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EDITION

WILDCAT CANTER

UNIVERSITY OF KENTUCKY AG EQUINE PROGRAMS NEWSLETTER

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HIGHLIGHTS

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SARAH COLEMAN NAMED 2022 FRIEND OF UK AG EQUINE PROGRAMS

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UK AND EQUINE INDUSTRY PARTNERS RESPOND TO HORSES IN NEED AFTER EASTERN KENTUCKY FLOODING

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Fernanda Camargo, associate extension professor in UK's College of Agriculture, Food and Environment, and Sarah Coleman, executive director of the Kentucky Horse Council, led the group responsible for vaccinating and deworming more than 200 horses in Eastern Kentucky and distributing more than 200 pairs of mud boots and more than 300 bottles of fly spray.

UPCOMING EVENTS AND IMPORTANT DEADLINES

December 15, UK Last Day of the Semester, Graduation Open House, UK Commencement
December 15, EQAAN Bits & Bites, 6:30 p.m., Mirror Twin Brewing, Lexington, KY,
December 16, UK Commencement

Full event listings and details can be found here.

WELCOME

The Wildcat Wranglers sure did wrangle me in during my freshman year in 2020.

As someone who came to a large university from out of state during the pandemic, I was extremely worried about how my first year of college would go. But those worries were unfounded. From scavenger hunts around campus to goodie bags during holidays to outdoor activities, UK Ag Equine Programs ensured students felt welcome and part of a community. With that impact, I knew I wanted to be a Wildcat Wrangler my sophomore year.

As a Wildcat Wrangler, one of the activities I most appreciate is our Equine Week of Service. I love how our equine students come together to support various organizations within the local equine community. I truly enjoyed getting to know other students in the program, volunteering and gaining leadership and organization skills from planning these activities.

One of our other Wildcat Wranglers, Piper McGehee, agreed. "I have learned how to truly step up when needed, and I have continued to grow my leadership skills," she said. "Working together as a team has made me grow and learn various skills."

Another of my favorite activities as a Wildcat Wrangler is functioning as an ambassador for the program when meeting prospective students. I remember attending the Experience Equine Day during my senior year of high school, so it was an honor to attend this event as a Wildcat Wrangler this year. Meeting prospective students and their families and participating as a panel member answering questions they had about the program and the University of Kentucky was very rewarding and strengthened my public speaking skills. I am excited about several events this month and hope that students were able to check them out. The Wildcat Wranglers hosted a game night Dec. 1 from 5-7:30 p.m. in the Ag Info Center. This event was' a nice break from studying for finals.

Another fun event coming up in April is the second annual Horsey Hustle 5K that supports the UK Ag Equine Programs Student Experience and Applied Education Fund.

If you have ever considered getting more involved and becoming a Wildcat Wrangler, I highly encourage you to do so, as this has been such a rewarding part of my college experience. I look forward to meeting more students at upcoming events.

Go cats!

GABBY DILEMME
'24, EQUINE SCIENCE AND MANAGEMENT

WHAT I'VE LEARNED

By Emily Brown

"If you want to go fast, go alone. If you want to go far, go together." African Proverb

When I was 16, I got my first 'real' job at the Gap. The manager of the store easily became one of the most influential people in my life. Whether he meant to or not, he taught me to strive to really get to know people. He did this by teaching the sales associates why greeting customers with a smile and by asking, "Hi, how are you?" goes leaps and bounds farther than a halfhearted, "Welcome to Gap."

I would ask this, the customer would answer and I would often find that we had much more in common than one might expect. By listening to the customer and breaking the ice with them, I was able to establish trust and enrich their experience in the store.

As I've gotten older, I've realized that being able to connect with and speak to people I did not know or possibly had nothing in common with would build into a much more important goal than driving sales at the Gap.

Equestrian is a historically elitist sport. Being a person of color, it can sometimes be hard to recognize being fortunate enough to participate in equestrian activities. Multiple things can be true at once, and I have learned that it is okay to identify with more than one group. We cannot dream up conflict where it might not exist. More and more people of color are proving this in the horse industry as it becomes more and more normalized for there to be equestrians of color. The perceived increase in diversity (which can be defined as people of multiple cultures gathering in one space) in the UK Saddle Seat team is an opportunity for learning from one another's experiences.

Tackling topics like racism and prejudice can be very challenging. It can be even more challenging to know how we, as individuals, can create meaningful, positive change for something seemingly so much bigger than us. Because these issues are founded in social interaction, we must first begin by listening, validating, and supporting one another.

I feel very fortunate to have found this type of support in the UK Saddle Seat team. The UK Saddle Seat team is first a support system. As a person of color, I feel accepted and embraced by my peers on the team. I feel as though I am treated fairly, listened to and valued. This is what being inclusive is. Inclusivity is where the togetherness needed to truly positively impact the way people of color experience the world begins.

As I've navigated recruiting and fellowship efforts for the team, my priority has always been to replicate the same positive experience of inclusivity I received when I joined the team as a freshman. By placing value in the team members as people, they enjoy an inclusive experience. This builds a strong foundation for people of color to feel safe and embraced on the team.

Another important aspect is building a safe place for all is representation without tokenism. Representation can empower minorities because being able to identify with someone is how connections are formed. However, there is a line between representation and tokenism. Tokenism is a performative act, whether intentional or unintentional, to give the appearance of inclusivity and equity without genuinely making efforts for change that lasts. An example of tokenism would be if I had written this entire paper on myself, being a person of color, as an individual and what being different than 'everyone else' in the horse industry is like. Instead, I am using my platform to represent minorities as a community and to explain how the team was able to create a space that supports and lifts people of all identities up. Being mindful of representation versus tokenism is very important in educating oneself on DEI efforts and allyship.

After events of racial injustice and discrimination, many are left wondering what they can feasibly do to help. How can you personify inclusivity? I would argue it all begins with a simple, "Hi, how are you?" For many, the University of Kentucky might be the most diverse community they are a part of for their entire lives. We cannot let this go to waste. As we meet new people throughout our lives, we are constantly given the opportunity to work on ourselves to relinquish our clinging onto mistrust and unconscious bias. Together, we can learn from one another by listening, validating and creating spaces where individuals are able to let themselves be vulnerable. Mindfully listening and validating others' experiences comes from an acceptance that everyone's experiences are different and a genuine curiosity for learning from others. Let us not forget that we have much more power to make long lasting connections and improve minorities' life experiences than an Instagram repost. I encourage everyone to be mindful of these things. This is how we begin to heal from racial injustices, prejudice and bias. Only together do we truly move forward.

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ALICIA BENBEN NAMED ACADEMIC COORDINATOR FOR UK'S EQUINE UNDERGRADUATE PROGRAM

By Holly Wiemers

Alicia Benben has been named academic coordinator for UK's Equine Science and Management undergraduate program.

Benben joins a team supporting the largest major in the University of Kentucky's College of Agriculture, Food and Environment. In this role, she will help teach and advise, as well as create and implement program initiatives. She begins her position Jan. 2.
"We are all very excited to welcome Alicia as a colleague. She has a lifetime of equine experience across multiple disciplines and with several academic programs, in addition to instructional design and computer-assisted learning expertise," said James N. MacLeod, UK Ag Equine Programs director and faculty member in the Gluck Equine Research Center. "I am confident that our students and everyone in UK Ag Equine Programs will benefit from having Alicia on our team."

"The opportunity to join UK Ag Equine Programs in many ways brings my professional endeavors full circle, as it enables me to combine my passion and background in both the equine industry and higher education. I am very excited to serve both the program and our future, current and past students in this capacity and advance UK Ag Equine Programs' presence as a leader within equine education, research and extension/outreach," Benben said. "I did not come from a family that had roots in the equine industry and was incredibly fortunate to have the support and guidance of mentors throughout my personal and professional growth. I look forward to emboldening students in their pathway just as others had for me."

For the past two years, Benben has served as a part-time instructor in UK's equine undergraduate degree program, teaching Thoroughbred Sales. Since 2018, she has also served as an instructional designer for UK Online, where she has provided support, consultation and expertise in online course design, development and implementation for UK's 16 colleges. Prior to that, she served as an assistant professor within the Bluegrass Community & Technical College's Equine Studies program, where she taught five equine studies courses and advised students on curricular requirements. She also served as an academic coordinator and instructor in the same program at the start of her time with BCTC.

"UK Ag Equine Programs is truly an exemplar of academic programming here at UK. With over 300 undergraduate students and more than 600 alumni, the position of academic coordinator plays a crucial role in supporting a robust and engaging educational experience. I was drawn to the multi-faceted nature of this position, from advising incoming freshmen and supporting curriculum and programmatic initiatives to instructing EQM courses and facilitating alumni relations," she said. "This opportunity will allow me to leverage the passion I have for the equine industry and higher education to enhance the academic journey of future, current and past students.

"For me, being a part of a student's growth and development as an equine professional is incredibly rewarding, as well as the opportunity to share with others an industry that has given me so much. The path I have taken would not have been possible without supportive and encouraging mentors during my academic and professional career, so being in a position that supports the educational journey in various capacities is truly special to me," she said.

In addition to her academic background, Benben has also worked in several capacities within the equine industry. She served as an assistant trainer for Silver Wing Stables in Versailles, Kentucky, where she oversaw the daily training, nutrition and health of horses in race training and rehabilitation. She was also a stable worker for John Booker Jr. Racing in Lexington, an administrative assistant for Equi-Force Equine Products and a working student within Kent School Stables in Kent, Connecticut. Benben is a member of the National Association of Equine Affiliated Academics, Quality Matters, Kentucky Equine Networking Association and the Kentucky Horse Council.

"I am excited to jump right in this coming spring semester! There are many exciting things on deck, including instructing EQM 101 and EQM 301, which I have been teaching part-time for the last two years. I am very much looking forward to getting to know and working with the UK Ag Equine team on programmatic needs and emerging initiatives. I feel it is important in this early stage to take the time to listen and observe so that I can best support my colleagues and our students," she said.

She added, "This position plays a significant role in alumni relations, which is an area I am excited to delve into and support. There is an opportunity here to evolve the relationship we have with our former students and engage with them as advocates and ambassadors of the university and ESMA program. How could we integrate alumni more into our curricular efforts? In what ways can we support our alumni in their career endeavors and educational pursuits? These are a few of the many questions I have begun thinking about and look forward to exploring further in this role."

SARAH COLEMAN NAMED 2022 FRIEND OF UK AG EQUINE PROGRAMS

By Holly Wiemers

When Kentucky's horses need her, Sarah Coleman is there. From helping with recovery efforts following a destructive tornado in Western Kentucky, to organizing the delivery of vital supplies after historic flooding in Eastern Kentucky less than a year later, she is often on the front lines helping horses in need. Whether it's a vaccination and gelding clinic, first responder training for large animal rescue efforts or hay assistance to horse owners, Coleman is one of Kentucky's go-to people for equine wellbeing.

In recognition of her tireless work, Coleman was recently named 2022 Friend of the University of Kentucky Ag Equine Programs. She is the executive director of the Kentucky Horse Council, a non-profit organization dedicated to the protecting and developing the Kentucky equine community, and a long-time advocate and partner on many UK initiatives.

"Sarah has been a great friend and collaborator with UK Ag Equine Programs, but in all fairness, she is a tireless and fully engaged advocate for all horses and everyone who cares about them," said James MacLeod, UK Ag Equine Programs director and faculty member at the UK Gluck Equine Research Center.

Coleman said she is thankful to those within UK Ag Equine Programs who have assisted the KHC during the state's recent natural disasters.

"The kindness and support the college has shown the KHC as we have sought to help horse owners in counties affected by floods and tornadoes is truly invaluable," Coleman said. "From helping locate extension agents for real-time needs to hauling hay and administering vaccines, to simply being a sounding board for ideas on how

UK Vice President for Land-Grant Engagement and Dean for the College of Agriculture, Food and Environment Nancy Cox and UK Ag Equine Programs Director James MacLeod, present the Friend of UK Ag Equine Programs Award to Coleman.

best to protect the horses in the commonwealth, there is no greater advocate for the horses and the equine industry in Kentucky than UK."

Coleman was co-nominated for the award by Bob Coleman (no relation), extension horse specialist and faculty member in Animal and Food Sciences, and Nancy Cox, UK Vice President for Land-grant Engagement and College of Agriculture, Food and Environment dean.

Her nomination letter lauded her support of the 2022 Kentucky Equine Survey and her willingness to serve as a public face for the collaborative project while also doing legwork to garner funding and industry support. The letter also included information about her impact on longstanding issues in the equine industry.

Eastern Kentucky has dealt with free-roaming horses for many years. It is a challenging issue with many moving parts. Coleman's nominators said that she has worked to understand the issue and find reasonable solutions by developing strong relationships with the people from the area and being a great listener and willing partner.

The nomination also highlighted her hands-on efforts in disaster recovery, from organizing supplies to loading trucks and trailers and hauling supplies to those in need.

Nominators pointed out that as executive director of the Kentucky Horse Council, Sarah worked hard to make sure the horse industry is at the table when issues related to agriculture are discussed. The letter noted that she represents the industry well and includes all horse owners in her efforts.

An avid equestrian, Coleman grew up in northeastern Ohio and graduated from the Scripps School of Journalism at Ohio University. She moved to Kentucky in 2004 to work with multiple equine- and agriculture-related publications. She shifted to equine-oriented roles at Lexington Catholic High School and Georgetown College before transitioning to the community and public relations director for New Vocations Racehorse Adoption Program. In that role, Coleman oversaw the construction of New Vocations at Mereworth Farm and established the New Vocations All-Thoroughbred Charity Horse Show at the Kentucky Horse Park, among other endeavors. She has been in her role with the Kentucky Horse Council since 2020.

Coleman also serves on multiple equine boards and committees, including secretary and treasurer of the Kentucky Hunter Jumper Association, a member of the UK's Saddle Up Safely program and a member of the Kentucky Horse Breeders Incentive Fund Non-Race Committee.

She continues to work as a freelance writer for several publications including Hobby Farms, Midwest Harness Report, Horse Illustrated, Equestrian, Kentucky Equestrian Directory, Business Lexington, and Young Rider and serves as a contributor to the Paulick Report.

The Friend of UK Ag Equine Programs was created in 2005 to recognize people who have provided advocacy, funding or other extraordinary support or a college or university employee who has generated an exceptional relationship with stakeholders that manifested into a new program, new advocacy success or new resources.

Past Friends of UK Ag Equine Programs include Fred Sarver, of Cornerside Farm; Tom Riddle, a Lexington-based veterinarian; Matt Koch, of Shawhan Place Farm; Bennie and Cheryllee Sargent, of Sargent Quarter Horses; Stuart Brown, a Lexington-based veterinarian; Norm Luba, executive director of the North American Equine Ranching Information Council; Dan Rosenberg, of Rosenberg Thoroughbred Consulting; Northern Kentucky county extension agent trio Don Sorrell of Campbell County, Dan Allen of Kenton County and Jerry Brown of Boone County; and David Switzer, former executive director of Kentucky Thoroughbred Association/Kentucky Owners and Breeders Association. For more information about UK's Ag Equine Programs, visit http://www.ca.uky.edu/equine.

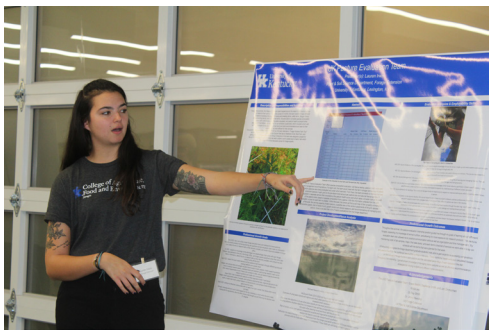
STUDENTS PRESENTED EXPERIENCES AT INTERNSHIP SHOWCASE

By Erin DesNoyers

Photos by Holly Wiemers

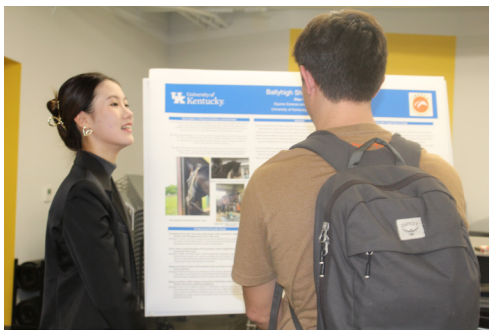
Approximately 20 students who completed their internships this past summer and fall semesters converged to present their internship posters to students, faculty, staff and industry stakeholders on Dec. 6 at the UK Cornerstone. Students were evaluated on their poster presentations and answered questions about their learning outcomes and responsibilities during their time on internship.

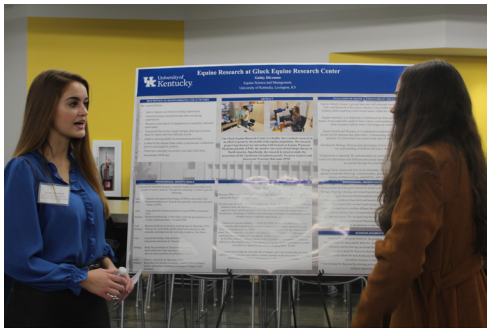
- People's Choice Award: Gabby DiLemme, Gluck Equine Research Center
- Outstanding Intern Award (Summer '22) - Mary Paige Lacy, Horse Country Tours
- Outstanding Intern Award (Fall '22) - Michael Ciccolella, Sun Dance Trail Guest Ranch

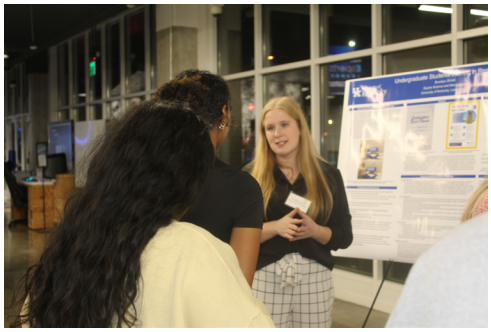


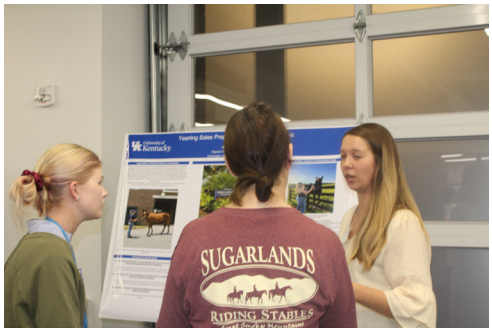

Horse Country Internship

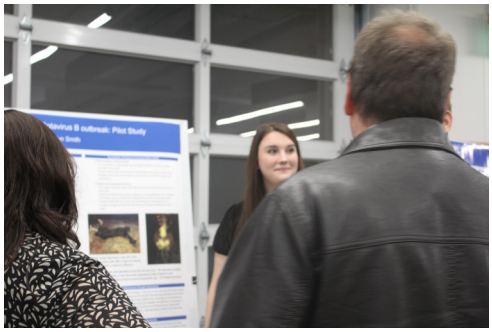

Equine Healthcare Internship
HAGYARD
Equine Medical Institute



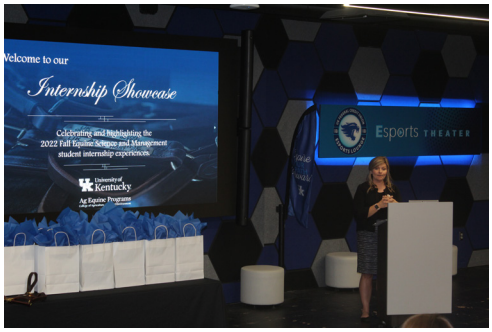

Equine Research at Gluck Equine Research Center




SUGARLANDS
RIDING STABLES




Internship Showcase
Celebrating and Highlighting the
2022 Fall Equine Science and Management
student internship experiences
Esports THEATER


Welcome to our
Internship Showcase
Celebrating and Highlighting the
2022 Fall Equine Science and Management
student internship experiences
Esports THEATER

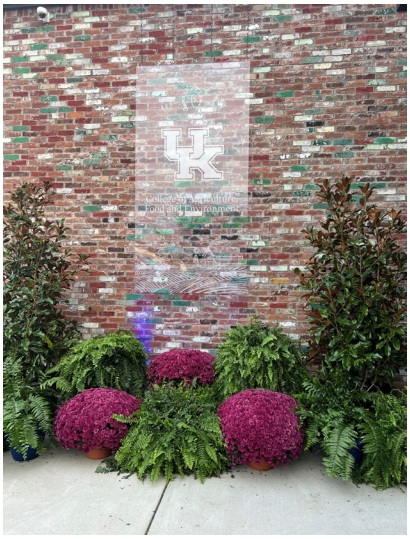

Internship Showcase

MEET YOUR WILDCAT WRANGLERS

Photos by Jen Zimmerman

UK AT BREEDERS' CUP FESTIVAL

The week of Breeders' Cup, Oct. 31-Nov. 5, featured numerous events in the Lexington area, including representation from the College of Agriculture, Food and Environment. The college hosted a ticketed bourbon tasting event highlighting Kentucky's signature industry programs, bourbon and equine. Representatives from the college attended to showcase UK and greet approximately 250 equine and bourbon enthusiasts each of the three nights the event was held.



SIX NEW ED BROWN SCHOLARS ANNOUNCED FOR 2022-2023

The Ed Brown Society's Chairman Greg Harbut and President Ray Daniels announced six new Ed Brown Scholars. The announcement was made at the Lyric Theatre & Cultural Arts Center during the Opening Night Art Exhibit celebrating African American equestrians, co-sponsored by the Ed Brown Society, Breeders' Cup Festival Week and Commerce Lexington.

Jaida Alee, a sophomore at the University of Kentucky, majoring in Equine Science and Management; Chanler Robinson, a junior at Ohio State University, majoring in Animal Science; Sophia Vega, a freshman at the University of Kentucky, majoring in Animal Science; Harrison Goode, a junior at the University of Kentucky, majoring in Equine Science and Management; Jeffrey Mitchell, Jr., a doctoral student at the Auburn University College of Veterinary Medicine and Deanira Smith, a doctoral student at the University of Arizona College of Veterinary Medicine were all recognized as Ed Brown Scholars for the remainder of the 2022-2023 academic year.

Each Ed Brown Scholar was awarded a $3,000 scholarship and will gain industry exposure, training and experience through the EBS career development program that will properly position them to pursue successful careers within the equine industry.

Chairman Greg Harbut said, "At the Breeders' Cup, many will place their wagers on who they believe will be the winners of world championship races. In that same spirit, the Ed Brown Society is making this investment in young people of color who are running strong academic races in pursuit of their equine careers, and we believe they will finish strong."

About the Ed Brown Society
Founded by Living The Dream Stables, the Ed Brown Society (EBS) celebrates the rich history of African-Americans in the equine industry while creating opportunities for young people of color to gain industry exposure, training and experience, through academic scholarships, development programming and professional internships. EBS focuses on identifying and qualifying students of color, with demonstrated interest, skills and commitment, to become successful professionals in all aspects of the equine industry.

For more information about EBS visit www.EdBrownSociety.org.

UK AND EQUINE INDUSTRY PARTNERS RESPOND TO HORSES IN NEED AFTER EASTERN KENTUCKY FLOODING

By Holly Wiemers

Photos by Fernanda Camargo and Sarah Coleman

After the water began to recede from historic July flooding, 13 Eastern Kentucky counties were declared federal disaster areas. Communities began to take stock of the toll inflicted by one of the most devastating flooding events in the state's history and identified an immediate need to help horses in the impacted areas.

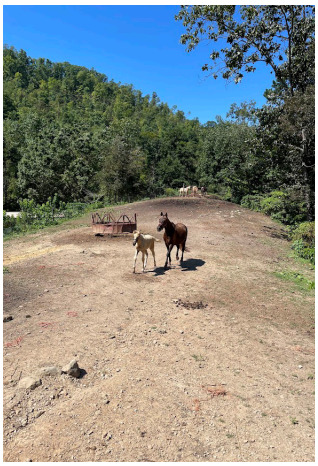
Flooding disasters bring an increased risk for diseases spread by mosquitos, flies, ticks and other pests as well as an enormous need for vaccinations and fly and tick control. An equine industry group sprang into action, responding to the need with donations and expertise.

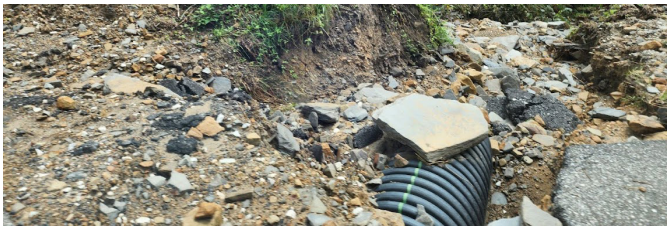
Fernanda Camargo, associate extension professor in the University of Kentucky College of Agriculture, Food and Environment, and Sarah Coleman, executive director of the Kentucky Horse Council, led the group responsible for vaccinating and deworming more than 200 horses in Eastern Kentucky and distributing more than 200 pairs of mud boots and more than 300 bottles of fly spray. They provided medicated shampoo, delivered thousands of pounds of donated hay and supplied halters, fly masks and buckets.

"Animals are an integral part of our lives," Camargo said. "Whether they are pets or production animals, they enrich humanity. So, in times of utter devastation, I feel that if we can help care for these animals, we free up victims' time and brain space so they can deal with and focus on rebuilding their lives, knowing that they don't have to worry about their horses. This hopefully decreases their emotional distress, and they can mourn their losses and restart their lives."

Camargo said this disaster was challenging in many ways. Not only did people lose loved ones, houses and belongings, but the flooding happened in a mountainous area, with hard-to-reach places.

"Some places were already difficult to get to before the flood, but now roads have been washed away and people and animals are islanded," Camargo said. "Moreover, people lost their cell phones, internet and electricity, so communication is near impossible in some cases. What used to be fields of grass are now covered in mud, so these animals don't have anything to graze on. If people had already stocked hay for the winter, they may have lost it all, or they need to feed it now because they have no fields and will





be short on hay in the winter. Fences have been washed away, so it's hard to contain farm animals. Some have even been tied to trees, so they don't wander away."

Several organizations and individuals donated supplies through this effort. This included vaccines from Boehringer Ingelheim, Merck and Zoetis; dewormers from Zoetis; fly spray from Absorbine, Pyranha and Neogen; rubber boots from Bogs and Noble Outfitters; syringes and needles from Neogen and Hagyard Equine Medical Institute and wound products from Zarasyl Equine. State Line Tack and Absorbine donated wound products.

Farms and Individuals who donated hay, money, general items like clothes, halters or buckets include Bel Mar, Camargo, Marylu Ernsting, Erin Dupre, Courtney Calnan, Kristi Fry and Campbell Horse Transport, Dorrisa Risner, Laurie Lawrence, Stephanie Reedy, Peter Timoney, Ron Wilt, Alexandria Pannett and Megan Douglass.

Coleman led the hay effort, which resulted in thousands of pounds of donated hay, with Bernice Amburgey from the Appalachian Horse Project, Reed Graham and other Cooperative Extension agents.

Organizations that donated money included the American Association of Equine Practitioners, Kentucky Association of Equine Practitioners and the Kentucky Horse Council. Organizations that helped spread the word, organize volunteers and helped with other logistics included KAEP, KHC, Kentucky Veterinary Medical Association, Appalachian Horse Project, Kentucky Humane Society, Kentucky Equine Education Project and the Kentucky 4-H Horse Program.

Covetrus also donated miscellaneous items. Other individuals who helped in facilitating efforts included Jen Roytz and Ryan Wilson.

Veterinarians who helped administer vaccinations and access and treat medical needs included Tina Cassar, Scott Hanson, Joe Lyman, Lisa Frederico and Vickie Coomber.

"I am humbled to see how rapidly these multinational companies were so quick to reply to my simple email requesting for help," Camargo said. "This just goes to show that they are eager to help, but sometimes they don't know how, or don't have a personal local connection to have boots on the ground, and all I had to do was ask for specific items and where to send them, and they all came through."










ERICA JACQUAY AWARDED TOP HONORS IN GLUCK THREE-MINUTE THESIS

By Jordan Strickler

It's not easy is it to present a major thesis in just under three minutes. However, Erica Jacquay, graduate student and MARS Equestrian™ scholar at the Gluck Center, pulled it off quite well as she emerged victorious in the University of Kentucky Gluck Equine Center Three-Minute Thesis with a presentation of her horse transportation study.

A New Zealand university initially developed the rules of the 3MT, which allow students three minutes to discuss their research using only one presentation slide and no gimmicks (e.g., props, costumes, songs, etc.).
"The study is a follow-up to previous research out of Amanda Adams' lab on how traveling short distances affected aged horses' stress and immune response," Jacquay said. "My current research expands upon the 2020 study to include horses of different ages and with various health issues."

While previous studies had only researched healthy horses, Jacquay took it a step further to see the impact traveling has on those with health problems. She hopes to learn more about how horses of different ages and health statuses respond to transportation stress. This includes geriatric horses, horses with equine Cushing's disease (Pituitary pars intermedia dysfunction; PPID), horses with Equine Metabolic Syndrome and horses with insulin dysregulation (ID), a condition where horses have either increased levels of insulin in their blood or abnormal insulin responses to a meal.

One of Jacquay's research program goals was to conduct a nationwide survey on the most common reasons for transporting horses and the management practices associated with various forms of travel, focusing on transport by road for three hours or less. Jacquay, along with advisor Amanda Adams, MARS Equestrian™ Fellow and UK associate professor of veterinary science, Jill Stowe, UK professor of agricultural economics, Pat Harris, director of science Mars Horsecare, and Bridgett McIntosh, director of Mars Equestrian created a 15-minute survey including questions such as the reason for transportation, management style and horse owners' concerns when traveling. They surveyed from March to April 2022 and collected 1,300 responses, including at least one person from every state.

The most common survey taker was an adult female, amateur horse owner who is a recreational rider. The most common reason for transporting a horse by road in the past year was for trail or leisure riding, followed by show competitions. The most common journey length was less than an hour, with only 12% of trips being four hours or more.

"No one has really conducted a survey of this type before," Adams said. "This information really helped us figure out what type of questions we need to be asking. It helped guide the areas that we want to move into. Things like this have a big impact on the horse industry."

Most horses were Thoroughbreds and Quarter Horses aged 5 to 15. Most had access to hay before, during and after transportation as well as access to water prior to and following their trips.

"The survey results highlight that short-distance research is important," Jacquay said. "We wanted to find out

what most people are doing with their horses and if there is something they should be doing differently to improve horse health."

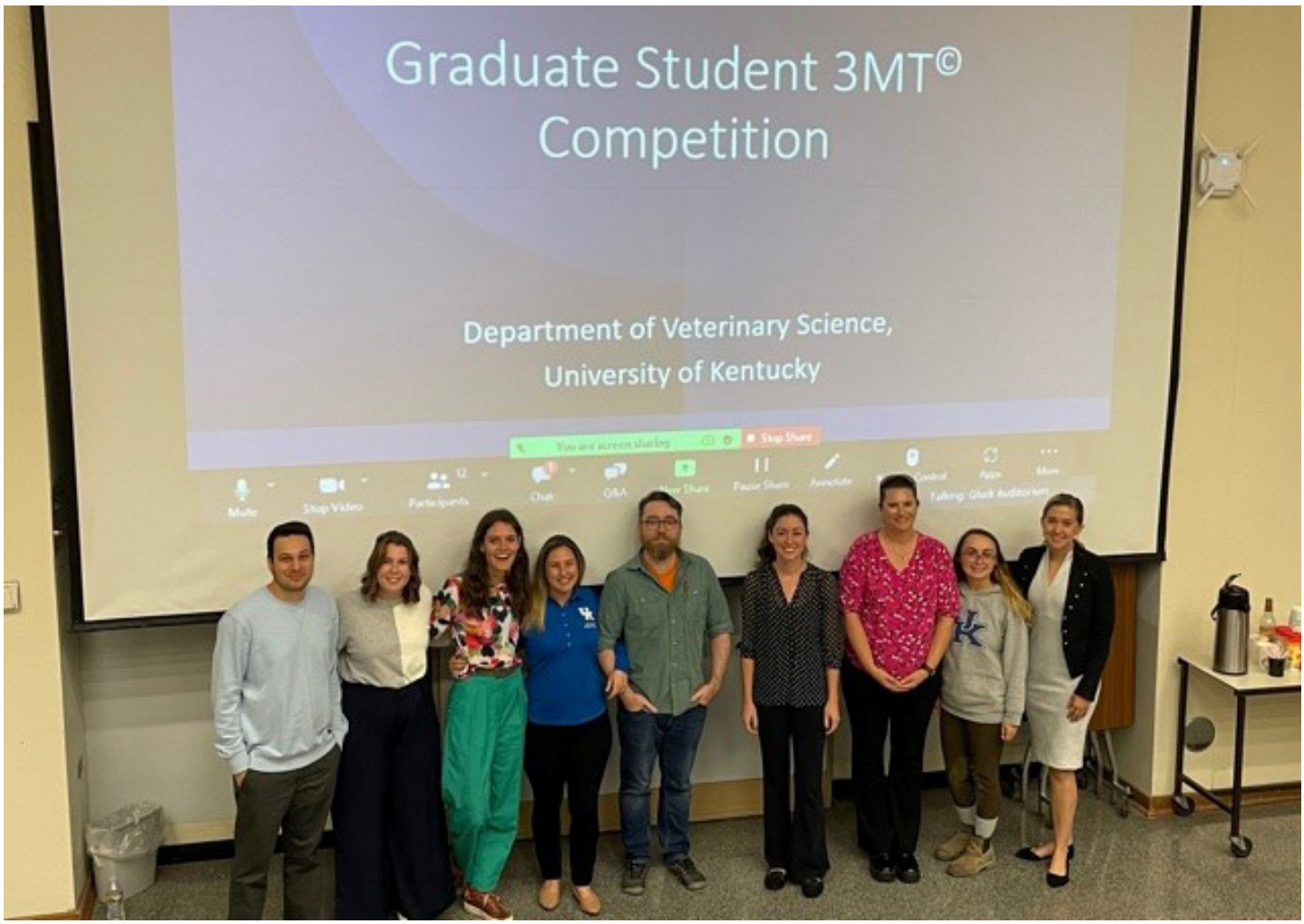
Jacquay earned a bachelor's degree in animal and dairy science from Virginia Polytechnic Institute and State University and a master's degree in animal science from Kansas State University.

She first became interested in equine research during her internship at the MARE Center in Middleburg, Virginia. Jacquay spent her time in Kansas researching equine reproduction, specifically the development of the mare and foal fecal microbiome and effects of various weaning techniques on the fecal microbiome. After completing her master's degree, she moved to Pennsylvania for a year to breed, foal and train Connemara ponies in dressage. She then relocated to Lexington in 2018 to work in Spy Coast Farm's reproduction unit and coordinate ongoing research projects with UK. Jacquay worked in equine veterinary diagnostic testing at EDS prior to starting her doctoral studies at UK. In August 2020, she began working in Adams' laboratory where she became the first Mars Equestrian Scholar.

Jaquay said she started getting involved in horses as a hobby, and then, as with many horse people, spiraled into a lifelong passion.

"I've been interested in horses since I was nine years old," Jacquay said. "I was never really into your more traditional sports, and got involved as something to do. I got involved in eventing and then dressage and now I do a little bit of everything. My favorite area now is starting and training young horses."
After her win in the Gluck competition, Jacquay moved on to the university competition where she earned third place in her division.

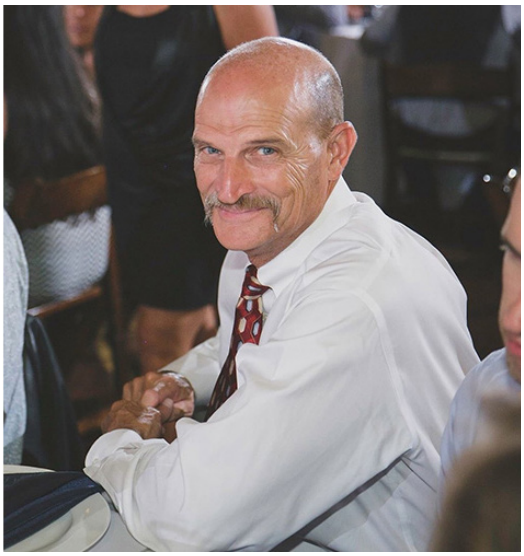
"I really enjoyed competing in the university-wide 3MT not only to be able to convey my research to those unfamiliar with equine science, but also to learn about the diversity of research across campus from the other



UK'S CRAIG WOOD TO BE HONORED AS PART OF APHA HALL OF FAME IN 2023

Craig Wood, Assistant Director of Extension for Agriculture, Natural Resources and Horticulture within the College of Agriculture, Food and Environment, will be honored in the American Paint Horse Association Hall of Fame class of 2023 June 30, in Fort Worth, Texas, as part of the APHA Hall of Fame & Awards Celebration. Wood is a former APHA president from Owenton, Kentucky, a Paint breeder, judge and Professional Horseman and was instrumental in guiding APHA.

Read the story here: https://apha.com/news/six-to-be-honored-as-part-of-apha-hall-of-fame-in-2023/



PERSPECTIVES FROM OUR STUDENTS

Note from editor: An important part of the mission of our program includes undergraduate education, specifically with our Equine Science and Management undergraduate degree program. In a class taught by Camie Heleski, a faculty member and lecturer within the program, is one designed to present provocative, often controversial issues that are current to the equine industry. In EQM 305, "Equine Industry Issues," students are introduced to topics, heard from speakers, researched information and communicated about industry issues in written and oral formats. The course is designed to expose students to hot button issues in the industry and encourage them to research and formulate well-communicated opinions about those issues. One avenue made available to this course is publishing some of those stories here.

The Equine Industry's Global "Hoof"-Print

By Chloe Young

Since the late 1800s, the climate has been rapidly changing because of human activities. Global temperatures, ocean levels and health, extreme weather events, ice sheets and landscapes are all factors that continue to change. Climate change refers to the long-term changes observed in weather events and temperatures (IX). Climate change is often affected by gas emissions, population changes and changes in demand for resources. When looking up climate change, the influential date that arises is 2050: a reanimated "doomsday."

While there is considerable evidence that the direction of global climate is not looking positive, the solution is often unclear or overwhelming. Changes made to the climate up to this point will already be exceedingly difficult to reverse, taking hundreds of years (IX). What scientists and activists seek is to inform the population on how to become more sustainable in their practices of living.

More recently, the equine industry has been questioned on its sustainability. In one day, the average, non-working horse drinks 10-12 gallons of water, consumes 20% of its body weight in forages and produces 50 pounds

of waste (IV). In one year, this adds up to at least 3,650 gallons of water, 7,300 pounds of forage and 18,250 pounds (about the weight of a school bus) of waste. Of course, there are other factors to consider, such as water used to reduce arena dust, gas emitted transporting sales or competition horses and the effects of long-term grazing on landscapes. When examined thoroughly, as though under a magnifying glass, it is definite that the equine industry leaves a large global "hoof print."

The global "hoof-print" of the equine industry is quite broad, and not all actions of the industry have a negative effect. Fortunately, the equine industry is truly diverse in its breeding, and this can be seen positively when reviewing climate change and species diversity (VII). The use of horses for work (primarily in Third World countries) also is a major benefit, as horses do not emit as much gas as a car would. While horses are not the most conventional use of travel in large metropolitan areas, more work horse use could reduce emissions from tractors and cars, though the drawbacks of this reversion would mean less production and be time inefficient.

When observing the industry, there are many disciplines/uses of the horse, requiring a different standard of facilities. Most equestrians rely on a dirt arena/area to ride in and water it down to reduce dust. A typical dirt arena requires more than 2,500 gallons of water daily to control dust and maintain prime footing (III). Considering racetracks, show arenas and boarding barns do this every day, that is a lot of water gone just to ride. Focusing on the competition and racing industries, there is plenty of other waste to factor in. Transport of equines, feed, tack and spectators can impact methane emissions.

Further, the surface pressure horses exert on land and their precise grazing techniques cause the soil to weaken and erode. Erosion can lead to eutrophication of water sources nearby as the manure in the soil erodes, the excessive amounts of nitrogen and phosphorous will contaminate the water (IV). Erosion will also cause the soil to lose its strength and nutrient capacity, making it more difficult for plants to grow in that area. These problems have exponentially arisen in regions with high populations of feral horses, with more land being destroyed and water sources being depleted by the growth of herds (V). The larger populations of feral horses are not only causing higher mortality rates of the horses but are also wiping out native flora and fauna (V).

Nonetheless, the equine industry has plenty of opportunities to improve. Regarding footing, there is new technology of synthetic footing that not only requires less water but is also beneficial to the ligaments of the horse (III). Utilizing proper grazing techniques including rotational grazing, limiting access to water bodies (streams, ponds, creeks) and re-establishment of pastures to include dry lots (mud reduction) are all ways facilities can preserve the land and water (IV).

Unfortunately, the industry must prepare for the worst and will need to start to implement some of the strategies mentioned above to become more sustainable. Not only does the industry impact climate change, but climate change can also impact the way we manage and work with our equine companions. The predicted increases in temperature can lead to an increase in disease outbreaks and heat related stress on the horse while exercising (VIII). Knowing that a large portion of equestrians enjoy competing, the temperature change can manipulate show seasons and enforce more vaccinations/stricter guidelines. Thus, even the slightest change can change the entire structure of the equine industry.

A major improvement the equine industry can make is providing a better education of sustainable management, including the proper removal of waste, sustainable facility design and proper equine management that benefits the land and water resources (IV). Many colleges/universities are implementing more courses on sustainable agriculture, where many of the topics can be converted directly to the equine industry. Studies on the exact amount horses and the equine industry emit should also be done alongside "vulnerability assessments" to identify horse operations most affected by climate change (II).

In review, while the equine industry contributes to only a small portion of the effects of climate change, climate change will impact both the activities of horses and their riders. The industry must be prepared to adjust competitions/activities to benefit the health of the horse, to face large outbreaks of disease and to find ways to reduce waste of natural resources. Promoting equine management and sustainability courses to facility designers and barn managers could impact the emissions of the industry. Knowledge of waste removal, beneficial footing and proper grazing techniques are great first steps to improvement that any small level barns/facilities can make. While these changes may seem small, if implemented worldwide there will be a large positive impact, and we can preserve the factors that make the equine industry diverse.

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Approach to Horse Management in Wildfires: No Loved One Left Behind

By Allison Heard

Horses depend on their owners for survival and care in all situations. When a natural disaster such as a wildfire is approaching, it is important that horse owners provide proper preparation for their horses to the same extent they care for themselves.

There is no way to predict the exact route of a wildfire. This is because wildfires are affected by many different factors (Madigan, n.d.) Even if it is predicted that the area where a horse owner lives will not be affected, something as simple as the wind can change that outcome. Therefore, if there is a threat of wildfires anywhere near a horse owner, the horse owner needs to make a plan for how to manage their horse(s).

The two main routes of managing horses in wildfires are evacuation or turning them loose. The safest and most effective way to protect horses in wildfires is evacuation (Madigan, n.d.) There are many steps needed to prepare for evacuation. The most important preparation needs to be done in advance. This is training horses to load into a trailer. If the horse owner has not previously trained a horse to load into a trailer, this process can be very stressful and potentially dangerous. When a horse is loaded into a trailer for the first time, it might panic and injure itself by rearing and slamming its head on the ceiling of the trailer (Florida Department of Agriculture and Consumer Services [FDACS], n.d.) This can cause brain injuries and topical wounds for the horse. It is also very dangerous for humans to try to load a stressed horse into a trailer if they have not loaded before. Another aspect of evacuation that horse owners need to consider is having a farm where the horse can stay once it has evacuated (FDACS, n.d.) This can be a friend who lives far away, an animal shelter or another horse owner who is willing to house the horse. If the horse can successfully load, some supplies need to be gathered to prepare for evacuation. The horse owner needs to have a copy of complete medical records, a basic equine first aid kit and a supply of water, feed and medications that will last multiple days (FDACS, n.d.)
As explained previously, the most desirable approach to keeping horses safe in wildfires is to evacuate (Madigan, n.d.). If the horse owner does not feel safe sheltering in place, their horse will not be safe either. Unfortunately, sometimes evacuation is not an option. There are many reasons that a horse owner will not be able to evacuate, including not being able to catch horses, not being able to safely load horses, not having enough trailer space for all horses and not having adequate time before smoke and flames make it unsafe for humans. (Madigan, n.d.)

The alternative to evacuation during wildfires is turning the horses loose from their pasture. However, there is also preparation needed in turning horses loose. The most important preparation for turning horses loose are vaccination and identification (Madigan, n.d.)

It is crucial to have your horses up-to-date on vaccines if they are going to be loose. Fernanda Camargo explains in "Equine Emergency and Disaster Preparedness" that the core vaccines for horses are tetanus, Eastern and Western equine encephalomyelitis, West Nile virus and rabies. Tetanus protects horses against diseases involved with puncture wounds from nails. During natural disasters, there will be a variety of debris, which can result in horses getting puncture wounds. In addition to a tetanus vaccine, the other core vaccines

are important in case your horse interacts with infected horses while turned loose. If your horse manages to survive the wildfires but returns with one of these diseases, the results could be fatal.

Identification is the most important aspect of retrieving horses after turning them loose. There is a low chance of finding your horses again if there is no identification on them.

Camargo explained in "Equine Emergency and Disaster Preparedness" that there are two types of identification: temporary identification and permanent identification. The best way to ensure identification is to use multiple methods of identification on your horse.

Some temporary identification uses are halter tags, neck collars, leg bands, mane or tail tags, clipper shaved information, livestock marking crayons and permanent markers to mark hooves. Halter tags are tags that contain the owner's information that is attached to the horse's halter. It is important to remember that horses can lose their halters when they are loose, so multiple forms of identification are necessary. Neck collars are rings of either leather or plastic that wrap around a horse's neck. These rings have the owner's contact information on them. Leg bands are rings that wrap around the lower part of a horse's legs with contact information on them. Mane and Tail tags are tags with contact information on them that are braided into your horse's mane or tail. There is also the option of clipper shaved information. This is when you used clippers to shave a phone number into a horse's coat. Livestock marking crayons make it possible for the owner to draw contact information on the horse's coat. Finally, a horse owner can use a permanent marker to draw on their horse's hooves. This is helpful if your horse has light-colored hooves. If you use a permanent marker to color their hooves an unnatural color, it will be easier to identify. For example, if many loose horses have been collected at a rescue, a horse owner can go to the rescue and tell the employee, "My horse has blue hooves," to help identify them easily.

Some examples of permanent identification are tattoos, brands or microchips (Camargo, n.d.) Dular explains in "Identification Lip Tattoos for Racing Horses" that tattoos are applied to a horse's upper lip and consist of a unique combination of letters and numbers. Most breeds of racing horses, including Quarter Horses, Standardbreds and Thoroughbreds, require a lip tattoo in North America. Anyone who finds a horse with a tattoo can look them up and find their registered racing name. This can help publicize to find the owner.

Lenz explains in "Chip your Horse" that microchips are electronic devices inserted into the ligament at the top of a horse's neck. All Thoroughbreds registered with the Jockey Club are required to have a microchip, but any horse owner can have their horse microchipped. In case of an emergency like a wildfire, anyone with a scanner, such as a shelter or a veterinarian, can identify a horse using a microchip.

Camargo explains in "Equine Emergency and Disaster Preparedness" that brands are permanent changes to a horse's coat. There are freeze brands and hot brands which both change the color of a horse's coat to white to display a pattern. These forms of identification improve a horse owner's chance of retrieving their horse after setting them loose.

The risk of wildfire is terrifying and dangerous to those affected. Horse owners are solely responsible for ensuring their horse's safety during such a dangerous time. Horse owners who live in an area affected by wildfires must have a plan for the survival of their horses. This can consist of either evacuation or turning your horses loose. There are advantages and disadvantages to both, but both provide the opportunity for the horse to live. Without a proper plan, horses who trust and depend on their owners could die. Proper preparation can result in all parties living through such a tragic natural disaster.

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The Ethics of Genetic Testing in Horse Breeding

By Colleen Ellzey

Within the last 20 years, scientists have discovered many genes that cause genetic disorders. As technology has advanced, we have commercialized most of these tests and they are a tool readily available for breeders and horse owners. These tests have helped bridge the gap in understanding these disorders and how they are inherited. Even alleles for color and patterns have been found, so we can very accurately predict what color foal might result from breeding.

As technology has been created to test for these alleles, testing costs have become more affordable. The average test costs around $40, and many breeds with multiple disorders will have a panel test that covers all the disorders for that breed and is typically more affordable per test than if the whole panel was purchased individually.

When testing a horse, 20-30 mane or tail hairs are pulled with the root attached and sent off to a lab. New tests for colors, patterns and disorders are being discovered continuously, and we understand more now than ever how these traits are inherited and expressed.

Genes can be either dominant or recessive. A dominant gene only needs one copy of the allele to be expressed, and a recessive gene needs two copies to express that gene. An example is in color genetics; all horses are black or red. A black horse has at least one dominant (E) gene, whereas a red horse needs two copies of the recessive gene (ee). A horse with one copy of a recessive allele is called a carrier, as it does not express the recessive trait but can pass it on to its offspring.

Sometimes recessive genes can be harmless if a horse has a single copy or very dangerous if the horse has two copies. Two examples are the Frame Overo and Glycogen Branching Enzyme Deficiency, also known as GBED, genes in stock-type horses. Both genes are harmless in an adult carrier horse, but if two carriers are bred together, and the foal inherits a copy from each parent (25% chance), the foal will have a fatal disorder and die shortly after birth. Some genes are embryonic lethal and can cause abortions if the embryo receives two copies of the gene; this can negatively impact a mare's reproductive cycle and force her to miss a foaling year or foal later than desired.

Other traits are dominant and only need one gene copy to affect an individual. An example is the Hyperkalemic Periodic Paralysis disorder, also called HYPP (Hyperkalemic Periodic Paralysis (HYPP) | Veterinary Genetics Laboratory, n.d.) The allele that causes HYPP is commonly found in all stock horse breeds. HYPP causes muscle spasms and weakness that can cause sudden death; this can be worsened by a horse having two copies. If a parent has one copy, the chance of offspring being affected is 50%. This chance rises if both parents are affected by one copy and can be 100% if either parent has two copies.

Now we move on to the question of which horses should be tested. Stallions that are producing a large number of foals should be tested. In the breeding industry, most stallion owners are already testing and advertising their stallions with genetic panel results readily available. Broodmares should also be tested, as they make up a more significant percentage of the breeding population but are typically less likely to be tested. Testing both parents would be the ideal way to prevent both dominant and recessive traits from affecting foals. Foals that are a result of a carrier-to-non-carrier cross should also be tested to determine if the foal is also going to be a carrier. The breeder should be responsible for supplying prospective buyers with the foals' genetic test results or, at the very least, letting them know if a parent was a carrier or was affected by any genetic disorder. This is a standard that we, as an equine community, should move towards.

Many registries leave it up to the breeders to decide if they will test their horses. In contrast, others are proactive in protecting their breeds' genetic integrity and have put policies into place to regulate and sometimes require genetic testing. For example, the American Paint Horse Association, also known as APHA, passed a rule stating that all breeding stallions must have a six-panel genetic test on file with APHA (2021 APHA rule book). This rule means that all APHA stallions must be tested for six genetic disorders and have those results published in the APHA database, where any APHA member can access them. This was a massive step in the right direction for this breed association. The hope is that other breed registries will adopt this practice and expand it further. If all breeding horses were required to be tested, it would significantly reduce the number of detrimental genetic traits being passed down unknowingly.

Some breed registries also limit which horses can be registered if the horse is a descendant of horses known to carry defective traits. An example is how the American Quarter Horse Association, also known as AQHA, requires all foals who descend from the popular halter horse named Impressive to be genetically tested. Impressive is known to be the origin of the HYPP gene (Riddel, Hypp in performance horses - North Carolina State University). Homozygous foals, meaning they have two copies of the trait, are barred from registration (The "Gen-ethics" of Equine Breeding). AQHA implemented this so that there is never a horse that is homozygous for HYPP being bred, as this would result in 100% of the offspring being affected by HYPP.

This was an effective way to curve the amount of homozygous HYPP horses being registered; however, it is not foolproof, as many breeders still breed affected horses together. If a foal from one of these breedings tests homozygous for HYPP, they have been known to be dumped at auction barns, sold as grade or registered and shown with a color registry that does not have the same HYPP restrictions. A more effective route might be not registering any foal resulting in a carrier-to-carrier cross or one with an affected parent. This can only be done if all breeding stock is already being tested.

Breeding a carrier to a carrier or breeding a horse with a dominant trait is not a good or ethical practice in the horse breeding industry. Breeders who mate horses who are known carriers or horses affected by harmful dominant traits contribute bad genes to the population, which can be a huge problem. Breeders who mate horses without testing are arguably worse because they could contribute multiple bad genes to the gene pool. There is an argument to be made about breeding carriers who are exemplary in their discipline and can contribute a lot of good to the breed IF and only if they are bred to tested non-carriers. This would help solve the problem of an already small gene pool to choose from.

Genetic testing should not be the only thing evaluated when a horse is chosen to enter the breeding pool, but it should rule out horses who have undesirable dominant traits. If a carrier is bred, it should be done responsibly.

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