

## Sustainability and Return on Investment

Tracking energy use can save money.

When evaluating return on investment (ROI) we're really evaluating management decisions and the thought process leading to them. Last month's *Stepping into Sustainability* considered ROI measures associated with land productivity and feed costs. This month's column extends the conversation about overall energy use.

I owned and operated a grant writing business for several years, working with farmers and ranchers to obtain USDA grant funding. During that time, I became an expert in USDA's Rural Energy for America Program (REAP), which provides funding to agricultural producers and rural small businesses for energy systems or to make energy efficiency improvements. Personally, until working with producers on these grants, I hadn't considered the value of conserving energy to an operation's bottom line. Energy seemed, well, abundant. Remember the days when you pulled up to the farm fuel tank and filled up before heading to school?

These days, or course, we know how fast and significantly energy costs can change. When was the last time you took a hard look at how energy costs affect your business? After all, sustainability and profitability meet in the things we do and the ways we conserve costly resources. The following efficiency measures are worth considering.

### Fuel use per cow or per acre

Tracking gallons of fuel burned per acre or per cow provides an interesting snapshot of operational efficiency. Divide the total annual fuel gallons by the acres managed or by the number of cows maintained. How do the numbers look when you divide them across acres and cows? Can you reduce fuel use and still cover the ground you need to cover?

Reducing this number often comes down to management decisions like combining field passes or improving grazing distribution.

### Electricity cost per head

Electricity powers water systems, fencing, shops, fans, barns, phone charging and much more. While it may seem minor compared to feed costs, electricity rates are rapidly accelerating in many parts of the U.S. Dividing your annual electric bill by the number of cows provides a broad benchmark, but you'll need to dig deeper if you want to estimate cost by enterprise, home usage and the like. Even so, there are many options to improve efficiency.

For instance, you could consider installing energy-efficient pumps, upgrading to LED lighting, maintaining proper water pressure or installing solar-powered livestock watering systems. These upgrades can reduce electric bills and improve drought resilience. A quick internet search of energy-efficient or solar-powered charging units can provide more ideas.

### Equipment hours per cow

Total machinery hours reflect fuel use, depreciation, maintenance and labor. It could be worth tracking tractor and heavy equipment hours per cow for a clearer view of how dependent your operation is on mechanical inputs.

Here's a basic example: If you log 1,200 tractor hours annually and manage 200 cows, that equals six hours per cow per year. That might not sound like a lot, but have you ever considered how much time you and your team spend driving around? Are there ways to reduce this time through a fresh look at pasture layout, more efficient feeding systems or placement?

For perspective, if your tractor operating cost is \$75 per hour and you could decrease annual use by 300 hours, that would amount to a savings of \$22,500. So, you might see a substantial ROI from making changes.

With cattle prices at historically high levels, this may be the perfect time for some operations to evaluate new investments. As you consider the future of your business, think about how potential cost advantages of energy efficiency improvements fit into to your ROI calculations. **HW**

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