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Everybody seems to want to beat around the bush. Everybody wants to state, cautiously, that two and two, one must admit –and making due allowance for differences of opinion –are probably more than three and almost certainly less than five. But to come right out and say plainly that two and two are four; heavens to Betsy, a writer could lose his reputation today, even be dubbed "controversial," for taking such an extreme position. *-Robert Welch*

KOW Ruminations

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A Straightforward Comparison: Cost Per LB of dry matter (DM)
Confinement vs. Grazing

By Bob Hansen, KOW Associate Advisor

I thought it would be a good idea to sum up the facts and figures I've seen recently concerning the cost of feeding cows. There is much advice out there on "efficiency" and what to do during low milk prices, etc. The author of one article used 8 ¢/lb DM and warned against cutting certain costly items out of the ration due to loss of lbs of milk. Another advised the farmer to strive for a certain level of milk production per lb of DM fed. Others have mentioned straw and distillers grains as profitable additions to the dairy ration. While these articles may offer some good advice, the sum total of what is gained is rather small when compared to the entire list of expenses on the dairy farm. Some have observed that "no two farms are the same" and management decisions are not "one size fits all." It is true that farms come in many shapes and sizes and all are different from each other. However, two things <u>all</u> farms have in common are: 1. The cows must be fed and 2. Machinery is getting more costly all the time. The way you choose to feed the cows has a greater effect than anything else on your wallet; as feed costs, including machinery, are a huge portion of the expense on any dairy. This is where rotational grazing stands alone in saving <u>dollars</u> –not just *pennies* for the farmer.

So, what does it cost to feed a cow? Today a figure that is often quoted for the average TMR in Wisconsin is 7 ¢/ lb DM. In reality a lot of expensive supplements could increase this number, as was the case in the previously mentioned article; and a lot of homegrown and harvested dairy quality forages could reduce the number. For our purposes here I think 7 ¢/lb DM is fair and widely accepted for confinement feeding.

Let's also assume 65-75 lbs of milk across the whole herd long term. I know there are some farms that can maintain a higher average, but there are a whole lot more who either fall into this range or fall short of it. 65-75 is a reasonable production goal.

Recently at a dairy feeding seminar sponsored by the University of Illinois, it was suggested that 50 lbs of DM should approximately result in 70 lbs of milk.

Combining these figures and doing some simple math, shows a feed cost of $3.50/cow/day or $5/cwt (@70 lbs milk/cow). These figures pertain to Holsteins. Jerseys and crosses would likely have a completely different set of numbers.

Let's take a look at rotational grazing. As with confinement feeding, there is a wide range of management approaches to consider. Soil type and terrain will dictate the species of grass and clover you will graze. Opinions vary on this. My first hand knowledge is heavily influenced by a grazier from Beaver Dam, Wisconsin. In his situation, perennial ryegrass and improved white clover have worked out very well. The start-up seed cost can vary quite a bit depending on species, etc. Perennial ryegrass and white clover will be approx. $50-$60/acre. This is a one-time cost. When averaged over many years, it is very small.

Next there is land cost. There are a number of different ways to figure this depending on land price, amount of land owned, interest payments, etc. Let's make it simple: figure none is owned and all is rented at $110 / acre/year. Long term the fencing and water could be $30 /acre/year (I think it can be done for much less than that.). To keep thick stands of perennial ryegrass, maybe you'll want to re-establish some every year. For

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this I'll budget about $20 /acre/year. Nitrogen applications of 60-80 units will increase DM yield. 50-60 lbs may be enough, sometimes less. Stocking rate, rainfall, and soil type all are factors. $30/acre should be enough, even at this year's N price. P and K applications are rare. Added up it comes to $190/acre. The check writing pretty much stops there because the cows do the harvesting. 3.5-4 tons DM/acre is a safe bet. This figures out to be 2.5 ¢/ lb DM. Keep in mind this pasture is around 22% CP, high in digestible energy, vitamins, and minerals. It comes to $50/ton. Would you get this quality at a local hay auction for $50/ton?

Typically this kind of pasture is fed at an estimate of 30 lbs DM/cow/day (75¢). Along with that is 9 lbs dry hay (54¢), shelled corn at 10 lbs (45¢), mineral (25¢), buffer and salt (6¢), ground roasted soybeans are optional at 1-2 lbs (18¢) depending on pasture quality. A ration like this costs 4.3¢/lb DM. If, in the heat of summer, the pasture growth slows down and more stored feed is put in the ration, the cost could go up to about 5¢/lb DM. 4.5 ¢/lb DM is a good average. This is 36% lower than the 7 ¢/lb DM for the confinement TMR. Added up, this is about $2.23 / cow/day or $3.43 /cwt (@65 lbs milk prod.). If my math is right $5.00-$3.43 = $1.57/cwt. less costly to produce 100 lbs of milk for the grazier. Remember, I'm allowing 5 lbs/cow less milk for the grazier, but that's not always the case. I can show you a farm with Holsteins that regularly does 65-70 lbs on the ration I just listed. That's $1.70/cwt less costly!

Other savings add up quickly when you consider the machinery savings (less feed to harvest and haul), reduced storage needs, less storage loss, reduced cost of taking feed out of storage and/or mixing the TMR. Less labor as these tasks are reduced or eliminated. Another task at the back end of the cow is also greatly reduced: manure hauling. If a cow grazes six months out of the year, just think how much custom harvesting, feed hauling, and manure hauling she is doing for you – free of charge!

Cow health, reduced vet bills, and increased longevity are well documented in grazing herds. Selling bred or just fresh heifers and good cows is common for the grazier. She's going to leave the herd someday. The more that leave as replacements for other herds rather than forced culls the better.

There are a couple of websites that put much of this in perspective. The University of Minnesota Ext. has done an excellent job of studying machinery costs over the long term - not just the purchase price. It's amazing how much money can be thrown away on needless machinery and/or repairs. The other is the UW Center for Dairy Profitability. They studied over 600 farms for 5 years and when all the adding and subtracting was done, the results showed graziers cwt cost was a $1.60 lower than confinement dairies, in spite of higher milk production in confinement. **More milk per cow did not equal more money in the farmer's pocket.** These web pages are easy to access through U of M Extension or UW Extension websites (www.extension.umn.edu and www.cdp.wisc.edu).

Land base and having enough land adjacent to the buildings will be a limiting factor for some dairies, especially the larger ones. Normally one acre per cow is needed for full-time grazing, but even at one third acre or one quarter acre per cow, a sizeable portion of the ration could come from grazing: 250 cows x .33 acre = 83 acres. This would give you about 10 lbs of DM (20% of ration) at 2.5 ¢/lb. When you look at the whole picture, those 10 lbs DM are by far the *least costly* and *highest quality* of the 50 lbs she gets each day.

To sum up: 100 cows milking x 65 lbs/day x 365 days = 23,725 cwt at a total cost difference of $1.60/cwt. The result is $37,960 / year. What other management practice could you adopt to equal this kind of increase in profit?

I once heard this definition of insanity: doing the same thing over and over and over again –all the while expecting different results. Everyone agrees the dairy industry is changing. Unfortunately for the farmer that "change" is a lowered milk price and tighter margins. To cope with that *requires a large enough change in management to make a real difference* in production costs. To continue doing the same old things over and over again with only minor "tweaking" here and there fits the definition above. Grazing may be a *huge* step for some farms and should be planned carefully. Do yourself a favor and take a *small* step first: Visit a successful rotational grazier and listen with an open mind. This information did not originate from me and is not some "new break through" that was held in secret until now. Both farmers and university people have solidly established the profitability of rotational grazing versus confinement. I hope this article was informative. I tried to represent the facts as best I can.

What do **you** think:? Could grazing put more money in **YOUR** pocket?

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