

Texas Dairy Matters

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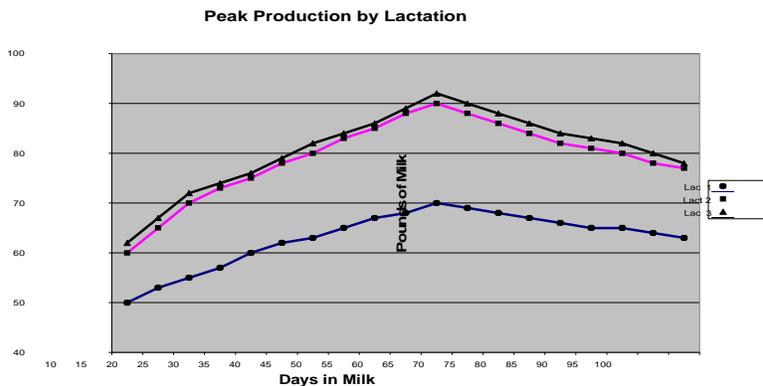
MONITOR MILK FACTORS

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With escalating diesel prices, weather moderating, and an increasing number of cows freshening, it's time to monitor cows as they move through their lactation cycle to maximize profitability. Four key factors, critical for profitable production, change as the cow moves through the lactation cycle.

Factor 1: Milk production curve. Peak milk sets the lactation curve for a cow. Optimally, peak milk occurs 40 to 60 days after calving. Monitoring peak production requires routinely measuring each cow's milk production on a monthly basis. Less frequent monitoring results in missing peak production on many cows.

Once peaks are defined, check that peaks of first lactation cows are at least 75% of the peak milk of older cows in the herd. If the ratio is less than 75%, first lactation cows are not peaking high enough compared to older cows. Look at your heifer growing program.

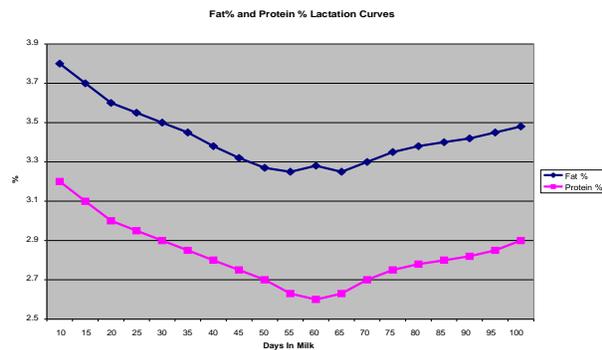


Two reasons exist for first lactation cows peaking over 75% of older cows. First, heifers peak higher due to genetics, health, and/or heifer rearing programs. On the other hand, older cows may not peak high enough. In the latter case, check late lactation and transition programs.

Factor 2: Milk fat and protein curves. Many times we question the cost for individual cow component sample testing. Although milk fat and protein vary by breed and season, there is a relationship between the two. Typically, the curves run parallel as the cow moves through her lactation. Milk fat test results 0.2 points below protein potentially indicate rumen acidosis.

Milk protein tests below breed average or protein shifts during various phases of lactation warrants investigation. Consider the following reasons for low milk protein production:

- Low levels of fermentable carbohydrates decreases microbial protein synthesis and amino acids for milk protein synthesis.
- Low levels of dry matter intake reduce the supply of nutrients available for the rumen microbes and cow.
- Protein shortages and/or an imbalance of amino acids decreases milk protein synthesis.
 - Fats and oils are substituted as energy sources instead of carbohydrates. Fat is not a source of rumen fermentable energy required for microbial protein synthesis.



Factor 3: Dry matter intake curve. Check for increasing dry matter intake after calving. Increasing the cow's dry matter intake after calving avoids metabolic disorders, minimizes weight loss, and improves reproductive performance.

Factor 4: Body weight loss and gain curve. Monitoring weight changes in dairy cows provides valuable information on energy status of cows. High producing cows lose weight to provide the high energy levels needed in early lactation. Body condition scoring is a field method to monitor weight changes. Most herd management software track scores as the cow moves across the lactation.

General guidelines for body condition score include:

- One body condition score equals 120 pounds of body weight.
- Cows should not lose more than 1 to 1.5 body condition score points.
- Two pounds per day is the maximum weight loss allowable to avoid negative effects on reproduction and metabolic disorders.
- Cows should be at the optimum body condition score prior to drying off (3.25 to 3.75). If the cows are too thin, limit weight gain to one-half body condition score during the dry period.

Evaluate these four factors during lactation to stay on top of what is happening to your cows. Enter this information into a database found in modern dairy management software. The reports generated provide critical evaluation tools to keep track of change.