

## EQUINE SCIENCE Review



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#### HOW DO HORSES TRAVEL? RESEARCHERS NEED YOUR HELP! 3

Researchers workd to better understand ways horses are transported.

UNIQUE RESEARCH COULD IMPROVE INDOOR EQUINE ENVIRONMENT, 5 Researchers are breaking new ground with a multi-year study.

### AVOID TALL FESCUE TOXICITY THIS SPRING, 7

While most often a safe grass for consumption, it can bring hazards.

NATIONAL SURVEY ON HORSE HAY Markets Underway, 9

Looking at national horse hay market from perspective of producers.





Photo courtesy Dr. Jimmy Henning.



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

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### HOW DO HORSES TRAVEL? RESEARCHERS NEED YOUR HELP!

When you see a horse trailer heading down the road, do you wonder where it's headed and why? How long its trip will be? Or how the horses inside are managed? Well, you're not alone. Researchers have the same questions, and they're seeking horse owner input to determine the answers. While it's well-known that horses are transported in trailers on roads regularly, the specific reasons for travel and how horses are managed during transport aren't well-documented. To fill in some of those knowledge gaps, researchers from the University of Kentucky Gluck Equine Research Center are conducting a survey to gain a better understanding of the purposes and ways horses are transported, as well as different journey lengths and management practices involved in transporting horses on U.S. roads.

With the information gathered, they hope to conduct further research on and improve management recommendations for horses traveling in the United States.

This survey is coordinated by Erica Jacquay, graduate student and MARS Equestrian<sup>TM</sup> scholar at the Gluck Center, whose research focuses on equine transportation. Jacquay works under and is conducting the study with Amanda Adams, PhD, MARS Equestrian<sup>TM</sup> Fellow, UK associate professor and specialist in equine immunology.

"We are interested in understanding how transportation affects horses of different ages, breeds and health status so that we can ultimately find ways to better support horse health. This survey will provide valuable information and therefore we encourage all horse owners to get involved and be part of our project," said Dan Howe, PhD, interim chair of the UK's



PHOTO COURTESY ERICA JACQUAY.

### INVITATION TO PARTICIPATE IN AN ONLINE SURVEY

## U.S. EQUINE ROAD

Help us by completing this survey so we can gain a better understanding of common transportation practices

The survey will ask about:

- How and why your horse(s) are transported
- The types of journeys taken

Email Erica.Jacquay@uky.edu with questions

"As someone who has regularly

Department of Veterinary Science

and interim director of the Gluck

transported horses, I believe that

survey will highlight similarities

the information we learn from this

• Horse management for trips of 3 hours or less

You can participate if you are: *at least* 18, reside in the U.S., and have at least **one horse or pony** that was transported in the **past year** 

Option to be included in a drawing for an ETHEL M<sup>®</sup> Chocolates prize basket courtesy of MARS EQUESTRIAN™



Center.



To access the survey scan the QR code



and differences in why and how horses are transported across the U.S.," Jacquay said.

The survey is open until April 1 and can be found online <u>here</u>. Participants must be at least 18 years old and own, lease or be in

JAN/FEB 2022 | PAGE 3

the full care of at least one horse or pony that resides in the U.S. and has been transported at least once in the past 12 months. The survey takes approximately 15-20 minutes to complete, and participants can choose to enter a drawing to win an Ethel M® Chocolates prize basket courtesy of MARS Equestrian<sup>TM</sup>.

"We are quite excited about this survey and need the equine industry's feedback," Adams said. "This information is important in helping us understand more about transportation of horses, which will then help us ask relevant questions that may lead to new answers relating to how we transport horses and support their health along the way. We are thrilled about continuing our collaboration with Dr. Pat Harris from MARS Horsecare and Dr. Bridgett McIntosh from MARS Equestrian."

The study is also being conducted in collaboration with Jill Stowe, professor of agricultural economics at UK.

#### **ABOUT THE GLUCK CENTER**

THE MISSION OF THE GLUCK CENTER IS SCIENTIFIC DISCOVERY, EDUCATION AND DISSEMINATION OF KNOWLEDGE FOR THE BENEFIT OF THE HEALTH AND WELL-BEING OF HORSES. GLUCK CENTER FACULTY CONDUCT EQUINE RESEARCH IN SEVEN TARGETED AREAS: GENETICS AND GENOMICS, IMMUNOL-OGY, INFECTIOUS DISEASES, MUSCU-LOSKELETAL SCIENCE, PARASITOLOGY, PHARMACOLOGY, THERAPEUTICS AND TOXICOLOGY AND REPRODUCTIVE HEALTH. THE GLUCK EQUINE RESEARCH CENTER, A UK AG EQUINE PROGRAM, IS PART OF THE DEPARTMENT OF VETER-INARY SCIENCE IN THE COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT AT THE UNIVERSITY OF KENTUCKY.

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#### ABOUT WALTHAM PETCARE SCIENCE INSTITUTE

THE WALTHAM PETCARE SCIENCE INSTITUTE IS MARS PETCARE'S PET RESEARCH CENTER. OUR WORK FOCUSES ON THE NUTRITIONAL AND BEHAVIORAL NEEDS OF PETS, AS WELL AS PREVENTIVE HEALTH. WE USE THIS KNOWLEDGE TO SUPPORT DEVELOP-MENT OF INNOVATIVE PRODUCTS AND SERVICES, ADVANCING SCIENCE TO **DELIVER OUR PURPOSE: A BETTER** WORLD FOR PETS<sup>™</sup>. THE WALTHAM<sup>™</sup> EQUINE STUDIES GROUP, WHICH IS HEADED BY PROFESSOR PAT HARRIS, MA, PHD, VETMB, DIPECVCN, MRCVS, IS DEDICATED TO ADVANCING THE SCIENCE OF HORSE NUTRITION AND PROVIDES THE SCIENTIFIC SUPPORT FOR MARS HORSECARE GLOBALLY INCLUDING THE BUCKEYE<sup>™</sup> NUTRITION, SPILLERS<sup>™</sup>, AND WINERGY™ BRANDS. BY COLLABO-RATING WITH KEY RESEARCH INSTITUTES AND UNIVERSITIES AROUND THE WORLD ITS WORK REMAINS AT THE FOREFRONT OF EQUINE NUTRITIONAL SCIENCE.

| Erica Jacquay is a graduate student and MARS Equestrian<sup>™</sup> Scholar at the Gluck Center.

### LOYNACHAN NAMED INTERIM DIRECTOR OF THE UK VETERINARY DIAGNOSTIC LABORATORY

Alan Loynachan, DVM, PhD, Dipl. ACVP, has been named interim director of the University of Kentucky Veterinary Diagnostic Lab, effective March 1. Craig Carter, DVM MS PhD Dipl. ACVPM FNAP and former director retired after almost 15 years at the helm.

At the UKVDL, Loynachan helped provide timely and accurate diagnostic pathology services for necropsy, biopsy and cytology cases submitted to the UKVDL. He also collaborated on equine infectious disease research projects, assisted with the training of graduate students and was a co-editor for the Equine Disease Quarterly. Loynachan was appointed associate director of the UK VDL in 2021.

Loynachan earned his DVM and PhD in microbiology from the Iowa State University. He is board certified by the American College of Veterinary Pathologists. Prior to joining UK in 2009, he was a faculty member at ISU.



PHOTO COURTESY DR. ALAN LOYNACHAN.

### UNIQUE RESEARCH COULD IMPROVE INDOOR EQUINE AND LIVESTOCK ENVIRONMENT

#### VIDEO <u>HERE</u>.

Plenty of research exists sur rounding outdoor equine and livestock arenas, but when it comes to indoor facilities, University of Kentucky College of Food and Environment researchers are breaking new ground with a multiyear study.

"This is an area that has become of greater interest to Cooperative Extension clientele across the state," said Bob Coleman, PhD, PAS, Dip. ACAN, associate professor and equine extension specialist. "I get asked about it often from people who are building their facilities from the ground up. They are thinking about what the ground's going to look like, indoor and outdoor, and there's just been such a lack of information out there."

Coleman is working with UK agricultural engineer Morgan Hayes, PhD, PE, assistant extension professor in the Department of Biosystems and Agricultural Engineering, and graduate student Staci McGill to study indoor arena conditions affected by a host of variables including air temperature, humidity, ventilation, air speed, horse activity and outdoor conditions. With 13 cooperating arenas, the researchers have been installing measurement devices and collecting data they will use to determine best management practices for building and maintaining indoor facilities.

"We have sonic anemometers to measure air speed from any direction, which is really nice in these arenas where we don't know exactly where the air's going to come from," Hayes said. "Sometimes there are doors and windows open; sometimes not. Sometimes there are fans on and sometimes not. This device allows us to record horizontal air movement in



L-R: BOB COLEMAN, STACI MCGILL, MORGAN HAYES AT LAKESIDE ARENA IN FRANKFORT, KENTUCKY. PHOTO BY MATT BARTON, UK COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT.

any direction."

Hayes, Coleman and McGill visit each facility to check the equipment and collect data. They are also measuring ground temperature and roof temperature with a thermal camera.

"We are looking for spatial and temporal variability and to see the differences in the summer and winter," Hayes said. "If we see less air movement and more humidity issues, then we know we have a wintertime challenge. It's a little bit different than the summertime challenge, which may be more of a temperature issue."

Hayes said many of the cooperators are very invested in getting the study results and can assist researchers with very little trouble. Owners like Bruce Brown, at Lakeside Arena in Frankfort, record the activities that go on in the arena, so researchers can correlate the data.

Brown built Lakeside, a 108,000 square-foot arena, to fill a need for an all-weather facility for horse shows and other events.

"I judge horse shows around

the country and a lot of the ideas you see here I've taken from other places I've been," Brown said. "Anything I can do to improve the exhibitors' experience here and improve our methods of working the arena, hauling the manure, housing the horses and the exhibitors ... it's important to me ... The exhibitors are not only clients, they are also our friends, and we want them to have a very friendly experience here."

To fulfill her master's degree requirements, McGill began the research in 2018 as a partnership between UK College of Agriculture, Food and Environment and the UK College of Public Health in an effort to better understand horse and human health. They started with a survey that drew more than 450 responses, 77% of which were concerned with dust, moisture levels and lack of air movement in indoor facilities. Originally from Chesapeake, Virginia, McGill then got funding from the U.S. Department of Agriculture's National Institute of Food and Agriculture for a predoctoral fellowship

and used those surveys to begin developing design guidelines and recommendations for engineers, project managers, construction companies and the equine industry as a whole on how to build better indoor arenas. She plans to draft a formal set of research-based guidelines before graduating with her doctoral degree in spring 2023.

"People spend a lot of money building these facilities," McGill said. "We want them to be something that lasts for decades. The main purpose of this study is to gain a better understanding of what's going on in these facilities and provide recommendations for farms and owners about how to build great facilities."

Coleman said the multidisciplinary team makes the results stretch to a wide audience.

"The cool thing about our team is that everybody brings something different to the table," he said. "That's really important to me. I look at what Staci and Dr. Hayes bring in; I need to understand the engineering component. I don't need to know how to calculate it, but I need to understand it and ask the right questions that will help my clientele. We spend a lot of time talking about our observations—what's working, what's



STACI MCGILL AND BOB COLEMAN INSTALL ENVIRONMENTAL MONITORING DEVICES IN LAKESIDE ARENA. PHOTO BY MATT BARTON, UK COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT.

not, what could be better. We're looking at all these things through a different lens, and it certainly has expanded my knowledge and my vision. From my perspective, this is all about making it right for the horses. If they are happy and comfortable, the owners will be as well."

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| Source: Feb. 8, 2022, news release. Aimee Nielson is an agricultural communications specialist in the UK College of Agriculture, Food and Environment.

### FACEBOOK RESOURCE ALERT: UK EQUINE EXTENSION SPECIALIST PAGE PROVIDES INFORMATION TO HORSE OWNERS

Looking for a place to learn about horse care and management topics from University of Kentucky and other Cooperative Extension specialists? One Facebook stop that aims to educate horse owners on timely topics related to horse care and management is "Equine Extension with Dr. Bob," found at <u>https://www.facebook.</u> com/hayoatsandeverythinghorses.



### AVOID TALL FESCUE TOXICITY THIS SPRING

Tall fescue is grown on an estimated 35 million acres across the United States. In Kentucky, it can make up at least 20% of any given pasture. While most often a safe grass for consumption, it can bring hazards.

Equine fescue toxicosis is caused when pregnant mares eat tall fescue infected with an endophyte fungus, Epichloë coenophialum. Consumption of the endophyte-infected fescue can have effects on mares and foals.

"Fescue itself is not a problem for horses," said Krista Lea, MS, research analyst in the University of Kentucky's Department of Plant and Soil Sciences and coordinator for the UK Horse Pasture Evaluation Program. "The problem is that most fescue naturally occurring in Kentucky, and throughout the Southeastern United States, is infected with an endophyte which can produce compounds toxic to horses and other livestock. The most common of these is ergovaline."

The grass is a cool-season, perennial bunchgrass brought to North America in the late 1800s from Europe. Since the detection of a field in Eastern Kentucky in 1931, and the ensuing release of the Kentucky-31 variety 12 years later, fescue has become the predominant cool-season perennial grass in the Southeast

Studies have shown toxicity symptoms appear in pregnant mares at ergovaline levels greater than 300 parts per billion. However, most UK extension publications suggest a more conservative level of 150 to 200 ppb. During the last trimester of pregnancy, researchers generally advise managers remove mares from endophyte-infected pastures to prevent serious difficulties. Fortunately, fescue toxicity



PHOTO COURTESY UK COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT.

in other classes of horses (such as geldings and stallions) has been negligible.

Clinical signs of tall fescue toxicity in pregnant mares include increased gestation length; agalactia (absence of milk production); foal and mare mortality; tough, thickened or retained placentas; weak and immature foals; reduced serum prolactin levels; and reduced progesterone levels. Other signs include abortions, decreased conception, early embryonic mortality and dystocia.

"Getting rid of it on a wide scale is difficult because it's so well adapted," said Lea. "Fescue with the endophyte is much tougher and resistant to grazing, drought and pests. Infected tall fescue is really tough and durable in pastures. The best way is to mitigate it or just remove it from individual pastures one at a time. There are some herbicides you can use which will kill the fescue without killing other grasses."

Another alternative is to dilute concentrations of toxic tall fescue in pastures by overseeding other grasses and legumes. Since horses do not prefer tall fescue, having other grasses available significantly lowers the chances for toxicity. Ergovaline concentrations are the highest within the seedheads of the endophyte-infected tall fescue. Strategic mowing of the infected pastures to prevent seed development can lessen the possibility of a spike in toxicity levels. Ergovaline dissipates from the plant after several winter freezes.

Ergovaline levels in endoyphyte-infected tall fescue are the highest in the spring. As summertime approaches, grasses slow their rate of growth and ergovaline concentration. On Thoroughbred farms, broodmares are usually in their last trimester during the winter months, therefore the risk for toxicity is much lower in early foaling mares.

Lea says that one thing she encourages mare owners to consider is planting novel endophyte tall fescues, such as the Lacefield MaxQ II variety developed by UK College of Agriculture, Food and Environment plant breeder Tim Phillips, PhD, associate professor in Plant and Soil Sciences.



PHOTO COURTESY UK COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT.

Novel endophyte varieties contain special endophytes that enhance persistence, but do not produce or produce lower levels of ergot alkaloids, making them safe for grazing. Endophyte-free varieties are also safe for grazing, but have poor persistence, especially when forage is overgrazed and under drought conditions.

To learn more about the UK Horse Pasture Evaluation Program, visit <u>https://equine.ca.uky.</u> <u>edu/horsepastures</u>. To learn more about fescue toxicity in livestock and how to combat it, visit <u>https://</u> <u>grasslandrenewal.org/workshops/</u> to participate in several virtual workshops put on by the Alliance for Grassland Renewal.

| Jordan Strickler is an agricultural communications specialist within UK's College of Agriculture, Food and Environment.

### EQUINE INNOVATORS PODCAST: EQUINE REPRODUCTIVE HEALTH

### EQUINE INNOVATORS PODCAST

In this <u>episode</u> Barry Ball, DVM, PhD, Dipl. ACT, Albert G Clay Endowed Chair in Equine Reproduction at Gluck Equine Research Center, Center describes what he and his colleagues have learned about reproductive endocrinology, placental function, feeding broodmares and equine contraception during his time at UK. Ball, who retired this month, also reflects on 35 years of equine reproduction research.

The "Equine Innovators" podcast series is brought to you by Zoetis. You can find the Equine Innovators podcast on TheHorse.com, Apple Podcasts, Spotify, Stitcher, Google Podcast, and many other podcast apps.

About the Researcher: Ball received his DVM degree from the University of Georgia in 1981. He completed a theriogenology residency at the University of Florida and his graduate training at Cornell University. He was a member of the faculty at Cornell University from 1987 to 1996. In 1996, he was appointed as the

first Hughes Endowed Chair in Equine Reproduction at the University of California, Davis. In 2010, he was appointed as the first Clay Endowed Chair in Equine Reproduction at the University of Kentucky. Ball's research has been directed toward reproductive endocrinology and pregnancy loss in mares. He has received numerous awards, including the SmithKlineBeecham Award for Research Excellence, the Excellence in Equine Research Award from the American Veterinary Medical Association, the Schering-Plough Award for Outstanding Research from the World Equine Veterinary Association, the Norden–Pfizer Distinguished Teacher award from UC Davis and the Theriogenologist of the Year award. Ball was a Fulbright Distinguished Scholar at the University of Cambridge 2004-2005. He is a past chair of the International Equine Reproduction Symposium Committee, and he is a past president of the ACT.



PHOTO COURTESY UK COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT.

### NATIONAL SURVEY ON HORSE HAY MARKETS UNDERWAY

The University of Kentucky received a grant to determine hay perceptions in the equine market, including package size, hay type and perceived quality. This survey will provide insight into the national horse hay market from the perspective of hay producers. We will provide a summary of our findings in an article in Hay and Forage Grower and in extension publications. We ask you take a few minutes to complete this anonymous <u>survey</u>.



PHOTO COURTESY UK COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT.

### NEW STUDY FROM ONE-OF-A-KIND HERD WITH NO DEWORMING FOR 40 YEARS

The University of Kentucky maintains a unique herd of horses that hasn't been dewormed since 1979.

According to Martin Nielsen, DVM, PhD, parasitologist at the University of Kentucky Gluck Equine Research Center, while the horses have a lot of parasites, they are healthy.

He and his team recently published a study describing parasite infection patterns in these horses over the course of a calendar year. Some of the findings include:

- Mare pregnancy, foaling and lactation did not affect parasite fecal egg counts.
- There were no differences in parasite egg shedding between seasons.
- Horses had antibodies to the bloodworm (Strongylus vulgaris) throughout the year, and the parasite was steadily detected in fecal samples.
- Mares passed these antibodies onto their foals through the colostrum.

"We learn so much from this unique herd of horses," Nielsen said. "First and foremost, they remind us that parasitism is a natural state, and that worms only extremely rarely cause disease or ill-thrift."

Nielsen said that several of the findings made in the study were surprising. Seasonality in parasite egg shedding had been reported in other countries, and many people had speculated that pregnancy and foaling could affect parasite transmission.

"This study demonstrates the importance of investigating these things properly, and this research herd offers excellent opportunities for doing so," he said.

The full scientific paper can be found <u>here</u>.

| Martin Nielsen, DVM, PhD, Dipl. ACVM, Schlaikjer professor of Equine Infectious Disease at the University of Kentucky Gluck Equine Research Center, provided this information.





PHOTOS COURTESY UK COLLEGE OF AGRI-CULTURE, FOOD AND ENVIRONMENT.

### EQUINE VERTEBRAL COLUMN PATHOLOGY

As technology associated with advanced imaging and diagnostic modalities progresses, more attention is being given to equine vertebral column pathology. The vertebral column serves important roles in protection of the spinal cord and locomotion. Therefore, diseases that impact the vertebral column can have a significant impact on equine health and rider safety.

Equine submissions to the University of Kentucky Veterinary Diagnostic Laboratory over a 10-year period (2011-2021) were queried for diagnoses related to significant vertebral column pathology. A total of 426 cases were identified. Distribution of diseases included equine cervical vertebral stenotic myelopathy (n=224), fracture/subluxation (n=123), abnormal spinal curvature (n=51), osteomyelitis (n=13), intervertebral disk disease (n=7), congenital vertebral anomaly (n=5) and neoplasia (n=3).

Vertebral pathology associated with equine cervical vertebral stenotic myelopathy (wobbler syndrome) comprised the majority of cases. This is no surprise given the density of Thoroughbreds in the central Kentucky area and their documented breed predisposition to develop the disease. Wobbler syndrome occurs when malformation of the cervical vertebrae results in spinal canal narrowing and cervical spinal cord compression. In general, wobbler syndrome is categorized as affecting two groups of horses. The first being young, growing horses with complex multifactorial interactions between gender, growth rate, diet and genetic determinants. The second group is seen in older horses with age related changes in the neck, mainly osteoarthritis. In this retrospective, males were more

commonly affected (male n=182; female n=34), the average age was 23.1 months (4 months-168 months) and Thoroughbreds were the most common breed (n=165). Vertebrae are classified as irregular bones due to their complex shape. Therefore, changes in different locations of the bone itself can result in spinal cord compression. Articular process joint lesions were the most frequent cause of spinal cord compression (n=71) followed by subluxation of the vertebral body (n=67), generalized narrowing of the canal (n=27) and thickening or elongation of the dorsal lamina (n=13). Articular process lesions were largely due to osteoarthritis, followed by osteochondrosis.

The cervical column was the most commonly reported site of fracture/subluxation (n=69), with the vertebral body being most frequently affected. In eleven cases, partial spinal cord transection was described. While a clinical history of trauma was reported in all identified cases, six cases had evidence of underlying neurologic disease (wobbler syndrome or equine protozoal myeloencephalitis).

Acquired spinal curvature disorders (i.e., scoliosis, lordosis, or kyphosis) were identified in 51 cases, with 50 considered congenital and one case of acquired scoliosis. Of the congenital cases, 71% had other skeletal abnormalities including limb contracture or facial malformations. Dystocia was described in 66% of the submitted histories. The thoracic column was the most common location (n=27)followed by the lumbar column. All vertebral osteomyelitis cases occurred in horses under one year of age. The lumbar vertebrae were the most frequent location. Rhodococcus equi and Streptococcus zooepidemicus were common

bacterial isolates. Secondary pathologic fracture was noted in six cases.

Clinically significant intervertebral disk disease is a more recent area of interest. In this review, intervertebral disk disease cases exhibited yellowing of the disk material with varying degrees of fibrillation, clefting and loss. All cases had a clinical history of ataxia. Secondary spinal cord compression was noted in four cases.

Of the remaining disease categories, congenital vertebral anomalies included cystic vertebral body or vertebral fusion. Neoplastic processes impacting the vertebral column included primary vertebral body sarcoma, metastatic lymphosarcoma and metastatic melanoma.

A variety of disease processes can impact the equine vertebral column. Pathologic evaluation of the equine vertebral column in conjunction with clinical information will continue to help better our understanding of these processes and their impact on equine health.

| Jennifer Janes, DVM, PhD, Dipl. ACVP, assistant professor of anatomic pathology at the University of Kentucky Veterinary Diagnostic Lab, provided this information. Source: January 2022 Equine Disease Quarterly.

# NEW VIRTUAL PLATFORM ALLOWS FARMERS TO HELP FARMERS

The University of Kentucky College of Agriculture, Food and Environment is joining other landgrant institutions to bring a new online platform to assist farmers in improving their on-farm practices. In conjunction with Mississippi State University, the University of Wisconsin-Madison, University of Arkansas and University of Illinois, the platform allows farmers to access and submit videos and podcasts aimed at getting started and having success with soil health and regenerative practices.

One Good Idea was created to increase farmer-to-farmer learning about methods to improve soil, land and finances. Topics cover an array of subjects such as cover crops, conservation tillage, rotational grazing and nutrient management. "One Good Idea is a great spot for farmers to learn from other farmers about what has worked or hasn't. as well as benefits from certain practices," said Amanda Gumbert, PhD, UK extension specialist for water quality. "Farmers are generally less hesitant to try practices recommended by other farmers. We don't really interfere. We just step back and let the farmers do the talking. We want to make it easier for farmers to connect and learn from each other."

One Good Idea accepts video or idea submissions from farmers or organizations eager to share how they implement soil health and regenerative methods on their operations to assist other farmers considering similar practices. These submissions are then verified by extension professionals to ensure validity before posting to the website.

"This new platform is laid out where you can find informa-



PHOTOS COURTESY UK COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT.

tion based on specific crops and location," Gumbert said. "So, for instance, you can narrow down videos and podcasts to those specifically about topics such as forages or soybeans or vegetables. There is also a search bar where farmers can type in the subject they are hoping to learn more about. You can also pull recommendations and advice from farmers only from certain states, so producers can specifically see what is working in their area." To further promote idea sharing among producers, One Good Idea is running a social media campaign with the hashtag #WhatsYourGoodIdea on Facebook and Twitter. Gumbert is encouraging farmers and agriculture industry professionals, such as extension agents, farm advisors and conservation professionals, to participate. Those wishing to learn more about the program can visit http://www. goodideafarm.org.

One Good Idea is a project of SERA-46, a committee that includes the land-grant universi-

ties involved in the project and is focused on research and extension to improve water quality in the Mississippi River Basin and shrink the Hypoxic Zone in the Gulf of Mexico. Funding from the U.S. Environmental Protection Agency made One Good Idea possible. This project is funded wholly or in part by the United States Environmental Protection Agency under assistance agreement number 00D87719 to Jennifer Seifert at MSU. The contents of this document do not necessarily reflect the views and policies of the Environmental Protection Agency, nor does the EPA endorse trade names or recommend the use of commercial products mentioned in this document.

| Jordan Strickler is an agricultural communications specialist within UK's College of Agriculture, Food and Environment.