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# December 2021 DAIRY NEWSLETTER

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## Reproductive Benchmarking

With the new year upon us, it's a great time to look back at your herd's data from the last 365 days. We can use dairycomp or other dairy software to look back at your herd's performance for reproduction, transition, milk production and much more. Today we will touch on some useful reproductive benchmarks and how they make a financial impact on your farm. Talk to your herd veterinarian for an in depth look at your farm's individual data. We can make suggestions on improving your reproductive efficiency to start 2022 off with a bang!

### Key Reproductive Parameters

There are a multitude of different reproductive parameters that can be captured with modern herd software. However, we will focus on a few basic measures that are most impactful and easy to find. Based off your individual farm's reproductive profile, we may go into further detail in one area or another.

**Voluntary Waiting Period** = minimum days in milk before a cow can be bred.

- Cows that are eligible to be bred are counted as animals that are past the voluntary waiting period and not marked as a "do not breed"

**Insemination Rate** =  $\frac{\text{number of cows bred in a 21 day period}}{\text{number of cows eligible to be bred in a 21 day period}}$

- aka heat detection. How good are we at finding our cows that are in heat? In a herd using heavy synchronization programs, how good are we at following the programs and getting cows bred?

**Conception Rate** =  $\frac{\text{number of cows pregnant in a 21 day period}}{\text{number of cows bred in a 21 day period}}$

- When we do breed cows, how efficiently do we get them pregnant? Many factors come into play here, such as: correct identification of a standing heat and insemination timing, transition health, semen used, individual cow genetics etc. We can break down your conception rate by breeding code, lactation, number of times bred, semen category, days in milk at breeding etc.

**Pregnancy Rate** =  $\frac{\text{number of cows pregnant in a 21 day period}}{\text{number of cows eligible to be bred in a 21 day period}}$

- This is the number one benchmark for reproductive performance: the higher the number, the more efficient the reproductive program. It is essentially made up of the insemination rate x the conception rate



Now that you have looked up your farm’s reproductive rates, how are you doing? Use the following table to compare the above rates, as well as some other reproductive cut points. Data is based off DHI collected herds in Ontario for the year 2020, which are ranked by reproductive performance and sorted into percentiles.

Percentile	Pregnancy Rate %	Insemination Rate %	Conception Rate %	DIM at first breeding	Times Bred	Days open
25	12	33	35	92	2.1	126
<b>50</b>	<b>16</b>	<b>43</b>	<b>41</b>	<b>81</b>	<b>1.8</b>	<b>114</b>
75	20	51	47	75	1.6	104
90	24	57	54	70	1.4	95

### Reproductive Performance – Why do we care?

Having a good pregnancy rate is about more than just bragging rights, this is a key driver for the economic success of your farm. There are several angles to consider:

Getting cows pregnant sooner optimizes the **average days in milk** of your herd. The more cows that are at peak milk, the higher our herd production average. Keeping our reproductive performance consistent all year round leads to consistent freshening’s and number of cows in peak milk. Other added benefits to consistent calving’s are less high density calving periods, which can strain our calving pens, leading to issues with transition and calf health. We aim to have our average days in milk at around 150 days.

Getting cows pregnant more efficiently saves you on several expenses that are incurred with additional breedings. These include semen costs, labour and hormones. In addition, we lose somewhere between \$1-4 (farm dependent) for each day that an individual cow is open past 120 days in milk.

Based off Canadian input costs and milk prices, we can estimate your additional earnings per year based off improvements in pregnancy rate. Note that as we become more efficient, the margin of profit narrows. Eventually comes a tipping point that the increased input costs (drugs, heat detection technology, labour etc.) exceed the money made by pregnancy rate improvement. The following is an estimate of the dollars saved per cow per year based off raising your pregnancy rate a single point in the designated brackets.

Pregnancy Rate Bracket	monetary gain for 1 point improvement per cow per year
10-14%	\$66
16-20%	\$23
22-25%	\$8