

British Equestrian Federation / Virginia Tech Internship 2012

When asked by numerous family and friends to sum up my Internship to the Middleburg Agricultural Research and Extension Center (MAREC) between early May and the end of August, I always reply with the same phrase – “Life changing!” since the experience in which I was offered has been just that.

I submitted my report, titled “The Development of the Horse Sector in the United Kingdom” to the British Equestrian Federation and was selected for interviews at Stoneleigh Park, Warwickshire. After my interview with Dr Rebecca K Splan associate professor at Middleburg, Professor Graham Suggett and Karen Spinner, I was lucky enough to be chosen to spend four months enriching my education in one of the most beautiful and world renowned areas of America. The internship provided me with a variety of skills and experiences to utilise within my career and life thus allowing me to apply these into hopefully improving not only the UK horse sector but the industry worldwide.



The MAREC

There were many educational events held on site at the MAREC including the Hunt County Stable Tour, an event in which local Barns open their doors twice a year and hold tours and demonstrations with the aim of educating the general public about their business, how they help the industry and keep the area sustained. This was an opportunity to meet the local people of Middleburg and explain about my internship with the British Equestrian Federation and Virginia Tech’s programme at the MAREC. The Country Stable Tour is an important tool in attracting farm based tourism and is similar to the England Rural Development Programme (ERDP) which has been involved in supporting a wide range of tourism activities and focusing on bringing tourists to a specific area – the equine industry in the UK could therefore benefit from a similar scheme.

The significant economic force of the equine industry is estimated to have an output of £3.4 billion each year, carrying employment of 250,000 people and at least 600,000 horses, thus making a huge contribution to the economy and social fabric of many communities (British Horse Industry Confederation, 2005). The expansion of many towns and cities has also increased the number of equine centres and industries that have been centred upon the leisure economy, having a tremendous effect on the horse sectors development. Again these stable tour events are vital in ensuring this continued growth and popularity.

The Technical Large Animal Emergency Rescue was another large event held during June. This three day training event was held with the aim of educating emergency service



Technical Large Animal Emergency Rescue – practical activity.

servicemen and the public during emergency animal rescue situations, dealing with themes including: animal behaviour, basic life support measures, roles of emergency servicemen and practical activities such as trailer overturn stabilisation exercises and a Barn fire evacuation operational exercise. It was great fun to get involved within the practical activities, providing thought on how to act in potentially life threatening situations.

Although the MAREC is an education and research centre, another aspect of learning for students is the breeding of high quality sport horses. The MAREC currently has two resident stallions; Innkeeper (Secretariat x Sue Babe x Mr Prospector) and Royal Appearance (Riverman x Eyreen II x Lord Calando) which are both used for research, student education and breeding. All foals produced are available for purchase and many have distinguished careers both under saddle and inhand with professional and amateur riders. Students have a key role within the preparation for sales; helping to prepare and show horses when clients visit. An exciting event at the MAREC was a visit from Diana Dodge – a prolific Hunter Breeder – which was a great experience as to learn what type of horses she is attracted to and what qualities she believes make good Hunter horses.

We also had a visit from The Chronicle of the Horse - a leading Equestrian magazine in North America; interviewing Dr Splan about MAREC faculty and how their dedication to equine research has helped educate both undergraduate and postgraduate students alike in preparation for a successful career. This recognition and promotion of animal and equine faculties at universities and colleges can gather interest from individuals who wish to pursue

a career within the industry and make a difference yet do not have a clear understanding of which direction to choose.

The current financial climate has meant many universities within the United Kingdom have had funding previously used towards research and education either limited or ceased – a 12.5% cut of £940 million has been cut from the budget for teaching, research and buildings for the 2012/2013 academic year (The Guardian, 2011). This is therefore forcing many Institutions to seek private donation in order to continue this research. The regular marketing of institutions such as the MAREC in publications, could secure further funding and opportunities, possibly leading to new discoveries within science, management or performance.

The MAREC is equipped with a wide range of facilities used during research and student teaching. Within the first week of my arrival in Middleburg we took part in a demonstration of the equine high speed treadmill, the different designs available and its advantages and disadvantage for use during research. Dr Splan and Dr Porr held lectures for myself and the other interns on a variety of topics, being a useful addition to the practical experiences we had each day. Dr Splan's current areas of interest include equine breeding and genetics, and equine conformation and biomechanics. The bloodline and genetics lectures we had with her gave us an insight into current popular stallions in use throughout the world, trends in breeding and how strategic breeding programmes are designed to improve the quality of sport horse breeding.



Forage analysis – drilling a core sample

Practical activities I undertook with the Professors at the MAREC focused upon a variety of areas. Dr Porr, whose areas of interest include equine nutrition and equine exercise physiology, ran a lecture and practical hay sampling activity which involved boring – or drilling – into bales of farm produced hay to collect a core sample which could be analysed for nutritional content. The samples we collected were placed into specific containers which were sent off for analysis including testing moisture content, dry matter, crude protein, adjusted crude protein, acid detergent fibre, neutral detergent fibre, starch, water soluble carbohydrates, simple sugars, crude fat, ash and mineral content to assess if the hay quality fed to the horses was good or if an extra supplement would need to be fed.

We also took part in static and dynamic conformation practical activities with Dr Splan. Initially, we discussed the ideal conformation for different disciplines, and then assessed different horses on their positive and negative areas of static conformation. This was followed by the assessment of a number of different horse's dynamic conformation in hand and how,



Competing Laudable VT at Dressage at Lexington. Picture courtesy of www.picsofyou.com

when breeding, their negatives can be improved upon. There is a need to recognise and support ideas in creating and maintaining participation from riders. At Virginia Tech there is a riding programme whereby students who are interested in riding and competing are able to improve equestrian skills, compete against classmates and meet people in a fun and friendly environment. These equestrian programmes can also be found within the United Kingdom at many colleges and universities. Riding programmes can act as a promoter of the sport within the local community, used

as part of general certificates in education sport qualification (Edexcel, 2011) and should be promoted to individuals to act as a route into sport. There is also a suggestion that they can be a focus for the equestrian community to the welfare of the horse and career development.

During July, in preparation for Lexington Dressage Breed Show, the foals had progressed with their handling and I was given the task of working with Dr Splan in training the foals for show handling. This involved working in the evenings with Dr Splan and the other interns, developing our teamwork and individual show presentation to ensure we could show the mares and foals to the best of their ability. Although initially it felt like hard work, improvement was seen following each session and we all had improved confidence and ring presence. There was also work to be done with me preparing the foals for Lexington by clipping and trimming each to ensure they caught the judge's eye, looked professional and attracted attention from the public to show the fantastic breeding programme in place with Virginia Tech.

Research topics currently on going include evaluating the effects of Polyphenol Resveratrol on metabolic function and reproductive efficiency in the obese broodmare. The goal of this study is to see if oral supplementation of resveratrol helps mitigate metabolic and reproductive problems commonly observed in overweight mares. Unfortunately data

collection was still ongoing, with data analysis due to commence in the autumn, when the time came for me to leave. During my four months, daily ultrasounds of the mares took place with myself and the other interns responsible for horse measurements, body condition scoring, weighing horses and assisting with uterine biopsies. I also partook in Frequently Sampled Intravenous Glucose Tolerance Tests (FSIGT) upon all horses used in the study on selected dates.

Another research task I was involved in was testing all the horses' faeces on the farm for parasites. This involved collecting un-contaminated faecal samples from each horse and processing them in the laboratory to check the parasitic count. This count revealed which of the horses on the farm were low, medium or high shedders and were then used to ensure a correct worming programme which is carried out multiple times throughout the year. The parasitic research task is extremely important for parasite control in herd healthcare and also allowed me to understand how important a research procedure can be - even within routine management.

In order to become successful within the equine breeding industry, it is important to have practical experience in dealing with horses – both young and mature. My four months at the MAREC gave me invaluable experience in managing a large scale breeding yard; with an emphasis on performing all tasks to a high standard, ensuring that they are completed with efficiency and care. Interns took responsibility for feeding, daily healthcare checks, liaising with the farrier and ensuring daily breeding and research work was completed. We were given the opportunity to assist with the vaccinations of all horses, allowing technique to be developed. Each week one intern was selected to act as assistant barn manager to help develop managerial skills and ensure efficient communication between Dr Splan and all parties upon the farm.

The Sport Horse breeding programme at Virginia Tech is well known for its quality. Although the program is still fairly recent, horses bred by Virginia Tech have received numerous championship honours and Horse of the Year titles nationwide. The evidence that over production of poor quality equines becoming a significant welfare problem within the UK has been seen within welfare charities, with over 11,000 horse currently in their care (British Horse Society, 2011). Foals should only be bred as specifically stipulated by the relative governing breeding bodies. Breeding good quality horses and ponies with good temperaments and conformation will benefit not only professional riders but also recreational

riders with the opportunity open to them. Virginia Tech is proud of the quality of stock produced and regularly provides updates on previous horse's success within their career. This allows prospective clients to observe what they themselves could aspire to do with their chosen horse and many clients return, pleased with the quality they received last time. As part of the internship I was involved with a whole range of tasks involved with reproductive management and foaling. When I arrived, the Centre already had eight of the 2012 foals born and we were given an initial demonstration of how to correctly handle the foals, progressing as the summer went on how to correctly halter train and lead. It was interesting to get a different perspective of young horse training in America with comparison to my experiences in the United Kingdom.



Desensitising foals to handling

I was able to develop my young horse handling skills from foal handling and leading to preparing for both the yearling and two year olds sales. This involved desensitising the horses to general handling experiences such as grooming, having equipment put onto them for the first time and being led around the farm.

Interns took a key role in preparing for artificial insemination (AI) collection. We were all taught how to prepare to collect our resident stallions, setting the artificial vagina (AV) and other equipment. During my time at the MAREC I was lucky enough to be able to assist when collecting Royal Appearance for client semen by both handling the stallion and holding the AV during the collection process. This was a great opportunity to further build my confidence and practical experience. Another interesting experience was to watch the live cover of Innkeeper to a client's mare with a lecture on live cover and its uses particularly within thoroughbred breeding.

After semen collections the semen was taken to the laboratory to be processed, whereby I was able to learn and practice evaluation techniques including the processes of cooling and freezing such semen, the use the haemocytometer, centrifuge and liquid nitrogen which is used when storing frozen semen for substantial periods of time.

As part of artificial insemination when using frozen semen I learned the semen structure, how to evaluate the quality of the semen and what abnormalities can occur.

An incredible experience I had was to observe transrectal ultrasound scanning of ovulatory

stages in the mare's reproductive cycle during research studies and pregnant mare ultrasounds. I was given the task of noting the information down correctly within breeding records for interpretation and required to learn the reproductive cycle of the mare with how this would appear on ultrasound scans including judging the type of fluid and folds present. When ultrasounding mares who had been inseminated, we were taught the importance of assessing the embryo, learning to look for symptoms of twinning and follow the embryos development over 65 days for detecting the initial heartbeat - itself being a phenomenal sight to see. With one mare I had the great opportunity to artificially inseminate with the chosen stallion's semen under the guidance of Dr Splan; and then to later on see the heartbeat was incredible and fascinating.

One of the highlights of my trip was the opportunity to become involved in the two foalings which were due to take place within the second week of my arrival. It was important to learn to identify impending signs of foaling and recording changes (both behaviour and physiological) that the mare may display. Milk calcium tests were used to detect calcium changes in the mare's colostrum and when the result became above a certain level foal watch was needed. The interns were split into pairs and we tackled different shifts making regular checks on the mares and noting any irregular behaviour.



The birth of Beretta VT

I was able to watch the birth of Beretta VT (Baladin d'Oc x EM Wowie, Weyden) and note differences exhibited such as suckling and standing. We also had a responsibility to check the mare's placenta once it had fully dropped, collect it and examine to check it was all present. IgG (Immunoglobulin G) tests were performed by all interns and we all had the responsibility to monitor health and behaviour of both the mare and newborn for the first few days following birth.

While undertaking my internship at the MARE Center, I was extremely lucky to be able to increase my learning outside of the classroom. Dr Splan arranged a number of trips across the summer to leading equestrian competitions, events and breeding establishments. Within the first few weeks of arriving at the MAREC as a group we visited Upperville Horse Show, having the distinction of being the oldest horse show in America and hosting high level Hunter and Jumper classes which attract hundreds of competitors and spectators. At this show our aim was to view the different types of horses and observe both positive and negative qualities that the horses possessed and displayed while competing. As Interns we also had the

opportunity to compete the 2012 foals in hand at regional Sport Horse Shows - our first show being Dressage at Lexington in July. We took two fillies – Laudable VT (Loerke x Maywest, Donnerhall) and Isabeau VT (Ideal x Flambeau, West Coast) whereby I was the handler of both foals in their classes. The competition was a great learning experience as while I already have experience from ridden competition I had no in hand or breed show experience. We also had success with Isabeau VT's Dam Flambeau placing Champion Mare 2012 and Laudable



Team success at Lexington! Picture courtesy of www.picsofyou.com

VT winning the ISR Oldenburg class. There was also a fantastic opportunity to watch high level Dressage throughout the weekend and watch the progression between the novice and Grand Prix level tests.

As outlined above there needs to be improvement in marketing the UK breeding industry to buyers. There is promotion of the thoroughbred abroad by the British Horseracing Authority united with the Thoroughbred Breeders' Association. Other organisations of

breeders – many with limited budgets – need to work together with governing bodies of particular breeds and disciplines to present horses and promote the success of the particular breed to relevant buyers. For example, the United States Dressage Federation's Lexington event holds classes promoting the breeding of potential Dressage horses. This has started within the UK with the British Equestrian Federation's Futurity Young Horse Evaluations whereby events are held around the country to promote British-bred horses. Regional centres could be established in order for stallions or young stock to be professionally presented to buyers on behalf of owners (British Horse Industry Confederation, 2005). There is suggestion that greater co operation between and within breeding sectors is needed including between competitive and recreational riders and breeding associations. While at Dressage at Lexington we were introduced to many successful breeders, judges and competitors enabling ourselves to build a professional network, and learn their opinions on how they believe they could take American breeding forward. Centralised sources of breeding information and advice must become available to all, and the employment of qualified and experienced staff to undertake marketing and publicity of British Breeding would improve the horse world's economy within the UK.

In late July we travelled to Hilltop Farm, MD which was hosting an American Hanoverian Society (AHS) Inspection and Futurity. The judges were Dr. Werner Schade, George Walker and Suzanne Quarles. The American Hanoverian Society hosts these inspections and futurities both as a breeding licensing event and an educational event for owners, breeders and spectators in conformation, gait and breeding of Sport horses. Three of the five presented stallions were licensed at the event: Doctor Wendell MF (Don Principe x Sandro Hit), Vive Victory (Viva Volaire x Akzent II), and Donnegan (Don Frederico x Walt Disney I), with Donnegan being named Champion of the licensing.

At this year's event there was also a new addition of the AHS Futurity in which Royal Reflection EMF (Royal Prince x Pablo) was winner of the yearling colts/geldings class. Balenciaga KIS (Bugatti x Rackamundo xx) was the top scoring two year old filly. Finally the two year old colts/geldings class was won by Lock O'Gold (Locksley x Grundstein).

The event also gave Hilltop Farm the opportunity to showcase their resident stallions which allowed us to see some of the high quality horses which are available to American breeders.

The increase in horse sports has enlarged the interest in breeding a suitable performance horse phenomenally. Research by Thorén Hellsten et al (2006) reviewed testing procedures used in different European countries breeding schemes, finding the same objectives: namely to breed out of horses due to their success in the competition field with procedures varying per country. In France attention is paid to traits such as temperament, gait, conformation and reproductive ability enabling successful production of performance horses with capable high performance ability (Dubois and Ricard, 2007). Breeding societies and organisations within the United Kingdom regularly hold grading and performance testing events, like the American Hanoverian Society, but use different systems to grade their horses. A process of standardisation across the industry would help owners, breeders and prospective buyers understand scores and results of horses tested. This breeding of higher quality horses and



Hill Top Farm Stallion Inspection. Picture courtesy of Annie Laib.

ponies would benefit not only the equine industry but the nation as a whole. The value of the horses and ponies bred would increase as would the value of market share between the breeder's thus boosting employment and economic benefits in both rural areas and trade (British Horse Industry Confederation, 2005).

In order to get an idea of the different type of Breeding Farms which are located around America we visited Iron Spring Farm PA, a leading Warmblood and Friesian Breeding Farm. Iron Spring's owner Mary Alice Malone has imported a number of stallions from Europe with the focus on both Dutch Warmblood's and Friesians primarily from the Netherlands. Our visit



Team VT!!

included a tour of the farm with Sales Manager Ashley Wolfe giving us information about the farms day to day running, the stallions which are based here including their general management routines and how their breeding season works.

There is an estimation of over 18,000 equestrian businesses in the United Kingdom, allied or dependant to the equestrian industry (British Horse Industry

Confederation, 2005). The majority of these businesses are small to medium sized employing up to 5 staff members. They range from breeding farms such as Iron Spring Farm and tack shops to photographers and product design. The economic performance of these businesses is important to the industries development by having a strong business sector in which regulations and business skills can be beneficial to consumers and manufacturers. The providence of networking strategies and a growing significance of businesses can improve equine activity in certain areas.

One of the final events we participated in was the VADA/Nova, Inc. Summer Breeding Show at Morven Park Equestrian Centre. This was another great opportunity to demonstrate the handling skills I learned under Dr Splan and showcase the filly Laudable VT and broodmare Maywest in a number of classes including Filly of 2012 class, Champion Mare 2012 and the Amateur handler class – where I placed second in a competitive class. Again this was another opportunity to meet and network with leading owners, riders and trainers.

In order for the industry to develop and move forward; skill levels, training opportunities and the environment in which people can build a career must be improved and cultivated. Enhancing training, skills and standards would help improve the industry's image and

performance and bring the industry together to attract and retain staff – therefore boosting business (British Horse Industry Confederation, 2005). At Iron Spring Farm, employees involved within young horse training have lessons with international trainers to ensure a high level of rider performance, which is then put back into the training of the horses produced. A major challenge is the retention of staff once attracted to the industry.

A career within the equine industry requires commitment not fitting the image and lifestyle of many young people. Career information is not often readily available and it difficult to maintain their drive and enthusiasm; essential to a successful equine career.

To combat this, progression and training opportunities within the workplace must be well structured to encourage participation and maintain their commitment and continued enthusiasm. The British Equestrian Federation MAREC Internship is a clear example of how with industry support, young people can have an opportunity to develop their skills, maintaining their commitment and enthusiasm to the industry. It is clearly defined that practical experience is needed within the horse industry with most disciplines having a clear defined structure that requires related qualifications (British Horse Industry Confederation, 2005). The qualifications needed should be clearly explained to young people, parents and other governing bodies to display what is available to prospective career minded individuals who wish to understand the opportunities available.



Visiting the Lincoln Memorial in Washington DC

There is a tendency nowadays for young people to take college-based learning courses to develop skills and knowledge rather than to train during employment. This has resulted in competition between training establishments and colleges and further education centres to provide training whereby there should be equal value placed between academic forms of education and a vocational aspect of learning. There are other industries which combine on-the-job training and learning in a further education centre and there should be greater alliances formed between equestrian establishments such as training yards and colleges to provide work experience and academic learning giving the learner a greater chance of employability. The MAREC offers, to American undergraduates at Virginia Tech, the opportunity to engage in a full semester of coursework combined with practical experience

for upper level employment in the equine industry, academic or veterinary or biological sciences.



Team day out to watch Upperville Showjumping
puissance!

It is worth noting that the United Kingdom is extremely successful in many areas of equestrian sport. Participation in the 2012 London Olympic and Paralympic Games has brought outstanding performance and been a substantial boost the equine industry. While there are reports that there is a figure of ‘elitism’ within equestrian sports it can be referred to as more of a perception than a reality (British Horse Industry Confederation, 2005). Although

elite activity will attract the media’s attention, it helps appeal to and encourage other riders to achieve higher outcomes. The successes that British riders have enjoyed has started to attract greater participation and therefore provide contribute to ambition and accomplishment.

Life at the MAREC was not just about the hard work and learning. We also had the opportunity on our days off and evenings to explore the area and have fun. Twilight Polo located at Great Meadow Polo Club, tubing down the Shenandoah River and trips to Washington DC were fantastic events, even the July 4th Celebrations provided a great opportunity to socialise with the other interns and Masters students.

The local community of Middleburg and Virginia hosts some superb equestrian events on weekends allowing all members of society to get involved and try something new or enjoy their favourite pastimes. Fox Chase Farm held regular show jumping events to watch and we all travelled to the USEF recognised Maryland Horse Trials observing leading amateurs and professionals competing in classes ranging from Novice to Intermediate.

The increase in the number of non-horsey, urban background individuals wishing to become involved in the industry was seen during my time in America, as is also on the rise in the United Kingdom. Their influence is capable of expanding the growing leisure economy significantly and as such the industry must investigate and develop any opportunities that many increase participation and build enthusiasm of these individuals. An inclusive approach should be taken which generates an influx of new riders, particularly as most people’s

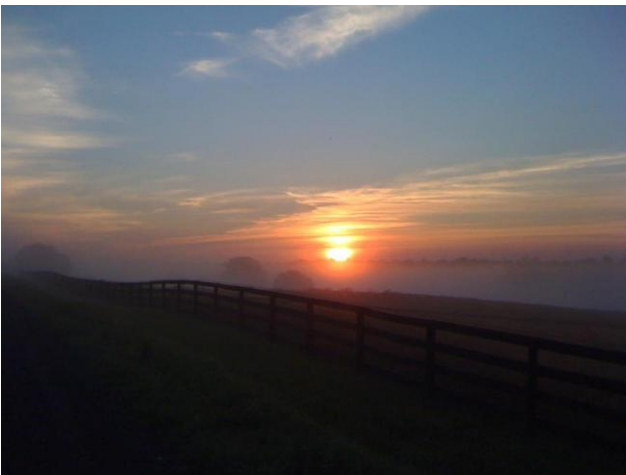
experience of equestrian businesses is, as mentioned above through a riding school (British Horse Industry Confederation, 2005).

According to the British Horse Industry Confederation (2005) in order for the UK to achieve sporting success, there are a number of factors which should be linked together. Including:-

- Defined, clear plans with targets to be achieved over a set period;
- Well organised and resourced government structure;
- Athlete development for riders and horses;
- Talent spotting programmes;
- Outstanding coaching structures; and
- Access to well bred and produced horses.

These strategies can already be seen in racing. However, the British Equestrian Federation has developed a new structure designed to improve athlete performance and development. This includes the World Class Development programme to identify, nurture and support developing riders.

Long term athlete support and development is already in place to help athletes achieve correct



One early morning during my dream summer!

training for growth and development throughout their career and to maximise their potential. The support of riders is also beneficial to the production and development of younger horses, e.g. establishing a protocol to train quality horses by well trained riders, course training and long term development schemes. The development of younger horses can be supported by encouraging better quality breeding of performance horses which can improve the United Kingdom's chances of

success during competition.

In order to achieve all of the stipulated actions discussed above. The horse industry needs to ensure that commitment and co-ordination between the many different sectors of the industry are observed. The increasing employment of individuals within the industry can help to

increase revenue and contribute to the United Kingdom's wider economy thus having significant effect on the industry and continue to play such a prominent role within.

In conclusion, I am extremely grateful to the British Equestrian Federation for this once in a lifetime opportunity. Thanks must also go to the MAREC for the knowledge and skills gained, an experience that will remain and last a lifetime.

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