HIGHLIGHTING RESEARCH
AND OUTREACH EFFORTS AT
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College of Agriculture,
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ESR

Equine Science Review is a monthly College of Agriculture, Food and Environment newsletter that highlights important equine work happening at the University of Kentucky.

Photo courtesy Jimmy Henning, PhD, extension professor, Plant and Soil Sciences

ADOPTION OF UNIFORM TERMINOLOGY ASSISTS IN LEGITIMIZING EQUINE-ASSISTED SERVICES (EAS)

Over the past 50 years, services that incorporate horses to benefit people have diversified and expanded. Along with the exponential growth has come the proliferation and use of unclear and imprecise terms for naming and describing these services.This, in turn, has generated many serious problems that include confusion and inadequate protection of consumers, reimbursement obstacles for certain types of legitimate therapy that incorporate horses, misinformed policies and barriers to scientific advancement through research.

To address these challenges, in 2018, the Bob Woodruff Foundation funded a two-year consensus-building process that was comprehensive, systematic and inclusive. It included convening a summit in July 2019 with experts and representatives from relevant national organizations associated with equine-assisted services. These organizations included the Professional Association of Therapeutic Horsemanship International (PATH Intl'), Eagala, the Equine Experiential Education Association (E3A), Certification Board for Equine Interaction Professionals (CBEIP), the American Hippotherapy Association (AHA), the United States Department of Veterans Affairs and the Bob Woodruff Foundation, among other practitioners and consumers of equine-assisted services.

The summit process culminated in a number of terminology recommendations. From there, a group of six summit members worked to further refine the recommendations for both the adoption of optimal terminology, and for the discontinuation of especially problematic terminology. These recommendations were recently published in the Journal of Alternative and Complimentary Medicine. The article (https://www.liebertpub.com/doi/10.1089/acm.2020.0415) by Wendy Wood, Kathy Alm, Joann Benjamin, Lynn Thomas, Debbie Anderson, Lissa Pohl and Michele Kane is titled, "Optimal Terminology for Services in the United States That Incorporate Horses to Benefit People: A Consensus Document."

Article Summary

"The purpose of adopting optimal terminology is to enhance consistency, clarity, transparency and specificity when communicating about services that incorporate horses to benefit people. These terms are intended for use in the United States but are welcome to be used more widely," the authors wrote.

Below are the key highlights from the paper while full definitions and rationales for term usage are outlined in the published document.

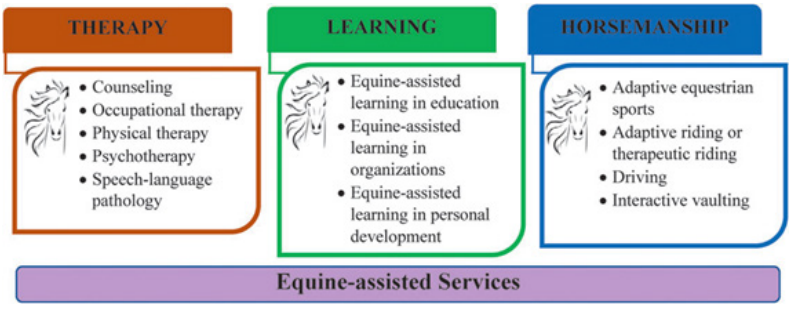
Equine-assisted Services (EAS) is recommended as the optimal and unifying term to refer to multiple services in which professionals incorporate horses and other equines to benefit people. Presently the most common term used, though problematic, is Equine Assisted Activities and Therapies (EAAT).

"(EAAT) has been misrepresented as a single form of therapy that is simply called EAAT. In actuality, no health profession, practice standards nor licensure regulations are known to exist for any single form of therapy called equine therapy, equestrian therapy, horseback riding therapy or EAAT," the authors wrote. "Yet, widespread adoption of such terms has created obstacles for reimbursement of legitimate therapies and influenced the development of misinformed policies"

Since the term equine-assisted services represents a variety of different services offered to individuals or groups, it is recommended to refer to the exact area of service (i.e., psychotherapy incorporating horses, or equine-assisted learning in personal development or therapeutic riding) when describing these services.

Recommendations for 12 Distinct Equine-assisted Services

The diagram below shows how a variety of equine-assisted services fall under the broader industries of therapy, learning and horsemanship and where professionals with specialized training and certification can provide opportunities for people with diverse needs to benefit from the skilled incorporation of horses into their services.



RECOMMENDED TERMINOLOGY FOR 12 DISTINCT TYPES OF SERVICES AND FOR MULTIPLE SERVICES. (WOOD, ET. AL.)

Therapy

Therapy-first language is recommended when the emphasis is on the specific licensed discipline that is providing the service. (For example, pysical therapy using equine movement; or psychotherapy incorporating horses.)

According to the authors, when licensed therapy professionals adopt therapy-first language, accurate representations of their profession and transparent communication with clients and insurance providers regarding reimbursable services can occur. Standard licensed therapy practitioners who offer counseling, occupational therapy, physical therapy, psychotherapy or speech and language pathology may incorporate horses, equine movement or equine interaction within a comprehensive plan of care for improved health, wellness and function of their client.

Learning

Equine-assisted Learning (EAL) refers to experiential learning activities facilitated by qualified professionals that leverage horse-human interactions to enhance the growth and learning of their clients. There are three distinct nontherapy EAL services: equine-assisted learning in education (EAL-E), equine-assisted learning in organizations (EAL-O) and equine-assisted learning in personal development (EAL-PD).

EAL professionals should possess appropriate training, experience and skill in facilitating the particular content of equine-assisted learning as well as demonstrate extensive knowledge of horse behavior and handling, human/horse relationships and design of experiential learning activities involving horses. It is also very important that EAL practitioners are able to clearly differentiate between therapy and learning when working with their clients. This is to ensure the client's emotional safety and for minimizing liability risk.

Horsemanship

Under the area of horsemanship, there are four distinct nontherapy services that are adapted from the traditional equine disciplines of horseback riding, driving and vaulting to match the abilities and diverse needs of participants who experience restricted participation in life situations. These services include adaptive equestrian sport, adaptive riding or therapeutic riding, driving and interactive vaulting and are offered by trained/certified professionals. These types of services assist participants attain individualized horsemanship skills and allow for the healthful benefits of riding and other horsemanship activities to occur.

Problematic terminology recommended for discontinuation

The consensus-building process culminated in recommendations that specific terms be retired from widespread usage owing to their problematic impacts. Terms recommended for discontinuation include equine therapy, equestrian therapy, equine-assisted therapy, equine-assisted activities and therapies (EAAT), hippotherapist, hippotherapy program/clinic, horseback riding therapy, therapy riding and any non-specific reference to services that incorporate horses to benefit people. There is no profession, academic degree, professional license or state regulation known to exist that supports the terms above as legitimate stand-alone therapies.

"Altogether, terms recommended for discontinuation were found to be potentially legally indefensible for providers and to have misled other stakeholders," the authors wrote.

The importance and benefits of using optimal terminology

For decades, various stakeholders have had to grapple

PHOTO BY GILLIAN VALLIS. PHOTO COURTESY LISSA POHL.

LISSA POHL WORKS WITH NURSES FROM UK HEALTHCARE. PHOTO COURTESY LISSA POHL.

PHOTO COURTESY LISSA POHL.

LISSA POHL CONDUCTS LEADERSHIP TRAINING USING HORSES IN QATAR. PHOTO COURTESY LISSA POHL.

with the damaging effects of ambiguous, imprecise, misleading and confusing terminology. Though there has been much discussion about terminology amongst experts in the field, until now there has never been a comprehensive effort to define, recommend and use optimal terminology.

Everyone benefits from the adoption of optimal, common and precise terminology. Professionals and equine facilities can more effectively market their services and reduce liability risk. When researchers use clear and accurate terminology in naming a service under study, its exact nature is best clarified and its scientific foundation can be progressively built. Research that utilizes consistent terminology makes it much easier for stakeholders to find quality research to support decisions about the services. When treatment services are identified more clearly and accurately, third party payers and consumers can be assured of receiving and getting reimbursement for beneficial therapies.

When Equine Assisted Learning is clearly separated from therapy services or horsemanship services, both EAL practitioners and consumers benefit by understanding exactly what type of experience they are going to have and pay for.

Last but not least, the widespread adoption of optimal terminology will help to sustain services that are preserving an invaluable role of the horse in society, while simultaneously benefitting and enriching people's lives.

| Lissa Pohl, MA, is program and outreach extension associate in UK's Department of Community and Leadership Development in the College of Agriculture, Food and Environment. She is one of the authors on the paper referenced here.

UK AG EQUINE PROGRAMS TO HOST EQUINE RESEARCH SHOWCASE VIRTUALLY

University of Kentucky Ag Equine Programs will host its 10th annual UK Equine Showcase virtually through four sessions over four dates in January and February 2021.The event will emphasize weanling to yearling horses, presenting both completed and work-in-progress projects.

The cost to attend all sessions is $25 until the early-bird registration deadline of Jan. 5. This package will include access to a recording of the sessions after the event has concluded. Attendees can also opt to attend only one or two of the sessions they are interested in. There are special rates for farms interested in having multiple employees attend. Students from any university can participate for free. Continuing education credit for veterinarians and veterinary technicians is pending approval by the Kentucky Board of Veterinary Examiners. Additionally, CEU credit has been approved for American Registry of Professional Animal Scientists.

Register at https://www.eventbrite.com/e/10th-annual-uk-equine-showcase-virtual-event-tickets-123079454963. Contact equine@uky.edu with questions about the event or with help registering.

ADAM NAMED TO AAEP BOARD

Emma Adam, DVM, PhD, DACVIM, DACVS, equine outreach veterinarian for the University of Kentucky Department of Veterinary Science, was named to the American Association of Equine Practitioners Board during the association's annual convention Dec. 9. The term is for three years.

Adam is a second-generation veterinarian who grew up on a commercial horse breeding farm in Newmarket, England. She received her veterinary degree from the Royal Veterinary College in London. Following a stint in private practice, she completed a residency in internal medicine at Texas A&M University and a surgical residency at the University of Pennsylvania. She earned her PhD from the University of Kentucky in 2016. Adam has served on the AAEP's Racing Committee since 2019, presented at the AAEP Annual Convention multiple times and served as a moderator of the convention's ethics section in 2019.

"Being nominated by, and subsequently voted for by the AAEP membership to serve on the Board is a great honor," Adam said. "I'm really looking forward to serving the AAEP in this capacity. The AAEP's mission is to work hard on behalf of equine veterinarians everywhere and continue to promote best care practices and wellbeing for horses. These shared values are aligned with what we try to achieve at UK in the Gluck Equine Research Center, Department of Veterinary Science and throughout the College of Agriculture, Food and Environment."

About AAEP

The American Association of Equine Practitioners, headquartered in Lexington, Ky., was founded in 1954 as a non-profit organization dedicated to the health and welfare of the horse. Currently, AAEP reaches more than 5 million horse owners through its over 9,000 members worldwide and is actively involved in ethics issues, practice management, research and continuing education in the equine veterinary profession and horse industry.

| Holly Wiemers, MA, APR, is the communications and managing director for UK Ag Equine Programs.

OPTIMIZING EXISTING FORAGE RESOURCES

Pastures are dynamic, ever changing and evolving. While many of us would believe that a pure stand of Kentucky bluegrass is best for our horses, you'll find that is a difficult, if not impossible goal.

Different species thrive in slightly different environments, and mixed pasture stands are therefore the most durable from year to year. For example, Kentucky bluegrass enjoys close, frequent grazing, which is why it is so well-suited for horses, but it is the first to go dormant or die off during hot, dry summers. Tall fescue has the greatest tolerance of Kentucky summers, and holds its quality deeper into the winter, but it can't tolerate shade. Orchardgrass thrives in shaded areas and comes up well when overseeded into existing stands, but only survives four to five years, sometimes less, under heavy grazing pressure. We can tailor our management to encourage mixed stands for stronger, more productive pastures.

Liming pastures.

How we manage our soil acidity can influence what forage species are present in our pastures. For example, in a mixed pasture, adding lime to a soil with a low pH would tend to encourage the clover. If we did not add lime, we might expect grasses and acid tolerant legume species such as annual or sericea lespedeza to be present in greater quantities. Lime not only reduces soil acidity, but also makes other nutrients in the soil, like phosphorus and potassium, more bioavailable to the plant. If your pastures need lime as indicated by a soil test, then lime should be the first thing that you apply. In most cases, we should target a soil pH of 6.2 to 6.4 for grass-legume mixtures.

Fertilizing pastures.

Generally speaking, improved grasses and legumes like orchardgrass, clovers and alfalfa need good soil fertility to persist and be productive. This means not only adjusting soil pH with lime, but also adding phosphorus and potassium. If soil fertility is low, it will favor species that are more efficient at extracting and using nutrients from the soil. A good example of this is tall fescue and sericea lespedeza on reclaimed mineland in southeastern Kentucky. These species are present because they are better adapted to marginal soils and poor fertility.

Nitrogen application rate and timing can also be used to shift the botanical composition of pastures. In mixtures of grasses and legumes, nitrogen fertilization will tend to encourage grass growth shifting the composition toward grasses and away from legumes.

The timing of nitrogen applications can also influence the balance of warm- and cool-season grasses in your pasture. Early spring and late summer applications will encourage cool-season grass growth (tall fescue and bluegrass). In contrast, late spring and summer applications will shift the pasture composition toward crabgrass, foxtail and nimblewill. Unless you are striving for warm season grasses to graze, fall nitrogen is best to maintain your cool season grasses.

Grazing management and forage plant growth

How we graze our pastures has a profound impact on botanical composition. To fully understand the effects of grazing management, we need to talk a little bit about forage plant growth. After defoliation (grazing or cutting), plants need energy to regrow. In grasses, this energy comes from two places. The first is leaf area remaining after grazing. The remaining leaf area is like a solar panel that captures sunlight and converts it into energy (sugars and carbohydrates) that the plant can use for regrowth. The more leaf area we leave, the larger the solar panel and the faster pastures will regrow.

PHOTO COURTESY UK COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT.

The second place that energy comes from for regrowth is stored carbohydrates. The location of these stored energy reserves depends on the plant species. For example orchardgrass and tall fescue store their energy in the stem bases, while bermudagrass stores energy in its stolons and rhizomes (modified stems that grow just above or below the soil surface). So grasses that store their energy in the stem base are less tolerant to close and frequent grazing compared with grasses that store their energy in stolons and rhizomes that are safely below the grazing height of livestock.

The amount of stored energy in pasture plants depends on whether or not we rest our pastures between grazing events. Resting pastures allows leaf area to regrow and carbohydrate reserves to be stored up. In general, tall growing legumes are more dependent on stored energy for regrowth. For example, alfalfa is completely dependent on stored energy in the tap root for regrowth. This means that it needs time to rest and replenish its stored carbohydrates between grazing events. That is the reason that alfalfa does not persist well in continuous grazing systems.

Grazing height

In our naturalized pastures, close grazing will tend to favor grass and legume species that have leaf area and energy stores close to the soil surface. This results in a shift toward low growing species such as bermudagrass, Kentucky bluegrass and white clover under close grazing. A higher grazing height would tend to shift the botanical composition back toward our tall growing cool-season grass species such as tall fescue and orchardgrass.

Grazing frequency

How often we graze or if we utilize rotational stocking can influence the botanical composition of our naturalized pastures. Most pasture species benefit from rotational stocking. Some species are more tolerant of frequent grazing. These species tend to have leaf area close to the soil surface that is retained even under close grazing and include bluegrass, white clover and bermudagrass. This means that grazing naturalized pastures closely and frequently will tend to shift the botanical composition toward these species.

Grazing timing

The time of the season when pastures are grazed can also influence the botanical composition. Grazing a mixture that includes both cool- and warm-season species during the summer months will tend to shift the botanical composition toward the warm-season species. This commonly occurs in pastures in Western Kentucky. Grazing these pastures hard during the summer months favors the bermudagrass and crabgrass, especially during and after droughts.

Using improved varieties

After you determine what species are well adapted to your area and management practices, you may want to consider using improved varieties. These varieties may offer considerable benefits in terms of improved yield, animal performance and persistence. Using improved varieties of tall fescue, orchardgrass and white clover are particularly beneficial and highly recommended.

Regardless of what you are doing, in most cases working with nature greatly improves your chances of success. Grazing is no different. Successful grazing systems are based on forage species that are well adapted to your local conditions and managing those species to meet your specific needs.

To learn more about grazing management, please contact your local extension agent. They have a detailed understanding of local conditions and resources.

| Chris Teutsch, PhD, UK Research and Extension Center, Princeton, Kentucky, and Krista Lea, MS, UK Horse Pasture Evaluation Program, Lexington, Kentucky, provided this information. Story adapted from article first published in Cow Country News, December 2020.

DESPITE COVID-19, KY AG RECEIPTS HOLD STEADY

The COVID-19 pandemic made for a tumultuous year in Kentucky agriculture, but the state's agricultural receipts will likely hold steady to 2019 levels.

Agricultural economists from the University of Kentucky College of Agriculture, Food and Environment are projecting 2020 farm cash receipts to be $5.5 billion, equaling 2019 receipts. The economists estimate that net farm income will likely exceed the $2.2 billion Kentucky producers earned in 2019.

"Like most businesses, agriculture has experienced a crazy and challenging year, but unlike a lot of industries, the farm economy not only survived, but is ending 2020 on a positive note," said Will Snell, PhD, UK agricultural economist.

2020 began with optimism across the industry due to new trade deals, continued low production costs and improved supply/demand balances. But the coronavirus greatly impacted the industry and the agricultural markets. While markets initially plummeted at the pandemic's onset, some sectors recovered.

In Kentucky, higher grain prices, induced primarily by an increase in exports and crop yields near all-time highs helped offset lower equine, poultry, cattle, dairy and tobacco receipts.

"The impacts of COVID on the livestock sector were huge, as labor challenges created a significant processing bottleneck in the spring and the marketing system had to adjust to a major shift away from restaurant consumption and toward at-home consumption," Kenny Burdine, PhD, associate extension professor in UK's Department of Agricultural Economics, said.

A significant addition to Kentucky's increased farm income is two rounds of government payments producers received through the Coronavirus Food Assistance Program and the last payments from the 2019 Market Facilitation Program. Accounting for these and other federal programs, Kentucky farmers may receive close to $500 million in direct government payments in 2020.

Nationally, direct government payments may account for nearly 40% of the country's net farm income. The U.S. Department of Agriculture forecasts net farm income will be $119.6 billion, up 43% from 2019.

"Despite an expected increase in net farm income and potential for improved commodity prices in 2021, the national and Kentucky farm economies remain very vulnerable, especially if the ag sector experiences large crops, additional trade disruptions, a significant pullback in direct government payments, higher interest rates and/or a decline in asset values," Snell said.

Poultry remains Kentucky's top agricultural commodity, comprising 19% of all projected sales for the year. Corn and soybeans tied for second, each accounting for 17% of all projected sales. Equine fell to fourth, with 16% of all projected sales.

Equine highlights: After surpassing $1 billion in 2018 and 2019, receipts are expected to drop considerably in 2020 given a sharp sales decline. Another decrease is likely for 2021 as both stud fees and the number of mares bred should decrease.

For the entire outlook, visit the UK Department of Agricultural Economics website or visit their Facebook, Twitter and YouTube accounts @UKYAgEcon.

| Edited Dec. 4 UK College of Agriculture, Food and Environment news release by Katie Pratt, agricultural communications specialist.

ENDEMIC, EPIDEMIC OR PANDEMIC?

You have likely heard of the term epidemic, and most certainly heard of pandemic considering we are in the middle of one currently. How about the term endemic?

While they all sound similar and are related, they do have different meanings and we would like to remove any mystery and confusion in these widely-used terms.

Why do these three words often confuse people? All three words contain -demic and are used to talk about disease, or specifically outbreaks of disease. The demic part of these three words comes from the Greek dêmos, "people of a district." The different meanings are a function of the first three letters.

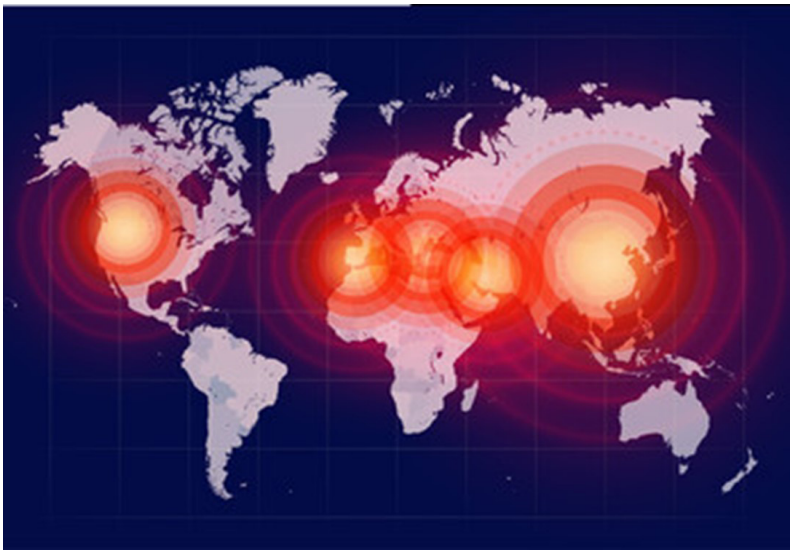


PHOTO CREDIT: ADOBE STOCK IMAGE.

What does this mean for the veterinary community?

Endemic refers to the constant presence of a specific disease within a geographic area. It's a disease that is normal and commonly found in a particular location, region or specific population. So what we would consider normal in a given area during a particular time of year. We would say that strangles in horses is endemic in Kentucky. We see horses every year all over the state that need veterinary care for this disease.

Epidemic means that an increase (usually suddenly) in the number of cases of disease in an area is higher than what we normally expect to see (endemic). An example of this would be the outbreak of African Horse Sickness in Thailand. While considered endemic in sub-Saharan Africa, the outbreak in Thailand this year has caused hundreds of deaths.

Pandemic is an epidemic that has spread over a very large area. Academically, this could mean a disease that is prevalent through an entire country, a whole continent or globally (COVID-19). Typically, the word is generally reserved for diseases that have spread across a continent or the entire world. The World Health Organization (WHO) specifically defines pandemic as "a worldwide spread of new disease." The current COVID-19 pandemic has had a major impact in the veterinary community.

According to the American Veterinary Medical Association, 98% of veterinarians were limiting client contact due to COVID (https://www.avma.org/resources-tools/animal-health-and-welfare/covid-19/covid-19-impact-veterinary-practices). We are seeing limited human visitation with their pets, postponement of spays/neuters and routine check-ups. Veterinary drug and equipment shortages have occurred where production has been hampered by COVID and demand increased by COVID, for example, with personal protective equipment. Drugs and equipment that was destined for the veterinary market is being diverted to the COVID crisis and has saved human lives.

The take home message

A small camping fire that you take care of and deal with constantly is endemic. If something is spreading like a forest fire, it's an epidemic. If the entire forest is on fire and has spread all over, causing major impacts, it's a pandemic.

| *Jackie Smith, MSc, PhD, MACE, Dipl AVES, is an epidemiologist based at the University of Kentucky Veterinary Diagnostic Lab. Emma Adam DVM, PhD, DACVIM, DACVS, is based at the University of Kentucky Gluck Equine Research Center and Veterinary Diagnostic Lab and is responsible for research and serve as a veterinary industry liaison.*

EARLY WINTER BLAST PROMPTS LIVESTOCK PRODUCERS TO THINK ABOUT COLD MONTHS AHEAD

An early blast of cold, snow and ice arrived in the Bluegrass, and that puts pressure on farmers to make sure their animals are ready for the winter assault.

"The combination of cold air and wind create windchills that cause dangerous and emergency-category periods of livestock cold stress," said Matt Dixon, agricultural meteorologist for the University of Kentucky College of Agriculture, Food and Environment's Ag Weather Center.

Livestock producers should make sure animals have adequate shelter, water, dry bedding and feed to make it through cold periods. Pet owners should bring pets indoors. Animals have a higher requirement for energy in the colder months, which means they need high-quality grains and forages.

"The average horse, with a lower activity level, should eat between 1.5 and 2 percent of its body weight in feed per day to maintain its weight," said UK equine specialist Bob Coleman, PhD. "That feed requirement goes up in the winter, as horses use more calories to keep warm. He recommended providing extra hay and making sure horses have shelter to get out of windy, damp weather."

Horses must have access to clean, unfrozen water. Coleman said to check often to make sure water sources are open. A decrease in water intake affects dry matter intake.

The hair coat acts like home attic insulation—trapping air and enhancing the insulating value. Wet, muddy hair reduces insulating value and increases heat loss. As little as 0.1 inch of rain can immediately impact cold stress severity by matting the hair down reducing its insulating ability. Acclimation time, hide thickness, fat cover and other factors will also influence the degree of cold stress that animals experience.

The key is to give animals a draft-free place to get out of the wind during extreme wind chill conditions.

ANIMALS HAVE A HIGHER REQUIREMENT FOR ENERGY IN THE COLDER MONTHS, WHICH MEANS THEY NEED HIGH-QUALITY GRAINS AND FORAGES. PHOTOS COURTESY UK COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT.

| Source: Edited Dec. 1 UK College of Agriculture, Food and Environment news release by Aimee Nielsen, agricultural communications specialist.

EXTENSION AGENTS HOST VIRTUAL 14TH ANNUAL PASTURES PLEASE!!

University of Kentucky Cooperative Extension agents and Ag Equine Programs will host a virtual Pastures Please!! pasture management workshop from 6 to 7:30 p.m. EST on Jan 26.

Horse owners, and farm managers will have the opportunity to listen to expert talks, including information about managing carbohydrates in the equine diet, new herbicides and their effectiveness on weed control and wise investments for pasture management.

"This year's program is driven by the questions that come into extension and the challenges currently facing horse owners," said Krista Lea, MS, coordinator of the UK Horse Pasture Evaluation Program and one of the event organizers. "Managing carbohydrates is tough on owners, but a common issue in horses today, and there is as much misinformation as there is information. We have several new pasture herbicides on the market that give managers new options, and now, more than ever, farms large and small are having to take a critical look at their expenses and try to save where they can."

The event is hosted annually by Central Kentucky extension agents. One of those agents, Linda McClanahan from Mercer County, said the information shared is valuable and applicable for horse owners and managers.

"We are excited to once again be offering Pastures Please, which allows the Cooperative Extension Service to deliver timely information to our horse farm owners and managers around Central Kentucky and now beyond with the virtual format. Past attendees have indicated Pastures Please!! led to increased profitability through less reliance on feeding hay, decreased weed pressure in pastures and better overall forage management," she said.

Those interested in participating in this free event can register online at https://UKPasturesPlease.eventbrite.com.

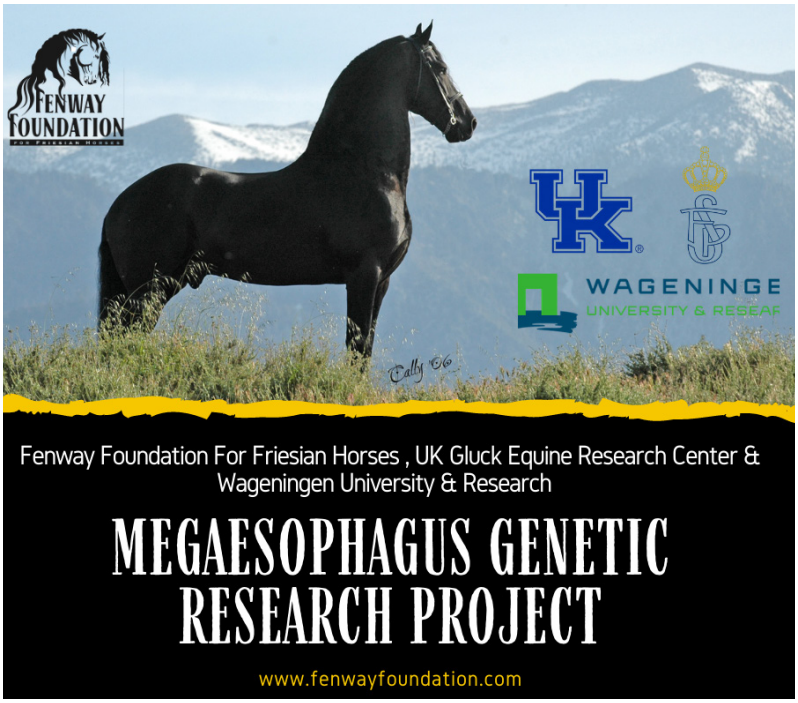
| Holly Wiemers, MA, APR, is the communications and managing director for UK Ag Equine Programs.

THE FENWAY FOUNDATION FOR FRIESIAN HORSES PARTNERS WITH THE UNIVERSITY OF KENTUCKY AND WAGENINGEN UNIVERSITY TO RESEARCH FRIESIAN GENETICS

The Fenway Foundation for Friesian Horses, at the request of the The Koninklijke Vereniging "Het Friesch Paarden-Stamboek" (KFPS), the oldest studbook in the Netherlands, is about to embark on a research program that could have a positive impact on the lives of Friesian horses and their owners around the world. Fenway is incredibly fortunate to be partnering with researchers at the famed Gluck Equine Research Center at the University of Kentucky and Wageningen University in The Netherlands.

But they aren't just common researchers, they might be the most prestigious genetic research team in North America, if not the world. Kathryn Graves, PhD, Ernest Bailey, PhD and Ted Kalbfleisch, PhD, from the Gluck Equine Research Center at the University of Kentucky and Dr. B. J. Ducro at Wageningen University make up the Gluck/Wageningen/Fenway Friesian Genetic Research Initiative. Fenway and every Friesian owner in the world is blessed to have this team to study our beloved horses.

So, what are we researching? The genetic research team is going to work towards unlocking the genetic code that causes the megaesophagus and aortic rupture genetic flaw in our Friesian horses. Our goal is the development of a genetic test that will assist in breeding decisions and hopefully over time eliminate this debilitating and sometimes fatal genetic flaw in our horses both young and old.



FLYER FEATURING NANNING 374, A NOW DECEASED KFPS APPROVED STALLION. PHOTO CREDIT: CALLY MATHERLY. USED WITH PERMISSION OF THE FENWAY FOUNDATION

This research program will require DNA samples from very specific affected and control candidates. We will publish those requirements in the very near future and look forward to cooperation by the Friesian community in finding those candidates and submitting appropriate samples. Fortunately, and encouragingly, is that many blood samples frozen for both horses with aortic rupture and megaesophagus have been collected and are now stored in The Netherlands. The advantage? This initiative my not have to wait for new samples to be collected. But as the program moves forward, more specific samples may be requested from the Friesian community.

Fenway, the genetic research team at Gluck, Wageningen and the KFPS hope the entire Friesian community are excited at the prospect of solving these genetic issues and insuring an enduring Friesian breed for our children, grandchildren and beyond.

| *Source: Edited news release from the Fenway Foundation.*

HORSE OWNERS SHOULD HAVE ENOUGH HAY FOR WINTER

Kentuckians have already experienced the first effects of winter. A University of Kentucky College of Agriculture, Food and Environment specialist said that was a good reminder that many horse owners will soon be feeding more hay and need to check their supplies.

"While most horse owners purchased hay months ago and neatly stored it away, it's a good idea to double check what you have on hand," said Bob Coleman, PhD, UK equine extension specialist within UK's Department of Animal and Food Sciences. "Make sure you have what you will need or make a plan to make best use of what you have and extend your supply as long as possible."

The nutrient profile of hay is important. It's not too late for horse owners and managers to get a hay analysis and determine exactly what that hay will supply to their horses. Local county extension offices can help with taking proper samples and sending them to the lab for testing.

"If you've already started feeding hay earlier than you planned, take inventory of how many bales you have left and how many pounds of hay you have available," Coleman said. "Make sure your storage method has kept the hay in good shape. You don't want to find out later that your tarp ripped and caused bales to spoil from excessive moisture."

Coleman recommends getting a good estimate on body weight for all horses because that number determines the animal's daily nutrient needs and feed intake requirements. Horse owners can use a heart girth tape to get an estimate or use the Healthy Horse app, available through Android and Apple app stores, to estimate current and ideal body weight.

THE WAY HORSE OWNERS FEED HAY MAY CONTRIBUTE TO COST SAVINGS OR LOSSES. PHOTO BY AIMEE NIELSON.

"The body weight is so important when you are determining how much to feed horses each day," he said. "A 1,000-pound horse needs to eat 2% of its body weight each day, so about 20 pounds of feed. It doesn't seem like a lot of hay, but if you underestimate your horse's weight and buy 100 days' worth of hay for a 1,000-pound animal that actually weighs 1,200 pounds, you'll be short by more than eight bales per horse."

Horse's body condition scores can change, so it's a good idea to monitor each animal throughout the season to make sure feed management is working.

"If your horses are gaining in body condition score, you might be able to feed less, while horses that are losing body condition score, may need more," he said.

The way horse owners feed hay may contribute to cost savings or losses. Research shows that using a feeder that minimizes hay waste results in significant savings in feed costs. Just feeding on the ground can result in as much as 57% feed waste.

"Get a good feel for how long a bale lasts and how much the horses are cleaning up," Coleman said. "If they are leaving hay behind, you might be feeding too much or not using a waste-reducing feeder. If you keep a good watch on body condition score and manage your reserves well, you can probably get through the winter with more than enough."

| Source: Dec. 10 UK College of Agriculture, Food and Environment news release. Aimee Nielsen is an agricultural communications specialist within the college.


Wishing you happiness and health
this holiday season, with a look ahead to the possibilities of a new year in 2021.
From your friends at UK Ag Equine Programs.
University of Kentucky
Ag Equine Programs
College of Agriculture, Food and Environment

Through this challenging year, UK Ag Equine Programs has continued our mission to discover, share and apply new knowledge to enhance Kentucky's equine industry through our education, research and extension work. This work would not be possible without the dedicated support of our alumni and friends. Please make your gift before the end of year to help us continue to serve students, faculty and the equine industry.

- *You can support the Equine Programs Initiative Fund here.*
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Thank you for your consideration, we hope you and your family have a safe and happy holiday season!

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