

# Selective Dry Cow Therapy

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Recently at a ProAction biosecurity classroom training session we discussed reducing antibiotic use and the topic of selective dry cow therapy came up. A few producers had tried it out and selected certain cows not to treat at dry off and were convinced it was working. They were hopeful I could provide more insight and advice.

Although there has been research around for a few years on the topic it is still up for debate whether it is an effective approach. Blanket dry cow therapy (BDCT) is when all cows are treated at dry off with an intra-mammary antibiotic tube. With selective dry cow therapy (SDCT) certain cows are selected based on specific criteria not to receive dry treatment with an intra-mammary antibiotic. It is a good idea to use a teat sealant whether a cow receives an antibiotic treatment or not.

The first step, before deciding on implementing a selective dry cow treatment program is ensuring you have good records. Having monthly individual cow somatic cell counts (SCC), bulk tank somatic cell counts, good records for clinical mastitis cases and regular milk culture results for mastitis cases. It is important to know when during a lactation new clinical cases are occurring – early, mid or late lactation. Monitoring new cases, specifically in early lactation once you start the program is critical to be able to determine if you are seeing a change in new cases and your criteria for selecting cows not to treat is working. The herd and individual cow somatic cell counts should be assessed to see if there is any change due to the new dry treatment protocol. The monitoring should be done at least monthly and the herd veterinarian should be consulted to discuss the results.

I will give a rough template based on the current research on selective dry cow therapy (SDCT) for how to select which cows not to treat at dry off. This is something that should be discussed with your herd veterinarian before making any changes.

Guidelines to consider “not” to dry treat a cow:

- The last three individual cow monthly SCC tests below 200,000
- No clinical cases for cow during current lactation
- Herd bulk tank somatic cell count <200,000 for last year, ideally less than 150,000
- Very few if any contagious mastitis pathogens cultured in your herd in the last 12 months

An alternative approach is to culture cows quarters at dry off and use this information to determine which cows to dry treat. This doesn't tell us much about the history of the cow – high SCC or previous infections but tells us what is going on right at dry off. For this to be a feasible strategy the cultures have to be performed on farm to ensure you have a quick enough turn around time to get the results before it is time to dry treat. Overall this

strategy won't be as effective and we will likely treat some cows that don't need it and not treat some cows that likely should be treated.

One other consideration when implementing a selective dry cow program is how these cows are housed. Ensuring the dry cows are kept clean and dry and making sure they aren't overcrowded is important. Having well bedded stalls or a pack with lots of clean bedding will reduce the exposure to mastitis causing pathogens. This is critical for an effective selective dry cow program.

Selective dry cow therapy will reduce your costs in addition to reducing your on farm anti-microbial use. It will reduce both the labour in dry treating animals and the cost of dry treatment.

As with any big management change, I would recommend discussing the idea with your herd veterinarian and make sure they are involved in the monitoring of new cases and your dry cow strategy moving forward. This is hopefully a good first step in decreasing antibiotic use on farm and will put you ahead of the curve if there are any regulatory changes down the road.

#### References:

Becker, C. and Stone, A. 2018. Dry-cow therapy: Choosing the best protocol for your dairy. Mississippi State University Extension. Pg 1-8.

Berry, E.A. and J.E. Hillerton. 2002. The effect of selective dry cow treatment on new intramammary infections. *Journal of Dairy Science* 85:112-121.

Cameron, M et al. 2014. Evaluation of selective dry cow treatment following on farm culture: Risk of postcalving intramammary infection and clinical mastitis in the subsequent lactation. *Journal of Dairy Science* 97: 270-284.

Vasquez, A.K. et al. 2018. Use of a culture-independent on-farm algorithm to guide the use of selective dry cow antibiotic therapy. *Journal of Dairy Science* 101: 5345-5361.