

Kentucky Equine Research Holds Annual Nutrition Conference

A primary goal of Kentucky Equine Research (KER) is to provide educational opportunities for people interested in the proper care and nutrition of horses and ponies. One way that KER achieves this is through its annual nutrition conference. Held October 18-19 in Lexington, Kentucky, this year's conference featured a mixed bag of topics.

The first day of the conference was devoted to an issue that is important to equine nutritionists and feed manufacturers worldwide: the revision of a reference book titled *Nutrient Requirements of Horses*. First published in 1949 by the National Research Council (NRC), the book has undergone four revisions, the last of which occurred in 1989. The next version is scheduled to be published in 2005. On hand to speak about the process of revision were Dr. Laurie Lawrence, professor of animal sciences at the University of Kentucky and the chair of the committee to revise *Nutrient Requirements of Horses*, and Dr. Randy Robbins, chairman of the Specialty Feeds Committee of the American Feed Industry Association.

Lawrence and Robbins provided insight into how the NRC selected the committee and the methods by which that committee will gather relevant information for the book.

KER has a considerable, vested interest in the content of this book, as it has produced a sizeable

collection of cutting-edge research over the last 15 years. While much of this research validates information previously published, some studies have revealed surprising results including NRC recommendations that may be suboptimal for some horses. Though KER has incorporated these findings into feed formulations for its Team Members, portions of the research have not received widespread use.

To this end, Dr. Joe Pagan talked first about the distinction between nutrient requirements and recommendations. *Nutrient Requirements of Horses* states that its values represent the minimum amounts necessary to sustain normal health, production, and performance of horses. But by its own admission, *Nutrient Requirements of Horses* concedes that ultimately horses should be fed as individuals because certain factors may alter requirements (including, but not limited to, health of the animal, climatic and environmental conditions, and variations in nutrient availability). Though KER developed its own recommendations intended to account for several of these variables that affect nutrient adequacy, they are too general to be used in every situation. Therefore, more specific recommendations are under development by KER for different breeds, disciplines, geographic regions, and pathological conditions.

Paul Sirois, the manager of Dairy One Forage Laboratory in Ithaca, New York, added his perspective. As a commercial testing facility, Dairy One Forage Laboratory has access to thousands of nutrient analyses on several hays, both grasses and legumes. In 2003 the laboratory performed tests on over 120,000 samples.

Sirois stressed the need to use large collections of data when creating reference tables in the new edition of *Nutrient Requirements of Horses*. Reference tables include the nutrient composition of most raw feedstuffs fed to horses. Nutritionists use these tables when formulating concentrates and rations, so their accuracy is imperative.

As an example, Sirois shared this comparison. To come up with the reference values for three grass hays (late-bloom orchard grass, full-bloom timothy, and mid-bloom timothy), the NRC used analyses from a total of 36 samples. Dairy One Forage

KER employee Whitney Jones speaks with conference attendees during a break.



Catherine Bishop

Laboratory's database for grass hay analysis in a one-year period contained over 15,000 samples. In his conclusion, Sirois emphasized the point that reference tables for forages should be built on large numbers of observations so the nutritional content of forages is accurately represented.

Mike Lennox, formulations expert for KER, was then responsible for explaining how a nutritionist builds a concentrate based on the requirements or recommendations suggested by the NRC or KER and the nutrient content of common forages. Nutrients not supplied by the forage must be provided by the concentrate. But, as Lennox explained, this is not as easy as it sounds.

For instance, *Nutrient Requirements of Horses* does not include values for starch or fat, both of which are important sources of energy in diet formulation.

Dr. Peter Huntington spoke of the challenges faced by equine nutritionists who live outside the United States. Ingredients commonly used to supply horses with energy and other nutrients vary from country to country. As such, *Nutrient Requirements of Horses* is used differently among international nutritionists. Unfortunately, not all ingredients used in the feeding of horses worldwide are mentioned in the book, so formulations must be tweaked based on practical experience.

Once feeds are formulated and allowances are made for varying ingredients, the end products are not always suitable for all horses. Dr. Kathleen Crandell, a KER nutritionist, reviewed formulations for horses with medical problems that are influenced by nutrition, such as muscle disorders or insulin sensitivity.

At the conclusion of the day, an answer and question forum regarding the revision of *Nutrient Requirements of Horses* was held.

In order to gather input from conference attendees—an array of individuals including feed manufacturers, nutri-



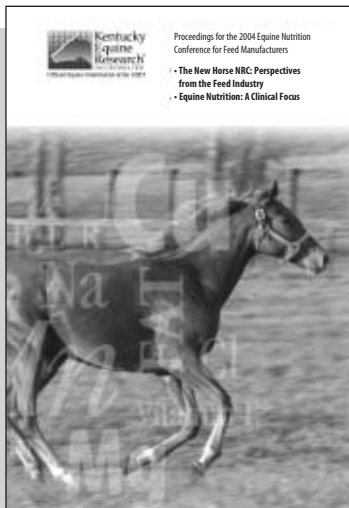
Drs. Joe Pagan and Laurie Lawrence discuss revisions to "Nutrient Requirements of Horses."

Catherine Bishop

tionists, academicians, veterinarians, and horse owners—Lawrence and KER nutritionists put together an extensive survey that asked respondents several questions about current NRC recommendations. Results of this survey will be important to Lawrence and other committee members in deciding what to include in the new edition.

The second day of the conference focused on equine veterinary and management issues. Dr. Dawn Logas, a practitioner from Florida, spoke on food allergies in the horse, and Dr. Craig Reinemeyer of East Tennessee Clinical Research, Inc., presented novel approaches to parasite control. Dr. Ken Hinchcliff, a researcher at The Ohio State University, gave an overview of exercise-induced pulmonary hemorrhage.

Nutritional causes of certain behaviors was covered in-depth by Dr. Cindy McCall of Auburn University, and Dr. Ed Kane, a senior nutritionist at Stuart Products, reviewed the importance of vitamin E in the diets of all horses. ☺



Proceedings for the 2004 Equine Nutrition Conference for Feed Manufacturers

- The New Horse NRC: Perspectives from the Feed Industry
- Equine Nutrition: A Clinical Focus

Missed the Conference?

If you were unable to attend the Kentucky Equine Research Nutrition Conference for Feed Manufacturers, you can still get every bit of information presented by purchasing the official proceedings. This 140-page booklet is spiral bound and contains an article written by each invited speaker. Many of the articles contain valuable reference lists. One incredibly useful feature of this booklet is the comprehensive list of all papers that have been presented at KER nutrition conferences since 1991. A brief summary for each article explains its content and relevance, and bibliographical information lists the author and location of the article. All articles are found in their entirety in one of three volumes, *Advances in Equine Nutrition I, II, or III*. Proceedings are available for \$35. To place an order, contact Kentucky Equine Research at 1-800-772-1988.



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