

# Where's the beef in ration balancing?

Mike Brown for *Progressive Cattleman*

Beef production is the largest segment in American agriculture, adding more than \$60 billion to the U.S. economy.

As beef producers, we strive to produce the best, highest-quality beef for our fellow Americans. But we're equally interested in efficient beef production. Taking advantage of on-farm and opportunity ingredients is imperative to our bottom line. Plus we need to strive to bring out the genetic potential of our herd and maintain cattle nutrition. Lower cost of gain, efficient production and cattle nutrition and genetics can't be separated.

• How do you, or we, as nutritional consultants, best formulate rations to achieve a better cost of gain efficiency, let us use our own forages and ingredients and still maintain animal nutrition?

• Can you control your cost of gain by managing input (ingredients) and output (average daily gain)?

• Should we ration balance for least cost?

• Or balance for best cost while maintaining animal health and production?

Computer-based ration-balancing software is a powerful management tool to develop rations that make sense for our budgets and our cattle.

So how should a ration-balancing program stack up?

## 1 Accurate, extensive biology and feedstuffs database

Look for a program based on sound scientific analyses, containing an extensive database of feedstuffs and their nutrient content. And nutritional models within the software must understand cattle nutrition to accurately predict animal requirements

using a broad range of feeding situations and ingredients. The software also needs to have the capability to incorporate multiple nutritional models as well as profit projection capabilities, so we can directly link ration balancing with profitability opportunities.

One important note: The software company that supports ration balancing programs must periodically update its biology database, incorporate the most current technology and the latest nutrition models to best predict cattle performance.

## 2 Ability to add, adjust and store nutrient values and prices of local feedstuffs

In my role as a beef nutrition consultant, I find the biggest drivers of how cost-effective an ingredient may be are the energy and protein content of an ingredient.

We must effectively use energy values from on-farm feedstuffs and take advantage of "ingredient fire sales" to stock feedstuff inventories. Flexibility in the ration-balancing program accommodates ingredients and nutrient values specific to your own rations or feeding situation.

Ration balancing can help us make informed buying and management decisions by comparing the ingredient energy content or production advantage versus the relative cost. We can fine-tune feeding alternatives and the cost-effectiveness related to those ingredients. I use a ration-balancing program that allows me to develop multiple rations, set minimums and maximums for both ingredients and nutrients and make comparisons of nutrients, ingredients and ration costs.

## 3 Ability to predict cattle performance

I like a great feedstuff bargain. But the bargain isn't a bargain if the ingredient makes no contribution to my client's herd performance, particularly if nutrition is at risk. The ration-balancing process is the relative balance between the cost of nutrients and calorie needs and the level of productivity obtained.

Cattle performance, and ultimately meeting the genetic potential of our cattle, depends on using cost-effective ingredients that also maintain good nutrition. I depend on the models within my ration-balancing software to accurately predict impact on cattle performance.

## 4 Ability to compare rations and costs

When I can evaluate a variety of ingredients and forages incorporated into feeding formulas, I help my client make better buying, feeding and management decisions. Ration-balancing software provides a side-by-side comparison of the original ration and the ration using an alternate feedstuff. As a cattleman, I can make a ration comparison before I buy the ingredient, giving me the opportunity to decide if the ingredient really works in my nutrition program.

A software program with least-cost comparisons lets me immediately identify how feedstuffs fit in my client's cost analysis. The cattleman then has the ability to weigh the value of the cost advantage versus the actual nutritional value and its effect on production.

## 5 Technical support

Ration balancing is a manual operation that's only as good as the user's skills and the company behind the software. Users of ration-



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balancing software should have some advanced knowledge of cattle nutrition. The software company should have knowledgeable, accessible technical support. The combination of those, along with good common cow sense, will help you, and your nutritional consultant, use the software to its fullest advantage.

## What's the most useful feature of a ration-balancing program?

I like the ability to connect a ration formulation with an expected level of productivity and other production costs to see the larger picture of potential ingredient changes.

Ration-balancing programs help us as cattle producers get the big picture on how ingredients change our costs, production and cattle nutrition in our own feeding operations. Ration balancing also provides insight into how opportunity ingredients and on-farm feedstuffs can, or cannot, change our cost of gain.

I advise clients to plan their nutritional program, re-evaluate it regularly and make short-term adjustments as necessary or as affected by external conditions, like cold stress and shelter conditions. As with all nutritional management decisions, never discount the importance of your own nutritional knowledge, special handling or storage characteristics of feeds and animal observation.

Ration balancing is my tool to counsel cattlemen to better buying and feeding decisions. After all, better ingredient buying and more efficient cattle feeding means a better beef product. 

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