WASHINGTON STATE UNIVERSITY
WALLA WALLA COUNTY EXTENSION

HOW MUCH IS PASTURE WORTH?

Pasture rental charges are often based on tradition rather than logic. Frequently they fail to reflect either the value of the forage or the value of the nutrients to the livestock.
Monthly pasture charges are commonly based on animal units (AU's), but people have different conceptions of what an AU equals. Pasture consumption is highly related to animal weight. An AU is defined as a 1000-pound mature cow with a small calf. Thus a 1200-pound cow would equal 1.2 AU's. A calf probably doesn't eat much pasture until it is two or three months old or weighs about 200 pounds. If the calf grazes from the time it weighs 200 pounds until it weighs 500 pounds, it's average weight for the grazing period would be 350 pounds or .35 AU's. An 1100 pound horse equals 1.25 AU's. A mature ewe equals .2 AU's. A dry cow equals .77 AU's.

Thus a 1000 pound cow with a 200 pound calf that is put on pasture and the calf grows to 500 pounds would equal 1.35 AU's for the grazing period.

The animal performance obtained from the pasture is determined by the forage species and the pasture's condition and stage of growth. Best quality pastures are assigned a value based on anticipated performance. "Excellent" pastures are those that contain seeded grasses or grass-legume mixes with abundant growth and are tender with no blooms or seed heads showing. Yearling cattle would be expected to gain 1.75 pounds or more per day on this pasture.

"Good" pastures show abundant growth of seeded or native grasses or legumes, but are less palatable due to the grass species and a high proportion of the plant being in early to late bloom or seed stage. Gains of 1.25 to 1.75 pounds per day would be expected.

"Fair" pastures are composed of grasses which are less abundant but adequate. They can be either weedy or are of lower quality because of lack of moisture or advancing maturity. Gains of .75 to 1.25 pounds per day would be expected.

"Poor" pastures are short and overgrazed, droughted, or heavily infested with weeds. Gains of less than .75 pounds per day would be common.

The values assigned below for each classification were derived from the nutrient content of the pasture, the anticipated animal performance and the consumption expected by a 1000 pound animal. The "Excellent" pasture with a value of .3 should result in performance comparable to alfalfa hay. "Good" pasture has a value of .25,
"Fair" a value .2 and "Poor" a value of .15.
Irrigated pastures should fall into the "Excellent" or "Good" categories. The best range or native pasture should be in the "Good" category the first half of the season and then drops off.

The charge for standing pasture should reflect the current market value of hay, minus the cost of harvesting. It costs about $35-$40 per ton to put up hay. Selling forage as pasture, rather than hay, removes the risk of weather damage. The risk of weather will vary from area to area, but 10% of the selling price of hay during the grazing season seems to be a fair price. You should set your own level of damage risk.

To come up with a monthly charge for pasture, use the following formula:
Monthly Charge = Animal units x (Average price of stacked alfalfa hay during the grazing season - Cost of harvesting hay - Weather risk factor) x Pasture quality factor.

Let's look at an example. Assume the average weight of this cow herd is 1100 pounds and the average weight for calves during the grazing season is 350 pounds. Average alfalfa hay is selling for $85/ton. The pasture is classified as good.

Animal units involved: 1100# + 350# = 1450#/1000 = 1.45 animal units.

Value of standing pasture: $85 (hay price) - $35 (harvest charge) - $8.50 (10% risk factor) = $41.50.

Pasture charge per cow-calf month: 1.45 (animal units) x 41.50 (value of standing pasture) x .25 (pasture quality factor) = $15.04.

Similarly if the hay price were $60/ton and the pasture quality factor was fair, the monthly pasture charge would be $6.89.

This formula reflects the value of the standing forage and does not take into account other factors associated with pasture rental such as water resources, fence maintenance and livestock grazing management. Grazing management is the key to good animal performance and maintenance of good pasture condition.

Most overgrazing is a result of time of exposure to grazing. Once a pasture is grazed to the recommended level, it needs time to rest, recover and regrow. If not given enough recovery time, pasture will progress to an overgrazed condition.

For more information on determining pasture rent:
Determining Pasture Rents
Compute Your Cost of Producing Milk

Compiled by John Fouts.

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