

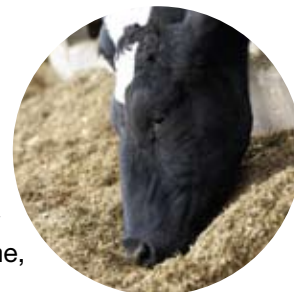
The only FDA-approved feed ingredient for milk-production efficiency*

- Rumensin delivers more milk per pound of feed for just pennies per head per day
- Rumensin increases milk-production efficiency throughout lactation
- Rumensin meets the U.S. Food and Drug Administration’s stringent standards for effectiveness, and animal, environmental and human-food safety
- On average, Rumensin provides at least a 5:1 return on investment

*Production of marketable solids-corrected milk per unit of feed intake



Feed efficiency: understanding it, measuring it, and profiting from it



Feed efficiency may also be called milk-production efficiency or dairy efficiency, but these all refer to the same thing: how efficiently a dairy cow converts feed to milk. Far more important than the name, however, is how this efficiency can affect a dairy’s profitability.

A direct tie to the bottom line

An improvement in feed efficiency can result from three possible scenarios: an increase in milk yield with no change in feed intake, a decrease in dry matter intake with no change in yield, or a combination of a slight decrease in feed intake and an increase in milk yield.

The influence of each scenario on the bottom line depends on the prevailing milk price compared to the cost of dry matter (see table). A pound of milk is almost always worth more than a pound of dry matter. An increase in milk yield will usually have the greatest impact on income over feed cost. A decrease in dry matter intake will have a positive but lesser effect. A combination of the two will have an intermediate effect in income over feed cost. Calculated over the course of a year for every 100 cows, a change in feed efficiency could result in an extra income over feed cost of \$12,045 to \$27,375—a substantial increase in profitability.

How changes in milk-production efficiency (MPE) can affect income over feed cost (calculations based on 100-cow dairy)

Milk ¹	Milk Income ²	DMI ³	Feed Cost ⁴	MPE ⁵	IOFC ⁶	Additional IOFC ⁷
70	\$10.50	50	\$5.00	1.4	\$5.50	
70	\$10.50	46.7	\$4.67	1.5	\$5.83	\$12,045
75	\$11.25	50	\$5.00	1.5	\$6.25	\$27,375
72.5	\$10.88	48.3	\$4.83	1.5	\$6.05	\$20,075

¹Milk yield per cow per day on a 3.5% fat-corrected basis

²Milk income per cow per day assuming \$15 per hundred weight of milk

³Dry matter intake per cow per day

⁴Feed cost per cow per day assuming \$0.10 per pound of dry matter

⁵3.5% fat-corrected milk yield divided by dry matter intake

⁶Income over feed cost

⁷Additional income over feed cost by improving feed efficiency from 1.4 to 1.5 over the course of a year per 100 cows

Measuring milk-production efficiency

In an ideal world, you would know exact dry matter intake and milk yield for every pen, every day. Problem is, very few dairies actually have this information on a daily basis, so you have to work with the information available.

For example, most operators would know total milk shipped per day and total number of cows being milked, and thus could readily calculate average milk yield on a per head, per day basis. Factoring in component information from the milk check would achieve a 3.5 percent fat-corrected milk (FCM) yield.

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. The bottom line is, on average, 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.

ELANCO

Rumensin[®]

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Next, establish dry matter intake. If you utilize a feed program, the feed offered per cow daily is relatively easy to obtain. But to accurately measure intake, you need to subtract feed refusals (orts). The amount of feed refusal may have to be estimated. By estimating feed refusals daily and using weekly or monthly averages, you can remove a lot of irrelevant "noise" from your data. If you do not utilize feeding software, data gathering will require documenting feed offered each day in order to calculate dry matter intake, again taking feed refusals into consideration.

The objective in measuring feed efficiency is to collect data that are as accurate as possible and then use averages over a period of time to diminish the "noise." As numerous variables can impact feed efficiency, making comparisons to other farms may not be prudent. Your numbers should be used as your farm's own benchmark to evaluate changes.

Factors that impact milk-production efficiency

Management factors

- Cow comfort
- Walking distance to/from milking center
- Times milked per day

Non-management factors

- Pregnancy
- Body size
- Weather
- Sickness
- Stage of lactation¹

Nutrition factors

- Differing digestibility of forages
- Feed additives
- Fiber content

¹A cow in early lactation is mobilizing body reserves to meet milk-production demands and, as a result, is producing a lot of milk for the amount of feed she's consuming. Cows in late lactation are producing less milk in response to their still relatively high dry matter intake because they are replenishing body reserves.

A good understanding of the factors that impact feed efficiency will help you determine if an observed change in feed efficiency is due to management, nutrition, or some other factor outside of your control.

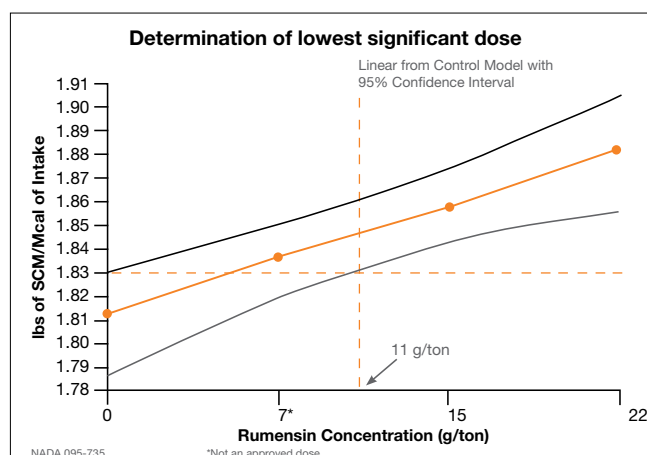
Nutrition's impact on feed efficiency is typically the result of differing digestibility of forages, feed additives, and the fiber content in the diet. These three factors can increase the nutrients captured by the cow for each pound of feed consumed.

Manage the trends

Improving milk-production efficiency can improve profitability on most farms, but using data to make decisions can be risky if the data are not accurate. It is important to understand what factors in your herd are really influencing milk-production efficiency. There may also be large seasonal variations. Within one to two years of data, your ability to make strategic management decisions improves. The key is to manage the trends you observe, not the absolute feed efficiency values.

Rumensin is FDA-approved for milk-production efficiency

Rumensin is one feed additive proven to improve milk-production efficiency. Whether you get more milk from the same feed or the same milk yields with less feed, Rumensin delivers more energy from every pound of feed.²



- Rumensin provides a 2-4% linear response—as you increase Rumensin dose, your milk-production efficiency response increases
- Continue to work with your nutritionist to maximize Rumensin response in your herd

² Symanowski, JT, HB Green, JR Wagner, JID Wilkinson, JS Davis, MR Himstedt, MS Allen, E Block, JJ Brennan, HH Head, JJ Kennelly, JN Nielsen, JE Nocek, JJ vanDer List and LW Whitlow. Milk production and efficiency of cows fed monensin. *J. Dairy Sci.* (Suppl 1):82. (Abstr.), 1999.