

SHOULD YOU GROW YOUR OWN HAY FOR HARVEST A LOOK AT THE ECONOMICS



By Dallas Mount

Perhaps you have a few irrigated acres or land productive enough to grow hay. Before rushing out and making the significant investment in an arsenal of machinery, carefully examine the economics of harvesting hay to ensure this doesn't turn into an expensive hobby.

Widespread drought and forage shortages drove hay prices to record highs in 2012. Many predict hay prices will remain high, but the likelihood of record prices continuing is slim, so basing revenue on more reasonable hay prices might be wise.

Cost of Growing Hay

Before driving a swather into the field, there are many costs to account for. Some include stand establishment or renovation, irrigation water or pumping costs, irrigation system repairs or depreciation, fertilizer, and labor for growing the hay.

Consider also the potential lease value of your productive land; it could be rented for a flat cash lease per acre, and any operation done using that land should cover that base value. Ballpark estimates for these costs are in the table below. Your costs will certainly be different.

| Hay Costs | | | |
|-------------------------------------|------------------------------------|--------------------|--|
| | Item | Cost per acre/year | Cost per ton of hay (estimated 3 ton per acre) |
| Growing the hay | Land lease value | \$50 | \$16.67 |
| | Stand establishment | 30 | 10 |
| | Irrigation water or utilities | | 30 |
| | Irrigation system depreciation | 80 | 26.67 |
| | Fertilizer | | 20 |
| | Labor | | 5 |
| | | Subtotal | |
| Direct or variable harvesting costs | Fuel, oil, grease | | 15 |
| | Twine, additive, etc. | | 5 |
| | Labor | | 20 |
| | | Subtotal | |
| Overhead | Machinery depreciation and repairs | | 40 |
| | | Total Costs | 188.34 |

I would caution potential or current hay growers that the cost of growing the hay often gets away from people. I've worked with producers who had more costs involved in growing the hay than the hay was worth after harvest. Putting up hay then becomes an expensive hobby.

Items in this category include the opportunity cost of renting the land. Stand establishment is a prorated annual cost that can be applied to renovating a stand every few years. Some aggressive alfalfa growers renovate their stand every six years; others using native hay meadows may not have renovation costs, but their production will be much lower. Irrigation water costs could include dues to an irrigation district or pumping costs if using ground water. Irrigation system depreciation can be depreciation on a pivot or side-roll sprinkler or annual ditch maintenance costs if flood irrigating. Fertilizer costs will be extremely variable. Perhaps you are paying for nitrogen on a grass hay meadow or phosphorous on an alfalfa field, or perhaps you choose not to fertilize and accept a lower yield.

Labor cost is the labor involved in growing the hay – primarily irrigation.

Harvesting the Hay

Once the hay is grown, you are ready to harvest. Costs are grouped into two categories: variable or direct costs, and fixed or indirect costs.

Variable costs will increase with each additional unit of hay harvested, and **fixed costs** will generally remain constant regardless of number of units to a point. Again, costs will vary from the example numbers. The **direct costs** are pretty straightforward so I



Ensure hay production does not become an expensive hobby.

won't discuss them in detail.

The cost of machinery depreciation and repairs will vary greatly from one operation to the next. If an operation has \$500,000 in hay equipment inventory and only harvests 500 tons of hay, their overhead may be \$150 per ton of hay. If an operation uses older equipment and does its own repairs and still harvests a good amount of hay, overhead may be as low as \$25 per ton. I've experienced both types of operations.

The variability is large. Managing machinery costs are paramount to running a profitable hay business. As a rule of thumb, figure 13 percent of the current value of the equipment for depreciation and repairs. Add interest if operating on borrowed money or you want to charge yourself opportunity costs on your money invested in

machinery.

For example, a tractor worth \$20,000 would cost \$2,600 annually in depreciation and repairs. This rule of thumb doesn't work for all; however, it provides a good starting place. You can always adjust up or down using historical expenditures on repairs and new purchases.

Growing and harvesting hay is an expensive activity. In many years, the hay would be worth less than the example cost of production I calculated. However, there are many hay growers who have found ways to lower the cost of hay production and add value to the hay through aggressive marketing.

Hay production can be a lucrative business, but like anything else in agriculture, it will take management moxie to make that happen.

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