

Kiwi Scientist Joins Kentucky Equine Research

There's a new face at the table during staff meetings at Kentucky Equine Research (KER). Clarissa Brown-Douglas, a native of New Zealand, has recently joined employees from Canada, Ireland, Argentina, and various parts of the United States. Clarissa will spend the next year working as a research fellow, pursuing studies in the area of growth and development of young horses.

Clarissa grew up in Wellington, New Zealand's capital city, in a family where no one else initially shared her strong interest in horses. However, in the way of horse-loving little girls the world over, she persuaded her parents to buy her a pony when she was eight years old. Years of

ate, earning this degree in 2004 for work related to puberty and growth in young Thoroughbreds. During this period she worked with Professor Elwyn Firth, a world-renowned expert on equine growth and development.

"My study looked at several management factors and how they affected young horses," she said. "In New Zealand, there is superior pasture available. Young horses tend to stay out more, and the foals and lactating mares are also given somewhat less grain than in the United States. One phase of my work was evaluating weight gain among foals raised only on pasture. Compared to young horses in the United States, the horses I studied were able to achieve the same weights, and they had no skeletal deficiencies."

Because of the difference in seasons in the Southern Hemisphere, the breeding schedule begins in September, and foals turn a year old on August 1. This created a problem for breeders who sent young horses to North American sales, where their yearlings were less mature than local youngsters. Breeders were reluctant to change their breeding schedule to produce foals in February and March because of fears that the foals would not grow as well during the southern winter months. However, a comparison of statistics did not bear this out. According to Clarissa's findings, early growth was related more to the mare's milk production than to season, and growth curves were nearly identical for fall and spring foals. In addition, fall-born foals weaned in the spring showed better rates of post-weaning gain than those born in spring and weaned in the fall, possibly because spring pastures offer more nutrition than those available in late fall and winter.

Old ideas die hard, though, and new discoveries and trends are often quite slow to be accepted by an industry that relies heavily on traditional management practices. As a young, female, city-raised scientist, Clarissa anticipated a credibility issue if she tried to advise experienced horse breeders on the latest management practices. To overcome this gap, she decided to take a break from the academic setting and gain more practical, hands-on skills. First, though, it was time for some fun!

"I'd spent a lot of years studying, and I was ready to do something completely different," she said. She accepted a job in Aspen, Colorado where she spent several months teaching skiing, waiting tables, and working at a Western riding stable before gravitating back to the Thoroughbred industry. A job at Lane's End Farm in Versailles, Kentucky was the next stop. Clarissa arrived in time to help prepare young horses for the fall sales, a labor-intensive program that involves careful nutrition, exercise regimens, and



Pony Club involvement followed, and her parents eventually became avid supporters of their daughter's equine activities as Clarissa moved toward taller horses and eventing competitions.

As she entered Massey University to study equine science, time constraints due to increased academic demands led her to give up eventing in favor of foxhunting. "In New Zealand we hunt hares, not foxes, but it's still called foxhunting," she explained. "My horse had been a steeplechaser, and he was a wonderful hunter, very bold and sure-footed." She graduated with honors in 2000 and then pursued a doctor-

expert grooming. Again, different practices between the Southern and Northern Hemispheres became obvious.

"Breeders in New Zealand mostly hand-walk the young horses," she said, "although this is changing somewhat. In Kentucky, more farms combine hand-walking with mechanical walkers, treadmills, equine swimming pools, and other methods to condition their young horses." Having done extensive reading and writing about breeding farm management in Kentucky, she enjoyed the chance to see and participate in the everyday workings of a large equine operation, especially the attention paid to each young horse's development.

"If you talk to a farmer who raises hogs or cattle, he can tell you the weight of every animal in the pen," Clarissa said. "Horse breeders have only recently realized the importance of slow, steady growth. KER's Gro-Trac program allows a manager to keep a detailed record of weight for each foal. If an individual is getting too heavy, or is lagging behind his peers, the manager can take steps to correct the problem in its early stages."

Armed with both academic and practical experience, Clarissa was ready to put her knowledge into action. "I'm interested in closing the gap between research and farm management," she explained. "The goal should be to produce healthy horses by taking research findings and applying them at the farm level." She came to her job at KER with hopes of pursuing this goal.

More than a decade ago, KER began to weigh and measure thousands of Thoroughbred foals from dozens of Bluegrass farms throughout the first six to eighteen months of life. The project has continued to expand, and figures now pour in for a large number of foals overseas as well as in Kentucky. These measurements have been used to create an enormous database from which average growth parameters have been derived for various subsets: colts, fillies, all foals, all foals on a particular farm, all March foals, and so on. Simply keeping up with the volume of figures is a daunting task, but Clarissa is happy to take on this chore because she can anticipate the myriad uses to which the figures can be applied.

"We don't know exactly what correlations we may see," she explained, "but we'll be looking for a number of trends. There may be relationships between growth figures and racing success, or a tendency for a certain sire line to produce foals with a larger or smaller incidence of orthopedic problems."

Numerous factors influence a racehorse's eventual success, many of which are out of a breeder's or trainer's control. Because nutrition is one aspect of horse care that can be very carefully planned, recommendations arising from this research may lead to significant changes in the way young horses are managed. This, in turn, might help horses stay sound, race successfully for more years, and

Looking for an Internship? KER Wants You

Internship at Kentucky Equine Research (KER) is offered to university students or recent graduates who want to spend a year at the research farm, working daily with the horses and participating in every aspect of equine nutrition and exercise physiology studies. It's a chance to gain experience, learn skills, and become acquainted with professionals in a wide range of industry positions.


Requirements for consideration include:

- Strong academic background
- Extensive hands-on experience with horses of all temperaments
- Attention to detail, in both barn and laboratory settings

KER provides a small salary as well as housing for interns and covers the expenses involved in getting visas for successful foreign applicants. On days off work, KER's location near Lexington in central Kentucky is ideal for interfacing with many aspects of the horse community.

Are you ready to spend a year working, learning, and meeting top names in the industry? If you are, go to www.ker.com, select the North American site from the "Site Map" options, click on "About KER," and then choose "Career Opportunities."

perhaps go on to second careers as jumpers, eventers, or pleasure horses.

"Right now we're in the earliest stages of this project," Clarissa said. "We haven't even thought of all the questions we want to ask, because each factor we consider seems to generate about five more possibilities!" Still, she expects to have preliminary results in time for a presentation at KER's fall conference in October of 2006. The conference will center around growth and development of young horses, and breeders and veterinarians who attend will hear talks on the relationship between growth and disease. "There's been a lot of recent research in Germany on the heritability of developmental orthopedic disease in warmblood breeds, and we'll probably try to include that in our topics," Clarissa added. "As we learn more, the aim will always be to let professionals in the industry know how to apply the findings." 



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