



DR. MICHAEL OVERTON, PRECISION DAIRY DATA EXPERT



"Producers that have larger inventories of high-quality forages grown on-farm are faring much better this situation"

For some time now, Europe is affected by strong price increases in raw materials such as corn and soya and is also facing increasing supply problems, which is why the European Union has lifted the veto on importing these products from the United States and from different territories of South America. We talk about how this has changed the situation in the US market in this interview with precision dairy data expert Dr. Overton.

How have the new export possibilities impacted the US market?

The US dairy industry has also been impacted by higher feed prices but the magnitude of the impact seems to vary by region of the country. The western US seems to have been hit hardest due to local water challeng-

es. In conversations with producers and nutritionists, feed costs have risen by 20-40% and much effort has been used to try and identify alternative feed ingredients to try and maintain similar levels of protein and energy in order to maintain productivity.

Is there any faction of the herd where you are noticing these price increases the most?

Some of the largest increases in costs appear to be in the young heifers (higher milk cost and higher protein cost for starter and grower grains) and in the early to peak lactating cows, but all segments are being impacted.

To what type of farmer would you say this situation is affecting less?

Producers that have larger inventories of high-quality forages grown on-farm are faring much better this situation than those that much purchase their forage base. Moving forward, due to sky rocketing fertilizer prices, I expect producers to be more diligent with soil sampling and manure utilization in order to try and reduce the amount and cost of purchased fertilizer. However, it is inevitable that we will likely see much higher forage costs moving forward unless something changes.

From a management perspective, what are the key areas to be focused on to maintain and/or improve profitability in such situation?

From a profitability perspective, several important steps should be considered. Instead of looking at the total feed cost, carefully consider the value of an incremental liter of milk vs. the marginal feed cost required to produce it. While it is true that feed costs have increased significantly, most areas are also seeing a rise in the value of the milk produced. Normally, it takes about 0.4-0.45 kg of marginal feed to produce a marginal liter of milk. Assuming a total feed cost of € 0.32/kg total ration dry matter (silage, concentrate and hay), and milk that contains 4% fat and 3.3% protein, 1 liter of incremental or marginal milk with a value of € 0.38/liter

CURRENT SCENARIO	
Current feed cost/kg of TMR dry matter	€ 0.32/kg total ration dry matter
Current average feed intake	25 kg
Total feed cost	€ 8.11
Energy density/kg of TMR dry matter	7.1 MJ ME/kg
Milk production	37 liters
Value of milk	€ 14.06/d
Income minus feed cost (current)	€ 5.95

ALTERNATIVE SCENARIO (less expensive but inferior feed, lower energy)	
Current feed cost/kg of TMR dry matter	€ 0.29/kg total ration dry matter
Current average feed intake	25 kg
Total feed cost	€ 7.30
Energy density/kg of TMR dry matter	6.7 MJ ME/kg
Milk production	34 liters
Value of milk	€ 12.97/d
Income minus feed cost (current)	€ 5.67

► “WHEN INPUT COSTS RISE SIGNIFICANTLY, THE FIRST REACTION IS TO TRY AND DECREASE COSTS. HOWEVER, DOING SO WITHOUT REGARD TO THE IMPACT ON REVENUE WOULD BE A HUGE MISTAKE”

costs an extra € 0.14 to produce resulting in a net gain of € 0.24/liter of income minus feed cost.

Obviously, it is important to carefully examine all ingredients that are being used to identify any opportunities to lower cost without negatively impacting productivity. Are there any moderate to high energy by products available locally that might help to partially replace a portion of the costly grain? Are there some non-traditional forage sources or human food waste options that might be of value for certain populations of animals on the dairy? Is the dairy holding onto low producing cows that should be removed or replaced? When cows reach the later stages of lactation, maintenance feed requirements constitute a much larger proportion of the total feed cost.

And what about the nutritional perspective? In previous crisis some farmers decided to decrease either the amount of food or use cheaper products to maintain profitability. Could they be a good option?

Management-wise, it is important to avoid impulse responses that seem logical but yet result in greater loss-

es. For example, consider what will happen to milk production if a less expensive and nutritionally inferior feed ingredient is substituted into the ration. If this ingredient and thus, the new ration is lower in energy, protein, and/or digestibility, production will decline. Consider the example I put in the tables.

So, in this case, going with the lower cost feed would truly lower the feed cost as expected but the unintended consequence is that the amount of milk produced, the total revenue from milk, and the Income minus feed cost would actually be reduced as well.

The above scenario was a conservative illustration. Imagine now that the new feed ingredient was actually higher in less digestible fiber. In that case, one would expect to see a reduction in feed intake, furthering the loss in milk production and resulting in an even greater magnitude of loss. This is clearly a case where lowering cost is not the answer since the reduction in cost is due to the substitution of an inferior feed ingredient and the resulting reduction in milk production was greater than the feed savings.

Do you recommend monitoring any specific KPI for nutrition or efficiency?

Each dairy is different. I am not sure that a single KPI would be valuable across all farms. Monitoring feed cost is NOT the answer. Even if cows maintain their feed intake and production efficiency, in the face of rising feed ingredient costs, individual feed costs WILL rise. As discussed above, the most important thing to understand is the value of a marginal (extra) kg of DMI both from the cost of that feed, and the value of the milk produced (assuming no quota...)

If there is nearly a 3:1 return per euro of DMI feed, most farms should strive to maximize dry matter intake. Be sure that the cows are overfed. That is, try to feed an additional XX kg of DMI, and measure the increased cost and measure the increased value of milk. Typically most farms will see at least a 2:1 return. If so, repeat the increased DMI until the return drops below 1.5?

In these times, an empty bunk is an economic disaster. I know this might sound counter intuitive but every farmer should be obsessive of trying to get their cows to eat one more bite.

How are US nutritionists managing this situation?

Not always very well... When input costs rise significantly, the first reaction is to try and decrease costs. However, doing so without regard to the impact on revenue would be a huge mistake. If every extra euro spent returns two euros, and assuming a constant TMR cost across time, as illustrated previously, increasing feed costs/cow can be VERY profitable! This also applies to keeping low producing cows; fewer low cows will decrease the competition for eating and resting. If facilities are overcrowded, removing a few minimally profitable cows can either a) allow more productivity from the existing cows or b) open the door for a new, more productive fresh heifer to enter the herd. Improving cow comfort can also lead to an increase in feed intake and an increase in milk production. ■