

SCIENCE IN THE BARNYARD

Feed formulations provide essential nutrients with little excess

One of the toughest battles for Confined Animal Feeding Operations (CAFOs) remains the one for public perception. Feeding animals a science-based formulation ensures the animals are absorbing the bulk of the nutrients so less of the nutrients are excreted into the environment in the manure. The effort that goes into formulating feed and feeding low-nutrient excretion (LNE) diets are not topics that generally make the news. Instead, media reports typically blame the phosphorus in animal manure for water pollution.

While no one denies that phosphorus (P) can be harmful to an aquatic eco-system or that excess phosphorus in land-applied manure can run off during a heavy rainfall, it is important the public realizes that animal nutrition has become a precise science and that animal producers do not over-feed important nutrients, such as phosphorus, because they want to keep costs down and

to be good stewards of the land.

"We're not motivated to overfeed P," said Dr. Terry Coffey, president, production operations of Murphy-Brown, LLC, and a panelist at PotashCorp's "The Phosphorus Cycle in the Feed Industry" symposium.

"In fact, we're motivated to learn more about the animals' requirements and the availability of P in feedstuffs and be able to refine that more precisely with regard to avoiding excess," Coffey said.

Coffey is not alone in this evaluation of phosphorus use in animal feed formulations.

"One of the most expensive nutrients in a feed formulation is phosphorus, which is supplied as a feed-grade calcium phosphate," said Dr. Steve Auman, Business Development Director for Feed Phosphates. "Nutritionists will take pains to limit the inclusion rate of phosphate to only the minimum amount needed to meet the animals' requirements, which avoids the high cost of wasting this essential nutrient."

Furthermore, there is no room for excess nutrients in current formulations. The basic pig or chicken diet is generally composed of corn and soybean meal, which makes up

75 to 90 percent of the complete feed, while the remaining 10 to 25 percent might include animal or plant co-products, vitamin and mineral supplements, and at times preventative or therapeutic medications.

When it comes right down to it, livestock producers care very much about what their animals are fed, because the well being of their animals has a dramatic effect on the economic outcomes of animal agriculture enterprises. A complete, balanced nutrition program combined with excellent housing and care of the animals is key to maximizing production of meat, milk and eggs at the most optimal cost.