NEWS UPDATE

EQUINE SCIENCE CENTER

"Better Horse Care Through Research and Education"

FALL 2010

Help Us Celebrate Our 10th Anniversary!

There are plenty of reasons to celebrate as the Equine Science Center nears it tenth anniversary in 2011. Within the short course of a decade, the Center has risen to prominent status locally and globally, and is recognized as a leader in equine research and education. The Center is a hub of discovery, learning, and outreach whose sole focus and concentration is the health and well-being of horses. The work of the Center continues to have a measurable and direct impact on horses and the horse industry, irrespective of discipline and breed. As the Equine Science Center outlines its vision for the next ten years and beyond, it is important to recognize a few of its innumerable accomplishments which serve as the catalyst for its future success.

"The idea of the Equine Science Center began in 1980 with a vision, a hammer, and $5,000," said Karyn Malinowski, director of the Center. "I inherited the Ryders Lane farm, which formerly housed black Angus cows; I clearly recall being up to my knees in cow manure and wondering if I would have the ability and resolve to create a world-class equine science program, literally from the manure-covered ground up." Determined in her conviction, Malinowski added, "I knew that if I stayed the course, I would see the vision for what would become the Rutgers Equine Science Center come to fruition."

Malinowski's tenacity and hard work was rewarded with a significant financial allocation; one that she regards as the pinnacle of her career at the Equine Science Center. In 1992, the New Jersey Legislature allotted $1.2 million in uncashed parimutuel ticket winnings to the New Jersey Agricultural Experiment Station – of which $300,000 went directly to the Equine Science Center. The funds were awarded annually to support strategic equine initiatives, scientific research, and the facilities operated by the Center.

In 2001, Rutgers University's Board of Governors recognized the excellent science, teaching and extension components of the equine studies program by declaring the Rutgers Equine Science Center an official center of the university.

"For more than 20 years, my colleagues and I have been developing the Equine Science Center as the primary source for everything equine. I felt a tremendous sense of pride and accomplishment when the Center received the official recognition from the university," said Malinowski.

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RUTGERS
New Jersey Agricultural Experiment Station

EQUINE SCIENCE CENTER AROUND THE WORLD (PAGE 6)

From the Clubhouse

Photo by Nick Romanenko

Greetings Friends,

As the Equine Science Center welcomes the new academic year, I'd like to reflect back over the past few months and share details of upcoming Center activity.

The Center hosted a book signing event in late May featuring New York Times Best Selling author, Susan Richards. The event, which directly benefitted the Center, was a tremendous success and drew attendees from the tri-state area and even Delaware. Many thanks to the event sponsors: Sandy Denarski; Elizabeth Durkin; Durkin & Durkin, LLC; and Johnson & Johnson. To stay apprised of upcoming Center events, please visit the Events page of our website, esc.rutgers.edu.

For most, the thought of summer evokes images of sun, surf, and sand. For educators, the summer months provide the perfect opportunity for professional development. Faculty associated with the Center from the Department of Animal Sciences, which include Kenneth McKeever, Sarah Ralston, Carey Williams, and I, traveled from coast-to-coast and by year's end, will have visited five continents. For details about our summer voyages, please read the article, *Jersey Roots, Global Reach* on page 6.

Late July kicked-off a flurry of activity as a spotlight shined on the future of gaming, sports, and entertainment in New Jersey. The Equine Science Center, widely recognized as the primary resource for everything equine, was repeatedly asked what impact the implementation of recommendations in what is now known as the "Hanson" report would have on the horse industry and agriculture in the state. Please find my article on page three for more details on horseracing.

I encourage you to save the dates for two annual fall and winter events: the Stakeholder meeting, Friday, October 15; and the Equine Science Update, Tuesday, December 14. Perhaps my favorite event each year, the Stakeholder meeting is an opportunity for the greater equine community to unite and have an open dialogue to address challenges and concerns facing members of the community. Additionally, the feedback and input received during the Stakeholder meeting is often the root of many Equine Science Center research projects and activities. The Center actively engages its constituent base in order to enact initiatives which have direct effects on horses and the horse industry. Our second event, the Equine Science Update, provides a chance to share the status and progress of the Center's research projects, many of which were suggestions from previous Stakeholder meetings. We hope to see you at both events.

Have you had a chance to horse around with Lord Nelson on Equine Science 4 Kids, the new youth component of our website? Launched in early April, Equine Science 4 Kids has become a major hit with young equine enthusiasts and budding scientists. We recently added "Fun on the Farm," an interactive game intended for children of all ages to learn about the environmental impact of a horse farm. We encourage parents to play along and compare their knowledge and horse-sense with their children. Be sure to read about Lord Nelson's public appearance on the back cover!

Other new additions to our website include the Multi-Media page and the virtual tour of the Equine Exercise Physiology Laboratory. The Multi-Media page was developed to enhance the experience of navigating our website. It combines several popular features and media-related Center projects into one central location, including the podcast series, archived webinars, videos and staff interviews, a link to the Friends of the Equine Science Center Facebook page, and a video demonstration of the high-speed equine treadmill. A virtual tour of the Equine Exercise Physiology Laboratory was added to provide a behind-the-scenes look explaining how and why we use an equine treadmill in our scientific research. Similar to the Ryders Lane virtual tour launched in January, the Exercise Physiology virtual tour includes a photographic storyboard with accompanying descriptive text. Be sure to complete the survey for the virtual tour. We look forward to your feedback.

In 2011, the Equine Science Center will celebrate its tenth anniversary. I am astounded when I reminisce on the achievements and accomplishments of the Center. As we embark on the next ten years, our mission of better horse care through research and education will remain the foundation for everything we do. Our vision is clear: we are **educating** students, stakeholders, and the public; we are **training** advocates for equine and other agriculturally-based industries; we are **finding** solutions through science-based inquiry; and we are **exploring** the relationship between horses and humans. I am honored and humbled to acknowledge that the world-class research, teaching, and extension programs conducted at the Center would not be possible without continued support from the equine community.

Please celebrate the ten year anniversary of the Equine Science Center by helping to ensure our future success. To learn more about supporting the Center, please visit **esc.rutgers.edu** or call us at **732-932-9419**.

Behind the Scenes at the Equine Exercise Physiology Laboratory

In late-August the Equine Science Center unveiled a new addition to its website. The Equine Exercise Physiology Laboratory virtual tour shines a spotlight on the research methods utilized by the faculty and students of the Equine Science Center with a behind the scenes look at how equine science is conducted.

Photo by Larry Levanti

Following the successful model of the Ryders Lane Environmental Best Management Practices Demonstration Horse Farm virtual tour, the Equine Exercise Physiology Laboratory virtual tour is a photographic storyboard describing each step of an acute graded exercise test, also known as a GXT. The star of the virtual tour is Frankie, an eight year old standardbred mare. The pictures and accompanying text detail Frankie's role as an eager participant in the GXT. From preparing the horse to analyzing samples in the laboratory, visitors get a feel for the tools and methods used by scientists and veterinarians to better understand the effects of training and acute exercise on equine athletes.

The virtual tour is the product of two days of filming and shooting in February 2010 at the Rutgers New Jersey Agricultural Experiment Station's Equine Exercise Physiology Laboratory on the G.H. Cook Campus in New Brunswick. The virtual tour illustrates the teamwork needed to successfully perform an experiment, with faculty, graduate students, and undergrads working together as a single research unit.

The high-speed treadmill became operational in April 1995. "I crossed my fingers and hit 'Go'," recollects Kenneth McKeever on the first time the treadmill was fired-up. Over the years, research projects have examined endocrine function and cytokine production in the context of aging and exercise training; antioxidant status in exercising horses and its relation to inflammation; and effects of performance-enhancing agents on exercise capacity and long term health.

In addition to facilitating research, the "Treadmill Laboratory" serves as an interactive teaching environment. Each semester, undergraduate students earn credit towards graduation by participating in research and through hands-on courses that instill research techniques. Throughout the year the Equine Science Center hosts several open houses for 4-H and pony club members and the general public, conducting treadmill demonstrations and simulating experiments.

The Equine Exercise Physiology Laboratory is a world-class facility, one of only two such laboratories not associated with a veterinary college in the United States. The virtual tour allows horse enthusiasts of all ages to glimpse the science and methodology behind equine exercise research.

Equine Science Center - *Its Proven Track Record*

Anyone following New Jersey media outlets knows that the Equine Science Center has been very busy since the release of the recommendations by Governor Christie's Advisory Commission on the Future of Gaming, Sports, and Entertainment on July 23. Two days later, the Center posted an response to the "Hanson" report which can be found on the Professionals webpage of its website.

Photo by Lisa Photo

What followed was a flurry of activity which resulted in 35 interviews and/or media citations in a two week period. The New Jersey Equine Industry 2007: Economic Impact study has been referenced repeatedly since its release in 2007 by people around the world who are following the state of horseracing in New Jersey and following the lessons to be learned as policy decision-makers map out the course for racing's future.

The Center is recognized locally and globally as the only neutral, credible source for policy decision-makers regarding the economic impact of horses and the horse industry. As a result of its prominent status and vast network of resources, the Center has been called upon time and time again because it provides sound, scientific facts regarding the socio-economic impact of the equine industry in New Jersey and its value to the preservation of working agricultural landscape in the Garden State.

Besides a plethora of media attention, the Equine Science Center's director was also asked to present testimony during a hearing held by a democratic legislative panel in response to Governor Christie's acceptance of the Hanson Report's recommendations. This meeting was held on Friday, September 10 at the Meadowlands Racetrack. Interested parties can follow Center involvement in horseracing issues on the website at **esc.rutgers.edu**.

Young Horse Teaching and Research Program

August 2009 – April 2010 review

Last year the Young Horse Teaching and Research Program (YHTRP) had a unique slant. For the first time in its 11-year history, the YHTRP included mustangs and used yearling/two year old horses. The four mustangs, RU Rambling Rose, RU Canella, RU Casanova, and RU Marley, were purchased as yearlings in August, 2009. The research this year compared wild mustangs' growth and behavior to four well-trained yearling draft crosses that had not sold at the 2009 spring auction, and four untamed weanling draft crosses that were half or full siblings to the yearlings being used.

In controlled behavior tests throughout the school year, untamed mustangs were documented to be no more difficult to train or handle than draft cross weanlings and yearlings to which they were compared. Slightly more reactive to stimuli than their draft cross counterparts, the mustangs were also more sensitive and responsive to training cues once they understood what was being asked of them. Feeding trials used total mixed ration cubes formulated for growth (Square Meals, Idleacres, Inc, Cokato, MN) which were fed free choice to all 12 horses. The mustangs did not differ in feed efficiency (gain per Mcal consumed) from that predicted by the 2007 NRC for light horses. Draft cross weanlings and yearlings, as in past years, grew faster but consumed fewer calories than predicted by the NRC. There were no significant health issues this year. Carey Williams, an independent observer who had evaluated the limbs of young horses as part of research during the past four years, noted a reduced incidence of epiphysitis, probably due to the use of older horses that were growing at a slower rate than the usual weanlings in the fall. The research dispelled myths that mustangs are more efficient than normal horses but more difficult to handle and train, and reinforced the relatively high efficiency and docility of horses with even ¼ Belgian or Percheron breeding.

Students also benefited by learning new training techniques from Robin Rivello, President of the US Wild Horse and Burro Association. Rivello, an approved mustang trainer who works closely with the BLM, helped daily with initial taming/training of the wild young horses in the first month and held regular training sessions for students throughout the school year. Her dedication and contributions to the program were invaluable.

For more information about the Young Horse Teaching and Research Program, please visit **http://younghorse.rutgers.edu** or call **Sarah Ralston** at **732-932-9404**.

Students Participate in the Jersey Fresh Three-Day Event

Rutgers University was well represented during the Jersey Fresh Three Day Event at the Horse Park of New Jersey. Animal Science students at the Rutgers School of Environmental and Biological Sciences provided significant volunteer relief throughout the course of the event which took place May 6 – 9, 2010.

Students helped with various tasks each day. In addition to decorating cross country jumps, their volunteer efforts also involved washing and painting jumps, mulching, and adding flowers and other ornamentation, which not only enhanced the appearance of the course, but also served to help horses make the proper jumping effort. Putting the hands-on training from their academic studies to work, student volunteers assisted veterinarians with the horse check-in process upon arrival to the Park and again helped check horses upon completion of the cross-country course.

Although this was her first venture into volunteering at Jersey Fresh, Jennifer Hanke, pre-veterinary major class 2011, did not let the tasks at hand intimidate her. "It was very labor intensive, but because of that, it was so much more satisfying. It was fun and extremely rewarding to see the horses fly over the jumps that I helped create."

Student assisting with research at past Jersey Fresh event.

Cara Urban, pre-veterinary major class of 2011, asserted that volunteering at Jersey Fresh provided an opportunity to meet some of the most dedicated people in the New Jersey horse community.

Organizers of the event were thoroughly impressed with the professionalism and commitment of the Animal Science students and particularly appreciated return volunteers.

Gary Maholic, an organizer with veterinary related tasks stated, "Both the FEI (official) Veterinarians and I agreed; this was another great year for volunteer turnout from Rutgers. Many students said that they will be back again next year, and I look forward to working with all of them again!"

Student Stephanie Wittenberg echoed Maholic's sentiments, "My experience at Jersey Fresh was nothing short of wonderful. I have volunteered for this event for the past three years and plan on continuing to do so in the future. I can't wait to do it again!"

Our 10th Anniversary! (continued)

"The endorsement reinvigorated my commitment to the mission of the Center: Better horse care through research and education to advance the well-being and performance of horses and the equine industry."

The Center has consistently demonstrated the ability to maintain its status as a global leader in equine science and as a dominant force in agri-business and open space and farm land preservation in New Jersey. Specifically, the Center has identified five focus areas, driven by stakeholder input in which to dedicate resources: Horse Health; Right to Farm/Cost of Farmland/Land Use; Environmental Stewardship; Integrity of Equestrian Sport; and the Sustainability of the Horse Industry, Economic Growth and Development.

Equine Science Center faculty members aligned with the Department of Animal Sciences in the School of Environmental and Biological Sciences are committed to horse health by focusing on preventive healthcare research rather than curing clinical syndromes or diseases. Recent studies include how gut derived bacteria influence the incidence of laminitis, and effects of age and training on the hormonal regulation of glucose metabolism in horses.

Last year, the Center unveiled the Ryders Lane Environmental Best Management Practices Demonstration Horse Farm as an example of environmental stewardship. A multi-year project which required collaboration with a team of Rutgers researchers and several state and federal agencies, the Ryders Lane farm was designed to identify environmental issues horse farms may face, and the best way to address each challenge.

As a credible and unbiased source, the Center also focuses on the integrity of equestrian sport. Several scientific studies involve the investigation of the effects of performance-altering agents in racehorses and their implications in horse health.

As early as 2003, the Equine Science Center has been educating the public about the benefits of the equine industry and its significant impact for all residents of the state, even those not directly involved with horses or agriculture. In 2006, the Center published "A Delicate Balance: The Future of Horse Racing and the Preservation of the Equine Industry, Agriculture and Open Space in the Garden State." The following year, the Center released what has become its most commonly cited publication, the "New Jersey Equine Industry: 2007 Economic Impact" study. In 2009, the Center released the report, "Impact of Slot Machines/Video Lottery Terminals on the Economy, Horse racing and Breeding Industry, Agriculture and Open Space in States/Provinces where they Exist: Why this is Important to New Jersey." Evidenced by its proactive approach to identify potential threats to the stability of the horse industry, the Equine Science Center continues to focus on the vitality and economic growth and development of the horse industry.

Through its dynamic website, the addition of a multidisciplinary team of faculty affiliates, and the widespread recognition and acknowledgement it has received as a result of its programs, the Center is at the forefront of need-based research, teaching, and outreach in the study of equine science.

"Even today, I am amazed by what the Equine Science Center has accomplished within a short period of time and with limited resources," said Malinowski. "I firmly believe we have achieved our success due in part to the outpouring of support from the equine community. The future success of the Equine Science Center is inseparable from the direct support of the community we serve."

The Equine Science Center's vision for the next ten years is to provide global leadership in the discovery of better ways to manage horses and horse farms, and develop future leaders to ensure the sustainability of the horse industry. The Center will continue to be the most effective proponent for the economic viability and sustainability of the horse industry in New Jersey. It has set its course to become the lead authority for equine health and management in the United States and internationally. The Center has assembled a team committed to delivering sound science, applicable to both animal and human health, plus sensible policy linking a viable horse industry with the preservation of open space and farmland in New Jersey.

For more information on celebrating the tenth anniversary of the Equine Science Center, please contact **Tiffany Cody** at **732-932-9419** or **cody@njaes.rutgers.edu**.

Upcoming Events

Equine Science Update
Tuesday, December 14, 2010
Cook Campus Center
Rutgers, The State University of New Jersey
New Brunswick, NJ
Call 732-932-9419 for reservations

Horse Management Seminar
Sunday, February 13, 2011
Cook Campus Center
Rutgers, The State University of New Jersey
New Brunswick, NJ
Call 732-932-5529

Ag Field Day at Rutgers Day
Saturday, April 30, 2011
G.H. Cook Campus
Rutgers, The State University of New Jersey
New Brunswick, NJ

Young Horse Teaching and Research Program Yearling Auction
Sunday, May 1, 2011
G.H. Cook Campus
Rutgers, The State University of New Jersey
New Brunswick, NJ
Call 732-932-9404 for information

Gone But Not Forgotten

Making the decision to euthanize a horse may be one of the most difficult decisions a horse owner will ever make. Often times, horses and pets become extended members of the family; and even though they are animals, many people still experience the heart-wrenching stages of grief when faced with their untimely demise. With the help of a few prominent veterinarians, the Equine Science Center has established a program which honors the memory of these beloved animals.

In 2004, the Equine Science Center and veterinarian Daniel P. Keenan of Keenan McAlister Equine in Crosswicks initiated the Equine Memorial Contribution program. After humanely euthanizing a horse, Keenan McAlister Equine makes a donation in memory of the deceased horse to the Equine Science Center. Upon receiving notification of the horse's death, the Center writes a personalized letter to the horse's owner expressing condolences for their loss. Additionally, the Equine Science Center acknowledges the memory of the deceased horse through a devoted page on its website which lists the name of each horse that was put down by participating veterinarians. Owners are encouraged to visit the Honor Roll page on **esc.rutgers.edu/giving_honor_roll.htm** to see the name of their dearly loved horse.

"Our motivation for participating in the program was two-fold," said Dr. Keenan. "The death of an equine patient can be devastating and we wanted to do something to help our clients through the grieving process. Furthermore, we believed that supporting the equine industry and contributing to scientific research that will benefit the overall health of all horses was equally important to both us and our clients," added Keenan.

Dr. Sharon Vaillancourt of Atlantic Equine Clinic in Egg Harbor has also been a long-time supporter of the Equine Memorial Contribution program. "I see the emotional connection my clients have with their horses. Losing a companion, and in some instances a loving part of their workforce, can be overwhelming. The Equine Memorial Contribution program is another opportunity for me to say I understand," said Vaillancourt.

According to Keenan and Vaillancourt, their clients are often moved to tears upon receiving the acknowledgement letter in the mail from the Center. Monroe Arndt, a client of Keenan McAlister Equine, was overcome with emotions after the equine memorial letter for his horse Raja was received. "I was distraught over losing Raja; not just because he was my horse, but because I named him after my deceased brother, Roger," said Arndt. "Receiving the memorial letter from the Equine Science Center brought tears to my eyes, a smile to my face, and solace to my heart."

Ultimately, the memorial donations are used to support the research initiatives of the Equine Science Center. The top focus area for the Center is equine health, followed by additional equine concerns that are imperative to New Jersey horse owners: right to farm, cost of farmland, and land use; environmental stewardship; integrity of equestrian sport; and sustainability of the horse industry and economic growth and development.

"We see the Equine Memorial Contribution program as a compassionate and sincere opportunity to reach out to the greater equine community," said Karyn Malinowski, director of the Equine Science Center. "At the core of our work and mission, we are dedicated to better horse care through research and education. Owners grieving the loss of their beloved animals should find comfort in the fact that their horses live on in our research and commitment to improving horse health and well-being."

The Equine Science Center also accepts memorial donations for other pets and animals, as well as honorarium gifts for individuals. For more information about the Equine Memorial program, please contact the **Tiffany Cody** at **cody@njaes.rutgers.edu** or call **732-932-9419**.

Jersey Roots, Global Reach

"Travel and change of place impart new vigor to the mind" ~ **Lucius Annaeus Seneca**

Over the summer months, Associate Directors of the Equine Science Center exemplified the Rutgers University tagline, "Jersey Roots, Global Reach." Ken McKeever, a noted equine exercise physiologist, was invited by the University of Limerick to provide an academic review of its equine science program. Sarah Ralston, a well-respected equine nutritionist, was asked to present during the Australian Equine Science meeting. Carey Williams, an expert in both exercise physiology and equine nutrition, presented during the Equine Symposium at the Brazilian Animal Science Society. In November, Williams, McKeever and several graduate students will travel to South Africa for the International Conference on Equine Exercise Physiology (ICEEP). By the end of the year, all three will have purposefully visited five continents as they expand the vision and mission of the Equine Science Center: Better Horse Care Through Research and Education.

Kenneth McKeever – The Emerald Isle

In June 2010, I traveled to Ireland to serve the third year of a four year term as the External Examiner for the Equine Studies Program in the Division of Life Sciences at the University of Limerick. The External Examiner is part of the academic system in Ireland serving as an outside set of eyes to read final exams and final year thesis projects.

Reading the student exams and final year projects has been an educational experience for me, providing insight into the magnitude and economic importance of the horse industry in Ireland. I am impressed with the excellence of the program at the University of Limerick; the classes are scientifically rigorous and the students are well prepared. They get plenty of hands-on learning as well as academic preparation in the science and business aspects of the horse industry.

A second goal of my visit was to discuss potential exchange and study abroad opportunities for undergraduate students from Rutgers and the University of Limerick. This opportunity has been a major focus of my liaisons with faculty at the University of Limerick as well as other institutions. Discussions about exchange programs have also taken me to University College Dublin and University College Cork.

The trip provided an opportunity to present a series of seminars, and each year I have given talks at the University of Limerick and University College Dublin. Updates on our research into the care of the aged horse, as well as the ongoing nutraceutical research, have provided insight to leaders of the Irish equine industry on how important horses are to New Jersey. With each trip, I've met new colleagues and visited amazing sites within the country. The most memorable event over the last three visits was the opportunity to see my daughter Nicole dance with the show Riverdance in Killarney.

Sarah Ralston – A Trip "Down Under"

Based on an invited presentation of my research at the European Equine Nutrition and Exercise Physiology meetings in Spain in fall 2009, I was invited to present an overview of our NMR-based metabonomic research on detection of metabolic markers of osteochondrosis in young standardbred horses at the Australian Equine Science Symposium, June 3 - 6. I had attended the European meeting regularly for many years and had met a few colleagues from Australia and New Zealand, though until recently, I never had an opportunity to go "down under."

My presentation was well received; so much so that I have been invited to present an expanded version of the talk with a refereed paper submission to the Recent Advances in Animal Nutrition - Australia meetings to be held in Hunter Valley, Australia in July, 2011. In addition, I have been invited to not only consult for a large nutrition company in Australia, but to also conduct a research project which would expand the NMR database to include thoroughbreds. Ideally, this will further validate my research findings.

I did have a small break in the conference schedule to explore Brisbane. I spent an afternoon in an Aborigine museum and was absolutely fascinated by the native culture. Coincidently, one of my favorite musicians was touring in Australia during the conference. My husband and I received a flashing moment of celebrity status when the musician paused during his performance to acknowledge our presence and mention that we visiting from the United States!

After next year's follow-up presentation in Australia, I plan to return with a great deal of new information and perspective on horse management practices abroad that will be of interest to my students and colleagues.

Carey Williams – Beautiful Brazil

Prior to attending the Brazilian Animal Science Society conference in Salvador, Bahia, I wasn't sure what to expect. I have only presented in foreign countries three times before, all of which were international meetings, therefore English speaking. This conference was specifically a Brazilian event; hence, the lectures were primarily in Portuguese.

I presented a workshop titled 'Antioxidant Supplementation to the Exercising Horse'. My talk was well attended considering this was only the third year which included equine as one of the species in the Animal Science conference. Interestingly, this symposium marked the first time I had given a presentation which had to be simultaneously translated. The question and answer portion of my lecture was translated using headphones. Proceedings of the paper will be published in the Brazilian Journal of Animal Science.

I discovered that endurance riding is a popular discipline and took notice of a major difference between the equine industry in South America compared to the industry in the United States. In South America, horses are primarily used as utility for transportation and work whereas they are generally for pleasure and sport in the U.S. I connected with several researchers from Sao Paulo and may collaborate on a study focusing on the best nutrition for endurance horses.

Overall, the conference was a great experience and my time spent in Brazil, although short-lived, was simply amazing. From the informative presentations at the conference, to the diverse food and extremely friendly and accommodating people, the entire trip was memorable and engaging. While visiting, I had an opportunity to participate in a beach tour that went along the picturesque coastline. Observing horses graze on street medians and roaming around freely was a particularly unusual sight, which certainly added to the overall trip!

As the ICEEP conference in South Africa draws near, I hope to have another educational, yet intriguing, equine experience to share with my students.

Student Voices: Graduate Student Perspectives

In July of 2010, two students in the Endocrinology and Animal Biosciences Graduate Program and working in the area of equine science sat down to discuss their involvement with horses, their motivations, and the Equine Science Center. Danielle Smarsh graduated with a B.S. in Animal Science from the University of Delaware in 2008. Ryan Avenatti graduated from the University of Illinois in 2009 with a M.S. in Animal Sciences. Excerpts from their conversation are documented here.

Danielle Smarsh: I knew by the age of five that when I grew up my job would involve animals. My family had everything from cats and dogs to turtles and fish. Like most girls, I loved horses and just wanted to be around them every day. When I was 10, after we moved from St. Louis to New Jersey, I would spend every day at the farm across the road grooming horses. Later, I joined 4-H because of my love for animals.

Ryan Avenatti: I grew up with horses. My parents train and drive standardbreds, as did both of my grandfathers. I literally grew up in a barn. I joke that I never had a chance to do anything different.

DS: During my teens I had to stop riding due to time constraints, but I still maintained my passion for horses and 4-H. This led me to study animal science at the University of Delaware. I spent four years as an undergrad learning as much as I could about not only horses, but all livestock, and I loved every minute of it.

RA: I chose animal science because I realized somewhere along the line that I liked working with horses and I wanted to learn more about them. I wanted to be a veterinarian, working to fix horses that were broken or sick. I liked the idea of being called "Doc."

DS: By my senior year, I realized I wanted to be able to focus on an academic career. A future of teaching and scientific research with livestock strongly appealed to me.

RA: Same here, as I continued with my studies, I realized that there were many underlying questions that veterinary medicine alone could not answer. However, basic science chips away at the mysteries of how physiological systems work, how diseases affect the body, and why we age. I knew I would make a good vet, but I could be a better scientist and educator.

DS: I researched various graduate schools trying to find the perfect program. It did not take long for me to realize that continuing to study animal science at Rutgers was the right choice for me.

RA: It was about the same time when I decided to leave Illinois. I would have done well to stay there, but I believed I could do better. After some web research and a visit to the treadmill barn with Drs. Malinowski and McKeever, I knew Rutgers and the Equine Science Center were where I was meant to be. In June of 2009 I came to New Jersey, leaving behind friends, the state I lived in all my life, and whatever belongings that couldn't fit in my truck.

DS: It seems I have come full circle, once again back in New Jersey working towards my Ph.D. in Animal Science here at Rutgers. My love of animals, science, and teaching has brought me back to the Garden State.

RA: I firmly believe in the three pillars of academia: research, teaching, and extension. The Rutgers Equine Science Center exemplifies those principles.

DS: Oh I agree. Not only is the Equine Science Center a benefit to horses, but also to horse enthusiasts. The Developing Future Leaders of the Equine Industry class is a perfect example. We had such a diverse group, in terms of age and professional background that we all benefited from each other's experiences. And the class wasn't just about horses; it was about *leadership* and *coalition building*. As we fight to preserve the horse industry in New Jersey, these skills will be put to the test.

RA: The leadership class was a great experience. Another great program the Equine Science Center has developed is *Equine Science 4 Kids*. Now kids have an opportunity to gain valuable information about horse care and science in a fun environment. It really is an example of how the Equine Science Center is investing in the future.

DS: Being a part of the Equine Science Center has been an amazing experience thus far – not only is the Center supportive of my research, but I am offered many opportunities to teach the public about horses and their importance to New Jersey. Watching the awe on the faces of children and adults during a treadmill demonstration is a huge motivation for me. Ag Field Day 2010 was a perfect example of this – I have never seen the treadmill barn packed with so many people, and everyone was so excited to see the horses run, despite the heat. The Equine Science Center provides services and resources to New Jersey residents and horse people all over the world. I am proud to be a part of such a wonderful program.

RA: After over a year, I am still excited to be here: a world-class facility with first-class faculty. The Equine Science Center and the New Jersey Agricultural Experiment Station provides a tremendous service to New Jersey through outreach, education, and quality scientific research. I am learning more than ever before. My time here will prepare me for a career of service to horses and horse-people.

DS: As I travel to various conferences and meet people from other schools, I realize how truly unique the Equine Science Center is and how many opportunities it has to offer. I know that what I have learned here will enable me to be the best possible researcher and educator I can be.

Platinum Partners

New Jersey Farm Bureau's primary purpose is to represent the overall interests and improve the financial well-being of farmers and our $800 million industry. NJFB activities are supported through voluntary membership and annual dues. Members have access to:

- Staff assistance on farming issues and regulatory problems.
- Educational workshops on topical issues such as farm labor, wildlife damage, and zoning.
- Weekly updates on legislation news and regulations affecting all aspects of farming.

It pays to be a NJ farm Bureau member! For a full list of membership levels and benefits, or to sign up, visit www.njfb.org.

The New Jersey Department of Agriculture (NJDA) is an agency which oversees programs that serve virtually all New Jersey citizens. One of the Department's major priorities is to promote, protect and serve the Garden State's diverse agriculture and agribusiness industries. In addition to the programs we offer to support production agriculture, NJDA also manages programs that feed schoolchildren, distribute surplus federal foods to soup kitchens and pantries that serve our needy citizens, conserve precious soil and water resources, protect farmland from development and preserve it for future agricultural use, expand export markets for fresh and processed agricultural products, and promote our commercial fishing industry, and administer the complete program of agriculture, food and natural resource education, which includes the State FFA Association. For more information about NJDA, please visit www.nj.gov/agriculture/index.shtml

Established in 1961, the **Standardbred Breeders & Owners Association of New Jersey** [SBOANJ] has a membership comprised of horse breeders, drivers, trainers, owners, and backstretch personnel, and its mission is to support and promote the standardbred industry in New Jersey. The Board of Directors authorizes stallion, mare and foal registrations, negotiates with track management, actively oversees and administers a benefits program, and advances legislation favorable to the horse racing industry. For more information, please visit www.sboanj.com.

Rutgers New Jersey Agricultural Experiment Station (NJAES) Cooperative Extension helps the diverse population of New Jersey adapt to a rapidly changing society and improve their lives and communities through an educational process that uses science based knowledge. Through science-based educational programs, Rutgers Cooperative Extension truly enhances the quality of life for residents of New Jersey and brings the wealth of knowledge of the state university to local communities. Visit them on the web at http://njaes.rutgers.edu/extension.

Lord Nelson

Lord Nelson has always been up for an adventure; from football games to patrolling the streets of New Brunswick in his younger days, but it wasn't until a warm Friday afternoon in August that Nelson stepped hoof off the property where he has been kept since his retirement in 2001. The occasion that beckoned his appearance was the 50th anniversary of the New Jersey State 4-H Horse Show, a competition that welcomes 4-H youth riders from all disciplines to exhibit their skills over the course of three days at the Horse Park of New Jersey. Commencing the weekend's festivities were performances by various 4-H drill teams followed by a ceremonial parade led by none other than Lord Nelson himself! After proudly marching around the arena, Nelson took full advantage of his celebrity status by meeting with fans at the ice cream social held in the pavilion where he was treated to his own bowl of vanilla ice cream and a slice of chocolate cake. To get the full "scoop" and see pictures from the event, check out Lord Nelson's blog at **http://lordnelsonsblog.blogspot.com/**!

esc.rutgers.edu

Equine Science Center — Better Horse Care Through Research and Education

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