

Texas Dairy Matters

Higher Education Supporting the Industry

STRATEGIES TO IMPROVE FERTILITY IN THE REPEAT BREEDER

Todd R. Bilby, Ph.D. and Ellen R. Jordan, Ph.D.
 Extension Dairy Specialists
 Department of Animal Sciences
 Texas A&M AgriLife Extension Service
 The Texas A&M University System

A “repeat breeder” is any cow that has been inseminated at least three times and returned to heat or is presented for a 4th timed artificial insemination. This syndrome can be one of the more frustrating problems affecting reproductive management of a dairy herd. As shown in Table 1, the lower the conception rate the more repeat breeders you have to contend with. Commonly, normal conception rates range from 35 - 45% for lactating Holstein cows. Thus the percentage of repeat breeders ranges from 28 – 17%, respectively. Repeat breeders can become a significant problem weighting down your farm fertility, but just as importantly reducing farm profitability.

Table 1. Expected Repeat Breeders at Various Conception Rates¹

Conception (%)	Cows		Cows	
	Conceiving in 3 Services (%)	Repeat Breeders (%)	Conceiving in 5 Services (%)	Open after 5 Services (%)
70	97	3	100	0
60	94	6	99	1
50	88	12	94	3
40	78	22	92	8
30	66	34	83	17
20	49	51	67	33

¹Based on Dairy Reproduction Simulation Model – Jeff Reneau and B.J. Conlin, University of Minnesota, 1984

When the number of repeat breeders is above 30%, a significant repeat breeder problem exists. Some possible strategies for improving fertility in repeat breeders include:

Consult your team: Start diagnosing and solving the problem by getting all parties involved with your herd health and reproductive program together to evaluate the problem and review herd records. Frequently the team identifies factors not only affecting reproduction, but other issues that may be negatively affecting your herd and its profitability.

Consult with your veterinarian to insure an adequate vaccination program is in place. Detecting an infectious disease going through a herd can be one of the hardest problems to identify. For the most part, when an infectious agent is finally found, significant damage has already occurred. In addition, check the repeat breeders for any reproductive abnormalities and treat or cull accordingly.

Strengthen your estrous detection: Inadequate estrous detection is frequently a cause of cows becoming repeat breeders. Since estrous detection is less than 60% on many dairies (i.e. for every 10 cows cycling only 6 are inseminated), there is a substantial need to improve accuracy and efficiency of estrous detection. Utilize a combination of estrous detection aids to improve both accuracy and the number of animals inseminated that are truly in estrus.

Establish and improve compliance to a resynchronization program: Resynchronization protocols are continually improving, becoming an effective strategy to improve fertility in repeat breeders. They can be used in combination with breeding on detected estrus. Consult with your reproduction management team to insure a good resynchronization program is in place.

Insure proper semen handling, storage and insemination techniques: Make sure your AI technician utilizes proper semen handling and storage techniques. Resources are available on the web and through your semen distribution company explaining proper techniques. Consider having a refresher course for employees.

Cow comfort and cooling: Dairy farms tend to treat their repeat breeders differently without realizing it, decreasing their chances of becoming pregnant. Sometimes the most attention goes to high producing or early lactation cows and late lactation animals are moved to pens with less cooling, different herd mates, poorer quality corral conditions, and possibly different rations. Insure that late lactation cows (most likely the largest concentration of repeat breeders) have adequate cooling to maintain normal body temperatures improves fertility.



Intensively manage bulls: Often time's cows are presented to the bull for natural service at a certain DIM (i.e. 180 DIM) or after a certain number of AI (i.e. > 3 AI). When not properly managed, extensive use of a bull breeding program may increase the chance of a cow becoming a repeat breeder. Initiate an intensive bull management program including breeding soundness examinations, vaccination programs, and rotation.