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UVM Kimberly

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THE VITAMIN E SAGA CONTINUES: REDEFINING "NORMAL"

One horse's mysterious muscle soreness in 2016 started us down this path; he had clinical signs of vitamin E deficiency that were remedied by therapeutic supplementation, but we wondered if this was the only way to fix those low E numbers. In early 2017 we embarked on a study here at Miner looking at different strategies to boost our horses low blood vitamin E levels. Preliminary results spoke to fast boost in E levels using a natural, water-soluble product, but also showed us that simply adding 2000 IU/day of synthetic vitamin capsules to the diet could improve E as well. All looked like a simple paper to write up until the final day of testing in early May of 2017 when levels of many of the horses returned to lab-reported low blood levels of Vitamin E! We scratched our heads. A lot.

E levels improved from the initial testing, but not like we might have hoped; at that point, it looked like synthetic E capsules were reasonable enough for us to move along while we continued to scratch our heads. Time flies by and we finally got around to doing a whole herd check again in March of 2018. We had been consistently supplementing the diets

of all horses with 2000IU of synthetic E per day since May of 2017, about 10 months of this regimen. These results didn't look great to me- 70% of the herd had E levels below lab normal! We decided to try switching to a natural capsule, but needed to use the rest of our giant purchase of synthetic E, so we upped everyone's dosage to 5000IU of synthetic/day to see if we could change numbers that way. It didn't change much in 8 weeks when we tested in early May, so we started with natural capsules at 2000IU/day.

10 weeks on natural vitamin E capsules showed some improvement in the random sample of horses we tested, but not as much as I'd have liked to see. We tested 11 horses, some with access to pasture, some on very tight diets and still had more than half of them under the lab's defined normal. The lab's reference range states that adequate serum vitamin E concentrations in adult horses ranges between 2.0 and 4.0 ug/mL. Our efforts focused on that 2.0 ug/mL number and finally reaching a fevered pitch about what to do next, we called in some

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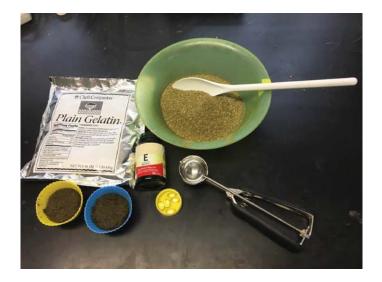
MAKING "PILL-POCKETS" FOR HORSES

As part of the Vitamin E study we conducted in 2017, figuring out how to be sure each horse received its allotted treatment of supplement was a project unto itself. We feed grain to the horses that live in fields in a semi-supervised way. The fences have grain buckets hanging from them and each horse gets one pound of the ration balancer grain per day, give or take. For the most part, each horse stays at his/her bucket to eat up and we'll put some hay stretcher pellets in the fast eaters' buckets to extend mealtime long enough to let the pasture mates finish up. It is an imperfect system; occasionally horses move around and steal others grain, but on average in a week, everyone gets what they need. However, simply putting any supplements in the grain wouldn't ensure that each horse would get the vitamins.

After much trial and error, we came to a system of making a soft treat that would hold together reasonably well. Jell-O Shots. Alfalfa is often used in commercial supplements as a vehicle for meds as it is very palatable and aromatic, so it can cover unfamiliar scents and tastes. Using ground alfalfa pellets as our base, we add a mixed up recipe of plain gelatin and water to make slurry. The alfalfa/gelatin mixture gets portioned out into individual silicone muffin cups and refrigerated to set. We've found that about 4 days is the safest life for these treats- after that, the risk of them getting moldy increases.

It is possible to incorporate a powdered supplement into the individual slurries before they set or since we've been feeding capsules, we put those in the center of the slurry cookie and top it off with a bit more to make a "filled" cookie. It is easy to insert pills into a set cookie also. So far, these treats have been very easy to use and feed and it helps us be sure that supplements are getting to the horse they're supposed to get to!

- Karen Lassell



VITAMIN E, Continued from Page 1

reinforcements from equine nutritionists. With the help of Dr. Tania Cubitt of Performance Horse Nutrition and Dr. Carey Williams of Rutgers University we had a conference call meeting to go over our collection of results and make some recommendations on where to go next with our feeding program.

Dr. Williams recently presented the review paper "Vitamin E Requirements, Supplementation and Disorders" at the 78th Minnesota Nutrition Conference and she shared details with us on a phone call. All the lab reports we received come with the statement of interpretation: "Serum vitamin E concentration is a good indicator for vitamin E status. The animal requirement for vitamin E is not absolute, but varies on such things as the fatty acid profile of the diet and oxidative stress placed on the animal. Therefore, it is impossible to state what deficient, or adequate, vitamin E nutriture is for all situations." Dr. Williams explained that the absolute number of 2.0 ug/mL wasn't as absolute as we were thinking. We talked at great length and eventually she helped us understand the progression of our quest and that we're not as bad off as I was afraid we were! In the summary of her paper, she concludes that the value of 1.5 ug/mL is likely a more reasonable reference number for the average horse. Her extensive research and review of the literature also once again reinforce what we all know about feeding horses; that there are few absolutes and that each horse should be treated and fed as an individual!

When I revisit the data of our vitamin E blood collection, generally 75% of our horses are just fine on 2000IU/day of vitamin E capsules- there was little difference between the synthetic and natural E. While it has been a struggle to get to this point, I know it is just a point on a continuous learning curve. We are certainly MUCH more aware of the impact that vitamin E can have on a horse's health and performance and we'll continue to monitor blood E values over time.

— Karen Lassell lassell@whminer.com

MINER EXPERIENCE A SOUND FOUNDATION FOR EQUINE SPORTS MEDICINE

As a child, Shannon Heibeck remembers going through the phone book and calling every horse barn in the area to find the one which offered the least expensive riding lessons so that she could convince her mom to let her do it. Shannon grew up about an hour outside St. Louis, MO and says that she has loved horses for as long as she can remember.

She attended Truman State University about four hours north of her hometown and there she learned about Miner

Institute and the Summer Experience in Equine Management from Carrie Ostrowski. Carrie was also a student at Truman who had participated in the Summer Experience program and then returned to Miner after graduation for a year-long internship. Shannon said that Carrie "spoke so highly of the program that I knew I had to apply and try to be a part of it."

Shannon participated in the Summer Experience in Equine Management program at Miner in 2013 and then returned in September 2015 for a yearlong internship. Shannon now works for an equine sports medicine veterinary practice based in Lexington, Kentucky. The practice – East West Equine Sports Medicine -- specializes in lameness and musculoskeletal-related injuries. The group travels around the country, spending winters in Thermal, CA and summers in Traverse City, MI. "My job title is technically Veterinary Technician but I do everything from scheduling to billing to jogging/lunging horses during exams to assisting during procedures to caring for the horses and I'm even lucky enough to do some



riding," Shannon explained.

The emphasis at Miner Institute on teaching and emphasizing safe horse handling skills has been really useful in her job, Shannon said. "Every day I handle rambunctious, naughty, and sometimes dangerous horses. Miner taught me how to read and assess horse behavior as well as how to handle everything from babies to stallions." Her time at Miner also helped her to better understand the client side of the vet-client relationship, she said. "Having been the concerned horse owner responsible for a barn of horses allows me to put myself in the client's shoes and see where they're coming from and understand what they need – especially when it comes to what is feasible for treatment."

When they are in California and Michigan, the sports medicine group is the official show vets for the circuit, so they work long hours and see 20-30 horses a day and may even be called back during the night if there is an emergency, she said. "At a show we see a huge variety of issues – broken legs, lacerations, colic, skin, teeth, eye and ear issues, lameness/ soundness issues and everything in



between." Things are little less hectic when they are back in Kentucky, she said. On a typical day in Kentucky they typically travel to different client barns and might see 5-10 horses. "The job is always exciting and despite being exhausted at the end of every single day, I wouldn't trade it. I love the job, the people, and the animals with my whole heart," Shannon said.

— Rachel Dutil dutil@whminer.com

FAREWELL, HD ST. REGIS

Reflecting on the long, but never long enough, life of our own HD St. Regis brings so many emotions to the surface that it is difficult to pull together a few paragraphs. Trying to count the number of people that Reggie's life touched and impacted is an almost impossible task and out of the fear of forgetting someone, I won't try to list them all.

Katie Ballard was the Equine Program Coordinator (now Director of Research) and I was a Summer Experience in Equine Management student from UNH in 1989 when the pretty mare, Blue Rose Martha, was bred to UVM Elite. On May 13, 1990, HD St. Regis arrived and was the 7th foal born to the newly established equine program at Miner. He was dark bay with a tiny bit of white on one hind heel and two forehead whorls above eyelevel, but one slightly higher than the other. Anyone who's familiar with the lore of how and where whorls are located on a horse's face and the connection to that horse's temperament knows that Reggie fully owned his multi-faceted personality! He was a handsome, expressive youngster, that we took to many shows as a young horse and I think I remember them more clearly for the struggles in leading (or being dragged), spooking (Chickenboy!), and early introductions to bathing, clipping, lungeing, longlining, saddlewearing and more. Gratefully, he was never afraid of being ridden!

Our collaboration with the UVM Morgan Horse Farm extended to the growing equine-focused animal science major at the Spear Street Farm at UVM in Burlington when Josie Davis became full time faculty. UVM needed horses for



student learning on campus and Reggie began his very long, illustrious college career as a 3 year old gelding in the fall of 1993. Only missing a few semesters during his whole life, Reggie would spend his summers here at Miner and be in Vermont from September to May. As his riding skills grew and evolved over the years, he went from less of a student "project pony" to earning his honorary Professor Reggie title.

"There is one principle that should never be abandoned, namely, that the rider must learn to control himself before he can control his horse. This is the basic, most important principle to be preserved in equitation." A famous quote by Alois Podhajsky, past director of the Spanish Riding School and author of the book, *My Horses, My Teachers*.

So many lessons learned by me, many of them hard-earned, make me grateful for the forgiving nature of the horse! Reggie taught me to pay close attention to our shared environment and to his subtle,

but honest expression that would predict what might happen next. In training and riding him, the ability to keep him put together for the soft jog he could offer and the easy up in the bridle lope all came from the biggest lesson of truly riding a horse from back to front. The speed and endurance that Reggie could offer while waiting for one's arms to give out was impressive as a young, energetic horse! The quick application of leg to engage the hind end, the thighs to ask his shoulders to hesitate a moment, the hands to ask for flex in the jaw and poll through the bit, then release. All of this while creating enough "tension" and energy in one's core without being rigid and maintaining fluidity through this endless conversation around the arena. As an instructor, being able to help Reggie's riders create this feeling of conversation and partnership on a finished horse is one of the things I will miss most about him. He would always give the rider every chance to figure it out, but it wasn't simply given away by him; the rider had to earn that feeling.

Reggie was the go-to horse for so many things. Teaching the basics of lungeing, longlining, how to trot or canter for the first time, what a Morgan Western Pleasure horse could feel like, demonstrating at so many venues the virtues of America's first breed of horse, or just going for a leisurely bareback jog because that student needed "therapy" in the way that only a horse can provide.

As most stories like this end, the last lesson is one that no matter how many times we go through it, it doesn't get easier. Reggie

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If you are a Miner alumni, we would love to hear from you! Please reach out via facebook or twitter or email Rachel at dutil@whminer.com.

PLAYING IT SAFE:

NEW RULES FOR USEF EQUESTRIAN SPORTS

On February 14, 2018, the federal bill, Protecting Young Victim's from Sexual Abuse and Safe Sport Authorization Act of 2017, was signed into law. It is the updating of two past laws, the Amateur Sports Act of 1978 and the Victims of Child Abuse Act of 1990, all of which are meant to bring awareness to the risks of child abuse and mandate the reporting of suspected abuse. Under this law, all sports that fall under the 1978 Amateur Sports Act are the ones that are governed by the U.S. Olympic Committee. The United States Equestrian Federation falls under these guidelines as well since there are several equestrian disciplines that are Olympic sports.

The United States Center for Safe Sport has been tasked with creating policies and programs to prevent the emotional, physical, and sexual abuse of amateur



athletes. In equestrian sports, many of those amateur athletes are also children. The USEF has developed a program under the Safe Sport umbrella that is approved for the training of any adults that compete in USEF recognized disciplines. The initial training is a 90 minute on-line module that costs \$20; annual renewal of Safe Sport training is a 30 minute refresher. Safe Sport offers a free training module for the parents of equestrian athletes. Beginning January 1, 2019, all USEF Adult Competing Members are required to be certified by US Center for Safe Sport.

While we all wish we live in a perfect world where abuse never happens, we don't. As a human culture, we've grown in our knowledge and understanding that skeletons shouldn't be kept in the closet, or the tack room. A few minutes of our time as teachers, trainers, competitors and parents is well worth knowing that it could help protect the safety and welfare of vulnerable equestrians. More information is available through the USEF website and www.safesport.org.

MINER INSTITUTE AT EQUINE AFFAIRE

The past few years we've had a booth at the Equine Affaire and had a great time meeting so many people and talking about equine education opportunities here at Miner as well as talking Morgan Horses. It has been worthwhile, but scheduling this year was looking tough, so our booth is taking a vacation. However, the College and Career Fair which began at last year's event and will happen again in 2018, was so much fun and had a great impact, we wouldn't miss that



for anything! Karen Lassell will represent Miner Institute as part of the College and Career Fair and will be volunteering to support Dr. Karin Bump and Tim Williams' efforts in making this an even better venue this year. As part of the National Association of Equine Affiliated Academics and in her job as an equine extension specialist in Madison County, NY, Dr. Bump has a keen interest in seeing the horse industry flourish and be filled with well-educated equestrian enthusiasts. Watch for notices on social media and at Equine Affaire's website for how to participate on Saturday, November 10th.

SAVE THE DATE: YOUTH EQUIDAY IS NOV. 3!

Geared for 4-H kids, this event is open to the public and free of charge. Registration in the Horse Barn classroom is from 9-9:30 a.m. and the program will run from 9:30-11:30 a.m. 4-H'ers need to bring their approved helmets to be able to participate in the hands-on portion of the event. Preregistration isn't required at Miner, but if you're coming with your 4-H group, check in with them! Dress for the barn; boots and warm things as needed!





REGGIE, Continued from Page 4

had acute laminitis in early May. With lots of support and professional intervention, he was doing really well through much of the summer, until he wasn't anymore. Old, tired, injured laminae struggle to hold up the weight of a big, strong horse and they started to give out. The modern technology of the venogram (an x-ray of the vascularization of the foot) showed us that Reggie's battle wasn't going to be won, so the decision was made to humanely euthanize him.

On August 15, 2018, Reggie was prepped to define the "good death" that euthanasia ought to be. Dr. Nate Theobold came early that morning to nerve block his feet to give him a pain-free 6 hours of strolling around the farm, grazing on the choicest pieces of lawn, eating apples and mints and being itched and loved on by his people. It was a sunny, lovely day. As the time came to say solong (no good-byes here!), great big raindrops fell from the sky and wept with us as we let him go. Just in time to bury him in the Antique Display Pasture next to the rose bushes, the sun made its return. Reggie's final lesson on Earth was complete. Until we meet again, Reggie, for "No heaven can heaven be, if my horse isn't there to welcome me."



Special thanks as well to all the vets at Vermont Large Animal Clinic, Reggie's farriers Jaret Pullen (also one of Reggie's UVM advisees) and Joe O'Leary, Drs. Sammy Pittman and Ric Redden for long distance advice, and the Trahan family and Adrianne Melis on-site support and consult.

- Karen Lassell lassell@whminer.com



Learn more about the Heart's Delight Morgan Horses and view our sales list http://whminer.org/equine/sales-list.php



photo by Christopher Crosby Morris

Cavalry Day

MORGAN HORSE FARM

Saturday, October 20th, from 10am-3pm

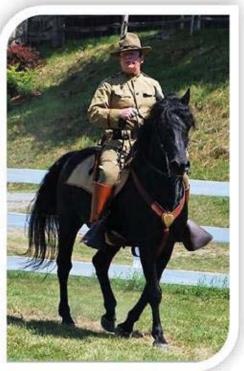
Bring a picnic lunch to the UVM Morgan Horse Farm, rain or shine, for this family-friendly educational event: Members from the 1st Vermont Cavalry, "Co. K", will recreate living history through Civil War reenactments and demonstrations, to educate visitors about the Morgan's important role in the building of this country.

The day's activities will include mounted drills, reenactment tent, lectures, and historical photo exhibits.

A World War 1 reenactor will educate visitors about the important role of the US Government Morgan Farm.







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FEATURED MINER MORGAN: UVM KIMBERLY









— Photo by Christopher Crosby Morris

In 2016, the generous and kind mare, Kimmy, readily accepted the orphan colt HD Times Square (aka "Peanut") and mothered him like he was her own. We knew she deserved a foal of her own and had already picked the name of HD Providence as the perfect name for a foal by the stallion Privilege. After a couple of sleepless nights on foal watch, Lindsey Bjorgan, the year- long equine intern, noticed Kimmy laying down in the tall grass in the beginning stages of labor on June 12. She allowed us all to form a quiet, reverent semi-circle to be witness to the arrival of this foal. Of course, the definition of providence is "the protective care of God or of nature as a spiritual power."

Learn more about the Miner Morgans at www.whminer.org/equine.html