

Ways to Measure Dairy Reproductive Performance

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We have used days open, calving interval, conception rate and services per conception for years to measure and monitor dairy cow and dairy herd reproductive performance. Days open is the interval from calving to pregnancy and is still a good measure of our ability to get cows pregnant. Calving interval is the interval from the birth of one calf to the birth of the next calf. It is a more historic measure of performance and is useful to monitor our ability to get cows pregnant from year to year. Conception rate is the percentage of animals serviced which become pregnant. Services per conception measures the number of services required to achieve a pregnancy.

Another measure of reproductive performance, pregnancy rate, is calculated and printed on the DHI herd summary sheet and is a common term in popular press articles. Pregnancy rate simply is the percentage of animals which get pregnant out of all the animals which are eligible to get pregnant during a specific time interval. For example, if a dairy herd had 40 open cows in the “breeding herd”, over a 21-day period 20 were caught in heat and inseminated, and 10 of the 20 inseminated became pregnant to that insemination the pregnancy rate for that 21-day period is $10 \div 40$ or 25%. Pregnancy rate can also be calculated by multiplying the percentage of cows detected in heat times the conception rate. In the previous example, the percentage of cows detected in heat is $(20 \div 40) \times 100 = 50\%$, and the conception rate is $(10 \div 20) \times 100 = 50\%$. Therefore, the pregnancy rate is $50\% \times 50\% = 25\%$.

The bottom line is pregnancy rate is a more timely way to measure our ability to get cows pregnant. One other point. As advisors to dairy farmers we need to make sure we know what term a dairy client is talking about when they are talking about the reproductive performance of their herd. If they are using pregnancy rate as the measure, 25% sounds low because we are used to hearing a conception rate quoted. In fact, a 25% pregnancy rate is quite good.