

Determining the Value of Standing Alfalfa in 2022

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Determining a “fair” market value for standing alfalfa during the 2022 growing season may be a challenge considering the highly favorable market conditions for corn and soybeans. *Opportunity cost* can be defined as the loss of a (potential) gain from other possible alternatives (rotating to a grain crop) when another alternative is chosen (keeping the existing alfalfa stand). As of May 2022, new crop corn is near \$7.00 per bushel for fall delivery while new crop soybeans are more than \$14 per bushel.

Due to the wide variation in corn and soybean yields from county to county and individual fields, each landowner will have their own unique circumstances to consider when evaluating opportunity cost. Yield estimates (https://www.nass.usda.gov/Statistics_by_State/Wisconsin/Publications/County_Estimates/) are available for those who may not have actual production history (APH) records as buyers and sellers negotiate these issues. Landowners should consider both the economic and environmental impacts (long term crop rotation plans, erosion limitations, etc.) before they make any final decisions related to particular alfalfa stands in 2022. Open and honest communication about both parties’ needs is required for a successful negotiation this year.

The absence of daily quotes as compared to other agricultural commodities (grains) requires us to rely on the most recent hay market prices available at <https://cropsandsoils.extension.wisc.edu/hay-market-report/>. The three most significant factors to consider when determining the potential value for any individual cutting of alfalfa or the stand for the entire growing season include the following:

- Expected Dry Matter (DM) Yield in Tons per Acre
- Estimated Value of a Ton of DM
- Harvesting Costs

Ideally, one would be able to weigh all the forage being harvested from any individual cutting from a particular field. This is the best way to ensure both parties are treated fairly in any formal arrangement in which standing alfalfa is bought or sold. If a scale is available, multiple forage samples should be collected during the process of harvesting to determine an accurate value for the average dry matter (DM) content of the feed being sold. Once you have agreed upon a fair price or value for a ton of DM (may be with or without harvesting costs), you simply multiply the harvested tonnage by the agreed upon value per DM ton then adjust for harvesting costs. Unfortunately, not all farms have access to drive-over scales. However, making an effort to get at least one individual wagon or load weight from a state-certified scale at harvest will significantly improve the accuracy of any yield estimate made that does not include a scaled weight.

Expected dry matter (DM) yield can be estimated by measuring alfalfa stand density or by utilizing multi-year on-farm data sourced from the Wisconsin Alfalfa Yield and Persistence (WAYP) program. The project is managed by the University of Wisconsin-Madison/Division of Extension. The 2021 WAYP summary can be viewed at: <https://arlington.ars.wisc.edu/wp-content/uploads/sites/115/2022/04/2021-WAYP-Summary.pdf>.

When determining a fair price for an individual cutting of alfalfa or all cuttings for the entire growing season, buyers and sellers should discuss the following six considerations to estimate realistic DM yields, account for weather risk and field losses, account for reasonable harvest costs, and calculate a fair price for a ton of DM.

1) Stand Density: Alfalfa stands with an average of **55 stems per square foot** are defined as not being limited and having full season yield potential. Due to the high variability in alfalfa stem counts throughout many fields these past few growing seasons, it would be wise for buyers and sellers to evaluate stands to determine a realistic potential yield. WAYP project data can help you estimate DM yield derived from on-farm data collected over the past 14 years. Local growing conditions, alfalfa stand condition after overwintering, age of the stand, composition of the stand, soil texture/series, soil fertility, and soil drainage can all significantly impact alfalfa DM yields during any given growing season. It is not advisable to purchase standing alfalfa without taking each of these considerations into account before any final arrangement is agreed upon by all parties involved.

2) Percentage of Overall Season Yield Per Cutting as Determined by the WAYP Program On-Farm Data:

- 3 cut system – 46% (1st crop) – 28% (2nd crop) – 26% (3rd crop)
- 4 cut system – 36% (1st crop) – 25% (2nd crop) – 21% (3rd crop) – 18% (4th crop)
- 5 cut system – 32% (1st crop) – 21% (2nd crop) – 18% (3rd crop) – 16% (4th crop) – 13% (5th crop/fall cut)

WAYP data collection begins with the first full production year following new seeding. Fifth cutting and late fall cutting data were collected in years when available. It should be noted that four-cut systems represent the largest percentage of the data. The low, mean (average), and high values for DM yield over the life of the project are illustrated below. In addition, 2021 data is included so you can compare the most recent year’s data to the other benchmark measurements established over the past 14 years.

3) Total Season Yield: The WAYP program has an observed yield range of less than 3.0 tons to more than 6.0 tons DM per acre. The most frequently observed yield has been **4.0-4.49 Tons DM per acre per year**.

4) Weather Risk and Field Losses: Management practices applied to the site by the buyer during the cutting and harvesting of alfalfa will influence the final quality measurements. Purchased baled hay may have a known, measured quality from a forage test. Alfalfa purchased standing in the field has unknown quality until after harvest due to weather risk, insect or disease pressure, advancing maturity, leaf shatter, and harvesting losses. These factors need to be considered and accounted for when determining the final price. An adjustment of 25 percent to the value of the alfalfa standing in the field may be considered a reasonable method to further account for the buyer’s risk.