The Bottom Line: Are High Milk Yield and Minimal Nutrient Excretion Mutually Exclusive?

The feeding strategies just presented in this lesson provide a starting point for formulating diets that minimize nutrient excretion into the environment but still meet the requirements for high levels of milk production. As computer programs become more sophisticated and our knowledge of cow nutrient requirements becomes more precise, we will be able to do a better job of feeding cows for high levels of performance without simply overfeeding major nutrients. Computer programs, such as the Cornell Net Carbohydrate and Protein Model©, Spartan Dairy Ration Evaluator©, the Ohio Dairy Ration Program©, and the latest Dairy NRC (2001) model are four examples of computer software that allow nutritionists to accurately formulate diets that meet, without exceeding, the cow's nutrient requirements and provide nutrients in the proper ratios and amounts for the cow's most efficient use. Other software packages are available that will accomplish the same objective.

So, the answer is, "No, high levels of dairy productivity and minimal N, P, and K excretion are not mutually exclusive." A dairy producer can feed for high performance and still minimize any negative impact of nutrient excretion on the environment. Ensuring cow comfort, maximizing feed intake, testing all forages and major feed ingredients, properly formulating rations, using soil tests, and determining proper soil fertilization will all lead to a more environmentally sound feeding program. Properly formulated rations will not only support high production levels but will also minimize nutrient excretion into the environment.

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