



Cow Tales

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Dry Cows Can Have Good Memories

By Dan Leiterman

In the course of one's life there are many lessons and principles presented for a person to learn from. One lesson I have experienced many times over is, "if a dry cow is challenged anytime during the last two months of gestation it could negatively affect the transition period and post-partum performance." In simpler terms, if a dry cow is 'dinged' (experiences a problem or challenge), there is a likelihood that she 'will remember it', resulting in a higher risk of problems during the transition period. In some situations the 'ding' may only last for one day and it may be early in the dry period, weeks away from freshening and seemingly unimportant. However, in many cases the cow could be significantly affected and negative repercussions still result during the transition period and the subsequent lactation.

What Is Dry Cow Memory?

It is a bit of fun and over simplification to personify a dry cow with having the human trait of memory. However, the suggestion of a dry cow having memory is a way of drawing attention to the 'biological memory.' The late term pregnancy of a dry cow is a complex biological process that is sensitive and vulnerable to negative challenges. If the challenge is severe enough during the dry period, the dry cow may not be able to biologically recover adequately for a healthy birthing process and lactation performance may be compromised. There are two general categories of dry cow 'dings' I use to classify the challenges most often experienced during the transition period. 1) The 'ding' was severe enough that the dry cow could not recover adequately prior to freshening. 2) The 'ding' was significant, but it put into motion a biological coping mechanism that can also cause problems at freshening and early lactation. An example of just such a biological coping mechanism that can cause problems is ketosis and/or sub-clinical ketosis. If the dry cow is 'dinged' in a way that interrupts/challenges her ability to access and/or utilize carbohydrates, she will set the stage for excessive fat to come off the back to make up the difference. The result could be



various levels of ketosis during the transition period. Just one such predisposing challenge that could set the stage for ketosis to occur would be 'empty bunk syndrome' where the bunk is empty for too many hours in a day, or the feed is not pushed up on a regular basis. This prevents the cow from feeding her rumen fermentation factory on a regular hourly schedule and nutrient delivery to the cow is compromised.

Types Of Challenges Dry Cows Are Sensitive To:

There are a number of predisposing issues that can 'ding' dry cows and set the stage for a problematic transition period and reduced lactation performance. Many of these predisposing/causative issues are listed below and any one of them could make for a long discussion. Two key topics from the following list are covered in more detail in this issue of Cow Tales. The first is on feed bunk management by Dr. John Popp and the other is on mycotoxins (specifically vomitoxin) by Brian Hoffelt. Both of these topics if occurring during the dry cow stage can significantly disrupt the transition period and severely reduce farmer profitability.

Ration Balance: Poor balance, especially for energy and cations.

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Counter Productive Ration Strategy: A nutrition model that does not support/develop proper rumen function.

Cow Grouping: Single vs. two group dry cow strategies, crowding, stressful regrouping, moves during dry period.

Energy Level: Lack of monitoring of dry cow body condition score during dry period to reduce the risk of problematic body condition (gains or losses).

Feedstuffs Not Specific To Dry Cows: An example is the feeding of straw in order to utilize inappropriate feedstuffs in the dry cow ration and to make the ration look good on paper.

Cation Balance: Balancing Ca, K, Mg, Na to reduce the risk of milk fever.

Monitoring DMI: Monitoring dry matter intake in conjunction with doing body condition scores helps to reduce the risk of problematic body condition gains or losses.

Feedstuff Bio-Availability Compromised: Poor Forage Digestibility: Moldy forages, heating in the bunk.

Nutrient Blockers In The Diet: Clays, charcoals, humates, diatomaceous earth, mycotoxins, excessive nutrients (sulfur, sodium, iron, sulfates), and Stress. See Brian Hoffelt's article on Mycotoxins in this issue (Page 10).

Insufficient Water Availability: Poor access, dirty waterers.

Body Condition: Over Weight: Body score of 4 or more (does not apply to dual purpose breeds), under weight: body score of 3.5 or less, gaining or losing body condition during the dry period.

Feeding Routine and Feed Bunk Management: See Dr. John Popp's article in this issue (Page 8). Empty bunk syndrome, feeding to the last cob, feed not regularly pushed up, irregular feeding intervals.

Stress: Environmental stress: heat stress, cold stress, insect stress: (flies, mosquitoes).

Health Threats: Mycotoxins; (See Brian Hoffelt's article in this issue), Other toxins: nitrates, sulfur, toxic plants, poor grouping practices; (with sick animals, over-crowding).

Can Dry Cows Recover During The Dry Period To Avoid Transition Problems?

Recovery for dry cows from a 'ding' during the dry period is always possible. However, recovery and lack of negative biological memory is going to depend on the severity of the challenge and length of time of exposure. There are a few general dry cow principles that I have

found more often than not to be true.

1) If a group of dry cows are 'dinged' sufficiently during the dry period, even if it is for one day, then the whole group of dry cows should now be classified as high risk cows for a problematic transition period and should be handled in a manner to help off-set potential problems. In other words, be pro-active. These challenged ('dinged') dry cows should get extra care and automatically be given preventative amendments for various metabolic disorders, such as ketosis, milk fever and off-feed. This could be called a Level Two protocol for higher risk dry cows which provides management and nutrition that is over and above normal transition cow protocol.

2) Use a calendar to mark the freshening date that the last dry cow in the 'dinged' group will have so you know how long to keep the Level Two transition protocol going.

3) For effective transition cow protocol options see pages 15 through 22 in the 2011 Crystal Creek catalog and then call us at Crystal Creek to discuss the best option for your particular situation.

Dry cows are sensitive, complex and vulnerable creatures that will biologically remember how they are treated. It is always good for a farmer's bottom-line if the dry cows approach freshening with positive memories. A heightened awareness of the challenges dry cows face is the key first step towards solving and preventing many problems. Be pro-active and identify higher risk dry cows. Providing the extra support they need in a timely manner will keep profit draining problems to a minimum or possibly even eliminate them. Give Crystal Creek a call today to discuss a dry cow strategy that is specific to your dry cow's needs!

Nutrition Nuggets

It is important to have a scale on your farm! A hanging scale can be a great tool when not using a TMR. Accurately feeding your animals and following your ration can be very beneficial and reduce the risk of incorrectly feeding your animals. You should weigh feed amounts at least once per month to measure accuracy.

Take feed samples regularly. Forages can vary greatly in moisture and quality. Haylage, corn silage, and high moisture shell corn should be sampled at least once per month or more depending on the size of your herd and feeding rate. Sampling often will help reduce the risk of ration error and keep your herd on a balanced ration.