

Boost Fertility & Improve Efficiency: Strategies to Improve Reproduction



Why Reproductive Success Matters

Better reproduction can lead to improved performance and increased profitability^{1,2}:



Higher
milk production



More selective
culling possible



Increased
calf inventory



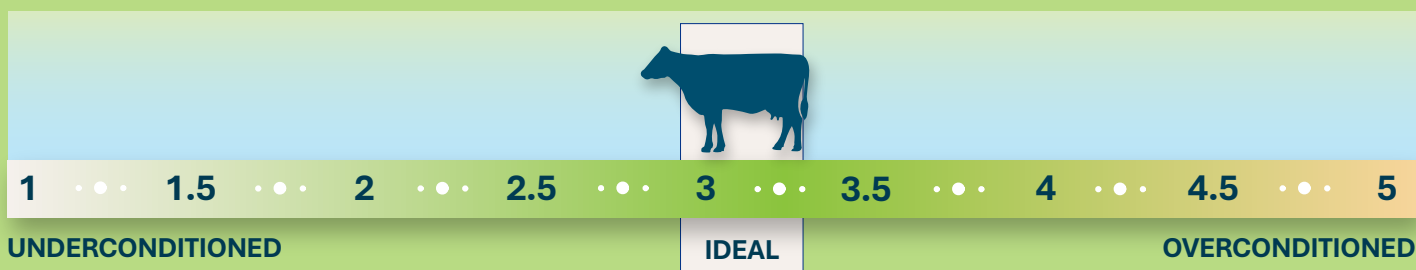
Fewer
days open

How to Improve

1. Cow Status

Body Condition Score (BCS)

Cows that **lose ≥ 0.5 BCS** after calving are 50% **less likely to be detected in heat** and 20% **less likely to become pregnant**^{3,10}. Thin (**< 2.75 BCS**) or overconditioned (**> 4 BCS**) cows also have **lower conception rates**⁴.



What Helps?

- Target a BCS of **3.0-3.25** at calving
- **Monitor BCS** of cows at dry-off, calving, and first breeding to assess nutritional management and **adjust diets if needed**
- Feed a **balanced diet during the dry period and after calving** to support energy needs and minimize BCS loss
- Consult with a **qualified nutrition advisor**

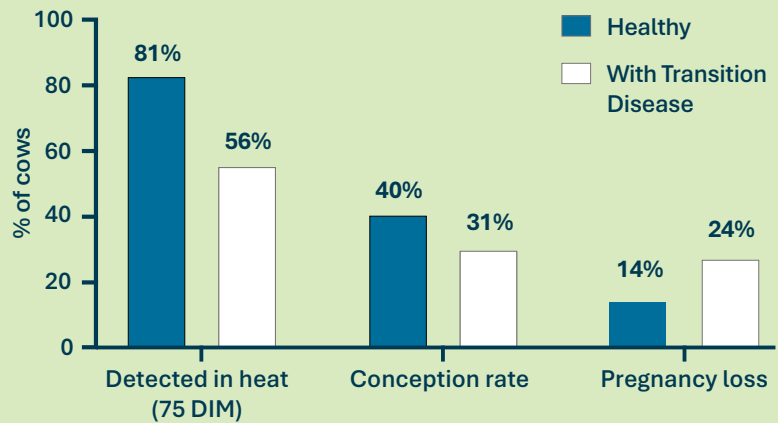
Disease After Calving

Cows with health problems during the transition period have a **lower chance of being detected in heat by 75 Days in Milk (DIM)³**; **lower conception rate and higher risk of pregnancy losses^{5,6,11}**.

What Helps?

- Focus on **transition cow health**
- Monitor for early signs and **act quickly**
- **Record health events** to monitor incidences and impacts
- **Review records routinely** to assess progress
- **Consult** with your herd veterinarian

Negative Impacts of Disease on Reproduction



2. Environment

Overcrowding

Overcrowding **reduces lying and feeding times** and **lowers heat expression and conception rate^{7,12}**

What Helps?



Keep stocking density
Below 100%



Provide
Enough bunk space

Heat Stress

Cows exposed to heat-stress for one or more days between 20 to 50 days before breeding had a **23% conception rate vs. 31% in cows not heat-stressed⁸**. Cows exposed to heat stress across the 21 days before breeding are **63% less likely to get pregnant⁹**.

What Helps?



Check that the barn's
ventilation system
is working properly



Provide additional
water sources



Use
fans and sprinklers
to manage heat



Avoid handling and crowding during the
hottest times of day

3. Management Practices

Heat Detection Practices

Better heat detection increases chances of success for pregnancy.

What Helps?



Train staff to recognize signs of heat



Use tools to help with heat detection, like activity monitors or tail chalk



Evaluate with your herd veterinarian whether timed AI protocols (e.g., Ovsynch) are a good fit for your herd

Breeding Timing and Technique

Incorrect timing (breeding too early or too late), poor semen handling, or poor technique can compromise conception.

What Helps?



Train staff for proper AI technique, timing, and semen handling



Use experienced technicians to maximize success

Know Your Numbers

Understanding your numbers helps focus efforts where they matter most, whether that is improving heat detection, breeding timing, or cow condition. Review your records regularly and set clear targets to track progress and guide decision-making. Reproductive performance can be measured using Pregnancy Rate.

Pregnancy Rate \approx **Heat Detection Rate** x **Conception Rate**

Pregnancy Rate is the percentage of eligible cows that become pregnant in each 21-day cycle

Heat Detection Rate is the percentage of eligible cows that are seen in heat and bred

Conception Rate is the percentage of inseminated cows that become pregnant

Take Action on Your Farm



Compare your data to the 2024 benchmarks (top 75th percentile) from Canadian herds¹³:

Pregnancy Rate: 21%; Heat Detection Rate: 50%; Conception Rate: 48%

If you are not hitting your reproduction targets, take a step back and look at the full picture. Cow status (body condition and post-calving health), environment (overcrowding and heat stress), and management practices (heat detection and breeding practices) all play a role. Review your records and look for the weak spots. Work with your veterinarian and advisory team to build and implement a plan that fits your herd, facilities, and goals.

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