



Impacts of Rising Feed Costs on the Costs of Producing Milk

Recent increases in the prices of corn, soybean meal, and hay have put pressures on dairy producers' profit margins. Fortunately milk prices have been high enough that dairy producers could cope with these higher feed costs. But now milk prices are declining and dairy producers' profits are being squeezed further. So the financial pain of rising feed prices is becoming more acute for dairy farmers.

The purpose of this paper is to give dairy producers and others an idea of how the costs of producing milk are likely to vary in response to changes in the prices of corn, soybean meal, and hay. Hopefully this information will help dairy producers gain a perspective of the profits that are currently at risk. Producers can try to preserve some of these profits by locking in a portion of their feed costs or they can roll the dice and hope that feed prices do not rise to even higher levels.

Table 1 shows how per hundredweight costs of producing milk rise given various increases in the prices of corn, soybean meal (SBM), and hay. The cost variables presented in the table were computed using a modified version of a computerized spreadsheet, entitled

Pricer.XLS, that was developed by Terry Howard and Randy Shaver of the UW-Madison Department of Dairy Science. The cost of production values in the above table can be used to estimate how much milk production costs, per CWT, could change given changes in the prices of corn, soybean meal, or hay. For example assume that one is concerned about what might happen to the per hundredweight cost of producing milk if the price of corn increases \$1 per bushel. To estimate this change in the cost of producing milk, one can take the per CWT cost of approximately 26 cents related to corn and double it. This doubling accounts for the fact that the cost of production values related to corn are for 50 cent per bushel changes in the price of corn. So a \$1 increase in the price of a bushel of corn (two, 50 cent increases) should result in roughly a 52 cent increase in the per CWT cost of producing milk.

Similarly, a 25 cent per bushel increase in the price of corn (one half of a 50 cent increase) would only be expected to drive the cost of producing milk up about 13 cents per CWT.

Changes in the per hundredweight costs of producing milk related to changes in the prices of SBM and hay

can also be estimated using the cost of production values in Table 1. The per hundredweight changes in the cost of producing milk are computed on the basis of: (1) a \$1 per CWT increase in the SBM price resulting in roughly a 9 cents per CWT increase in milk production costs; and (2) a \$20 increase in the price of a ton of hay which pushes milk production costs up somewhere between 40 and 60 cents per CWT.

The extent to which milk production costs rise as a result of increasing hay prices depends of whether a cow is milking at a high or low rate. For a cow producing milk at a rate of 60 pounds per day (about 18,000 pounds per year), a \$10 increase in the price of a ton of hay would be expected to raise the per hundredweight cost of producing milk about 30 cents (half of \$0.60). For a cow producing 80 pounds of milk per day (about 24,000 pounds of milk per year), the same \$10 increase in the price of a ton of hay would only push the costs of producing 100 pounds of milk 22.5 cents (half of \$0.45) higher.

This inverse relationship between milk production and hay costs is explained by the fact that higher levels of milk production per cow are achieved by substituting corn and soybean meal for hay.

The prices of corn, soybean meal, and hay in March of 2008 were all substantially higher than they were in March of 2006. Corn prices were up \$2.70 per bushel (from \$2.10 to \$4.80), soybean meal prices \$7.85 per CWT higher (\$8.75 to \$16.60), and hay prices were up \$45 per ton (\$100 to \$145). These increases in the prices of feed all elevated the cost of producing milk.

The cost variables in Table 1 can be used to estimate the impacts the price increases in corn, soybean meal, and hay each had on the per hundredweight costs of producing milk from March 2006 to March 2008. Consider, for example, the case where a cow is

milking at an average rate of 80 pounds per day. According to the Table 1 values, the cost of producing 100 pounds of milk was pushed up: (a) \$1.35 from the \$2.70 per bushel increase in the price of corn (\$2.70 divided by \$0.50 times 0.25); (c) \$0.71 from the \$7.85 per CWT increase in the price of soybean meal (\$7.85 divided by \$1.00 times \$0.09); and (c) \$1.01 as a result of the \$45 increase in the price of a ton of hay (\$45 divided by \$20 times \$0.45). All total, the cost of producing 100 pounds of milk rose \$3.07 due to the increases in corn, soybean meal, and hay prices from March 2006 to March 2008.

Dairy producers who raise some or all of their feed are not being forced to pay the high market prices for corn, SBM, and hay. But they are also having to cope with higher feed costs because the costs of producing feeds have risen as the prices of seed, fertilizer, fuel, and other crop production inputs have increased dramatically in the last year. The cost of producing corn could easily be up by as much as a \$1 per bushel this year and the cost of raising hay could rise by as much as \$20 per ton due to higher costs of inputs and cash rents for cropland. These higher costs for raised feed are going to erode dairy producers' profit margins the same way that increases in the prices of purchased feeds cut into producers' net returns. So the values in Table 1 can also be used to determine how changes in the costs of producing corn and hay may affect the costs of producing milk.

All dairy producers are being forced to cope with the problem high feed costs. Hopefully the information presented here will help them estimate how the cost of producing milk is likely to change depending upon the costs of purchased or produced feeds.

By Bruce L. Jones, Professor and Extension Farm Management Specialist UW-Madison

| Average Daily Milk Production Per Cow, In Pounds | Increase in Per Hundredweight Cost (\$) of Producing Milk with Increase in: | | |
|--|---|--|---------------------------|
| | Corn Price of \$0.50 per Bushel | Soybean Meal Price of \$1.00 per Hundredweight (CWT) | Hay Price of \$20 per Ton |
| 60.00 | \$0.25 | \$0.09 | \$0.60 |
| 65.00 | \$0.25 | \$0.09 | \$0.55 |
| 70.00 | \$0.25 | \$0.09 | \$0.51 |
| 75.00 | \$0.25 | \$0.09 | \$0.47 |
| 80.00 | \$0.26 | \$0.09 | \$0.45 |
| 85.00 | \$0.27 | \$0.10 | \$0.43 |
| 90.00 | \$0.27 | \$0.10 | \$0.40 |

Farm Safety Is No Accident

By Aerica Opatik, Kewaunee County UW-Extension Dairy Agent



Spring and summer are busy times on the farm and safety is sometimes not a high priority.

According to the 2005 report from the University of Wisconsin Center for Agricultural Safety and Health, 29 people were killed due to farm-related accidents, two in Kewaunee County alone. The 2005 report does not list the vast number of farm injuries that go unreported. It is important to keep farm safety a high priority for you, and for all visitors and children present around cattle, equipment, and farm implements.

It Pays To Be Seen

Wisconsin statutes require that every farm tractor and self-propelled implement which travel 25 mph or under, and any towed implement with obscures the rear of the tractor have a slow moving vehicle emblem (SMV) attached. An SMV emblem should be clean and visible for 500 feet in daytime conditions. The SMV emblem should be mounted centrally at the rear of the vehicle, securely mounted, unobscured, and 2 - 6 feet above ground, measures from the lower edge of the emblem. Is

it time for a new SMV? Start by cleaning the SMV emblem and check color. If the center is not bright orange, but appears yellow, white, pink, or metal shows through, it's definitely time for a new SMV sign. The cost of a new SMV sign is nothing compared to the cost of a collision!

Rollover Protection

Each year tractor rollover accidents continue to be the single leading cause of farm-related fatalities in Wisconsin. Having a rollover protective structure (ROPS) is the sure way to protect the operator in case of a rollover. There are ROPS retrofits available for many tractors. ROPS often cost \$300 - \$600. Contact your local equipment dealer to find out if you can purchase a ROPS retrofit kit. Never try to construct your own ROPS - there are too many variables in mounting and metal strength to build a rollover protective structure that is guaranteed to protect you. An approved rollover protective structure is designed to absorb some energy, yet withstand tremendous forces. Remember that not all cabs have ROPS structures built into the frame. A cab with ROPS has a label certifying that it meets ROPS standards. A final safety step you can take is to wear your seatbelt. If your tractor has a ROPS, the seatbelt prevents the operator from being thrown outside the zone of protection.

Operate with care

One of the most common and most dangerous things to do on a farm is to remove protective shields or guards. Those guards and shields are there for a reason, never remove them!! If you must remove them for repairs, be sure to securely and properly replace them according to manufacturer's standards. When operating equipment, make certain that all shields are in place and the equipment is operated at proper PTO speed. Be sure that no one is near equipment such as choppers and mowers, as this equipment may eject rocks or other projectiles and hit or injure someone.

If equipment becomes jammed or plugged, take the time to turn off the machinery completely before attempting to unplug or adjust it. Spinning power take-offs and pick-up equipment can very easily catch clothing or appendages.

Never allow anyone to ride on equipment, even if you are not running it. A passenger can easily fall off and get hurt or even run over. Never allow passengers on tractors. Kids love to ride on the tractor with parents, it only takes a second for a passenger to fall off

and get hurt. Tractors are responsible for 41% of the accidental farm deaths of children under 15, yet 4 out of 5 farm children regularly ride tractors with family members. While riding the tractor may be a family tradition, it's easier to bury a tradition than a child. If you know children are present on a farm, be sure to use extra caution when driving around buildings and entering farm yards. Often times children can see mom or dad coming into the yard on farm equipment and will run towards them.

Certainly most of this information may be common sense, but sometimes common sense is overruled by the need to finish a job quickly. Farm safety can be a contradictory term, but with proper caution and care, this summer can be a safe one for you and your family.

Skojlaas, Cheryl., Schuler, Ron., Kirschner, Hallie., Liantonio, Sherry. 2005 Wisconsin Farm-Related Fatalities. University of Wisconsin Center for Agricultural Safety and Health. Retrieved from: <http://www.wiscash.uwex.edu/Pages/StatisticsAndMiscDocuments/FatalitiesReports/fatal05.htm>



JUNE IS DAIRY MONTH



You're Invited... Assisting Cows With Calving Dairy Workers' Training (In Spanish)

Monday, June 23, 2008
1 pm - 4 pm
El-Na Farms

E4029 Pheasant Road, Algoma WI

This session will be limited to 20 participants so pre-registration is required. This training session will provide basic information on assisting cows with calving and will be taught by Dr. Matt Schaefer, DVM—Dairyland Veterinary Service and translation will be done by Carolina Pinzon.

Topics addressed include:

- * Stages of Calving
- * Calf presentations
- * Signs of Calving Distress
- * Providing calving assistance

Cost: \$25 per person (includes materials and refreshments)

Make check payable to: UWEX

Mail to: Jan Tess, Kewaunee County UW-Extension
810 Lincoln St, Kewaunee, WI 54216

For more information please contact the Kewaunee County UW-Extension Office at 920-388-7141.

How to Avoid Losing Feed Value This Year

by Brian Holmes, University of Wisconsin

A variety of conditions have increased the value of feed this year according to Brian Holmes, University of Wisconsin-Madison/Extension professor and farm structures specialist.

Increased cost of production, including fertilizer, fuel, equipment, seed and land rent, have made raising crops more expensive. Demand for crops used in fuel production has caused a diversion of cropland to grains at the expense of forage production. Drought conditions in some areas have reduced the supply of feed.

Dairy producers have been searching for ways to reduce their ration costs to help maintain profitability. Holmes said, "One way to save on feed costs is to reduce the loss of feeds during harvest, storage and feeding processes."

Holmes referenced an analysis that was conducted assuming good and fair management practices for alfalfa and corn forage for a 100 cow herd to demonstrate the economic significance of reducing dry matter loss in forage production. Hay and corn silage were fed to lactating cows, dry cows and most heifers at different rates based on dietary needs. Alfalfa silage represented 45 percent and corn silage represented 55 percent of the whole herd forage diet. Hay silage was valued at \$150/T DM and corn silage was valued at \$125/T DM.

The loss of feed value with good management is \$24,160 per year. This includes a 22.8 percent cumulative dry matter loss from alfalfa representing a \$13,445 loss and an 18.7 percent cumulative dry matter loss from corn silage representing a \$10,715 loss.

The loss of feed value with fair management is \$41,031 per year. This includes a 33 percent cumulative dry matter loss from alfalfa representing a \$22,378 loss and a 28.6 percent cumulative dry matter loss from corn silage representing an \$18,652 loss.

Holmes noted that moving from a fair management practice to a good management practice resulted in a savings of \$16,871 for the 100 cow herd used in this analysis.

So, what practices can reduce dry matter losses to move from fair to good forage management? Holmes suggests that to achieve the benefits discussed above, improvements need to be

made in all aspects of handling forages from harvest to feeding the animals. These improvements include:

- Proper adjustment of equipment, minimizing hay handling operations and harvesting at the recommended moisture content of 60-65 percent for alfalfa and 65-70 percent for whole plant corn reduces losses during harvest.
- Filling storages as quickly as possible helps to reduce respiration and aerobic deterioration losses during silo filling.
- Packing bunker, pile and bag silos densely during filling helps to exclude oxygen penetration during fermentation, storage and feedout. Exclusion of oxygen and precipitation from the forage during the fermentation and storage stages reduces storage losses. This requires tight silos and proper covering with plastic. Those who have observed any black silage on tops and sides of silos have some areas for improvement.
- Feedout losses may not be so obvious. A rough feedout face where less than 6 inches per day are removed will have larger dry matter losses at feedout than when feedout rates are larger and the face is kept smooth and without fissures. Taking care to remove only the amount of feed needed during a given feeding also helps to reduce aerobic deterioration of that feed as it waits for the next feeding.
- Delivering the correct amount of feed to the mixer wagon and not spilling feed during mixer wagon filling makes for a more correct ration and reduces losses at feeding.
- Close monitoring of feed bunks with adjustments to the quantity of feed delivered at the next feeding reduces the amount of feed refusal.

To learn more about recommendations for proper forage harvest, storage and feedout, see the many articles and spreadsheets available at the Harvest and Storage page of the UW Extension Team Forage web site at URL:

<http://www.uwex.edu/ces/crops/uwforage/storage.htm>



Don't Miss Breakfast on the Farm June 15



The Kewaunee County Breakfast on the Farm will be held

on Father's Day, Sun., June 15 from 9 am to 1 pm at El-Na Dairy Farm. The dairy is owned and operated by the Fenendael families.

The all-you-can-eat dairy brunch menu includes a ham & cheese omelette, fresh rolls & butter, cheese samples, strawberry sundaes, bagels & cream cheese, yogurt samples, cottage cheese, deep-fried ceese curds, mozzarella sticks and choices of milk. Entertainment throughout the day will include children's entertainer Randy Peterson and a clown.

It's a family affair! Children's activities include horse drawn-wagon rides, pedal tractor races, petting zoo, calf fashion show and free Polaroid pictures for kids will be available.

A special church service will be held at the farm at 7:45 a.m.

Admission is \$6 for adults, \$3 for children ages 4-12, and kids age 3 and under are free. The event is sponsored by Kewaunee County Dairy Promotion Committee, Inc.

Directions to El-Na Dairy are one mile north of Cty K out of Rio Creek, one mile west of Cty P. Watch for signs!

Come and join us for a dairy good time.

Save Fuel During Spring Planting

With today's high fuel prices it's a good idea to make sure tractors and equipment are correctly prepared to get the most work out of each gallon of diesel fuel. Farmers can take a number of steps to maximize fuel efficiency.

UW-Extension offers the following recommendations:

- Match the tractor to the job. Obviously, you don't need a 100 horsepower tractor to rake hay, but it's not uncommon to see high horsepower tractors doing very low power jobs.
- Make sure air and fuel filters are changed when necessary. Partially clogged filters can starve engines of both air and fuel making them work harder just to run. Making sure oil changes and other maintenance are completed also helps tractors run efficiently.
- Make sure tires are correctly inflated. Radials are typically inflated to lower pressures than bias ply tires.
- Make sure the tractor is properly weighted, both total weight and distribution. Often a tractor is weighted for the hardest tillage job it will do and left that way. Most of the year it could be weighted with significantly less weight and burn

less fuel. Eight to ten percent drive wheel slippage is the target for maximum efficiency.



Recommended weight distribution for a two-wheel drive tractor with a semi-mounted implement is 30 percent front and 70 percent rear, tractors with mechanical front wheel assist should be ballasted with 40 percent front and 60 percent rear.

Shifting up a gear and backing off the throttle can help save fuel while doing many tasks, as long as it doesn't cause the engine to lug down too much.

Newer diesel engines should not be blowing a lot of black smoke while working. The black smoke is unburned fuel and indicates inefficient operation.

Adjustments to the implements being pulled or used can also help get the most work for the fuel dollar. Tillage tools that are not correctly aligned or leveled make the tractor work harder to pull them across the field. It's easier to pull forage harvesters if the knives are sharp and the shear bar is correctly adjusted. In order to reduce friction, all machinery should be kept lubricated according to the manual.

UW-Extension Hosts Grazing Schools

Farmers interested in switching to rotational grazing or just starting out in grazing should plan to attend one of the Wisconsin Grazing Schools which will be held around the state over the next several months.

The Wisconsin Grazing Schools are designed to teach producers, educators and agency staff the basics of management-intensive grazing with a hands-on approach.

The two-day workshops will provide opportunities for in-depth discussions and field exercises covering both agronomic and livestock topics related to grazing and dairy and livestock production on pastures. Topics include pasture species selection and management, fencing and watering systems, animal health on pasture, animal nutrition, pasture improvement techniques and economics of pasturing systems. Producers will have the opportunity to network with producers already using Management intensive grazing (MIG) as well as University and USDA-NRCS experts in grazing. Management intensive grazing (MIG) is based on four key factors:

- meeting the nutrient requirements of the grazing animal;

- optimizing forage yield, quality, and persistence;
- environmental stewardship;
- And integrating knowledge and technology into a practical and profitable management system.

Cost for the school is \$75 per person, which includes reference materials and meals during the school. A second person from the same farm can register for \$35. Dates, locations and registration deadlines are:

June 10-11 in River Falls. Registration deadline – June 2.
June 24-25 in Gleason. Registration deadline – June 16.
July 22 in Fond du Lac. Registration deadline – July 14. Please note the Fond du Lac school is one day only and registration is \$35.
Aug. 19-20 in Richland Center. Registration date to be announced.

For a brochure and registration information, contact Dennis Cosgrove, UW-River Falls, 410 S. Third Street, River Falls, WI 54022 (715) 425-3345 or by email at dennis.r.cosgrove@uwrf.edu. The brochure can also be downloaded from www.uwrf.edu/grazing under upcoming events.