

Baling Up Costs of Hay-making

A buyer's guide

Is it cost-effective to bale your own hay? Specialist says run the numbers.

Farmers know that the devil is in the details when it comes to cutting and baling premium hay.

Many farmers and livestock owners want to put up hay or alfalfa in the shed and stock up for the winter. Is it cost effective to bale your own or is it better to pay someone to bale your hay? Run the numbers, specialists say.

To evaluate the cost-effectiveness of owning and operating hay equipment, you need to know several pieces of information. First, know your cost of both owning and operating a fleet of hay machinery. Machinery ownership costs include depreciation, insurance, interest and property taxes.

These costs will depend upon the market value of the equipment, how each implement purchased is financed, insurance costs and property tax rates.

When equipment is not used to its full capacity or when the hay produced has little value, machinery ownership costs are often prohibitive.

Machinery ownership costs are relatively fixed in the short run, meaning that no matter how much hay is baled, ownership costs do not change for the hay enterprise. But when calculating production costs for each unit of hay produced, these costs are spread out over all units of production. Therefore, the situation of owning hay equipment is made more favorable when the volume of hay produced with the equipment can be increased.

Operating costs also affect the cost-effectiveness of baling hay. Operating costs include labor, fuel, maintenance and repairs.

These costs are considered variable costs because the cumulative dollar value of these expenses will vary with the quantity of hay baled. Like ownership costs, these costs are theoretically spread across all units of production. Dividing the total ownership and operating cost by the units of hay baled provides a dollar value that signifies the ownership and operating costs embodied in each unit of hay.

After calculating the machinery ownership and operating costs per unit of hay, you can compare the costs to the custom rate for hay baling.

When your machinery ownership and operating costs are less than the custom rate, it is cost-effective to bale your own hay. When your costs are greater than the custom rate, you should consider hiring a custom baler.

Let's talk maintenance: Keeping your baler on a roll

During hay season, that first cutting always puts large square and round balers through a stress test.

That's why it is strongly recommended for you to get familiar with the operator's manual.

With today's balers, studying the manual is really important. Every machine has a lot of adjustments and explanations you need to know. It will save you time and possibly service calls. Some electronic monitor alarms, for instance, are just informational. But for others, you need to stop and find out what's wrong.

It pays to know what the control monitors are telling you.

In heavy windrows, for example, the feeder system will slip a bit, then keep going. But if it keeps slipping, you'll need to make adjustments. Sometimes, you can do it via the monitor, but many adjustments must be done mechanically. After getting familiar with your owner's manual, follow these best practices on maintenance.

Check needle and knotter specs: Twine mis-ties are frustrating. Getting the proper settings takes time, particularly for double-tie knotters. Set them according to specifications in the chill of a

late evening or early morning rather than in the heat and pressure of a baling day. The best time is long before baling season begins.

Check knotter brake pads: On many older machines, knotter brake fiber pads tend to wear. To prevent more serious damage, replace worn ones before haying gets under way. Worn pads throw off alignment and reduce a brake's holding power.

Keep knotters clean: Clean hayleaf chaff away from knotters. Most large square balers have an optional blower that does that while the machine runs. It helps reduce knotter component wear and mis-ties.

Performing windrows: Most balers can compress or decompress material coming off the pickup. In heavy alfalfa, you might want to open it to increase the volume flowing through. It's harder to compress fluffy straw. Yet with a square baler, the more compressed the straw is when you put it into the chamber, the smaller the flake or slice and the more dense your bale will be.

Keep baler throat full: In light cuttings, raking two or three windrows together improves field efficiency. More importantly, it allows you to slow your ground speed, keep the baler's throat full and form better bales.

Watch your driving pattern: With belt-chamber round balers, most farmers tend to look over their right shoulder and naturally steer and feed the right side more than the left. The result can be a cone-shaped bale. Bale formation is a key factor to belt life. As belts wear, they will gradually tend to run off track. A steady weaving pattern will feed both sides, build a better bale and lengthen belt life.

Watch for bale oversizing: If you are oversizing a lot of bales in the chamber, you're also stretching belts or increasing chain wear. Some machines automatically eject bales, but most don't.

Run at recommended speeds: Running your baler at its recommended PTO speed is very important. Running a 4x4 slower will reduce bale density. Excessive speeds with any baler can reduce chamber life, wear brake settings and damage linkages. When you are done baling for the year, clean the bale chamber to eliminate rust buildup. An oil or paint coating would be very helpful.

Preseason Checkpoints

Proper lubrication is probably the No. 1 rule: Some areas can be overgreased. Some, you can't grease enough. Study up on it in your operator's manual.

If your large square baler has cutter knives: Start haying season with sharp knives.

Baler monitors and electronics require 12 volts to operate. If voltage drops too low, they won't run. A tractor with a bad alternator may cause the problem, but so can dry electrical connections. WD-40 is a quick solution, but di-electric grease is the best solution.

Some balers require a specified hydraulic oil flow rate from the tractor. (See manual.) If it's too low, balers will operate sluggishly. If it's too high, the oil heats, reducing hydraulic component life in the tractor and baler. Too many tractors are set on maximum oil flow and left there. Set the flow rate for what the baler requires.

Whether you have a large square or large round baler, **start the season with clean gearbox oil.**

A round baler is a simpler machine than a large square baler. But one of its **biggest problems is the slip clutch.** Make sure it's not frozen by loosening all the springs and engaging the PTO to polish or burnish the plates — fiber or metal.

Before you head to the field, **double-check hydraulic hoses are fully coupled**. Partial flow can affect the cutter knives, tandem wheels, pick-up unit and bale density.

Make sure your **slow-moving-vehicle sign is highly readable**, or replace it. And be sure your warning flashers work.

With big balers, especially the 4x4s, **it's critical to use high-quality twine**. With poor-quality brands, you get more knot slippage and breaking. If in doubt, run a comparison.

Growing hay for profit

Whether a rancher grows hay to feed his livestock or someone else's, the enterprise is not worthwhile unless it makes money.

Surprisingly, many hay producers have no idea how much it costs them to produce a crop.

You have two ways to market: as cash or as hay for their own livestock enterprise. Regardless of which path a producer takes, the hay budget is a must.

After running through the cost of producing hay, you need to figure one more number: storage losses.

That's only one of the reasons growing hay for profit is different from any other commodity. Another is that no bale of hay is quite the same. What that means to you, is you must decide which market your hay fits.

Know hay cost and your potential market

The dairy market wants large round bales; demands a test; looks for 20% crude protein, 30% acid detergent fiber and 40% neutral detergent fiber; and measures feed performance by milk production. Dairy producers prefer alfalfa.

The horse market wants small square bales, doesn't necessarily ask for a test, and buys on sensory perception. Those who buy hay for their horses have no way to measure feed performance in their high-value animals. They like hay that smells fresh and looks green. That hay absolutely, positively must be clean. No mold, dust, weeds, foreign matter, or blister beetles.

The beef market wants large round bales, measures performance on pounds gained and has varying quality needs. Most of the hay grown for the beef market is grown by producers for themselves.

Other markets include — but certainly aren't limited to — sheep, mulch, goats, llamas, emu, zoos, nurseries, feed stores, rabbits, gerbils, medical research and, most recently, energy.

Base Price Selection on Production Costs and Local Market

Regardless of the market, you need to know the cost of producing the hay and the current prices in your market area so you can set a price that moves the hay and brings a profit.

Current prices can be found by looking at USDA hay prices on the Web, asking neighbors and Extension agents, or even checking the sales ads.

Once that price is set, collect the money on delivery.