

The Cost of Two Five Gallons Pails: \$8 Their Impact on Herd Health and Profitability: Priceless



By Teresa Hanson, B.S.

Dry cow and transition cow management is a crucial part of any dairy operation. Dry cows that receive an inadequate or unbalanced diet often have problems at freshening such as retained placentas, displaced abomasums, milk fevers and ketosis. These metabolic

disorders can have a severe economic impact on your herd. One milk fever can cost \$334 and one case of ketosis can cost \$145. Milk fever can easily be prevented with proper amounts of calcium and potassium in the dry cow diet, but ketosis is a much more complex issue and may take extra management by the producer to prevent its occurrence.

What is Ketosis?

Ketosis occurs in postpartum cows because of a lack of carbohydrate availability to the cow, forcing her to meet energy requirements by mobilizing excess body fat. This results in overwhelming fat movement to the liver. The liver cannot properly utilize the high volume of mobilized fat and the liver becomes impacted with fat, commonly referred to as fatty liver syndrome. As a result of the body's inability to completely metabolize the excess fatty acids, ketone bodies (non-esterified fatty acids or NEFA's) are elevated to high levels in the blood.

What is the Prevalence of Ketosis in a Dairy Herd?

Dr. Oetzel at the University of Wisconsin-Madison predicts that many herds have a prevalence level of 40-45% ketosis. That means 4 or 5 cows out of 10 have ketosis within the first three weeks of lactation. With an estimated loss of \$145 per case of ketosis, that would cost a 100-cow dairy farm \$5,800 to \$7,250 a year for just one metabolic issue. For every pound of milk that a cow loses off of her peak, she will likely lose up to 450 lbs. of milk off her total lactation yield. If a cow lost 10 lbs. off her peak, she would lose 4,500 lbs. of milk during her lactation. If milk is priced at \$23/100 lbs., milk money lost would be \$1,035 per head or \$41,400 to \$51,750 for a 100-cow dairy.

What are Indicators of Ketosis in a Dairy Herd?

1. Cows that do not peak properly. For most dairy breeds, multiparous cows will peak at 60 days in milk. Cows that peak early, have several peaks during their lactation, or do not peak at all, are all suspect for

ketosis. Analyze your DHIA records to see how individual cow lactation graphs look.

2. **Excess body weight loss in early lactation.** Cows that were in good condition during their dry period with a body score of 3.8-3.9 and are under body condition with a score of 3 or less at 30 to 45 days in milk likely have suffered from ketosis.
3. **Low Dry Matter Intakes.** Average daily dry matter intake for mid-lactation Holsteins is 50lbs. Cows with reduced dry matter intake have less feedstuffs from which to derive energy; predisposing them to ketosis. Dry matter intake can be reduced by feeds containing mold and/or mycotoxins or an unbalanced diet.

Recommendations for Preventing Ketosis

1. **Dry Cows:**
 - a. Feed a balanced dry cow ration. Make sure to test all feeds for quality.
 - b. Maintain a stable body weight. If dry cows are gaining or losing weight, make sure to communicate with your Crystal Creek® Dairy Nutritionist to have the ration adjusted.
 - c. Focus on bunk management. Keep feed bunks full and make sure there is adequate amount of space for each animal. Current university recommendations are 30 inches of bunk space per head in close up dry cow pens.
 - d. Reduce stress by minimizing group changes. Feed Crystal Pellets™ to address heat stress concerns.
2. **Transition Cows:**

Transition cows are considered three weeks pre-fresh and three weeks post fresh.

 - a. Keep your close-up dry cow ration balanced. Pastured herds should bring



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DRY COW AND TRANSITION COW MANAGEMENT

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close-up cows into the barn three weeks prior to calving and keep the fresh cows in the barn for one week after calving. This recommendation is in alignment with organic standards (7 C.F.R 205.239 - Part 205 National Organic Program-Livestock Living Conditions). If a cow freshens and stays on pasture, it is difficult for you, as the producer, to measure appetite and dry matter intake. Close monitoring of fresh cow dry matter intake and appetite is critical for successful transitions into lactation. The lactation graphs presented in this article represent two graphs from a grazing herd that properly managed their fresh cows during the winter-(Figure 1), but did not focus on the cows that freshened on pasture in the spring and summer-(Figure 2). The cows that freshened in the winter time peaked, whereas, the cows that freshened on pasture during the spring and

- summer did not peak at all.
- b. Keep maternity pens clean and well bedded.

3. Post Fresh Cows:

- a. Monitor post fresh cow intake. Make sure cow is on feed within hours after freshening.
- b. Study lactation graphs to diagnose ketosis.
- c. **USE YOUR FIVE GALLON PAILS.** Give at least 10 gallons of water to each fresh cow. Cows lose several gallons of water during the birthing process. It is essential to rehydrate the cow by giving her at least two 5 gallon pails of WARM water mixed with extra nutrition containing sources of calcium, trace minerals and yeast following birthing. Products such as Opti-Peak™ and FRESH-N-DRINK™ provide the much needed extra nutrition to help these fresh cows get off to a good start.

(See Dr. Leiterman's article on page 6.) For other transition cow aids, please refer to page 23 of the 2013 Crystal Creek® product catalog or contact a Crystal Creek® representative.

Don't let ketosis negatively impact your herd health and profitability. Focusing on your dry and transition cows can have a major impact on your bottom line. Get your five gallon pails ready, mix up your warm water with Opti-Peak™ or FRESH-N-DRINK™ and help your fresh cows get off to a good start on their next lactation.

Figure 1. Lactation Graphs (Winter Freshening)

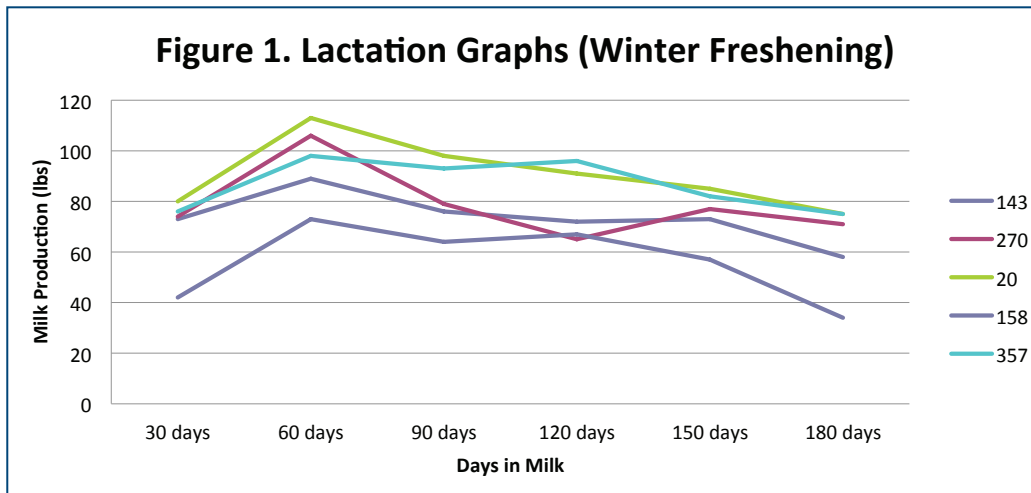


Figure 2. Lactation Graphs (Spring & Summer Freshening)

