SAYFC Agri & Rural Affairs

Texas Study Tour
8th ~ 22nd November 2025

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Introduction

Following on from previous successful tours in various parts of the world, Texas was the chosen destination for the 2025 Agri and Rural Affairs study tour.

The Lone Star State is the second-largest U.S. state by area and population, located in the South-Central region with a diverse landscape from coastal plains to deserts. Bordered by Mexico, Louisiana, Arkansas, Oklahoma, and New Mexico, Texas spans 268,596 square miles, featuring the Gulf Coastal Plains, interior lowlands, Great Plains, and the mountainous Basin and Range region.

The agriculture industry in Texas covers approximately 130 million acres, 78% of its landmass with over 247,000 farms and ranches of which 93% are family owned and operated the highest number in the US. Nearly $25 Billion in agricultural products are produced annually. It is the leading the nation in cattle, cotton, sheep, and goat production, Texas covers 125–127 million acres of farmland. It is also a major producer of poultry, dairy, hay, and diverse crops like sorghum, pecans, and citrus. During the tour the group visited as many of these industries and areas as possible in the time available.

As with every tour, a theme is chosen to give the group a focus while travelling and in preparation for the study tour the group felt that an important discussion in agriculture currently is resilience, both in individual farm business and the sector as a whole. With the many changes and challenges facing the industry each business needs to work towards a viable future and the group felt that this would be an important discussion to have with the businesses visited during the tour.

With this in mind the selected tour theme was ***'Farming Resilience'*** and the group explored this topic across a range of agricultural sectors to gain an insight into how farmers run their businesses and plan for the future in an ever changing industry.

Group Selection Process

Once the location was announced applications were opened to all current members of SAYFC. Applicants were asked to complete an application form detailing why they wanted to go on the trip, what they hoped to learn, why they would be a suitable candidate and finally how they planned to share what they had seen with fellow members and the wider industry during the tour and on their return.

We were delighted to receive over 80 applications, the majority of which were of a very high standard.

Catherine Telfer (nee Sloan), Iain Wilson and Andrew McGregor (all previous Agri & Rural Affairs Chairs) reviewed the anonymous applications and selected candidates who were invited to attend a face to face interview with an independent panel of Gilmour Lawrie (Agriscot), David Lawrie (International Trust), John Davidson (NFUS) and Fraser Graham (current Agri & Rural Affairs Chair).

The panel were impressed with the quality of all the individuals who made it to the interview process and after a lengthy discussion, selected 16 delegates who would be part of this trip of a lifetime tour to Texas along with Fraser.

The Group

All members of the group are involved in agriculture, some directly farming, whilst others are in careers supporting those at grass root level including a vet, accountant and consultant.

All are members of the Scottish Association of Young Farmers, and represent a wide geographical spread of Scotland from as far afield as Caithness in the North to Dumfries in the West and Border Federation in the East.

The group were accompanied by Janelle Anderson, SAYFC staff member, who coordinated the tour along with staff from Tarleton State University who organised the visits during our time in Texas.

Name	**Club**		**Name**	**Club**
Fraser Graham	Crossroads (Agri Affairs Chair)		James Hay	Kinross
Emily Black	Callander		Viki Johnston	Forfar
Euan Bremner	Halkirk		James Kennedy	East Lothian
Ailsa Buchanan	Stranraer & Rhins		Ewan Lambie	Strathearn
Ross Campbell	Machars		Craig Marshall	Stewartry
Rebecca Duncan	Callander		Andrew McMillan	Bute
Beth Farmer	Kinross		Jack Mckinna	East Kilbride
Katie Forster	Ednam		Cameron Smith	Kinross
James Hamilton	Avondale			

Throughout the trip the group were posting daily updates on their dedicated Instagram page along with writing a daily blog which was shared on the SAYFC website. These posts were also shared via the Association's social media pages.

This report details the visits and tours experienced throughout the trip. Each delegate came home with different highlights and we look forward to sharing these with you in this report.

The Tour

We departed from Edinburgh airport on Saturday 8th November, flying to Austin via Amsterdam.

Over the course of the next 14 days, we toured as much of Texas as possible in the time we had available. We travelled east from Austin to Tyler and Nacogdoches then back to San Antonio before heading north via Austin to Stephenville. This was followed by a six hour journey north to Amarillo and Lubbock in the Texas Panhandle, with our final day spent in Fort Worth before heading south to Austin for our flight home on Saturday 22nd November (see maps on page 33).

Day 1: Sunday 9th – Written by James Hay, Kinross

Texas Capitol Building and Meeting with the Texas Farm Credit Association

We kicked off our first full day in Austin with a group tour of the Capitol building from Patrick Dudley, husband of Dr Jean Lonie from Tarleton State University who has been the key contact in the planning of the whole trip. Patrick used to work in the Capitol building in the Texas Department of Agriculture, his role is communicating with the state administered levy boards which cover 12 different commodities. Several of the key commodities are levied by federal boards like eggs, sorghum and dairy.

The Capitol building of Texas was built in the 1880s by a large number of Scottish stonemasons, it had an underground extension in the 1990s creating 2 floors underground and 2 floors of car-parking. The magnificent building housed both the Senate and the larger House of Representatives. Patrick gave us a great overview of both the history and the operation of the state politics. The Battle of the Alamo has been an influential point in the history of the state and its relations with Mexico, it's neighbour. The Texan goddess of liberty faces south, towards Mexico unlike all other US Capitol buildings which face North. Patrick did emphasis the Texan approach to being different from other US states on multiple things.

Following our tour around the Capitol building we hopped on the coach for a 4 hour drive to Tyler, en route we stopped for some lunch at a mall with 150 petrol pumps, the scale of most things in Texas is non-comparable to Scotland. We met with Joe and Kyle from Farm Credit who kindly provided us with a great steak dinner. Farm Credit is the largest bank in Agriculture in the USA and is a cooperative owned by its farming customers which is quite a common business structure in the USA for banking institutions, they were surprised to hear we have no coop banks in the UK. Another key difference was although they have nearly 40% of the lending exposure to agriculture in the US they have numerous competitors and were shocked to realise how few banks we had facing agriculture in Scotland and the UK.

The timing of this meeting was useful to gain a business insight into the current state of the different farming sectors in Texas, similar to the UK, beef is resilient and Joe alluded to a lot of recent lending towards herd expansions off the back of this. Cotton is a large commodity in Texas and we passed a few mills and farms on the way to Tyler, they are currently experiencing a depression based around market pressures from Asia due to Trumps tariffs, however good yields have been keeping them afloat.

Issues in the sector sounded familiar, the ageing population of Texan farmers, average age being 64 which is higher than Scotland at 60. Related to this access to land for new entrant and young farmers was a huge problem with the bank being the only option to provide start-up capital. It was interesting to hear how interest rates seemed substantially higher and the higher loan to value rates that were offered compared to what we were aware of in Scotland. The value of mineral rights owned on farmland were interesting and untied to the land as well so a farmer can own the land but not the rights to minerals on the same plot, with the prevalent oil industry in Texas mineral rights are not readily traded and are a 'goldmine' if owned.

We presented Joe and Tyler with a token of our appreciation and they were delighted to host us in Tyler, which Joe was very proud to call his hometown.

Day 2: Monday 10th November – Written by Emily Black, Callander

A Day with Texas Forestry Association and Dinner with Texas Dairy Association

Our first full day in Texas was a great one! We spent the day with Rob Hughes from the Texas Forestry Association, who gave us a fantastic insight into forestry here in the Lone Star State. Rob and his team took us out to a plantation where we met Lauren, Caleb, and the foresters, and got to see the whole operation in action from trees being cut using impressive machinery to being loaded onto lorries. The boys were very much in their element…

We then visited another part of the forest where young trees were being planted fascinating to watch as each seedling was carefully placed in the ground using specialised equipment and a clever trailer setup.

Next, we toured a mill production site, following the full process from the moment the lumber arrives from the forest to when it's manufactured into a range of products. It was amazing to see how it all ties together, a truly efficient and sustainable system.
To give you an idea of scale, Texas has over 12 million acres of forestry, with around 95% used in-state and only 5% exported, mainly for the construction industry. Rob's knowledge, passion, and enthusiasm were infectious, and we all came away with a much deeper appreciation for the forestry sector in Texas.

After a great day in the woods, we were invited to dinner with the Texas Dairy Association. It was a fantastic evening of Texan cuisine and great conversation with local dairy farmers, some milking over 30,000 cows, which blew our minds!
It was fascinating comparing our dairy systems, learning how their rations are mostly made up of corn, sorghum, and other local feeds.

Day 3: Tuesday 11th November – Written by Cameron Smith, Kinross

Introduction to the Texas Poultry Industry and Processing

On Tuesday morning after a great evening the night before meeting with the dairy association and our lumber host, we were off to visit the next big industry of east Texas, Chicken.

We headed off early to Wayne Sanderson farms, one of Texas's biggest chicken growers and producers, with farms from rearing, egg production, boilers and breeding. Having to sign our non-disclosure forms on the bus, we were eager to see what we were going to see, unaware we were actually going to visit one of the largest chicken killing and processing plants in the state.

Arriving at the site, we were met with truck loads of empty crates leaving and a que of white broiler hens entering the site, the scale was also displayed by the size of the staff car park with hundreds of cars parked in front of the main building.

We disembarked the bus and headed through security to meet our host Jackie, head of operation at the plant and she was also joined by JC Essler, executive vice president from the Texas chicken association.

After an introduction and welcome we kitted ourselves out in safety gear and split down into groups to head into the plant. What followed was a tour of the production line that can process 265,000 chickens a day, from live hens coming in to being packed and chilled in around 2 and a half hours. The scale and size of the plant was overwhelming, with a maze of elevators and conveyers taking different cuts to areas to be packed or processed. Although the mechanic scale was impressive, the size of workforce was also surprisingly large with 1800 staff working over 3 shifts 5 days a week.

With ear protection in and the noise of the plant, it was a quicker tour round with questions having to be kept for after but the sheer scale and speed was very impressive. The cleanliness of the plant was also noticed and several times we observed quality control being carried out, ensure a very high quality, consistent product was being produced. The final part of the walking tour maybe brought home the scale of the factory though, where we got to walk down to the live hens coming in and being hung on to the line to be then dipped in water and stunned before being killed. This part of the process was swift and efficient, on such a scale though that kept high welfare standards. When later asked about animal protesters and vegans, JC commented that they do everything to the highest standards and correctly but at the end of the day "killing chicken is killing chicken".

Once the walking tour finished we had a chance to talk with our hosts and some of the plant working and had a great selection of questions. Running operations was discussed and the monumental amount of water the plant uses was covered, with close to 7.2 million litres of water used every day in the plant, this is then all cleaned through an onsite treatment plant and then irrigated on hay pasture to return into the ground. Overall an amazing visit with the group feeling quite privileged to be allow in to such a secure facility.

After a stop for a bbq brisket lunch we headed to the headquarters of Cavenders, an original Texas family owned western work wear clothing shop. After a tour round the offices and meeting several staff we got the chance to visit their flagship store in town, where the group then all started to embrace the cowboy culture and purchase boots, hats and shining belt buckles.

Day 4: 12th November – Written by Katie Forster, Ednam & Ross Campbell, Machars

Katie Forster – Texas Agriculture Explained

This morning's session offered an in-depth exploration of Texas agriculture from two leading voices in agricultural policy: Mr. Dan Hunter and Dr. Jim Butler. Mr. Hunter, the State Executive Director of the USDA Farm Service Agency in Texas, is the highest ranking federal agricultural official in the state, with a career spanning Capitol Hill, state government, environmental research leadership, and agricultural advocacy. Dr. Butler, an animal scientist and rancher, has held high level positions with the UN Food and Agriculture Organisation, the Inter-American Institute for Cooperation in Agriculture, and the USDA, and now works across a range of agricultural education and development initiatives.

They described the enormous scale of Texas agriculture, noting that if the state were its own country, their economy would rank sixth in the world. Oil remains the largest sector, closely followed by agriculture. Around 95% of Texas land is privately owned, which shapes both production patterns and the policy environment. Texas leads the nation in beef, cotton, and grapefruit production and ranks within the top five for poultry and dairy. As Mr. Hunter noted, Texas is always harvesting something, with the citrus season currently underway.

The discussion also highlighted the thriving specialty product sectors. Texas has roughly 550 vineyards, including six wines ranked among the top 100 worldwide, and around 250 distilleries, one of which an Austin rum has been recognised as the most popular in Japan. These industries demonstrate the diversification and increasing international competitiveness of Texas agriculture.

Youth development was another important theme. The speakers noted the influence of FFA (Future Farmers of America) in shaping leadership, communication, and confidence in young agriculturalists. They also discussed shifting consumer expectations, particularly encouragement to reduce red meat consumption, which continues to reshape production and market trends.

The COVID-19 pandemic brought renewed focus to food security while deepening the disconnection between consumers and agricultural production. The agricultural trade deficit is widening as land is lost to urbanisation, drought, and alternative land uses that provide higher financial returns than farming.

Despite its strong production base, the United States is now a net importer of food, raising long term questions about resilience and food independence.

Energy and environmental policy add new layers of complexity. Solar developments supported by feed-in tariffs can make non-agricultural land uses more financially attractive than farming. Climate change continues to drive uncertainty and the need for ongoing adaptation, supported by certification frameworks and resilience programmes. Levies charged are reinvested into young farmer initiatives, and government backed insurance remains crucial to managing risk. Disease challenges, including avian influenza and its potential implications for cattle, demand constant monitoring.

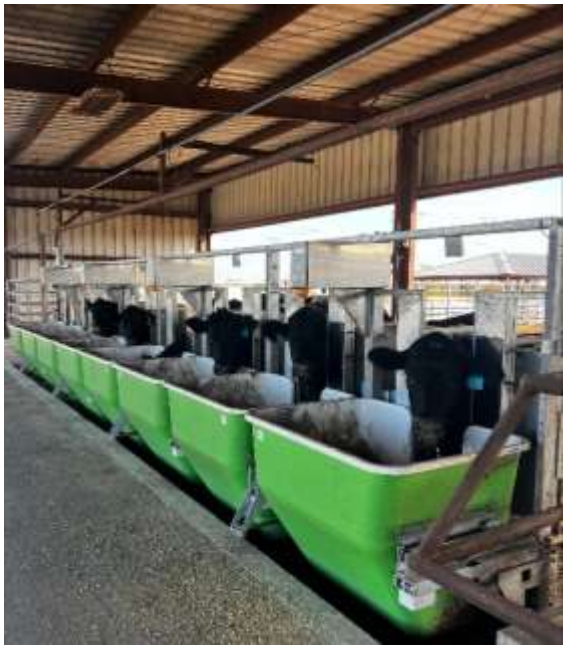
Further insight was provided through Texas A&M AgriLife Extension from Mr. Rick Avery and Mr. Cliff Lamb. Research funding for 2024 stands at around $345 million. With between 1,300 and 1,500 new residents arriving in Texas every day, pressure on land, infrastructure, and natural resources is immense. Agriculture contributes roughly $240 billion to the Texas economy, accounting for around 9.3% of GDP. Wildlife issues were highlighted as a major concern. The threat of the screwworm parasite pose risks, but the greatest challenge is the rapidly expanding wild hog population. The damage to crops, ecosystems, and infrastructure is severe. As Mr. Lamb remarked “We can’t barbecue our way out of this problem” capturing even aggressive control programmes barely make a dent in a population that can triple within a year.

In their final remarks, Mr. Hunter and Dr. Butler returned to two key themes. First, they emphasised the remarked that the face of agriculture is changing, with more women than ever involved in production, science, business, and policy, reflecting a more modern and representative industry. Second, they reminded us that although they could offer insight and policy context, the greatest learning comes from our peers. It was a fitting conclusion to a meeting that highlighted both the challenges and the opportunities within Texan agriculture today.

Ross Campbell - ST Genetics

In the afternoon we visited ST Genetics Bull stud Texas, the group got a very open and interactive tour of the facility being shown round by Shelby Cook, Call Centre Manager and Gustavo Toro, Beef Director, getting a tour of their semen sorting machines, bull stud and research centre.

ST Genetics is a global leader in cattle genetics and reproductive technologies, The company employs approximately 250 staff members at their Texas base and operates in 22 locations worldwide, including through its international partnership with Cogent.



Total Site Area 1,700 acres and forage is grown and transported from another site to feed the cattle.
Embryo Transfer & IVF Centre Provides reproductive services for both internal use and external clients. Research Centre is designated to monitoring feed intake and methane emissions.
Focuses on first-cross Angus × Holstein cattle as part of progeny testing for bull performance.
Livestock and Breeding Operations
ST Genetics maintains its own breeding herds for both beef and dairy.

- Total Bulls:
- 285 beef bulls
- 600 dairy bulls

ST Genetics also have a procurement team who buy bulls from top herds across the country with most recently an Angus bull purchased $500,000

Sexed Semen
Holds exclusive rights to sexed semen production (4m straws).
Additional Genetic services also extend to white-tailed deer and horses.
Cloning
The company is in involved in cloning elite bulls to enhance genetic progress in a small scale.

Day 5: 13th November – Written by Rebecca Duncan, Callander & Viki Johnston, Forfar

Rebecca Duncan – Gertson Family, Rice Production

We were kindly welcomed to the farm by John and Daniel Gertson , who farm over 1000 acres of rice as their main enterprise, as well as 250 Aberdeen angus suckler cows.
It was a fantastic visit with the whole group fully engaged in learning about an area of agriculture we previously knew so little about.

The main market for the rice crop is for human consumption. Market forces tend to mean the majority of rice is sold as white rice, only meaning it is further processed from brown rice, and much of the nutritional value is lost.
A topsoil depth of 3-4 inches allows for few crops to be grown successfully. The rice crop thrives in the shallow soil, which lies upon clay. The layer of clay holds the moisture on the surface, creating the perfect environment for the rice crop to grow.
The crop is sown in march, The rice is harvested twice a year; First In late July, early August then again in November.
With little feed value in the straw, at 5-6% protein, it generally gets mulched back into the soil, and allowed to rest before it is resown the following year.
Combines are tracked to minimise ruts, and compaction to the ground which would reduce the quality of the 2nd crop.
It is important for the ground to be levelled to allow for the water to be held at a level across the field. It is "pre flood" following herbicide application at 5-6 weeks , and then is fully flood to allow the whole crop to lie In approximately 4 inches of water.
Water is a precious resource , costing approximately 200 dollars per acre , with a total production cost of about 1800 dollars per acre.
Both fert and spray applications are done via aeroplane of which the farm owns 2, which have the ability to hold 800 gallons of liquid, flying over the crop at 140mph, 20-30 feet from the ground.
The crop is harvested at 15-20% moisture and is then stored and dried further on farm.
Although the family has invested heavily in rice production, and continues to do so, he is not optimistic about the future of rice farming in Texas as a result of an annual decline in water in the state, which seems to have been a theme in every enterprise we've seen. A reminder that climate change is challenging farmers across the globe in every form of agriculture.

Viki Johnston – J.D. Hudgins, Inc. a quality Brahman breeder

This tour was led by company president and 5th generation farmer, Coleman Locke and his son John. Coleman and John gave us an in-depth run down of the business and its history. One thing that was of interest was that the business is split in to 8 divisions. All 8 are raising Brahman and are all branches of the family tree but work independently of each other. There is ~ 1800 cows across all divisions. Across the 8 divisions there are 15 full time family members working in the business, selling 300 bulls a year, most of which are sold privately. Each animal is branded with the company's overall brand and then with its specific division's brand too.

The business has been farming Brahmans since 1915 and have sold genetics to 43 different countries, with the first being sent to Australia in 1933. John stated that semen sales have dropped recently due to the increased popularity of IVF, one straw can do a lot more now a days.

After the introduction and in-depth question session from the group, we headed out to the ranch to see the bulls. While out on the ranch, Coleman and John continued to tell us about the business. We were told that in his 81 years of life Coleman has only ever seen two c-sections on his cows. All cows calf outside naturally with very little to no human intervention. When asked about the temperament of the animals (as they are known to be more highly strung) John replied "any dummy can work a Hereford", implying that they may not be for everyone to work but once you learn how to work with them and read them etc. they aren't as bad as their reputation suggests.

After lengthy discussions in small groups with Coleman and John we headed back to the office. Coleman stated he could have kept us there until "the day after tomorrow" talking all things Brahman and cattle but unfortunately John had a football game to go to and we had a journey to San Antonio to make. After a quick vote of thanks to let John get away, we left Hungerford and headed West to San Antonio.

Day 6: Friday 14th November – Written by Beth Farmer, Kinross

Heartbrand Beef and Visit to Polish Heritage Centre with talk on the Texas Agricultural Lifetime Leadership Program from Dr Jim Mazurkiewicz

Our first day waking up in San Antonio and we jumped on the bus first thing and headed East for an hour and a half to Heartbrand Beef. This is a family ranch, running 3,000 Akaushi cows over multiple farms.
Firstly we stopped in by their distribution shop, where they pack up their Akaushi beef and ship frozen to households all over the US, this was a small facility and probably not what most of us expected, but

the domestic online market is only about 2% of their meat sales. We learned here about the marbling of the meat, the muscles less used on the beast are the best marbled, for example the ribeye, strips and flat iron. The pricing of the beef is a limiting factor to the general public with the current cost of living, creating a niche market, a 14oz ribeye coming in at $55 (£41.75) or a 10oz tenderloin fillet $90 (£68.32). Although being a niche product the Heartbrand company finds that their customers tend to become loyal and prioritise the quality of their beef over price, they use social media campaigns and emailing to help the market grow. Currently they are killing 350 head a week to meet demand, these will be around 26-30 months of age and should kill out at 875-900lb hot carcass weight, they utilise all of the carcass and can reduce kill numbers to ensure they never have too much in stock. The majority of the meat is shipped out directly to a bigger distributor that sells it on to restaurants and shops.

Following on from there we headed for the main ranch for Heartbrand Beef, where we were greeted by the head cowboy, Noe, he spared a couple hours to show us round and give us some more on the ground knowledge about Akaushi cows. Akaushi are a red wagyu cow, with a great marbling quality, although they aren't as well marbled as the black wagyu they tend to finish 3-4 months quicker than them.

The Akaushi also cope very well with the heat, meaning they are well suited to the high Texas temperatures!
On the ranch they are running 1,100 cows calving twice a year. This is purely a cow calf operation which is what we would refer to as a suckler herd. They wean the calves and send the steers and heifers that haven't made the cut for breeding to their feed lot which runs separately, ideally they only keep as many bulls entire as they need and will cut the rest, bulls don't tend to marble as well as the heifers do.

They select breeding heifers by eye rather than by figures, as well as breeding their own replacements they also sell bulls, 300 of which being sold at 18 months of age, averaging between $5,800 and $18,000. Through selling their bulls to ranchers near by they offer a buy back programme, in which the other ranchers will buy their bulls use him and then Heartbrand will buy back the calves, so long as the calves are 50% Akaushi they can be certified.
As well as learning lots about the cows we also met some working horses, all cowboy work on Heartbrand ranch is done on horseback, this helps settle the cows temperament and keep them calm.

After this we had a quick lunch stop at H.E.B. This was what can only be described as overwhelming… the sheer scale and variety of everything is amazing. H.E.B is a premier, privately held supermarket chain operating over 435 stores across Texas and Mexico. Renowned for its strong community focus, high-quality private-label brands, and excellent customer service, H-E-B frequently ranks as the top U.S. grocery retailer

For our last visit of the day we went to the Polish Heritage Centre in Pana Maria, we were given a flying tour round the museum before having a talk from Dr Jim Mazurkiewicz.
Dr Jim is the director of the Texas Agricultural Lifetime Leadership programme, which runs over two years with 24 successful applicants. It is designed to develop the candidates and push them outwith their comfort zone, with 520 hours of lecturing and training.
Alongside being in charge of TALL, Dr Jim has many other roles and responsibilities, he was a great speaker to listen to and it is inspiring to listen to someone so passionate about agriculture, from grassroots to professors and everything in between. He encouraged us to grow and learn as much as we can, take every opportunity we get and continue to push the agricultural industry forwards, as he quoted us “Everybody wants the sausage but nobody wants to kill the hog”.

Day 7 & 8: 15th & 16th November – Written by Fraser Graham, Crossroads

Saturday marked the midpoint of the trip and a chance to catch up with ourselves, spend some free time in San Antonio and enjoy some social activities. The group was keen to explore a few different authentic Texan cultural experiences whilst also catching up on some laundry.

After a good breakfast and debrief on the trip so far, some of the group headed out to NARDIS Gun Club to blow off some steam. The gun culture in America is a stark contrast to back in the UK, with most citizens owning multiple firearms, and often will be concealed carrying on their person whilst out in public. It was fascinating to hear from the staff at NARDIS who were fantastic about getting us up to speed on gun safety, and the legalisation behind gun ownership and possession. A number of times it was highlighted that responsible ownership is taught from a young age and the respect towards concealed carrying and being safe when out in public is very clear. With a number of the group holding shotgun, firearms and air rifle licenses back in the UK, it was a real experience to compare this culture which seemed very far away from a 'day at the clays' back home. Thankfully we managed to leave the range in one piece, with a few paper targets souvenirs peppered with holes showcasing our questionable level of accuracy and grouping! A truly exhilarating experience!

In the afternoon we took the opportunity to take in another of Texas' great cultural experiences, College Football. We couldn't turn down the opportunity to take in a football game during our time in the US, and see how popular matches are as part of the university experience. College football is a huge industry in the states and boasts an incredibly passionate following on and off the field. Parking lots around the stadium and campus are filled with food stalls, tailgates, coolers, merchandise, and live music. The atmosphere was amazing. On the field it was the Incarnate World Cardinals hosting Southeastern Louisiana Lions. Up to the top of the bleachers, we had an excellent view of the field and spent the afternoon doing our best to work out how the game was actually played! Watching a game of football is a sensory overload, with fast paced action on the pitch, the crowd getting behind their teams, the smell of popcorn and corn dogs, cheerleaders demonstrating their routines and abilities, and the college's marching band providing a very patriotic soundtrack. It was a spectacle and a fantastic experience to watch the game. We even managed to get some photos with players on the field after the match. They were certainly bemused by the kilts and why a bus load of Scots were there to support them!

Into the evening we headed back into San Antonio city centre and River Walk area for a classic Mexican style dinner. The centre of San Antonio features an area full of bars, restaurants and shops lined along both sides of the River, with many quaint stone bridges, palm trees and river boats illuminated with fairy lights hung from the trees. Street musicians were entertaining diners up and down the river walk and waiters serving tables precariously close to the waters edge! A busy bustling area for locals and tourists gave the area a magical atmosphere for us to enjoy the warm evening socialising and sharing stories from the day.

Sunday morning was the last of our free time in San Antonio, so it was the last chance to take in some of the local history and culture before heading up to Stephenville. We took the opportunity to visit the site of the infamous Alamo. Originally built as a Spanish Mission founded in 1718, it was later claimed as a military camp for the Texan army and the last line of defence during the Mexican occupation. In 1836 it was laid siege by the much larger and better equipped Mexican Army and on the 24th February, after a fortnight of gallant defence, fell into Mexican hands. The brave sacrifice by the 200 Texan soldiers would resonate around the state, and the "remember the Alamo" rallying cry would go on to be the motivation that resulted in Texas later claiming Independence in its own right. The original stone walls of the building still stand strong today are now designated a UNESCO World Heritage site.

After some quick souvenir shopping and a sandwich stop, we said farewell to San Antonio and began our journey north to Stephenville, the home of Tarleton State University. On route to Stephenville, we were warmly welcomed for an al-fresco dinner and BBQ with the head of the Texas Sorghum Association, Wayne Cleveland, in the gardens of his own house just outside the town of Salado. Nestled in a beautiful garden adorned with fairy lights and the gentle sound of Cicadas, Wayne and his wife Cathy laid on a tremendous feast of barbecued brisket, sausage, pork, tacos, sheet cake and much more besides, all washed down by a margarita or two!!
We had a quick introduction to the Texas Sorghum industry from Wayne and his colleague Ty Wilson, an interesting crop that was new to many of the group. It was a real pleasure to spend time with Wayne, Cathy and their family and receive their very kind and generous Texan hospitality.

The last bus journey of the day would then take us up to our accommodation for the next few nights, Hi Point Ranch and GKB Cattle, where we would settle in and prepare for the busy week ahead!

Day 9: Monday 17th November – Written by Ailsa Buchanan, Stranraer & Rhins

Tarleton State University

After arriving last night at Hi Point Ranch, we began week 2 visits with a trip to Tarleton State University. We were greeted by the Dean of the Agricultural College. Tarleton State was founded in 1899 as an agricultural university and though it has grown and diversified into other courses since, its roots are still firmly in agriculture.
We met with some of the team of professors and admin staff where we learned more about the university, its structure and recent growth. We were also given the opportunity to proudly share with them what SAYFC does as a whole, as well as our individual roles and passions within the industry and the organisation.
Following on from this we sat in with a class on communicating ag to the public and met with students from the university. After discussions with the students, it was evident that a lot of the challenges such as getting young people into ag and financial constraints which are present in Scotland, also exist here in Texas.
This was followed by a tour of the campus and its facilities which were very impressive.

Over lunch we heard from Dr Jean Lonie About the development within the university of the new 'Centre for Rural Resilience'. The overall principle of this is to provide tools to improve the holistic approach to healthcare (physical and mental) for medical professionals working in rural areas with farmers and ranchers. Currently they are developing mental well-being programmes and have used those from other countries as a basis including SAYFC's 'Are Ewe Okay' Campaign.
A favourite quote of the day came from the discussions surrounding the underlying causes of mental health challenges in the rural communities with many farmers and ranchers feeling increased government pressure and limited interaction between farmers and policymakers - "Shoes on the carpet should never tell boots on the ground what to do'

An Overview of the System
We toured the University's research farm after lunch. Much like back home, it is becoming less common for higher education institutes to have their own working farms due to the increasing costs of running and decreases in funding. Tarleton State University is in a fortunate position to still be able to provide students with hands-on experience and practical education.

The dairy at Tarleton State University is formed as part of a contract with a dairy farm who run around 8000 cows over multiple operations in Texas and California. They run a variety of breeds including cross breds, Holsteins and Jerseys as well as multiple others. Currently, they bring cows back to the barn at Tarleton around 35 days in milk and are kept at the facility until dry-off. All heifer rearing and dry cow management is done off-site. They are milking between 380-400 cows through a 24 point rotary parlour with ACR. At present, they are not recording daily yields and instead are milk recording yields fortnightly and milk quality parameters monthly by manual recording. This is an area the research team have highlighted for improvement and hope to have automated recording in the near future.

Diet and Performance Review

Cows at the facility are being fed 23kg DMI per cow per day. The TMR has a DM of 51% with corn silage making up 40% of the TMR. Interestingly they also use tortillas as a by product of the human food industry as part of the ration. Yields and composition on this unit are comparable to average in the UK with average daily yields of around 50L and 4.2% butterfat and 3.7% protein.

Growth Hormones, Health and Welfare

We discussed the use of somatotropin (growth hormone) within the dairy industry. It is still widely used with protocols involving administering it every 2 weeks by intramuscular injection. This practice has been applied to heifers to achieve growth targets faster for being eligible to breed, with some starting to inseminate as early as 12 months. Currently they are not using this within the setup and we discussed the main drivers for reducing the use being both public perception and the negative impact on longevity. Cows are lasting on average 2.5-2.7 lactations where growth hormones have been used.

Lameness is a significant problem within the herd here, as well as nationally due to the common predisposing factors as well as the high energy content of the concentrates fed. Pregnancy rate varies significantly from 17-37% and is heavily impacted by heat stress. All mating is done through AI and Ov-Sync programmes are used relatively routinely. Control over the use of HP-CIAs appears to be less regulated in the US compared to the UK.

Weekly vet visits are used mainly for fertility management as well as identified lame and sick cows for intervention.

Areas of Interest for Current and Future Research

Gabriela Pérez-Hernández is the Assistant Professor & Director of the Southwest Regional Dairy Centre. Gabriela discussed her research interests with regards to heat stress and the impact on milk yields, fertility and overall health and performance. Gabriela's future research is likely to based on blood flow and nutrient delivery to the mammary gland when cows are experiencing heat stress.

Overall there were many similarities and differences between the challenges faced within the Texan and UK dairy industries with some key take home messages for us all:

* The worldwide dairy industry is under pressure from the public and how they perceive management strategies
* Dairy farmers have very little influence on the price set for milk with the overall economic picture in terms of price per litre being similar in both countries at present.
* Lameness, fertility and mastitis are common denominators as the major challenges from a health perspective.
* Heat stress is a huge problem in Texas due to the high temperatures and humidity and whilst this is relatively less common in the UK, the rising temperatures we have experienced over the past few years make it something we are likely to see more and more of.

Tarleton State - Agrilife Extension

Overview of Peanut Production within the US There is currently around 250,000 acres of Texan land planted with peanuts and it is the only state in the US to grow all 4 types of peanuts.

In order for peanuts to grow, they require a sandy loan soil type with a pH from 6.0-7.0. Planting takes place between April and July and depending on the cultivar of peanut it takes between 120-130 and 140-150 days to mature. Throughout the growing season they require up to 8 fungicide applications but no fertiliser applications as they are a legume - leaving behind 45kg/ha of nitrogen for the following crop.

Peanuts are harvested whole and sold within the shell yielding between 3000-4000lb/ac. The sheller pays the producer on pod weight (around 50% of this is nut) and how they grade. As all peanuts require shelling, this part of the supply chain dictates markets and pricing.

Research Interests - We met with Dr Simpson who has been an industry leader for 64 years and is a world famous peanut breeder. One of Dr Simpson's main accolades was the introduction of nematode resistant genetics after bringing in wild peanut species from Peru. This is of huge significance today as no more germinal organisms are allowed to be brought in, therefore they are maintaining the collection through cuttings and freezing of seed. The centres main focus is breeding hybrid varieties and genetic advancement. These types of research and development projects are key to enabling the peanut industry to be more resilient to ever-changing disease and pest challenges.

New varieties take a significant length of time to from the initial laboratory planning stages through to release and can take up to 20 years. The research centre here are working on an 8-10 years as an average length of time for first cross to release going through the stages of: breeder seed, to foundation seed, to registered seed.

We visited their trial plots and greenhouses to see first hand where they grow different varieties and harvest them to go for further lab analysis.

This was a very interesting visit as peanuts are not something that can be grown in Scotland's current wetter and colder climate.

Day 10: Tuesday 18th November – Written by Ewan Lambie, Strathearn & James Hamilton, Avondale

Ewan Lambie - Diversified Pecan Farm, San Saba

1. Introduction

As part of our study on agricultural diversification and value-added food production, we visited a pecan farm and processing business located in San Saba, Texas. San Saba is recognised as the Pecan Capital of the World due to its favourable growing climate and long history of pecan cultivation. The aim of the visit was to understand how traditional farms can enhance resilience by expanding into direct-to-consumer markets.

2. Farm Background

The farm has been family-operated since 1888, when the original owners emigrated from England and settled in Texas. Early generations were involved in pioneering research on pecan varieties, contributing several cultivars that have influenced the modern pecan industry. Today, the farm encompasses approximately 1,000 acres of pecan trees and remains under family ownership.

3. Production Practices

We were shown the full production cycle, beginning with the orchard itself. Key observations included:

- Harvesting: Pecans are collected from October onwards using a mechanical tree shaker followed by equipment that gathers nuts from the ground and grades them. Annual yield is typically 250,000–300,000 lbs.
- Management: The orchard uses drip irrigation and targeted nutrient application, especially nitrogen and zinc sulphate. Livestock integration plays a role: Angus cattle graze the orchard after harvest until August, helping manage ground vegetation.
- Environmental and wildlife pressures: Pests such as crows, feral pigs, and deer pose challenges, although fencing reduces damage. Early frosts can shorten the production season.
- Varieties: The farm grows both native and hybrid pecan varieties. Native trees require less management but produce lower yields, while hybrids offer higher productivity.

4. Diversification Into Value-Added Products

A key focus of the visit was how the business has diversified. In 2002, the family began producing pecan-based products for direct sale. What started as a small hobby operation has now expanded into a thriving enterprise employing around 20 staff in the bakery and processing area.

Products include fresh and frozen pecans, baked goods, and more recently chocolate-coated pecans, which the company began coating in-house last year. The coating uses a ratio of 3 parts chocolate to 1 part pecan, with chocolate sourced from within Texas. Fresh pecan products have a shelf life of around 4 months, while frozen products can be stored for up to 2 years.

To maintain supply for processing, the business also purchases high-quality pecans from other growers.

5. Marketing and Distribution

The company sells through a combination of:

- Wholesale
- Direct-to-consumer online sales
- Business-to-business supply

An external marketing company manages branding and customer outreach. Products are shipped nationwide, with delivery typically taking 2–5 days, including for chocolate products. A small proportion is exported internationally.

6. Economic Importance of Diversification

Farm management emphasised that relying solely on raw pecan sales would make the business financially vulnerable due to price fluctuations and high production costs. Value-added processing allows the business to capture more of the profit margin, providing stability and enabling continued reinvestment. This approach has been essential for the long-term sustainability of the farm.

7. Conclusion

The field visit provided valuable insights into how a traditional agricultural enterprise can adapt to modern challenges through diversification and direct marketing. Diversification is something we have not seen a lot of so far during our time in Texas. The combination of established orchard production, value-added processing, and national distribution has allowed the family business to future-proof itself while continuing a legacy that began over a century ago. The visit illustrated the importance of innovation, product development, and market expansion in sustaining rural agricultural businesses today

James Hamilton - GKB Cattle

In the afternoon our visit GKB cattle began at their sale barn. Gary and Kathy Bucholz talked us through their cattle breeding business, which farms 6000 momma cows across 5 different ranches across the state. They breed Hereford predominantly, but combine this with Angus and Brahman. These breeds are crossed to make hybrid "tiger stripes" (Hereford/brahman), brangus (Brahman Angus) and super baldies (brangus Hereford). They host an on farm sale, selling 300 bulls through the ring with additional private sales of semen, embryos, show calves, females and bulls throughout the year.

The sale barn itself was a seriously impressive building, with a custom made sale ring, back pens and cattle fitting set up. Gary talked us through the decisions he's made around designing the system, focusing on improving the experience for buyers, reducing stress on bulls, and improving the flow, pace and safety of each sale.

We moved back to the bus and drove round their outlying land, viewing holding pens, synchronised AI centre capable of handling 700 heifers, and eventually to their machinery yard. As with everything else, it was a proper job, with a full line up of tidy kit including tillage, sowing, hay making and harvesting equipment. Much of this equipment was put to use clearing trees and improving their grassland, something we have seen very little of in Texas.

The highlight at this yard though was undoubtedly their fire station. Due to the low rainfall and vast areas of scrubland they live with a very high risk of fires. To combat this GKB have invested heavily in a fire station at each of their ranches- with a full complement of tankers, trucks and a fire engine capable of flattening wire fences at speed. The entire workforce was trained up in operation of this gear, and are prepared to respond quickly to any fires in the community. Oxygen masks were fitted to all trucks, and are deployed in teams of two for safety.

The whole enterprise was built with a no expense spared mentality, and Gary made clear he believed that a job was best done right the first time. Their attention to detail with all infrastructure was second to none, built off the back of a lifetimes experience ranching.

As much as the ranch was very special, Gary and Kathy themselves were the most impressive part of the visit. They had a fantastic drive for success, an eye for perfection and a genuine care for their staff. At 75 years old they were still hungry for progress, with a new show barn in construction and 1600 acres of native grassland being improved.

Before we left GKB and headed back to our fantastic accommodation at Hi Point Ranch, Gary left us with some words of wisdom. Simply to believe in ourselves.

Day 11: Wednesday 19th November – Jack McKinna, East Kilbride & James Kennedy, East Lothian

Jack McKinna - F-Troop Feeders

The day kicked off with our final morning at the Hi Point Ranch, which has been our base for the past few days. This began our longest day of travel on the bus with a 6 hour journey towards the Panhandle area of Texas. We stopped for lunch at River Smiths chicken and Catfish.

We then headed for a Visit with F-Troop feeders who are a family owned and operated farm and feedlot operation, farming roughly 7000acres and feeding on average 30,000 cattle per day. We first arrived at one of their feed storage facility's where we were met by Landon Friemel, whose family own the operation. Landon is in charge of the feed storage and farming side of the operation. The facility was bought in 2018 and can hold over 9000t of feed when full. The operation is growing sorghum for silage production and purchasing corn from over 64 local producers within a 50 miles radius. The facility will be filled twice a year and with all loads weighed in and moisture tested before going into storage. Because they are the end user of the product they can pay slightly better than what farmers are being offered and so have built good relationships with producers which also helps the feedlot side of the business and control costs.

We then travelled a short distance along the road to the feedlot which is one of two that they own, where there is currently 13,000 head on feed at the yard. We then met with Landon's dad who manages the feedlot operations, who began by explaining that they work on a B&B cattle system. They were invoicing on yardage and water per day, and per pound of feed per day basis on top of this. They also offer loans towards cattle to support cattle buyers and will occasionally go into partnership as-well. He then showed us the feeding system, feeding three times a day with wagons. The finishing ration is roughly 80% grain by weight and the sorghum is steamed at 200 degrees in a boiler up to 22% before being added to the ration. Compared to UK systems, the biggest difference in the management of the cattle comes in the form of hormone implants as soon as the cattle arrive along with a full vaccination program to cover respiratory diseases, BVD and IBR. The hormones take the form of an anabolic steroid which is used to increase growth rates. They are also using feed additives, such as monensin, which is used to control coccidiosis, and tylosin to tackle foot rot. The use of feed additives are common practice in US feedlots, which is very different to what we are used to in the UK, where we are under tighter regulations regarding use of antimicrobials, and prophylactic use is not allowed. They also use an additive from Elanco called Experior 10 (ludabegron Type A medicated articale) which is a drug approved in the US to reduce ammonia gas emissions in their waste, and although not its primary reason for use, it may improve growth rates and feed efficiency. Although these management practices

would not be common in the UK, the Panhandle of Texas has the highest beef production of anywhere in the world, and to be successful and to remain competitive, your business must be able to scale. Demand for beef is currently extremely high in the states and the need to feed the growing population means these feedlot systems play an important role in food security for the nation.

James Kennedy - Richardson Seeds

As the sun was beginning to set on our first day in the Texas Panhandle we met up with Richardsons Seeds Plant Manager David. He was accompanied by Jarrod and Kyle who all took some time and showed us around their sorghum seed facility. Richardsons, who are now owned by Nufarm since 2009, have been based at Vega for 70 years and with 80% of the world seed sorghum being produced in the Texas Panhandle, their business is perfectly located to find growers to supply them with 5-7000t of grain every year.

The business is solely researching and producing hybrid sorghum seed - grain sorghum, forage sorghum and Sudan grass. Their research work includes a plant nursery and hybrid trials on site to develop new varieties with higher yield, earlier maturity, disease, insect and fungicide tolerance. In order to replicate and maximise trial work in other countries Richardsons run a contra season nursery in Argentina, allowing them to carry out trial work all year round to find more resilient varieties. To produce these different hybrid species, male and female plants are grown separately in the field at regular intervals - grain sorghum for example requires 75% of the field to be female plants and 25% to be male plants. These male plants are sowed in strips for pollination and will then be harvested separately if the strips are wide enough, or they will be mulched into the ground.

As the grain is harvested, their 40 main growers deliver the seed to Richardsons for overwinter storage in their 109 grain bins which totals up at 55 million lb (25,000t). The grain must be under 14% and cool for long term storage as the team will process all throughout the winter period.

When we arrived at the site we firstly seen their original cleaning plant which is still in use cleaning, treating, bagging and palletising seed into a variety of bag sizes depending on destination. Countries who use the metric system will receive seed by the kg and those still on an imperial system will get bags weighed in lbs.

David then took us into their new shed to show us their brand new $8m cleaning and bagging plant complete with cleaner, gravity table and optical colour sorter, all with a completely automated bagging unit. This new plant has five times the capacity of the original one and adds a new level of precision and attention to detail to the whole process, while reducing the labour requirement significantly - a key factor in building a more resilient business as labour availability is increasingly difficult.

The investment in a new plant has enabled Richardsons to create higher quality seed with minimal varietal impurities and a zero tolerance to weed seeds. Their standards are a minimum of 98% purity with a minimum germination of 85% with representative samples from each batch being send to Texas A&M for certification. Crops are also walked twice during the flowering period and regular auditing of the business to enable phytosanitary certification for all seed being exported across the globe to countries such as Pakistan and China.

Once we had finished the tour of the facilities we were invited in for some more Texas hospitality, namely in the form of some barbecued Jalapeño Poppers, Tortilla Chips and Queso. With some music on in the background we even taught some traditional Scottish dancing with a rendition of the Orcadian Strip the Willow!

Day 12: Thursday 20th November – Written by Euan Bremner, Halkirk & Craig Marshall, Stewartry

Euan Bremner - Texas A&M University

We visited West Texas A&M University. Based in the Panhandle it was great to get to visit a University where food production was at the heart of everything they were doing. We were told how the focus was on beef production as Texas harvests 6 million cattle per year, so ensuring the industry is well supported is very important to them. Offering 8 Undergraduate Agriculture Degrees, 4 postgrads and a PHD in systems agriculture, the University currently has 1200 students enrolled in Agriculture.

The main focus of our tour here was the University on site meat lab. None of us were really sure what to expect when we were told we were visiting a meat lab but it was definitely not what any of us expected. A fully functioning slaughter house, production lines, butchery and a shop is what greeted us. The onsite facility has been designed to let students fully understand the full meat process whilst also allowing research to be carried out on animals before and after harvest.

The slaughter house has the capacity to handle 35 cows per day but they run it at 10-20 cows, one day every other week. Averaging 120 cows per year. The main focus is cattle and beef but they have the capability to process sheep and pigs if needed. They employ students to work in the slaughterhouse but

it's not compulsory for them to work as part of their degrees. The facility is more about allowing students to better understand the process to aid learning. It was a fairly simple set up with about 30 staff needed on a working day as not much is automated but it's still an amazing facility and unlike anything we have at home. As its a research facility as well, all the stages allow for samples to be collected. They also carry out private customer kills for a cost as the facility has to run at a profit and isn't just for research. Most of the meat that is processed is butchered and sold in the on campus shop or sold through the University canteen.

Students get hands on with the carcasses with all the rooms being set up to allow group access. We visited a lecture theatre with a hook and rail system inbuilt that allowed for carcasses to be taken out of storage directly to a lecture to benefit learning. The butchery and industrial kitchen could be used by students to experiment with different ways of adding value to beef and a sensory deprivation room allowed taste tests to be carried out without food bias. They also had a lot of research equipment including CT scanners allowing a lot of in depth research projects to be completed. Current projects include research into liver abscess and investigating salmonella in cattle as these are current issues faced by local producers. Overall this facility was incredible and made a lot of us jealous that we have nothing like this back home.

We then got a quick tour of the vet school next door. The VERO (veterinary education, research and outreach) programme was started in 2009 with the facility we visited opening in 2021. A relatively small vet school (36 students per year) with a focus on large animal veterinary. This was a state of the art facility with clinics and labs kitted out so that all research could be completed in house without sending away samples. Students could bring in their own pets to study as well as local wildlife groups and farms bringing in animals to work on. They also provided labs for local vet practices showing how community led this University is. It was great to visit a vet school that focused on the large animals as the shortage of large animal vets we see in Scotland is the same in Texas.

Craig Marshall - Cotton & Sorghum Growers

As we neared the end of our tour around Texas, we visited Arthur Farms, a large-scale cotton operation near Lubbock in the Texas Panhandle. The farm is owned and operated by Lloyd and Angela Arthur, fifth-generation cotton producers. On arrival, we watched bales of cotton being collected onto specialised trucks ready to be transported to the gin— the cotton processing facility.

Lloyd welcomed us into a shed filled with family memorabilia before delivering his presentation. He is heavily involved in several national cotton boards, especially Cotton Incorporated. He spoke to us about the challenges facing the cotton industry as cheaper synthetic materials gain ground, reducing global demand for cotton. Cotton Incorporated's mission statement, "The Fabric of Our Lives," remains central to their efforts. Lloyd's passion for the industry was clear, and he stands out as a strong advocate for promoting and educating people about cotton.

Arthur Farms covers 2,500 acres: 2,000 acres are planted in cotton and the remaining 500 in grain sorghum. The two crops complement one another, improving weed control and contributing nutrients back into the soil. Wheat is also used as a break crop between harvest and planting to reduce soil erosion and improve soil structure.

All cotton on the farm is irrigated, either through centre pivots—each covering 120 acres—or via subsurface drip irrigation across 500 acres. Although subsurface drip minimises losses from sun evaporation and is more efficient, it comes with a much higher installation cost. With the farm receiving only around 18 inches of rain per year, irrigation is essential. To help manage water use, the Arthurs employ modern technology such as variable-rate water application and in-ground moisture sensors. Rising water-pumping costs also make efficient irrigation crucial.

Planting begins in mid-May when soil temperatures rise above 65°F. All cotton must be planted by June 5th for the farm to qualify

for crop insurance. The Arthurs use no-till or strip-till drilling practices. Throughout the season, the crop is fertilised and treated using a combination of mechanical and chemical weed control.
Harvest runs from October through late November. Yields vary each year depending on weather and water availability. The 2025 crop was significantly reduced after hail destroyed 1,250 acres, leaving only 750 acres of cotton to harvest. Even so, the remaining crop yielded an average of two bales per acre—roughly 1,000 lbs per acre—totalling 1,500 bales, which is considered a strong result. At the time of our visit, only 65 acres remained unharvested due to wet weather delays.
Once harvested, cotton is transported to the gin, where fibres are separated from the seeds. Cottonseed has considerable value thanks to its high oil content and is used both in animal feed and in the production of cooking oil. The cotton lint goes on to be used for textiles, while the seed contributes protein, fat, and fibre to livestock rations.
Overall, it was an informative visit, offering an in-depth look at the family farm and the complexities of cotton production. Unfortunately, due to poor weather, we were unable to tour the fields or see standing crops and machinery at work.

Our next stop, an hour down the road, was the Heinrich Brothers Farm, another large cotton-producing operation.
We were welcomed into their machinery shed, where they explained the workings of their John Deere cotton harvester. This machine is fitted with an aftermarket water-suppression system due to the high operating temperatures and the flammability of cotton, which makes harvesting a fire risk. The harvester can strip and bale cotton in one pass and operates with John Deere GreenStar GPS using full RTK accuracy of 2.5 cm. It was an impressive piece of equipment to see up close.
The Heinrichs farm 10,000 acres: 5,000 in cotton and the remaining 5,000 split between corn, grain sorghum, and cattle. Their crops follow a rotation system, which helps maintain soil structure and organic matter. Of their cotton acreage, 4,000 acres are irrigated with drip irrigation—the most efficient method—while 1,500 acres use centre pivots. However, the pivots are aging and increasingly inefficient due to evaporation losses and high running costs.
In a typical 500-lb bale of cotton, only about 33% is usable lint; the remainder consists of seed and plant debris.

We also discussed global competition, especially from Brazil. Thanks to major infrastructure investment from China, Brazilian cotton producers have improved their systems significantly. They are able to achieve similar yields to Texas growers but without irrigation, resulting in a much lower cost of production.
This visit gave us valuable insight into the harvesting side of cotton production and the realities of the global market. The Heinrich family were extremely knowledgeable and happy to answer all our questions.

As our trip draws to a close, it has been an incredible experience—both educational and full of meaningful connections.

Day 13 & 14: Friday 21st & Saturday 22nd November – Andrew McMillan, Bute

Friday 21st November – National Ranching Museum and Arrival in Fort Worth

After breakfast in our Lubbock hotel we headed to Cavendars for some last minute cowboy and cowgirl attire, in preparation of the final stop of the tour at Fort Worth.

Before we hit the highway for the 4 hour journey south we stopped in at the National Ranching Heritage Museum. On entering the impressive foyer area we were greeted by some very friendly and knowledgeable staff who gave us a brief overview of the museum, its purpose and aims.

The centre sits on ground belonging to Texas Tech University but runs totally independently to it. The unique partnership formed in 1976 and has grown and adapted to form the centre that we visited today.

In order to create an authentic experience of what ranching life was like between the mid 1700s until the 1900s the site comprises a mixture of ranch buildings, information boards and even a train! All but 5 of the 55 structures on the 22 acre site are original ranch buildings that have been dismantled and carefully rebuilt at the centre to create the truest feeling of the evolution of ranch life in Texas.

Alongside the 22 acre heritage park outside there is an impressive 44,000 square foot indoor museum which is home to 7 galleries which showcase permanent and temporary art exhibitions, photography and historical artefacts all about western life.

In the evening, we arrived in Fort Worth for our final evening meal together. Once sufficiently full we headed along to the Cowtown Coliseum to watch the Friday night rodeo and bull riding. Unfortunately, due to an outbreak of Equine Herpesvirus Type 1 there were no horses allowed at the rodeo so only the bull riding championships were being held that evening.

There was a great atmosphere in the arena as we watched the bull riding championships. Afterwards we were able to get down onto the sand and enjoy the after show entertainment by the live music band Austin English. The group had a great final night together exploring Fort Worth and the Cowtown area, seeing some of the sights and sounds such as the John Wayne Museum and the country line dancing bars.

Saturday 22nd - Fort Worth by day and time to head home

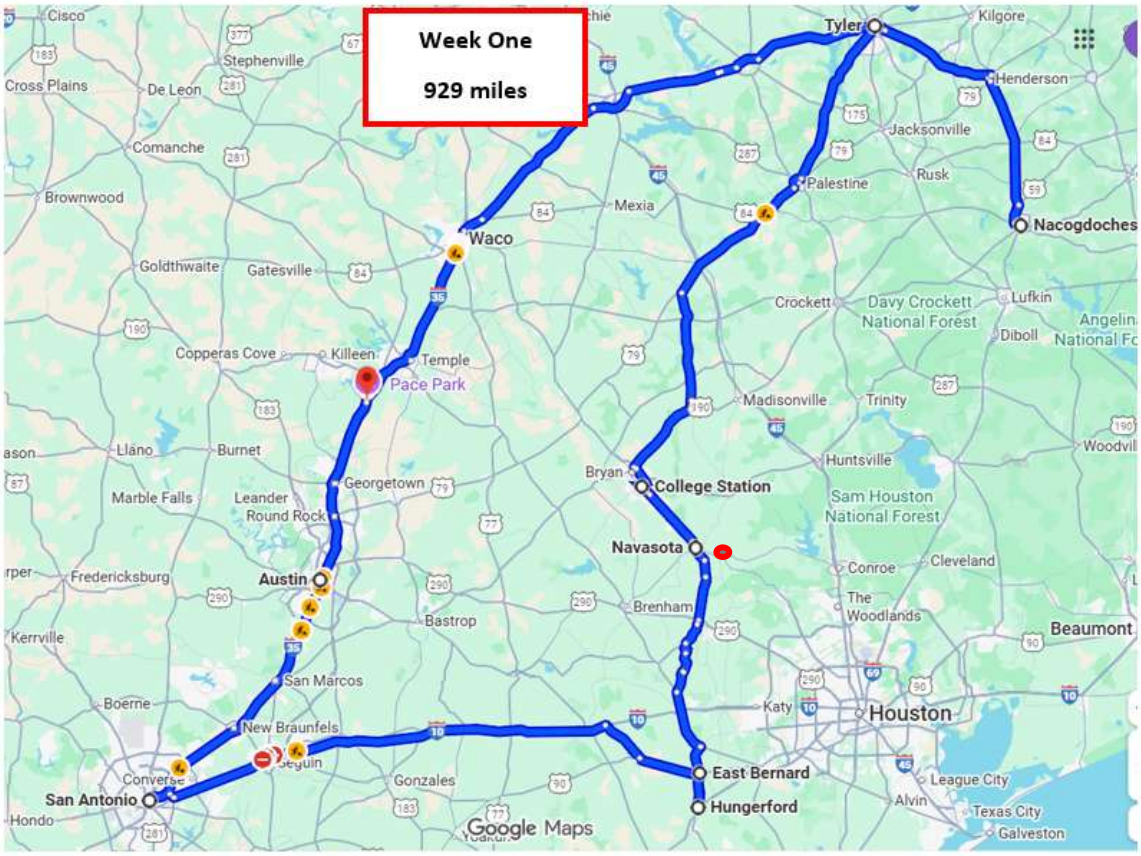
Lastly, on our final morning before heading 3 hours south again to Austin Airport, the group headed back into Forth Worth town explore the historic Stockyards and to see the longhorn cattle.
The Fort Worth Cattle Drive is a twice-daily event in the Stockyards where real Texas cowboys lead a herd of Longhorns down East Exchange Avenue at 11:30 a.m. and 4 p.m. It is the world's only twice-daily cattle drive. Unfortunately, again due to the outbreak of Equine Herpesvirus this was also on hold. Nevertheless, we got a good understanding as to the traditions in the town and the chance to see the cattle in their pens.

After our final chance to buy gifts for home we boarded the bus one last time and headed to Austin to catch the flight home from what has truly been a once in a lifetime opportunity which the group will never forget.

The next two pages cover the areas and routes travelled during our time in Texas and our acknowledgements to our sponsors and others who assisted with the tour, we are indebted to them for their support.

We hope that you have enjoyed this report on our 2025 Agri & Rural Affairs Study tour and that it will encourage other young farmer members to apply for the opportunity to attend in the future.

Route Covered During the Tour



Acknowledgments

The group are indebted to our contacts in Texas who assisted by organizing our visits during the tour with special thanks to **Dr Jean Lonie, Patrick Dudley and Tarleton University Post Grad Student, Kara Tifft** for in arranging visits and for accompanying the group on various days during the tour.

Sponsors

The group are indebted to all those who supported them financially, whom without this trip would not be feasible. The members would like to thank the following for their contribution to the full group:

*** Cameron Travel Trust** *** International Trust** ***Agriscot**

The group would also like to thank their individual sponsors who include friends, family, their own Young Farmers clubs and Districts and all those listed below:

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