

**TAKING THE GAMBLE OUT OF BUYING/SELLING  
ALFALFA FOR GREENCHOP OR SILAGE**

Don A. Toenjes<sup>1</sup>

Abstract: Market value of standing alfalfa can be based on the hay market if the costs of custom hay harvesting are subtracted. A more realistic price can be developed by using the UC Dairy Ration program or the Bennett Dairy Ration program. Both are computer software packages. A field study showed that conditions of weighing and moisture testing can affect the final payment up to 41%. Field experience has shown that an investment in a moisture tester and truck scales makes the transaction into a business arrangement rather than a crap-shoot.

Establishing market value is the first problem that a person interested in buying or selling standing alfalfa growth encounters.

A simplistic process for determining fair market value can be based on the hay market. Interested parties agree on a market value for nutritionally equivalent baled hay in the grower's stack or delivered to the dairy. The costs of harvest, roadsiding and, if needed, transportation to the dairy are removed (custom costs are used). A standard dry matter content of the delivered hay is agreed upon. The value of one pound of dry matter contained in the standing growth can now be calculated.

Example:

Premium quality hay delivered to dairy	\$115/ton
Minus custom harvest and roadsiding	\$ 25/ton
Minus local haul	\$ 11/ton
Equals one ton of premium hay standing	\$ 79/ton
One ton premium hay at 12% is	2,000 lb.
Pound of moisture in a ton at 12% is	240 lb.
Dry matter weight	1,760 lb
Value of one pound of dry matter	\$79/1760 lbs. or \$ .0449/lb.

The California Dairy Ration program developed by Don Bath and Loren Bennett can go one step further. It can develop a price based on a multiple relationship involving costs of numerous feeds available to the dairy or dairies in a locale. I have used this program to develop the relative monetary value of alfalfa silage, corn silage, cereal silage, almond hulls and numerous by-products for both buyers and sellers. Other Farm Advisors with dairy responsibilities have this software and many dairy nutritionists use a commercial version.

---

<sup>1</sup>University of California Farm Advisor, Cooperative Extension, Glenn, Colusa and Butte Counties, Orland, CA 95963

Example:

A typical dairy ration for cows producing 80-90 lbs. of 3.7% butterfat milk would consider premium grade, 47% moisture alfalfa haylage delivered to the dairy at \$48.20 a good buy when compared to premium grade alfalfa hay at \$115/ton, corn silage at \$18/ton, wheat hay at \$50/ton rice bran at \$95/ton, wheat at \$130/ton, whole cottonseed at \$160/ton and barley at \$130/ton.

Compare this to our first method where the 47% moisture haylage would be priced at \$47.59/ton without harvest costs. Hay growers might prefer the first method!

The easy part is done, from now on the negotiations often take on more of the aspects of draw poker than an informed business arrangement. The parties must agree to a scheme for determining the drymatter content of the chop and the weight of the loads.

These arrangements or lack of arrangements to accommodate (Murphy's Law) often changes friend into foe. In my career as a Farm Advisor, I have seen this happen numerous times. In a recent example I was subpoenaed to testify in a suit involving a \$55,000 dispute over delivered weight to the dairy. Now friendly people might buy each other \$2.00 drinks, but a \$20,000 discrepancy that's business!

How could something like this happen? It started with a handshake between friendly reasonable people. The verbal agreement was for every load to be weighed and a certain number of the loads would be sampled every day for moisture. The independent truckers, agents of the seller, were paid by the delivered tons and the custom chopper, also hired by the seller, was paid by the tons chopped. This is not an unusual arrangement. The truckers found that weighing the load required about 5 extra miles of travel and 20 minutes of time so they quit the second day. The dairyman, anxious to receive the chop, contacted the truckers and chopper to find the reason for the stopped deliveries. He offered more money to the truckers and relaxed his request for every load's weight to a couple weights per day.

When the bill arrived he was shocked to find that he was asked to pay for 2,000 more tons than he figured his bunker silo would hold. He disputed the bill and "friends" went to court. Expert testimony using different methods were in close agreement in estimating the tons of silage stored (one of the estimates was mine). However, the spot weights and load counts were in conflict by 2,000 tons. The dairyman had no other load count. The court decided on a point of contract law that the truckers and the custom chopper became the dairyman's employees once he contacted them and renegotiated, that the buyer-seller agreement was based on weight of loads and the truckers' load counts and while the buyer changed the rules, the agreement was still in effect even though very few loads were weighed. The judge found in the favor of the seller, however, negotiations reduced the bill a bit.

Fortunately, this dairyman had a successful past and was able to absorb this cost and the cost of a low clearance electronic truck scale. For the next silage purchase he had his own on ranch in-weights and load counts. Now all feed deliveries to the dairy are weighed on the dairy's scales. In addition, he purchased his own apparatus to determine the moisture level of each delivered greenchop load.

That brings us to another point. A dairyman can usually obtain water for his cows by pumping or diverting surface supplies. Paying a grower or a trucker to provide the dairy with water can be expensive. Recently, with the help of a local Sacramento Valley dairyman, I was able to look at various weighing and sampling schemes for buying or selling alfalfa chop in the spring. The dairyman purchased some standing alfalfa and agreed to sample and weigh each load and record the time of day. I ran a dry matter test on each load. A summary of the data is shown below.

**Specifics - Greenchop Alfalfa Study**

Actual tons delivered to silo		203.63
Average tons per load		4.53
Calculated tons of dry matter stored		106.45
Converted to 14% moisture hay equivalent		121.35
Full load weights (wet)	High 12,440 lbs. Low 7,060 lbs.	
Moisture percentages	High 47.71% Low 26.21% Ave. 47.73%	
Lbs. of dry matter per load	High 6257.09 Low 3181.67	

Now the cards have been dealt, let's see the hand. If by chance we weigh a random load and it happens to be the lightest full load, payment would be decreased by nearly 19% compared to the actual, but if by chance the heaviest load was used, payment would be increased by nearly 41%. Let's say we use the load filled at 2:00 p.m. each day. In this case payment would be 14% more. How about using the weight of every twelfth load--underpayment by 9.6%. Maybe a more frequent weighing; every eighth load--underpayment of 10.8%! In our study a weighing and sampling of every other load gave us reasonable accuracy.

Now if asked I would never had suspected such a wide variation, but it is reasonable. Heavier loads were developed when the trucks had to travel further to obtain a load and when partly filled trucks settled during the lunch period or waited for repairs. Moisture levels were influenced by dews, breezes, clouds and hours between swathing - chopping. Moisture determination can be easily done wherever there is a 110 volt outlet. Small microwave ovens easily dry forage for drymatter determinations if a container of water is also placed in the oven. Good scales are needed and at least several sources can supply these. The Koster Hay-Haylage-Silage-Grain Moisture Tester is exceptionally easy to operate and requires no arithmetic. Possible sources of small scales would be Nasco West (1-800-558-9595), Fisher Scientific (408-727-0660), Cole-Parmer (1-800-323-4340) and others. Sources of electronic truck scales may include Weigh-tronic (507-238-4461) and others.

In closing, in my experience someone is going to get the short end of the stick when alfalfa greenchop is sold if the parties involved make it a game instead of a business transaction. There is no assurance that it won't be you the buyer or you the seller. Just running the loads over the scale isn't good enough, you also need to determine moisture levels.