



Limited Availability of Protein Feeds: What Are Our Options?

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The animal feed sector is currently facing challenges regarding the supply of protein sources.

Since May, the strike at Viterra has already complicated the supply of soybean meal for Eastern Canada, and now the ongoing labour disputes within the railway industry (CN and CPKC) are exacerbating this issue. In light of this exceptional situation, what can be done to minimize the impact on the farm?

1. Work Closely With Your Feed Advisor and Suppliers

To minimize the impact of diet changes on animal performance and feeding costs, seek advice from your consultants. They can help you

evaluate the best strategies for your situation.

2. Monitor Milk Urea Levels

A change in the ration's protein quantity or type can alter the nitrogen/energy balance in the rumen. Monitor milk urea levels to see how your animals are reacting and adjust the diet accordingly. To optimize animal performance and nitrogen use efficiency, aim for a milk urea level between 8 and 12 mg N/dl.

3. Optimize Forage in the Ration

Forages are one of the main protein sources in the diet. Check with your advisor if it's possible to include a higher proportion of forages in the ration.

Also, consider temporarily using a batch of forage that has higher levels of crude protein. If you use corn silage, check if it's feasible to replace part of it with haycrop silage.

Don't forget to monitor the impact of your strategy on your forage inventory.

4. Evaluate Feed Bunk Management

With the help of your feed advisor, ensure that feed bunk management minimizes waste while optimizing animal intake.

5. Replace Part of the Degradable Protein with Urea

It is possible to replace part of the rumen degradable protein with products containing urea, including slow-release urea. Check with your feed advisor if this is viable in your situation.

In excessive amounts, urea in the diet can reduce dry matter intake and even be toxic to animals. It is important to follow these recommendations for cows:

- Use urea in a supplement for uniform distribution;
- Always follow feedmill constraints to avoid the supplement getting stuck in the truck/silo;
- Check for other urea sources in the ration, as some commercial products already contain it;
- Ideally, combine it with a rapidly fermentable carbohydrate source;
- Adhere to the following maximums for total urea in the cows' ration:
 - 1% of concentrates;
 - 135 g/cow/day;
 - 20% of the total crude protein from urea, including other added non-protein nitrogen sources;
- For replacement animals, do not exceed 0.3 to 0.7% of total dry matter intake.

6. Optimize Microbial Protein Production in the Rumen

Rumen microbes can create high-quality protein from fermentable energy (digestible fiber, starch, sugars, etc.) and rumen degradable nitrogen. With your feed advisor's help, optimize fermentable energy intake while ensuring sufficient degradable nitrogen. Consider the following:

- Ensure optimal grain processing;
- Provide enough sulfur, an essential element for rumen microbes;
- Consider using products containing sugar or soluble fiber, which can provide energy to microbes with a much less pronounced effect on pH than fermentable starch;
- Avoid ruminal acidosis, which would harm microbial protein production.

7. Consider Creating More Feeding Groups

Dividing animals into more feeding groups allows for rations that more precisely meet their needs. This could lead to reduced purchases of protein feeds. Discuss this possibility with your feed advisor.

8. Check the Availability of Alternative Protein Sources

Inquire with your feed advisor about the possibility of using an alternative protein source for your ingredients or supplements. First, evaluate if protein sources are produced on the farm and if you have the facilities necessary for storage and use in the diet. Also, check with your suppliers to see if alternative sources are available. However, many of these sources may also be affected by the strikes. Some examples of alternative protein sources include:

- Canola meal (already in limited supply)
- Corn gluten feed
- Corn gluten meal
- Treated soybean meal
- Soy-based bypass protein
- Distillers dried grains with solubles (DDGS)
- Brewers grains
- Faba beans
- Peas
- Animal by-products
- Etc.

9. Explore the Possibility of Balancing the diet for Amino Acids

Amino acids are the building blocks of proteins digested by animals. With a diet balanced for amino acids, a reduction in protein supply is possible

without compromising cow performance.

Protected amino acids can be used to directly provide cows with the nutrients they need.

The two most important essential amino acids are methionine and lysine. Consult with your feed advisor and ensure you always meet the degradable protein requirements for rumen microbes.

10. Reduce Protein Content in the Ration of Certain Animal Groups

If a reduction in protein content is inevitable, lower it for animals in late or mid-lactation. If possible, maintain sufficient protein levels for dry cows, transition cows, and those in early lactation.

For replacement animals, possibilities for reducing protein content are quite limited due to their significant needs for growth and gestation. Instead, focus on using alternative nitrogen sources (urea, forages, etc.).

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