Leading the Way in Antimicrobial Stewardship:
NYFVI seeking DVMs to help NY dairy farms implement Selective Dry Cow Therapy (SDCT)

Collaborators at Cornell University, University of Minnesota, private veterinary practices, and industry allies have developed and validated an approach that allows dairy farmers to reduce their use of dry cow antibiotic treatments by 50-60% without hurting udder health or production and saving money on treatments. The predictive model uses herd health records to identify the cows that are likely to not have subclinical mastitis and thus do not need antibiotic treatment. For farms that are using VAS's Dairy Comp 305 software and are on DHIA test, the module is already available for use. For farms that are not using that platform, the recommendations can be calculated offline with herd health records or determined using bacteriologic culture.

Several randomized, controlled research trials across North America have shown no negative effects on mastitis, somatic cell count, milk production, and/or other health outcomes by implementing this practice. Further, for herds already utilizing DHIA testing it saves about $7/cow/year on average. (citations below)

The New York Farm Viability Institute (NYFVI) is proud to have provided support for the SDCT predictive model, and pleased to be able to continue our efforts to help New York dairy farms implement the SDCT practice.

Creating a New Normal. The SDCT practice will only become normalized if it is supported by the individuals that farmers trust for herd health advice. That's why this NYFVI program is focused on supporting DVMs as they work with farmers to make this change. This program provides:

- Small group education by Cornell University and Quality Milk Production Services (QMPS) on how to implement the practice and monitor the outcomes.
- On-farm support from Cornell to help the DVM as they set-up the program and train staff
- Informational resources to use with the dairy community.
- Reimbursement, up to $2,500 per farm, of documented time, travel and lab testing expenses.

On the Farm, Criteria for Successful Implementation
Not all farms are at the right stage with their mastitis management practices to adopt this approach. Farms that are a good candidate for this practice meet the following parameters:

- Veterinarian of Record with a strong client-patient relationship (VCPR)
- Ability to implement new management tactics
- Bulk Tank SCC regularly less than 250,000
- No *Strep ag* in the herd
- Control of *Staph aureus* infections
- Regular DHIA testing
- Routine detection and recording of clinical mastitis (easiest if in DC305, but other tools can be used)
- Use of systematic dry-off lists (easiest if in DC305, but other tools can be used)
- Monitoring of subclinical and clinical mastitis and/or bulk tank culture surveillance
- Routine use of teat sealants at dry-off that are administered by diligent and trained staff with good hygiene and excellent technique

NYFVI SDCT Program Structure and DVM Responsibilities

DVMs may apply to work with up to three farms. It is anticipated that it will take a minimum of 7 months to implement the process and monitor the outcomes at each farm. At each farm, the DVM will be responsible for the following:

- Prescreening farms to ensure that the SDCT practice will be a good fit.
- Helping farms learn how to run the Dairy Comp 305 module; or use their herd health records to generate the treatment plan.
- Training farm staff to use the report and correctly implement the protocol.
- Providing written protocols, customized for the farm's operation
- Ensuring the dry-off procedure is conducted cleanly and well
- Active herd health monitoring (e.g. SCC, clinical mastitis, milk production)
- Assisting Cornell in quantifying the extent of antibiotic treatment changes and economic benefits of SDCT over two lactations and actively sharing the information with the farm.
- Providing access to the data to QMPS for anonymous aggregation and further study.

A final report, documenting the farms that were supported and providing insight about the activities that were undertaken and the outcomes must be completed online. A template will be provided.

Eligible expenses, up to $2,500 per farm that adopts the practice, will be reimbursed. Eligible expenses include travel, consulting fees, and lab testing. All expenses must be documented for reimbursement and a reimbursement request submitted at the conclusion of the project.

Eligibility, Online Application and Selection Process:

The program is open to NY DVMs only, and all farms must be located in New York State. DVMs must be the Vet of Record (VoR), or have a Valid Client Patient Relationship (VCPR) with each farm they intend to support.

The program will support up to three farms per D.V.M. applicant. At least one farm must be identified in the initial application. Funds will not be reserved until a farm has been identified. If additional farms are identified, the original application may be revised.

Applications will be accepted on an ongoing basis between September 1st 2021 and January 30th 2022 as long as funds are available. The goal of this approach is to allow the program to group participants to allow for efficient technical support, as well as to ensure equitable geographic distribution

Participants will be selected and notified at three points during the application window. It is expected that work with the farm would begin within a few weeks of notification, and implementation would be completed within 8 months.

Application deadlines are below. Applicants are encouraged to apply as soon as possible to ensure funds will still be available:

Application Deadline	Notification Dates
October 15, 2021	October 20, 2021
December 8, 2021	December 13, 2021
February 9, 2022	February 14th 2022

Application Link. Note: By providing your email address, Google Forms allows you to start the application and return to it later to complete it.

Program Webinar

An informational webinar about the program will be held on Friday, September 24th, 2021 at 1 pm. Registration is required and can be completed here. More resources about the SDCT practice are linked below. For any questions about the application or NYFVI program, please reach out to Aileen Randolph (arandolph@nyfvi.org). For technical questions about SDCT please reach out to Dr. Amber Forrestal (amf326@cornell.edu) or Dr. Tracy Potter (tlp64@cornell.edu).

SDCT Informational Resources

Articles

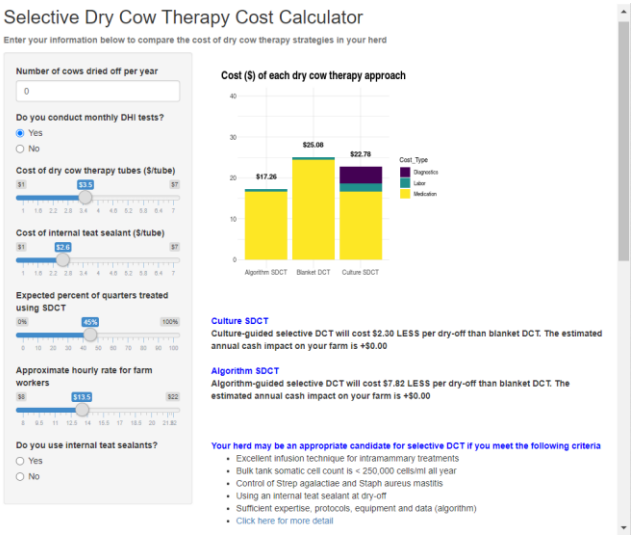
Selective Dry Cow Therapy Has Merit. Daryl Nydam D.V.M. and Michael Capel, D.V.M, Hoard's Dairyman, July 2021

Selective Dry Cow Therapy: Antimicrobial stewardship can offer financial returns in appropriate herds. Pro-Dairy Cornell Manager, Amy Vasquez. and Sam Rowe

Guide and Factsheets, Calculator

QMPS is developing a guide and factsheets about antimicrobial use to manage mastitis. It is anticipated that these materials will be ready by mid-October.

The calculator is available at this link It will help a farm estimate the economic benefits of using SDCT. It includes a link to a document that will help guide conversations between a VoR and farm.



Academic Studies

Partial budget analysis of culture- and algorithm-guided selective dry cow therapy.
Rowe SM, Nydam DV, Godden SM, Gorden PJ, Lago A, Vasquez AK, Royster E, Timmerman J, Thomas MJ, Lynch RA.
J Dairy Sci. 2021 May;104(5):5652-5664. doi: 10.3168/jds.2020-19366.
https://pubmed.ncbi.nlm.nih.gov/33685701/

Evaluation of quarter-based selective dry cow therapy using Petrifilm on-farm milk culture: A randomized controlled trial.
Kabera F, Dufour S, Keefe G, Cameron M, Roy JP.
J Dairy Sci. 2020 Aug;103(8):7276-7287. doi: 10.3168/jds.2019-17438
https://pubmed.ncbi.nlm.nih.gov/32505410/

Randomized controlled trial investigating the effect of 2 selective dry-cow therapy protocols on udder health and performance in the subsequent lactation.
Rowe SM, Godden SM, Nydam DV, Gorden PJ, Lago A, Vasquez AK, Royster E, Timmerman J, Thomas MJ.
J Dairy Sci. 2020 Jul;103(7):6493-6503. doi: 10.3168/jds.2019-17961.
https://pubmed.ncbi.nlm.nih.gov/32331877/

Use of a culture-independent on-farm algorithm to guide the use of selective dry-cow antibiotic therapy.
Vasquez AK, Nydam DV, Foditsch C, Wieland M, Lynch R, Eicker S, Virkler PD.
J Dairy Sci. 2018 Jun;101(6):5345-5361. doi: 10.3168/jds.2017-13807.
https://pubmed.ncbi.nlm.nih.gov/29605332/