BABY DOLL NUTRITION NEWS

Nutrition Series Number 2 **Single Issue Price $4.00**

Least-Cost Formulation - Penny Wise and Pound Foolish

Least-Cost Formulation is good for feed companies and bad for livestock producers. **BABY DOLL products are not least-cost formulated** because we understand the true and hidden costs to livestock producers. Here's how least-cost formulation works and what the real costs are to the beef producer.

Super Computer - Super Saving or Super Draining?

When a feed product is designed and formulated, most feed companies utilize a computer formulation system that helps the nutritionist quickly formulate the product. Minimum and maximum amounts of ingredients, such as alfalfa meal, urea, soybean meal, salt, and others are entered into the computer. Nutrient concentrations, both maximum and minimum amounts are also entered. These would include different types of protein, fiber fractions, energy density, minerals, vitamins, and feed medications. Then, the computer determines the formula which meets the parameters with the minimum total cost based on the cost of each ingredient at that time. For example, if soybean meal costs $250/ton and has 44% crude protein and cottonseed meal costs $160/ton and has 41% crude protein, the computer would "choose" cottonseed meal, since the cost of protein with soybean meal is obviously more than the cost of protein with cottonseed meal. Nearly all feed formulations are developed using a computer formulation system based on this principle. Without the computer feed formulation would take a tremendous amount of time.

The computer allows us to make frequent changes strictly to save money on the price of feed - - least-cost formulation. Depending on the feed company and the feed product, formulas may be changed monthly, weekly, or daily. If the price of alfalfa meal goes up and the price of soybean hulls goes down, the computer would replace alfalfa meal with soybean hulls. The price of the feed would go down, the color of the pellets would change from green to brown, and everyone would be happy, right?

What's wrong with least-cost formulation?

Unfortunately, not everyone would be happy with the changes in the example above. For one, the pellet mill operator will not be happy with the changes because a series of calibrations (temperature, steam, conditioning time) during production will be needed before a quality pellet can be made consistently.

The quality control manager won't be happy with the amount of fines in the feed due to formula changes.

The cattle feeder won't happy because the green pellets he bought last week have been replaced with brown pellets with fines this week, even though the bag and tag look the same.

Most importantly, the cattle won't be happy. Even though the computer says the pellets are the same (within the parameters given by the nutritionist), the cattle and producer agree that something has changed. Cattle need some time to adjust to changes in the ration. Even a seemingly small change can set the cattle back a few days. Research conducted at New Mexico State University showed that inconsistency in feed intake could reduce average daily gain from 3.23 down to 3.02 lbs/day. Feed required per pound of gain (F/G) increased from 5.33 up to 5.70 lbs.

Changing the feed formula makes the banker unhappy, too. Let's assume it takes only one day longer to feed the cattle because of the change in feed. If complete feed costs $120/ton in the bunk and yardage is $0.35/day, the cost for one day longer in the feedlot is $0.35 in yardage and $0.90 in additonal feed for maintenance/head. The cost to the cattle feeder for the least-cost formula change is $1.25/head. In reality, it may take up to 3 additional days on feed.

Who does least-cost formulation help?

Feed companies that practice frequent least-cost formulation claim it saves the producer money. Many feed companies change feed formulas for as little as $1.00/ton difference in formula ingredient cost.

How much is $1.00/ton worth per head of cattle? If you feed 2 lbs/head of a supplement and the formula is changed in the middle of a 150 day feeding period, the savings in feed cost is 7½ ¢ per head. Let's do the math here. It cost the producer $1.25 per head in poorer performance to try and save 7½ ¢ per head in feed cost!

The tragedy is that most feed companies print price lists a week ahead - the same time as they make

From the code of the old west:

You don't need decorated words to make your meanin' clear.
Say it plain and save some breath for breathin'.

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formula changes. In reality, the week of the change, the new least-cost formula saves the feed company $1.00 per ton and the cattle feeder gives the feed company the 7½ ¢ per head!

Compare Feed Tags

How can you tell what's in the feed? The first sign of least-cost formulated products is "collective ingredient terms". Most feed companies can't tell you what's in their products by looking at the feed tags because they change the formula with least-cost formulation.

To avoid changing feed tags, feed companies use collective ingredient terms such as: Plant Protein Products, Processed Grain By-Products, Animal Protein Products, Forage Products.

What are these ingredients? Here are the AAFCO definitions of each collective term:

- **Animal Protein Products -** Dried Animal Blood, Animal By-Product Meal, Buttermilk (condensed or dried), Casein, Dried hydrolyzed Casein, Cheese Rind, Crab Meal, Fish By-Products, Fish Liver & Glandular Meal, Fish Meal, Fish Protein Concentrate, Fish Residue Meal, Fish Solubles (condensed or dried), Fleshings Hydrolysate, Hydrolyzed Hair, Hydrolyzed Leather Meal, Hydrolyzed Poultry By-Product Aggregate, Hydrolyzed Poultry Feathers, Leather Hydrolyzate, Meat & Bone Meal, Meat & Bone Tankage, Meat Meal, Meat Meal Tankage, Dried Meat Solubles, Dried Lactalbumin, Dried Whole Milk, Dried Milk Protein, Poultry By-Products, Poultry By-Product Meal, Poultry Hatchery By-Products, Shrimp Meal, Condensed Skimmed Milk, Condensed Cultured Skimmed Milk, Dried Skimmed Milk, Dried Cultured Skimmed Milk, Condensed Whey, Condensed Cultured Whey, Dried Whey, Hydrolyzed Whey (condensed or dried), Whey-Product (condensed or dried), Whey Solubles (condensed or dried).
- **Forage Products -** Alfalfa Meal (dehydrated or sun-cured), Ground Alfalfa Hay, Costal Bermudagrass Hay, Dehydrated Corn Plant, Dehydrated Silage, Flax Plant Product, Ground Grass, Lespedeza Meal, Lespedeza Stem Meal, Ground Soybean Hay.
- **Grain Products -** Barley, Corn, Grain Sorghum, Mixed Feed Oats, Oats, Triticale, Wheat, Rice (ground brown, ground paddy, ground rough, broken, or chipped), Brewers Rice, Rye.
- **Plant Protein Products -** Algae Meal, Dried Beans, Canola Meal, Coconut Meal, Cottonseed Flakes, Cottonseed Cake, Cottonseed Meal (low gossypol, whole pressed), Guar Meal, Linseed Meal, Peanut Meal, Peas, Rapeseed Meal, Safflower Meal, Soy Protein Concentrate, Soybean Feed, Ground Soybeans, Soybean Meal, Heat Processed Soybeans, Soy Flour, Soy Grits, Sunflower Meal, Yeast (active dry, brewers, culture, dried, primary, torula).
- **Processed Grain By-Products -** Aspirated Grain Fractions, Brewers Dried Grains, Buckwheat Middlings, Condensed Distillers Solubles, Condensed Fermented Corn Extractives w/ Germ Meal Bran, Corn Bran, Corn Flour, Corn Germ Meal, Corn Gluten Feed, Corn Gluten Meal, Corn Grits, Corn Distillers Dried Grains, Corn Distillers Dried Grains/ Solubles, Corn Distillers Dried Solubles, Corn Flour, Grain Sorghum Germ Cake, Grain Sorghum Grits, Grain Sorghum Mill Feed, Feeding Oat Meal, Pearl Barley By-Products, Peanut Skins, Rice Bran, Rice Polishings, Rye Middlings, Sorghum Grain Flour (gelatinized, partially gelatinized, partially aspirated), Wheat Bran, Wheat Flour, Wheat Shorts, Wheat Germ Meal, Wheat Middlings, Wheat Mill Run, Wheat Red Dog.
- **Roughage Products -** Ground Almond Hulls, Dried Apple Pectin Pulp, Dried Apple Pomace, Bagasse, Barley Hulls, Barley Mill By-Product, Dried Beet Pulp, Buckwheat Hulls, Dried Citrus Meal, Dried Citrus Pulp, Citrus Seed Meal, Corn Cob Fractions Cottonseed Hulls, Flax Straw By-Products, Husks, Malt Hulls, Oat Mill By-Product, Oat Hulls, Peanut Hulls, Rice Hulls, Rye Mill Run, Soybean Hulls, Soybean Mill Feed, Soybean Mill Run, Sunflower Hulls, Ground Straw, Dried Tomato Pomace.

The BABY DOLL WAY: Never Least Cost... No Feed Tag Secrets.

All BABY DOLL products list the actual feed ingredients used in each formulation from the highest inclusion ingredients to the lowest inclusion ingredients. Each ingredient is used for a specific purpose. Only through careful ingredient selection, scientific formulation, research and development, and listening to our customers have we developed the finest products available to the cattle feeder. Feed ingredient prices go up and down with the market fluctuations during the year. As a result, our feed prices fluctuate, too. We design our feed products for optimum nutrition and make formula changes only for nutritional reasons. We do not least-cost formulate because we know the cost of needlessly changing feed formulas.

Unlike least cost formulas, we want you to make informed choices. We guarantee the following nutrients **beyond** AAFCO requirements: Zinc (min), Manganese (min.), Iron (min.), Copper (min.), Selenium (min.), Vitamin D3 (min.), and Vitamin E (min.) .

And, we guarantee levels of these nutrients as required by AAFCO (Association of American Feed Control Officials): Crude Protein (min.), Equivalent Crude Protein from Non-Protein Nitrogen sources (max.), Crude Fat (min.), Crude Fiber (max.), Calcium (max. and min.), Phosphorus (min.), Salt (max. and min.), Potassium (min.), and Vitamin A (min.).

BABY DOLL products are superior quite simply because **Quality Is Our First Ingredient**.