

Calculate Numbers to Provide Money for Future Generations

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Data is necessary for decisions. The ramblings of an educated statistician or a freshman working out an algebra problem generally go unnoticed as the trivia of the day are reviewed by all gathered for the evening get together.

The reality of numbers, however, and their impact on us and all that we do, is quite mind bending. The algebraic equation may not impact the supper conversation, but the various components of management decisions do use formulas and numbers.

These formulas and numbers are applied to the purchase of equipment and vehicles for beef cattle operations. These calculations need to be made to assure something is here for the next generation. In essence, our future is steered by numbers.

Currently prices have many cow calf producers smiling. Income is a lot easier to distribute than to receive. Be conservative, pay attention to the details and do the entire math as you plan to spend the revenue.

At the North Dakota State University Dickinson Research Extension Center, we are wondering whether we should purchase a truck. The answer does not reside in the color of the paint, but in the numbers.

Our last leased truck was a tandem axle grain truck. The truck cost the owner, the North Dakota Department of Transportation (DOT) \$36,000. As the Center evaluates lease options, the truck could be leased for \$39 per hour of operation. Is that a good deal?

The primary question involves leasing or purchasing. Equipment money is not available to manage the operation. In this case, the Center has a goal of maintaining 350 cow/calf pairs, all needing to eat. A typical lease would be \$2,340 per year (60 times \$39) or \$6.69 per cow calf pair (\$2,340 divided by 350).

That sounds good but the actual costs are dependent on usage. Typically, DOT figures a 15-year life and 30 percent salvage value on the truck. In 15 years, the truck would sell for an estimated \$10,800. Currently, the operating rate is \$15.98, including parts, fuel, insurance, labor, shop overhead and administration.

The depreciation is the actual cost, less salvage value of the truck, spread over the estimated useful life of the vehicle. In this case the truck lost \$25,200 (\$36,000 - \$10,800)

in depreciation. On an annual basis, the depreciation is \$1,680. Currently, the lease is only calling for \$5.66 per hour to cover depreciation.

If the Center leases the truck and only drives the truck 60 hours a year, DOT will only get \$339.60 to cover an annual depreciation bill of \$1,680. Over 15 years, DOT will have a shortfall of \$20,106, not counting interest. The Center would benefit under that relationship.

The last number we need to look at is replacement value. The replacement rate is the difference between what is needed to purchase a new vehicle, and the amount that is recovered through the depreciation portion of the rate. The Center is currently paying \$17.36 per hour as a replacement rate. If the Center only puts 60 hours on the truck, that is only \$1,041.60 per year set aside to purchase a new truck, or \$15,624 over the life of the truck not counting interest.

In this case, if a new vehicle costs \$45,000 in fifteen years, the depreciation fund contributes \$5,094, the replacement rate fund contributes \$15,624, projected interest would be estimated at \$4,500, for a total of \$25,218, or roughly \$20,000 dollars short.

Figures make a business. The DOT cannot afford to lease the Center a farm truck for 60 hours per year. From the Center's perspective, we should sign on the dotted line but partnerships need to be fair to all. Having one partner go out of business doesn't really do the remaining partner any good.

We could avoid this situation by looking at a more multiple-use vehicle, such as a towing pickup with accessories, thus increasing use, but also eliminating other aspects within the enterprise.

More next time, but for now, sit up and learn to figure. Your future depends on it.

May you find all your ear tags.

Your comments are always welcome at www.Beeftalk.com. For more information, contact the North Dakota Beef Cattle Improvement Association, 1133 State Avenue, Dickinson, ND 58601 or go to www.CHAPS2000.com on the Internet. In correspondence about this column, refer to BT0163.

Notes on Truck Costs^{*}

	60 hours/year	120 hours/year
Purchase price	\$ 36,000	\$ 36,000
Operating cost	\$ 14,382	\$ 28,764
Depreciation cost	\$ 5,094	\$ 10,188
Replacement cost	\$ 15,624	\$ 31,248
Salvage price (30%)	\$ 10,800	\$ 10,800
Cost per cow/calf pair (350 pairs)	\$ 6.69	\$ 13.37
Cash available for next generation (plus interest)	\$ 31,518	\$ 52,236

* Rental rate of \$ 39 per hour