Managing Cow Herd Costs

How much does it cost to maintain a cow herd? How does one calculate the profitability of their cows? These are important questions to consider as the input costs keep rising and market prices are relatively flat. Identifying and controlling costs is critical to maintaining a profitable cow-calf enterprise.

Cow Costs

Often cattleman refer to the cost in terms of dollars per cow per year. A more accurate measure of cost would be dollars per hundred (Continued on page 4)
Livestock symptoms of plant poisoning (which can be cumulative) that might require a walk through the pasture with your Extension Agent to identify the plant source include:

- Standing alone.
- Acting disoriented.
- Holding its head down.
- Refusing fresh feed.
- Drinking large amounts of water.
- Wasting away.
- Changing to an unhealthy and abnormal shaggy coat.

If the animal is passing dark urine and is acting listless, call your veterinarian immediately.

Common Fall toxic plants to look for in order of importance, the closer we get to the first killing frost, include (see pictures):

- Showy Crotalaria.
- Coffee Senna (sometimes called Coffee Weed).
- Sicklepod.

Control of these three weeds in a Bahiagrass pasture in early Fall (before frost) can be done with an application of GrazonNext, or by simply mowing. Small numbers of these plants, as might be found in small paddocks, can be pulled by hand and removed from the pasture.

References:

Jacque Breman, Ph.D., Union County Extension Director

Thistles are biennials weeds that are best controlled in winter. During the first year, the plant will grow as a rosette (a taproot with a cluster of leaves on or near the soil surface). During the second year, a stalk elongates (which is often referred to as bolting) from the rosette. The plant then flowers, produces seed, and dies.

In Florida, the rosette growth stage occurs primarily during the winter months. Bolting occurs from late January through July, and flowering occurs from April through August. However, there is a great deal of variation in individual thistles plants making control methods difficult to time. Mowing can be effective for thistle control, but timing is critical. Mowing thistles later in the spring (April to June) is quite effective when the flower stalk is typically hollow (late bolting stage). The plant is not likely to regrow or produce seed if mowed at this time. However, mowing thistles in the rosette stage is not recommended as they will quickly regrow. An important note, timing a mowing treatment can be difficult, since all thistles do not bloom at the same time.

The most cost effective control for thistles are 2, 4-D at 2 qt per acre or WeedMaster (2, 4-D+dicamba) at 2 pt per acre. These herbicides must be applied when the plants are in the rosette or bolting stage. They will not control thistles that have begun to flower. Milestone (aminopyralid) is the only herbicide that will control thistle in the flowering stage. However, since seeds will have already been produced and the plant is near the end of its life cycle, mowing would be the best options for plants at this stage.

References:

Barton Wilder, Alachua County Extension Agriculture and Natural Resources Agent
Stocking Rate
This is a critical factor in the success of cool season pastures. Stocking rate will vary according to the productivity of the particular pasture and the amount of nitrogen applied, but should carry 600 pounds of beef per acre. The minimum average daily gain (ADG) for profitable stocker cattle production is 1.5 pounds per day.

Example of Strip grazing program for a 30 head 1,100 lb cows¹ on 15 acres of annual ryegrass for 120 days².

| INPUTS | One ton of 20-0-10 fertilizer at $346/T  
| Apply 300 lbs/A of fertilizer to 15 acres (60 lbs/A of nitrogen)  
Fertilizer cost per acre = $51.90 |
| FORAGE PRODUCTION | Assumes that after weeks of growth ryegrass is 12 inches tall  
12 inches x 200 lbs of dry matter per inch = 2,400 lbs Dry Matter (DM)  
Utilization rate is 70%  
2,400 x 0.70 = 1,680 lbs Dry Matter in 15 acres  
1,680 x 15 acres = 25,200 lbs in Dry Matter in 15 acres |
| ESTIMATED NUMBER OF GRADING DAYS | Cattle consuming 3% of body weight per day of dry matter  
1,100 lb cow x 0.03 = 33 lbs of dry matter per day  
33 lbs x 30 cows = 990 lb of dry matter consumed per day  
25,200/990 = 25.5 days of grazing OR 5 days per acre |

¹ Assumes that cows calve in the fall  
² Keep in mind that stocking rates might need adjustment in the spring with rapid forage growth  
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Winter Weed Control
As the temperature begins to cool winter weeds will soon begin to germinate. Winter annual weeds germinate in the fall, undergo vegetative growth during the winter, and flower and produce seeds in the spring. Biennial weeds complete their life cycle in two years. Biennials such as thistles also readily grow throughout the winter.

As always, the best time to control cool season weeds are when they are small and actively growing. As weeds increase in size, higher herbicide rates and/or more expensive herbicides must be used to control them. The following section will discuss three easy to control, cool season weeds that are commonly found in north Florida.

Fireweed (Urtica chamaedryoides), also known as stinging nettle, is a particularly troublesome weed. It is a winter annual commonly found in high traffic areas such as feeding pens and under trees. Its name comes from the stinging hairs that release toxins into the skin when disturbed. The toxin causes severe irritation to the skin that can last for several hours. Studies have shown that mowing is not an effective control mechanism for fireweed. It results in smaller plants with many more sting hairs. In addition, fireweed produces many small sticky
weight produced. This number would include the cow costs, number of cows and the calf crop percentage.

When calculating costs, we always include the obvious such as feed, fertilizer and fuel. However, we also need to include fixed costs such as facilities, equipment and family living expenses. Fixed costs are expenses that occur regardless of level of production such as land purchase and equipment depreciation. Variable costs are tied directly to the level of production such as feed, vet bills and labor. These variable costs must be accurately recorded because they must be paid first. Remaining revenue then goes toward paying down the fixed costs.

Breeding Stock
Is a capital asset and should be depreciated over its useful life. If the cow or bull is purchased then this price is used to calculate this investment cost over time. If you are retaining heifers for replacement then you should determine a market value for that animal and any associated development costs.

Equipment Costs
Allocating equipment costs can be challenging especially if there are different operations on the ranch. Costs should be assigned based on how much each piece is used on a particular enterprise (cattle vs. hay or crop). These costs can be allocated based on hours used or percentage of revenue they bring in. Also, don’t forget to include pick-ups, livestock trailers and other farm implements.

Labor & Family Expenses
In agricultural operations, the owner/operator should be rewarded for their risk and capital investment. This cost can be calculated either in terms of labor expense, family living expenses. Labor is effort spent on day to day operations. Management would account for strategic decision making and marketing. If these costs are factored into the budget, the operator does not have to simply take what is “leftover” after all the bills are paid.

Land Costs
There are two ways to factor in land expenses. The first is to assume the costs will be equal to the going rate for agricultural land rental. The alternative is to use the fair market value of the land and assign an acceptable rate of return (2-4%). These costs should be enough to cover land taxes.

Reducing Total Costs
Once the total costs are calculated, the challenge is to reduce them to increase profitability. This can be done by lowering the level of inputs, increasing production or a combination of both. There are numerous decision aids available online to assist the cattle rancher in determining the optimum level of production and to help track all of the various costs associated with managing a beef cattle operation.

Basic Principles to Maximize Fall Grazing
As planting for fall forages starts in October, we need to look at developing a strategy to maximize fall and winter grazing. The fall/winter feeding period for North Central Florida may be as long as 120 to 140 days and may account for more of the actual feed costs than grazing for the remainder of the year. The use of fall forages into your feeding program has the potential to decrease the number of days that hay has to be fed, hopefully reducing your feeding costs.

To help with reducing costs, let’s look at some basic principles.

Soil
An important part to pasture management involves determination of soil fertility and soil pH. The three primary nutrients of concern for pastures in cool season grass and/or legumes are nitrogen, phosphorus, and potassium. Along with these three nutrients we also need to be aware of two secondary elements, magnesium and sulfur. With a soil analysis, a fertility program can be structured for your pastures to determine the amount of nutrients needed. Contact your County Extension office on how to collect a soil sample.

Match Cattle to the Forage
The animal’s current nutrient requirements must match the type and stage of production of your forage. You should be able to match stocking rates with current forage dry matter production. It may be cheaper to use hay with proper supplementation for older cows and use high quality grazing for weaned calves and growing heifers.

Legumes
Legumes can improve the production and nutritional value of pastures while reducing nitrogen fertilization requirements. It is important that a pH of at least 6.0 is maintained. A good legume stand should be 30% to 40% clover in the pasture. Legumes have several benefits:

1. They reduce the need for nitrogen fertilizers (they can provide from 50 to 200 lb N/A/yr to the pasture).
2. They improve forage quality by increasing protein levels and overall digestibility of the forage.
3. Some legume selections can improve seasonal distribution of forage dry matter by boosting yields and extending the grazing season.

Fertilization
After Emergence (2 to 4 leaf stage): 30 – 45 lb N/A
After First grazing: 45 – 60 lb N/A
After each subsequent grazing (or monthly intervals): 30 – 45 lb N/A

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