What is Standing Hay Worth?

There are many factors that impact the value of standing hay. The value of hay will fluctuate depending on the local supply and demand and winter survival of the crop. The crop quality, size and location of the stand, forage mixture, and local land rental rates also impact the value. Recently the baseline value of standing forage crops has decreased substantially due to lower hay and commodity feed prices.

Renting bare crop land is different than renting a field of standing hay. In the latter case, you're really buying a product that is already established, but not yet harvested. When renting hay ground the landowner should get, at minimum, a bare land rental price plus the cost of alfalfa establishment prorated over four years, plus the value of nutrients removed by the alfalfa crop. If they can't get that minimum, then there may be more value in just renting bare land without the cost associated with establishing alfalfa.

Several factors will likely lead to lower prices for established hay ground in 2015. Area farm land cash rental values have peaked and showed a decline of 2% in 2014 in Green County. Wisconsin hay production increased by 44% from 2013 to 2014 and the current supply in the region is greater than the demand resulting in hay prices being much lower than the past three years in the region. Winter kill in the region could still impact prices depending on the severity and size of the area impacted.

The value of P and K nutrients removed by alfalfa is a major consideration when pricing hay ground and standing hay. Each ton of forage dry mater that is removed from hay fields removes 13 lbs. of Phosphorous (P205) and 60 lbs. of Potassium (K20) fertilizer. Using the county's average hay yield of 4.5 tons D.M./acre that equals 58.5 lbs. of Phosphorous and 270 pounds of Potassium that needs to be replaced to maintain soil fertility annually. If we use a value of $0.40 per pound the replacement cost of K for each ton of dry matter alfalfa is $24. With a 4.5 ton annual per acre yield, that adds up to a value of $108/acre (4.5 tons x $24/ton) of K that needs to be replaced from what was removed by the crop if 4 cuttings are sold.

If we assume the prevailing bare land cash rent value is $157/acre (2014 USDA average for Green County) and prorated alfalfa seeding costs (planting and seed cost) are $40/acre/year. The minimum price needed for standing alfalfa is then $197 per acre PLUS the value of potassium that is removed ($108/acre) we come up with a number of $305/acre that the owner needs for 4 cuttings of alfalfa. Add to this amount another $27/acre to replace the 60 pounds of phosphorous (P205) that is also removed in a 4.5 ton yield and the total cost is $332/acre. This represents the amount the landowner needs to cover land, establishment and fertilizer costs for the alfalfa stand, if the landowner is paying for the maintenance fertilizer.

What about the buyer's perspective? On average, it costs about $35-40 to harvest a ton of forage dry matter (DM). As we calculated above, potassium removal will be about $24/ton of D.M., and phosphorus removal will be cost about $6/ton of D.M. Adding these three amounts together gives us a total minimal investment of $65 to $70/ton D.M for fertilizer replacement and harvest cost. With that value comes some weather risk of getting a quality crop harvested. If the owner has decided to charge $200/acre plus fertilizer replacement costs, the total investment for a 4.5 ton per acre yield is roughly $109 to 114 per dry matter ton (($200/acre divided by 4.5 tons = $44) + $65 to $70 for harvesting and fertilizer = $109 to 114)). That price is equivalent to paying about $55 to $57 per ton for Haylage @ 50% D.M., or about $93 to $97 per ton for baled Hay @ 85% DM. Comparing this to current hay market prices this may or may not be a good buy. That answer will vary for each farm and situation. The most important factor in setting the final price for any item is ultimately determined by what someone else is willing to pay for it.

Keep in mind that the process is more important than the actual numbers, as cash rent values, harvest costs, and fertilizer values will vary with each situation. For example, some fields with soils that test excessively high in phosphorus will not require any to be added for several years and reducing the P levels may free up more land to spread manure on. The base cost is also going to differ by location, yield and quality of the hay. Renting standing alfalfa may or may not be a good deal and farmers should run the numbers. If you need hay compare the cost of buying standing hay and incurring the harvest costs along with weather risks to buying hay already baled or chopped out of the field at harvest time when prices are historically at the lowest point.

Mark Mayer, UW-Extension Agriculture Agent Revised: April, 2015