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Dairy Connection

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Make Forage First in the Ration

Balancing the ration for your dairy herd can be a challenge with factors like feed availability and pricing affecting the decisions you make. The main objectives in a balanced dairy ration are to provide an optimal mix of feed nutrients that maintain the cow's health, support good reproduction, and promote optimal milk production profitably. So how can we achieve *balanced ration*?

While the answer is most certainly a complicated one, it starts with a simple fact: build your ration around your main forage source. Decades of years of research and many more years of cattle feeding and milk production have proven that the best feed for dairy cows is forage. In fact, the ruminant cow's digestive system is built specifically to digest forage.

In a September Hay and Forage Grower article, University of Illinois extension dairy nutritionist Mike Hutjens offered this advice:

He recommends that dairy producers and nutritionists consider using his "55-30-15" formula when balancing rations in the coming months. The 55 in the formula refers to his recommended percentage of forage dry matter in the ration.

"That percentage of forage dry matter, which comes out to 28 lbs/cow/day, is what's commonly used, not only in the Midwest, but in the rest of the country, too," he says.

The 30 is the percentage of concentrate and can consist of corn, barley, soybean meal, distillers grain, vitamins, minerals and maybe some fat.

"With 85% of the ration locked in, producers now have the final 15%, or 7-8 lbs of dry matter, to work with, and that can fluctuate based on feed prices, quality and availability," says Hutjens. "But whatever they choose to feed, they can't break the golden rule of dairy production — never sacrifice milk production or milk components at today's prices."

For high-producing cows, he recommends that some of that 15% be devoted to a nutrient-dense ingredient, such as fat, heat-treated soybean products or corn grain. But for the balance of the herd he recommends feeding more forages.

"Now's the time for more forages in the ration to combat rising grain prices," he says. "Generally speaking, forages are cheaper per unit of energy or cheaper per unit of protein vs. corn grain and soybean meal in the feeding program."

But he cautions that using forages to comprise that final 15% only makes good sense if they're high quality, such as corn silage with an NDF digestibility percentage in the mid-50s on a 30-hour fermentation profile and 30% starch. Alfalfa with a relative forage quality index of 150-170 qualifies, too.

He says limiting corn silage to 75% of the total forage dry matter is a safe guideline. "I know of producers who feed 100% of their total forage dry matter as corn silage, but that makes me a little bit nervous."

If rations are that high in corn silage, the silage must be processed — and chopped at the correct particle length. "Because some processed corn silage is not chopped correctly, it fails to maintain a rumen forage mat," says Hutjens. "And feeding that much corn silage also requires a balanced amino acid profile and balanced starch fermentation rates to avoid acidosis."

If producers don't have access to high-quality forages, they could feed 2-3 lbs of moderate-quality forage along with byproduct feeds to make up the final 7-8 lbs of dry matter, he says. Depending on location, those byproducts could include soy or almond hulls, citrus or beet pulp, corn gluten feed or wheat midds.

When feeding byproducts, he reminds producers and nutritionists to "monitor total NDF levels to manage rumen-fill limitations and rumen fermentable carbohydrate levels (soluble fiber, starch and sugar) to keep rumen microbial growth at optimal levels."

Finally, he says producers need to remain flexible with feeding programs in the coming months as they strive to strengthen their bottom lines.

10 reasons to make FORAGE FIRST in the ration.

1. Provide protein

Legume forages can provide up to 75% of the protein needed by lactating dairy cows; corn silage can provide up to 25%.

2. Provide fiber

Forages are often the only source of fiber in a cow's diet. Fiber is essential to slow the passage of feed, thereby increasing the amount of nutrients that the cow can absorb from the feed.

3. Maximize intake

Forages stimulate cud chewing and rumination, which improve the cow's appetite. Some non-forage sources of fiber actually reduce intake.

4. Provide energy

Forages are also an important source of energy -- especially corn silage which can provide up to 50% of the energy needed in a cow's diet. Alfalfa silage can provide up to 40%.

5. Minimize acidosis

Acidosis occurs when excessive VFA production in the rumen causes cows to go off feed. Adequate forage and fiber greatly stimulate rumination (cud chewing) which buffers acids in the rumen.

6. Designed for rumen

Cows were designed to eat forages. With their rumens working as fermentation vats, cows turn plants and byproducts that we can't eat into foods we can.

7. Minimize laminitis

Many times when cows develop acidosis, they also develop laminitis. Adequate fiber in the diet greatly reduces both acidosis and laminitis.

8. Reduce feed costs

Forages are an economical source of protein, energy and fiber because these nutrients are more expensive when purchased as concentrates.

9. Good for soil

With their deep roots and permanent ground cover, perennial forages help hold soil in place. They also increase the organic matter in soil, and legumes add nitrogen to the soil.

10. Sustainable

Perennial forages help protect the environment because they reduce surface water runoff and leaching of nutrients; they require less fertilizer; and they cover the soil year-round.

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Greener Horizons for Crops, Cows, and Communities

Doboy's Nutrition Consultants work with producers to develop the best dairy rations utilizing our cutting edge Total Dairy System technology.

Total Dairy System

Domain's Cutting-Edge Feed Technology System

- Designed to improve accuracy in meeting nutrient requirements using dynamic modeling
- Customized for calves, heifers, dry cows and lactating cows in high-producing dairy herds
- Ability to formulate nutritional programs for conventionally and organically fed herds
- Maximizes farm forages and matches these to the right compliment of grains to maximize farm profits and meet producer goals

Advanced Nutritional System

- Better defined digestibility (Kd) and passage rate (Kp) data in custom database
- Models for all 10 essential amino acids
- Also considers total sulfur amino acids - unique
- Utilizes the most current amino acid and carbohydrate balancing system available
- Evaluates nutrient contribution from total digestive tract for protein and carbohydrate fractions
- Optimizes rumen microbial production and balances with metabolizable bypass protein
- System based on metabolizable energy & protein
- Focused on maintaining healthy cows & healthy rumens
- Maximizes milk, fat and protein production

Customized Forage Database

- Based solely on data for Upper Midwest (WI/MN) forages
- Unique database; no competitive software has this
- Templates based on over 30,000 actual forage lab analyses
  - Both NIR & wet chemistry
- Extensive database with templates for low to high quality forages
  - Over 170 custom templates for corn silage, grass & legume silages, hay and pasture
  - Templates based on dry matter, digestible and indigestible fiber
- Templates adjust for chop length and processing
  - Both impact digestibility and rate of passage for forages

Fatty Acid Sub-Model

- Monitoring of the digestion of 10 different fatty acids fractions
- Balancing for the absorbed levels of these fatty acids
- Implications for improving reproduction: linoleic acid (C18:2) & linolenic acid (C18:3)
- Implications for preventing butterfat depression: limiting C18:1T
- TDS Exclusive forage and feed database fatty acid database

DOMAIN, INC.

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Features and Benefits

- 20% Protein
  - Amino Acid balanced to match nutrient needs
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- Sodium Diacetate (SDA)
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- Steamed Flaked Corn
  - Highly digestible corn source
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  - Higher energy content than whole oats
  - Higher Selenium content than local oats
  - Dried Whey
  - Easily digestible and eases the transition from milk to dry feed
- Concentrated Yeast Culture
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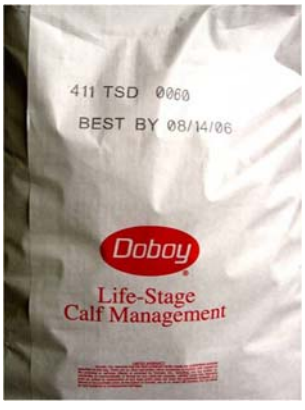
- Vitamin B-12
  - Reduces severity of anemia
  - Stimulates intakes
  -Improves energy stimulation from sugars and fat
- Vitamins A, D, & E
  - Promotes growth, healthy bones, and tissue development
- Organic Selenium
  - Highest bio-available selenium source
- Liquid Molasses
  - Palatability Enhancement

Freshness dating



- First commercial calf starter to feature dated bags
- Freshness date is approximately one month from the date of production
- Helps to promote improved inventory management on farms & in warehouses
- Give producer piece of mind that starter will be fresh every time