

New Staff Members Explore Relationship Between Nutrition and Performance



The stated goals of Kentucky Equine Research are to advance the horse industry's knowledge of equine nutrition and exercise physiology, and then to apply this knowledge to produce healthier, more athletic horses. These efforts will be enhanced now that a new division manager, a veterinarian, and a research intern have been added to the staff. Melissa Fryer, Dr. Karen Hooks, and Nicola Crowley bring years of professional training and valuable experience to the KER team.

Over its 20-year history, the company has conducted scores of research projects designed to uncover information and to pass the knowledge on to those who own, train, and work with horses.

Many studies were designed to help in building the best feed management strategies. How long before a period of strenuous exercise should performance horses be fed grain meals? How much grain can safely be fed at one time? How can an intensely worked horse ingest enough energy to fuel exercise without risking digestive or metabolic problems?

Other studies have focused attention on exercise physiology topics. When two horses have identical training programs, why does one horse suffer severe muscle cramps during exercise, while its stablemate doesn't? Compared to a high-starch meal, will a high-fat diet allow a horse to work for longer periods of time with a smaller build-up of metabolic waste? How much difference is there in a

Melissa Fryer, Dr. Karen Hooks, and Nicola Crowley say "good morning" to Flirt, a Quarter Horse mare with polysaccharide storage myopathy.



Jeff Rogers

Catherine Bishop

Thoroughbred sprinter's physiological response to exercise compared to an Arabian horse completing an endurance race?

Not surprisingly, the critical connection between diet and exercise emerged more clearly with the results of every study. KER president Dr. Joe Pagan commented, "We know that nutrition strongly influences every aspect of a horse's life. Over the years, we've learned a lot about how to modify equine diets to relieve exercise-induced muscle conditions. A new focus of the company is to find ways of preventing, rather than treating, nutrition-related problems so that horses can perform to their maximum abilities."

Melissa Fryer is manager of KERx Special Needs Nutrition, a divi-

sion designed to extend the range of KER's services by combining the individual strengths of veterinarians and nutritionists in order to optimize equine wellness. A Versailles, Kentucky native, Melissa is not new to KER, having worked as a summer intern during her high school years. Her present position, however, has a much broader scope, encompassing product development and marketing as well as the dissemination of nutritional information to veterinarians and horse owners.

"Nutrition is increasingly on the minds of veterinarians," she explained. "They are finding that nutrition is related to many medical conditions such as tying-up, hindgut acidosis, and insulin

Moving On

As new personnel moved in, Tiffany Dobbs, a research intern from Queensland, Australia moved on. The year she spent at KER was packed with activities and adventures as she made use of the many resources in nearby Lexington, heart of the Thoroughbred world. "The industry here is just remarkable," she said. "KER offers many opportunities, but so does the entire Lexington area. There were so many resources available here to expand my experience!" Exploring the region, Tiffany made connections with a number of professionals who welcomed her skills and enthusiasm. She spent some time assisting with studies of genetics, reproduction, and nutrition at the Gluck Equine Research Center at the University of Kentucky. Training, riding, and showing third-level dressage horses at a nearby stable took up more hours, and whatever free time was left over was spent traveling to nearby points of interest.

Armed with degrees in applied animal science with special study in insulin resistance from the University of Queensland, Tiffany had first applied to work at KER's Australian office, but when she found out about the research intern program, she jumped at the chance to spend a year in the U.S. At the end of her stay, she commented on her experience: "I learned you can never stress nutrition enough. I really enjoyed working with Joe Pagan and Karen Hooks on insulin resistance research. And Stephanie Valberg was very knowledgeable and wonderful to work with."

What's on tap now for Tiffany? After some travel, she'll return to the University of Queensland to work toward a doctorate. She's especially interested in insulin resistance and OCD, and expects to spend about three years earning her degree before looking for a position in the field of equine nutrition.

Australian native Tiffany Dobbs recently finished a year as a KER research intern. Her favorite barn buddy was Pepe, a four-year-old Thoroughbred gelding.



Catherine Bishop

resistance that are seen on a daily basis. KERx is a resource when owners have specific questions about feeding their horses. If veterinarians need more information on nutrition, they can seek us out for some input, or direct their clients to us. Our goal is to provide education so clients can take the best care of their horses."

KERx offers a range of products and services to veterinarians and horse owners, and Melissa has been instrumental in getting the program started. Helping to design the Web site (www.kerx.com), marketing the new division through trade shows and meetings, and defining objectives for distributors are all within the scope of her position. Melissa's education (degree in marketing) and work experience (management, financial planning, and sales) have given her solid business skills, while her strong equine background (riding and showing hunters, member of hunt-seat and Western collegiate equestrian teams, hunter show judge) is a benefit when she talks to anyone in the horse business. However, no one person can launch a concept like KERx Special Needs Nutrition, and Melissa works closely with other staff members to achieve the new division's goals.

Dr. Karen Hooks, a veterinarian from Arkansas, joined KER in the fall of 2007. Visiting her grandfather's ponies as a young child, Karen developed an interest in learning how to provide care and healing to horses and other animals. After the ponies came a Quarter Horse, then a foxtrotter, and then dressage and jumping on a leased Thoroughbred. Following veterinary school, she bought a Thoroughbred/Clydesdale cross gelding, and most recently became the owner of a two-year-old Hanoverian. In addition to this hands-on experience with many different breeds and types of horses, Karen has studied veterinary chiropractic and acupuncture therapies, and lists years of experience in clinical practice, farm calls, and emergency medicine and surgery.

Looking for a change, she was drawn to Kentucky Equine Research. "I knew KER conducted excellent research and offered good products for the benefit of the animals," she explained. "Also, I like the fact that the company looks toward preventing health problems rather than simply fixing them."


In addition to providing routine veterinary care for the more than 30 horses in the KER herd, Karen's work will focus on research and product development. One of her first assignments involved the KERx Wellness Program, in which a team evaluates horses in a particular stable, identifying specific dietary needs and health risks for each animal based on riding discipline, exercise schedule, and other factors. "Every horse's profile will be unique," she said. "If you look at a dressage horse, a Grand Prix jumper, and a young racehorse, their requirements for various nutrients will be slightly different. I'll look at dietary parameters, and also determine each horse's risk for



particular injuries and metabolic problems based on the demands of training and performance." With this information, the KERx staff can design a Wellness Supplement containing all the ingredients needed to support health and exercise for each individual.

Assisting with the Wellness Program is Nicola Crowley, who recently finished a year working directly with the KER horses before accepting a position as a research fellow. Nicola, who came to the U.S. from Liverpool, England, is currently working on the nutritional audits that precede Wellness Supplement formulation. She's also researching behavioral issues with performance horses, and will help to design studies evaluating the effects of diet on behavior. In time, this effort may lead to products that can allow horses to work more calmly, eliminating stress and enhancing overall well-being.

An eventing enthusiast who rides and competes regularly, Nicola appreciates the importance of groundwork and preparation in both riding and research. "I went to a meeting the other day to discuss product development," she said. "It was exciting to see a product being built around the results of the research data I helped collect last year when I worked with the horses. When you're doing barn chores every day, maybe cleaning stalls or bathing horses when they come off the treadmill, it's hard to keep in mind that you're actually participating in a study that could influence the design of products and supplements in the future."

If these efforts can someday eliminate problems like insulin resistance or severe muscle cramping in equine athletes, owners will see their horses staying healthier and performing better. 



Reprint Courtesy of Kentucky Equine Research, Inc.

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