

Calculating Marginal Milk Protein Income

by David R. Balbian (5/14/14)

I recently had a conversation with a dairy producer in our area who saw his herd's milk protein drop from 3.15% to 3.05% after some diet forage changes. The ration was rebalanced to account for the forage changes. The herd (Holsteins) was milking well at 85lbs./cow/day. Butterfat was near 4.0%. His nutritionist was balancing the diet for Amino Acids.

A closer look at the diet details revealed that methionine levels should be slightly increased to bring things into line. In addition, both lysine and methionine levels could both be increased slightly. The question then went to economics. What could he afford to spend to bring milk protein up? To calculate the break even cost we decided to look at an increase in milk protein back to previous levels (3.15%).

When we spoke the value of milk protein was \$4.7089 per pound. To calculate the value of a .10% increase in milk protein we took 85 lbs. of milk and multiplied it by .001 and got .085 lbs. of milk protein/cow/day. We then multiplied .085 lbs. times \$4.7089 (value of milk protein per pound) and got \$.4002565. That tells us that the break even cost to increase milk protein is 40¢/cow/day. That assumes production and butterfat stay the same.

So, if the cost to increase and balance both Lysine & Methionine was 40¢/cow/day he would break even. IF this result could be accomplished at 20¢/cow/day his return would be 2 to 1. In this case a margin of 20¢/cow/day would equate to \$20/day on 100 cows or \$600/month or \$7,300/year! With milk protein prices at record levels dairy producers

should be working with their nutritionists to take advantage of this opportunity.