

Hybu Cig Cymru Scholarship

Beef Production in South America



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Background to the HCC Scholarship Application

In the run up to applying for the Hybu Cig Cymru scholarship I was concerned of the lack of profit margin there was in the suckler cow industry and the danger of future ever growing costs to the herds. Wales will always have its fixed costs to cattle production due to seasonal weather, rules and regulations. A conclusion that I came to was the main cost being our feed inputs and labour costs, this resulting in thoughts to cattle types and breed.

I saw the HCC scholarship as a great opportunity to visit a part of the world that produces beef cattle at a low cost of production and being able to benefit from what I see and learn. Also, being able to share my experiences with other welsh farmers so maybe they will look at their business in a different perspective and fresh outlook and possibly implementing some suggestions to improve on their cost of production.



South America (Brazil, Chile, Argentina, Uruguay) seemed to be the obvious choice for me to visit. Apart from being a constant threat of importing meat to the UK and the rest of Europe they are also very effective at producing at low cost using traditional British beef breeds. The climate of Brazil and Argentina I knew were very different to our weather in Wales, but in parts of Chile the

climate was not too dissimilar to ours. Also these countries are not heavily reliant on subsidies and I was interested to see how their farming systems cope with this.

Summary to South America Beef Industry

During the last decade, South America has become a bigger competitor in the beef export markets, which it shares with Australia. They export to various other countries such as the EU, Russia, the Middle East and some south East Asian markets. However, despite the region experiencing fast export growth during the early 2000's, this has slowed as a result of a tightening in supplies in the region.

In 2010, Foot and mouth disease outbreaks in the region have closed markets and limited market accessibility. Brazil and Argentina are not eligible to export unprocessed beef to Japan, Korea or the US. A future increase in export supplies from this region will rely on productivity increases driven by higher profitability in the cattle industry.

Land use for cattle grazing also faces strong competition from other agriculture activities.

Argentina

Export statistics

- Argentina exported 20,245 tonnes of beef in 2010

Historical trends

Argentina's beef exports peaked in 2005 as a result of rising global consumption and high prices. Since then, the industry has faced difficulties as a result of a series of government imposed export and supply chain controls and price caps aimed at increasing supplies to the domestic market. Since late 2005, when the first measures commenced, profitability in the beef industry has been eroded and supplies have tightened as producers liquidated their breeding herds and switched to other more profitable agricultural projects.

As a result of the plummeting supplies in 2010, Australia is likely to experience reduced competition from Argentinean beef in export markets. Argentina is expected to concentrate on rebuilding the herd for at least the next two years as farm gate prices soar.

Brazil

Export statistics

- Brazil exported 80,190 tonnes of beef in 2010

Historical trends

Brazil has the worlds largest commercial herd and saw exports rise until 2007 as a result of competitive prices, a depreciated local currency and government support.

Investments in the industry have supported an increasingly professional beef industry, which has rapidly gained new markets and positioned itself with global brands around the world. However, exports from this market have decreased in 2008 and 09 as a result of lower head per herd, lower competitiveness, a partial ban on exports to the EU, and more profitable domestic market.

Exports from Brazil are expected to recover on the back of increased productivity, although growing at lower rates than in the past decade.

Uruguay

Export statistics

- Uruguay exported 25,987 tonnes of beef in 2010

Historical trends

The Uruguayan industry has made important efforts to improve its traceability for food safety procedures, which helped to achieve market access to the US, the only South American market to achieve this. However in recent years they have been focused on the higher value EU market due to lower supplies from Brazil and Argentina.

Uruguay's beef industry will remain an important source of income to the country, as around 80% of its beef production is sold in international markets.

Chile

Beef produce

- Chile produced 247,000 tonnes of beef in 2010.

The Chilean industry made important efforts to its traceability to ensure a place in the world market.

The industry is enjoying good returns from agriculture and is looking to triple production from its current figures.

CATTLE BREEDS

Brazil's main cattle breed are Brahman, these are found in the mid west of



14 months old Braford bull weighing 450kg

Brazil, they are found in some of the biggest herds – up to 70,000 head. The areas where these are farmed are very dry and vast open areas of the country and their ability to cope with the harsh, hot and dry weather are impeccable. But their

meat is not of a good quality and is mostly used for processing- e.g. mince etc.

The area of Brazil I visited – Rio Grand De Sul, was the best-known region for its quality of beef. The most used breed of cattle were Hereford or Angus, be it pure bred or a breed which the Brazilians have developed as their own – Brangus or Braford.



5 year old Brangus bull

The Braford and Brangus breeds were created to provide a consistent and efficient product for beef production. A cross between a Hereford bull and a Brahman cow made the breed. They carry the characteristics of both breeds.

They began experimenting with various types of Brahman-Hereford cross bulls. Eventually they identified Braford bulls that were producing calves that met the requirements and used these bulls and their offspring to form what is recognized as the Foundation Herd of the Braford breed.

In all of the countries visited Angus and Hereford were the dominant breeds of cattle.

Summary

Cattle breeds in Brazil have been primarily based on easy care characteristics, but also very important was the ease of finishing ability on grass, and therefore a good conversion rate of grass to meat ratio. They have found this in the Angus, black /red and Hereford even after trying continental breeds and finding they need a lot of concentrates to finish them have always reverted back to their old systems due to the cost difference in finishing an animal.



Brangus bullocks finishing on annual rye grass

There was a clear reason for them developing the Braford and Brangus breeds. The very hot two months in the middle of their summer was a strenuous time for their cattle and these breeds with their hybrid vigour could withstand the conditions well and even thrive. An extra quality it brought to the Hereford in particular was the pigmentation to the skin around the eye thus doing away with the problem of eye cancer.

The way the cattle are bred genetically could be seen in the field - correct cows



Pedigree Angus Cow bred by Estancia Rincon

with even offspring making it very easy to market and forecast their forward budgeting.

I was amazed at the work that was going into the improvement of breeds and to learn that one of the main reasons of the Braford and Brangus was to improve the quality of the Brahman for the mid west farmers.



Their determination to breed out any weakness and any improvement in to the herd was outstanding. The main reasons that the Angus and Hereford were so popular in South America were clear to see.

An animal that had a high conversion rate of grass to meat, ease of calving, hardy, milky, low maintenance, productive cattle and above all quality meat to market.

Cattle diet

In Brazil the farms I visited maintained their cattle on native grass and were able



Cows and calf's grazing on native pasture

to finish some stock on it as well. There was always mineral powder on offer to the calves and mineral salt for the cows.

Also all the farms I visited finished their cattle on grass. A Bradford

breeder was finishing 800 steers and 600 heifers and cows on native grass or a mixture of white clover rye grass and Lotus (corniculatus). His costs were around £2/head/yr for minerals. On a 100 /ha of native grass he could produce 280kg of meat/Ha.

On 100ha of irrigated improved land he could produce 1100kg of meat/ha. He used no nitrogen and neither did any other of the farms I visited



Mineral powder always available for calves and trough for cows to feed mineral salts.

The aim for the future is to irrigate more land and be more productive. The water used for irrigation is rainwater caught in massive reservoirs - a familiar sight on every farm as they grow rice aswell; Brazil is the second biggest exporter of rice in the world!



Example of an on farm reservoir

Heifers were being finished at an average weight of 480kg and steers 520kg at



On farm milled sorogo

around 20 months.

Some systems fed Sorogo – a hardy type of corn that grows well in the dry spells. They mill this and mix with protein and energy, this is fed mainly to steers and bulls that are sold. A very popular system was planting annual rye grass (azavem) to finish cattle in the winter months.

In the spring the rye grass dies off shedding its seed in to the soil, then soya is planted with a slot seeder to grow and harvest

by the end of the summer.

The rye grass starts to grow again and the circle begins once more. This allows the land to be very productive to the business.



Chile

The farming systems in Chile differed a lot from Brazil, mainly due to the climate. Alfalfa was a very popular and effective way of producing fodder of high quality and good bulk. Alfalfa produces around 12t DM/ha and similar to clover it has a protein value of around 21%.



Alfalfa being baled into silage Osorno, Chile

Clover is still used a lot in different grass leys.



The Chilean farmers are reclaiming land and receiving government grants to do so. The aim is to be triple if not four times more productive. The

first crop they put in is barley under sown with Alfalfa, eventually producing a silage of high quality to finish cattle on. Normally cattle are finished weighing 450-500kg at around 20mnths.

Trials taken place at Simmons valley research farm have shown that strip grazing stubble turnips during the winter along with some roughage was a very effective way of finishing cattle. Turnip produces on average 15t DM/ha - 18t DM/ha max and a min of 10t DM/ha.



Left-Land which has been partly reclaimed Right-Reclaiming in process



The research centre is a very important information resource for the Chilean farmers to find new, modern, efficient ways of farming, and the work carried out is crucial for future

farmers of Chile.

A lot of the rye grasses used are the N.Z nui variety; also IGER's Aberavon was a popular choice-a good reminder of our world-class research centre on our own doorstep that we should make more use of!



Most of the north of Argentina have similar systems to Brazil and Uruguay, there are some feed lots in both countries but all animals start from good grazing.

I went to the south of Argentina and visited a farm in the Gaiman. Although it is



situated in dessert like conditions after a lot of hard work by the settlers they constructed an impressive network of irrigation through the valley supplied by a never ending supply of water from the Andes. They could grow grass very successfully, the leys consisted of red and white clover, Alfalfa, Lotus, Fescue, Bromus, and orchard grass.



They used a rotation grazing system and bought 4-500 Hereford calves at 6 mnth old weighing an average of 160kg down from the Andes where there was a lack of grass for finishing, this meant moving the cattle every day to paddocks of about 2/ha.



This allows them to have the best quality grass consistently to finish .The cattle are constantly observed to see how close they are to being in prime condition.



They would pull 30 to 50 out and put them in the feeding lot for 2 weeks to give them a final push on barley, maize, soya and alfalfa hay.



The cattle are sold on farm to butchers and are selected when they weigh 370kg to 400kg .The cost of production for all this after buying is £2/head.

Breeding

The farms in Brazil used a lot of A.I. All replacement heifers would be



inseminated the same time as soon as they averaged a weight of 380kg, which would be around the 15mnth age. The reason for this is:

- Selection of easy calving sires
- Rapid genetic improvement
- Tight calving pattern

The older cattle would have bulls turned to them, working at a rate of 35cows per bull. Farmers are always trying to tighten their calving window that is to calve all cows within 8-9 weeks. This saves labour and produce's more evenly matched calves.



The selection process of replacement heifers was very dependent on weigh scales. They would weigh the cows and calves at weaning 7/8 months, the calves that weigh 50% of its mother's weight would be selected as a breeding heifer and ensures a good production of milk in the herd.

Overall Conclusion

It seemed to me that beef production in south America was very profitable, mainly down to their low costs and ease of cattle management.

There were things I saw which I think could be applied to our farming systems i.e.



- Weighing – a good way to bench mark your herd and see which cows are paying their way and producing.



- Grazing management-improve grass and silage quality, selection of grass seed.
- Soil fertility-the basis to finishing stock from grass.
- Cattle breeds-introducing breeds with easier management characteristics i.e calving ease, ability to finish from grass-less concentrates, etc.
- Handling system - very important to reduce stress level of animal and farmer.
- Culling of low performing cattle
- Tightening the calving pattern.

Overall I was impressed with the farming systems I saw throughout South America and was surprised that even in some very traditional areas that they were always embracing new and modern ways of farm management and technology.

Having been awarded the HCC scholarship and had the opportunity to see other farming systems and practices it has confirmed and given me total confidence in my way of thinking.

My ambition is to apply these practises to the family farm and run an efficient productive beef herd, I realise that it will not happen overnight and that it will be a gradual process.

It is my belief that the future is bright for British farming as long as we are able to adapt to ever changing challenges of farming.

