The grass/alfalfa was mowed in the morning and baled and wrapped by nightfall. Bale quality was 19-24% protein.

Originally the cows were grazed on a good stand of alfalfa but the alfalfa eventually died out due to wet weather and the grasses took over. It was observed during this period that the cows gave the same quality of milk on grass as they did on alfalfa.

The cows are now on a seasonal dairy cycle. Cows are all bred within a two cycle period. With this combination all calves come within one period of time each year. Cows are dry from mid December to March.

The cows are set out to pasture in mid March and taken off when the snow and ice gets to heavy. If needed their feed and pasture is supplemented with hay. The average milk production of his herd is 15,000 lbs.

To eliminate the problem of the cows going to the barn for water, a watering system was installed. Water was not provided to each paddock but rather several central points easily assessable by the cows. A pond was used as a water supply and the water piped to the barn and to the paddock area. In addition, to the piped water and existing spring was used for a water supply.

Evaluations were also done with pasture fertilization, increasing water intake of the cows, and feeding the cows a supplemental feed. In this case, the experimentation with additional fertilizer showed the best result was obtained when the fertilizer was applied in July or August. The

fertilization program was discontinued as the producer had excess pasture available and did not need to increase production.

Providing more water for the cows provided no additional yield in milk production. The additional feed supplement increased the milk yield but not enough to offset the cost. As the cows ate more expensive feed they ate less, inexpensive grass.

Limited mowing was done on the pastures after the cows grazed to eliminate the clumps left by the cows. The concept behind this was they were saved for fiber and that the cows would eat the clumps when their bodies told them they needed additional fiber. However, the cattle never ate the old clumped grass. Pastures were clipped once or twice a year.

From the producer's experiences the MIG system has improved his cash flow over his previous operation. Although labor and management efforts are higher than before the higher profits have justified these additional inputs.

In the future the producer plans to better utilize the pasture by hiring a herdsman and raising the number of cows milked. In addition, some of the current crop ground maybe converted to grass and used to further increase the herd size. The dairy operation will remain as it provides a higher net return than a cow/calf operation.

The producer stated "when starting to develop a MIG system do nothing permanent. Observe what you did and how it works, if it doesn't work change it. There is no right or wrong answers just trial, error and intuition."

The MIG system is as much an art as it is a science according to the producer. The key is the proper mindset and the ability to see what the cows are eating and being able to plan at least two weeks ahead.

### **Impacts and Producers Evaluation:**

The cows are now the difference. The cows create the income and profit for the farm. The cows are carrying the cropland. Due to the poor return on the rented acres the producer is considering dropping some rented crop acreage and increasing his herd size. He is even considering the idea of doing away with cropland and converting all acreage to grass. Although the producer still sells a very limited amount of hay, he now has a profitable market for his hay and pasture by processing it through a dairy herd into milk. The producer admits his herd average of 15,000 lbs of milk per cow is not high. However, his return per cow and per acre maybe higher than a 20,000 lb plus herd average on concentrated feed in a confinement system.