

LIVESTOCK

Online calculators help make management decisions

by Robert Wells / rswells@noble.org



Have you ever had a tough decision to make for the ranch? One that would cost a lot of money up front, but would make doing a task much easier or

save you money in the long run, yet you still just were not sure if it was the right thing to do? Every day we face these types of decisions while managing agricultural enterprises. However, when we can take the emotion out of the equation and put the consideration down on paper, the decision becomes much easier to make.

Noble Foundation consultants have developed a series of online decision support calculators to help farmers and ranchers. These calculators range from chemical sprayer or planter calibration to determining the cost of wasted hay in different hay rings. Two new calculators were recently developed. One calculates stocker breakeven purchase price. The other, which this article will focus on, allows producers to determine the feasibility of purchasing an overhead feed bin and truck-mounted feeder.

The overhead feed bin calculator is used to evaluate the feasibility of purchasing an overhead feed bin and truck-mounted feeder for feed



storage and feed delivery to cattle on pasture. Cost savings are typically associated with purchasing of bulk versus bagged feed and the ability to purchase by-product feeds compared to bulk range cubes only. Typically, there is about a \$20 per ton price increase if feed is bagged rather than in the bulk form. Additionally, an overhead feed bin allows the ability to use by-product feeds. Some ranch-

Cost of overhead feed bin and setup	\$8,500
Cost of truck-mounted feeder	\$1,750
Interest rate for financing purchase	7%
Amount financed	\$10,250
Length of loan (years)	5
Number of cows fed	100
Feed fed to cows (lbs/d)	4
Number of feeding days, cows	120
Number of calves fed in backgrounding	92
Feed fed to calves (lbs/d)	8
Number of feeding days, calves	45
Number of trips per week to feed store	1
Round trip distance to feed store, miles	25
Miles/gallon fuel consumption, mpg	14
Cost of fuel	\$4.00
Cost difference of bagged vs. bulk feed	\$20

ers may not have previously had this flexibility since many feed stores do not sell bulk by-products feeds. The cost differential between range cubes and by-product feeds can be substantial and oftentimes is greater than \$60 per ton, which is in addition to the bagging costs.

This tool takes into account the lifespan of the equipment and taxable depreciation. To be as accurate ►

LIVESTOCK

as possible, the developers of the calculator took into account the tax depreciation of the equipment over a life of 10 years. For purposes of the calculator, the lifespan was presumed to be 10 years, although with proper care and maintenance the equipment could last twice as long. Additionally, for those who do not have onsite storage of their feed, this tool will calculate the costs of trips to the feed

store, taking into account the fuel efficiency of the truck and cost of fuel. No salvage value was assigned since it can be highly variable. If a salvage value for the equipment is determined, then the number of years to break even on the purchase cost of the equipment would be even less.

An example of a typical scenario is included in the table above. Using the table's figures, a total of 40.56

tons of feed would be required on a yearly basis. The amount of feed purchased to break even, including equipment financing, would be 146.2 tons. It would take the ranch about four feeding seasons to pay for an overhead feed bin and feeder through feed and fuel cost savings. This calculator and many others can be accessed at www.noble.org/ag/tools. ■