

Four steps to help analyze milk fat issues on your dairy



1. Identify the issue

Is there a problem? What is it and when did it occur?

2. Walk and look

Visit the farm and do a herd walk-through.

3. Review list of risk factors

See what may be contributing to the problem (list at right).

4. Take action

Decide what you are able to recommend based on walk-through and evaluation.

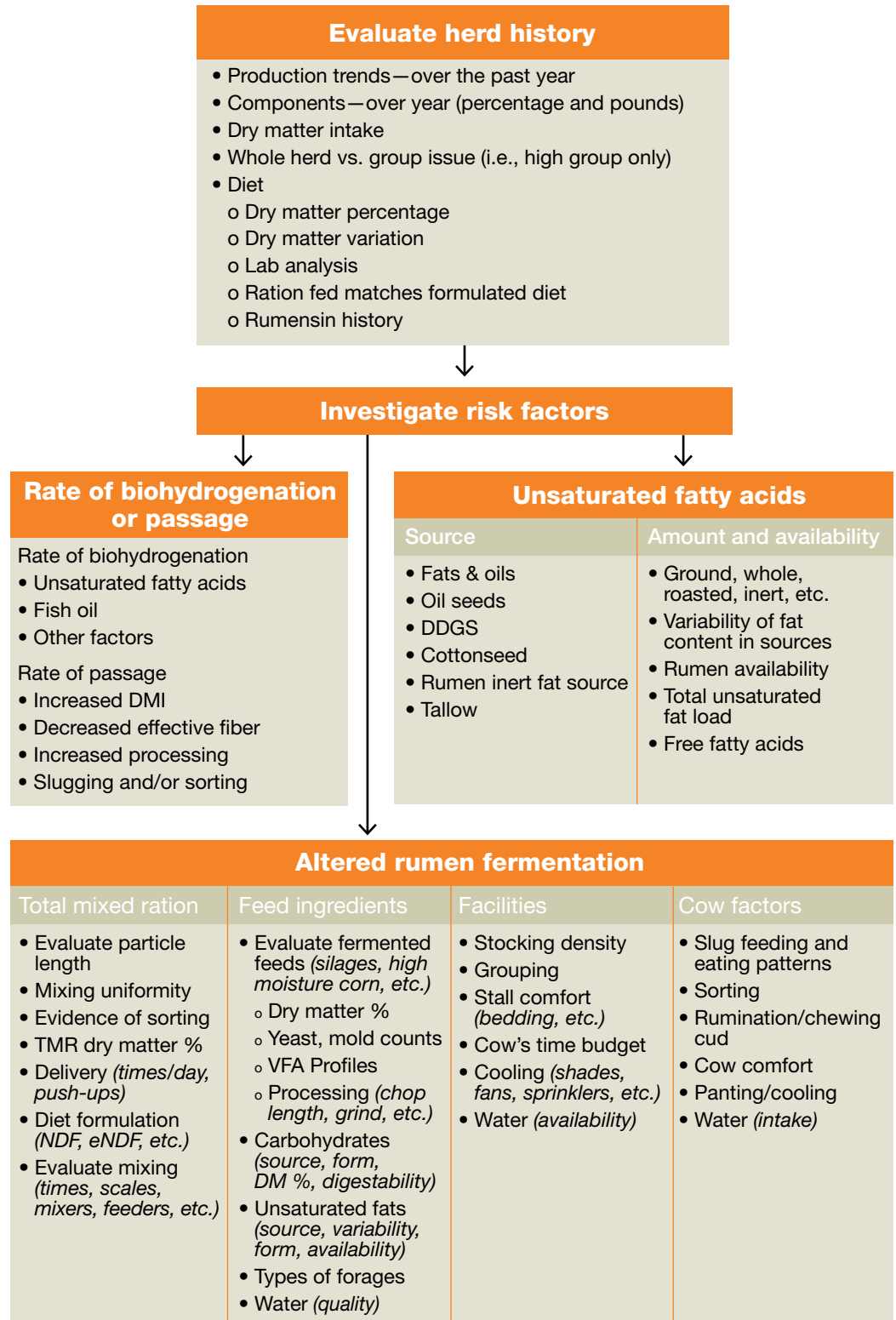
Milk fat depression (MFD) is a multifactorial problem*

No single TMR characteristic or ration component accounts for more than 10 percent of the variation in herd level milk fat percentage.

*From a field study to investigate risk factors for milk fat depression in commercial dairies; Elanco Study Number T1F360503

Troubleshooting milk fat challenges

The following chart contains a variety of risk factors that may be considered when troubleshooting milk fat challenges or low milk fat on the farm.



Rumensin dose recommendations for dairy cows

Dairy cow claim:

For increased milk-production efficiency (production of marketable solids-corrected milk per unit of feed intake).

Total mixed rations (complete feed):

Feed continuously to dry and lactating dairy cows a total mixed ration (complete feed) containing 11 to 22 g/ton monensin on a 100% dry matter basis.

Component feeding systems (including top dress):

Feed continuously to dry and lactating dairy cows a Type C medicated feed containing 11 to 400 g/ton monensin. The Type C medicated feed must be fed in a minimum of 1 pound of feed per cow per day to provide 185 to 660 mg/hd/day monensin to lactating cows or 115 to 410 mg/hd/day monensin to dry cows.

Recommend with confidence

Producers depend on your expertise, so recommend Rumensin with the assurance that you're helping them unleash the full power of the rations you formulate for their dairy cows. On average, Rumensin provides at least a 5:1 return on investment throughout lactation and the dry period.

The label contains complete use information, including cautions and warnings. Always read, understand and follow the label and use directions.

For additional product information or to report a suspected adverse event associated with the use of this product, call (800) 428-4441.

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Rumensin[®]

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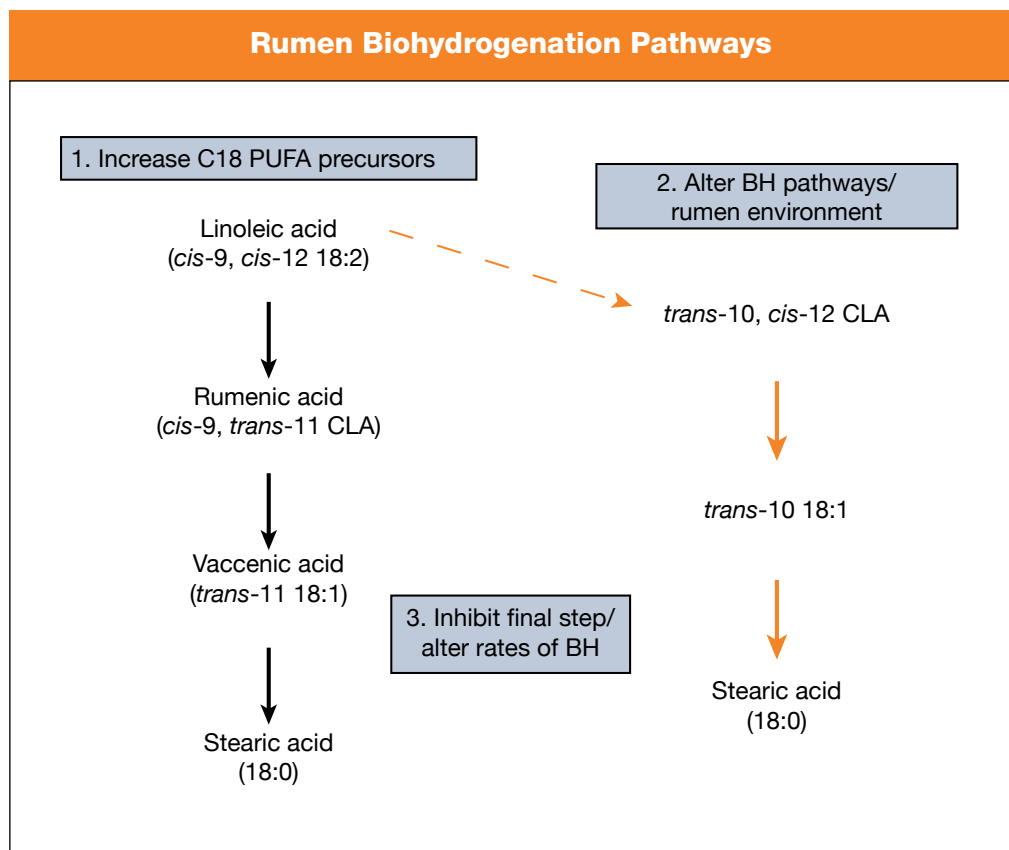
The 'Biohydrogenation Theory' of milk fat depression (MFD)

Under certain conditions, rumen biohydrogenation results in unique fatty acids that are potent inhibitors of milk fat synthesis, e.g., *trans*-10, *cis*-12 conjugated linoleic acid (CLA) and possibly related intermediates from linoleic acid and other polyunsaturated fatty acids (PUFA).

1. Small quantities of specific BH intermediates produced in the rumen when taken up by the mammary gland are sufficient to induce substantial MFD. A small amount such as 1.5 to 2.0 g/d of *trans*-10, *cis*-12 CLA passing to the small intestine can cause a significant decrease in milk fat (3.8 to 3.2 percent).
2. Improving our understanding of the interaction and interrelationship between dietary supply of PUFA and rumen fermentation is key to developing approaches to troubleshoot MFD.

Nutrition and management decisions may contribute to increasing risk for milk fat depressing biohydrogenation intermediates passing out of the rumen by:

1. Increasing supply of substrate PUFA for the formation of CLAs noted to induce MFD.
2. Altering the rumen environment in a variety of ways impacting biohydrogenation.
3. Dietary components can influence the rates of biohydrogenation, which will drive an increase in the passage of biohydrogenation intermediates, some of which contribute to MFD. Rate of passage of feedstuffs through the rumen may contribute to an increase in the likelihood of biohydrogenation intermediates passing through the rumen.



Adapted from Lock and Bauman, 2007. 4-State Nutrition and Management Conference.