



Management & Marketing Economics

FORAGE ENTERPRISE BUDGETS

A key step in successful forage production is determining what forages you have and the most cost-effective alternatives to meet the nutritional needs of your livestock throughout the year. Enterprise budgets for forages assist in the decision-making process for profit-seeking farms.

Enterprise budgets for the major forages produced in Alabama offer cost estimates for the establishment, grazing, and haying costs of bahiagrass, bermudagrass, and tall fescue. Budgets for winter and summer annuals are provided for consideration as well.

Prices and costs included in the budgets are just estimates due to variations in locations, alternative inputs, and different production systems. The budgets allow producers to use values that represent production and costs that are representative of their operation.

Budgeted costs typically are divided into two categories: variable and fixed. Variable costs, also known as operating or direct costs, are a little easier to estimate. Examples of variable cost items are seed, fertilizer, pest control, twine, or wrap. Fixed costs can be more difficult to allocate to a specific enterprise but are incurred whether production happens or not. Examples of fixed costs include interest, depreciation, taxes, and general overhead. More information is available at "Enterprise Budgets for Forages" on the Alabama Extension website at www.aces.edu.

GRAZING AND STORAGE ISSUES

An often unaccounted for cost of forage production and feeding is loss in the form of waste. Waste occurs in both grazed and harvested forages, although the waste percentage is usually much higher in harvested forages. The significant economic impact of these losses should be considered, and loss mitigation strategies incorporated into the farm strategic operating plan.

Hay stored on the ground can result in extreme losses of up to 40 percent during handling and storage and up to 70 percent from animal refusal. Hay stored in a pole barn, on the other hand, would normally incur losses of only around 2 percent during handling and storage and 3 percent from animal refusal. Hay production and manufacturing practices also can result in loss from improperly cured or baled hay with a lower density, which can lead to increased spoilage and lower nutritional values.

While it is often easy to quantify the need for management to reduce loss in harvested forages (hay), management of grazing is also necessary to reduce waste and maximize opportunity for profitability. Properly managed pastures that utilize grazing management strategies, such as rotational grazing, can result in utilization of up to 30 percent more of produced forage. Management of harvested and grazed forages to prevent loss and improve utilization is one of the most important economic concepts that producers can use to improve profit opportunity.



PASTURE, RANGELAND, FORAGE INSURANCE PROGRAM

The Pasture, Rangeland, Forage (PRF) Insurance Program provides subsidized insurance coverage on perennial pasture, rangeland, and forage acres used to feed livestock. This insurance product is designed to protect against yield associated with low moisture conditions.

Producers can purchase an area-based insurance policy for a grid that is 0.25 degrees in latitude by 0.25 degrees in longitude based on where the field is located. Premiums are subsidized between 51 and 59 percent of the cost, depending on the chosen coverage level.

Enrolled producers become eligible for an indemnity payment when the rainfall index (RI) in the covered grid area, over a selected 2-month period, is less than the historical precipitation estimate for that area and chosen coverage level. The RI is calculated by the National Oceanic and Atmospheric Administration (NOAA) Climate Prediction Center (CPC) using weather stations around the grid area. This calculation is an estimate and not a precise measurement of the rainfall within the grid. Following are decisions that producers need to make when considering the coverage to purchase:

- Number of acres to insure
- Use of the insured acres for either grazing or hay
- Coverage level between 70 and 90 percent, in 5 percent increments. A 90 percent coverage level means that indemnities are paid when the RI is less than 90 percent of the historical estimate for the grid.
- Choice of a productivity factor between 60 and 150 percent to determine the dollar protection relative to the average value for the grid. A chosen factor greater than 100 percent means that the producer believes the land is more productive than the grid average.
- At least two different, nonconsecutive 2-month intervals for coverage

The USDA has a decision support online tool available on the USDA Risk Management Agency website. Insurance coverage is purchased through an authorized crop insurance agent by November 15 for the upcoming year. A more detailed publication is available at "Forage Risk Management: Subsidized Insurance as a Strategy" on the Alabama Extension website at www.aces.edu.

FINANCIAL MANAGEMENT TIPS

- **Document** available resources (available acres and types of forage).
- **Soil test** to meet nutrient needs and monitor fencing and water sources.
- **Estimate** animal nutritional needs and determine additional feed needs (if any).
- **Develop** a comprehensive grazing plan and monitor forage height.
- **Track yields** or estimates of forage production (monthly).
- **Know** your stocking rate (number, size, and type of animal).
- **Measure** pounds produced per acre or other yield measurement.
- **Keep receipts** for expenses (seed, fertilizer, pest control, financing).
- **Track weather** impacts (especially extreme events).





FORAGE-FINISHED BEEF PRODUCTION

Forage-based finished beef products have been gaining space in markets due to feed and live cattle price fluctuations and increased interest in improving sustainability in livestock production systems. Improved forage quality and genetic improvement in beef cattle also have contributed to the increase in forage-based beef production in the United States.

Over the last decades, production systems (grain versus forage-finished beef) have been adapted to meet growing market niches and demand trends. The influence of niche marketing for beef products through alternative markets (farmers markets, freezer beef, custom processing, retail outlets, or restaurants) is gaining momentum in the beef industry.

Selecting a finishing method for beef production is not about debating grain versus forage finishing. Rather, the method chosen should be influenced by cost of production and return on investment of the activity. Marketing of beef can be a volatile arena that is influenced by countless factors that are often uncontrolled by the producer, such as current market price, cost of feed, labor, and market demand of beef cuts.

Research has shown that forage-finishing cattle can result in a daily gain of 1 pound less per day than concentrate-finished cattle. However, feeding cattle for finishing using cool-season forages with

grain supplementation at 1.2 percent of animal body weight or greater can result in beef carcasses achieving acceptable quality grades of USDA Choice or better.

Stockpiled forages, cost of gain, available grazing, and grazing season are vital influencers in assessing when it is time to select a feeding regime. Aside from growth impact on forage-finished beef, forage quality can vary throughout the year because of environmental factors that result in animal gains varying from 0.5 to 2 pounds per day. Average daily gains ranging from 1.2 to 2.8 pounds for beef animals are often reported when beef cattle are finished using forage species such as alfalfa, chicory, cowpea, bermudagrass, and pearl millet. Palatability of beef products is another important point to consider. Some consumers may refuse forage-finished beef due to different taste than grain-finished beef products.



Figure 64. Chicory