

DAIRY FEED: A NEW CASH CROP

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Introduction

Cash grain producers generally sell their grown commodities through traditional marketing outlets that set a price for delivery or allow the grower to take advantage of various price risk marketing tools (forward contracts, options, etc.). Occasionally, a neighboring dairy producer may be in need of additional feed because of a less than optimum growing season. This has often resulted in a transaction between farms for high moisture corn or corn silage. It's the classic example of neighbor helping neighbor and has been a long tradition among Wisconsin farmers. So in one sense the thought of selling crops to provide feed for a nearby dairy farm is nothing new. What is relatively new, and becoming more commonplace, is a **long-term** arrangement between farms to supply feed (generally forage as corn silage and/or alfalfa).

So what has brought about this increase in contractual arrangements between the "grain" farmer and "dairy" farmer? A number of factors contribute, but the overriding one is the fact that many dairy farmers only want to concentrate on the dairy enterprise. This is often the case when farms expand cow numbers and when there are smaller new start-up operations. These dairy farms need both feed and acres to spread manure. Further, they know that they will need to make it economically attractive for their feed grower because that individual has other options whereas the independent dairy unit does not. This is generally not difficult because "feed" value is often higher than "grain" value. In the ideal situation, both farm units stand to make more money than if the dairy grows its own feed and the grain farmer sells the crop through traditional marketing channels.

Advantages and Disadvantages

Let's first look at the advantages and disadvantages of feed contract arrangements. Of course this becomes a matter of perspective depending on whether you're the "giver" or "receiver." Here, our attention is on the feed grower:

Grower Advantages:

- Unlike a land rental arrangement, the grower maintains an economic "stake" in the crop and is offered a competitive return for their labor and management.
- If growing corn silage:
 - Lower risk to grow when compared to grain or vegetable crops in terms of planting date, cool growing seasons, or an early fall frost.
 - Offers growers the opportunity to spread fall tillage operations over a longer period because the corn silage crop is harvested earlier.
 - Growing corn for silage is not much different than growing corn for grain.
- If growing alfalfa:
 - High value crop compared to grains.
 - Tremendous crop rotation benefits in terms of nitrogen credits, soil erosion control, and yield enhancement of the subsequent crop.
- Opportunity to utilize manure for both nutrient and soil quality characteristics.

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Grower Disadvantages:

- Often, payment arrangements are based on a set price for quantity. This can result in losing any upside market swings but also takes out risk from downside movement.
 - This concern can be overcome with a floating price contract, which is based on grain markets over a designated period of time. Either local markets prices or Chicago Board of Trade nearby futures can be used.
- The grower becomes an unsecured creditor. It's important to build good relationships and know who you're dealing with.
- Corn silage and alfalfa have higher nutrient removal rates than corn for grain or soybeans. For example, corn for silage will remove 80 to 90 lb/acre more potassium (K) than corn for grain. This additional removal needs to be figured into the value of the crop or replaced with a subsequent manure application by the dairy enterprise.
- Corn residue is removed as silage. This may have ramifications in terms of soil conservation plans. The impact may be negated if alfalfa is also grown in the rotation.
- Growing alfalfa is very different than growing grain crops and there may be an initial learning curve.

Contract and Pricing Considerations

There have been numerous approaches to setting-up feed supply contracts. There is simply no right or wrong way to formulate a contract and pricing options as long as both parties are content with the arrangement and understand their obligations. It's always a good idea to examine some existing contracts and talk to growers who have experience with these arrangements. Just as corn silage and alfalfa differ in the way they are grown and managed, they too differ in the way they are priced. Here are some considerations:

Corn Silage

To begin, it's always good to figure your expected gross return on dry grain. This helps to set "floor" price on the return you need to have when shifting to a silage enterprise. Include in this analysis your costs for harvesting, drying, storing and transporting the grain. Silage pricing is often based from some measure of dry corn price. For example, 7.5 bu grain/wet ton silage times the grain price, adjusted for harvesting cost. The system can be the same from one year to the next; however, the corn price used may be different depending on market movement. In the case of short-term, contractual arrangements (not permanent from year to year), forage "market" factors may be taken into account. When forage is short because of alfalfa winterkill, drought, etc., corn silage value increases beyond that based solely on the dry corn price. In permanent contractual arrangements, these types of market forces are less of an issue. There will be years when the price paid or received is higher or lower than the prevailing market price in that year. Before negotiating a contractual arrangement, have a floor and ceiling price set from which to work.

Harvested corn silage can vary in moisture from year to year and from field to field. It's important to set prices based on a specific moisture in the same way that dry grain is priced based on a standard of 15.5% moisture. The standard moisture for corn silage is often set at either 65% or 0% (100% dry matter). As with dry grain, moisture really matters. For example, silage priced at \$18.00 per ton @ 65% moisture equates to \$15.43 per ton @ 70% moisture and \$20.57 per ton @ 60% moisture.

Another consideration that is becoming more important for dairy producers feeding silage is hybrid selection. Often, the dairy producer either selects the hybrid to be grown or offers the grower a list of hybrids to choose from. This is usually not a big deterrent to the grower because the dairy is as interested in getting high yields of high quality feed as the grower. Forage quality of corn silage is primarily dictated by harvest time whole plant moisture and the hybrid selected. For this reason, quality is rarely used as a factor in adjusting base price. It's much easier to set parameters on an acceptable whole plant moisture (if the grower is also responsible for harvesting) and make appropriate hybrid selections.

The question of "Who is responsible for harvesting?" is another consideration in feed arrangements. Typically, it is the dairy producer who takes responsibility by contracting with a custom harvester. This is also the preferred arrangement by the grower as well because they often do not have the harvesting equipment and it puts the burden of a timely harvest on the feed buyer. In some cases, the forage grower has the equipment and facilities to harvest and/or store the feed. Generally this occurs because the grower has an existing dairy operation but desires to spread fixed costs over more acres by providing feed to other operations. Some provide a full total mixed ration on a daily basis. The contractual considerations are similar except that the purchasing dairy generally sets quality parameters. Further, because the feed is purchased coming out of storage, there is often a premium paid for the feed because shrink losses have already been incurred by the grower. Shrink losses in a well managed bunker silo are generally between 10-15%.

Alfalfa

To state the obvious, growing alfalfa is much different than growing a grain crop. It will require a bigger "leap" for a traditional grain crop producer to devote acreage to a perennial crop like alfalfa. That said, growing alfalfa holds some inherent advantages in terms of crop rotation effects, N credits for a subsequent crop, and soil erosion/soil quality benefits. Higher initial establishment costs, pest control, and higher P and K demands are all things that must be considered. Alfalfa is also subject to winterkill or injury and there is year to year yield variation. Again, the burden of harvest is generally placed on the purchasing dairy operation.

Unlike corn silage purchase arrangements, alfalfa is often priced based on yield and forage quality. In many cases, a base price is set for one ton of dry matter at a specific forage quality (e.g. \$100 per ton for forage that has 18% CP and 150 RFQ). The price is then adjusted up or down based on the quality of the delivered feed. Usually an acceptable range is set around quality parameters.

Measuring Yield and Quality

In the rush of harvest, shortcuts are sometimes taken in an effort to quantify yield and/or quality. Suffice to say that it is extremely important to be accurate when weighing loads for yield or taking samples for quality. Small errors with large volumes of feed quickly translate into large errors and great sums of money. Many large dairies have invested in on farm scales for trucks and wagons. In permanent contractual arrangements, using estimates based on silo or wagon size simply isn't good enough. Make sure that all contractual parties are clear on how both yield and quality will be determined.

Summary

Cash cropping milk provides traditional grain crop growers a viable alternative enterprise that has both a nearby market where feasible and profit potential beyond that of traditional grain crops. Business relationships are built long-term instead of “as needed” on an annual basis. It’s important to build these relationships on trust, while at the same time putting agreements in writing. There are many examples in the state of successful feed grower-dairy arrangements. They vary in scope, the type of crops grown, and how prices are determined. What often isn’t different is the fact that each partner benefits.