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## **“Udder”standing Selective Dry Cow Antibiotic Therapy**

### **Why use Dry Cow Therapy (DCT)/intramammary (IMM) antibiotics at dry-off?**

The treatment of cows at dry-off with intramammary (IMM) antibiotics is widely practiced on dairy farms. Historically, this blanket dry cow treatment targeted mainly the contagious pathogen *Streptococcus agalactiae* and other Gram-positive bacteria.

The goal of dry cow antibiotic treatment:

1. Therapeutic – Cure cows with subclinical infected quarters (SCC > 200,000 cells/ml = evidence of mastitis) at dry-off. Treatment of these infections at dry-off is more efficacious, reduces drug residues, and is more economical – no milk discard.

2. Preventative – Prevent new Gram-positive infections during the high-risk period immediately after cows dry-off. It is important to note, that most dry cow antibiotics do not provide protection for the entire dry period. Furthermore, they lack activity against Gram-negative environmental bacteria, especially coliforms. Sealing of the teat canal by a keratin plug is the primary defense against new infections. High producing cows often have delayed formation of this keratin plug. To supplement the teat's defenses, internal teat sealants (e.g. Orbeseal, Lockout) can be used and act as a physical barrier through the entire dry period. Teat sealants have NO antimicrobial activity.

The elimination of *Streptococcus agalactiae* from Ontario dairy farms, along with decreasing provincial bulk tank somatic cell counts (SCC), has prompted the push for Selective Dry Cow Therapy (SDCT) and reduction of IMM antibiotic use at dry-off.

### **What is Selective Dry Cow Therapy (SDCT)?**

Selective Dry Cow Therapy (SDCT) means using Antibiotics AND/OR Teat Sealants.

The goal of SDCT is to use IMM antibiotics ONLY in cows that have evidence of an intramammary infection (IMI) at dry-off. Teat sealants are used to prevent new infections from environmental bacteria.

Selective dry cow programs are NOT simply stopping use of dry cow antibiotics.

Selective dry cow programs, when CARFEULLY APPLIED in selected herds, can decrease antibiotic usage without increasing mastitis.

### **Why reduce our use of IMM antibiotics at dry-off?**

As we know from the August newsletter highlighting Ceftiofur and antimicrobial resistance, antibiotic use is an aspect of the dairy industry that is under scrutiny by consumers. When antimicrobial resistance occurs and antimicrobial drugs are no longer effective, the ability to fight infectious disease in humans and animals is significantly impeded.

Dairy Farmers of Ontario (DFO), along with many other industry stakeholders, are rolling out a Selective Dry Cow Therapy (SDCT) program. The goal of this program is to work with dairy farmers and their veterinarians to evaluate current dry-off management and create modified dry cow treatment protocols.



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As part of DFO's SDCT project, a Guidance document on Assessing Potential Risk of Mastitis at dry-off and at calving, as well as a Selective Dry Cow Therapy Decision Tree, are available at [www.scc2020.ca](http://www.scc2020.ca). Lactanet is also currently providing Fresh Cow Udder Health and Selective Dry Cow Therapy Reports.

### **Let's keep milking this...so is SDCT appropriate for your herd?**

#### **Herd Level Criteria:**

- Has your herd controlled subclinical mastitis?
  - o Review Bulk Tank SCC history. If your BTSCC is >250,000 cells/ml, you should continue to use the blanket DCT antibiotic program.

#### **Cow Level Criteria:**

- Do you have the ability to adequately monitor mastitis?
  - o Review Cow History – Monthly individual SCC values, previous clinical mastitis records, and culture results.
    - Cows with monthly SCC > 200,000 cells/ml on last 3 DHI test, OR SCC > 200,000 cells/ml on last DHI test, OR had Clinical Mastitis > 1 during last lactation SHOULD receive DCT antibiotic.
    - Cows with SCC < 200,000 cells/ml, NO history of Clinical Mastitis, and CMT negative at dry-off are eligible for SDCT/Teat Sealant ONLY.
    - If in doubt – treat cow with DCT antibiotic!

#### **Other Criteria to consider:**

- High milk production at dry-off increases risk of milk leakage and mastitis. Do you have a program in place to reduce milk production prior to dry-off? I.e. reducing milking frequency before dry-off and changing to a lower energy diet.
- Do you vaccinate for Coliform Mastitis during the dry period?
- Do your dry cows have clean, dry bedding and adequate room?

### **SDCT Risk vs. Gain**

While one can argue that the cost per cow at dry-off will decrease by reducing IMM antibiotic use and using only teat sealants in selected cows...if you run into fresh cow mastitis issues, costs will significantly increase due to increased mastitis treatments, nonsalable milk, and production loss.

If you pursue SDCT you will need to closely monitor early udder health in multiparous cows not given DCT antibiotic to ensure this program is both economical and maintaining high milk quality standards.

**Please consult with your Herd Health veterinarian if you are interested in learning more about SDCT.** The implementation of SDCT can be effective in some herds, but risks vs. gains need to be assessed!

*Heifer self a Dairy little Christmas and Happy Moo Year!!!*

Paige Gamester, DVM



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## **Veterinary Services During the COVID-19 Pandemic**

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Much has changed with the alarming presence of the COVID-19 virus in Ontario. During this time, it is important that we maintain a safe food supply. Our veterinarians will continue to play a role in animal health, welfare, and food safety. At the time of this writing, we are still providing herd health and emergency service. In response to the pandemic, our clinic is taking many precautions to ensure everyone's safety. We care very much about the health and wellbeing of our clients, staff, families and community. Below are some of the changes we have implemented. Please be aware that as this pandemic develops, we may have to adjust our procedures in response.

### **Veterinary farm visits**

- Once on farm, we try to maintain a distance from people of at least six feet wherever practically possible
- Care will be taken to wash and disinfect hands and contacted tools and equipment before re-entering our vehicle

### **Technician farm visits**

- Techs will continue to assist veterinarians as necessary. The same precautions as above will apply
- Technicians will continue to provide services, such as dehorning, but we ask that no farm personnel are in the immediate vicinity during their visit

### **Clinic procedures**

- Our clinic will remain open, but business hours may be subject to change
- Clients will be met at the door by one of our customer care representatives
- Purchases will be set out at the door
- Laboratory samples will be received at the door

**If you have experienced any Covid-like symptoms or have had possible exposure, we urge you to please notify us before your next vet visit so we can take the appropriate precautions.**

We thank you for assistance in helping us continue to provide veterinary care while considering the health of yourselves and our staff.

Stay healthy!

