

Hay Produce or Purchase Calculator*

Producing and harvesting hay is a common practice in the livestock industry, especially in areas where forage availability is frequently limited during winter or times of drought. Cow-calf producers must choose whether to produce their own hay or purchase hay. Hay production costs include both costs of operating inputs plus fixed costs associated with machinery ownership. High-cost hay equipment and associated ownership cost together with highly variable yields and low volume production can make hay an expensive feed. This spreadsheet helps organize data so an informed decision can be made whether to purchase or produce hay.

Getting Started

Cells for data entry on the *Hay Produce or Purchase Summary* worksheet appear in blue on the screen. Values generated by the program are protected so they cannot be accidentally overwritten and the equations erased.

First, consider the “what if” alternatives:

1. Continue to produce hay and own hay equipment.
2. Contract out the hay harvesting. Minimize machinery investment with cost shares or custom service.
3. Move out of hay production and harvesting business by selling machinery assets and buying the hay needed of similar quality.

This spreadsheet contains a worksheet that contains a produce or purchase analysis plus a separate worksheet for data collection/organization.

Key Data Needs

- Annual volume of hay production – consider both good and bad years to come up with a reasonable average
- Operating expenses to grow, harvest, and haul hay from planting through harvesting to storage
- Savings if hay is not produced, for example, a reduction in fertilizer if hay is not produced plus earnings on investment proceeds from sale of the machinery (or savings in interest from paying down debt with proceeds)
- Cost of hay with similar quality if purchased
- Value of the extra grazing if land is not used for hay

Results

Total cost savings if hay is purchased is a combination of reduced costs from operations and ownership after the machinery is sold and other reductions in costs such as fertilizer or herbicides associated with hay production. Cost savings also include revenue from additional

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grazing on land instead of hay production. Subtract total costs savings from the cost of purchased hay and compare this amount to the cost of producing hay.

Other Aids to the Process

Machinery costs can often account for as much as 50% of the annual cost of producing and harvesting a forage crop. The producer's own production records (or alternatively, Schedule F tax information plus the depreciation schedule) are a good place to start when determining hay production expenses. Of course, if an operation has multiple crop enterprises, the total farm expenses (such as those listed on the Schedule F) must be prorated among hay and other enterprises. An OSU fact sheet, AGECE-242, "From Cash Records to Cost of Production", may be helpful in this process (<http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-1663/AGECE-242web.pdf>). Software tools such as AGMACH\$ may also assist with machinery cost calculations (<http://agmach.okstate.edu>).

For small acreages, custom hire of various forage operations is typically less expensive than machinery and equipment ownership and maintenance. Of course, the trade-off is forced reliance on someone else to perform operations in a timely manner to the producer's quality standards. Information on the cost of custom work in Oklahoma is in CR-205, Oklahoma Farm and Ranch Custom Rates available online at <http://osueextra.com/> or through local Extension offices. OSU Enterprise Budget software is another tool designed to assist producers in evaluating the cost of forage production and is available at <http://www.agecon.okstate.edu/budgets/>

References

- Doye, D and R. Sahs. Oklahoma Farm and Ranch Custom Rates. *OSU Extension Current Report CR-205*, Cooperative Extension Service, Oklahoma State University. <http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-8064/CR-205%202011-2012web.pdf>
- Huhnke, R. AGMACH\$ - Agricultural Field Machinery Cost Estimation Software. OSU Cooperative Extension Service, Oklahoma State University. <http://agmach.okstate.edu/>
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