

Easton
+ Otley
College



The Farmers Club Educator Awards 2018

Thinking 'outside the
box' – opportunities for
agricultural students
outside the UK

HELEN REEVE

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Introduction

My reasons for applying for the Farmers Club Educator award are rooted to my lifelong love of cattle of which I have been fortunate to work with for many years alongside my employment at Easton and Otley College. I was instantly drawn to the World Jersey Cattle Bureau (WJCB) conference which I researched online and thought that attending the biennial conference would be a great way to learn about a wide range of topics connected to farming enterprises. My main interests lie in the genetic progression, nutrition, production systems and the economics of dairy farming. As such, the opportunity to visit, participate and learn at the 2018 conference was an exciting, thought-provoking and interesting experience from start to finish.

The chance to visit leading Jersey cattle breeders and to witness their enterprises was a revelation. Seeing first hand, how American breeders are choosing genetics and technology innovations to develop their herds would gave me a great insight into advances that could be made back home in the UK. Understanding the challenges that American dairy farmers face and comparing with the enterprises back home will provided me with lots of food for thought. Topics such as succession, diversification and getting the best out of people are also key areas for investigation.

Jersey cattle are growing in popularity year-on-year due to their milk quality and efficiency so it is fascinating to discover how US Jersey breeders and owners are adding value to their cattle and milk through marketing, social media and extending their dairy product ranges. Meeting fellow young breeders to share experiences, forge links and work together to promote the Queen of the dairy breeds is another aspect that appealed.

Seeing tremendous herds and meeting inspirational breeders and stock-people is nothing short of inspiring. I like to discover new systems for work as well as having a keen interest in genetics so being able to make contacts and learn new ideas would greatly help my own progression in the dairy industry.

The World Jersey Cattle Bureau conference is primarily for Jersey cattle breeders, producers and enthusiasts to come together and celebrate the Jersey breed. The three-week conference tour visits a vast amount of herds and enterprises starting in Oregon and finishing in Chicago, giving attendees the chance to see first-hand, the genetics, welfare systems and production techniques in operation as well as meeting the people who care for some of America's finest Jersey cattle. Alongside this, an eight-day conference gives further insight into the Jersey breed in America's dairy land.

This promises to be an once-in-a-lifetime study tour to investigate many subjects that I could bring back and deliver learning to my students.

Project proposal

My role within the apprenticeship department at Easton and Otley College is varied and challenging.

In a single academic year, I will work with over 50 agricultural apprentices from a variety of backgrounds and interests spanning both the livestock and arable sector. Many have never travelled out of their home counties or the Eastern region or have any concept of the idea that there is life beyond the farm gate. That being said, there are a number of apprentices who want to challenge themselves to think “outside of the box” and to investigate the prospect of dairy farming or in fact, to travel abroad to widen their agricultural knowledge.

Many apprentices who are not familiar with practises in the dairy sector have little or no perception of the opportunities for employment or the advances made in relation to breeding, genetics, welfare, nutrition and adding value to dairy products.

Despite only being in the early stages of my teaching career, building resources for classroom activities is an important part of my role. What better way to do that than to bring a part of the US dairy industry to the classroom with first-hand knowledge of my findings? Attending the 21st International Conference of the World Jersey Cattle Bureau provides the opportunity to visit a number of dairy enterprises, meet a variety of people connected to the farming community, discover more about the US dairy industry and find out about opportunities for young people within farming.

Project timings and plan

The timings of the Educator Awards interviews and the 2018 WJCB Conference enabled me to gain a place on both the pre and post conference tours.

The outline below details the dates and plans of the conference itinerary:

18/6/18 – arrived in Portland, Oregon. Travelled independently from Norfolk via Heathrow to Portland International Airport – the very start of my trip and the first time that I had travelled a long haul flight on my own.

19/6/18 – Portland – a day of getting to know the other international visitors on the trip as well as taking in the scenery of Oregon such as the Columbia River Gorge and Multnomah Falls.

20/6/18 – Portland to Grand Ronde – farm visits to Lady-Lane Farm and Forest Glen Jerseys. Recreational visit to the Evergreen Aviation and Space Museum before heading to Spirit Mountain Lodge which is a hotel and entertainment centre built on land owned by the Confederated Tribes of Grand Ronde.

21/6/18 – Grand Ronde to Tillamook – a full day of herd visits to Sun Valley Jerseys, Legendairy Farms LLC and Sunset Canyon Jerseys.

22/6/18 – Tillamook to Portland – a full day of herd visits to Martins Dairy LLC, Wilsonview Dairy, Royalty Ridge Jerseys and the Tillamook Cheese Factory before returning to Portland International Airport.

23/6/18 – travel day from Portland via Denver to Columbus, Ohio.

24/6/18 – Columbus – morning visit to ST-Ohio Heifer Centre before heading to the Franklin Park Conservatory and Botanical Gardens for evening meal and meeting with John B. Cole (Research Genetic Leader of the Animal Genomics Improvement Laboratory, ARS, USDA). First WJCB Young Breeders Congress meeting on the subject of genomics and genetic improvement in the Jersey breed.

25/6/18 – Columbus – tour of the American Jersey Cattle Association and National All-Jersey Inc. offices before visiting Waterman Dairy Farm at Ohio State University for a linear type evaluation and appraisal demonstration. Afternoon and early evening visit to Select Sires Inc.

26/6/18 – Columbus to Canton – farm visits to Bar-Lee Jerseys and Albright Jerseys LLC. Evening meeting for Young Breeders on nutritional needs of modern Jersey cattle with James S. Huffard III and Sherry B. Smith

27/6/18 – Canton – all day session meetings of the 21st International Conference of the World Jersey Cattle Bureau. Evening presentation awards ceremony and Presidents meal at the Military Aviation Preservation Society (MAPS) to celebrate 150 years of the American Jersey Cattle Association

28/6/18 – Canton – visit to Amish and Mennonite Heritage Centre before visiting Amish Jersey herds Scenic View Jerseys and Clover Patch Dairy. Scenic Valley Farm hosted the 61st National Heifer Sale in the evening.

29/6/18 – Canton – morning session meetings of the WJCB Conference. Herd visits to Cold Run Jerseys LLC and Nature View Farms LLC. Evening dinner and benefit auction to raise money for the AJCC Research Foundation.

30/6/18 – Canton – morning meeting sessions with the Young Breeders Congress as well as Young Breeders luncheon

1/7/18 – travel day from Akron-Canton Regional Airport via Cleveland Hopkins International Airport to Chicago O’Hare International Airport. Recreational tour of Chicago by bus with Chicago pizza ‘experience’ and visit to the John Hancock Centre in the evening.

2/7/18 – Chicago to Fort Atkinson and Janesville – morning sightseeing tour of Chicago by boat before heading off to visit Hoard’s Dairyman Farm (farm owned by a magazine publication).

3/7/18 – Janesville to Madison – visits to Barlass Jerseys LLC, Kutz Dairy LLC as well as trip to National Dairy Shrine Museum.

4/7/18 – Madison – public holiday and Independence Parade in DeForest/Windsor area to celebrate Declaration of Independence. Afternoon herd visits to Kessenich Farm LLC and Endres Jazzy Jerseys.

5/7/18 – Madison – field day and tour of the Dairy Forage Research Station by the US Dairy Forage Research Centre and University of Wisconsin-Madison. Evening tour of Madison City.

6/7/18 – Wisconsin to Illinois – mixed programme of activities including visits to Truttman Dairy LLC, Bohnert Jerseys, the John Deere house and shop as well as visiting Culvers – a fast food chain that supports regional farmers.

7/7/18 – East Peoria, Illinois to Chicago – extended visit to Kilgus Farmstead and Midewin National Tallgrass Prairie Reserve. Evening spent with fellow conference attendees

Project Findings

- US dairy industry
- Jersey breed influence
- Conference tour findings

The US dairy industry today

Within the USA, there are currently an estimated 9 million dairy cattle who contribute to produce milk valued at \$38.1 billion per annum.

Dairy farmers face a number of challenges such as rising production costs, lower retail prices, land availability, staff training and retention, consumer perception and these issues are the same across the world.

There are six breeds of dairy cattle in the US – Holstein, Jersey, Ayrshire, Guernsey, Brown Swiss and Milking Shorthorn. The Holstein breed makes up for 90% of all dairy cattle in America. Jersey cattle are quickly building in numbers in the US. In 2018, registrations of Jersey calves totalled numbers in excess of 120,622 - a figure which has risen year on year since 2015.

The American Jersey Cattle Association lactation average in 2017/2018 was recorded as totalling 9,973kgs of milk with constituents of protein 337kg and butterfat of 447kg in a 305 day lactation.

Jersey Breed influence

Originating from its humble roots in the Channel Islands, the Jersey is becoming increasingly popular with dairy producers the world over. The American Jersey Cattle Breeders Association are currently experiencing tremendous growth of the Jersey breed largely in part to the yield potential and milk components payment schemes in place.

With milk yields possible of just under 10,000kgs with favourable protein and butterfat content, it is fascinating to think that a small brown cow from a small Island has had such an impact on the global dairy scene. This is possible because of the Jersey cow's ability to be productive for a longer time than some other dairy breeds, are more tolerant to extremes of weather (including heat), less calving and fertility problems, aggressive grazers and able to convert energy greater than Holsteins making them more efficient eaters and milk producers.



Traditional Jersey cattle from Jersey Island

Conference Tour Findings

Week 1 – Pre-conference tour

As part of the three week trip, I was fortunate to also secure a place on the pre-conference tour which began in Portland, Oregon. Nestled between the Willamette and Columbia rivers, Portland is a large city with the feel of a small town that has both vibrant cultural and economic aspects and is home to just under 650, 000 people. Just a small coach trip of about an hour took the tour group out of the hustle and bustle of Portland into the stunning scenery of the surrounding areas where timber and woodland forms a large part of the landscape and occupation.

It became clear very early on in the trip that the people I met on my travels would inspire and educate me along the way. I was fortunate, in the very first week of my tour, to strike up friendships with like-minded internationals from New Zealand, Australia, America and the UK.

The first week was largely a huge learning curve. Not only did I have to get used to an eight hour time difference but also the intensity of farm visits was far greater than expected in the initial tour documentation. In the course of one week, visits were made to eight Jersey herds alongside visits to local places of interest as well as four hotel changes.

Each herd that was visited had a special interest to promote or to explain to the conference party which ensured that the tour provided something for everyone. The organisers – American Jersey Cattle Association (AJCA) – had really pulled out the stops to promote the Jersey breed in the most advantageous way possible. In hindsight, this was a tremendous platform to showcase and highlight some of the best Jersey dairy herds Oregon to an international audience and was evident that those hosting visits, were extremely honoured and proud to do so, quite rightly.

Week 1 Herd Visits

Lady-Lane Farm run by Garry J. Hansen and his newly-married wife, Lacey, care for 100 pedigree registered Jerseys. To add value to their milk, they decided to tap into the producer-distributor market by bottling their milk under the Lady-Lane name for All-Jersey/Queen of Quality® milk. During the visit, the process for homogenising and vat pasteurising was detailed as well as the distribution channel which covers over 50 retail stores in and around Portland.



The entrance of Lady Lane Jerseys

Garry and Lacey had a real passion for their cows and as they put it 'the golden milk' they produce. The move towards direct selling to customers came as a result of frustration of the payments from

larger processors and the requirement to increase infrastructure on the farm which is designed to hold 100 milking females. Garry explained that he loved his cows and couldn't imagine life without them – something that all attendees on the trip resonated with.

As another way to increase promotion of the Lady-Lane cattle, Lacey and a small team from the farm regularly attend state fairs and the National Jersey Show in Louisville where they have enjoyed considerable success over the years. We were treated to a display of their award-winning female breeding lines which proved to many that you can still have high-yielding commercial cattle that can also compete with cattle on the show circuit.



Display of milking cattle paraded at Lady Lane

The enthusiasm and dedication by the Hansen's was infectious – a young couple with a drive and determination to succeed – like many on the trip, I was instantly bowled over by them and their aims in their marketing campaign. Already the bar had been set very high for the remainder of the tour!

For many, including myself, there are herd prefixes that you get to know having worked in the dairy industry and *Forest Glen Jerseys* is a name synonymous with the Jersey breed. Established in 1946, the herd today is managed by Dan Bansen and his daughter Jamie. Currently there are 2,500 cows farmed in two herds, one of which is a certified organic farm and with over 50 employees in total across the farm enterprise.

Forest Glen genetics have been widely used world-wide for many years; semen from the bull, Forest Glen Avery Action, has been used extensively and really helped to shape the Forest Glen prefix into the bloodlines of many herds. Despite the notoriety of producing a number of sought-after genetics, the Bansen's modest outlook on farming was humbling. They too understand the frustration of rising production costs as well as trying to increase their milk values by organic conversion but have also come across many challenges along the way. Somatic cell counts in an organic herd can be hard to improve due to finding new treatment options that aren't antibiotic based but the Bansen's have adopted a feeding regime that incorporates a cayenne pepper bolus for each cow in a bid to reduce SCC. Similarly as another way to add value to milk, the Bansen's are looking into the processing of cold pressed milk which is produced in a manner similar to beer, as this is becoming a popular choice for dairy consumers.



Milk collection at Forest Glen



Organic cattle grazing

The strength of the farming families that I met on the trip really left an impact on me. Although I have a small suckler herd, the idea of putting my dream of owning a dairy herd will remain a pipe-dream mainly due to the financial impact of setting up a farm. Succession is another issue for many of the young people and colleagues that I come into contact with on a daily basis – the elephant in the room (succession) is evident across the pond in the States as well as further herd visits eluded to during the trip.

Sun Valley Jerseys based in Cloverdale, Tillamook County is a 500 cow herd owned by Bearl ‘Smokey’ and Joanne Seals. The Seals are well-known in the AJCA as Bearl was awarded one of the highest honours in the Jersey breed in 2016 from the National Dairy Shrine as a ‘Distinguished Dairy Cattle Breeder’. Bearl and Joanne have over 60 years of experience in dairy farming but have to contend with a number of wildlife concerns including wild geese and elk regularly grazing their grass as well as attacks on cattle from bears, bobcats and coyotes. They currently don’t test for TB but there are growing calls from their veterinarians to keep an eye on screening for this in the future.



Bearl ‘Smokey’ Seals in the field

The farm was cut straight into the Tillamook Valley with a mixture of dense woodland and marsh-like grazing areas as this is along the coastal path of Oregon. Genetics and breeding is one of the passions of the Seals; over the years they have dabbled with using Danish bloodlines from bulls such as Dimension, Link, Lemonhead and Fastrack as a way of increasing yield and butterfat composition of which they are paid for on the constituent parts for cheese making of Tillamook Cheese.



Sun Valley cows in the Tillamook Valley

Two sons, Dave and Jeff, work alongside Bearl and Joanne whilst another son, Tom and his wife Jenny run their own herd – *Legendairy Farms LLC*. *Legendairy* was established in 2013 with 140 Sun Valley cows and now runs over 300 milking females plus young stock. In less than five years, Tom and Jenny have managed to turn a leased farm into their very own with a lot of hard work and determination as well as producing some fantastic milk figures of an average of 17,300lbs (7847kgs) per lactation with 5.4% butterfat and 3.9% protein. Milked through a 14/14 herringbone parlour twice a day they employ a team, mainly Hispanic, to assist with the herd but are encouraged that their son, Coltan, is keen to follow in his parent's footsteps in the dairy world.

Tom is now heavily involved in the AJCA as a board member as well as fast becoming well-known as a breeder of high genomic index cattle and producing show and sale winning females. The visit to *Legendairy* gave an insight into how varying forms of succession can work effectively to ensure the future of family farms.

The farming world is full of rich characters, and none more so than Eric Silva – a highly respected and entertaining breeder whose dedication to the Jersey breed has seen bulls from his herd prefix, *Sunset Canyon*, travel all over the world. Originally from California, Eric relocated to Oregon in 1998 in order to produce milk for Tillamook Cheese and now milks 500 cows on a 300 acre farm. Eric has made extensive investments in building infrastructure in recent years as well as installing an elk fence to control elk entering the farm. Due to the location of the farm, Eric has had problems with coyote and possums which is something he felt he needed to invest in to protect his livestock.

Eric has bred over 350 bulls for the artificial insemination industry; in fact the legacy of *Sunset Canyon* name runs worldwide with bulls such as *Sunset Canyon Dazzler*, *Daybreak*, *Dimension* and *David* being well-known and respected in the Jersey breed. In my time as a herdsman, I used these bulls widely and to great effect on improving stature, udder condition and yield.

Many people on the tour, were already firm friends with Eric which helped to regale stories of cattle from days gone by. Sentiment plays a big part with breeders who regularly have their own 'favourites' in the herd, so much so that Eric has a gravestone for a cow he bought from a government-run mastitis project who wasn't required for further testing but Eric could recognise potential in the cow in question and purchased her for an undisclosed sum. 'Maid' was 22 years old when she passed away peacefully in 2014 but to honour the legacy that she left on Eric's herd with the offspring she generated through flushing and embryo transfer, he had her buried in a spot in his garden. Who ever said that farmers were hard-nosed and hardened to losing an animal? Eric certainly confirmed what all of us on the tour know; that the loss of a great cow is a deep blow.



Tour group at Sunset Canyon Jerseys

Genetic improvement to increase productivity and efficiency is a subject dear to the majority of dairy farmers on a world-wide scale. None more so than the highest ranked genomically tested herd at the time of the tour; *Martin Dairy LLC*. Just like Eric Silva, Norm and Gwen Martin moved their family and cattle from California to become producers for Tillamook Cheese. On their arrival in 1995, they ran a 50/50 split breed herd of Holstein and Jersey cattle but after four years, the family decided to make the move to 100% Jerseys in their 1000 strong herd. They found that the Jerseys were more profitable and had less problems of health, fertility and nutrition and as a result have invested heavily into the genetics of their herd resulting in the Martins herd becoming renowned in the world of artificial insemination.

The herd today is run by Norm and one of his sons, Chad, who admitted that their cows receive no special treatment. Milking takes place twice a day in a 32-point rotary parlour with cows averaging 25litres per day with butterfat of 5.5% and protein at 3.7%. The herd also runs an IVF programme flushing 6-8 cows per month and aims to calve heifers down at 18 months of age. The Martin family were very honest with their production figures and eluded that rearing heifers costs \$2.70/day (£2.99) which given the numbers of heifers they rear each year, is a huge cost to include. The cows are managed in six management groups of 150 cows to ease stress on the cattle and to help spot cows on heat. Over the duration of the visit, discussion on the suitability of specific bulls for individual systems came to the fore-front once again – each and every farm is different, and this must be respected by visitors. Whilst some of the second lactation milking cattle looked much more advanced than their age, this is the system that works for the Martins. They require large numbers of heifer replacements each year to maintain their genomic rating and status within the AJCA and this works on this particular farm; it might not be to every producers liking but if it works for the Martin family, then so be it. I was impressed with the attention to detail this particular herd employed to ensure it stays at the top of genetic improvement.



Cubicle shed at Martins Dairy LLC

Just a short five minute journey from the Martins, the tour continued at *Wilsonview Jerseys*. A real family farm steeped in tradition and heritage but with a real desire to embrace securing a farming system for the future. The *Wilsonview herd*, run today by the hospitable Josi family – Don, Desi and youngest son, Derrick – have farmed on the same site for 100 years on the banks of the River Wilson. Back in the 1960's, Don's interest in dairy cattle began on the back of a 4-H project and as a result the farm reared 60 cows on 60 acres. The Josi's dabbled in breeding Holsteins as well as Guernseys before introducing a few Jerseys; fast forward to today and the herd is now a 550 strong pedigree Jersey herd with a reputation for producing high yielding, highly scored genomic cattle with many requests for specific family lines to breed bulls for the global market.

One of the interesting points about Wilsonview Dairy is that during the winter months, the herd can spend up to 3ft of water as the River Wilson bursts its banks each year. Rainfall averages between 200-250cm per year which is usual for the area where they are based in the Tillamook valley. Steps are put in place to ensure cow comfort isn't compromised but the Josi's admitted that they spend a small fortune in waterproofs during the winter and have to remove all of their fencing so that it isn't washed down stream.



Wilsonview entrance

Derrick Josi is fast becoming a well-known figure in social media circles as he aims to educate subscribers to his Facebook and twitter accounts on issues surrounding dairy farming. Working under the name of TDF Honest Farming (Tillamook Dairy Farmer), Derrick is followed by over 100,000 'fans'

on Facebook alone. Just as the name suggests, he is completely honest about the work on his farm, animal welfare and the issues dairy farmers face on a day to day basis. It was great to meet a like-minded young farmer who wants to share his story with a growing audience. The Josi family are also keen to host overseas work experience students which was great to hear – contacts were exchanged at the time and I now wait in anticipation of some keen apprentices who would relish the chance to learn new skills from an enthusiastic farming family.



Derrick Josi explaining to the tour group

It is always great to meet passionate farmers and the next stop on the tour involved a young couple and their family combined with their lifelong love of Jersey cows. Ryan and Freynie Lancaster, own the neighbouring farm to Martins Dairy and the two systems couldn't be more different if they tried. *Royalty Ridge Jerseys* are already well-known and established on the cattle show circuit. It takes 51 hours to drive to the All American National Jersey Cattle Show in Louisville but over a relatively short amount of time they have developed one National Grand Champion, one Reserve National Grand Champion as well as the National Jersey Jug Futurity winner (in this class, breeders enter their chosen heifers a whole year in advance of a show – winning provides a great platform for the marketing of your herd as a sign of a quality breeder of cattle).



The Lancasters

The Lancasters moved to the area in 2011 from Washington and currently farm 45 acres with 55 milking cows and followers. The cows are fed a traditional diet of alfalfa, chopped straw and concentrates as well as grazing in the summer months whilst in the winter months, the cows are kept in a free stall barn. The 'girls' at *Royalty Ridge* are now famous pin-ups with one of their cows featured on the outside wall of the Tillamook Creamery. Circus is a well-known cow on the show circuit thanks to an illustrious and almost unbeaten record at some of the major Jersey cattle shows in the US. In an

encouraging note, Ryan and Freynie's young children are now themselves taking a keen interest in the exhibiting of calves in state and county fairs as part of their involvement in the 4-H movement. Royalty Ridge Jerseys was a particular highlight of the first week of the tour. Not only were we greeted by enthusiastic Jersey breeders but also saw some well-bred long-lasting cows set amongst a stunning back-drop of Mount Hood.



Photogenic cows at Royalty Ridge

Seeing as the tour had taken us to see the poster girl of the Tillamook Creamery in the flesh it was only fitting that the end of the first week of the tour would close with a visit to the production facility where the farmers we had met throughout the week, sold their milk to for cheese production.

Milk production in the Tillamook Valley has been recorded as far back as 1851 when the first settlers arrived in the area. The cool climate and water supply from multiple rivers, bays and the Pacific Ocean lends itself to dairy farming. In 1855, farmers in the region wanted to increase the size of their market and a trading ship was built, under the name of the Morning Star to enable produce to be shipped to Portland. In fact the logo of the Morning Star ship still features on the packaging for Tillamook Cheese to this very day.

Cheesemaker, Peter McIntosh, brought his cheesemaking talents to Tillamook in 1894. The cheese produced today is made from the same recipe developed over 120 years ago. Today over 100 farms produce milk for Tillamook which is a household name in America (in fact, on my return home, my in-flight meal included Tillamook Cheddar and biscuits). Since 1949, the public have been able to see the cheese being made in the Tillamook Cheese Factory which is now deemed to be a family attraction. It was fortunate that the only a few days before visiting the factory, a brand new visitor centre was opened where the public can witness all of the stages from milk delivery to the end cheese product through a series of display windows. I was really struck by the information provided in the accompanying exhibition as well as the message of supporting farmers producing milk for the factory. Tillamook Cheese is very much a brand, with clothing, an ice-cream parlour and a cheese shop all featured in the facility – it is estimated that 1.3 million people visit the site annually. This is a facility that is proud to promote the dairy industry and all those that serve it – a message that stood out in my mind as a key point that UK producers and processors should grasp.



Tillamook Creamery



Strong messages at Tillamook

Week 2 - Conference Week

A week in Oregon had been a fantastic start to the tour and gave a really good introduction into what was to be expected for the duration of the trip. In the space of seven days, I now counted 30 Jersey cattle enthusiasts as my friends and now, in the WJCB Conference week I had the opportunity to speak with over 500 AJCA and WJCB members who were attending the week-long event from countries such as Argentina, Canada, Columbia, Denmark, France, Italy and of course, the Channel Islands.

Travelling to Ohio was quite an experience not least because of the many variations of routes in which to take to get their via American airlines. I was fortunate to travel with some UK attendees and made a relatively simple journey from Portland via Denver to Columbus, Ohio. For several on the tour, it became an on-tour joke that many could have returned home quicker than the time that it took to get across the States. The sheer expanse of land means that air travel is the simplest and quickest way to travel in the US but politics between airlines requires travellers to land at 'hubs' rather than making their journey directly from A to B.

Canton, Columbus would be my 'home' for the next week which also gave attendees the chance to spend more than one night in the same hotel – something that by now had already started to become quite a tiring aspect of the trip.

Conference week from the outset saw a different pace from the previous tour days as well as the opportunity to see some larger enterprises and research facilities. The first visit of week two was to *Sexing Technologies*, a site housing 5,000 animals in 10 buildings that are roughly a quarter of a mile long each. The site for Sexing Technologies was originally the Ohio Heifer Centre which was responsible for exporting 10,000 heifers a year to Turkey and Russia from the 1960's until 2014 when the last shipment happened. As a result the Centre then became a research facility for genetics and feed trials. All animals born are a result of Embryo Transfer, once born animals are genomic tested

and given the result of their genetic merit their future is determined. The females become either a donor dam or a recipient, the bulls fate is decided upon if they are good enough to go to stud or not through genetic testing and proof trials. Regardless of their genomic results all animals go into feed efficiency trials at the facility. All the data is collected for each individuals feed intake and growth rates. Currently an 800 cow robotic barn is being built to go to the next step to compare once the heifers are calved to enable them to correlate the data from feed efficiency as growing heifers to feed intake and production performance date.

To enable everyone the chance to socialise and to visit another local point of interest, the next port of call was to the Franklin Park Conservatory and Botanic Gardens which is a 13 acre site that is home to several glasshouses, exhibitions, butterfly garden and a large park to explore. The late afternoon saw everyone on the trip meet for an evening meal where I was able to chat to some New Zealand farmers who gave me an insight into the way that they relax – something they think is very important to maintain a healthy work/life balance. The evening was rounded off by a guest speaker - John B. Cole (Research Genetic Leader of the Animal Genomics Improvement Laboratory, ARS, USDA) – who gave a really interesting insight into the work being collated within genomics to assist farmers to make informed breeding choices. As part of the tour, all young breeders present under the age of 40 were invited to form the Young Breeders Congress. The first meeting was held later that night back at the hotel where I and approximately 25 young breeders were able to share our experiences as well as getting the opportunity to speak to the invited speakers to the conference. This in itself was a great way to learn directly from a whole host of industry professionals as well as the other young members. I hadn't expected to be part of this sub-group but it proved really beneficial.

As the Conference coincided with the AJAC 150th celebrations, the US Jersey Society were proud to show their office facilities which is also home to a number of Jersey cattle memorabilia. Dr. Cherie Beyer – Executive Secretary and CEO of AJCA – and her team gave a whistle-stop tour of the work of the Association and the way in which it communicates with its members across the US. Helping members gain the most from the Jersey breed is a massive part of the Association and this gave way to our next visit to Ohio State University and Waterman Dairy Farm.

Waterman Dairy Farm has roughly 122 acres of cropping land with 45 acres of pasture in the middle of Columbus. The farm is commercially run with 120 milking Jerseys but also serves as a teaching resource for Ohio University students. The students get the chance to milk, feed, maintain accommodation as well as calf rearing and dealing with day to day management of the herd – learning on the job what is expected of them when they enter the dairy industry after completing their studies. It was really encouraging to talk to the students who are members of Buckeye Dairy Club; they all have a strong interest in the dairy industry as well as taking part in competitions within the Club for stock-judging and showmanship and compete against other colleges in America in a number of events. They also include social events such as ice cream evenings in their programme as a way of encouraging more students to join! One of the subjects the students learn is to appraise cattle. This is known as classification or linear scoring in the UK. As I have previously competed in linear judging through Holstein UK and YFC, it was really interesting to compare the differences that farmers score on in the US. Ron Moser, the head Jersey Appraiser in the AJCA gave a witty and lively appraisal of a number of cattle at different stages of their production. Ron was one of those characters that I will remember for a long time, mainly because of his way of demonstrating appraisal techniques, his no nonsense attitude and a continuous supply of coffee in his flask.



Ron Mosser demonstrating appraisals

Within the breeding world, *Select Sires* has been a well-known name for many years with many bulls being produced for the A.I market. It's hard to get your head around the scale of the *Select Sires* business which is a farmer-owned cooperative with almost 200 bulls a day being handled to produce nine tonnes worth of semen a year either for the American or export market. Formed in 1965, *Select Sires* offers a wide genetic range of options to its members and has grown to become the largest A.I organisation in North America and exports to 95 countries making the Plain City site of *Select Sires*, the biggest bull housing facility in the world.

Herbie Lutz, heads up the team of Dairy Sire Analysis at *Select Sires* and with his hard-working team, gave an impressive tour of the facilities of the business from the bull calves being reared prior to selection to the 450+ bulls kept in individual pens at a nearby site as well as the main collection and bull handling facilities and the semen sorting area which is capable of filling 50 - 60, 000 semen straws per day. We were given the opportunity to see some of the most current influential bulls in the Jersey breed such as Valentino, Chrome, Oliver P and Swagger. It's not often that you get to see A.I bulls in the flesh so this was a real moment – it was interesting to see the reactions of my fellow tour colleagues, who were really impressed with the handling skills of the bull handlers – definitely not a job for the faint-hearted!



Bull parade at Select Sires

One of the highlights of the trip was the opportunity to engage in conversation with the other conference attendees during the evening activities. Learning about farming systems and enterprises from other dairy farmers gave me a really good insight into the issues faced across the world-wide farming industry. Networking and the chance to build contacts is something that I was keen to achieve; communication is an important part of my job and thankfully, the contacts I made during the trip are still in close communication with me.

During the tour, it was fascinating to see the varied ways that the farms were embracing technology and addressing the issue of labour and succession. One such example of this was *Bar-lee Jerseys*. Currently milking 130 cows, the herd was established in 1963 originally with cows in stalls. The Nuhfer family (Gary, Amy and son Jason) realised back in 2015 that they would need to make significant investment to safeguard their farm's future but didn't necessarily want to spend hours of their day being tied to a milking parlour. Robotic milking appealed to the Nuhfer's and the farm is now home to two Lely units as well as a Lely Juno to push the food up in the cattle troughs. Bedding came in the form of sand so a sand separation unit had also been installed.

Following on the same theme, the next stop of *Albright Jerseys LLC* saw yet another farm who had visited in robotics. Fred Albright, and son Joel farm 400 acres and 500 Jerseys which is the far cry from the 25 cows that they started their farm with. As with many farms visited on the tour, the cattle were kept indoors all the time to maintain production and efficiency. One of the key points about this particular farm was that the dunging passageways were flushed out by a water flush system that runs at a rate of 900 litres a minute. The water and sand from the cubicles are then separated and collected where around 90% of the sand is reused for bedding. Joel Albright leads a busy lifestyle as he also teaches agriscience fulltime at a local school; a job he runs alongside managing a high performing Jersey herd. Having dual professionalism can be both rewarding as well as exhausting so I was really impressed by the enthusiasm held by the Albright family in their aim of updating the infrastructure of their farm.



Albright Jerseys



Water flushing system at Albright

As the tour was part of the AJCA and WJCB conference, there were a number of meetings and sessions held, not only to appoint representatives to the two organisations but also to provide an insight into a number of areas of interest within the worldwide Jersey breed. The topics were thought-provoking and timely for the audience to consider and tied in well with the various enterprises that we had visited on the tour. Conference speakers and topics are detailed in the table below:

Speaker	Topic
Glenn Fischer, President, Allflex USA Inc.	Animal ID and Emerging Technologies
Andrew Le Gallais, Chairman Jersey Milk Marketing Board	Adding Value: The Power of Pedigree
Marcelo de Paula Xavier and Maurício Santolin, Associação dos Criadores de Gado Jersey do Brazil	TV Jersey - The Milk Channel (ACGJB)
Larry A. Schirm, Strategic Account Manager InVitro Brazil, ABS Global,	Does the World Want Your Cow?
Dr. Dennis Savaiano Virginia C. Meredith Professor, Department of Nutrition Science, and Director, North Central Nutrition Education Centre, Purdue University	Milk Intolerance: Is it more than lactose?
Dr. Henry Zerby, adjunct Professor at The Ohio State University, and James Cook University, Queensland, Australia Jerad R. Jaborek, Ph.D. candidate, The Ohio State University.	Evaluating Jersey Beef Opportunities
Dr. Kent H. Weigel, Project Leader and Department Chair, University of Wisconsin-Madison	The Improvement of Feed Efficiency Study
Dr. Jørn Rind Thomasen, Aarhus University and Viking Genetics	Breeding for Improved Feed Efficiency and Reduced Emission in Dairy Cattle with special focus on Jersey
Dr. João Dürr, Chief Executive Officer Council on Dairy Cattle Breeding	Horizons for Genetic Evaluations
Emma Andrew, Dairy Food Advocacy Network (DairyFAN), American Dairy Association North East	Dairy Advocacy – how to handle the media

I was particularly interested in the session on TV Jersey, a specific channel broadcast on Youtube and other social media platforms which has been developed by two Brazilian Jersey breeders (Marcelo de Paula Xavier and Maurício Santolin) who want to share their enthusiasm with the breed on a world-wide scale. They attend shows, interview farmers and produce promotional material to advocate the benefits of the Jersey cow not only to those who are already involved in the dairy industry but to show the wider public, the work carried out by farmers. So far, they have over 300,000 followers worldwide which is growing monthly due to increased exposure on a number of communication platforms.

The sessions based around lactose intolerance and Jersey beef production also gave really insights into the behaviour trends in consumers and the issues driving the buying public to specific brands and products. The latter topic really hit a chord with the audience who through later discussions, I found out are really interested in how to find a market for beef from their Jersey bull calves; something which in the UK has little or no market value and is subsequently an issue for Jersey farmers worldwide. As a way of promoting Jersey beef, the evening meal held at a Presentation ceremony at the *Military Aviation Preservation Society (MAPS)* that night featured Jersey beef on the menu. A lot of discussion was held on the subject of the influence of JX bulls within the breed as had already taken place in informal chats throughout the tour. The advantages of Jersey genetics is becoming increasingly well-known within the dairy industry with the milking efficiency, butterfat content and longevity of the Jersey proving popular but the stumbling block for many remains the issue of maintaining the integrity of the Jersey cow. This topic is an on-going subject that is dividing many Jersey breeders and dairy farmers; there is no disputing that the influence of the little brown cow is certainly causing a stir in the dairy industry.

As a member of the Young Breeders congress, I was invited to listen to two informative sessions as the conference progressed. Dairy cow nutrition is an in-depth sphere of the science behind milk production. For many years, nutrition has focussed on high production Holstein herds so it was interesting to hear from two respected nutritionists in the American dairy world - James Huffard III (Rationale Inc.) and Sherry B. Smith (Cows Come First consulting group). Both had a straight-forward but effective approach to dairy nutrition in terms of ration and diet requirements but also highlighted some of the major differences between Holstein and Jersey cattle. They gave all participants the opportunity to share their own experiences of nutrition before revealing ways in which Jersey diets have to differ in order to sustain maintenance, fertility and high-production efficient cattle. The last Young Breeders session involved discussion around Jerseys and sustainability with Dr. Roger Cady; senior Technical Consultant for Global Sustainability of Elanco. Roger brought, not only his knowledge of the ways in which the younger generation can play a part in the sustainable future of dairying but also pushed the group to think about the ways in which farmers explain to the general public about agricultural practices. This was a perfect time to explain to the international members about Open Farm Sunday. Delegates were interested in the model and how it works in the UK and as a result this tied in nicely with a later conference session based on how to handle the media and concerns from the public about farming practices.

As well as the various herd visits and discussion sessions, the chance to witness life in different cultures was something that I had been looking forward to. Visiting the *Amish and Mennonite Heritage Centre* and Lehman's Hardware Store gave me a really good insight into the lifestyle of their traditional way of life. The Amish are a group of traditionalist Christian church fellowships and are closely related to, but distinct from, Mennonite churches. The Amish are known for simple living, plain dress, and reluctance to adopt many conveniences of modern technology. They use horse and carts as their main way of transportation which in the town of Kidron, mixes with cars, lorries and buses in an accepted

way of life. This led to a visit to *Scenic View Jerseys* of the Miller family in Fredericksburg where we were all treated to a traditional Amish hospitality including a wholesome lunch.



Amish transport

Leroy and Martha-Sue Miller and family may embrace Amish beliefs but in their own small steps, use a number of modern practices to enhance production of their milking cattle. Artificial Insemination was used throughout the herd and over the last 18 months, the use of genomic bulls on the herd was also being implemented into the breeding programme. They use a TMR diet which includes soya, quinoa and corn distillers as well as maize and a small amount of lucerne silage. On the approach to the farm, I couldn't help noticing that the maize crops near the farm, were some of the best I had seen during the tour. The weather had been very dry and with little rain fall in the last few months which had delayed drilling in the spring of the year but Leroy's maize was easily a foot taller than some of the other neighboring Amish farms. This prompted some debate within the tour! When asked what his secret was, Leroy explained that he had recently invested in a mobile phone which enabled him to contact agricultural contractors who could provide a service of land preparation, drilling, sprays and fertiliser to the crop which he wouldn't have had access to himself. Where there's a will there's definitely a way!



Housing at Scenic View Jerseys

The pace of life is noticeably slower in Amish communities; in a world dominated by emails, phone calls and instant answers, it was a welcome relief to step back and enjoy the location of the area. The Amish farming practices may differ to modern-day exercises but they work for them in their own systems. The State of Ohio is home to America's largest population of Amish communities – the land

is productive and the location is favourable. Travelling from Fredericksburg to the next stop near Millersburg, the route was busy with horses and carts as well as several corn stores on the side of the roads which are used to store corn cobs over winter. Certainly a new concept to grasp for many of us on the tour.

The next stop of *Clover Patch Dairy* run by Alan, Sharon, Courtney and Brandon Kozak was a complete contrast to the previous farm. Clover Patch is home to 400 milking cows and followers who are producing milk for three different processors for fluid dairy products, yoghurt and cheese. The cattle were kept in a straw yard covered by what appeared to be a reinforced polytunnel. The cattle looked in good condition with some strong family pedigrees behind them. Bulls such as Lemonhead and Dazzler which have been used widely in the UK had also been used across the herd to good effect with some high production, balanced cows on good legs and feet. At this farm, there were a number of Jersey Youth members aged between 4 and 18 years old who were learning from AJCA and fellow Jersey breeders about appraisal scoring milking cows. It was great to see so many young people taking an interest in the breed. This is just one part of the American Jersey Association – every year a Jersey Youth Academy is run where participants learn about breeding, feeding, marketing and caring for Jersey cattle. Many of the youths go on to farm in their own right or work for associated dairy companies; in fact a large proportion of the academy are given employment within the AJCA as breed evaluators or area representatives where they can share their knowledge with fellow farmers.



Housing at Clover Patch Jerseys

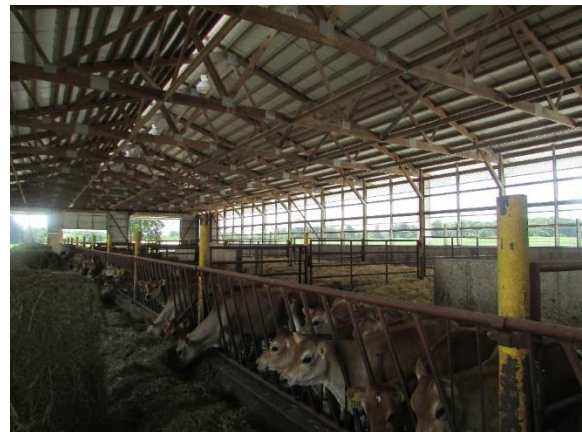
The Jersey Marketing Service run a Jersey heifer sale which has become an annual event which has been taking place for over 60 years. It is more than just an auction to make money – it is a big social event, raises the profile of the Jersey breed and helps to promote Jersey Youth as all of the heifers in the sale ring are paraded by younger members of the AJCA. Prices have risen considerably over the years to reflect the growing demand for Jersey cattle. So much so that the old sale record of \$40,000 was broken twice with lots reaching \$51,000 only to be beaten shortly there after with a JX heifer being bought for \$67,500. Over 41 lots the sale averaged \$7,190 (£5,575.80). A lot of the heifers were bought as part of embryo flushing programmes. The buzz of an American auction is something I won't forget in a hurry. My own experiences of bidding at auctions in the UK rely on the nod of the head or

a very discreet tap – there is nothing discreet about American bidding! It is noisy and at times, hard to follow with shouts and cries from the bidding assistants becoming a bit off-putting but certainly entertaining in its own way.

It had been another intense week with a great display of farms on show and the last herd visits were just as impressive as the farms before them. The first visit of the last day of the second week was to *Cold Run Jerseys LLC* where we were greeted with a very high producing, high type herd of cows. The philosophy of the owners - David Herron and his wife, Julia, their son Jim and his wife, Tara - being breed for type and feed for production which clearly worked for them. The farm had invested heavily into facilities for rearing youngstock with calves reared in individual hutches before being moved into groups in a large building. Heat stress had been a particular problem across the herd and they had provided air fans in all of the cubicle sheds and loose yards to help maintain good air flow. The farm began in 1945 by Carl E. Herron under the prefix of Welcome View. Fast forwards to 2006 and David, formed a Limited Liability Company with his son and Cold Run Jerseys began. The herd now runs a number of 275 milkers and has ranked highly in the US production figures for fat production.



Cold Run Jersey heifer shed



Inside the youngstock building

A short journey to the final herd visit was to that of the Herron families *Nature View Farms LLC* where the use of polled genetics are a big factor in their breeding philosophy. Today the 135 cow herd is made up of 75% of cows that are polled with 30 of them being Homozygous PP cows. The farm was a combination of older-style traditional buildings with newer designed facilities. The Herron family are keen to promote the use of polled semen and as a result have created their own website to help other producers access polled breeding lines. Nature View Jerseys are leading the way in assisting other breeders which is admirable – instead of feeling that they are competing against fellow farmers, they are willing to share their knowledge and expertise of the polled market with others.



Polled calves at Nature View

Quite rightly so, the AJCA wanted to showcase the very best of the herds of Ohio during the tour. There had been a lot of discussion regarding cattle and farming so it was good to then round off the week with two separate events where there was the chance to socialise with members of the AJCA and WJCB. The first was a benefit auction where Jersey collectibles and memorabilia were up for grabs. All proceeds go to the AJCA Research Foundation which helps to provide support for projects addressing significant issues relative to the Jersey breed of cattle and Jersey owners. Since 1988 more than \$1,000,000 has been provided in support of such research. Funding is in the form of seed money and has averaged \$7,000 per project since 2008. Two characters from earlier in the tour, Ron Mosser and Herby Lutz, acted as the bidding callers to much amusement – it was a good job that I had experienced another auction only a few days before as the confusion still remained as to what was happening. In this instance, it was all about the amount of money being raised for an important part of AJCA and the promotion of the Jersey breed.

The second event was to recognise the end of the 21st Annual World Jersey Cattle Bureau Conference with the Presidents Gala Banquet to celebrate what was a very enjoyable week.

At the banquet awards were given to the following people for their outstanding service towards the Jersey Breed and the WJCB: Distinguished Achievement Award - Derrick Frigot, Jersey Meritorious Achievement Award - Dr Cherie Beyer, America and Certificate of Achievement - Bernard Gaborit, France

The new executive committee and board members to lead the WJCB forward were also acknowledged and the following posts were promoted: President - Steve Le Feuvre (Jersey), Secretary - Roger Trehwella (UK), Treasurer - Alison Gibb (New Zealand), Africa Vice Pres. - Arno Theron (South Africa), Oceania Vice Pres. - Trevor Saunders (Australia), Europe Vice Pres. - Benoit Guioullier (France), North America Vice Pres. - Kathryn Roxburgh (Canada), South America Vice Pres. - Jacobo Cabassa (Columbia) Patron and of the World Jersey Cattle Bureau - Derrick Frigot (Jersey).



The UK contingent L-R Roger Trewella, Linda and David Brown, myself and Lena Lewis

It was also an evening to honour those of us who had formed the Jersey Youth Congress on the tour. All participants were awarded a book – *The Dairy Queen: A history of the Jersey breed worldwide* (written by Derrick Frigot) as a way of thanking us for our contributions and to encourage us to maintain our enthusiasm for the Jersey breed. It was a perfect way to round off the second week and also to say goodbye to people I had been fortunate to get to know over the past two weeks.



Members of the Jersey Youth Congress

Week 3 – Post Conference Tour

The third and final week of the tour came too quickly. It had seemed only a short amount of time since leaving from Heathrow but now it was time to board yet another plane from Canton Airport to Chicago O' Hare which took just under the hour. In a time when climate change is so mainstream, it is astonishing to consider the amount of aircraft being used on a day to day basis. The travel plans of American's are certainly not helping to fight the amount of pollution in the atmosphere.

Once in Chicago, the hustle and bustle of the city replaced the vast expanses of land that I had been acclimatised to in the last week. A guided bus tour gave a detailed history of Chicago as well as taking us to some of the most famous landmarks including the Magnificent Mile, Millennium Park (home of art installation, the Bean – officially known as Cloud Gate) and the architecture of buildings such as the John Hancock Centre and Willis Tower. The day was rounded off with an authentic pizza experience at Gino's East restaurant as well as a late night expedition to the John Hancock Centre to experience sunset over Chicago at 1000ft (or 94 floors) above the Magnificent Mile.

The next day (now the 2nd July) saw another hotel move, this time to Janesville, Wisconsin but only after a morning visit to Chicago's Navy Pier. Here, we were greeted by Seadog – a boat part of the fleet of Lake and River cruises which showcases Chicago from the man-made Lake Michigan as well as the Chicago River system of which a lot of the buildings are built near. It was interesting to see how the City is developing with new buildings appearing next to historic sites. Chicago is a vibrant City, full of commerce and trade but with a welcoming feel. Crime is something of an issue that was discussed throughout the tour-goers – one gentleman had seen on CNN news just a few days before our arrival in the City, that in one week alone, 17 murders had been committed.

With that in mind, it was time to find some more cows. It had now been over 24 hours since we had last seen a cow and so a few were starting to get a bit twitchy. The next stop was to *Hoard's Dairyman Farm*. The farm was originally purchased in 1899 by W.D Hoard, who was a magazine founder with a passion for dairy farming who decided the industry was lacking a publication to keep dairy men and women informed of the latest news of all things bovine. The main reason for having a farm was to keep all employees of the magazine (especially the editors) aware of the on-farm issues affecting dairy production. Today the farm comprises of almost 900 acres of cropable land which is big leap from the original 100 acres located on the north edge of Fort Atkinson.



Milking parlour at Hoard's



Hoard's buildings

There are actually two herds at Hoard's – Guernsey's and Jerseys –of which there are 225 of each breed. In 2007, the farm invested in a 10/10 herringbone parlour and a naturally ventilated freestall barn which led to further housing outlay in 2010 with the Jersey's being housed in a converted freestall building. The one thing that struck me is how all of the journalists and publication staff are given the opportunity to get as hands-on with the farm as their schedule will allow them to. I was able to speak to two of the research team who assist with the book publication aspect of the business and they spend regular time with the head herdsman to get a real feel for nutrition, cow issues and production techniques to assist with their writing. The business is keen to encourage young graduates into the team and annually take on a number of interns to help with the various aspects of the publication. The Hoard's team visit all of the major shows in the US and create special editions of the magazine in the run up to World Dairy Expo in Madison to showcase to their worldwide readers, the current winners in the American dairy scene. The visit to Hoard's was a great mixture of employees who have a genuine love of cows as well as a desire to help others in the industry.

Throughout the tour, we were joined by staff members of the AJCA to assist with proceedings, provide some local knowledge and to share their experiences with us all. Many of the employees of the Association are Jersey breeders themselves or come from a family background of little brown cows. For several days, we were joined by Kristin Paul, AJCA Director of Field Services whose family run *Barlass Jerseys LLC*. Parents, Marion and Bill, run a 1200 acre farm with their son Brian who in the last 20 years have embraced a number of changes to secure the future of their estate. Not only have they increased their land total from 250 to 1200 acres but they have increased their milking herd to over 420 registered Jerseys, putting steps in place to improve production with added investment of milking and housing facilities. Calf care and youngstock was a key area of the farm with the heifer rearing being completed by the females of the family – Marion and Kristin. Their attention to detail and waste management to ensure calves had optimum comfort, was admirable.

Whilst in the area of Fort Atkinson, it was a great time to witness the *National Dairy Shrine Museum*. Based in the heart of Wisconsin, known across the country as American's dairyland, the museum is as the name suggests, a shrine to anything connected to the dairy industry. From photographs, paintings, equipment, publications to exhibitions celebrating the producers, scientists, business leaders and educators who have helped to shape the dairy world, the museum is a treasure-trove of dairy related valuables. From the first week of the tour, I had made friends with a couple from Devon, UK (David and Linda Brown) who were interested in the way in which the museum had been put together – the reason being that they have their own private collection of dairy memorabilia.

The next stop of the tour was to *Kutz Dairy LLC* near Jefferson which is run by Ron and Pam Kutz with their sons, Alan and Aaron. The farm began in 1973 initially with Holsteins with Jersey bulls being used for easy calving and for cross-breeding purposes. Fast forward to 2000 and 50 pure-bred Jerseys were added to the herd; in a short space of time, another 400 jerseys were acquired and the remaining Holsteins were sold. At the time of the tour, the herd totaled 1,450 milking cows, 1,400 acres of forage crops and in a separate enterprise, the Kutz family also rears 1,600 replacement heifers on a separate herd in Nebraska. The herd was kept in huge sheds with a complete temperature controlled environment. Electricity usage on the farm, Ron explained was one of the highest input costs on the farm with an estimate of \$20/cow/month – a huge cost to incur to assist with the production of milk. It was also at this farm, that a number of pedigree black and white Jerseys were seen – obviously the repercussions of cross-breeding but also a concern of the integrity of the Jersey breed.



Fan system at Kutz Dairy



Housing milking cattle at Kutz Dairy

The next day of the tour signaled a slight break in the tour thanks to celebrating Independence Day. For American's, the fourth of July Independence Day is a federal holiday in the United States commemorating the Declaration of Independence of the United States, on July 4, 1776. The Continental Congress declared that the thirteen American colonies were no longer subject to the monarch of Britain and were now united, free, and independent states. As a result, the country revels in commemorating this special date and in quite spectacular fashion as well. We were taken to the DeForest/Windsor area where a street parade with floats, tractors, dancers, bands, marching bands and community groups entertained thousands who lined the streets. It was quite a sight to behold and with a real family atmosphere – for those of us who had been on the tour for almost 15 action-packed days, it was quite an emotional day with many of us thinking of our nearest and dearest back home.

Cow tours wait for no-one and it was appreciated that two farms were willing to welcome us to their farms, even on a public holiday. Following the celebrations, our first stop was to *Kessenich Farm LLC*, where brother and sister team, Wade and Natalie Kessenich milk under 300 registered Jerseys. Like many other farms in Wisconsin, were originally Holstein breeders but the purchase of a Jersey calf for Wade as a young boy planted a seed in the family and over a number of years, the Holsteins were

decreased. After several breeding programmes, embryo transfers and shrewd purchases, Kessenich Farm is now predominantly a Jersey herd. Natalie is a natural-born spokesperson with a real head for stockmanship and performance targets. She impressed me with her sharpness and straight-talking as well as her ability to explain how the farm operates with both members of the family, their individual input into the enterprise and balancing family life with running a successful farm. Both siblings are past Youth Academy members which further reinforced the long-term benefit of the AJCA's inclusion of young members in dairy industry.



Wade and Natalie Kessenich



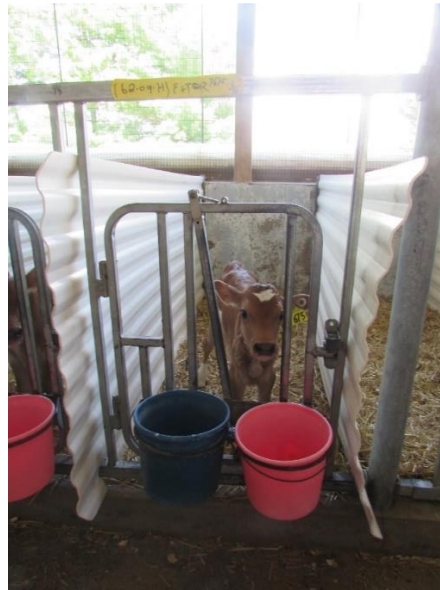
Jerseys and Holsteins together

The next and last stop of the day, led the tour to *Endres Jazzy Jerseys*. Similarly throughout part of the week, we had been joined by Sydney Endres – another Jersey Youth Academy graduate and AJCA area representative for Arkansas, Colorado, Kansas, Missouri, Oklahoma. Sydney's family including her father, Dave Endres (past chairman of the National All-Jersey Inc.) and two brothers, farm 1,200 acres, a farrow to finish pig enterprise as well as milking 900 Jerseys and rearing 800 followers. The enterprise is very much a family orientated business not only with the Endres family but also their staff. One of the herdsmen on the farm works alongside his wife who rears the calves whilst their children are now also employed on the farm to assist with milking, heifer rearing and general farm work. Jazzy Jerseys are well-known in Wisconsin for being a progressive dairy not afraid to embrace change. Wisconsin weather is very changeable with extremes of heat in the summer and severe cold spells in the winter. Dave told the tour group how over many years he had battled with calf deaths during the winter and often averaged a 10 percent death loss during those months. In a bid to decrease losses, a purpose built calf facility was erected in 2006, Endres built a new calf barn. He designed it in the shape of an "H." The central portion is used as an office and to prep milk for the calves, store supplies and anything else the calf employees might need when caring for the calves. Off of that central room are four other rooms, each of which is completely separate from the other and follow an all-in, all-out system. Dave wanted to model their calf barn on the same style as their pig barns to limit the spread of disease between calf groups. In addition, the aisles in each room are heated, keeping the barn above 35°F throughout the cold Wisconsin winters, and positive-pressure ventilation tubes bring in fresh air to calf-level.

The individual calf pens have panels that easily pull out to allow skid steer cleaning between groups. Once cleaned, the room is pressure washed and disinfected with bleach. Since improving their cleaning protocols and barn setup, they have not yet had a bug spread from one calf group to the next and currently average an impressive 1 to 1.5 percent death loss.

If calves do show signs of sickness, employees treat them promptly. A simple piece of duct tape marked with the date and treatment is stuck to the pen to communicate the situation to other workers. In addition, when each calf arrives at the calf barn, the calf's number, its dam, the date and

who handled it in the maternity area. They also track this information on a clipboard in the office. This way, management can not only track the calf's progress, but also make sure employees do their jobs correctly. Communication of all farm procedures to all of the staff and families is a huge part of this farm's success – the team at Jazzy Jerseys are a real credit to themselves and their stockmanship skills.



Calf rearing at Jazzy Jerseys

The tour group experienced first-hand just how extreme the weather can be in Wisconsin on that particular day; just walking around in the heat was unbearable – completing manual labour in the temperatures experienced must be a real challenge especially when the summer in Wisconsin can last for weeks rather than the days British farmers have to contend with.

The next day saw two visits on the plan. The first to *ABS Global* was a real eye-opener of another breeding company with customers on a worldwide scale. With its headquarters in DeForest, Wisconsin, USA, ABS Global is the world-leading provider of bovine genetics, reproduction services, technologies, and udder care products. Marketing in more than 70 countries around the globe, ABS has been at the forefront of animal genetics and technology since it began in 1941. In bovine genetics, ABS serves more than 40,000 customers globally, including some of the world's leading beef and dairy producers. ABS Global owns bull studs in Europe, North America, Latin America, and India, selling genetics to dairy and beef customers in North America, Latin America, Asia and Europe.

ABS Global is a division of Genus plc (LSE: GNS). Genus plc is a British-based, publicly traded business selling products manufactured using biotechnology to cattle and pig farmers. The business has its origins in the former Breeding & Production Division of the Milk Marketing Board, which was established in 1933 and broken up in 1994.

In 1999, Genus acquired ABS Global, a company founded in 1941 by J.R. Prentice in the United States as the American Breeders Service, selling the semen of cattle. Through the purchase of Sygen International plc in 2005, Genus acquired PIC, a company founded in 1962 by six pork producers in the UK as the Pig Improvement Company. As a Genus customer myself it was good to see where some of my money goes to as well as seeing the developments that the company have made especially in the semen sexing technology side of their business.

A tour of the bull stud facilities, gave an insight into the care and attention that all of the bulls receive as well as showing the tour group how the young bulls are selected for breeding trials and how they then progress through to become proven bulls. The headquarters and bull stud are modern, state of

the art and with biosecurity measures throughout each section which all on the tour were impressed by.



Bull stud facilities at ABS Global

The next stop on the tour took the group to the *Dairy Forage Research Station*. Nestled in a bend of the Wisconsin River about 30 miles north of Madison, the field facilities of the U.S. Dairy Forage Research Centre demonstrates current dairy technology. The facilities include three types of cow barns, calf and heifer housing, a milking parlour, research and hospital areas, and a feed centre as well as several feeding silos. The facilities were designed for 300 milk cows plus replacements. Calves for the original herd were produced largely through embryo transplantation.

The Dairy Forage Research Station is a cooperative effort between the U.S. Department of Agriculture, the University of Wisconsin-Madison, and other land grant universities. It focuses on problems that are national in scope and that limit effective and efficient use of forage for milk production. It coordinates intensive research involving engineers, microbiologists, chemists and plant and animal scientists at locations in five states. The research is directed toward increasing yields and quality of forage grown and harvested, reducing losses associated with harvesting, storage and feeding, and maximizing use of forage nutrients by the dairy cow for milk production. In a bid to harness the growing demand for milking Jerseys in the US, the Station is now home to 60 Jerseys at the Prairie Du Sac Station.

As well as being shown around the cattle facilities, scientists leading investigations into feeding efficiency and other nutritional programmes gave presentations on their findings so far as well as giving tour members the opportunity to discuss the topics detailed. As myself and the other younger members of the tour had been lucky enough to previously spend an evening talking about feeding with specialised Jersey nutritionists with the Youth Congress, it was interesting to hear the issues that other breeders were experiencing. Milk fever, ketosis and displaced abomasum's feature heavily as issues that most tour attendees have concerns with on their farms; despite the miles between all of us on the tour, the problems are the same, the world over.



Research facilities at Prairie Du Sac

Being so close to the Wisconsin capital, Madison, the opportunity to explore the City was one not to be missed during some free time in the evening. Madison is a vibrant area with the feel of a friendly town. It is well-known for its production of craft beers with a number of micro-breweries popping up. Dairy is a noticeable influence on the City with restaurants and bars such as the Tippy Cow and Spotted Cow featured as well as a number of models of cows located near buildings. American football is also a huge part of Madison; the home team are called the Wisconsin Badgers who are a University/College team. The popularity of the Badgers is such that alongside the fibreglass models of bovines, badgers line the streets and sidewalks as a way of promoting football and the design talents of Wisconsin artists.



Wisconsin Badgers



Bovine artwork in Madison

The tour was quickly coming to an end but there was still a lot to pack in. Friday 6th July started with a tour of *Truttman Dairy LLC*. The Truttman's – Dan and Shelly – operate the farm with Dan's father and a few part-time employees where they milk over 200 pure-bred Jerseys as well as some crossbred cattle. Dan is the fifth generation to farm on the site near Blanchardville and regularly welcomes schools and tour groups to the farm to inform interested parties about the work carried out on the farm and issues faced. Dan eluded that the price of milk is one of his biggest causes for concern along with labour issues. He is keen to use technology to assist the running of the herd and may look to

robotic milking in the future but currently, the return on production per litre doesn't leave much scope for infrastructure investment. Politics also came into the conversation during this tour, with debate about President Trump's policies coming to the fore. Dan supplied some figures that estimate in 2018 alone, just under 3,000 dairy farms in the country will be forced to cease production. Wisconsin lost 638 dairies in the last 12 months; Dan hopes that the way he runs his farm is sustainable and efficient enough to not be another statistic in the near future. It cuts deep when you think just how many farms are departed on an annual basis. For many of these enterprises, they are family-run enterprises – not only do these individuals lose their employment but also their lifestyle and years of family history.

In the run-up to my trip, many of my colleagues and friends joked about how burgers I would eat during my tour so I was pleasantly surprised that it had taken until day 19 that I would experience a Culvers burger.

Culvers is a family-run, chain restaurant that started with humble beginnings in Sauk City, Wisconsin in 1984. Following decades of running supper clubs and eateries, Ruth and George Culver and their family, combined their love of home cooked, wholesome food with dairy products and Culvers fast food restaurant, began. The son of a cheesemaker and grandson of a Wisconsin farmer, George Culver spent the early part of his career inspecting and grading dairy farms for the Wisconsin Dairies Cooperative. He already had a good insight into the way in which dairy played an important part in the Wisconsin landscape as well as knowing how to source cheese, milk and such-like for catering usage. Today, Culvers is famous for its butter burgers, frozen custard and cheese curds and has over 600 restaurants in 24 States.

But Culvers is more than just a fast food chain; it also raises the profile of agriculture and the people who play a part in the production of food throughout its restaurants as well as helping those in the farming industry. Since 2013, their 'Thank A Farmer' charitable trust has raised over \$2million to help fund agricultural education. The family values, the urge to promote farming and the desire to inform customers about food production is a great model for a food chain to adopt. Culvers are proud to admit that their mission today is the same as it's always been: That every guest who chooses Culver's leaves happy. I can certainly say that myself and the other tour attendees, left happy with a full stomach and a sense that this was a food producer that cares about the wider picture.

Travels in the tour bus had now led us to Moline, Illinois. You can't visit Moline without John Deere being mentioned; the modest foundations of a global farming brand is what makes the area famous and is the world headquarters of Deere and company. Visiting the *John Deere house and workshop* (in Grand Detour) made for an interesting stop where we managed to catch a glimpse of the way John Deere invented the first steel plough and where production of it began in 1837. The prairie land of Wisconsin and Illinois was densely populated with tallgrasses and unproductive plants that covered an area of 61% or 21.6 million acres of land in what is present day Illinois. Farmers realised that the prairie land would be advantageous for cropping but needed to remove the unwanted vegetation and turn the soil over. John Deere being an inventor and engineer, took to work and built a number of ploughs that he made individually before securing a contract to create them on a mass produced scale. The use of the plough transformed the way in which farmers could operate and become more efficient. With cultivation techniques at the fore-front of soil science and practises, it was interesting to get back to basics and to learn how the John Deere brand has been developed over 180 years.

The last visit of the day reached the location of East Moline where we were greeted by the *Bohnert Jerseys* and the family of Scott and Karen and their children, brother Scott and parents, Jim and Wanda. The Bohnert's are yet another enthusiastic farming family who's love of Jerseys began as a hobby in 1984 with ten cows and has now grown to 500 milking cows and 1,300 acres of corn,

soybeans, wheat and rye. The Bohnert herd is fast becoming well-known in Illinois and beyond for producing well-bred cattle with strong pedigrees that score highly in appraisals. Alongside the farm, Karen plays an active part in communicating with the public about life as a mother on the farm, working alongside her family and bringing up her children. She is part of a group called Illinois Farm Families who actively promote farming practices to those outside of the agricultural community. She also writes a blog for Hoards Dairyman Magazine on life as a dairy farmer and is an AJCA board member. The Bohnert's actively engage with environmental schemes to reduce waste and encourage recycling methods on the farm. It was good to meet yet another farming focused family with a real enthusiasm for their farm; they are invested in the enterprise for many reasons not least to secure a future for their families for years to come.

The last day of the tour brought sweltering sunshine again and the opportunity to visit *Kilgus Farmstead*. The farmstead is a multi-generational venture led by the partnership of Paul and Matt Kilgus. The farm milks 175 Jerseys with all of the milk being bottled for liquid milk sales, used for cheese and ice cream which is sold through the farm shop as well as rearing goats, bullocks and pigs. Meat, dairy products, locally sourced produce and merchandise is sold not only through the farmstead but is also distributed throughout the State of Illinois.



Finishing bullocks at Kilgus farmstead

As a direct seller of beef myself, I was really engrossed in how they have developed their products. One of their selling points is that they are located in a favourable spot on a road with good footfall. Over the years, they have built up a solid reputation locally of producing quality produce. Customers travel from Illinois and further afield to purchase quantities of meat and dairy which confirms the quality, provenance and desire for their commodities. The farm invested in their own creamery thanks to grant funding and this facility backs onto the farm shop so customers are able to see the milk and cream being processed. Matt Kilgus explained that this was a real hit with followers of the farmstead.

Every member of the family plays a part in the running of the farm. Showing is another aspect of the farm that is taken very seriously; not only are the cows there for their milking ability, but also for marketing of stock and for their genetics. The milking cows are kept in a barn where they are bedded on woodchip and compost as well as having access to grazing in the summer months. Jersey bullocks are reared as a separate enterprise. Whilst there isn't much of a market for male Jersey calves

worldwide the Kilgus' have adopted a cereal-based diet on a low input style system to provide beef for their shop as well as utilising what could be classed as low value commodity. Growing demand for goat and pork meat has increased sales in the last two years so much so that the farm delivers livestock to the local abattoir on a weekly basis with all the meat sold through the farmstead. This was a fantastic way to finish the farm trip section of the conference trip – being able to link the farm to the end consumer is a great step to connecting farmer to buyer.

The very last stop on the tour was to the *Midewin National Tallgrass Prairie Reserve*. Set in 18,500 acres, Midewin National Tallgrass Prairie is a place where volunteers, partners and staff are restoring one of the last remnants of the native tallgrass prairie ecosystem. The site features walks and trails for visitors to enjoy as well as experiencing the ecosystem that would have been in place when Illinois was dominated by prairie land. Species found there includes tallgrasses, forbs, flowers, trees and insects as well as a small herd of bison. The bison were introduced to the site in 2015 and live a solitary life away from public view. The US Forestry Service have a 20 year study in place to investigate the relationship between the grazing habits of the bison and the prairie restoration and ecosystem health.



Midewin National Tallgrass Prairie

Over the space of three weeks, the tour had come to an end and what a trip it had been. The last night was an emotional time to reminisce over the time the group had shared and experienced as well as saying goodbye to new friends who had all been joined together through the love of a small, brown, dairy cow.

The next morning started another marathon session of travelling from Chicago O Hare International Airport to Detroit Metropolitan Wayne County Airport and then onto home turf at Heathrow.

Knowledge exchange of project

Before setting off on my travels, I was keen to use social media to keep any interested followers updated on the farms I would visit and the experiences I would encounter.

I used a number of social media platforms – Twitter, Instagram, Facebook and Whatsapp – to document my travels which included some light-hearted moments on the trip as well. This really helped to keep my colleagues, friends, family and farming connections, interested in the variety of farms I visited and the sights I saw.

On my return, I had several comments from people who communicated that this was a really good way to share my travelling experiences. Photographs are a great way to get people talking and it certainly helped engage my findings with others.

Similarly, in the run-up to the Conference, I was featured in the Eastern Daily Press promoting the Farmers Club Educator Awards although this was somewhat over-shadowed by news that I had also been invited to a Royal wedding.

Once back in the UK, I was keen to share my findings on the tour.

Thanks to the summer break, I had to wait a while before I could explain to my apprentices what I discovered on my three week study-tour. My teaching commitments on my return were a lot greater than prior to the trip but this has meant that I have been able to impart my experiences not only to livestock apprentices but also to crop students. In teaching terms, we would call this stretch and challenge!

Since the tour, I have been able to use the evidence I collected to teach my groups about the scale of American farms and the variety of enterprises that I came across.

My livestock groups have been informed about the production methods that I saw in terms of feeding, breeding and fertility as well as adding value. It is worth noting that the livestock students I teach are from a mix of farms including intensive pig units (both indoor and outdoor), beef herds (suckler and finishing units), sheep and dairy farms. I am a great believer that apprentices should learn a whole range of topics on livestock rather than being pigeon-holed into one specific area at a young age.

It is difficult to put an estimate on the number of times I have brought my American experiences into my lectures – I am also hoping to build on this by promoting my tour to the FE side of the College which would help to strengthen department links within the organisation as well. Wherever possible, if there is a topic of interest that means I can bring in the WJCB tour, I relish the opportunity.

Alongside College lectures, I have also presented my findings to the Norfolk Farmers Trust, members of the East Anglian Jersey Cattle Society as well as a number of clubs in the Norfolk and Suffolk Federation's of Women's Institutes. The PowerPoint presentation I have used is shown in the appendix section. Being keen to share my travels, a lot of my friends have commented that I'll tell anyone who'll listen what I experienced which in many ways is true. I often joke that I can talk until the cows come home; the truth being that in this case, it's quite true!

I was also keen to share the tour with the UK Jersey Society. An article I wrote for the Society magazine (The JT (Jersey Times)), unfortunately was not published. This was due to the fact that the UK Jersey President, attended part of the Conference and had also written an article. It was deemed that my article was too similar to the President's which is not hard to believe seeing as we were on the same

trip. I couldn't help feeling that the Society had missed a trick by including a younger member's experiences on a tour that could potentially be of interest to many members, young and old.

Conclusion

The three week tour I undertook made a massive impact on my thoughts about the US dairy industry. Despite the miles, the challenges that are faced by UK farmers are replicated throughout American farms.

The cost of production, rising input costs, decreasing milk prices, welfare, production techniques, fertility and genetics and adding value to individual enterprises were all common themes that came into conversation throughout the tour. These subjects seem to be universally communicated but topics such as labour recruitment as well as retention and family succession, again seems to be issues that need to be addressed but are often pushed to one side.

The tour provided a platform to promote and highlight some of the most successful and progressive Jersey breeders in the US; some were very honest with their views on labour and future family plans but naturally, these are sensitive areas of any business that needs to be discussed with care.

I took the time to ask a number of producers on the farms visited as well as the other attendees on the tour whether they have labour issues on their enterprises.

The answer came back very similar in lots of cases. Many of the farms visited were family-run farms that relied on family members to offer help and support (some on a part-time basis) – in many of these cases they often have employees with a Hispanic heritage who are keen to work because finding labour is difficult. This is very similar to many parts of the UK, especially in the location that I am based in whereby a number of Eastern Europeans have located to, to work on livestock farms. With Brexit looming in one year or the next, labour will be something that we too, in the UK, need to address within the agricultural community.

I also enquired about the opportunities for agricultural students in the US. I was impressed with the dairy club at Ohio State University – they compete against other Colleges and Universities across the country in a number of events. I really like this style of competitive nature that not only gives students the chance to project-learn new skills but also gives them an insight into other aspects of the dairy industry.

Whilst I am aware of specific College challenges and competitions in the UK, I am left wondering if there is scope to build on a similar scheme. Competitions and events could be a real way to build industry knowledge as well as giving students the chance to build their own skills base to make them more employable in the long-run.

A number of farmers were interested in taking on short-term placements for students and interns and this gave me encouragement that I could use my American contacts to encourage some of my apprentices to experience farming outside of the UK.

One of the issues I have faced with my own and students experiences in the industry is that when someone is keen to work, they are almost pushed too far. Working an 8 hour day quickly leads to 12 hours and before too long, a contract of 6 days a week, often becomes 7 leading to dissatisfaction, low employee morale and in many instances, leaving the industry.

Keeping hold of labour and making employees feel valued is a key point of the farming community that is often over-looked.

I will be encouraging my apprentices to look at the wider picture; gaining experience is vital but that doesn't necessarily mean you have to stay in the UK to do so. See a bit of the world, experience new working practises and cultures and learn; staying in the same place may seem the easy option but

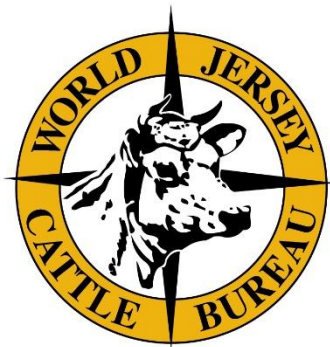
ultimately there is life beyond the British Isles. I now wish I had convinced my younger self of this point over 20 years ago!

The memories I have from the tour will remain with me for a lifetime. I am so grateful for the opportunity to travel and to be able to share my experiences.

I saw more of America in three weeks than I ever deemed possible and with that came the chance to meet some fantastic people along the way – many who have become firm friends. As a result of the tour, I could now visit a number of countries with acquaintances and friends, all simply linked to the love of a little brown cow.

It is safe to say that Jersey cattle may be small, but they are a force to be reckoned with; on a worldwide scale.

I am eternally grateful to The Farmers Club Educator Awards for allowing me the opportunity to experience such an amazing tour with fantastic memories, new friends and the chance to learn about American farming.



US Jersey



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http://royaljersey.co.uk/about_the_rjahs/the-jersey-cow/

<https://www.statista.com/statistics/194297/total-number-of-cattle-and-calves-in-the-us--since-2001/>

Farm and Breeder websites and social media accounts linked to the farm visits

John B. Cole (Research Genetic Leader of the Animal Genomics Improvement Laboratory, ARS, USDA)
– various publications through USDA

Various articles published in Hoard's Dairyman Magazine, Progressive Dairy, American Dairy Man,

Conference papers printed by the AJCA and WJCB

Appendix

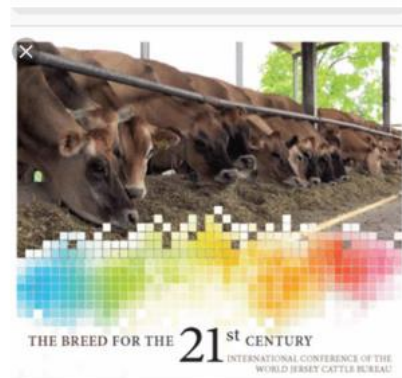
Slides from the PowerPoint presentation that I have presented since returning from my travels

Norfolk to America

(with thousands of Jersey cattle along the way)



Helen Reeve



USJersey







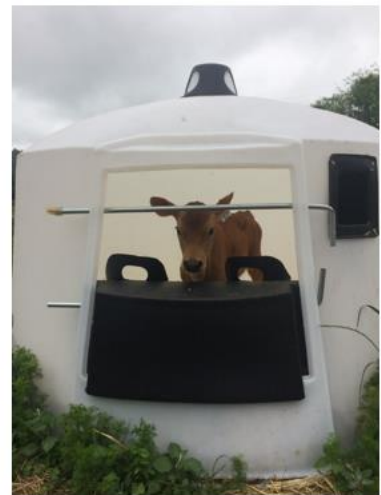


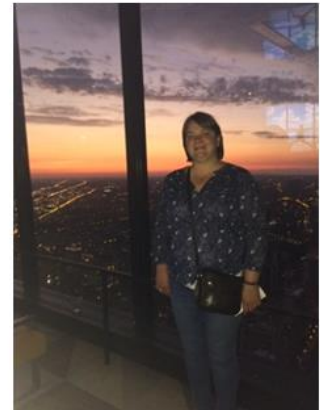








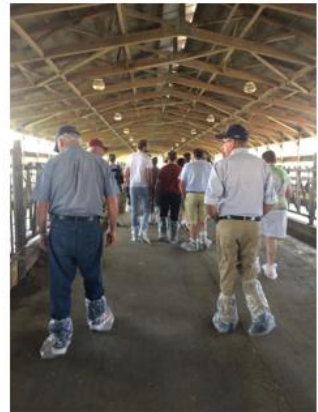


















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