NEWS UPDATE

EQUINE SCIENCE CENTER

"Better Horse Care Through Research and Education"

SPRING 2006

New Jersey Prepares For Major Equine Survey

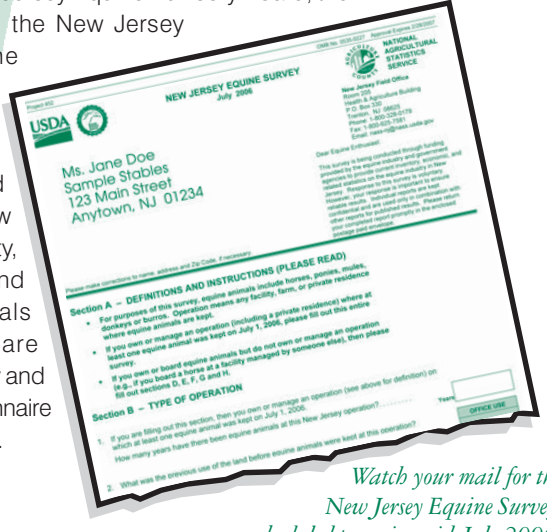
In mid-July, New Jersey horse owners and equine farm operators will receive an eight-page questionnaire that will have an impact on the horse industry for years to come.

The ***"New Jersey Equine Survey"*** questionnaire from the U.S. Department of Agriculture's National Agricultural Statistics Service (NASS) is part of a major study spearheaded by the Equine Science Center to determine the influence of the horse industry on the economy of New Jersey, on the preservation of open space and the viability of traditional agriculture in the state.

The results of the study will be used to inform and educate stakeholders and to provide an accurate picture of the scope and the breadth of the horse industry. A report will be made available to groups and individuals looking to increase their voice with legislators, governing bodies, regulators and various audiences.

"Every horse owner and equine farm operator in New Jersey is urged to respond to this important survey," says Dr. Karyn Malinowski, director of the Equine Science Center. "This will be the first time in 10 years that comprehensive data have been collected on the industry, and it is crucial that the state clearly understands and appreciates the scope of equine operations and the equine business. Economic development opportunities, regulation, public policy and other critical initiatives will depend on the successful completion of the study."

The Equine Science Center, the New Jersey Equine Advisory Board, the New Jersey Sire Stakes program, the New Jersey Department of Agriculture, the Standardbred Breeders and Owners Association, the Thoroughbred Breeders Association of New Jersey, the New Jersey Thoroughbred Horsemen's Association, the New Jersey Sports and Exposition Authority, officers of major breed groups and disciplines and many individuals throughout the horse industry are supporting and endorsing this survey and urge anyone who receives the questionnaire to answer it completely and promptly.


NEW JERSEY EQUINE SURVEY
July 2006

USDA

NATIONAL AGRICULTURAL STATISTICS SERVICE

Ms. Jane Doe
Sample Stables
123 Main Street
Anytown, NJ 01234

Section A – DEFINITIONS AND INSTRUCTIONS (PLEASE READ)

Section B – TYPE OF OPERATION

OFFICE USE

Watch your mail for the New Jersey Equine Survey, scheduled to arrive mid-July 2006.

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Best Management Practices Horse Farm Update! (Page 3)

From the Clubhouse

Dr. Karyn Malinowski, Director

Photo by Nick Romanenko

Earlier this spring, Senator Barbara Buono invited a number of horse people to testify before the Senate Wagering, Tourism and Historic Preservation Committee, which she chairs. The subject was the future of horse racing in New Jersey – should it be sustained? can it be sustained? and if it should and can, how? All tough questions.

I was one of the individuals asked to testify, especially to offer the perspective of the Equine Science Center on the importance of the horse industry and how racing affects it.

Whenever I have the privilege of addressing one of our state legislative committees I am struck by the diligence and concern that most of our legislators display as they tackle the thorny issues that must be addressed to keep the state running smoothly. I also am struck by the fact that there are no simple answers. A credit to one group may mean a debit to another. Everybody has a point of view, and our legislators do their best to consider each on its own merits.

Everyone in the room left the hearing believing that horse racing in New Jersey must be preserved. Dollars generated by horse racing support, in part or in full, many of the important activities that benefit all horse people, regardless of the breed or discipline they choose to enjoy. Racing provides significant support for hay and grain producers, equine retailers, equine medical professionals, equipment suppliers… the list goes on and on. Some of the largest horse farms in New Jersey are those owned and managed by individuals in the racing business; thus prime land remains open space – at no cost to the taxpayers. Racing is also a significant component of tourism in the Garden State. The example I used was a one-day event – the Far Hills Steeplechase Races – that each year draws 50,000 people to Somerset County, generates millions of dollars of income for vendors and suppliers, and produces a substantial donation to the Somerset Medical Center (a total of more than $17 million over the years).

One of the best developments to come out of the hearings is an ongoing working group that formed that spring day and is addressing the need to unify all horse people in New Jersey to speak up in one voice for the industry. This is something that I have been trying to accomplish for years, and, incidentally, is reflected in the Equine Science Center's mission to ensure the vitality and viability of the New Jersey equine industry. You will hear more about the progress of the unification effort in this newsletter as time goes on.

The hearing also demonstrated the need for all horse and farm owners to respond to the ***"New Jersey Equine Survey"*** that is being mailed July 17. (See the story on Page One.) A great deal of the data defining the horse industry is now 10 years old. It is imperative that we have new, reliable numbers to cite when making the case for the horse industry and for making projections regarding the industry's impact on critical issues such as the economy, traditional agricultural products and the preservation of farmland and open space.

So, folks, if you get the equine survey in the mail, take the time to fill it out and send it back to the statisticians who will give us all a true and fresh picture of New Jersey horse power!

Equine Survey (continued)

Individual responses to the survey questionnaire will be compiled with all other responses so that complete anonymity is maintained. Data will be analyzed by a reliable, respected, experienced third party; all individual data are kept strictly confidential as required by law (Title 7, U.S. Code). The survey is intended to be completed by individuals 18 years of age or older, and NASS asks that any minors who may receive the questionnaire have a parent fill it out.

To ensure adequate coverage of all equine operations across the state, individuals in randomly selected land parcels will also be interviewed. This methodology was developed by NASS to compensate for any list incompleteness and to obtain more accurate estimates. Employees of the National Association of State Departments of Agriculture (NASDA) will be working with NASS and visiting equine operations through August. NASDA employees also are bound by strict rules of confidentiality; they can be identified by their official badges and the NASDA placard in the windows of the vehicles they drive.

According to Dr. Paul Gottlieb, associate professor and extension specialist in agricultural economics, the survey is part of an overall economic impact study. "Rather than just a horse census, the study will determine the economic benefits horses bring to New Jersey; how supplier businesses and others (such as hay, straw and grain farmers and other types of traditional agriculture) benefit from horses; how many acres of open space are devoted to keeping horses in New Jersey; the factors that could negatively affect the horse industry; attitudes of the public toward horses and equine operations; and similar information that will provide an accurate portrait of New Jersey's 'horse power,'" he says. For questions about the survey, call 800-328-0179.

Ryders Lane 'Best Management Practices' Horse Farm Update

Last fall, we announced an initiative undertaken by the Equine Science Center and several state and federal agencies to develop a demonstration working horse farm on the Cook College campus that would use agricultural "best management practices" to provide solutions to many of the environmental problems facing farm owners and stable managers today.

Located at the Ryders Lane facility on approximately 40 acres, the complex will serve as a learning center where research, education and proactive outreach through live demonstrations and twilight seminars will enrich the public's understanding of how to successfully manage the environmental challenges their farms may pose.

Progress has been made on this project, which is led by Dr. Carey Williams, extension specialist in horse management:

- An integrated crop management (ICM) approach, custom-designed to manage pastures on a field-by-field basis, has been developed under the guidance of Donna Foulk, agricultural program coordinator.

- Dr. Sarah L. Ralston is assisting in the selection of various pasture grasses, which will be tested for durability, palatability and nutritional content.

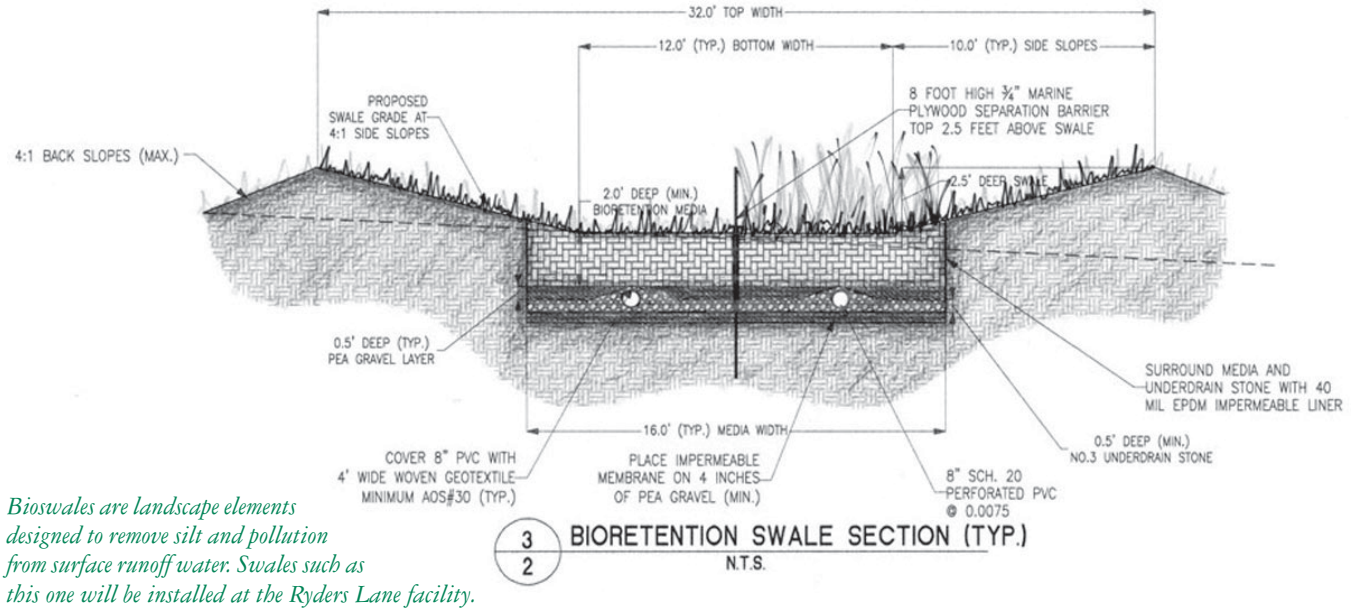
- As one of the co-managers of the project, and extension specialist in livestock and dairy, Dr. Michael Westendorf is working closely with the Natural Resources Conservation Service to develop a design for proper manure management, including storage and composting.

- Dr. Christopher C. Obropta, extension specialist in water resources, who is co-managing the site along with Dr. Williams, is implementing a water management plan to control stormwater runoff that might pollute nearby water bodies.

- A special area of the Equine Science Center website detailing various solutions and progress on the project has been created and will be updated periodically.

A major component of this program is the outreach and education sessions for the public. Numerous learning opportunities are being planned, including on-site demonstrations, workshops, and twilight meetings. In addition, a short course on best management practices will be offered in a two-day focus session at Horses 2007, Saturday, March 31 through Sunday, April 1, 2007 at the Equine Science Center.

In addition, fact sheets, newsletters, and peer-reviewed articles will be produced. Details of seminars and workshops will be posted on our website, **www.esc.rutgers.edu**, as they are made available. A journal also appears on the site.



Bioswales are landscape elements designed to remove silt and pollution from surface runoff water. Swales such as this one will be installed at the Ryders Lane facility.

Student Voices – The Road to Graduate School: Pursuing a Ph.D. in Equine Nutrition and Exercise Physiology

By Emily D. Lamprecht, Third-Year Graduate Student in Equine Science

Photo by Jamie Lamprecht

Emily Lamprecht and Snowdrift.

When asked what I am going to do with a Ph.D. in equine science, my answer is something like, "…Continue to find ways to improve equine welfare and performance, to educate horse owners and enthusiasts about relevant equine-related topics, and to promote and ensure the vitality of the equine industry both locally and nationally." After contemplating this response, most people ask if I am going to be a veterinarian; of course my answer is "No." Upon completion of my doctoral studies, I will most likely work in academia, in industry for a feed company, or for a pharmaceutical company. I particularly enjoy equine outreach and extension. About half of the people I have this conversation with are satisfied with this answer, the other half are curious as to how I started down this career path.

Like many young animal enthusiasts I aspired to be a veterinarian. I was accepted into the animal science program at the University of Missouri, Columbia and it wasn't until my sophomore year that I changed my career goals. After coming to terms with the reality of vet-school incurred debt, a typical starting salary for a veterinarian, and the general lifestyle of a practicing vet, I decided it wasn't for me. It was then that I got involved with equine and dairy research at the University's Department of Animal Science and saw the possibility of graduate school. Realizing that I would not be able to achieve my career goals without a higher degree, I was motivated to apply. I applied to several graduate programs including Rutgers University, University of Kentucky, Colorado State University, and University of California, Davis.

Rutgers' equine science program was my top pick for many reasons. The animal science faculty is outstanding. Among them are several distinguished and respected equine faculty, including Dr. Ken McKeever, Dr. Sarah Ralston, Dr. Carol Bagnell, and Dr. Carey Williams. Dr. Karyn Malinowski (a former animal science faculty member and now Dean of Extension and Director of the Equine Science Center) realized a dream with the creation of the Equine Science Center. It is a tremendous asset to the Department of Animal Sciences, the University, and the state of New Jersey. The center provides networking and outreach opportunities for students and faculty, resources for the industry, and is a source of funding for equine research.

Another significant factor influencing my decision to attend Rutgers was funding. Rutgers' Department of Animal Sciences was the only program that provided continual graduate support through teaching and research assistantships which will allow me to come out of graduate school without debt. Additionally, our equine research facility, commonly known as "The Red Barn", is a state-of-the-art equine exercise physiology laboratory complete with an equine treadmill, free-stall exerciser, scale, and a "wet" laboratory. Rutgers offered a complete package, and although it was difficult to leave my family and the Midwest behind, it was the obvious choice for graduate school. I was pleasantly surprised by the strong presence and diversity of the equine industry in New Jersey. From thoroughbred and standardbred racing, to eventing, dressage and gymkhana, this state has it all.

Now entering into my third year of graduate study, I am still 100 percent sure I made the right decision to attend Rutgers. The faculty has proven themselves as caring and effective advisors. My dissertation research in equine joint inflammation and nutraceuticals is a constant challenge that I look forward to everyday. I truly enjoy working with the horses and undergraduate research students to address issues facing the equine industry. Opportunities for personal and professional development are numerous in this program. I have had and will continue to have opportunities to attend and present research at local, national, and international conferences where networking opportunities and exposure to current equine research can be attained. Graduate school is an excellent alternative to veterinary school, one that has allowed me to turn my passion for horses into a career.

Faculty Voices: Nutrient Management Planning on Equine Farms

By Zane Helsel, Director, National and Regional Partnerships and Chair, Extension Specialists, and Dr. Michael Westendorf, Associate Extension Specialist in Animal Sciences

While many horse owners look at manure as a costly nuisance and a potential regulatory problem, proper management can limit problems and even create profitable outcomes.

Of particular concern are regulatory controls that seek to minimize nutrient and microbial runoff to bodies of water from animal waste. Federal and state regulations for Concentrated Animal Feeding Operations (CAFOs) and Animal Feeding Operation's (AFOs) have and will affect many equine operations. An important part of these regulations requires the development of nutrient management plans ensuring the implementation of "Best Management Practices" (BMPs) for manure management, storage, disposal, and land application on farms. All CAFOs and some AFOs are already required to have comprehensive nutrient management plans.

New standards for animal waste management are being considered by the New Jersey Department of Agriculture. As currently proposed, an operation with eight or more animal units (one animal unit equals a 1,000-pound horse or other type of livestock) will need to develop a self-certified nutrient management plan. Although technically not as comprehensive as the plans required by CAFOs, all nutrient management plans involve quantifying the farm operation in terms of numbers, types and uses of livestock, land availability use, nutrient status, estimated manure production, bedding use and nutrient content of manure and potential soil and nutrient loss when manure is land applied. Plans for proper disposal and use of manure along with safety requirements and other strategies to enhance the efficiency of the operation are also parts of the self-certified plans.

While these regulations may seem burdensome, they should help to reduce runoff pollution experienced on some farms and may also be helpful in improving the overall operation. Rutgers University's New Jersey Agricultural Experiment Station is assisting the Department of Agriculture and New Jersey farmers by developing educational programs that will help to implement these self-certified plans. "Self-certified" does not mean that it is voluntary, but rather each producer can develop and complete their own plan while getting support and guidance from technical people employed by the Department of Agriculture or Rutgers Cooperative Extension.

Particularly when animals are confined and/or pasture is limited, storage structures may be necessary to manage the manure. In addition, barnyards may need to be modified to control storm water runoff, and erosion control measures may be necessary to protect soil resources and control animal waste runoff. Fortunately the federal government through the USDA's Natural Resources Conservation Service (NRCS) has an Environmental Quality Incentives Program (EQIP) to support the development of comprehensive nutrient management plans. The NRCS will also assist in designing and providing monetary support for building the structures and BMPs needed to support implementation of these plans. Although competitive and not providing full funding, many equine operations have been successful in receiving EQIP funding in recent years. Rutgers Cooperative Extension has been a cooperator in some of these efforts and is planning an educational effort to assist AFOs to develop self-certification plans. Another major effort to support equine producers is the Best Management Practices (BMPs) demonstration farm currently under development at the Equine Science Center on the Cook Campus off Route 1 in New Brunswick. Funded by several groups, this demonstration farm will provide many examples of how producers can develop effective and useful plans that meet regulatory requirements and provide opportunities to save or make money from manure management by developing economical feeding rations, improving bedding use and management, and developing compost management and utilization strategies.

Producers need not wait to begin working on these practices. The Equine Science Center and Rutgers Cooperative Extension have produced several fact sheets (see below) that can help horse owners get started on their own nutrient management plans. Along with potential support through the EQIP program (sign up for the EQIP programs can be done through your local USDA Service Center), equine operations can get a leg up on preparing to meet regulations and enhance their operations.

Fact Sheets

The following Fact Sheets and Bulletins are available via the Equine Science Center's website – **www.esc.rutgers.edu**. Just place your cursor on "Ask Us" and then click on "Publications" for easy access.

E296	Agricultural Management Practices for Commercial Equine Operations
E307	Best Management Practices for Horse Manure Composting on Small Farms
FS036	Horses and Manure
FS103	Horse Pasture Management - Species Selection
FS368	Establishing and Managing Horse Pastures
FS537	Horse Manure Management: Bedding Use
FS618	Equine Barnyard Management
FS770	Equine Pasture Management "A Year-Round Approach"

The Equine Science Center: You Can Help

The Rutgers Equine Science Center is an initiative of Cook College at Rutgers, the New Jersey Agricultural Experiment Station and Rutgers Cooperative Extension. It is dedicated to the well-being of horses and expanded future of the equine industry. The Center is recognized nationally and internationally for its innovative teaching and technology, cutting-edge research, outreach to the industry and assistance in creating policy to promote the economic viability and sustainability of the equine industry.

As the needs of the horse industry continue to grow and change, the demand for information and assistance also increases. Therefore, it is critical that the Equine Science Center be able to face these challenges. We have identified several goals that, once met, will ensure that our bank of knowledge will be available for years to come.

- A $2 million Endowed Directorship will enable us to tackle special initiatives on a very timely basis.
- A $3 million new Equine Learning Center on Route 1 and Ryders Lane will include a distance-learning component, house more horses, and provide state-of-the-art technology to enhance teaching and research.
- Refurbishment of the historic Round House will help preserve this very special landmark, restoring it to become a high-tech "smart" classroom.
- Faculty, graduate fellowship and scholarship endowments will ensure that the best and brightest minds in equine science will have a place to flourish.

What can *you* do to support the work of the Equine Science Center?

Consider joining the "Community of 50" – either as an individual or as part of an organization. The Community is made up of donors who pledge gifts at the President's Council level for four years. President's Council members have traditionally made gifts of $10,000 or more through the Rutgers University Foundation. Gifts can take many forms, but the most common are cash, stocks, and securities, real estate, and bequests.

Spread the word. Be an advocate. At the stable, at shows, at dinner or on the trail, let your friends and associates know that the Equine Science Center is here for them – with science-based answers to pressing horse management questions, advice on how to comply with environmental regulations, and initiative when it comes to speaking out on policies and laws that shape the equine industry.

Visit the Equine Science Center. We offer many opportunities for the public to learn firsthand about the groundbreaking research done at the Center. Demonstrations of our high-speed equine treadmill can be booked three weeks in advance, and are popular with breed groups, school groups, and career programs.

Organize a "friend-raiser" event. If you can't come to us, let us come to you! Members of the Equine Science Center can come to your stable or barn, equipped with a presentation to educate your friends about our services, as well as answer any questions they may have. These "twilight seminars" are growing in popularity – they're a great opportunity to make an open house something special!

Make a personal gift. Whatever the size, your gift to the Equine Science Center does make a difference! Gifts may be made in a variety of forms, including cash, securities, and real estate, or through planned gifts, such as bequests and life income agreements. Gifts are tax-deductible to the full extent prescribed by the Internal Revenue Code.

For more information about how you can contribute to the Equine Science Center, please contact Diana Orban Brown at 732-932-9419 or orban@aesop.rutgers.edu.

Getting The Word Out

Cameraman Ed Hannen frames a shot of Snowdrift, Cook College student Nicole Fiorellino, Dr. Brian Voynick of News 12's "The Pet Stop", and Dr. Carey Williams. The Equine Science Center's research programs were featured on a recent segment of "The Pet Stop."

Horses 2007: Geared to Newcomers and Professionals Alike

Horses 2007, scheduled for Saturday, March 31 and Sunday, April 1, 2007, will create a learning event that will appeal to both new or prospective horse owners as well as seasoned professionals, including veterinarians and veteran horse owners and farm operators.

The event will take place at the Cook Campus Center on Rutgers' Cook Campus. Full details and directions will be posted on the Equine Science Center website – **www.esc.rutgers.edu** – by January 1, 2007.

The information-packed agenda is divided into two days of education. Saturday will focus on the concerns and questions of individuals who have recently bought a horse or horse farm or are thinking about doing so. It also will appeal to experienced horse people who are looking for refresher knowledge, or who are interested in science-based answers to horse-related questions.

Classes will be held on "Essentials" (equine behavior, exercise and stabling, owning your own farm, tack and equipment and other basics); "Nutrition 101" (hay, grain, supplements, problems and solutions); and "Horse Health and Lameness" (symptoms, causes, prevention, veterinarian and farrier care, vaccinations, dental work, aging and other concerns). Each class will include presentations and plenty of time for questions and answers.

On Sunday, presentations will take a more in-depth look at equine behavior, hay analysis, feeding-related problems, toxic plants, techniques and tools for diagnosing lameness, alternate therapies, rehabilitation, and a special look at policy issues and regulation. The Sunday session also will provide continuing education credits for veterinarians and vet techs.

On the same weekend, an intensive workshop on environmental best practices for operating a horse farm will also take place on the Cook campus – this time at the Ryders Lane facility (see the related story on Page Three). Enrollment in the two-day short course is limited to 80 participants to allow ample time for questions and hands-on learning. For more details, consult the Equine Science Center's website **(www.esc.rutgers.edu)** or the Office of Continuing Professional Education (cookce.rutgers.edu).

Speedy Drivers Told "Whoa" When Horses Are Present

The Equine Science Center and Rutgers Cooperative Extension remind motorists that New Jersey state law requires them to slow down as they pass horseback riders and horse-drawn carriages on public thoroughfares.

The Equine Science Center website **(www.esc.rutgers.edu)** has posted various materials to educate motorists and riders about a law requiring motorists to reduce their speed to no more than 25 miles per hour when encountering a person riding or driving a horse. The posters, flyers, press releases and other informational tools were created by the Atlantic County 4-H Junior Horse Council. Posters and flyers are available free of charge as a download from the Equine Science Center website.

According to Deborah Cole, Atlantic County 4-H agent and advisor to the public awareness campaign, "The law requiring drivers to cut their speed is relatively new and not widely publicized. Our 4-H horse project members realized that both drivers and horseback riders needed to be aware of the law, and that riders needed to know their rights as well as their responsibilities when using New Jersey roadways."

The group's posters and flyers can be printed in two sizes – 8 ½"x11" and 1l"x17" – and reproduce equally well in color or black and white. They are suitable for posting in public buildings, stables, tack shops and similar locations.

The theme of the awareness campaign is "Slow the Driving When They're Riding." It draws attention to the recently-enacted 25 mile-per-hour speed limit and the fact that, in addition, motor vehicles approaching in the opposite direction of the horse or carriage must stop and allow the horse to pass upon the request of the rider or driver using a hand signal or other means. Failure to comply can result in a fine of up to $150 and a jail sentence.

(continued on page 8)

Hay: What Horse Owners Want, What Horses Need

Horses are grazing animals. The digestive system of a horse is composed of a small stomach and 100 feet of intestine that is designed to continuously digest fiber. Long stem forages, such as pasture grasses and hay, can supply the fiber that is critical for proper digestive function.

Good hay or pasture can supply 70 percent to 100 percent of an active pleasure horse's nutritional needs. A good nutritional program should focus first on the available forages. The grain ration, if it is necessary, can then be chosen to complement the forage quality in the horse's diet.

Because hay is such an integral component of the equine diet, it is very important for horse owners to understand hay types and to evaluate hay quality. It is also important for horse owners to recognize the environmental factors and production practices that are necessary to produce quality hay.

Rutgers Cooperative Extension, in conjunction with the Equine Science Center, is sponsoring an evening meeting for horse owners and barn managers on "Hay Production and Quality" that will be held from 6 to 9 p.m. on August 16 at the Snyder Farm Agricultural Experiment Station in Pittstown, NJ. Participants will learn how to recognize different types of hay species, estimate forage quality, and recognize molds and toxic plants in hay. The workshops will also feature a hay-making demonstration and will provide information on the use of fertilizers, crop protectant materials and preservatives in producing quality hay. For more information and to register for the workshop contact Donna Foulk at 908-475-6503 .

In order to successfully produce and market hay to horse owners, farmers need to know what selection criteria is important to horse owners. As the price of fuel, seed, fertilizer, and equipment continues to escalate, farmers also need to be aware of local and regional variations in hay price.

To determine what hay selection criteria are important to consumers and to document trends and changes in attitudes about about hay quality, a survey on hay-buying practices was mailed to horse owners in New Jersey and eastern Pennsylvania in 1999 and again in 2004. Horse owners were provided with a list of types of hay and were asked to check the types of hay that were important to their feeding program. The survey participants were also provided with a list of selection criteria, such as price, lack of mold, color, lack of weeds, maturity level, lack of preservatives, bale size, supplier reputation and consistency of supply. The results of the survey have been tabulated and included in a bulletin, *The Equine Hay Market – What Horse Owners Want; What Horses Need.* The bulletin can be downloaded from the Equine Science Center website, **www.esc.rutgers.edu**.

Speedy Drivers (continued)

The campaign goes on to point out that riders and horse drawn vehicles must also comply with New Jersey law, which requires them to proceed in the same direction as the traffic and to stay as far to the right as possible. Horse-drawn vehicles must use a light on the rear of the carriage from 30 minutes before sunset to 30 minutes after sunrise and in foggy weather. Many limited access highways are off-limits to non-motorized vehicles.

Upcoming Events

Hay for Horses
6 – 9 p.m., Wednesday, August 16, 2006
New Jersey Agricultural Experiment Station at Snyder Farm
Pittstown, NJ
For more information, call 908-475-6503

Equine Management and Equine Science Updates
Tuesday, December 12, 2006
New Brunswick, NJ
See www.esc.rutgers.edu for additional details.

★ Extra! Extra! ★ Save the Date! ★

Horses 2007 Conference and Expo
Saturday, March 31 and Sunday, April 1, 2007
Cook College Campus
Rutgers, The State University of New Jersey
New Brunswick, NJ

"Better Horse Care Through Research and Education"

Dr. Karyn Malinowski
Director

Diana Orban Brown
Director of Communications

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NJAES New Jersey Agricultural Experiment Station
THE STATE UNIVERSITY OF NEW JERSEY RUTGERS