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# Crop Soil News

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"It is the crops that feed the cows that make the milk which creates the money."

Advanced Ag Systems  
Research, Education, Consulting

## Finding Profit In Dairy Farming

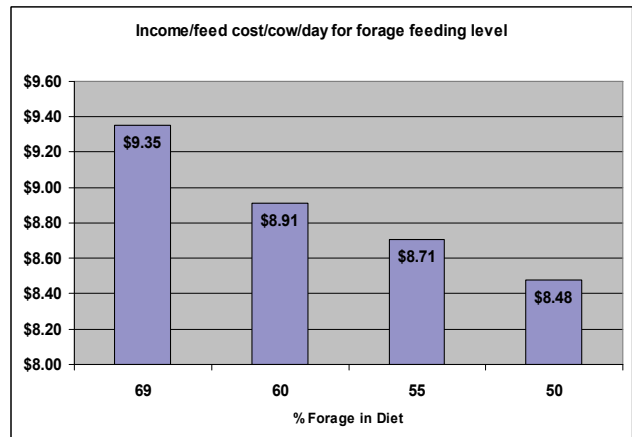
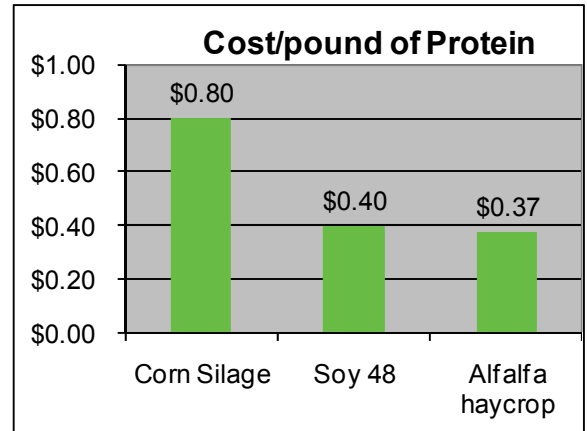
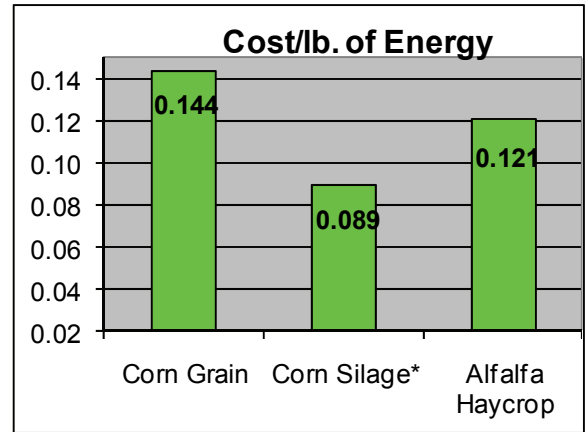
First low milk price, then as it started to increase, the cost of grains have shot through the roof. How do you get your income out of this cost price squeeze? To maximize production, dairy cows need a balanced nutrition meeting their protein and energy needs, in an effective fiber mix, at lowest cost, while the animal is in a comfortable environment.

In a simple answer, **MAXIMIZE THE NUTRIENTS FROM THE CHEAPEST SOURCES.** This may sound fundamental, but on a distressing number of farms are not optimized.

Many farms are still stuck at 50% forage in the diet. Those determined to stay in business in the Northeast are all over 60% forage in the diet and **an increasing number are at or above 70% forage in the diet**, over 85 lbs of milk/cow and very high components.

We have followed this higher forage feeding level in the past and it has consistently shown increasing income over feed costs (graph at right) for most of the farms we worked with. The example at the right from two years ago looks the same as the example from ten years ago—just the absolute numbers have changed (smaller).

Farms that have moved to the higher levels report improved herd health (save on vet bill) and reduced culling rates. Animals are staying in the herd longer to return a profit above the cost of raising them.



As you can see on page 1, getting the last possible nutrient from forage rather than grain is more profitable. The cost of nutrients (energy) is much cheaper from corn silage than from purchase corn grain. In fact, the energy from wide swath, same day haylage is cheaper than buying it as corn grain. The same holds true for getting protein from alfalfa rather than soybean meal. We had figured rather high machinery harvest costs. The margin is tighter but still there. For many farms the cost of protein is much lower than getting it from soybean meal.

The simple formula to determine your potential forage feeding level is in the Dairy Reference Manual, page 125 formula:

$$\frac{\text{Body Weight} \times \text{NDF forage Intake level}}{\text{Weighted forage NDF}}$$

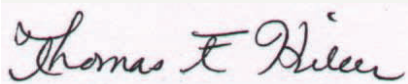
Applying this to various cow sizes and forage qualities gives the examples below:

Forage NDF % of Body Weight Feeding Level	Forage NDF Intake Level	1500 lb Cow @ .48 forage NDF	1500 lb Cow @.42 forage NDF	1350 lb Cow @ .48 forage NDF
		Lbs Forage DM Fed/cow/day		
.75	Minimum	23.4	26.8	21.1
.85	Low	26.6	30.4	23.9
.9	Moderately Low	28.1	32.1	25.3
.95	Average	29.7	33.9	26.7
1.00	Moderately High	31.3	35.7	28.1
1.1	High	34.4	39.3	30.9

You can't go to a high forage diet unless you have enough high quality forage. Going from a low (48% forage in diet) to a moderately high (62% forage in diet) means a **30% INCREASE IN THE AMOUNT OF FORAGE NEEDED**. This is a more profitable move than adding acres of corn for grain. The other caution is that it is not a quick fix for high grain costs because these changes in diet need to be made slowly over time. As with any ration change, gradually introduce the change, with daily milk /cow charting and dry matter intake calculations to track what is really going on in the cow. By taking step increases of 2% forage (eg. going from 50% forage to 52% forage) with corresponding changes in the rest of the ration to maintain a balanced nutrition will produce a slight drop (as any ration change does). After a few of days, the cows have stabilized on their new ration. After a week of stabilized production, then introduce the next step.

The worst-case scenario, is where the switch is made, the cows drop and don't recover. Inevitably a non-nutritional factor that had been band aided over before is uncovered (poor bunk management, over-under mixing, lack of water, poor ventilation). It is much easier to blame the nutritionist or the ration than to look at the foundation of milk production. This whole effort can also fall down in an unprofitable house of cards, if your crop program is not founded on soil tests for every field, a sound written and followed rotation, properly sized and managed silo storage, and the ability to make equipment last rather than "new iron" addiction.

Sincerely,



Thomas Kilcer,  
Certified Crop Advisor

172 Sunnyside Rd  
Kinderhook, NY  
12106

Tel: 518-421-2132

[tfk1@cornell.edu](mailto:tfk1@cornell.edu)

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Hand  
to Better  
Agriculture**

