

THE EXTENSION LETTER

"THE BOUNDARIES OF THE UNIVERSITY ARE THE BOUNDARIES OF THE STATE"



June 2014

Vol. 1 No. 1

Greetings!

The purpose of *THE EXTENSION LETTER* is to help bring research-based assistance to the farm community of Pepin County. This month's issue focuses on ALFALFA. I trust you will find the information helpful to your operation.

As always, if you have any questions, please feel free to contact *your* local UW-Extension Office.

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Upcoming events

June 9-11, 13	Youth Tractor Safety
June 14	Pepin County Town & Country Dairy Breakfast – Brion Dairy
June 18	Trempealeau County Soil Health & Cover Crop Field Day
July 25-17	Pepin County Fair
August 12-14	Farm Technology Days, Portage Co.
TBA	Summer Cover Crop Field Day
TBA	Fall Cover Crop Field Day

CONTENTS

	PAGE
What is Standing Hay Worth? <i>Short Answer</i>	2
Estimating Alfalfa Yield Potential	2
How to Price Standing Hay – <i>Long Answer</i>	3
Estimating Pre-Harvest Alfalfa Quality	4

The Wisconsin Custom Rate Guide 2013 was published in March of this year. It can be accessed at http://www.nass.usda.gov/Statistics_by_State/Wisconsin/Publications/custom_rates_2013.pdf or at the UW-Extension Office.

WHAT IS STANDING HAY WORTH? – THE SHORT ANSWER

What is hay in the field worth in 2014? We start with the going rate for hay. In this example we will assume \$220/ton for premium quality, local hay. What yield should we assume? Making an estimate of yield is discussed in the article *Count Stems to Estimate Yield*. For this example we will assume 4 tons/acre for the year. So the potential value of the baled hay is

$$\$220/\text{ton} \times 4 \text{ tons/acre} = \$880/\text{acre}.$$

As seen in the *Long Answer*, the seller's costs roughly equal the buyers cost (which includes weather risks and storage losses). If we assume the buyer and seller meet at "middle ground" a selling price for the year might be \$440/acre.

Now, let's break this down for each cutting in a 3 cutting system (40% of the yield in 1st crop, and 30% for 2nd and 3rd crop). Based on this example, a starting range for negotiations would be:

1 st Crop	\$160 - \$190
2 nd Crop	\$120 - \$140
3 rd Crop	\$120 - \$140

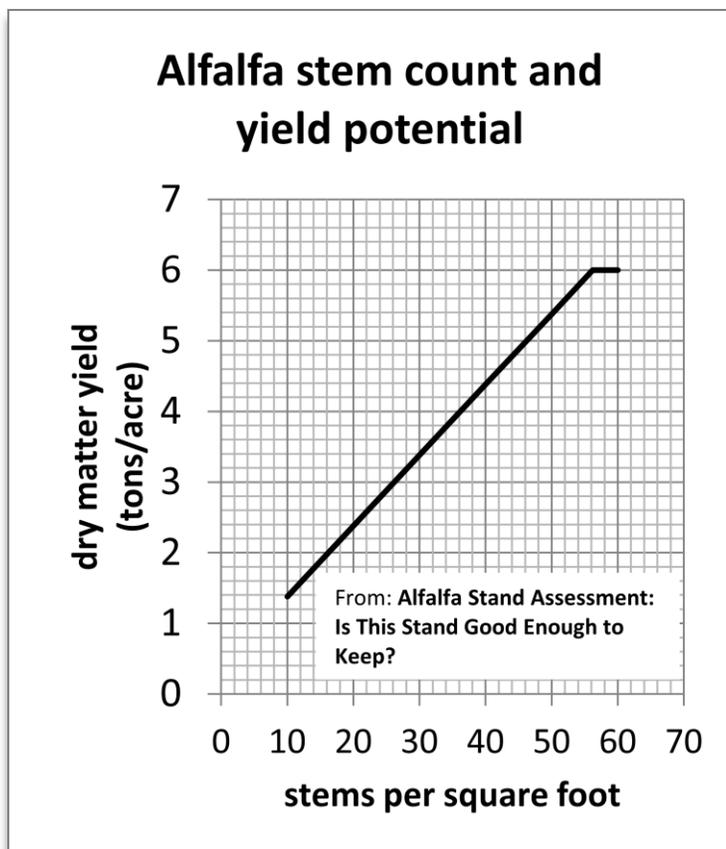
This example is only an estimate, and will need to be adjusted for a particular farm or field situation. However, it should give buyers and sellers a starting point for negotiations that are based on real costs and market conditions.

For the Long Answer, see Page 3.

ESTIMATING ALFALFA YIELD POTENTIAL

A rough estimate of alfalfa yield may be made based on stem density. To use this method, select three or four representative areas from the field. Mark off a 2-square-foot section at each location. It may be easiest to use a 17 x 17 inch square or 19-inch diameter circle – they both equal 2-square-foot. Count the number of stems – make sure to only count those stems that are tall enough to harvest. Divide the count by 2 to get stems per square foot. Use the graph to the right to estimate dry tons per acre. The method works best when the stand is 6-10 inches tall. Also, remember, this only estimates POTENTIAL yield; ACTUAL yield may be reduced by management, poor fertility, drought, or pest pressure.

For more details, see UW-Extension publication A3620.



HOW TO PRICE STANDING HAY – THE LONG ANSWER

A common question this time of year is *What is standing hay worth?* Consider four key parts to this question:

1. **What is the per acre yield?** Will the sale be based on actual yield (and how will it be determined, e.g., weighing sample loads or bales) or historic records for the field? Assume 40/30/30% of annual yield for 1st, 2nd, and 3rd cutting in a three cutting system; 35/25/20/20% for a four cutting system. Haylage value can be determined by adjusting yield for moisture content to dry hay equivalent.
2. **What is the quality of the forage?** Will samples be taken, or quality assumed based on visual inspection?
3. **What is the market price for hay?** At the end of the day, the value of forage in the field is dictated by the current price of hay. What is the market value for comparable quality forage?
4. **What are the production costs?** For the seller, costs involve the land value, stand establishment, and fertilizer. For the buyer, costs include harvesting, storage losses, and weather risks.

AN EXAMPLE

From the seller’s perspective . . .

The seller has several components of cost

(per acre):

1. Land value	\$100
2. Stand establishment	\$ 45
3. Annual fertilizer	\$190

Add these up to get

Seller’s breakeven price \$335

From the buyer’s perspective . . .

The buyer determines value starting with the cost to buy hay. In this example, we assume a market value of \$220 per ton and an expected yield of 4 tons/acre:

1. Value: \$220/ton x 4 tons/acre	\$880
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The buyer also has several cost components

(per acre):

2. Harvesting (3 cuttings)	\$180
3. Storage losses (5%)	\$ 45
4. Weather risk (15%)	\$130

Subtract costs from value to get Buyer’s per acre breakeven price \$525

So what is a fair price for standing forage? As the saying goes, “*a fair price is whatever a willing seller and able buyer can agree on*”. Both buyer and seller would like to profit; this worksheet can provide a starting point for negotiations. In the example given, the seller’s breakeven price of \$335/acre and the buyer’s maximum price of \$525/acre set the limits for the two parties.

Adapted from “How to Price Standing Forage” by Ted Bay, Rhonda Gildersleeve, Ken Barnett, and Dan Undersander, UW-Extension Focus on Forage, Vol. 10, No. 4.

ESTIMATING PRE-HARVEST ALFALFA QUALITY

The following is an excerpted and adapted from UW-Extension Publication A3681 *Alfalfa Germination and Growth*.

Choose five representative 2-square-foot areas in the field (more if larger than 30 acres). In each area, determine the stage of the most mature stem (see below). Then measure the height of the tallest stem, NOT the highest leaf. Note that the tallest stem may not be the most mature stem. Use the chart to determine relative feed value (RFV) of the standing alfalfa forage.

This procedure does not account for changes in quality due to wilting, harvesting, and storage; these factors may lower RFV by 10 to 20 points.

height of tallest stem (inches)	stage of most mature stem				
	late vegetative	early bud	late bud	early flower	late flower
16	234	220	208	196	186
17	229	215	203	192	182
18	223	211	199	188	178
19	218	206	195	184	175
20	213	201	191	181	171
21	209	197	187	177	168
22	204	193	183	173	165
23	200	189	179	170	161
24	196	185	175	167	158
25	191	181	172	163	155
26	187	178	169	160	152
27	184	174	165	157	150
28	180	171	162	154	147
29	176	167	159	151	144
30	173	164	156	148	141
31	169	161	153	146	139
32	166	158	150	143	136
33	163	155	147	140	134
34	160	152	145	138	132
35	156	149	142	135	129
36	154	146	139	133	127
37	151	144	137	131	125
38	148	141	134	128	123
39	145	138	132	126	121
40	142	136	130	124	118

Dairy quality forage

Source: Derived from equations developed by R.W. Hintz, V.N. Owens, and K.A. Albrecht at the University of Wisconsin-Madison, Department of Agronomy.

ALFALFA GROWTH STAGES

Late vegetative	Stem is more than 12 inches tall, no visible buds or flowers
Early bud	1 to 2 nodes have visible buds; no flowers or seed pods present
Late bud	More than 2 nodes have visible buds; no open flowers or seed pods
Early flower	1 node with at least 1 open flower
Late flower	2 or more nodes have open flowers