

Your Animals on Welfare

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By the time you read this column, the reality of the current dairy economics will be hitting you like a brick. The February Class III price has been announced at \$9.31/cwt, a drop of \$5.97/cwt from the December 2008 prices. The blend price in Federal Order 33 will be under \$12/cwt, probably even under \$11/cwt for at least a few months. With corn trading around \$4/bu and soybean meal over 350/ton delivered, there is no question that feed costs are historically high. We currently estimate feed costs at about \$4.70/cow per day for a cow milking 65 lbs of milk at 3.6% fat and 3.0% protein. This translates to \$7.23/cwt in feeding costs just for the lactating cows. The difference between the \$12/cwt blend price and the \$7.23 to feed the lactating cows must cover all other expenses, including your family living expenses, but also the welfare checks that you must pay your dry cows and heifers.

What do you mean welfare checks? Well, from a production standpoint, your dry cows and replacement heifers are nothing else than unwarranted welfare recipients on your farm. They eat, sleep, make a mess, but never pay anything in return – almost like a teenager... Thus the lactating cows have to shoulder the burden of paying for the housing and feeding of all the dry cows and heifers. How large is this welfare check? A 100-cow herd producing an average of 65 lbs/lactating cow per day, with a herd turnover rate of 34% and an age at first freshening of 26 months (about the averages in Ohio) requires 82 heifers in the replacement herd just to maintain its herd size. Such a herd would also have an average of 12 dry cows. The cost of feeding and housing a dry cow is currently about \$2.00/animal per day, and that of feeding and housing a heifer about \$1.85/heifer per day. The welfare check for the dry cows equates to \$0.37/cwt whereas the welfare check going to the heifers equates to \$2.33/cwt. Thus, although the cost of feeding lactating dairy cows is approximately \$7.20/cwt, the cost of feeding the whole herd equates to \$9.93/cwt. That is, the lactating cows are “taxed” \$2.70/cwt (37.5%) to provide feed and housing for the dry cows and replacement heifers.

Of course, every herd must have dry cows and replacement heifers, but the required number of these animals is affected by two major herd characteristics: cow turnover rate (CTR) and age at first calving (AFC). The cow turnover rate is, in its simplest form, the proportion of cows that were in your herd a year ago that are no longer in your herd. In table 1, we show the number of replacement heifers required to maintain herd size for 3 levels of CTR and AFC. Notice that a herd with an excellent heifer replacement program (AFC = 22 months) and herd health (CTR = 26 %) requires less than half the number of replacement heifers than a herd with an AFC of 30 months and CTR of 42 %. Using current feed costs data, we calculated the total herd feeding costs per cwt of milk for the 9 combinations of CTR and AFC (Table 2). The difference between the very good herd (AFC = 22 months, CTR = 26 %) and the not so good herd (AFC = 30 months, CTR = 42

%) equates to \$1.82/cwt, which is about what the average Ohio dairy producer has averaged in net return per cow over the last 5 years. Put differently, each additional 10 heifers per 100 cows is equivalent to a reduction of \$0.30/cwt in your milking check. Many Ohio farms could realistically decrease their total feed cost by \$0.50/cwt through a better herd replacement program and improved herd health. It may not have mattered as much when milk price was over \$20/cwt, but now that we are facing \$12 milk, it may be a matter of survival.

Table 1. Replacement herd size for a 100-cow herd with a 10% heifer cull rate.

Cow Turnover Rate (%)	Age at First Calving (months)		
	22	26	30
26	53	63	72
34	69	82	94
42	86	101	117

Table 2. Total herd feed costs per hundredweight of milk.

Cow Turnover Rate (%)	Age at First Calving (months)		
	22	26	30
26	\$ 9.11	\$ 9.39	\$ 9.65
34	\$ 9.56	\$ 9.93	\$ 10.28
42	\$ 10.05	\$ 10.47	\$ 10.93