

Improving Dairy Profitability

Presenter: Dr. Mike Hutjens

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1. Can you comment on the risks of drying off cows early with e.g. 40 kgs+ milk/day? The biggest issue I see is if we are going to dry off cows early we still need to dry them down to 15 kgs/milk day before dry off. We need to dry them down appropriately. Comments? I agree with you 100%. If cows are producing 40 kg of milk when scheduled to dry off, I suggest putting these cows on a low energy dry cow ration two weeks before drying off. With 40 kg of milk, I am concerned about leaking, mastitis, and cow comfort.

2. What factors would you take into account when deciding whether or not to dry a cow off early? The amount of milk you need to reduce to meet your target and the number of cows under consideration, younger cows, and cows with low somatic cell counts. High somatic cell count cows and cows with a history of metabolic disorders are higher risk cows. Dairy farmers have a target break-even milk yield to cover all costs of production (feed, labor, housing, etc.), which can be another factor.

3. You mentioned extending the dry period up to 120 days. How do you think this will affect milk production in the following lactation, please? Older DHI data were cows with longer dry periods (over 70 days) that had reproductive problems lead to long lactations, heavy cows, and lower milk yields. No special adjustments were made in the management program with these cows on DHI records (such as unique diets that limit body weight gains, controlled dry matter intake, or pasture for example).

4. What do you see happening with milk protein prices in the US in the near term? The record price of \$5 a pound of milk protein will decline as cheese prices drop from \$2.80 to \$1.70 a pound. My bias is protein price will remain higher than milk fat prices per pound as animal protein is in demand in the U.S. and world (cheese and yogurts vs. butter).

5. Would you adjust nutritional strategies based on the relative values of milk fat and milk protein? I would run a rumen computer model (such as AMTS, NDS or Spartan III) to calculate the amino acid requirements for your target milk yield and true milk protein test. If you are short (for example metabolizable methionine), I would add the amino acid. Adding a source of oil (for example from soybeans or fuzzy cottonseed) can increase milk fat content and yield. At the current milk fat price, adding a commercial dry oil product may not be economical.

6. Does the 3:1 cost: benefit ratio of rumen-protected choline take into account the full lactation milk response that was demonstrated in a trial from the University of Florida? It was based on the Grummer meta-analysis of 4.9 pounds of milk response. If you achieve higher milk response over the entire lactation, but only feed rumen-protected choline during the transition period, the benefit to cost ratio is higher.

7. What are some suggestions for improving feed efficiency in herds? The major factors are higher forage and feed digestibility per unit of dry matter, keep days in milk low (reflecting fertility), low somatic cell count (mastitis), and stable rumen function (no SARA). Other factors include higher milk components, older cows (no growth requirements), less walking, and reducing heat stress. Feed additives such as monensin, buffers, and yeast products can be effective.

8. Would you differ weigh backs at all depending upon stage of lactation? Great question, I would maintain weigh backs of 1-3% in close up, fresh, and high lactation groups. I could feed to an empty feed bunk in low lactation groups avoiding excessive weight gain. Weigh backs must not show signs of sorting using a Penn State Particle Separator.

9. Dr. Mike said high yielding cow should be kept on with yielding high milk yield but, he also said we may reduce the milking and milk yield at the same time for the same cow. Which way should we go? Oops, not a good statement. High yielding cows must maintain milk yield as they have the most profit (income over feed costs) and high feed efficiency (pounds of 3.5% milk / pound of dry matter consumed). If you were required to reduce milk sales, I would favor drying up cows, culling cows, and/or feed milk to young calves.

10. What are your thoughts about drenching MPG in three days after calving? Drenching with propylene glycol (300 to 500 ml) to cows having elevated BHBA (beta hydroxybutyric acid or ketone bodies) based on milk or blood tests is my recommendation. I recommend continuing until BHBA values drop to optimal levels.

11. Do you recommend to use MPG drenching for all fresh cows? No, only cows that show signs of elevated BHBA. Older cows (3rd lactation cows and older) and cows with a history of metabolic disorders would be on my list to watch and possibly drench after calving.

12. Can the Penn State shaker box be used for whole crop based diets? When you say whole crop based rations, I assuming you are referring to a TMR. Yes, we routinely use the shaker box on TMR to evaluate the ration targets for effective fiber, consistency of the TMR from day to day, and consistency along various locations along the feed bunk.

13. What other additives can I use other than monensin so I don't crash my fat test? Monensin should not drop milk fat test unless there are other factors such as forage particle size, unsaturated oil, or excessive starch. Buffers and yeast products can stabilize rumen fermentation and stimulate fiber-digesting bacteria increasing rumen acetate production (a VFA precursor for milk fat in the mammary gland).