

THIS ARTICLE IS SPONSORED BY THE
MINNESOTA DAIRY HEALTH CONFERENCE.



UNIVERSITY OF MINNESOTA

College of Veterinary Medicine

VETERINARY CONTINUING EDUCATION



ST. PAUL, MINNESOTA
UNITED STATES OF MINNESOTA

Organizing a Dairy Reproductive Program

Paul Rapnicki, DVM

Steve Stewart, DVM

University of Minnesota College of Veterinary Medicine

Excellent reproductive performance is essential to maintaining productivity and profitability of any dairy herd. Veterinarians have traditionally been very involved in all aspects of these programs. However, as herds grow larger and as new reproductive management techniques are developed, many herds could use even more help. Much of this opportunity will be assisting the dairyman better organize a systematic approach to the breeding program and in developing record systems that allows rapid, accurate and complete data entry.

It may sound overly obvious, but in order to implement a planned program, one must first define clearly what the intended Herd Policy for the breeding program actually is. A consistent Herd Policy is needed to allow consistent implementation. This conversation is necessary to ensure both dairy management and the herd veterinarian actually agree or at least are both aware of the intended policy.

A key point is that the current herd policy does not need to be the future herd policy. However, changes to herd policy should be made intentionally. When setting herd policy for the reproductive program, management should review available options with their herd veterinarian. There is no clear one right answer. Many options being presented for dairy reproductive programs have advantages and disadvantages. The purpose of setting herd policy is to allow management to choose the best options to implement at this time

This outline can be used to help the herd veterinarian work with the dairy manager to set the most appropriate reproductive herd policy. The decisions made in these organizational steps will be used to set herd policy. General recommendations are included for some points in this outline.

1. Establish the Voluntary Waiting Period (VWP).
 - Typically will start between 45 and 60 days in milk
 - Will different lactation groups have different VWP? (e.g., 1st lact)
 - Will individual cow VWP's be used? (e.g., high producing cows)
 - Recommendation: 50 days in milk, consistent for all animals in the herd

2. Establish if routine prostaglandin will be given prior to end of VWP.
 - Prostaglandin to aid in uterine involution. Commonly referred to as a "cleanup" shot. Should be given to cows at least 21 days fresh.
 - Prostaglandin to synchronize ovary structures. Commonly referred to as a "setup" shot. Should be given 2 weeks prior to the first breeding injection of prostaglandin.

3. Decide on method AI semen will be selected
 - Based only on semen cost
 - Genetic mating programs
 - Dairy COMP305 Bullseye Module
 - Youngsire program

4. Decide how often program injections will be given and on what day of the week
 - Weekly
 - Bi-weekly
 - Monthly
 - Recommendation: At least every 2 weeks, weekly is preferred in larger herds.
 - Recommendation: Prostaglandin injections should be given early in a farms work week.

5. Decide how often pregnancy checks will be done and on what day of the week
 - Weekly
 - Bi-weekly
 - Monthly
 - Recommendation: At least every 2 weeks, weekly is preferred in larger herds.
 - Recommendation: Pregnancy checking on the same day as program injections.

6. If the herd has multiple pens, decide which pens have breeding group cows and decide the palpation schedule for the pens.

7. Decide what the goal is for the first AI breeding days in milk
 - Goal option 1 – All cows bred by a maximum “X” days in milk
 - Goal option 2 – Modified Targeted Breeding ® Program where the first breeding is done at a specific days in milk target (example 60)

8. Decide which method or methods that will be used to submit cows for their first AI breeding
 - Visual Heat Detection (Must be very good to be successful)
 - Recommendation: Only possible in smaller herds with good detection skills.
 - Assisted Heat Detection
 - Tail Chalk Program
 - Cows must be examined every day in a consistent manner
 - Cows must be re-chalked every day in a consistent manner
 - K-mar patches
 - Electronic
 - HeatWatch
 - Pedometry
 - Hormonal Synchronization Program
 - Prostaglandin Program
 - Palpation for CL program

- Prostaglandin every 2 weeks
 - Breedings based on heat detection
 - Breedings done by timed AI
 - OvSynch ® Program
 - Modified Targeted Breeding ® Program
 - Combination of methods
9. Decide how cows that fail to conceive will be found. Accuracy in determining which cow is truly open is very important.
 - With aggressive post-insemination heat detection
 - Rectal Palpation starting at 35 days post-insemination
 - Ultra-sound
 10. Decide how cows will be re-bred after being found open
 - Palpation of ovary structures:
 - Use to predict heats
 - Use to determine cows with CL's to give prostaglandin
 - All open cows given prostaglandin
 - Visual heat detection
 - Assisted heat detection
 - All open cows will be started on OvSynch®
 11. Decide how “exception” cows will be handled in the system
 - Sick or thin or non-cycling cows
 - Low milk production cows
 - High milk production cows
 - Other management exceptions (e.g. ET cows)
 12. Decide if cows will be re-pregnancy examined
 - Use to detect early pregnancy loss
 - Typically done at 90 to 100 days after conception
 - Recommendation: If early pregnancy loss is a concern, re-exam for pregnancy at 75 to 90 days after conception. Much lower pregnancy loss occurs after 60 days.
 13. Decide when cows will be declared Do Not Breed (DNB).
 14. Decide if bulls will be used in the program
 15. Ensure data capture is sufficiently complete and accurate but not burdensome.
 16. Monitoring Recommendations
 - Voluntary Waiting Period with DIM at first breeding scatter graph
 - Pregnancy Rate with “21 day heat trial”
 - Heat Detection with “21 day heat trial”
 - Conception rate with BREDSUM module

Action lists

After the herd policy for the reproductive program has been designed, the next step is to describe the management tasks that need to be performed to implement the planned reproductive program (herd policy) of the dairy. In a successful reproductive program, these daily tasks are accomplished as quickly and as easily as possible.

During the process of determining herd policy the decisions that were made determine when and how often certain tasks, such as prostaglandin injections, need to be done. On the day these tasks need to be done, the staff on the dairy needs to be informed which cows have been selected to receive that specific task.

The easiest way to do this is to create a list of cows that require a specific task or action. For example, if herd policy has decided that every cow that is at least 50 days in milk and open will be given an injection of prostaglandin, the following action list can be generated:

Command : LIST ID PEN FOR LACT>0 DIM>49 RC=2-3 BY PEN\2UP

ID PEN	ID PEN	ID PEN	ID PEN	ID PEN
3581 3	3678 6	9524 6	8392 8	9201 8
3584 3	5110 6	3215 8	8496 8	9212 8
3586 3	5111 6	3300 8	8570 8	9427 8
3592 3	9366 6	3418 8	8601 8	9922 8
3603 3	9416 6	3513 8	8618 8	9942 8
3650 3	9420 6	3530 8	8690 8	
3682 3	9456 6	7634 8	8702 8	Total: 54
3683 3	9462 6	7749 8	8717 8	

Action lists assist the producer in answering the question "What do I need to do today?" An organized systematic approach to the breeding program makes it possible for the people on the dairy to clearly know what tasks they should be doing today. If they should be doing those tasks has already been addressed in the herd policy planning.