

How Many Horses Can Your Farm Hold?



A soil survey can help you calculate your farm's carrying capacity.

As many of us know, horse ownership is like eating potato chips; you can't have just one! The definition of too many horses depends on who you are asking and what parameters you are considering.

Before trying to decide if your checkbook can stand to take on one more horse, ask yourself, "Is my land capable?" More specifically, can the land you have support the horses you own in an economical and environmentally friendly way? There are tools to answer this question, one of which is the National Cooperative Soil Survey (NCSS) program.

National Cooperative Soil Survey

The NCSS program began in 1896 as an attempt to survey and map soils in the United States. The program started small, surveying only 2.8 million acres

in Maryland, Connecticut, Utah, and New Mexico. Today, soil survey data is available online for the entire country as the Web Soil Survey (WSS) and is maintained by the USDA-NRCS (United States Department of Agriculture, Natural Resources Conservation Service). The NCSS has a wealth of information and uses, both in and out of agriculture.

Using the Web Soil Survey

One of the many features of the WSS is the ability to calculate a farm's carrying capacity, answering the question, "How many horses can my farm hold?"

Below is a step-by-step guide to viewing soil characteristics for any piece of land in the United States. A PowerPoint presentation has also been created to graphically walk you through each step and can be found on the UK Horse Pasture Evaluation [Facebook page](#).

Articles of Interest

It's Haymaking Season

UK Equine Influenza Study Receives Funding from Zoetis

UKVDL Bulletin Alert: Unapproved Compounded Drugs

Is My Horse a Tick Magnet?

Weed of the Month: Buttercups

Chart: Pasture Weeds' Response to Herbicides

Eastern Tent Caterpillars on the Move in Central Kentucky

UK Cooperative Extension Celebrates 100 Years

Follow us on Twitter

UKVDL Reminder of CEM Collection Guidelines

Crowdfunding Project Receives Recognition

Equine Farm and Facilities Expo

Gluck Center to Host Annual Midwestern Conference of Parasitologists

Upcoming Events

For this example, we will select roughly 80 acres of prime horse pasture located on the University of Kentucky Research Farm near Lexington.

1. **Navigate** to the [Web Soil Survey](#) or search for "web soil survey." Click the green "START WSS" button.
2. **Enter Address** Click the dropdown arrows, enter the address, and click view.
3. **Find Your Area** Entering an address in WSS is like using a GPS—it isn't always completely accurate. Use the "+" magnifying glass to zoom in, the "-" magnifying glass to zoom out, and the "hand tool" to move the map

How Many Horses Can Your Farm Hold?

left, right, up, or down.

4. **Select Your Farm** Use the “AOI” button on the right to select your farm by clicking on points outlining the property. The program will connect the points with a straight line. Double click on the last point to complete the area. If you make a mistake and need to try again, simply click the “AOI” button to start over. When you are finished, the total acres selected will appear on the left.
5. **View Your Soil Map** Click the “Soil Map” tab at the very top (above the map). This will show a map of the selected area with each soil type outlined. A table containing all soil types in the selected area will be displayed on the left. To view this as a PDF or to print, click “Printable Version” on the far right. In the table, you can click on the soil types to learn more about that series.
6. **View Soil Ratings** Click “Soil Data Explorer,” then the dropdown arrows for “Vegetative Productivity.” Click “Yields of Non-Irrigated Crops (Map Unit)” and select “Pasture” from the dropdown menu. Finally, click “View Rating.” You will now see a map of the selected area with soil types colored in. Click “Printable Version” in the right corner to view as a PDF or to print. Scrolling down will show a table of the soil types and the ratings for each type in Animal Unit Months (AUM). This unit tells us how many months one acre of this soil type can support a 1,000-pound animal with average precipitation and recommended fertilization.

Interpreting Soil Ratings

As stated, AUM soil ratings indicate how many months one acre of land can carry one animal unit. This is useful for other livestock species whose numbers will fluctuate throughout the year, such as farms where calves are bought in the spring and sold in the fall. Generally, horse numbers are more stable, especially on nonbreeding farms. Therefore, those ratings are converted to acres per horse per year.

1. **Adjusting for Horses** An animal unit is defined as 1,000 pounds. The average horse’s weight is closer to 1,200 pounds, so divide the AUM rating by 1.2 to get the adjusted AUM

Plan buildings, roads, and fencing to utilize the best soils on your farm for pasture and understand what challenges you will face managing the land.

rating. Obviously, the horse’s breed and age has a significant impact on the animal’s average weight, so you might need to use a different adjustment factor. Light breeds (ponies) that average only 800 pounds would adjust by 0.8, while draft breeds that average 1,600 pounds might adjust by 1.6.

2. **Converting Months to Year** Divide 12 by the adjusted AUM rating to convert years. This gives acres per horse per year (AHY).
3. **Carrying Capacity by Soil Type** Dividing the number of acres you have of a soil type by the AHY will tell you the number of horses that soil type can carry for a year.
4. **Total Farm Carrying Capacity** You can repeat the calculations for each soil type and add the number of horses each soil type can carry to determine your farm’s total capacity.

For example, 80 acres on the UK Research farm in Lexington, which included 12 acres of Huntington silt loam, would be calculated as follows:

- $9.5 \text{ (AUM rating)} / 1.2 \text{ (adjustment factor)} = 7.92 \text{ (adjusted rating)}$
- $12 \text{ (months)} / 7.92 \text{ (adjusted AUM rating)} = 1.5 \text{ (acres per horse per year)}$

Now we know that we need 1.5 acres of this Huntington silt loam to carry one horse for one year. Now we can calculate how many horses we can have on 12 acres:

- $12 \text{ (acres of Huntington silt loam)} / 1.5 \text{ (AHY)} = 8 \text{ horses}$

This tells us that we can carry eight horses on 12 acres of Huntington silt loam.

We can repeat this process for each soil series present to calculate how many horses the entire farm can carry.

Uses and Limitations

Understanding a property’s soil types is valuable in many ways. Consider the production potential of a piece of land before making rental or purchase decisions. Use carrying capacity to estimate the land’s profitability based on the number of horses you could house for boarding, training, or breeding purposes. Plan buildings, roads, and fencing to utilize the best soils on your farm for pasture and understand what challenges you will face managing the land.

Proper soil fertility is key in obtaining maximum production. Permanent pastures benefit from recycled nutrients in manure and urine. Soil sample pastures every three years and fertilize according to laboratory recommendations. Cutting hay from pastures removes many nutrients; therefore, hay fields should be soil-sampled every year and fertilized accordingly to maintain production. For more information on soil sampling, see the UK publication, “[Taking a Soil Sample](#),” or contact your local county extension agent.

Just like making a budget and sticking to a budget are two different things, so is determining the capacity of your farm and implementing it. When rating soil types, the WSS makes a few key assumptions. The rating assumes that you will practice good pasture management, including maintaining grass cover, managing weeds, using rotational grazing, and maintaining soil fertility. WSS also assumes average weather conditions. Events such as a late spring, hard winter, or dry summer will all impact carrying capacity. Keep in mind that these are yearlong averages; in most years there will be excessive pasture growth requiring clipping in the spring and a lack of growth necessitating feeding hay in the winter. Year-round grazing is possible in some areas but requires intense management.

Finally, most horse farms will also have roads, barns, and common areas that are not included in pasture; remember to account for these nonproductive areas when determining your farm’s carrying capacity.

Knowing the production potential and limitations of the soil under your farm is key to reducing feeding costs when managing horses and being a good land steward. **UK**

> Krista Lea, MS, UK’s Department of Plant and Soil Sciences, provided this information.

It's Haymaking Season

Now is the optimal time for Kentucky forage producers to cut hay to ensure they get good quality and yield.

"The stage of maturity at which the hay is cut is the biggest factor that affects quality," said Tom Keene, UK hay marketing specialist with the University of Kentucky College of Agriculture, Food and Environment.

Many Kentucky producers entered the winter of 2013-2014 thinking they had enough good-quality hay to sustain their livestock. Before the end of winter, some found they needed more hay or that their hay quality was not as good as they had thought.



MATT BARTON

For grasses, Keene said producers should cut the plant when it's in the late boot stage (just prior to seedhead emergence). For legumes, producers should harvest when the plant is at the late bud or early flowering stage. A good rule of thumb for legume producers is to watch for flowers in the field. As flowers begin to appear, it's time to harvest for good-quality forage. Waiting any longer could result in poor-quality hay. While the harsh winter and a colder-than-average

early spring slowed some grasses' and legumes' development, most are at or nearing maturity now.

"The quality is going to go down every day producers wait to make hay from this point on," Keene said.

Because hay needs adequate time to dry before it can be baled or rolled, growers need four or five consecutive days of dry weather to make hay.

Once hay is made, producers can have it tested ensure good quality through the Kentucky Department of Agriculture.

More information is available at 502/782-9210 or online at www.kyagr.com/marketing/forage-program.html.

After producers receive those results, they can work with their county extension agent for agriculture and natural resources to develop a winter feed ration for their livestock. **UK**

Contact: Tom Keene, 859/257-3144

>Katie Pratt is an agriculture communication specialist at the University of Kentucky.

MASTHEAD

University of Kentucky Ag Equine Programs

Jenny Evans, Managing Editor, jenny.evans@uky.edu
Holly Wiemers, Managing Editor, holly.wiemers@uky.edu

Bluegrass Equine Digest Advisory Board

Bob Coleman, PhD, PAS, associate professor, director of undergraduate studies for equine science and management and extension horse specialist
Nancy Cox, PhD, dean of UK's College of Agriculture, Food and Environment and Kentucky Agricultural Experiment Station director
Ed Squires, PhD, Dipl. ACT (hon.), executive director of the UK Gluck Equine Research Foundation
Jill Stowe, PhD, director of UK Ag Equine Programs and associate professor in the department of agricultural economics
Mats Troedsson, DVM, PhD, Dipl. ACT, director of the UK Gluck Equine Research Center and chair of the department of veterinary science

Bluegrass Equine Digest Editorial Committee

Craig Carter, DVM, PhD, Dipl. ACVPM, director and professor of the UK Veterinary Diagnostic Laboratory
Laurie Lawrence, PhD, professor in the department of animal and food sciences
Ray Smith, PhD, professor and forage extension specialist
William W. Witt, PhD, professor emeritus in the department of plant and soil sciences

The Horse: Your Guide to Equine Health Care

Alexandra Beckstett, Managing Editor
Brian Turner, Layout and Design

The Bluegrass Equine Digest is a registered trademark of the University of Kentucky Ag Equine Programs and Gluck Equine Research Center. The Bluegrass Equine Digest is produced by the University of Kentucky in partnership with TheHorse.com and sponsor Pfizer Animal Health. It is published monthly to provide up-to-date information on equine research from the University of Kentucky's College of Agriculture. Research material is meant to be shared. However, materials are copyrighted and require reprint permission from UK Ag Equine Programs. Past issues of the Bluegrass Equine Digest are available at www2.ca.uky.edu/equine/bed.

University of Kentucky Equine Influenza Study Receives Funding from Zoetis

It's a dilemma many horse owners and managers face when a horse comes down with equine influenza: Do you aggressively seek treatment at the outset of illness in hopes of warding off any potential secondary bacterial infection, or do you wait to see if any further infections develop before treating?

The influenza virus is a significant cause of respiratory disease in horses. The virus itself is not treatable and must run its course; however, many horses develop secondary bacterial

infections, which can cause severe pneumonia and increased recovery time. This results in lost riding or training time as well as additional nonmonetary costs to the owner of the sick horse.

Jill Stowe, PhD, director of University of Kentucky's Ag Equine Programs and associate professor within the Department of Agricultural Economics, will conduct a study funded by Zoetis Inc. to examine the economic considerations of both approaches.

The economic considerations of the treat-now vs. wait-and-see methods will examine not only explicit treatment costs, but also the extent to which the owner/manager prefers to avoid having a horse feel poorly.

Equine Influenza Study

The study will consist of two parts. Part 1 will be an examination of the actual expected costs of the two strategies. The researchers will measure the likelihood of infection, the expected number of days the horse is ill, and the expenses associated with that illness, including medication, veterinary visits, stabling at the veterinary clinic, and any other costs associated with treating a sick horse.

For this phase of the project, the research team will collect data from field practitioners to estimate the cost of treatment for influenza signs, signs of secondary bacterial infections, and treatment with an antibiotic developed by Zoetis for lower respiratory tract infections, Excede, at the first fever episode post flu exposure.

Part 2 will consist of estimating owner/manager's willingness to pay for their horse to avoid illness. During this phase a questionnaire will be distributed to 1,000 Kentucky horse owners, and the researchers will use a common social science research technique called conjoint analysis to estimate respondents' willingness to pay for different attributes of a treatment strategy.

The study is expected to cost about \$57,000. **UK**

>Holly Wiemers, MA, communications director for UK Ag Equine Programs, and Jill Stowe, PhD, UK Ag Equine Programs director and associate professor in UK's Department of Agricultural

UK Veterinary Diagnostic Laboratory Bulletin Alert: Unapproved Compounded Drugs

The U.S. Food and Drug Administration-Center for Veterinary Medicine (FDA-CVM) released a bulletin May 16 regarding adverse effects associated with a compounded combination drug product containing pyrimethamine and toltrazuril. These drugs are used to treat the neurologic disease equine protozoal myeloencephalitis (EPM).

The release is available at www.fda.gov/AnimalVeterinary/NewsEvents/CVMUpdates/ucm397345.htm.

These cases highlight issues that veterinarians should consider when using or prescribing compounded products. In addition to the issues described in the release, veterinarians should also ensure the following:

- Clients should be made aware that compounded drugs may be formulated in varying concentrations, based on the prescription provided for each individual case, and a label clearly stating dosing instructions should be attached to the product to avoid incorrect dosing.
- Veterinarians should double-check prescriptions for accuracy before submitting to the pharmacy; compounding pharmacists should confirm the product is suitably formulated to provide appropriate doses of the drug(s).
- If an adverse drug event is suspected, the FDA-CVM should be contacted. The link above provides contact information for reporting.
- Veterinarians can receive updates and bulletins from the FDA-CVM by e-mail; see the link above to find out how to receive these updates. **UK**



ANNE M. EBERHARDT

For more information, contact Cynthia Gaskill, DVM, PhD, veterinary toxicologist at the UKVDL, at 859/257-7912 or cynthia.gaskill@uky.edu.

University of Kentucky

Ag Equine Programs





www.ca.uky.edu/equine
equine@uky.edu
 Find us on Facebook.



Is My Horse a Tick Magnet?

Q I have two geldings, a dark bay and a chestnut, that were turned out together for about two months. When I brought them back to the barn, the dark bay was covered in what seemed like hundreds of deer ticks. The chestnut maybe had five ticks. Why would there be such a difference in tick numbers if they were in the same pasture?

Kelly Stephens
Lexington, Kentucky

A There can be distinct differences in blood-feeding arthropods' (such as ticks and horse flies) attraction to individual horses. Some differences are inborn among these bugs; others are acquired after previous feeding exposure. Researchers are still learning which factors are important and how to use this knowledge to produce better repellents and protective chemicals for humans, horses, and livestock.

The factors that attract these bloodfeeders vary with the pest. For example, vision is important to horse flies. They see a dark moving shape in the distance and fly toward it. As they get closer, their senses check for other attractions, such as warmth, carbon dioxide, or specific skin odors. Often, dark-colored animals are more susceptible to attack from biting flies than light ones in the same herd because they are easier to see.

Ticks have limited vision so they rely on other senses. Hungry ticks climb vegetation and wait for a passing host. Ground vibrations from animal movement or carbon dioxide indicate a host is approaching. In theory, all horses pastured in the same field should pick up similar numbers of ticks. But once on a horse, the ticks might stay and feed or reject the animal and drop off without a blood meal. Over time, ticks continue to accumulate on "acceptable" animals; few will stay on those that have some sort of resistance mechanism.

Animals' responses or resistance mechanisms to tick bites appear to be a very important factor in whether ticks remain on an animal. Ticks inject dozens of chemicals as they feed. Animals with strong immune responses to these materials are not good hosts. Their physiological reactions interfere with the ticks' ability to feed so the ticks drop off without engorging. Differences in skin chemistry or oiliness, or accessibility of capillaries also may interfere with the feeding process. In some cases, strong reactions that result in itching and irritation may increase grooming activity, which reduces tick numbers.

It's clear that some animals are more attractive to blood-feeding pests than others.

Continued research may help to develop more effective pest control tactics. In the meantime, protection efforts (e.g., sprays, clearing brushy pasture areas, etc.) can be focused around susceptible animals. **UK**

>Lee Townsend, MS, PhD, is an entomologist in the University of Kentucky College of Agriculture, Food and Environment.



WEED OF THE MONTH

Common name: Buttercups

Scientific name: *Ranunculus* species

Life Cycle: Perennial

Origin: United States

Poisonous: Yes

Buttercup is the common name for several *Ranunculus* species distributed across much of the United States. Smallflower buttercup (*Ranunculus abortivus*), bulbous buttercup (*Ranunculus bulbosus*), tall buttercup (*Ranunculus acris*), and creeping buttercup (*Ranunculus repens*) are the most common species. They can be difficult to identify depending on the growth



stage. All buttercups are characterized by bright yellow flowers and most frequently grow in overgrazed pastures. Buttercups might overwinter as corms but primarily reproduce through seeds. In Kentucky seeds germinate in early March and plants flower from April through June. Buttercups can be poisonous to horses, but the plants are not palatable, and animals usually do not eat them. The toxin is found in the leaves and stems, and flowering plants contain more of the toxin than younger plants. Mowing is usually ineffective for controlling buttercups; however, buttercups are easily controlled with several herbicides. Consult a local Kentucky Cooperative Extension Service office for a list of herbicidal controls in your area. **UK**

>William W. Witt, PhD, professor emeritus in the University of Kentucky Plant and Soil Sciences, provided this information.

Eastern Tent Caterpillars on the Move in Central Kentucky

Eastern tent caterpillars in Central Kentucky are mature, have dispersed from trees, and are on the move, leading experts to advise horse farm managers to move pregnant mares, if practical, to pastures where they are less likely to come into contact with the crawling caterpillars.

Lee Townsend, MS, PhD, University of Kentucky College of Agriculture, Food and Environment extension entomologist, said populations are up in Central Kentucky this year.

"Mature Eastern tent caterpillars leave trees in search of protected pupation sites, where they will spin cocoons and transform into adults. This dispersal is a normal part of their life cycle," Townsend said. "These wandering caterpillars may move several hundred feet from the trees where they developed. The direction of travel tends to be random and directly related to air and ground temperatures. Movement will be slower when temperatures are cool and faster when they are warm. The caterpillars wander for a period of time

Caterpillars

until internal hormones signal that it is time to stop and pupate.”

Townsend said wandering caterpillars orient to dark, vertical objects such as tree trunks and fence posts. Check fence posts and rails to monitor caterpillar movement. If caterpillars are on your property, they are likely to be on these objects. Activity is winding down and should be done by the end of May.

“Insecticides are not very effective against large, dispersing caterpillars,” he said. “They feed very little, if any, so they are not going to consume treatments and little insecticide is picked up from treated grass or bare ground. Direct treatment of caterpillars may provide some control, but the effect is usually delayed.”



MATT BARTON

Mature Eastern tent caterpillar

The Eastern tent caterpillar is active early each spring. It is an important insect in horse country due to its role in mare reproductive loss syndrome (MRLS), which resulted in staggering

losses of foals in the 1999-2001 outbreak. MRLS can cause late-term foal losses, early- and late-term fetal losses, and weak foals. Subsequent studies by UK researchers revealed that horses will inadvertently eat the caterpillars, and the caterpillar hairs embed into the lining of the alimentary tract. Once that protective barrier is breached, normal alimentary tract bacteria can access and reproduce

in sites with reduced immunity, such as the fetus and placenta. **UK**

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

UK Cooperative Extension Celebrates 100 Years

In the past century, the University of Kentucky Cooperative Extension Service has impacted millions of Kentuckians. This year state extension personnel will celebrate a century of accomplishments and look toward ways the outreach arm of land-grant universities can improve Kentuckians' lives for the next 100 years.

“To make this next 100 years as successful as the first 100 have been, we need to be continually asking ourselves why we’re doing what we’re doing,” said Jimmy Henning, PhD, director of the Kentucky Cooperative Extension Service. “What we do can and should vary based on the differences in our communities and their needs, but the ‘why’ should always focus on leveraging the knowledge and the research at the university to improve the lives of Kentuckians.”

Over the years, UK Cooperative Extension agents and

specialists have implemented countless educational programs and grassroots efforts. Such programs and efforts have given young people the self-confidence to speak in front of their peers, provided nutrition advice to young mothers, supplied information to help Kentucky farmers become better stewards of the land, and much more. Each year, extension personnel make more than 7 million contacts across the state through their programs, events, initiatives, and efforts.

On May 8, the Cooperative Extension System will celebrate the 100th anniversary of the Smith-Lever Act, which established the service. A national convocation will be held that day at the Ronald Reagan Building and International Trade Center in Washington, D.C. Kentucky State 4-H president Paige Hart, of Caldwell County, will carry Kentucky's flag during the Parade of States. Other 4-H state officers will attend, including Allie Click from Jessamine County, Rachel Droege from Madison County, and Cody Phillips from Pike County.



Now you can Follow us on Twitter!

The University of Kentucky College of Agriculture, Food and Environment has several equine-related social media pages with the latest news and events information.

The UK Ag Equine Programs recently joined Twitter. Follow us at @UKAgEquine. The UK Maxwell H. Gluck Equine Research Center is also on Twitter at @UKGluckCenter.

Got Facebook? Like these pages administered by us:

University of Kentucky Ag Equine Programs: An overarching framework for all things equine at the University of Kentucky, including the undergraduate degree program, equine-related student organizations, equine research, and outreach activities.

University of Kentucky Maxwell H. Gluck Equine Research Center: The Gluck Center's mission is scientific discovery, education and dissemination of knowledge for the benefit of the **health and well-being of horses**.

Kentucky Equine Networking Association (created by UK and the Kentucky Horse Council): The mission of the Kentucky Equine Networking Association (KENA) is to provide an educational and social venue for equine professionals and other horse enthusiasts from all disciplines to share ideas and business strategies, and obtain current knowledge on horse and farm management with the principal objective of enhancing individual horse ownership and the horse industry at large.

Saddle Up SAFELY: A rider safety awareness program sponsored by UK HealthCare, UK College of Agriculture, Food and Environment and many community organizations. It aims to make a great sport safer through education about safe riding and horse handling practices. **UK**

In Kentucky, centennial events kicked off in February with a statewide conference for UK and Kentucky State University extension personnel. The centennial will also be celebrated during the Kentucky State Fair in the West Hall and the West Wing of the

Kentucky Exposition Center in Louisville. Many other celebrations will occur in counties across the state throughout the year. **UK**

>Katie Pratt is an agriculture communication specialist at the University of Kentucky.



Free Webinar: Managing Parasites in the Face of Drug Resistance

The growing reality of drug-resistance in parasites has made managing them a serious concern for horse professionals. Administering a rotational deworming schedule is no longer an adequate way to control parasites and could end up costing you more in the long run.

Speaker: Martin K. Nielsen, DVM, PhD,
Dipl. EVPC, ACVM

Duration: One hour, including Q&A

Date: May 26, 2014

Time: 5:30 p.m. Pacific/7:30 p.m. Central/8:30 p.m. Eastern

Register: <https://equestrianprofessional.leadpages.net/parasitecontrol/>.

Join EquestrianProfessional.com on Monday, May 26, for the free webinar “What Horse Professionals Need to Know About Drug Resistant Parasite Control,” with Martin Nielsen, DVM, PhD, Dipl. EVPC, ACVM, an assistant professor in equine parasitology at the University of Kentucky Gluck Equine Research Center.

During the webinar, Nielsen will unveil his findings and share solutions to help you answer your customers’ questions and provide optimal parasite management for the horses in your care. He will also cover:

- The current challenges of parasite control;
- Effective chemical measures and sustainable control strategies;
- Common parasite control misconceptions; and
- Ways to preserve the value of the dewormers we have, because no new ones are currently in development.

“Managing Parasites in the Face of Drug Resistance” is a free live webinar available to all horse professionals and can be viewed via your computer or phone. However, you must register to attend at <https://equestrianprofessional.leadpages.net/parasitecontrol/>. **UK**

Edited Press Release

RELATIVE RESPONSE OF WEEDS TO HERBICIDES USED IN PERMANENT GRASS PASTURES

Responses based on herbicide rates normally used for control of the specific weed.

	Weed Species	Preferred time to treat	Cimarron Plus	2,4-D	Weed master	Fore Front
Annuals	Chickweed, common	Nov or Feb-Mar	G	P	G	G
	Pennycress, field	Nov or Feb-Mar	G	G	G	G
	Amaranth, spiny	May-July	G	G	G	G
	Cocklebur, common	May-July	G	G	G	G
	Marestail	Mar-Apr	F	G	G	G
	Mint, perilla	May-July	P	G	G	G
	Ragweed, common	May-July	P	G	G	G
	Marshelder	May-July	F	G	G	G
Biennials	Burdock, common	Feb-Mar	F	G	G	G
	Hemlock, poison	Mar-Apr	F	F	F	
	Thistle, bull	Oct-Nov or Feb-Mar	F	G	G	G
	Thistle, musk	Oct-Nov or Feb-Mar	P	G	G	G
	Thistle, plumeless	Oct-Nov or Feb-Mar	F	G	G	G
	Carrot, wild	May-June	G	G	G	G
	Yellow rocket	Feb-Mar	F	G	G	G
Perennials	Aster spp.	Aug-Oct	F	F	F	F
	Buttercup spp.	Feb-Mar	G	G	G	G
	Chicory	Sept-Nov	F	F	G	G
	Clover, white	May-Aug	G	F	G	G
	Dandelion, common	Oct-Nov or Mar	G	G	G	G
	Dock, curly	Feb-Apr	G	P	G	G
	Dogbane, hemp	May-July	P	F	F	F
	Horsenettle	Aug-Sept	G	P	F	G
	Ironweed, tall	June-Aug	P	P	F	G
	Plantain spp.	Oct-Nov or Mar	P	G	G	G
	Thistle, Canada	Oct-Nov	F	P	F	G
	Yarrow, common	Mar-Apr	G	P	F	F

G=good or excellent control; F=fair control or suppression of weed growth; P=poor to no control
Prepared by W. W. Witt, UK Department of Plant & Soil Sciences, for the 2009 UK Equine Field Day, June 27, 2009. Listing of herbicide products implies no endorsement by the University of Kentucky or its representatives. Criticism of products not listed is neither implied nor intended.

UKVDL Reminder of CEM Collection Guidelines

The University of Kentucky Veterinary Diagnostic Laboratory sent a reminder recently that all contagious equine metritis (CEM) samples should be collected by a veterinarian and in accordance with a United States Department of Agriculture protocol (Version 9 CFR 93.301). CEM is a sexually transmitted disease in horses.

The guideline said that, per USDA guidelines, veterinarians must use a rayon-tipped swab of small diameter (~.1 cm) during collection from the clitoral sinuses. The UKVDL requests that future submissions from clitoral sinuses for CEM culture should be collected in this manner. Other types of swabs might be rejected as the sample may not be of high quality.

Stallions are asymptomatic (showing no clinical signs) carriers of *Taylorella equigenitalis*, CEM's causative agent, while mares show distinct clinical signs when exposed to and infected with CEM.

When a mare has CEM, about a week after breeding she will begin to show distinct clinical signs, including a noticeable vaginal discharge. The economic impact of a mare with CEM is that she will not become pregnant.

The first CEM outbreak occurred in Ireland and England in 1978 through natural breeding in the Thoroughbred

Crowdfunding Project Receives Recognition

Martin Nielsen, PhD, DVM, Dipl. EVPC, ACVM, an equine parasitologist, veterinarian, and assistant professor at the University of Kentucky Gluck Equine Research Center, received recognition from UK President Eli Capilouto for being the university's first faculty member to use crowdfunding to help fund a research project.

The official campaign is finished, but fundraising continues. Nielsen has now received more than \$8,000 for equine parasitology research to test a bacterial product against equine ascarid roundworms under laboratory conditions. The crowdfunding project titled, "Let the germs get the worms: Testing a novel probiotic compound for treatment of equine parasites," began in January.

The campaign was hosted at <http://equine-parasitology.ca.uky.edu>. The site is still available and will continue to allow guests to sign up for more information, access videos and educational information, and ask Nielsen questions about parasite control for their horses. UK

>Jenny Evans, MFA, is the marketing and promotion specialist senior at the Gluck Equine Research Center.



STEVE PATTON

Dr. Martin K. Nielsen

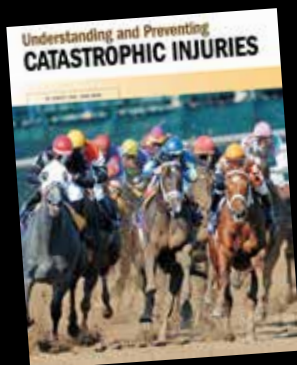
industry. In 1979 the first CEM outbreak occurred in Lexington, Kentucky, when two stallions were imported from Europe. This triggered a response from the United States on regulation control of imported stallions. Today, imported stallions and mares are tested for CEM.

The swab can be purchased from Difco

Laboratories at 313/442-8800. For more information, contact Erdal Erol, DVM, PhD, head of diagnostic microbiology at the UKVDL. UK

>Jenny Evans, MFA, is the marketing and promotion specialist senior at the Gluck Equine Research Center.

Download These **FREE** Special Reports Today



■ Catastrophic Injuries

■ Equine Herpesvirus

Both Sponsored By Pfizer Animal Health

Others available at

the **HORSE**.com
YOUR GUIDE TO EQUINE HEALTH CARE



UK Ag Equine Programs Presents:

The 6th Annual Equine Farm & Facilities Expo



Field Demos 6-8 p.m.

- Sampling techniques for soil fertility & hay quality
- Practical parasite control
- Fencing possibilities: temporary or permanent
- The where and when of equine digestion

Other Highlights 4-6 p.m.

- Weed identification and control
- Vaccination protocol
- Nutrition
- Pasture management
- Farm safety
- Other exhibits

Tuesday, June 3, 2014
1713 Catnip Hill,
Nicholasville, KY 40356
4-8 p.m.
meal provided

Special thank you to the
Kentucky Equine
Humane Center
for hosting the expo



Please RSVP to the
Fayette County Extension Office:
(859) 257-5582
or email equine@uky.edu

More Information: www.ca.uky.edu/equine

Murray State University and UK Ag Equine Programs Presents: A Western Kentucky Equine Farm & Facilities Expo

Thursday, June 5, 2014
Murray State Equine Center
2105 College Farm Road
Murray, KY 42071
4-8 p.m.
meal provided

Field Demos 6-8 p.m.

- Pasture establishment
- Practical parasite control
- Pasture fencing options
- Pasture weed control

Other Highlights 4-6 p.m.

- Rotational grazing, best practices
- BioBurner technology
- Door prizes
- Information booths



Please RSVP to help with meal count:

- Cadwell County: 270 - 365 - 2787, Shane Bogle
- Calloway County: 270 - 753 - 1452, Matt Chadwick
- Graves County: 270 - 247 - 2334, Trent Murdock



More Information: www.ca.uky.edu/equine

UPCOMING EVENTS

June 3

UK Equine Farm and Facilities Expo, Kentucky Equine Humane Center, Jessamine County, Ky.

June 5

Western Kentucky Equine Farm and Facilities Expo, Murray State University

June 5-7

Annual Midwestern Conference of Parasitologists, UK Gluck Equine Research Center auditorium

June 19, 4 p.m.

Department of Veterinary Science Equine Diagnostic Research Seminar Series, 4 p.m., Veterinary Diagnostic Laboratory, Lexington. The topic is Equine Welfare, with speaker Tom Lenz, DVM, Dipl. ACT, of Zoetis.

Gluck Center to Host Annual Midwestern Conference of Parasitologists

The University of Kentucky Gluck Equine Research Center will host the 66th Annual Midwestern Conference of Parasitologists from June 5-7. The conference will be held in the Gluck Center auditorium.

Augustin Jimenez, PhD, assistant professor at Southern Illinois University, is the presiding officer of this year's conference. Daniel Howe, PhD, professor and molecular parasitologist at the Gluck Center, is the meeting's program officer.

The conference topic is "Parasite adaptation and anthelmintic resistance." Symposium keynote speakers are Craig Reinemeyer, DVM, PhD, Dipl. ACVM, president of East Tennessee Clinical Research, and Martin Nielsen, DVM, PhD, EVPC, Dipl. ACVM, assistant professor at the Gluck Center. The conference will also feature oral and poster presentations, as well as graduate student competition for the respective categories.

For more information, visit <https://amcop.2014.eventbrite.com>. **UK**

> Jenny Evans, MFA, is the marketing and promotion specialist senior at the UK Gluck Equine Research Center.



Age-Related Susceptibility to *Rhodococcus equi*

Listen to Marcarena Sanz, DVM, MS, Dipl. ACVIM, of the University of Kentucky's Gluck Equine Research Center, share information about *R. equi*, a serious pneumonia-causing respiratory disease in foals up to 6 months old, at TheHorse.com/33777.



Equine influenza virus (EIV) and equine herpesvirus (rhinopneumonitis) cause the most common respiratory diseases in horses — and without a second vaccination, the risk increases.^{1,2} Don't take the gamble. Help protect your at-risk horse by vaccinating with FLUVAC INNOVATOR® EHV 4/1 every six months. Download the Equine Influenza Calculator on iTunes® or learn more at FluVacInnovator.com/calculator.

**FluVac
Innovator®**

Join our community



/eqstable



EQStable™ available in the Apple® App Store®

*EHV-1 and EHV-4

¹ Fretz PB, Babiuk LA, McLaughlin B. Equine Respiratory Disease on the Western Canadian Racetracks. *Can Vet J* 1979;20(2):58-61.

² Manley L, Caceres P. Retrospective Cohort Study of an Equine Influenza Outbreak in the Chilean Army in the Metropolitan Region of Santiago, Chile, during 2006, in *Proceedings*. 12th Symposium of the International Society for Veterinary Epidemiology and Economics, Durban, South Africa 2009:64.

All trademarks are the property of Zoetis Inc., its affiliates and/or its licensors. All other trademarks are the property of their respective owners. ©2013 Zoetis Inc. All rights reserved. FLU13013