

## Study: *Strongylus Vulgaris* Parasite Associated with Selective Deworming



THE HORSE STAFF

The intensive deworming regimens on many U.S. farms appear to prevent *S. vulgaris* transmission.

Results from a recent study performed on American and Danish horses identified an association between selective treatment and occurrence of the most pathogenic parasite, *Strongylus vulgaris*, said Martin Nielsen, DVM, PhD, EVPC, assistant professor in the Department of Veterinary Science at the Gluck Equine Research Center.

In the study, presence of *S. vulgaris* was significantly associated with the time elapsed since a horse's most recent deworming. Frequent anthelmintic treatments tend to eliminate *S. vulgaris* completely.

The study involved 991 horses representing 53 different horse farms in Denmark and Central Kentucky. The data were subdivided based on

whether farms used selective therapy as a treatment strategy and the time since the most recent deworming. The Danish results indicated a possible association between selective therapy use and *S. vulgaris* occurrence in both individual horses and at horse farms in Denmark.

"We found *S. vulgaris* on Danish farms representing both parasite control approaches, but the prevalence was significantly different," Nielsen said.

The overall *S. vulgaris* prevalence in Denmark was found to be approximately 12%. Farms basing parasite control on selective therapy had twice as much *S. vulgaris* as farms not basing anthelmintic treatments on fecal egg counts. Stud farms and training stables using selective therapy were

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particularly at risk of harboring *S. vulgaris*, which might be due to considerably higher traffic and the presence of young horses susceptible to parasite infection, Nielsen said.

However, when the most recent anthelmintic treatment had occurred less than six months ago, horses were significantly less likely to harbor *S. vulgaris*. The parasite's six-month prepatent (incubation) period might explain this relation, he added. If treatment occurs within the prepatent period, the lifecycle can be interrupted effectively.

While the mean time since the most recent deworming was more than eight months on the Danish farms, the Kentucky farms were treating much more frequently, with the most recent deworming occurring about three months

## Strongylus Vulgaris

prior to the study. This likely explains why *S. vulgaris* was not encountered in any of the U.S. horses.

According to Nielsen, the possible re-emergence of *S. vulgaris* in Danish horse establishments is most likely due to the current prescription-only restrictions of anthelmintic usage. This has lowered the treatment intensity dramatically and has led a majority of farms to adopt the selective therapy method. These regulations were introduced to encourage veterinary involvement in deworming programs and reduce further development of anthelmintic resistance. It appears to be an unforeseen consequence that we see *S. vulgaris* again.

"The good news is that this parasite is still fully sensitive to anthelmintic treatment," Nielsen said. "Anthelmintic resistance is a problem in other parasites infecting the horse: the cyathostomins (small strongyles) and the roundworm, *Parascaris equorum*."

According to Nielsen, the intensive treatment regimens commonly practiced on many American establishments on one hand appear to prevent *S. vulgaris* transmission, but on the other hand have also caused high levels of anthelmintic resistance in cyathostomins and *P. equorum*.

"We cannot completely avoid anthelmintic resistance unless we don't perform any treatment at all," he said.

## Knowing the Terms

### What is selective treatment?

Selective therapy is a widely recommended parasite control strategy. The principle is to perform fecal egg counts from all horses on a given farm and then treat only those animals that exceed a predetermined threshold value. Studies have clearly illustrated that adult horses are capable of maintaining consistent egg count levels over time. As a majority of horses will maintain low or moderate egg counts, a considerable share of horses can be left untreated while maintaining a high overall reduction of the egg output. This markedly lowers the treatment intensity and therefore reduces the selection pressure for anthelmintic resistance. In countries where dewormers are available on prescription only, selective therapy is widely used.

### What is *Strongylus vulgaris*?

*Strongylus vulgaris* is also referred to as the bloodworm. Its life cycle is characterized by extensive larval migrations in the mesenteric arteries, which can cause significant damage and result in painful colic. The lesions can involve ischemia (lack of blood flow) and infarction (localized tissue death resulting from obstructed blood supply to the affected site) of intestinal segments, which invariably is fatal for the horse. This parasite's prevalence in horses used to be almost 100%, but decades of intensive treatment have lowered its occurrence to negligible levels.

Reduced treatment intensity, as represented by the selective treatment regimen, will still select for drug resistant parasites, but at a much lower rate. However, the sparse treatment most commonly performed on Danish horse farms might pose a potential risk to equine health, Nielsen said.

"Overall, these results strongly indicate that the choice of anthelmintic treatment regimen represents a trade-off between anthelmintic resistance and *S. vulgaris*, which are both two undesired outcomes," he said.

Nielsen said parasite control should not be based upon just one potential parasitic risk but all parasites that might threaten equine health. Based on these study findings, Nielsen recommends applying a basic foundation consisting of one to two yearly anthelmintic treatments to all horses. This is likely to reduce the occurrence of *S. vulgaris* and can still be combined with selective therapy performed at other times of the year. **UK**

> Shaila Sigsgaard is a contributing writer for the Bluegrass Equine Digest.

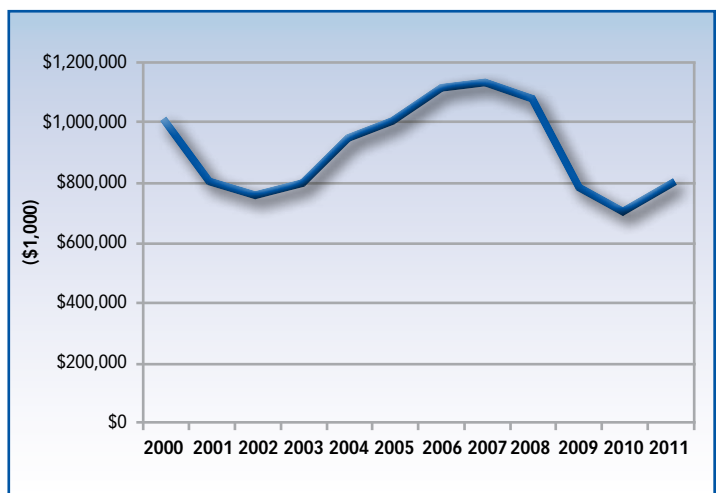
## Kentucky Farm-Level Equine Receipts Increase in 2011

After declining for three straight years, Kentucky farm-level equine receipts increased in 2011. In the recently released USDA estimates, equine receipts reached \$800 million last year, up 14% from 2010. This represents the highest mark since 2008, a year when equine receipts topped \$1 billion for the state. In terms of overall agriculture receipts, equine claimed the No. 2 spot in 2011, behind poultry and just ahead of corn.

Farm-level equine receipts primarily include Thoroughbred sales and stud fees, both of which likely helped boost receipts last year. Fall sales for yearlings and breeding stock were both up considerably from 2010. A combination of lower numbers, pent-up demand, tax incentives, and some large dispersals likely worked to fuel sales during 2011. Much more will be known about the 2012 market with the September sales. However, given the drought impacts on Kentucky's corn crop this year, equine is likely to hold the No. 2 spot again in 2012. **UK**

> Kenny Burdine, PhD, extension specialist in UK's Agricultural Economics Department provided this information.

### Kentucky Farm-Level Equine Receipts (2000-2011)



## Fencing: Is there a Best Choice?

Post-and-board, vinyl constructed plank, braided tape, coated high-tensile wire, pipe: There are many effective equine fencing options out there, but no hard-and-fast rules as to which is the best choice, explained Bob Coleman, PhD, equine extension professor in the University of Kentucky's Department of Animal Sciences. Rather, choosing a fencing style for your property comes down to looking at both your needs and the options available to you. "What is suitable on your farm is something you're going to have to decide," Coleman noted. "This means setting aside preconceived notions."

One parameter that plays a key role in fencing options is location. Coleman explained that material availability coupled with construction practices in an area often dictate which fencing styles are most readily available. For example, a four-board fence might be your best bet in Kentucky, whereas a pipe fence might be more the norm in Oklahoma.

The next factor is the functionality of fence type for the management style of the horses on your property. "A whole host of things comes down to what it is I'm trying to accomplish with my fencing," said Coleman. For example, many

## MASTHEAD

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JILL LANG/PHOTOS.COM

Material availability coupled with construction practices in an area often dictate which fencing styles are most feasible.

## Fencing

farm owners use an electric fencing option to subdivide large pastures and then construct a more substantial fence to surround the property's perimeter. "Consider how much pressure will be put on a fence, such as in areas where horses congregate," noted Coleman. The fence should provide both a physical and a psychological barrier. Some horses, such as stallions, young horses, and mares with foals, might require a greater physical barrier for safety, with an eye toward height and gaps. An electric wire on top rails might be necessary for those horses that don't respect the fence or are inclined to chew.

You might also have requirements external to your farm, such as being located in a residential area where you might need to control outside pets' access to pastures with wire mesh. Appearance can also play a role, such as at boarding, training, and sales businesses; fence type and quality is a big part of a visitor's first impression of the farm.

"The pros and cons kind of become the same thing for all of the fences," remarked Coleman. "Regardless of the kind of fence you might use, you want to see that it is properly constructed,

with the right size of posts and the right dimensions. The longevity of the fence in a lot of cases will be predetermined by how well it's been built and how well it's been maintained. Good construction and good maintenance will go a long way toward the safety of the fence."

When choosing the optimal fencing for your property, Coleman recommends talking with other farm owners and consulting with professionals. Formulate a budget based not only on construction material and labor costs, but also on maintenance and upkeep.

"Spend your money wisely. Buy quality, durable construction. Make sure the fence is suitable for the horses it needs to contain, which means good visibility, right size, and built to withstand excessive horse pressure," explained Coleman. "Look at all of the options and price it out. Look at utility, construction, and maintenance over long-term. Don't start out thinking it has to be 'a certain style of fence.' There may be nothing wrong with that style, but there may also be something just as good or better out there. Good purchasing decisions pay off in the long run." **UK**

> Natalie DeFee Mendik, MA, is a freelance journalist and American Horse Publications award winner currently living in Pennsylvania.

## STUDENT SPOTLIGHT

### DANIEL ANDREW HESTAD

*Degrees and Institute where received:*

**BS in Animal Science, Berry College, Ga., 2007**

Daniel Andrew Hestad chose to come to the University of Kentucky Gluck Equine Research Center because of its world-renowned equine research. With his interests in equine reproduction and his depth of experience in the equine industry, completing a graduate program at Gluck just seemed the perfect match, he said.

"On top of that, I knew after my first meeting with Dr. (Karen) McDowell (MS, PhD) that our interests and work ethics were perfectly aligned, such that she made my experience at the Gluck Center one of the best experiences of my life," he said.

Hestad's main research focus was to explore how endophyte-infected tall fescue seed ingestion (which causes fescue toxicosis in pregnant mares) would affect nonpregnant mares.

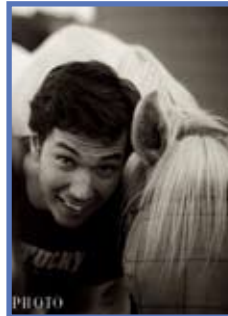
"Rather than side projects, we split this goal into three tandem experiments which all built on the previous knowledge that (ingested) fescue toxicosis would cause vasoconstriction (narrowing of the blood vessels resulting from contraction of the muscular wall of the vessels)," he said.

"Our study demonstrated that when mares ingest at least 10 mg of ergot alkaloid (the toxic chemical found in affected fescue) per day, certain parameters regarding the estrous cycle are not influenced, while vasoconstriction is observed," said Hestad. "This vasoconstriction may be related to the presence of the biogenic amine receptors (a variety of neurotransmitter receptors) which were defined in subsequent experiments."

According to Hestad, the combined results from these experiments imply that relative quantity of serotonergic receptor subtypes within a blood vessel might be related to the severity of that vessel's vasoconstrictive response to endophyte-infected tall fescue.

This project was able to clear up a lot of ambiguity in the field brought about by sparse reports with conflicting results, he said.

Hestad's next move is to enter veterinary school, where he ultimately hopes to return to research in the equine reproduction field. **UK**



## Fall Armyworm Captures Hit All-Time High

Captures of fall armyworm moths in Western Kentucky have hit a record high. On Sept. 13 the integrated pest management (IPM) traps at the University of Kentucky (UK) Research and Education Center, in Princeton, caught 675 moths. This surpassed the center's previous high of 549 collected Aug. 16. Fall armyworm moth captures remain low at the UK IPM traps located in Lexington.

"This will not be a distinct generation, as some of the worms from the previous large moth flight are still in fields," said Doug Johnson, PhD, extension entomologist with the UK College of Agriculture. "Worms from this flight will begin appearing in one to two weeks."

Each year, fall armyworm moths migrate to Kentucky from the South and begin laying eggs. Larvae hatch within three to five days. Fall armyworms are active beginning in mid-summer until the first killing frost.

The pest varies in color, though the grass-feeding type tends to be green. The fall armyworm has three yellow stripes down its back; the middle stripe is usually darker, and the ones on each

> Shaila Sigsgaard is a contributing writer for the Bluegrass Equine Digest.

## Fall Armyworms

side are wavy and yellow-red blotched. Fall armyworms have dark heads with a light-colored inverted “Y” mark on the front.

Producers currently scouting for this pest will see numbers begin to drop off as worms from the first flight die off, but they will pick back up again as the second flight produces caterpillars, Johnson said.

Fall armyworms prefer to lay their eggs in and feed on grasses, but they will move to other crops including row crops, alfalfa, tomatoes, cucumbers, and tobacco if no grass is available. This was and might continue be the case this year in areas of drought-stricken Western Kentucky.

“I would check grasses that are in good condition first, because they will likely have the most eggs,” Johnson said. “Young wheat plants and late-maturing



The fall armyworm has three yellow stripes down its back.

soybeans are going to be susceptible too. In the first flight there were worm infestations at the edge of some soybean fields. The worms migrated to these fields after they destroyed neighboring pastures.”

Armyworms’ feeding cause small, dark brown patches to appear in pastures. Producers might mistake these patches for rock or hardpan. In addition,

worms can hide underneath field debris or in soil cracks. As the worms continue to feed and their population increases, these patches will become larger. Once they destroy an area, they will move on to the next available food source.

Insecticides provide the best control when fall armyworms are 0.75 inches long or smaller. Each crop has a different threshold level before treatment with insecticides is warranted. More information on these levels and insecticides is available at the local UK Cooperative Extension Service offices.

While fall armyworm is a pest of cattle and horse pastures, it should not affect the animals’ health or be confused with the Eastern tent caterpillar that causes mare reproductive loss syndrome. Fall armyworms appear in Kentucky only in late summer and fall. Eastern tent caterpillars appear in the spring. **UK**

> Katie Pratt is an agricultural communications specialist within UK’s College of Agriculture.



## Gluck Center Three-Day Celebration

The University of Kentucky Gluck Equine Research Center hosted three events in three days—The Equine Research Hall of Fame on Sept. 23, the 12th Mary Passenger Memorial Lecture on Equine Medicine and Surgery on Sept. 24, and the 25th anniversary celebration of the Gluck Center on Sept. 25. Pictured are two of this year’s Equine Research Hall of Fame inductees—Eugene Lyons, PhD, of UK’s Gluck Center and Stephanie Valberg, DVM, PhD, of the University of Minnesota. George Allen, PhD, formerly of UK’s Gluck Center, received the posthumous award.

## WEED OF THE MONTH

**Common name:** Bitter sneezeweed

**Scientific name:** *Elenium amarum* (Raf.) H. Rock

**Life Cycle:** Warm season annual

**Origin:** United States

**Poisonous:** Yes

Bitter sneezeweed is distributed across much of the United States, from Texas north to Kansas and Missouri and eastward to the Atlantic coast. It is found frequently in pastures and can infest entire pastures in western portions of Kentucky. Overgrazing increases bitter sneezeweed’s abundance.

Seed germination occurs in late spring or early summer. Bitter sneezeweed’s leaves are narrow and threadlike and alternate along the stem. The flowers are bright yellow and bloom from late June through September under Kentucky growing conditions.

This species contains toxins that can cause digestive disturbance, appetite loss, and neurologic problems. Horses generally avoid eating bitter sneezeweed, and most toxicity problems occur in the late summer when the plant is flowering.

Bitter sneezeweed can be controlled using herbicides. Mowing will reduce seed production but generally is not effective in killing this plant. Hand weeding is effective to remove small infestations. Consult your local [Cooperative Extension Service](#) personnel for herbicidal control in your area. **UK**

> William W. Witt, PhD, is a researcher in the department of plant and soil sciences at the University of Kentucky.



SANDI EISENMENGER

## 2012 Kentucky Equine Survey Reaches Critical Funding Goal

The 2012 Kentucky Equine Survey, a statewide comprehensive survey of horse breeds, met a critical fundraising threshold this month. The state's equine industry and its supporters—among them organizations, businesses, and individuals—responded to the challenge of raising enough funds to be eligible for an equal amount from the Kentucky Agricultural Development Fund.

The University of Kentucky's Ag Equine Programs and the Kentucky Horse Council have partnered on the 2012 Kentucky Equine Survey, in conjunction with the Kentucky field office of the U.S. Department of Agriculture National Agricultural Statistics Service and the University of Louisville's Equine Business Program. The last comprehensive study of this type was conducted in 1977.

"We thank all those equine associations, large and small, as well as individuals all across the commonwealth, who contributed to the Kentucky Equine Survey," said Ginny Grulke, MS, executive director of the Kentucky Horse Council. "Every amount donated, whether \$5 or \$5,000, helped us reach this major milestone. We are proud of our grassroots riders who dug down deep to support



One of the study's purposes is to get an inventory of all horses in the state by breed and use.

the whole industry, enabling us to meet the \$100,000 challenge."

"It is encouraging to receive such strong industry-wide support for the Kentucky Equine Survey, because it again underscores the importance of having good data to help develop the state's signature industry to its fullest potential," said Jill Stowe, PhD, associate professor in agricultural economics, and project lead.

The survey was mailed in June to 15,000 Kentucky horse owners, and data collection will close Oct. 12. Horse owners who have not completed and mailed in their information are urged to do so now. Representatives from the National Agricultural Statistics Service are making phone calls to those who haven't submitted their information.

The purpose of the study is to get an accurate inventory of all horses in the state by breed and use, and to describe their economic impact at the farm and community levels, through races, shows, trail rides, and other events. The survey requests information relating to capital investments on the farm and in farm equipment in order to better assess the full economic value of Kentucky's horse industry. Horses being inventoried include those on farms owned by the horse owner as well as those boarded at equine boarding and breeding facilities.

The survey asks for information about breeds, their uses, and their estimated value. Other questions include the number and value of horses sold or purchased in 2011 as well as approximate expenses for horse care, including wages, taxes,

An advertisement for the University of Kentucky Ag Equine Programs. It features a close-up of a brown horse's head with a white blaze on its face, wearing a red halter. A woman with her hair in a ponytail, wearing a blue polo shirt, is looking at the horse. The background is a blue sky with white clouds. The text "University of Kentucky Ag Equine Programs" is written in large white letters on the left. The University of Kentucky logo and "College of Agriculture" are in the top right. Contact information and a Facebook link are at the bottom left.

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## Kentucky Equine Survey

feed, bedding, health, supplies, farrier, insurance, boarding, and training fees.

All farm and individual names are confidential and will not be available to any state or federal agency, including the University of Kentucky (UK) and the Kentucky Horse Council. Summary survey results are expected in December, with in-depth economic impact results becoming available during early 2013.

The cost of the study is \$600,000. The Kentucky Agricultural Development Fund committed \$300,000 to the project, with \$100,000 of that funding contingent on a match of \$100,000 from Kentucky's horse industry and organizations. Seventy such organizations, businesses, and individuals stepped up to help secure that match. UK's College of Agriculture committed \$200,000 for the study.

"This study is critical to every horse activity in Kentucky and will create a rich and unbiased set of data that should be a foundation for decisions by policymakers, educators, investors, and business leaders for many years to come," said Nancy Cox, PhD, associate dean for research in UK's College of Agriculture, Kentucky Agricultural Experiment Station director, and administrative leader for UK Ag Equine Programs. "We are extremely grateful to the equine industry for recognizing the importance of this study and responding with financial contributions."

The bulk of the budget goes to the Kentucky field office of the National Agricultural Statistics Service, an agency that conducts this type of research regularly and is able to provide the highest level of confidentiality to participants.

Early and major financial support for this effort came from the Kentucky Horse Council, Kentucky Quarter Horse Association, North American Equine Ranching Information Council, Kentucky Thoroughbred Association/Kentucky Thoroughbred Owners and Breeders, and Kentucky Thoroughbred Farm Managers Club.

Other major financial support was given or pledged by Alltech, Butler Schein Animal Health, Commerce Lexington Inc., Equine Medical Associates, Hagyard Equine Medical Institute, Keeneland, Kentucky Equine Education Project, Kentucky Hunter Jumper Association, Merck Animal Health, Pfizer Animal Health Inc., Rood & Riddle Equine

## Draft Horse Field Day

On Sept. 15, Asbury University, in partnership with the University of Kentucky, hosted the fourth annual Draft Horse Day at the Asbury University Equine Center. The event featured demonstrations of draft horses at work and provided an opportunity to learn how farmers worked the land before the introduction of tractors. The event also featured team games, a children's activity area, educational booths, and demonstrations by the Asbury Police Mounts program. Below, Ray Smith, PhD, professor and forage extension specialist at the University of Kentucky, drives one of the teams.



AMIEE NIELSON

Hospital, Spy Coast Farm, and the United States Equestrian Federation.

Additional financial support was given or pledged by Beta-Rock Stables, Cane Run Farm, Daniel Boone Distance Riders, Farmers Feed Mill, Fort Harrod Back Country Horsemen, Kentucky Association of Equine Practitioners, Kentucky Dressage Association, Kentucky Paint Horse Club, Kentucky Ropers Association, Kentucky Veterinary Medical Association, Kentucky Veterinary

**"We are extremely grateful to the equine industry for recognizing the importance of this study and responding with financial contributions."**

Dr. Nancy Cox

Medical Association Foundation, Lexington Equine Surgery, Maplecrest Farm, Masterson Station Equestrian Trust, McMahon & Hill Bloodstock LLC, Misty Ridge Farm, Mountain Pleasure Horse Association, Northern Kentucky Horse Network, Shawhan Place LLC, Siena Farm, Sierra Farm, Society for Arabian Horses in the Bluegrass Area, and Webster Pharmaceuticals.

Additionally, the Kentucky Horse Council raised money through a grassroots campaign where private horse owners contributed to the survey. A list of those contributors, currently more than 30 individuals, is available on the Kentucky Horse Council and Kentucky Equine Survey's websites.

More information about the 2012 Kentucky Equine Survey can be found at [www2.ca.uky.edu/equine/kyequinesurvey](http://www2.ca.uky.edu/equine/kyequinesurvey) or on Kentucky Horse Council's website at [www.kentuckyhorse.org](http://www.kentuckyhorse.org). UK

> Holly Wiemers, MS, is communications director for UK Ag Equine Programs.



PHOTOS.COM

## UK Ag Receives More than \$500,000 to Help Beginning Farmers

The U.S. Department of Agriculture has awarded the University of Kentucky (UK) College of Agriculture a \$561,000 grant for KyFarmStart, its comprehensive training program for beginning farmers and those who are considering careers in farming.

At the recent Farm Progress Show in Boone, Iowa, Agriculture Secretary Tom Vilsack announced more than \$18 million in grants through the Beginning Farmer and Rancher Development Program to programs in 24 states.

"In the past few decades, U.S. agriculture has become the second most productive sector of the American economy, thanks to farmers adopting technology, reducing debt, and effectively managing risk," Vilsack said. "These grants will help beginning farmers and ranchers overcome the unique challenges they face and gain knowledge and skills that will help them become profitable and sustainable."

The Beginning Farmer and Rancher Development Program makes grants to organizations that implement education, training, technical assistance, and outreach programs to help beginning farmers and ranchers, specifically those who have been working in the field for 10 or fewer years.

Lee Meyer, PhD, extension professor in UK's Department of Agricultural Economics and the director of KyFarmStart, said Kentucky is in transition, and its farm population, like that of the rest

of the country, is aging. Currently, 30% of principal farm operators in the U.S. are 65 years or older; in 2007 the average age of U.S. farmers was 57, according to the 2007 Census of Agriculture, a number that closely reflects the average age of Kentucky farmers. Only 40% of Kentucky's farmers farm fulltime.

"To keep farming viable in the state, we have to be able to replace these people," Meyer said. "KyFarmStart focuses on introducing interested people to the many aspects involved in farming and adding to the knowledge base of those who are already in the field."

With the new funds program organizers will continue and expand the training program begun three years ago. With its specialists and statewide network of extension agents, KyFarmStart delivers a cutting-edge curriculum backed by agricultural and financial experts. While they will continue to offer the original curriculum that includes face-to-face educational meetings at county extension offices, on-farm demonstrations, and the opportunity for mentoring by established producers, they will also offer a new, shortened "basics" curriculum for those exploring the idea of farming.

Joining UK in the project are Kentucky Center for Agriculture and Rural Development, Community Farm Alliance, Kentucky Dairy Development Council, and Catholic Charities of Louisville.

Meyer said the new grant would provide the necessary resources to expand

## UPCOMING EVENTS

### October 2012

#### Oct. 18, 4 p.m.

Equine Diagnostic Research Seminar Series, Veterinary Diagnostic Laboratory, R. Reid Hanson, DVM, will speak on Sport Horse Musculoskeletal Enteropathy, [www.ca.uky.edu/gluck/EdCEseminar.asp](http://www.ca.uky.edu/gluck/EdCEseminar.asp).

#### Oct. 21-26

International Conference on Equine Infectious Diseases IX. Oct. 21 Practitioners' Day in conjunction with the International Conference on Equine Infectious Diseases IX, Hilton Lexington Downtown Hotel, [www.eidc2012.com](http://www.eidc2012.com).

#### Oct. 30-Nov. 4

Alltech National Horse Show, Alltech Arena, Kentucky Horse Park, Lexington, Ky., [www.alltechnationalhorseshow.com](http://www.alltechnationalhorseshow.com).

### November 2012

#### Nov. 2-4

Eastern National 4-H Horse Roundup, State Fair and Expo Center, Louisville, Ky.

#### Nov. 8, 6 p.m.

Kentucky Equine Networking Association (KENA) Meeting, Networking 6 p.m.; Dinner 6:30 p.m., Equine Business vs. Hobby: What is the Law? Location TBD.

#### Nov. 15

*Lawsonia intracellularis* and Equine Proliferative Enteropathy Symposium, 1-5:30 p.m. with cocktails and hors d'oeuvres from 5:30-7:30 p.m., Veterinary Diagnostic Laboratory, register at [www.epesymposium.eventbrite.com](http://www.epesymposium.eventbrite.com)

and reach many more beginning farmers in the state.

"This has been a highly successful program," he said. "The additional funding from the USDA will ensure that KyFarmStart will continue, and we will be able to continue offering important resources to the next generation of Kentucky farmers." **UK**

> Carol L. Spence is an Agricultural Communications Specialist and editor, *The Ag Magazine*, in UK's College of Agriculture.



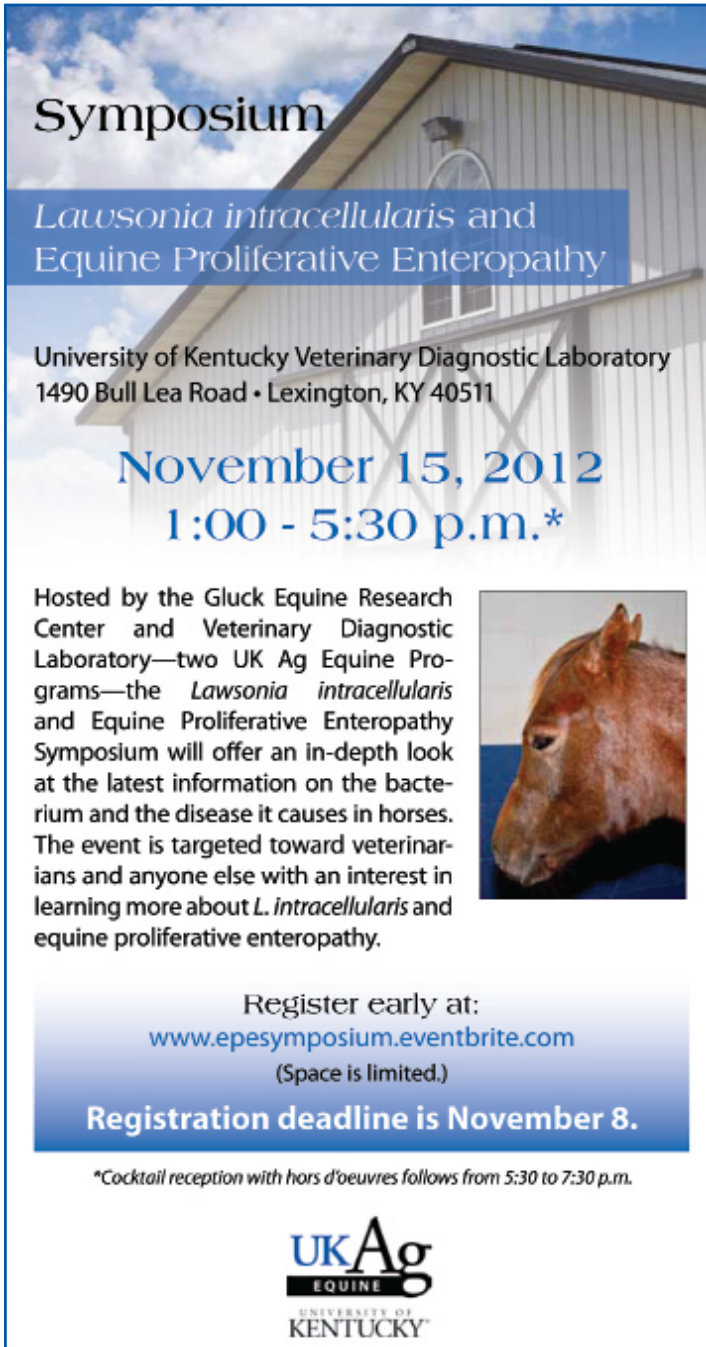


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# Symposium


## *Lawsonia intracellularis* and Equine Proliferative Enteropathy

University of Kentucky Veterinary Diagnostic Laboratory  
1490 Bull Lea Road • Lexington, KY 40511

### November 15, 2012

1:00 - 5:30 p.m.\*


Hosted by the Gluck Equine Research Center and Veterinary Diagnostic Laboratory—two UK Ag Equine Programs—the *Lawsonia intracellularis* and Equine Proliferative Enteropathy Symposium will offer an in-depth look at the latest information on the bacterium and the disease it causes in horses. The event is targeted toward veterinarians and anyone else with an interest in learning more about *L. intracellularis* and equine proliferative enteropathy.



Register early at:  
[www.epesymposium.eventbrite.com](http://www.epesymposium.eventbrite.com)  
(Space is limited.)

**Registration deadline is November 8.**

\*Cocktail reception with hors d'oeuvres follows from 5:30 to 7:30 p.m.



## A UK Ag Equine Program

Four hours of Continuing Education has been applied for with the Kentucky Board of Veterinary Examiners for veterinarians and veterinary technicians. CE sheets must be signed at the meeting to receive credit.

### Welcome and Introductions by:

**Dr. David Horohov, PhD, William Robert Mills Chair in Equine Immunology at the UK Gluck Equine Research Center**  
**Dr. Ed Squires, PhD, Dipl. ACT (hon.), Director of UK Ag Equine Programs and Executive Director of the UK Gluck Equine Research Foundation**

### Sessions include:

***Background and history of L. intracellularis, especially in pigs and horses, and available diagnostic tests***  
**Dr. Connie Gebhart, PhD, Assistant Professor in the Department of Veterinary and Biomedical Sciences at the University of Minnesota**

***Typical presentation, clinical signs, treatment, prevention, and case reports***  
**Dr. Nathan Slovis, DVM, DACVIM, CHT, Director of the McGee Center at Hagyard Equine Medical Institute**

***Immunology—weanlings and EPE***  
**Dr. David Horohov, PhD, William Robert Mills Chair in Equine Immunology at the UK Gluck Equine Research Center**


***Pathology—typical necropsy findings and newly reported necrotizing EPE***  
**Dr. Alan Loynachan, DVM, PhD, Dipl. ACVP, Assistant Professor at the UK Veterinary Diagnostic Laboratory**

***Screening for L. intracellularis in horses***  
**Dr. Allen Page, DVM, a PhD candidate at the UK Gluck Equine Research Center**

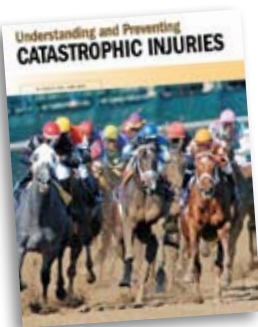
### Group Discussion:

***Future research directions and imperatives***

**Cocktail reception with hors d'oeuvres follows from 5:30 to 7:30 p.m.**



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