

Management & Marketing Notes 06-2005**Economic Issues in Rotational Grazing**

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Is rotational grazing profitable? That's a simple question and the simple answer is "It Depends." Or, if you prefer, "Sometimes it is and sometimes it isn't." This shouldn't be a surprise because there is too much variation among farms to generalize.

The economics depend on the farm plan, so if you are considering a change, the first step get some qualified help designing the new system, including any changes you will need to make in fencing and gates, watering systems, and lane improvements. There are some potential economic plusses (cost savings, more income) and some economic minuses (added costs) when moving to a more intensive system of grazing.

- It takes more time to move cattle more often and more equipment use too.
- Added investment in fencing, water, lanes and livestock may be required.
- Pasture productivity, quality and utilization improve, which creates several opportunities including to reducing pasture acreage, carrying more cattle, improving cattle productivity, and reducing the amount of supplementary feed required.

Here are the key questions when considering a change to a more intensive grazing management system.

1. Why do you have livestock and what type do you have? How important is profitability relative to lifestyle or other personal goals? Why are you considering a change to a more intensive system of pasture management?

Some producers have livestock for "lifestyle" reasons. Reducing environmental damage to streams is an important consideration for other producers. In these situations economics is of secondary importance. Fencing cattle out of streams means adding fencing and watering systems and once these changes are in place, modifying pasture management is much easier to justify. You do not need to justify the entire cost of the project --just compare the changes in costs and benefits of intensive with extensive grazing practices.

2. Is profitability the main concern? If so, intensive grazing must be justified by higher profits and all changes in costs and income must be considered.

- a. How do you manage your pastures now?

Use your existing management system as the basis for estimating the extra time and cost of a more intensive system. Many producers do not move cattle to a new pasture very often but still go check on them every couple of days. If you are making a trip out there anyway, it adds very little work to move temporary electric fence and give cattle access to a new

paddock. If you do the work yourself, charge for your time based on the return you expect or the cost of hiring someone to do the work. For example, if it takes 30 minutes for a round trip to move fence at \$8.50 per hour plus you use a small pickup truck or ATV 20 min. at \$13.93 per hour (fuel, repairs and a pro rated share of annual fixed costs) to run to the field and back the total cost for the trip is \$8.89. But if you were going to check cattle anyway and moving fence only takes 10 more minutes the added cost is only \$1.42 per trip.

- b. What do you have by way of fencing and watering systems now and what would you need to add to create a workable more intensively managed grazing system?

New investments in fencing and watering systems can be substantial but will depend on farm layout and existing infrastructure. Availability of cost share is a major factor. For example, the full cost of a perimeter fence including your labor could cost \$1.50 per foot; subdivision fence \$0.50 per foot; and a hot wire temporary fence set up \$0.20 per foot. Add a watering system, lane upgrade, etc., and cost can run to \$300/acre if starting from scratch.

New investments must be recouped over their useful life (actual life or your business planning horizon, whichever is shorter) and there will be repair or maintenance costs too. For example: If you write off a new fence over a 15 year life:

- The annual depreciation charge per \$1,000 of cost is $(\$100/15) = \$66.70/\text{year}$
- The interest charge at 6% is, on average, $[(\$1,000/2) \times 6\%] = \$30.00/\text{year}$
- Repairs at 8% of the new cost $(\$1,000 \times 8\%) = \$80.00/\text{year}$

- c. What do you expect in improvements in pasture production, quality and utilization, and the effect on livestock income and costs?

The effects changing pasture management can be complex. For example, suppose you have a beef herd and your current pasture management system allows you to make an average of 1 ton of hay dry matter (1.18 actual tons of hay) per acre and cattle eat another ton of dry matter as pasture (approximately 4 to 5 tons of actual grass). A switch to intensive grazing management may allow you to reduce pasture waste and you might get 50% more usable grazing from your pasture, 1.5 tons instead of 1 ton of dry matter.

- One option is to keep cow numbers the same and reduce the acres these cows graze. This may allow you to rent in less pasture land, grow something else, or keep the current acreage and make more hay, either for sale or to cut the amount of hay you buy.
- A second option is to increase your herd size. For example, the reduced waste may allow you to carry 20% more cows. The pasture cost per cow would be reduced but the other costs likely would not, so the effect on profitability will depend on your cost structure and whether the herd is profitable in the first place. Ditto for a stocker operation.

- d. Are there ways other than a switch to intensive grazing that are more profitable or that can be used in conjunction with intensive grazing to enhance farm profits? For example, can you rent additional land; are there changes in herd management practices, etc.?
- e. The final question is related to the first one; will these changes achieve more of your personal and business goals and improve your quality of life?

NCSU pasture and livestock budgets can be obtained from your county extension office or online at: http://www.ag-econ.ncsu.edu/extension/Ag_budgets.html