

# British Equestrian Federation/Virginia Tech/Middleburg Agricultural Research and Extension Centre Internship 2016

*By Michelle Hand*



In January of 2016, the British Equestrian Federation (BEF) and the Virginia Polytechnic Institute and State University (Virginia Tech) once again decided to launch their UK undergraduate competition offering the chance to win a place on the fantastic internship programme with the Middleburg Agricultural Research and Extension Centre (the MARE Centre) in Virginia. This centre is one of a kind. Situated in the heart of Virginia's horse country, it is well known for its innovative research efforts and educational outreach which spreads to a huge number of private owners, suppliers, and equine professionals, improving equine welfare in the area and around the world.

Opportunities like this are scarcely rivalled in the UK and certainly for undergraduates such as my then-self, so I found myself applying for the competition without a second thought, albeit with very little expectation of making it through the first phase. Applicants were asked to write an essay on an aspect of sport horse health of their choosing and I submitted an essay on the welfare implications of overpopulation resulting from indiscriminate breeding, including the current industry responses and further concepts that could play a vital role in improving the situation in the United Kingdom.

It was a huge shock to receive an email from Dr. Georgina Crossman (the BEF Research Consultant who quickly became a great support and friend) saying that I was through to the interview process, a shock which was perhaps matched with the realisation that my close friend Zoe Greenwood had also progressed to the same stage. Yet, these shocks were far belittled when, around two months later, we found ourselves seated across from Professor Graham Suggett, Dr. Georgina Crossman and Jan Rogers at the BEF headquarters at Abbey Park, Warwickshire, hearing that we were both being awarded places on the summer internship programme.



*A photo to mark the occasion, we literally couldn't stop smiling for a week!*

Despite only intending to interview for one place, Dr. Bridgett McIntosh (Extension Equine Specialist at the MARE Centre) and her associates had kindly made an exception upon finding that we were such close friends and finding us both to be suitable candidates. An opportunity that had already seemed incredible to begin with now appeared too good to be true, and we began our preparations for traveling to Virginia together.

It's hard to describe the feeling of arriving not only into a new country but onto a new continent. Virginia is a state of incredible natural beauty and we were welcomed by the MARE Centre team with a warmth to match the considerable temperatures that we soon began to enjoy. After being shown around the stunning expanse that the farm comprises of, which is somewhere in the region of 420 acres, it wasn't long before we were roasting s'mores over an open fire and, to my sheer delight, watching the fireflies twinkle around us.



*The MARE Centre has a wonderful mixture of traditional-style barns and modern facilities in the stable area and clinic. These are surrounded by rolling pastures where the 36 horses are turned out full time unless they are being used for research that day.*

After receiving such a warm welcome we couldn't wait to get started. Mornings begin at 8am at the MARE Centre and are usually the busiest part of the day with the summer afternoons frequently reaching temperatures of over 30°C. These early mornings were perfect for gazing at the splendid Virginia sunrise; they also provided a great chance to catch a glimpse of sleepy wildlife which might be a little more cautious later in the day.



*This was the view we were treated to every morning from our front door.*

My favourites were of course the bald eagles and monarch butterflies that North America is famous for, but lesser known beauties were just as sweet a sight, such as the northern cardinals, the barred owls and the Appalachian tiger swallowtail butterflies.



*A vital part of the monarch butterfly's lifecycle involves the plant milkweed, which is a favourite of cows. Under the guidance of the groundskeeper Mike, we were able to pluck these plants from the cow fields and allow the caterpillars to continue to grow in the safety of our porch. Not your average bouquet but with a much more beautiful result!*

Apart from the early morning start, it's almost impossible to describe a "normal" day at the MARE Centre, because the programme has been designed to give the interns as wide a variety of experiences as possible. At times that involved shadowing various professionals, at other times we were preparing the centre for (or going to) events; often we spent our time ensuring that the various aspects of running the large farm were seen to, but indeed no two days were really the same. Without a doubt my favourite aspect of the internship was being involved in the five research projects that were being carried out by the team while we were there.

The first was trialling the novel use of the non-steroidal anti-inflammatory drug acetaminophen, a painkiller commonly taken by humans, but currently not clinically approved for use on horses. This was carried out with the goal of providing a safer alternative to phenylbutazone which is most commonly used on horses presently and has multiple side effects such as increased susceptibility to gastric ulcers, internal haemorrhages, lowered white blood cell counts and liver damage. The study was led by veterinarians Dr. Harold McKenzie and Dr. Melissa Mercer, as well as Dr. Bridgett McIntosh from the MARE Centre.

Eight thoroughbred geldings from the MARE Centre were used for the two week period which involved bi-daily oral doses of the drug which was calculated according to the weight of the horse. Each horse also had blood samples taken and a gastroscopy conducted prior to dosing, which was then compared to blood samples, another gastroscopy and also a liver biopsy taken at the end of the two week period to assess the effects of long term dosing on the horses' physiology, specifically gastric ulceration and liver function.



*Endoscopying one of the TBs for gastric ulceration; Dr. McKenzie (left), Abbie (intern, x1 from left), Dr. Mercer (x2 from left) and Taylor (intern, far right).*

Throughout the duration of this study we were able to shadow the veterinarians conducting the tests, to help to prepare and administer dosages and get a real feel for everything that is involved in conducting such ground-breaking research. It was also a great opportunity to ask the vets questions about the use of pain killers on horses and both vets were happy to answer any other questions that we had.

The second study was working towards the development of an improved Body Condition Index (BCI) equation for horses. BCI evaluations could eventually provide much more effective assessments of equine adiposity than subjective Body Condition Scoring (BCS), however at this stage in the development of the BCI equation, equine conformations which are long and tall, as regularly seen in sports horses, are often miscalculated as overweight. To improve such miscalculations a range of information from numerous horses is needed to facilitate comparisons on how certain factors interrelate, such as morphometric measurements (height, body length, barrel circumference *et cetera*), BCS, weight, nutrition, workload, age and so forth. To this end, Zoe and I were part of a small team which travelled to one of the H.I.T.S. hunter/jumper shows at Culpeper in July to collect such information and add it to the limited existing database of information, along with that collected by a similar team sent by the MARE Centre to the Upperville Colt & Horse Show in June.



*MSc student Katie DeLano (far left) determines body length as interns Kate (x1 from left) and Zoe (x2 from left) assist. Photo taken by Bridgett McIntosh.*

The third study was the research component required by PhD student Aubrey Jaqueth. It was aimed at classifying which turfgrass cultivars were best suited to withstand foot traffic, which were preferentially grazed and what the calorie composition was for each, (considering the high levels of obesity in the equine industry and decreasing acres of land available for grazing). The MARE Centre was one of two sites involved in providing horses and pasture for Aubrey's study. The setup of the study was a pasture divided first into small plots for individual horses, and then further separated into uniform areas of various grass

types. Grass samples were analysed to determine the rate and quality of growth, after which the horses were released into the plots and allowed to graze for 24 hours. Grass samples were then taken again and compared to the previous data to determine the dry weight difference indicative of how much each horse had chosen to eat, and how well each type of grass had withstood foot traffic. Again we were very much involved in the project preparation and data collection.



*Turfgrass plots divided into different cultivars.*

The fourth study was a long-term study which has been running at the MARE Centre for the past two years and is headed up by Programme Coordinator Shayan Ghajar. It is a comparison between two adjacent pastures, one of which receives minimal environmental management, while the other is more ideally managed; labelled the Best Management Practices (BMP) lot. Features of the BMP include a stoned heavy usage area, manure picking and disposal bins designed specifically to aid composting, and the division of the pasture into rotational grazing paddocks. The focus of the study is to evaluate the differences observed between the two paddocks in grass growth, weed prevalence and damage as a result of overgrazing and hoof traffic, alongside the effect on the health of the horses e.g. parasite burdens, incidence of environment-linked pastern dermatitis, *et cetera*.

The fifth and final study which we had the opportunity to work on was the project of another PhD student, Katie Kaufman, who was investigating blood sugar levels in horses. This study was in the planning stages in the late part of the summer and experimental data collection had not begun before we left, however we were present for the initial blood samples and their preparation for testing, and it was incredibly beneficial to see first-hand the planning process of a PhD project, especially of someone who we came to know so well and could speak with openly.



*Separating plasma from red blood cells in preparation for testing. Photo (left) by B. McIntosh.*

Helping with these studies nurtured a genuine love for research inside me that I had only suspected before coming to the MARE Centre, I found it exciting and incredibly satisfying to be in an environment that was constantly changing as we worked on new projects, and yet these were highly organised and proceeded long enough to allow us to learn new skills, practice them and then to work with confidence.

As well as these studies, another aspect that provided some regularity to my weekly routine was my part-time internship with The Chronicle of the Horse. This had been organized by Dr. McIntosh after I had expressed an interest towards equine journalism during the interview process. I regularly spent one day per week at the Chronicle's offices in Middleburg and then multiple evenings during the following week continuing to work on the articles which I had begun while at the office. The office team were incredibly warm and helpful, and the experience of conducting interviews, researching information and of course having pieces published in the magazine has been a fantastic experience and will definitely aid my career prospects.





### Hydrating For Peak Performance

*Getting your horse to drink when you're far from home can be difficult, and it's a problem horse owners at all levels face. From experts in the grassroots, we collected tips and tricks to convince Dobbin to take the plunge.*

BY MICHELLE WARD

**T**here's a reason the old saying, "You can lead a horse to water, but you can't make him drink," endures. Constant training with, sometimes horses just choose not to drink, especially when they're under stress due to travel and competition and faced with unfamiliar water.

But the importance of a well-hydrated horse is undeniable. "Horses that are hydrated can perform to the peak of their ability, whereas when they're dehydrated, they can't," said Mike Tomlinson, DVM, who has been a veterinarian since 1992. "Most Equine Practitioners and even the chief dropouts for the U.S. endurance team."

Part of this is related to managing effective sweat function, but also because dehydration

balance, according to Christiana Chen, DVM, who runs the Canadian equine health consultation service with her husband, Andre Butler, at his Andre Butler Equine Clinic, Ltd. in London, England.

In the worst-case scenario, dehydration can cause laminitis, colic, and even death. Tomlinson pointed to a number of subtle signs of dehydration as well. "You don't want to look at the horse very well where it's dry," he said. "The horse may not be looking, but they aren't jumping as high, they aren't running as fast, and they aren't a half-past as well, because when they come back, their stomach hurts."

But convincing horses to drink more is the trick, isn't it? "Every horse has a different thing they like," said Tomlinson with a laugh. He pointed to variations such as temperature, taste and even type of the water bucket.

"Figure out what motivates your horse at home and place a bucket," he said.

When Chen is getting ready to ship a horse over land or sea, she uses this tip to help with proper hydration. "There are many methods commercially available online. We show the horse how and where to drink the water before they get on the truck," she said.

Christina Chen, DVM, who runs the Canadian equine health consultation service with her husband, Andre Butler, at his Andre Butler Equine Clinic, Ltd. in London, England.

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### How Do You Know When Enough is Enough?

**"A**s an owner, a horse should drink at least as much as they drink at home," said C. Mike Tomlinson, DVM. He immediately pointed to a number of subtle signs of dehydration as well. "You don't want to look at the horse very well where it's dry," he said. "The horse may not be looking, but they aren't jumping as high, they aren't running as fast, and they aren't a half-past as well, because when they come back, their stomach hurts."

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### Want more tips to get your horse to drink? Read on for reader submitted options.

► "We discuss salt into a spring and give it to them only. It will make them drink within five minutes. We also provide salt blocks in the pasture and stall."

BRIDGET MCINTOSH, Ph.D., Equine Nutrition, New York

► "My horse wouldn't drink much when traveling, and we tried different methods for years. She is super picky, but she absolutely loves home. I put a few handfuls of the apple flavor in her water, and she drank enough of it."

COURTNEY WALKER, Indiana

► "My boy has a tendency to stop drinking when the weather gets very hot or very windy, and he's confused several times as a result. I started putting a splash of apple juice in a small bucket and filling it with water, then giving it to him after every ride as a treat. I always use the same bucket and that color bucket is never used for anything else. Now, he starts to lick his lips whenever he sees the bucket, and I'll stop drinking. I know he'll always drink the apple juice water from that bucket."

KATHARINE B. BENDISCHALL, Los Angeles

► "My different water containers, water buckets through give off a taste that horses don't like."

SHARON LAGAR, Ontario, CA

► "When it's really hot and humid I add apple juice to my water, but in winter I've made it with water. It's basically a few apple cubes added to the water. The horse usually likes it, and they seem to love it."

ANGELA FREED, New York

► "Make sure the pasture has water, then give it to him after every ride as a treat. I always use the same bucket and that color bucket is never used for anything else. Now, he starts to lick his lips whenever he sees the bucket, and I'll stop drinking. I know he'll always drink the apple juice water from that bucket."



46 The Chronicle of the Horse

A three-page article of mine published in The Chronicle of the Horse. The piece focuses on the importance of keeping your horse hydrated and tips to make them drink, including interviews with vets and top tips from Chronicle readers. I was also able to borrow a high quality camera from the office and take stock images; the bottom right photo is mine!

On the same site in Middleburg as The Chronicle of the Horse office was the National Sporting Library and Museum (NSLM), one of our many one-time excursions, and also the location for the *2nd Annual Spotlight on Stewardship: Equine Land Management Symposium* hosted by the MARE Centre on the 29th July.

This was the second year that the MARE Centre and National Sporting Library & Museum has been able to host this fantastic event, the aim of which was to help educate participants on ways to improve their management of equine properties to enhance the health of their horses and land.

The symposium had multiple expert seminars on pasture management, environmental stewardship, and the toxicology of pasture plants for horses; followed by a chance to view the library's collection and a display of some rare books not usually open to public viewing.

After making the short journey to the MARE Centre in the haywagon and lunch on-site, the group enjoyed workshops on plant identification, heavy use area design and construction, manure management, fencing, grazing management, and soil health. The evening wrapped up with a wine tasting session at Boxwood Winery and then a concert on the lawn at the NSLM Open Late. Not only was it a fantastic opportunity to hear seminars and experience event planning and preparation, but it was also a great chance to speak with individuals from a variety of different backgrounds and levels of expertise; to share knowledge and make links with individuals from diverse aspects of the industry.



*Shayan Ghajar conducting a seminar on rotational grazing. Photo taken by Zoe.*

The NSLM also boasts a fantastic collection of equine and hunt-related art; providing another afternoon of exploring and a chance to soak in the rich culture of the "Nation's Horse and Hunt Capital," (Town of Middleburg, 2016).



*Foxhounds and a Terrier in a Stable Interior, 1878*  
John Emms



*Still Water, 2011*  
Nic Fiddian-Green



*Gone to Ground: A Grey Hunter with Foxhounds and a Terrier, 1887*  
John Emms



*Shrimp with Ponies in the Ringland Hills Near Norwich, 1911*  
Sir Alfred James Munnings

In the past the MARE Centre had a substantial breeding programme and was known far around for its yearling sales. Indeed, one of the stable barns is still called the Sales Barn by the team despite no sales having been held there for around seven years. Despite this change in pace, the centre does still breed between two and four mares per year to give its students an in-depth view of the entire process.

There were two high calibre mares with foals on the ground when Zoe and I arrived in late June (those interns who had arrived earlier in May had the opportunity to see the late maternity care and the foaling), but we were able to see the day to day care of mare and foal in practice which, for me, was an entirely new experience. We also got to watch as the staff (often the MSc student Katie DeLano, who had a particular finesse with feisty foals), gave foal handling workshops. Later we were able to see the next season's four mares being prepared and bred, including the ultrasounds, uterine lavages, artificial inseminations and check-ups, as well as helping to organise and disseminate the stallion breeding contracts.

In August we travelled to Zaragoza Acres in Jeffersonton, VA, to the Oldenburg Mare and Foal Inspection after much preparation in the previous week. It was a great opportunity to see more of the high calibre sport horse industry, including how much time, effort and investment it takes to produce a high quality sport horse.

*'Balencia VT' (Baladin d'Oc x Hearsay) and foal  
'Augustus VT' (Arrian x Balencia VT) trotting loose  
for the inspection.*

*Photo by Hannah and Antonio Salazar*



*'Balencia VT' and 'Augustus VT' with Katie DeLano (far left), Katie Kaufman (x1 from left), Zoe (x2 from left) and myself. Photo by B. McIntosh.*

On the 19<sup>th</sup> of July we travelled to Washington DC to visit a number of exciting groups and individuals from the headquarters of the American Feed Industry Association, Animal Agriculture Alliance, American Horse Council, and the office of the Virginian Senator Mark Warner. This day was jam-packed with fantastic chances to talk about legislation, welfare issues and career progression, it was also a great excuse to visit the beautiful Capital and enjoy the rich history there!



*Group photo outside the senate building: 8 of the 9 summer interns, Katie K, Katie D and Bridgett McIntosh (centre).*

It wasn't long after this photo was taken that the American interns began to return to their home-states as they had begun their three months much earlier than Zoe and I had arrived in late June. While it was extremely sad to say goodbye to our friends after what felt like such a short time, it began an entirely new chapter for Zoe and I, as not only did we have fewer people between which to divide tasks on the farm, but we were also able to choose trips and experiences that were more specific to our interests and have more one-on-one learning experiences with the MARE Centre staff. The remaining month and a half was full of fresh prospects, one such prospect being the chance to assist the vet and osteopath, both of which I found immensely interesting and gave me a lot to consider as I compared these new experiences to my previous career aspirations.

I mentioned previously in this report that my favourite aspect of the internship was the proximity to and involvement in such ground-breaking research. However, potentially my favourite single experience was during one of these sessions of shadowing the vet. It was after a colic case had turned out very unfortunately and the horse had indeed passed away, after which the vet and owner agreed to do a field necropsy for us to watch. It was something that I had never had the chance to see and I found myself filled with wonder at the complexity and intricacy with which horses are built, the delicate balance in which their health is held, and indeed the sheer magnitude of what is contained inside their thoracic cavities, which they somehow are

able to master when physically performing as they do. It was one of the many times over the summer that I found myself keenly aware of how unique an experience this was.

Shadowing and assisting the osteopath was a particularly interesting experience for me. It was a career path I had considered in the past but decided against due to a lack of confidence and, to some extent, a bad experience with a similar professional. Spending time observing and speaking with these professionals has definitely helped me to see the plausability of pursuing such a career. It would be fair to say that I had developed some misconceptions about the job and my own potential that this further experience amended.



*Assisting the osteopath, I even got the chance to try a couple of adjustments myself!*

In contrast, the 4-H show that we attended in Lexington, VA, was exactly what we had imagined of an American/western-style show! Sparkling jackets, fantastic western tack, loping quarter horses; it felt like something straight out of a movie and was fantastic to see first-hand! A group of us travelled down from the MARE Centre for the weekend to help with various aspects of the show, Zoe and I were helping with the 4-H Clover Bud group which is for children aged five to eight. 4-H is America's largest youth development organisation, a non-profit programme delivered by Cooperative Extension across the nation, a community together providing hands-on learning experiences for young people in areas like health, science, agriculture and citizenship (4-H, 2016). Between in-school and after-school programmes, community clubs and camps it currently reaches around six million children across the U.S. (4-H, 2016).

It is the belief and understanding of the 4-H community that children's earliest life experiences can have a huge impact on future development (4-H Youth Development, 2015). The Clover Buds, like the older 4-H youth programme, focuses on helping children to *"learn life skills to become competent, caring and contributing citizens... through promoting children's healthy development - mentally, physically, socially and emotionally"* (4-H Youth Development, 2015).

This was a fantastic two days combining two of my deepest passions; horses and young people. We had a great location for the group in an atrium above the main arena, so as well as doing lots of horse and pony-related arts and crafts, we spent a lot of time sitting with the kids and talking about what was going on in the classes below. It's truly hard to describe days like that as work, especially when staying in a lovely hotel and having plenty of time to see the show and have fun with the rest of the team in the evenings. It was definitely one of my favourite weekends of the summer.



*Working hard with the Clover Buds!*

In saying this, there were few aspects of the internship that actually felt like work. We were constantly learning and the programme had a very tangible feel of student-focus. The activities we did and the lessons we were taught were very much tailored to our career interests and individual gaps in learning. For example I personally had very little experience of wound treatments and drug/supplement application, despite learning healthcare theory in my degree. While we weren't able to treat the horses ourselves due to this year's visa restrictions, we were sought out to watch health treatments and were given very patient instruction about all the different aspects to consider; various scenarios that would affect the treatment, *et cetera*. Learning the theory and actually having the confidence to physically put this into practice are two very different things, so I feel that this has been massively beneficial to me in terms of preparing me for future hands-on roles with horses. Similarly this also applies to my understanding of the nutritional and reproductive management practices of the horses at the MARE Centre.

It was also a new experience for me to be involved with the management of the herd of young heifers on the farm. We were involved in ensuring that they had the right minerals available, that the fields were safe and properly enclosed, that all cows were present and healthy each day and with the rotation of their pastures every two-to-three weeks. We were also present when they were corralled and sprayed for parasites. It was great to get some hands-on experience with cattle and it's another example of new-found knowledge that I can confidently present to future employers.



*The young heifers being driven into the corral which we set up.*

It also goes without saying that we had a lot of great experiences in our free time too; afternoons spent in Dr. McIntosh's pool and evenings spent as a group around a fire or under the stars, trips to twilight polo and walks through the historic town of Middleburg, to name a few examples. We had a fantastic day at the breath-taking Shenandoah National Park; the views from Skyline drive are impossible to fully take in, never mind describe, and the intimate paths inside the forest of chestnut, oak, maple and birch trees make the nature-lover's heart sing. The wild paths of natural rock force walkers to slow down and enjoy the surprising dashes of colour and the peaceful bliss of being surrounded by so many happy growing things. It was a wonderful day and definitely something that we regretted not doing a lot more.



*Some snaps from our hike towards Compton peak.*



*One of the breath-taking views from Skyline Drive. Please excuse the mashing together of photos, I never quite got the hang of the panorama apps.*

We were able to do a lot of riding off site at a local event/livery yard in exchange for helping the yard owner, Nicolle Villers, with some chores. We also had the opportunity to groom for Nicolle at a local show when she competed one of her young Thoroughbreds. This was very kindly set up by the MSc student Katie Delano whose horse Ioupi was stabled at the yard and who often rode with us.



*Zoe and I riding Arya & Kylee (left) and then Kylee & Summer (right). The photo on the right was taken on the night we discovered that Thoroughbreds really can run faster than Haflingers!*

During the last week of our internship we went to a county fair, something that it seemed would be a shame not to do but that the Americans all seemed pretty relaxed about potentially missing. It was only on the journey there that one of them casually mentioned that the site of the fair was The Meadow Event Park, which was previously the home estate of the Chenery farm and indeed the birth place of the 1973 Triple Crown champion Secretariat! Secretariat is considered by many to have been the greatest racing Thoroughbred of all time and the estate and stud yard were donated to the Virginia Farm Bureau Federation in March 2015 by Penny Chenery to be listed on the Virginia Landmarks Register (Doswell, 2015). Virtually unchanged since the 1970s, the public is free to look around the yard and see where Secretariat was bred, housed and trained. There is even a plaque outside his stable door so that you are left without a doubt that you have truly stood where he stood. As a huge fan of Penny Chenery's determination and Secretariat's unrivalled skill and speed, it was a fantastic experience and one that I shall never forget.

Secretariat's last remaining (intact) son is housed at the MARE Centre. Innkeeper is a beautiful dark bay stallion who, despite his 28 years, positively gleams in the sunlight as he prances around the pasture each morning and evening at the sound of the feed cart. The manner with which he carries himself would almost convince you that he is well aware of his fame. Our house for the summer was no more than 400m away from his pasture.



*Secretariat's Barn*



*Innkeeper (Secretariat x Sue Babe)*

It's incredibly difficult to summarize three fantastic months into a few short paragraphs, and indeed this part of the report is proving far more challenging than I had imagined. It's been an experience that has stretched me both professionally and personally, and I've learned a lot under the guidance of the MARE Centre team and other professionals. I feel that the internship has definitely encouraged me to trust in my abilities and have the confidence to take on responsibilities; it has taught me a lot about coming across in a professional way and about various routes of progression and what my future ambitions might be. I definitely learned a lot about which working environments I enjoy and am most suited to. It has given me a lot more knowledge with regards to the management of events, educational outreach and horse healthcare, but the area which, undoubtedly, I have learned most is that of equine research.

Working with professionals such as researchers, vets and the osteopath has definitely prompted me to consider further study. I loved being involved in the studies I've written about above, and spending time with those professionals and finding that at certain points they have had similar fears and doubts to me was incredibly encouraging. The MARE Centre team and other interns also became very fast friends and were a fantastic group to learn alongside, many of whom are people that both Zoe and I shall undoubtedly keep in contact with.

It was an incredible experience to be immersed in a new culture for such a long period of time and to see what was once new become very familiar. Sharing the differences and similarities between the Americans and ourselves, (frequently referred to as 'the Brits', it's now strange having returned home to not hear that called out regularly), was a constant source of laughter but also an educational experience. We loved hearing local histories as we travelled through various areas and of course the exciting political debates were an excuse to learn more about America as a whole, on top of the wealth of things that we learned about the American equine industry.

This was a rare and fantastic experience; one that will undoubtedly improve my ability to compete with other candidates for jobs and further study. I'm so thankful that I had this opportunity, and to do so alongside such wonderful people, in such a beautiful part of the world. It was truly an amazing summer and one that I will never forget.



Doswell. 2015. Secretariat's birthplace at The Meadow named to Virginia Landmarks Register. [Online]. The Meadow Event Park. Available from: <http://www.meadoweventpark.com/secretariats-birthplace-at-the-meadow-named-to-virginia-landmarks-register/> [Accessed 30/10/16].

Town of Middleburg. 2016. About Middleburg. [Online]. Town of Middleburg. Available from: [http://www.middleburgva.gov/About\\_Middleburg.php](http://www.middleburgva.gov/About_Middleburg.php) [Accessed 27/10/16].

4-H. 2016. 4-H is a Community. [Online]. 4-H. Available from: <http://4-h.org/about/what-is-4-h/> [Accessed 30/10/16].

4-H Youth Development. 2015. Clover Buds. [Online]. College of Agriculture, Food and Environment. Available from: <https://4-h.ca.uky.edu/content/clover-buds> [Accessed 30/10/16].