

UPDATE

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Exercising HorsePower – Let’s Play!

Spring is here and the time is right to horse around online and have some fun while learning all about equine exercise physiology! After months of anticipation, the Equine Science Center recently launched its new game, **“Exercising HorsePower”**. The game is available through the youth portal of the Center’s website, Equine Science 4 Kids at esc.rutgers.edu/kids.

“Exercising HorsePower” was created as an exciting teaching tool which introduces highly academic scientific research and concepts to youth ages 10 – 14 in a manner that is fun, interactive, and effortlessly intuitive.

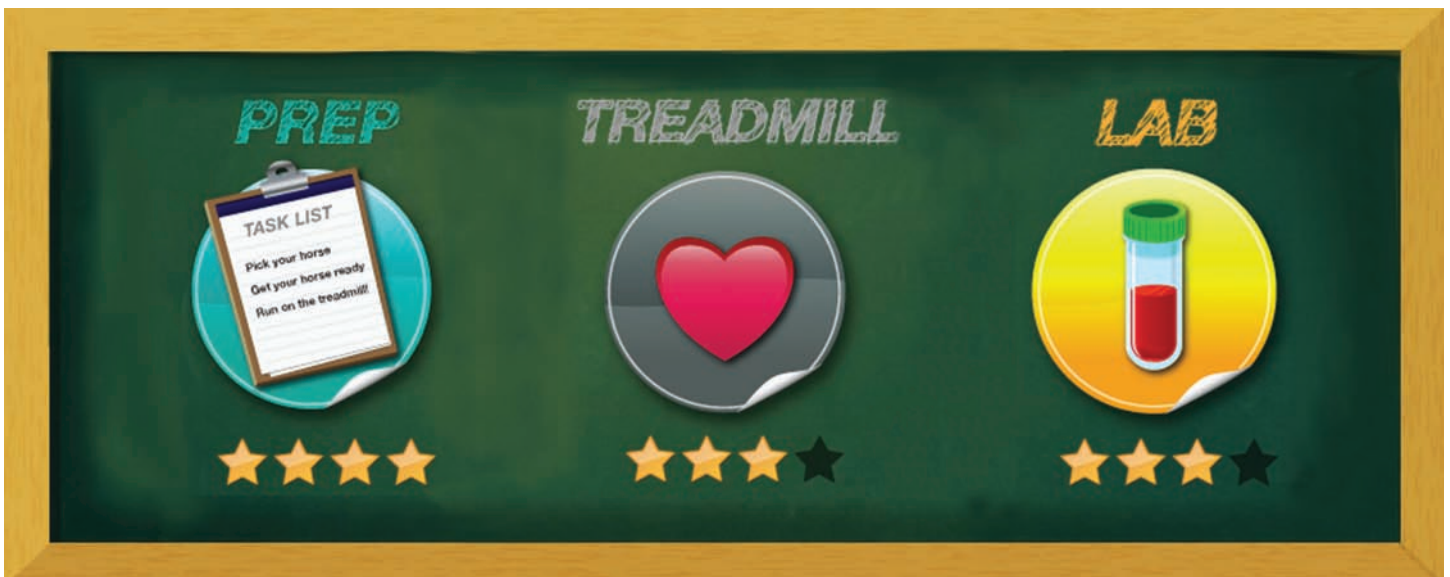
“We set out with blind ambition to make the best representation of the Equine Exercise Physiology lab as possible,” said Karyn Malinowski, director, Equine Science Center. “Exercising HorsePower exceeds our expectations and is just as educational as it is fun. Specifically, as a scientific center, a bonus for us is that we are advancing youth STEM education

(Science, Technology, Engineering, Math) using the best models for human medicine - horses.”

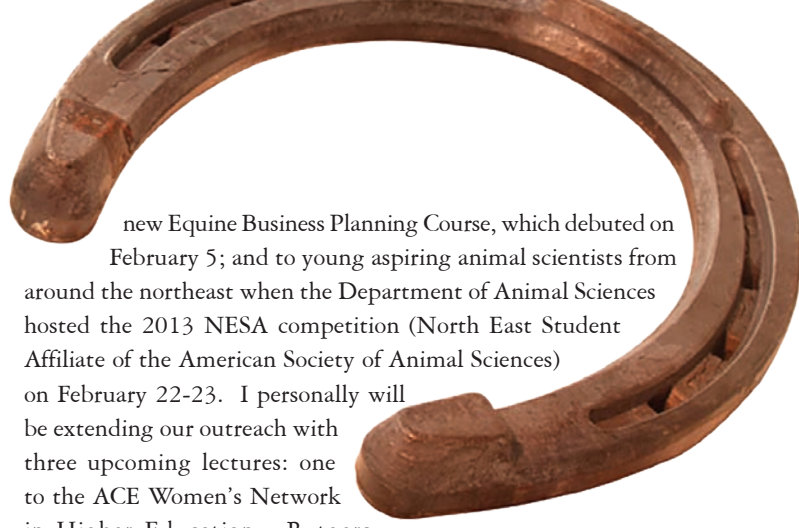
The game features three loveable and adorable animated horses: Lord Nelson, the mascot of Equine Science 4 Kids, along with Frankie and Snowdrift, two mares from the Horse Hero research and teaching herd at the Center and New Jersey Agricultural Experiment Station. Horses are depicted with a brief biography which includes fun facts and unique abilities depending on age and prior condition. Players will have a different experience with each horse; therefore, to add to the fun, the player should complete it in its entirety with all three horses.

The game has three well-designed levels which represent the stages of a standard equine exercise study: Horse Prep, Treadmill, and Laboratory. Each level gets progressively more challenging.

Continued on page 5



From The Clubhouse



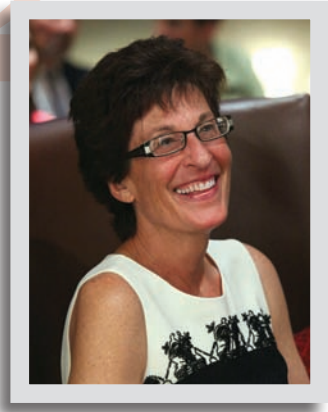
new Equine Business Planning Course, which debuted on February 5; and to young aspiring animal scientists from around the northeast when the Department of Animal Sciences hosted the 2013 NESA competition (North East Student Affiliate of the American Society of Animal Sciences) on February 22-23. I personally will be extending our outreach with three upcoming lectures: one to the ACE Women's Network in Higher Education - Rutgers affiliate, another to the Philadelphia Society for Promoting Agriculture, and third as the luncheon lecture for this year's Colonel Henry Rutgers Society luncheon.

I was thrilled to launch the new game. **"Exercising HorsePower"** on **"Equine Science 4 Kids."** See the cover story for more details. This truly has been a labor of love for **Tiffany Cody**, Avani Palikawahla, and Center staff members who have been working on this project for several months. We will be celebrating the launch of the game on **Ag Field Day** at Rutgers Day on April 27. I hope to see many of you there! With the generosity of Center supporters we will be able to fund another round of Equine Initiative grants this year. Colleagues are also engaged in several exciting contract research projects which will financially support our work, provide new insight into better horse care and management, and fund a good portion of the per diem costs of our **Horse Hero** mares. Thanks to those who are currently sponsoring a research mare in our herd. As our research plate increases in size more horses have been added to the herd. We will be highlighting several of the new mares on April 27 during Ag Field Day at Rutgers Day. Come on out, say "hello," and think about becoming a sponsor of one of the research 'heroes.'

Bestest,
Karyn

Happy spring!

Other than the return to eastern daylight time there has been nothing about the past few months that would indicate that spring is just around the corner. I am chomping at the bit to get back to a regular riding/driving schedule. Lord Nelson has survived another cold, wet winter and is "itching" for his pasture to turn 'green' again. See his Blog post on the subject at



<http://lordnelsonsblog.blogspot.com/>.

Even in inclement weather we stay busy at the Equine Science Center conducting *"Better Horse Care through Research and Education."* We've spent time celebrating with fellow New Jerseyans who were recognized for success in the equine industry. Congratulations to our own School of Environmental and Biological Sciences student Monica Smetts who won this year's Ernest Bell Memorial Scholarship from the New Jersey Equine Advisory Board. Kudos to Linda Toscano, our 2013 *"Spirit of the Horse"* award recipient who was recognized as "Horseperson of the Year" by the New Jersey Department of Agriculture and as "Trainer of the Year" by the United States Harness Writers Association at the Dan Patch awards banquet held in conjunction with the Harness Racing Congress on March 1-3. I was in attendance to hear the latest on a wide range of topics influencing the harness industry from experts in their respective fields. I was especially interested in hearing how the horse racing industry can, with limited funds, best address the medication issue.

We continue our outreach to horse owners and equine enthusiasts through the successful Horse Management Seminar, held on February 10; the



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.

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.



New Advisory Board Chair

by Ryck Suydam

It is my honor and privilege to serve as the newly appointed Chair of the Rutgers University Board for Equine Advancement. My family's legacy is deeply rooted in New Jersey farming, since 1713. As a 12th generation farmer, I am proud that Suydam Farms remains a vibrant agricultural cornerstone in Somerset County. As we celebrate our 300th anniversary, we recall what has enabled our farm to survive three centuries and the answer is threefold: 1) being proud stewards of the land, dedicated to hard work; 2) good and healthy soil to grow varieties of hay and field crop production; and 3) our equestrian friends throughout our great state.

I also wear the professional hat of being co-owner of the Suydam Insurance Agency located in Somerset, specializing in equine liability, mortality, and farm property insurance.

I accepted this position as Chair of RUBEA knowing full well that to see the equine industry thrive in the Garden State, it will take a firm commitment from the New Jersey equine industry and a strong, sustainable Equine Science Center.

The New Jersey horse industry has benefited greatly from the Center's cutting edge research which has generated applied scientific advancement in areas such as: exercise physiology, metabolism and digestion, equine pharmaceuticals, nutrition, and aging. This invaluable research contributes to horses and the equine industry, related industries, including agribusinesses like hay and field crop production also continue to thrive.

Under my leadership as Chair of RUBEA, I plan to move the board from its original mission of assisting the Center in its decisions regarding equine teaching, research, and outreach programs to that of fundraising in order for the Center to continue to be a recognized globally as a leader in equine research.

The reorganizational board meeting was held on March 27th with a lively yet rigorous dialogue which yielded new ideas to improve the financial outlook for the Center. A few suggestions ranged from introducing

new special fundraising events to cultivating the veterinarian horse memorial program to lobbying in Trenton and strategically working toward securing an endowment. Additionally, members recommended that we identify and cultivate relationships with industries that are supported by horses such as real estate, farm equipment, and equine supplies. Members are eager to get to work and produce positive results.

We are counting on the entire horse community, and supplemental industries, to rally together to help the Center

Raising money for a nonprofit organization in this current economic climate is difficult regardless of the charitable cause. RUBEA members know that this is not an easy task. However, we stand firm in our convictions and fully committed to the mission of RUBEA and the Equine Science Center. RUBEA is counting on the entire horse community, and supplemental industries, to rally together to help the

Equine Science Center in its endeavors to conduct impactful equine research. You can contribute to the success of the Center by making a donation. No gift is too small. To learn more about supporting the Center, visit **Giving** at esc.rutgers.edu, or contact Center Director, **Karyn Malinowski** at malinowski@aesop.rutgers.edu.

With your help, and the combined efforts of RUBEA, together we will usher the Equine Science Center into the next chapter of its remarkable success toward fulfilling its mission of "better horse care through research and education."



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

Want cash? Apply now!

Applications are now being accepted for the **Equine Science Center's Doris C. Murphy endowed scholarship**. The deadline to submit an application for the 2013/2014 academic year is **Monday, May 6, 2013**. The Doris C. Murphy scholarship is reserved for female students who are New Jersey residents majoring in Animal Sciences with a minor in Equine Science and are enrolled in or are incoming freshman at Rutgers University. Up to six \$1,000 awards are available annually.



For more information, email Tiffany Cody at cody@aesop.rutgers.edu

Earn a Gold Medal for Your Farm

The **Rutgers Equine Science Center** has teamed-up with the **New Jersey Department of Agriculture** (NJDA) and the **New Jersey Agricultural Experiment Station** (NJAES) at **Rutgers University** to create a new initiative the **New Jersey Equine Environmental Stewardship** program – which celebrates horse farms throughout the state. Promoting public awareness of environmentally friendly horse farms and sustainability of agriculture are two primary objectives of the program. The Equine Environmental Stewardship program also includes the Gold Medal Horse Farm award. The award and overall program gives recognition to outstanding equine farms for their dedication to environmental sustainability and management. It also underscores the efforts of the New Jersey equine industry to maintain the beauty of the Garden State. “We developed this program because it is imperative for the equine community and greater New Jersey population to know that their neighborhood horse farm is strategically implementing environmental sustainability measures,” said Michael Westendorf, associate extension specialist in Animal Sciences for Rutgers Cooperative Extension, NJAES. “Not only do we want to encourage and reward horse farms for developing best management practices tailored specifically to their operation, we also want the community to be made aware of their efforts as well. The New Jersey Equine Environmental Stewardship program is the perfect initiative to achieve both goals.”

The program is open to all New Jersey horse farms. In order to apply, it is mandatory that the farm already have an Animal Waste Management Plan and/or Comprehensive Nutrient Management Plan in place. Beyond the two plans, awards are based on water quality, soil erosion, stream and water management, sanitation, and pasture, feed, and manure management. The overall aesthetic of the farm will also be taken into consideration. Specific criteria include:

1. Controlling animal access to the waters of the State - “*Water or waters of the State* means the ocean and its estuaries, all springs, streams, and bodies of surface or ground water, whether natural or artificial, within the boundaries of the State or subject to its jurisdiction.”;
2. Storing manure at least 100 linear feet from surface waters of the State;
3. Applying manure using proper nutrient management practices;
4. Minimizing odors from manure storage and application areas;
5. Optimizing the beneficial use of nutrients from manure and bedding materials;
6. Having a biosecurity program in place to minimize disease risk.

After a thorough application and review process, four - five farms will be selected annually by representatives from the Equine Science Center, NJDA, and NJAES to earn the distinct honor of being recognized as a Gold Medal Horse Farm.

“This new initiative is a ‘win’ for all involved parties, and we are excited to see it flourish in the Garden State,” said Monique Purcell, director, Division of Agriculture & Natural Resources, NJDA. “It is another example of the outstanding partnership the NJDA has with the Equine Science Center and New Jersey Agricultural Experiment Station.”

To introduce the Gold Medal Horse Farm award in the inaugural year of the program, organizers decided to select Showplace Farms as the first award recipient.

Showplace was an early adaptor of the Animal Waste Management Rule, a mandate by the New Jersey Department of Agriculture which went into effect

on March 16, 2012. The rule requires that all farms with greater than eight animal units have an Animal Waste Management Plan. Bix DiMeo, general manager of Showplace Farms, took the initiative to contact a professional for help in writing the plan for Showplace Farms.

“We saw the Animal Waste Management Rule as a great opportunity to get feedback from animal science experts, and support from the state, to make our equine operation more proficient and environmentally-friendly,” said DiMeo. “Furthermore, those who know me would say that it’s quite fitting that I receive an award for shoveling manure,” quipped DiMeo.

Showplace, a Standardbred training facility with nearly 300 horses, previously stored its manure in an area of the farm which was not suitable for long term storage. Following guidelines in the Animal Waste Management Rule, it was determined that the manure site should be moved to a different location which would make management and removal much more efficient while eliminating risks for environmental pollution.



“Developing best management practices is crucial to equine environmental sustainability,” added Westendorf. “Showplace Farms exemplifies proper manure management. We know of no other horse farm in New Jersey that keeps such meticulous disposal records.”

Applications are now being accepted for the NJ Equine Environmental Sustainability Program and all farms are encouraged to apply. Completed applications must be postmarked by June 15, 2013. The final award results will be announced during the Equine Science Center’s annual Equine Science Update in mid-November. Additional information, including an **application**, **fact sheet**, and **survey**, can be found on the Equine Science Center’s website (esc.rutgers.edu).

Let's Play (continued)

In the Horse Prep level, players select their horse from among the three that are available. Once the horse has been chosen, the next step will be to prepare the horse for a Graded Exercise Test (GXT) on the high-speed treadmill. The preparation process involves equipping the horse with various items such as a halter, harness, heart rate monitor, and other things. The Horse Prep section is timed so players must prepare their horse quickly and accurately in order to successfully complete the level unlock to the next level: the Treadmill.

The Treadmill level is action-packed and features an animated version of the selected horse. The computer game player will have to multi-task as they operate the speed of the treadmill while simultaneously taking blood samples from their horse. Each of the horses has a different speed list for the treadmill and also requires a different number of total samples that need to be collected. Once all of the samples have been collected, and depending on the accuracy with which the level was completed, the player may unlock the final level: the Lab.

Players are invited to test their skills in the lab and before entering, must decide what activity they would like to play by choosing either Total Protein or Packed Cell Volume. Total Protein is used to help measure hydration status, among other things, in horses. Packed Cell Volume is used to indicate an increase in red blood cells needed to meet higher oxygen demands during exercise.

Each activity presents a special challenge which makes the game more rewarding. Depending on which measurement is selected, certain instruments and equipment will be accessible on the player's lab bench. For example, when measuring Total Protein, the player will use pipettes, a centrifuge, and a refractometer. For Packed Cell Volume, the player will utilize capillary tubes, a hematocrit card reader, and a microcentrifuge. A notebook is provided with helpful hints and additional information about the chosen activity. The player should pay close attention in the Lab level because there could be a pop quiz at the end!

Included in all levels are success meters, depicted as stars. The player will receive four stars at the start at each level. The objective is to retain as many stars as possible in order to get the best score. Once two or more stars are lost in a level, the player has to retry the level before moving on to the next level.

At the end of "Exercising HorsePower", the player will win a pop-up card reward based on their score. Simply print out the pop-up card template, color it, and assemble it.

"From beginning to end, "Exercising HorsePower" is non-stop action, excitement, and education" said Tiffany Cody, public relations specialist, Equine Science Center. "I am pleased that the Equine Science Center is adding a little fun to the science of horses just for the youth audience. Kids love playing computer games and with the addition of the new game, the Equine Science 4 Kids portal is the perfect place for all horse-loving kids to play."

"Exercising HorsePower" also features other cool interactive elements and links to additional content, including a video recording of Frankie exercising on the treadmill.

For more information about "Exercising HorsePower", Equine Science 4 Kids, or how the Equine Science Center is educating young students, please contact **Tiffany Cody** at cody@aesop.rutgers.edu or 848-932-9419.

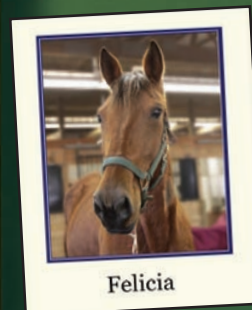
NELSON'S CORNER

Ag Field Day Fun!



It's spring time! And everyone should know what that means...

Rutgers Day is around the corner! Mark your calendar for Saturday, April 27th from 10 am - 4 pm!



Felicia

Her full name is Felicia Scott, and she is a very regal mare.

These girls will be trotting around the fields all day waiting to meet everyone who stops by the barns at Rutgers Day!

Making his encore appearance, our lifeless, but equally important equine partner, **Wishbone**, will be showcased in the barn! In his second life, our lucky Wishbone now teaches students about the skeletal structure of horses, and how we are more alike underneath the skin than you may have initially thought. Who said only cats have nine lives?



MAZEL

JK Mazel lives up to her quirky name.



Ursula

No, she is not an octopus, she's a horse.

On another note, do you know what happens when you combine a horse and a computer? You get the "**Exercising HorsePower**" **Game!** During the live treadmill demonstration in the Red Barn, you will see Snowdrift hitting top speeds, just like she does in the animated exercise physiology game on **Equine Science 4 Kids!** This newest addition to our kids web portal is sure to set off the charts records.

Rutgers Day is going to be buckets of fun, so make sure you stop by and see where all the excitement takes place!

Major Success for New Equine Business Planning Course

The Equine Business Planning Course, a new educational offering from funding partners, the Equine Science Center, New Jersey Agricultural Experiment Station, and Northeast SARE - Sustainable Agriculture Research and Education, concluded on March 19 to rave reviews.

The course was designed to assist equine business owners with the completion of a formal business plan. Modeled after Annie's Project, a business class for female farmers, the course walked students through the necessary components of a business plan. Each participant received a comprehensive workbook to supplement the live speaker presentations.

Beginning on February 5, the course was held on Tuesday evenings for seven consecutive weeks in two locations. Using modern video conferencing software, the classroom sessions were held simultaneously in Freehold and Bridgewater, NJ.

Carey Williams, equine extension specialist, and Robin Brumfield, farm management extension specialist, were the project managers for the course. An impressive and diverse line-up of experts were invited to present each week. Speakers and presentations are as follows:

February 5	Why Business Planning is Important; Accessing Business Planning Resources	Sarah Ralston, associate professor of Animal Sciences; Karyn Malinowski, director, Equine Science Center; and Ed Wengryn, research associate, New Jersey Farm Bureau
February 12	Strategic Planning; SWOT Analysis (Strengths, Weaknesses, Opportunities, Threats)	Robin Brumfield; Karyn Malinowski; and Paul Gottlieb, chair-Department of Agricultural, Food, and Resource Economics
February 19	Productions and Operations Plans	Elizabeth Durkin, Esq.; Ryck Suydam, Suydam Insurance Agency
February 26	Equine Marketing Plans	Brian Schilling, assistant professor-Department of Agricultural, Food, and Resource Economics; Patti Colbert, founder, Extreme Mustang Makeover
March 5	Business Management and Personnel	Bob Mulligan, senior consultant for Dairy Strategies, professor emeritus at Cornell University; Rick Wills and Charlie O'Brien, owner and marketing manager of Rick's Saddle Shop, respectively
March 12	Equine Business Financial Planning	Sandy Denarski, former VP of Johnson & Johnson Finance Corporation
March 19	Course Graduation and Networking Event	Closing remarks by Karyn Malinowski; Mark Robson, dean of Agricultural and Urban Programs, Rutgers representative for Northeast SARE

Following the end of the class, student reviews were overwhelmingly positive. Several students expressed interest in taking the course a second time. Student comments included: "We had no idea the importance of business planning before starting this course," and "I am just realizing that the business plan is the backbone to support my mission."

Anyone who missed this year's course may purchase the supplemental workbook in the near future.

For more information about the course and the availability of workbooks, please contact **Laura Gladney** at gladney@aesop.rutgers.edu or 848-932-3229.

Inaugural Equine Business Planning course class



Save the Date!

Ag Field Day at Rutgers Day

Saturday, April 27, 2013

G.H. Cook Campus
Rutgers, The State University of NJ
New Brunswick, NJ
rutgersday.rutgers.edu

Open House

Wednesday, July 24, 2013

Red Barn on College Farm Road
G. H. Cook Campus
Rutgers, The State University of NJ
New Brunswick, NJ
cody@njaes.rutgers.edu

Thank You

*The Equine Science Center would like to thank the following **Horse Hero** sponsors:*

SUPER HERO

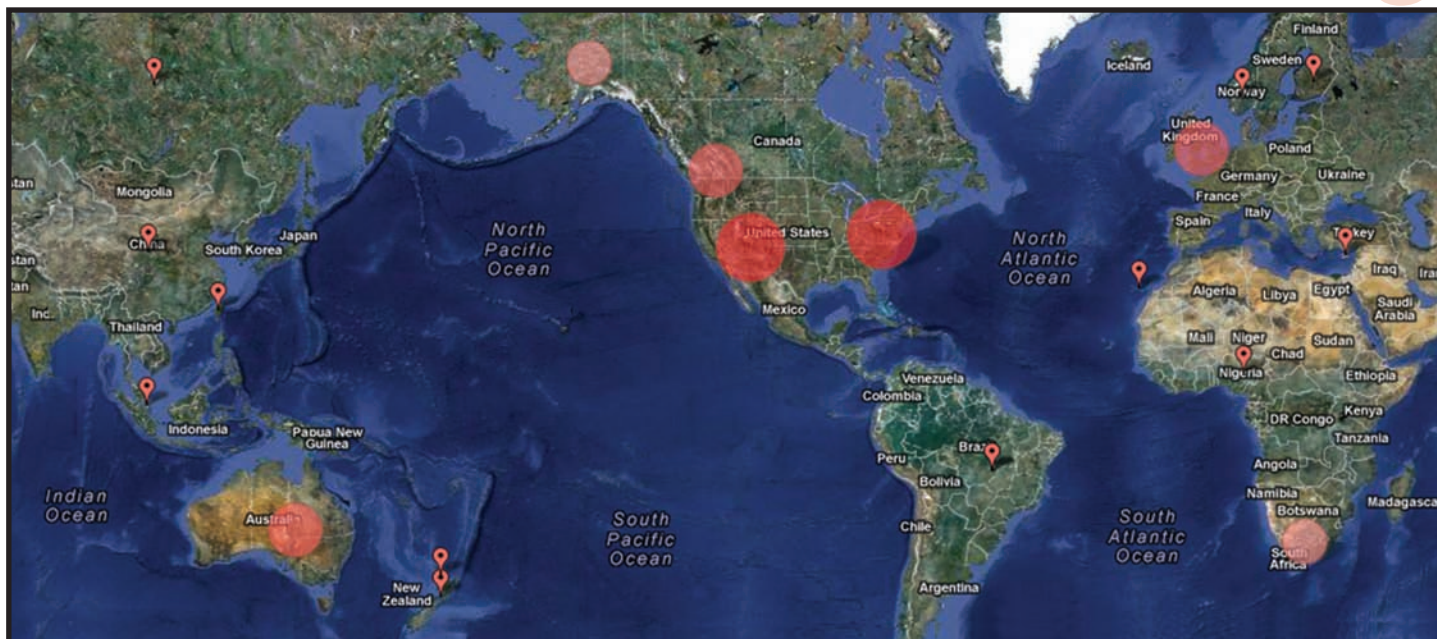
Pat Colbert & Kate Steenberg (JUNE)

HERO

Somerset Hills Pony Club (BISCUIT)

Jersey Roots, Global Reach

Answering Questions from Around the World



The vision of the **Equine Science Center** is “to be recognized locally and globally as the primary resource for everything equine.” Thanks to the “**Ask the Expert**” question and answer feature on its website, the Center’s vision has come to fruition and plans are in development to further expand its reach.

For thousands of people from all around the world, the best place for sound science is the “Ask the Expert” feature. By the end of 2012, the Center received questions from more than 21 countries worldwide. Questions have been received from Canada, the United Kingdom, Australia, South Africa, India, China, Taiwan, Singapore, Germany, and Brazil, just to name a few.

“I have heard that the Equine Science Center is the best kept secret in New Jersey,” said **Tiffany Cody**, public relations special, Equine Science Center. “Now, we have irrefutable data to prove that the reach of the Center extends far beyond the New Jersey state lines.”

The impact and awareness of the Equine Science Center is equally impressive in the United States. Since the inception of the “Ask the Expert” feature in 2004, the Center has received questions from every state in the US including from the less obvious states for equine activity like Alaska and Hawaii.

New Jerseyans submit the most questions to the experts at the Equine Science Center. While a significant number of questions come from the northeast region of the country, excluding New Jersey, the top five states that submit questions to the Center are as follows: California, Pennsylvania, New York, Texas, and Florida. On average, the Center receives approximately 20 questions per month with peaks in March and October.

Red dots indicate regions from where questions were received

Using the “Ask the Expert” feature is simple: a visitor to the Center’s website will click on the hyperlink to email **Carey Williams** (cwilliams@aesop.rutgers.edu), associate professor and extension specialist in Equine Management at Rutgers Cooperative Extension. Upon receipt of the question, Williams will either answer it directly or route it to the appropriate expert colleague based on the subject area of question. The Equine Science Center boasts an extraordinary roster of animal science experts and has the resources to collaborate with peers at other academic institutions such as Centenary College, the University of Kentucky, Pennsylvania State University, and Mississippi State University.

“Horse owners and farm managers always have questions regarding their horses and pasture,” said Williams. “The “Ask the Expert” feature is a great way for us to make ourselves available to the global equine community basically 24/7 through the website. As an academic institution, it is critical that we fact check our response; therefore, it may take a day or two before we reply. But, we make a point to answer all questions emailed through the “Ask the Expert” feature.”

Questions and answers are organized around several key themes - Farm & Pasture Management, Nutrition, and Equine Management - grouped in batches and then posted onto the Equine Science Center’s website several times throughout the year. Questions that are asked repeatedly are only posted to the website once. To submit your question or for the complete list of archived “Ask the Expert” questions, visit www.esc.rutgers.edu/Q_A.htm.

esc.rutgers.edu

Equine Science Center

Better Horse Care Through
Research and Education



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Go Green!



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