EQUINE SCIENCE CENTER

NEWSØUPUAI

"Better Horse Care Through Research and Education"

'Horses 2007' Is Coming! Top-Notch Educational Event is Geared for Everyone – From Newcomers to Professionals

Horse and farm owners are already signing up for Horses 2007, an educational conference that comes to New Jersey only once every four years.

Horses 2007 – organized by Rutgers Equine Science Center of the New Jersey Agricultural Experiment Station and scheduled for Saturday, March 31 and Sunday, April 1, 2007 on the Cook Campus at Rutgers in New Brunswick – will offer three distinct educational opportunities for horse people.

New owners, prospective owners, juniors, parents, instructors and the merely curious – will be encouraged to come to the Saturday session from 7:30 a.m. to 6 p.m. at the Cook Campus Center. That session will answer many of the questions associated with horse ownership, including the basics of equine nutrition, lameness, the cost of owning a horse, feeds, supplements, equine behavior and other subjects. Keynote speaker at the Saturday session will be Dr. Patty Hogan, an equine surgeon with the New Jersey Equine Clinic who made headlines two years ago when she performed successful, life-saving surgery on Smarty Jones – the Thoroughbred that went on to win the Kentucky Derby and the Preakness.

Veterinarians, technicians, experienced horse owners, trainers, farriers and those interested in academic-level animal health and science – are signing up for Sunday's conference program, also at the Cook Campus Center, which will cover cutting-edge

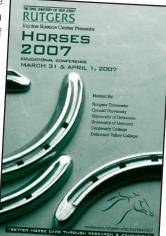
conference program, also at the Cook Campus Center developments in equine behavior, health, nutrition, horse care and equine medicine. Keynote speaker for this session is Dr. Sue McDonnell, a faculty member at the University of Pennsylvania School of Veterinary Medicine who is an expert on the sexual behavior of horses and other behavioral

Horse farm owners and managers, certified crop specialists, forage and environmental consultants and others involved in horse and livestock management – will benefit from a two-day Farm and Land Management Short Course taking place under the sponsorship of Horses 2007. The event, running from 8:30 a.m. to 3:30 p.m. on Saturday and from 9:45 a.m. to 4:30 p.m. on

(continued on page 3)

responses.

The Horses 2007 Registration Brochure will be mailed after January 1, 2007. Please call 732-932-9419 if you do not receive yours by January 15.



FALL 2006

HORSES 2007 SCHEDULE (Pages 4-5)

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From the Clubhouse

Dr. Karyn Malinowski, Director



This past September 20 was a day to be bookmarked for the New Jersey horse industry. It was on September 20, 2006 at Monmouth Racetrack that 200-plus leaders of the horse industry, academics, legislators, legislative aides, officials of state government and a handful of dedicated, horse-crazy kids came together to look for solutions that will keep the horse industry in New Jersey surviving and thriving.

The setting for the event – a horse-racing facility – was no accident. The issue at hand was how to stop the decline of horse racing in New Jersey as owners, breeders and trainers take their equine athletes to other states (and even other countries) where the potential earnings are greater than those they can count on in New Jersey.

But the day wasn't just about horse racing. It was about a united horse industry. There was a general recognition that all horse people are linked together by common services and common interests, whether they own a backyard pony or a stable of hunter-jumpers, or a driving team, or a string of racehorses. The audience and speakers at the event were mostly people who have a vested interest in keeping the horse industry alive. They spoke eloquently about some dreaded what-ifs – what if there are no more breeding stallions standing in New Jersey, what if all or most of the broodmares go elsewhere, what if racing days suffer further serious declines, what if tracks close?

But there also was a recognition that only a unified horse industry speaking in one voice will effect change in New Jersey and that the horse industry's ace up its sleeve (you should excuse the reference to gaming) is its overall positive impact on the economy and traditional agriculture and the role it plays in the preservation of open space.

A successful event is a good starting point, but there is a great deal more work to be done. What is the most effective... and correct... and beneficial way to preserve the horse industry that will benefit all of New Jersey and its residents?

Perhaps the best solution will be to awaken the general population of New Jersey to the valuable asset they have in horses and to stir into action what we believe is their underlying love and admiration for these magnificent creatures.

People tell us they love to drive by New Jersey's horse farms and see mares and foals frolicking or quietly grazing on a warm summer morning. Without sustainable ways to support these horses and ways in which they can perform as they were meant to do, we all may be looking at a scenario described in that old Joni Mitchell tune – "Don't it always seem to go that you don't know what you've got 'til it's gone? They paved paradise and put up a parking lot."

Dr. Malinowski Authors Book Chapter

'State of the Garden State' Explores Key New Jersey Issues

A white paper written by Equine Science Center Director Karyn Malinowski, Ph.D, is featured as a chapter in "The State of the Garden State," a new academic journal published by the Hall Institute of Public Policy in Trenton, New Jersey.

The Hall Institute is a non-partisan, not-for-profit foundation established to explore social, economic, educational and cultural issues.

Dr. Malinowski prepared her white paper, "A Delicate Balance," at the request of the Hall Institute as an analysis of the future of the horse racing industry and its interconnectedness to the preservation of agriculture and open space in New Jersey. "We all have a vested interest in furthering a high quality future for our state," said George E. Hall, the organization's founder. "We are hopeful that the research in *The State of the Garden State*, such as Malinowski's essay on land preservation, will generate the thoughtful, constructive discussion our state needs."

To obtain a copy of *The State of the Garden State*, contact the Hall Institute at 609-392-2237 or journal@hallnj.org.



Horses 2007 (continued)



Dr. Patty Hogan

Sunday, will feature an intensive, handson workshop covering pasture issues, forage growth, forage species, weed identification, nutrient waste and water quality management and other topics essential to good farm management practices.

Conference delegates can sign up for one or both days of the Horses 2007 educational conference programs taking

place at the Cook Campus Center; registration will be cut off at the first 300 registrants each day. However, the Farm and Land Management Short Course will take place at the Ryders Lane Geiger Center and the new Best Management Practices Horse Farm Facility on Ryders Lane. Those enrolling in the short course must register for both days, and the course is limited to 80 participants. (See Pages 4 and 5 for program details and use the enclosed insert as an early bird registration form.)

Co-hosts of Horses 2007 are Rutgers University, Cornell University, the University of Delaware, the University of Vermont, Centenary College and Delaware Valley College. A select number of commercial sponsors also will be on hand, with free literature and samples for delegates. In addition, the New Jersey Horse Council will hold its annual silent auction during the weekend, with treasures and trinkets at bargain prices. As a bonus for all registered delegates, specially bound copies of two important bulletins, "Agricultural Management Practices for Commercial Horse Farms" and "Basics of Farm Safety," will be included free of charge in the registration packets. Summaries of all the talks at the conference also will be included.

"Horses 2007 will be quite different from



expos and fairs that horse people are *Dr. Sue McDonnell* used to," says Dr. Karyn Malinowski, director of the Equine Science Center. "We are bringing together experts to share their knowledge with all those interested in providing better care for their horses or farms. In addition to their presentations, these top-notch practitioners will be available most of the day to talk with delegates and answer questions. There will be information and resources appropriate for horse people at all levels of training and interest."

Registration is being handled online and by mail or fax by the Rutgers Office of Continuing Professional Education at www.cookce.rutgers.edu. Additional information and downloadable registration forms are available on the Equine Science Center website at www.esc.rutgers.edu (look for the horseshoe icon on the home page) or by emailing esc@aesop.rutgers.edu.

The 2006 Equine Science Update

The Equine Science Center will sponsor its annual Equine Science Update on Tuesday, December 12, 2006 from 6 to 9 p.m. at the New Jersey Museum of Agriculture on the Cook Campus of Rutgers, The State University of New Jersey.

The Equine Science Update, geared to professionals, plus students, science teachers, 4-H horse program participants and educators, will include presentations highlighting the Equine Science Center's work in advancing equine health, horse management practices, and solutions to equine industry issues. Topics to be covered include:

- Facts and Fallacies of Horse Performance-Altering Substances
- Farmland Assessment and Right-To-Farm Issues
- Update on Environmental Best Management Practices for Your Horse Farm

- Equine Joint Inflammation and Nutraceutical Supplementation
- Equine Manure Management in New Jersey: The Truth About Poop

In addition to the Equine Science Update, tours of campus facilities will include a visit to the current crop of weanlings in the Young Horse Teaching and Research Program at 4:30 p.m. and a demonstration of the Center's high-speed equine treadmill at 5:30 p.m.

The seminars and tours require reservations, which can be made by calling 732-932-9419 or emailing ESC@aesop.rutgers.edu. The suggested donation for the day's activities, including a supper at 6 p.m., is \$25 for adults and \$10 for students. For additional information, directions, and a RSVP coupon, call 732-932-9419 or visit www.esc.rutgers.edu.

Horses 2007 Manage Your Horses • Manage Your Farm

Proposed Program* – Cook Campus Center

Saturday, March 31, 2007 – Introduction to Equine Care and Management (with the focus on the new or prospective horse owner)

- 7:30 9:10 Registration, sponsor visits at Cook Campus Center, New Brunswick, NJ
- 9:10 10:00 Keynote Speaker Dr. Patricia M. Hogan, surgeon, New Jersey Equine Clinic It's All About the Love of Horses: Saving Smarty Jones and Other Stories That Inspire
- 10:00 10:50 Dr. Sue McDonnell, Univ. of Pennsylvania Why Does My Horse Do That?—Elements of Basic Horse Behavior
- 10:50 11:00 Break
- 11:00 11:50 Dr. Betsy Greene, Univ. of Vermont The Cost of Owning a "Free" Horse
- 11:50 1:10 Lunch, sponsor visits, New Jersey Horse Council silent auction
- 1:10 2:00 Dr. Sarah Ralston, Rutgers Nutrition 101: Basics of Feeding the "Easy Keeper"
- 2:00 2:50 Dr. Mary Beth Gordon, Purina Mills, Inc. Special Feeds for Special Needs
- 2:50 3:40 Dr. Amy Burk, Univ. of Maryland Supplements: Fairy Dust and Hocus-Pocus?
- 3:40 3:50 Break
- 3:50 4:40 Dr. David Marshall, Univ. of Delaware Tips for Happy, Healthy Horses
- 4:40 5:30 Dr. Dan Keenan, Keenan McAlister Equine Lameness: Giving Your Horse a Leg to Stand On
- 5:30 6:00 Dr. Ken McKeever High-Speed Treadmill Demonstration (Red Barn-Laboratory Wing) Dr. Sarah Ralston – Meet the Yearlings: Young Horse Teaching and Research Presentation (Red Barn-Stable Wing)

Sunday, April 1, 2007 – Advanced Equine Care and Management (for equine professionals, with CE credits for veterinarians and vet techs)

- 9:00 10:00 Registration, coffee and sponsor visits at Cook Campus Center
- 10:00 10:50 Keynote Speaker Dr. Sue McDonnell, Univ. of Pennsylvania Current Research on Horse Behavior
- 10:50 11:20 Bridgett McIntosh Byrd, Virginia Tech Emerging Research and Issues on Forage for Horses
- 11:20 11:30 Break
- 11:30 12:00 Dr. Sarah Ralston, Rutgers Science-Based Feeding of the Growing Horse
- 12:00 12:30 Dr. Mary Beth Gordon, Purina Mills Inc. Challenges of Feeding the Special Needs Horse
- 12:30 1:45 Lunch and sponsor visits
- 1:45 3:45 Panel: Latest Modalities in Diagnosis, Treatment and Rehabilitation of Equine Injuries Dr. Brendan Furlong, B.W. Furlong and Associates – Diagnostic Tools Dr. Scott Palmer, New Jersey Equine Clinic – Orthopedic Injuries Dr. Rick Doran, Mid-Atlantic Equine Medical Center – Soft Tissue Injuries Q & A – Dr. Palmer, Moderator
- 3:45 4:35 Dr. Paul Gottlieb and Dr. Karyn Malinowski, Rutgers Preview of the Economic Impact Study Results
- 4:45 5:15 Dr. Ken McKeever High-Speed Treadmill Demonstration (Red Barn-Laboratory Wing) Dr. Sarah Ralston – Meet the Yearlings: Young Horse Teaching and Research Presentation (Red Barn-Stable Wing)

Horses 2007

Farm and Land Management Short Course

Proposed Program* – Ryders Lane/Geiger Center

[Note: Participants in the Farm and Land Management Short Course must register for both days of this program. Participation is limited to 80 persons. Certified Crop Advisor credits will be awarded.]

Saturday, March 31, 2007

8:30 - 9:00	Registration at Geiger Turfgrass Center, Ryders Lane, New Brunswick, NJ
9:00 – 9:10	(Inside Geiger Center) Dr. Carey Williams, Rutgers Equine Science Center – Welcome and Introduction
9:10 - 9:40	Dr. Carey Williams, Rutgers Equine Science Center – Importance of Pasture to Horses
9:40 - 10:10	Speaker to be announced – Forage Growth Basics
10:10 - 10:20	Break
10:20 – 11:10	Dan Kluchinski, Rutgers Cooperative Extension – Soil Fertility
11:10 – 12:00	Bill Bamka, Rutgers Cooperative Extension – Weed Management
12:00 – 1:00	Working Lunch and Discussion
1:00 – 1:50	(Outside at Ryders Lane facility if weather permits; otherwise, at Geiger Center) Speaker to be announced – Forage Species/Weed Identification
1:50 - 2:40	Robert Mickel, Rutgers Cooperative Extension – Pasture Rotation
2:40 - 3:30	Dan Ludwig, Pennsylvania Natural Resource Conservation Service – Pasture Renovation

Sunday, April 1, 2007

9:45 – 10:00	(Inside or outside depending on speaker and weather) Dr. Carey Williams, Rutgers Equine Science Center – Introduction to Environmental Consequences of Poor Pasture Management
10:00 – 12:30	Nutrient Waste Management Dr. Mike Westendorf, Dr. Uta Krogmann, Rutgers Cooperative Extension – Manure Disposal Options Speaker to be announced, Natural Resource Conservation Service – Manure Storage Facilities
12:30 – 1:00	Working Lunch and Discussion
1:00 – 3:30	Water Quality Management Dr. William Sciarappa, Rutgers Cooperative Extension – Environmental Concerns with Equine Operations Dr. Chris Obropta, Dr. Peter Kallin, Rutgers Cooperative Extension – Drainage and Buffering Systems for a Dryer, Healthier Farm
3:45 – 4:35	Preview of the Economic Impact Study Results (join group at Cook Campus Center)

*While program is confirmed at time of printing, speakers and topics are subject to change without notice.

WWW.ESC.RUTGERS.EDU

Alumni Voices: Swimming With the Sharks or Profiling the Equine Science Center, Brian Voynick Brings Us Closer to Animals

When new clients walk into the veterinary offices of Brian T. Voynick, DVM, in Randolph, New Jersey, they often do a double-take. "Say, aren't you the fellow on TV?" they ask.

He is. Brian Voynick (RU'78) is the host of the popular cable show "The Pet Stop," a feature of News 12 New Jersey for more than a decade. But Brian would tell you emphatically that he is the <u>host</u>, not the star, of the show. The star changes from week to week – from a friendly dog available for adoption to an exotic bird or some fearsome sharks (yes, sharks), Brian has "interviewed" them all.

Recently, Brian came back to his alma mater to do an on-location show from the Equine Science Center's Red Barn exercise physiology facility on the Cook Campus. He interviewed the Center's director, Dr. Karyn Malinowski; Center affiliated faculty, Drs. Ken McKeever and Carey Williams; and several graduate and undergraduate students who work with the equine researchers and handle and care for the research horses.

"That was a very popular show," says Brian, referring to the feature on the Equine Science Center. "I received a lot of good feedback about it – it's amazing how many people in New Jersey relate to horses and admire the wellness work that the folks at Rutgers are doing."

At one point in his life Brian thought he would be an equine practitioner. After his graduation in pre-veterinary medicine from the Department of Animal Sciences, he enrolled in the University of the Philippines' College of Veterinary Medicine. "This was during a time – similar to now – when the state of New Jersey suspended funding for veterinary students in stateside universities, so many of us who wanted to pursue veterinary school had to look outside the country for programs that offered a good education and financial support."

When he finished his academic education, the New Jersey native took a job at the Meadowlands. Born in Newark and reared in Clark, Brian knew he wanted to be a veterinarian from the time he was four years old. And even though family finances prevented him from taking riding lessons or engaging in equestrian pursuits, he was "passionate about horses, and I was thrilled by the prospect of starting at such an awesome place as the Meadowlands with all the great equine athletes of that time."

However, his dedication kept him at work from 7:30 in the morning to nine or ten o'clock at night and by that time he was married

with two small children and living not far from the Meadowlands with his in-laws. "When my son started calling my father-in-law 'Daddy,' I knew it was time to re-think my schedule and my career."

He interned with the Animal Medical Center in New York City, took his board exams and eventually became owner and director of his very successful full-service animal facility, the American Animal Hospital on Sussex Turnpike in southwestern Morris County, New Jersey.

He became involved with "The Pet Stop" about ten-and-a-half years ago when he appeared as a guest to discuss a controversial subject, the over-vaccination of small animals. He took aim at the established practice of vaccinating animals routinely every year for various kinds of common ailments without first measuring their current levels of immunity. He recommended, and still does, vaccinal titers which test immunity levels. If the level is sufficient, vaccination is not required and may even be dangerous, he maintains. He reports that current veterinary thinking is coming around to that point of view.

What is his most memorable show – besides the day of interviewing at the Equine Science Center, of course? "I think I'd have to say swimming with the sharks at Jenkinson's Beach Aquarium in Point Pleasant," he recalls. "I haven't had an experience like that since the time I was at my brother's law school graduation pool party," he quips.

With an inquiring mind and an energy level that amazes his colleagues, Dr. Voynick will likely always stay on the cutting edge.



Faculty Voices: Rutgers Researchers Excel at 7th International Conference in Fontainebleau, France

By Kenneth H. McKeever, PhD, FACSM

Researchers from the Equine Science Center and Department of Animal Sciences demonstrated their strong leadership in the field of Equine Exercise Physiology by authoring or co-authoring a record seven of the refereed papers presented at the 7th International Conference on Equine Exercise Physiology (ICEEP), held from August 26 to August 31, 2006, in Fontainebleau, France.

The conference, held once every four years, serves as the premier venue for the presentation of new cutting-edge information on the functions and processes of the athletic horse. The Rutgers contingent of faculty, current and former students, and collaborators (Kenneth McKeever, Carey Williams, Mary Beth Gordon, Charles Kearns, Jennifer McKeever, Karyn Malinowski, Emily Lamprecht, and Sara Malone), were part of more than 270 international experts from 26 nations who gathered to hear close to 170 presentations on the physiology of the equine athlete.

The 7th ICEEP continued a tradition of premier scientific gatherings including those held in Oxford, England (1982), San Diego, California, USA (1986), Uppsala, Sweden (1990), Brisbane, Australia (1994), Utsunomiya, Japan (1998), and Lexington, Kentucky (2002). Each meeting has been linked to a major equine sporting event, including the World Equestrian Games. The 7th ICEEP was hosted by the city of Fontainebleau in partnership with the Institute of National Research in Agriculture (INRA) at Jouy-en-Josas (Animal Genetics Department), with the congress coinciding with the prestigious European Show Jumping Championships held at the nearby Grand Parquet.

The Rutgers delegation highlighted their multi-departmental, multi-institutional, and interdisciplinary efforts with presentations and posters on a variety of topics including: the effects of exercise training on the hormones responsible for training-induced loss of appetite; the effects of EPO, Gastrogard[™], and nutraceuticals on markers of performance; the effects of aging and training on the athletic horse; and the use of Kaatsu therapy to facilitate muscle hypertrophy. For those interested in specific topics the titles of the papers from the Rutgers group are listed below and the whole articles can be found in a special refereed supplement to the Equine Veterinary Journal (https://secure.evj.co.uk/cgi-bin/bookshop).

Alumna Dr. Mary Beth Gordon, Jennifer McKeever, Dr. Ken McKeever, graduate student Emily Lamprecht, Dr. Carey Williams, and graduate student Sara Malone pose for a photo during the conference's gala dinner at Fontainebleau Castle, France. McKeever, K.H., J.M. Agans, S. Geiser, P. Lorimer, G.A. Maylin. Low dose exogenous erythropoietin elicits an ergogenic effect in Standardbred horses. Equine Veterinary Journal Suppl. 36:233-238, 2006.

Malinowski ,K., E.J. Shock, P. Rochelle, C.F. Kearns, P.D. Guirnalda, K.H. McKeever. Plasma b-endorphin, cortisol, and immune responses to acute exercise are altered by age and exercise training in horses. Equine Veterinary Journal Suppl. 36:267-273, 2006.

McKeever, J.M., K.H. McKeever, J. Alberici, M.E. Gordon, and H.C. Manso, Filho. Effect of Gastrogard[™] on markers of performance in Standardbred horses. Equine Veterinary Journal Suppl. 36:668-671, 2006.

Williams, C.A. and S. Carlucci. The effects of oral vitamin E supplementation on vitamin and antioxidant status in intensely exercising horses. Equine Veterinary Journal. Suppl. 36:617-621 2006.

Vincent, T.L., J.R. Newton, C.M. Deaton, S.H. Franklin, T. Biddick, K.H. McKeever, P. McDonough, L.E. Young, D.R. Hodgson and D.J. Marlin. A retrospective study of predictive variables for maximal heart rate in horses undergoing strenuous treadmill exercise. Equine Veterinary Journal Suppl. 36:146-152, 2006.

Abe, T., C.F. Kearns, H.C. Manso, Filho, Y. Sato, K.H. McKeever. Muscle, tendon, and somatotropin responses to the restriction of muscle blood flow induced by KAATSU-walk training. Equine Veterinary Journal Suppl. 36:345-348, 2006.

Gordon, M.E., K.H. McKeever, S. Bokman, C.L. Betros, H.C. Manso, Filho. Interval exercise alters feed intake as well as leptin and ghrelin concentrations in Standardbred mares. Equine Veterinary Journal Suppl. 36:596-605, 2006.



Equine Nutrition Course Available to Continuing Education Students

Good nutrition is an essential part of maintaining a strong, healthy horse. Due to the importance of this topic, the Rutgers School of Environmental and Biological Sciences' Department of Animal Sciences offers a full semester undergraduate course on equine nutrition, which is open to continuing education students.

The course runs from January 16 - April 26, 2007 on Tuesday and Thursday evenings from 5:35 p.m. - 6:55 p.m. on Rutgers' Cook Campus and is taught by Sarah Ralston, VMD, PhD, dACVN. Continuing education units will be granted. A high school diploma is required, and a background in biology and physiology is useful.

Equine Nutrition provides in-depth information on the function and peculiarities of equine gastrointestinal physiology and the importance and metabolism of the nutrients essential for equine well-being. Common feeds and supplements used to provide these nutrients are discussed in addition to how to read and interpret commercial feed labels and balance rations, using feed analyses and computer programs. Students will learn how to recognize and prevent feed-related illnesses and how to meet the special needs of horses that are ill or geriatric. Practical approaches to feeding the various classes of horses, such as broodmares, stallions, foals and performance horses, in addition to feeding systems including pasture management are presented in the last segments of the course. Several optional "wet labs" and field trips are offered during the semester.

For additional information, visit www.cookce.rutgers.edu/programs/equine.html, call 732-932-9271, or email OCPE@cook.rutgers.edu.

Update on Young Horse Program

Twelve draft cross weanlings arrived at the Equine Science Center's Ryders Lane facility on Saturday, September 16. The horses are the new subjects of the 2006 Young Horse Teaching and Research Program led by Sarah Ralston, VMD, PhD, dACVN.

Students spent the first month of the program halter training the young animals and getting them accustomed to the various routines needed for research. This year's research, which began in October, focuses on the effects of two rations on growth and bone metabolism. The rations to be studied are a standard combination of hay and concentrate versus total mixed ration cubes.

Last year the only growth-related problems in a similar study were encountered in two Thoroughbred/Percheron crosses. Therefore, this year six of the weanlings have those bloodlines, to serve as a comparison to the Belgian/Quarter Horse cross bloodlines used in the past.

The program's website features pictures and updates on the weanlings and research, as well as a student-written blog. To see the weanlings, call Dr. Ralston at 732-932-9404 to make an appointment. For details, visit www.esc.rutgers.edu and click on the "Young Horse Teaching and Research Program" menu item.



"Better Horse Care Through Research and Education"

Dr. Karyn Malinowski Director

Diana Orban Brown Director of Communications

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