

Rhodri Davies

Objectives

The reason I applied for the Scholarship was that I was keen to expand my farming enterprise and wanted to experience beforehand how the New Zealanders managed to run many thousands of sheep with minimal labour: and how they are also able to avoid purchasing expensive inputs such as feed blocks, concentrate feed, but are still able to lamb at 150%. Also, as I am a member of the Prince's Trust Lamb Group supplying M & S, I wished to see the Highlander and Primera sheep in New Zealand. When we agreed to supply M & S, one of the stipulations was that we would use Highlander and Primera tups on our sheep. In addition, the New Zealanders often talk about efficiency of breeding stock and I wanted to find out what they meant by this. I was also interested in their pasture management. I wanted to visit a variety of different farms and stud breeders, looking for similarities throughout New Zealand and differences to the UK industry. The focus was to look for simple ideas which could be easily adopted at home.

Diary

25th October 2007

Visited Bryan and Andrea Hannah at Mahounui, King Country. They had 450 hectares, 2300 Highlander Breeding ewes, 600 Primera breeding ewes and stud flock and 900 hoggets. All were mated. They ran 100 stabiliser cows and purchased 200 bulls from the dairy industry annually. The bulls were kept at 2.6/3 hectare, with chicory plaintain and clover lays. The ewes lambed at 160%, 5 year average of stock to sale, and the ewe hoggets were 80% stock to sale. The stud flock of primera ewes, which is a composite breed, made up from Dorset x Suffolk x White Suffolk. The ewe lambs were retained for breeding and the male lambs kept and sold as rams. It was an easy care flock in the sense that they handled the sheep as little as possible. The sheep were scanned and turned on to the hills, and were set stocked. There was minimal intervention at lambing and the first handling was when lambs were 4-6 weeks old for docking and worm drenching. The next handling was at weaning where they aimed to sell as many of the male lambs as possible. Bryan was a Director for Rissington Breed Lines and on Saturday morning he took us out to meet John Cameron who was interested in producing lambs for Rissington and supplying them to M & S. Their fertilizer policy was that the flat land received 50 units of phosphate and 30 units of nitrogen annually. The hills received 40 units of phosphate which was flown on and lime which was flown on at 1 tonne per hectare per 4 years. They placed a high reliance on clovers to fix the nitrogen and soil tested the fields bi-annually.

27th October 2007

Visited Grant and Brenda Massie at Bonnie Glen who gave us a tour of their 2000 acre farm. They were already contracted to Rissington Breed Line and had a multiplier flock which meant that all surplus ewe lambs were sold onto RBL and the wether lambs also sold to RBL and then sold onto a contracted finisher who sold lambs back to M & S.

28th October 2007

Visited RBL, Hawke Bay where we met the Absolum brothers who ran 3000 acres. They were instrumental in starting the stabiliser breed of cattle which is a composite breed, made up of four different breeds, and also the Primera and highlander breeds of sheep, again composite breeds. As stated previously, the Primera is made up of Dorset x Suffolk x White Suffolk, and the highlander which is Finn x Romney x Texel. They explained that the hybrid vigour is much greater when crossed three times instead of two.

29th October 2007

Drove down to Donald Watson, Beamish Farms, Hawksbay. Donald was a farm manager on a 2150 hectare farm. They had 12,000 highlander ewes crossed with Primera tups with all the lambs sold through Rissington Breed Line to M & S. They also had 2500 Primera stud flock. At lambing time, of the 2500 Primera's a team of workers would catch each lamb and weigh, DNA Test and electronically tag it. Any ram lamb over 8 kilos was not considered to be kept as a ram due to the possibility of passing on

heavy birth weight/complications to the next generation. All this information was then e-mailed back to Rissington Breed Line. Three thousand highlander ewe lambs were purchased each year. They also purchased 680 dairy bred calves which were kept on grass until ready for slaughter. Two hundred dairy cows scanned empty were purchased, bulled, calved and sold back to the dairy industry, making a profit of approximately \$600 per head.

30th October 2007

Drove to Dannevirke to meet John Heald, Pohuataij, a farm manager for the Knight family who mostly lived in Britain. John managed 5300 acres of very fertile land. They farmed 4000 elite highlander ewes on contract for Rissington Breed Line. Again these were all weighed E.I.D.'d and DNA tested at birth.

They also managed 11,000 commercial highlander ewes which were crossed with a Primera ram and lambs sold to M & S and they had 4300 ewe hogget which were all tupped. For all those ewes they had a total of 190 rams on a ratio of 1:100 ewes, which I thought was very impressive, compared to this country where we have approx 400 rams. They aim for 150% lambing and wean their lambs at 95 days, an average live weight of 35 kilos. In 2006, 177% lambing rate was recorded. They aim to sell a lot of the lambs at weaning at 34 kilos. Remaining weaned lambs were then put on crops for finishing, such as chicory, plantain, clover and silage aftermaths. They had 300 beef cows, comprising pure red Angus and stabilisers. The bulls were sold for breeding and any bull below standard was sold at 300 kilos dead weight for slaughter. Nine hundred Friesian bulls were purchased at 100 kilos live weight in the spring. Bulls were maintained in the winter on big bales of hay and silage, and in the spring turned onto chicory, plantain and clover lays, where they gained 3 kilos live weight daily. Regular weighing of cattle took place. Their 900 Friesian bulls were slaughtered at an average of 22 months old, weighing approximately 300 kilos dead weight. This enterprise necessitated 7 full time workers and casual labour when required.

31st October 2007

Down to Masterton, on the east coast, to meet Matt Wyeth, a young farmer who owned 807 hectares, only being effective, this meant a lot of scrub still needed to be cleared in order to use the whole acreage. As it was very steep land, he employed a helicopter to spray off the scrub using 'Round Up' allowing the natural regeneration of grass. Lime and phosphate were also flown on to aid the regeneration. This flock comprised of 3100 highlander ewes, which scanned at 175% but docking was at 141%. There was no intervention at lambing as the ewes were set stocked on the hills and he felt he would do more harm through shepherding and chasing the sheep down the steep hills and therefore causing mis-mothering. The surplus ewe lambs were sold back on contract to Rissington Breed Lines at \$1.45 per kilo live weight and had to be a minimum of 34 kilos. Matt was also trialling the EID system for race-well handling system. The system was fully automated and a one man handling system. As the ewe ran up the ramp and onto the race a sensor identified her presence, clamped the ewe, weighed her, scanned her EID tag and wirelessly, sent the information back to his computer at home. Unfortunately, they did have minor teething problems with the system, and sometimes Matt would become frustrated as he had a full shed of ewes to drench and the machine would not be working properly. In the evening

Matt took us to meet the Williams family whose grandfather had emigrated in the early 1900's from Pontypool to New Zealand. They farmed 1000 acres of mainly arable land and they also bought in store lambs and fattened them on fodder crops grown after the harvest.

1st November 2007

Met up with Steve Morris, a Professor at Massey University where we spent a very interesting morning discussing trials he had undertaken (see report Included). The afternoon was then spent with Alan McRay, a Director with Rissington Breed Lines and also an Agricultural Consultant. The evening was spent with Alan McRay, his wife Alison and Friends.

2nd November 2007

Visited a local Agricultural Show. The stock at the show were turned out differently to the UK with the ewes being shorn and the cattle grass fed only.

4th November 2007

Visited Donald and Liz Polson, Wanganui. They farmed 5500 acres being mostly hill land, fertilized by aeroplane annually. The land therefore carried high stocking rates. Tracks were made by bulldozer in order for quad bikes to go around the farm. They again, were a multiplier flock for Rissington Breed Lines and also bred a stud flock of Primera. The farm stocked 11,000 highlander ewes, 100 suckler cows, all of which are lambed and calved out on the hill with minimal intervention.

5th November 2007

Caught the ferry from the North to the south Island. On the ferry we met an interesting chap called Jim Shilton. We explained why we were in New Zealand and he took our mobile phone number and said he would arrange for us to visit a farming friend of his.

6th & 7th November 2007

Drove to Renwick to meet Georgie King, a farm manager of 2500 acres of flat dry land, a lot of which was irrigated. The owner had purchased the farm three years previously and was slowly converting it to vineyards. They had a herd of 200 Aberdeen Angus cows and 3000 Coop worth ewes. Sadly, Georgie did not know how long she would be employed due to the conversion to vineyards. I saw a good idea on the farm; it was a foot bath holding 150 ewes in one go. That day, true to his word, Jim Shilton rang and said that he had arranged for us to visit Chris and Jane Earle, Skargill. They had 497 effective hectares, on which they ran 4,500 ewes a mixture of coop worths and Kelsaw. It was quite a dry farm with only 714 mm of rainfall annually. Chris and Jane had been purchasing rams which were foot rot gene marked.

8th November 2007

Visited Campbell and Ingrid Tuer, at Hororata, on the Canterbury Plains. They farmed 6200 highlander sheep on 482 hectares and took in 200 dairy heifers on tack. It was a monitor farm for meat and wool New Zealand, High Eaton being the facilitator. The day was spent touring the farm and discussing his

farming methods. We saw kale, being direct drilled into a field, which had been sprayed with 'Round up'. The dairy heifers realised \$6 per week and also paid a bonus for every kilo they had gained, over 350 kilos, which was a good incentive to do the heifers well. The ewes lambed at 150% and scanned at 165%. The hoggets lambed at 95% and scanned at 125%.

11th November

Visited Guy King at Grampian Hills, Tekapo. He was Farm Manager of 30,000 acres, being very dry land with a rainfall of only 9 inches per annum. It was a very difficult farm to work due to the dry winds. They had managed to increase the sheep numbers by drilling Lucerne into approximately 2000 acres of flat land, thus enabling them to harvest the Lucerne big bales. The sheep were mostly Marinos, but due to the Lucerne they had been crossing Marinos with Romney's and keeping them on the lowlands. They also had a herd of 300 Hereford cattle. The cows were out-wintered on the hills and left to fend for themselves. They were brought down land to calve. With calves weaned at 5 months old.

12th November 2007

Spent Tuesday morning on the farm with Guy King and drove to Christchurch in the afternoon.

13th November and 14th November 2007

Spent two days at the Royal New Zealand show at Christchurch. At the show we met some very interesting people such as John Hickford from Lincoln University, a man who helped develop the foot rot marking gene. We also met Bruce Hare of Superior Minerals. In the afternoon, we drove down to Temuka.

15th November 2007

We arrived at Wayrio with Chris Adams, a farmer who owned 1250 acres. He kept 5500 ewes being Dorset x Romney x Inverdale Texel. The terminal sire used was a Texel x Dorset. He arrived at sell lambs averaging 17kg deadweight. He kept 600 deer and grew enough kale and Swedes to over winter a 1000 dairy cows for a neighbouring farm. He bought in 1700 ewe hoggets annually. Chris had an agreement with a hill farmer who had Romney sheep in that he supplied Dorset x Inverdale Texel rams. The ewe lambs were then purchased by this means. Chris explained what the Inverdale gene is, being a gene found by a farmer near Dunedin. In a ewe that kept producing 2 or 3 lambs every year without exception. He explained that the beauty of this gene is that you negative flushed the ewes at tugging time, thus allowing him to purchase an extra 10,000 store lambs for fattening. These ewes still scanned at 172%. The ewes grazed behind an electric fence after scanning so they received 1.3 kg of dry matter a day. This was done by using a plateometer to measure how much grass cover was in the field. The ewes were split into groups of 500 and the field split with electric fence in order for those ewes to receive 1.3 daily. They were then moved on the next day. This was how they managed not to purchase any concentrate for any twins or triplet carrying ewes.

16th November 2007

Spent the day docking with Chris Adams. We did approximately 600 lambs. These lambs were ear marked, docked, drenched, orf vaccinated and castrated.

17th November 2007

Chris took us to meet a dairy farmer neighbour of his. He milked 500 Friesian cows. Six months ago they were receiving \$4.50 per milk solid, they are now receiving \$6.20 per milk solid and that was set to increase again. Apparently, there was supposed to be a clearing sale in Southland every working day of January, February and March with sheep being sold and the farms wither sold to dairy farmers or the farmers themselves would go into dairy production. Estimated figures of half a million sheep were to be sold from Southland.

18th November 2007

A short drive from Wayrio to Ohai to visit Ceri Lewis at Mount Linton. Ceri was a Welshman working as a farm manager of one of the biggest farms in New Zealand. He had 30,000 acres, 52,000 breeding ewes, 21,000 ewe hoggets, which were tupped, and 16,000 ewes which were scanned in lamb. Romney was the main breed but they were moving towards the cross breeds. The hill Romneys were crossed with Cheviot and the ewes on the lower ground were a cross between Romney, Cheviot and Inverdale Texel. Suftex was then used as a terminal sire. These rams were Suffolk x Texel and Ceri had his own nucleus flock. They also had a herd of 2,500 Aberdeen Angus cows which were AI'd with performance recorded bulls from Australia. Approximately 350 bulls were sold for breeding and 600 in calf heifers were sold annually. Heifers not required for breeding and all remaining bulls were sold fat to Canterbury Meat Packers. Every year approximately 1000 acres of scrub hill land was sprayed by helicopter with 'Round-up' allowed to rot for one year and then set alight. Kale, lime and phosphate were then flown on. Cattle were then sent out to graze that land during the winter. The following spring Round-up was again applied and then grass seed flown on. Ceri was hoping to clear approximately 10,000 acres by this method. He hoped to expand the cattle herd and not the sheep as the cattle paid better.

19th November 2007

Drove to Te Anau to meet John Mc Clain and his family. John had a 2000 ewe flock of elite highlander ewes and 8000 commercial highlander ewes. The day before we arrived an estate agent had valued the farm and he was considering selling the farm to a dairy farmer and relocating to a farm near Queensland. The farm had been valued near \$20 million

20th November 2007

A very early start from Te Anau down to Alliance Abattoir in Invercargill one of the largest sheep abattoirs in the world. 32,000 lambs killed daily, 4 lines in operation doing two 8 hour shifts and 3.7 million through-put annually. All the lambs were soaked in a detergent on entering the abattoir for 2 hours and the jet washed so as to remove any dirt before slaughter. A laser machine was used to grade the lambs and to show meat yield. The cleanliness of the lines was of a very high standard. All

equipment was sanitised in near boiling water after every cut. The carcass was then passed over an electric stimulation rail of 5000 volts for 45 seconds. Within 2 days, carcasses were cut up and vacuum packed. On the day we visited producers were paid \$4.20 per kilo (approximately £1.61 per kilo deadweight) with an average carcass weight of 17.5 kg. The price would then drop to \$3.40 (£1.30) for summer and autumn lambs. The farmer was paid \$8 for the skin and the cost of slaughter was \$7. Alliance is a farmer owned co-operative with a turnover of \$1.4 billion with a profit of \$1.4 million. The quality and cleanliness of the abattoir was very impressive.

22nd November 2007

Met Dan and Daphne Begley at Palmeston, a monitor farmer for Meat and Wool New Zealand. They farmed 2,000 highlander ewes, 650 ewe lambs and 85 suckler cows being mostly Hereford cross. 500 of the ewes were crossed with Primer tup, the remaining 2000 crossed with a Highlander. He aimed to sell lambs at an average of 16.5 kg. The cows calved in the spring and were weaned when the calves were 6 months old and then turned out to the hill for the winter to fend for themselves while the calves were kept on lower ground. In the evening we were taken to a farmer meeting, 80 km away in Ranfurly to meet Mark Crawford and Jason Miller who were campaigning to be elected to the Alliance Group Board of Directors. We have now learnt that both were successful in their quest.

23rd November 2007

Got up at 5.30 am to dock 160 lambs with Daphne and Dan Begley. We were finished by 9.00 am and then drove down to Dunedin to an Open Day with Ag Research. Research was done into nutrient loss in soils. The cold tolerance gene in lambs was being researched i.e. why some lambs were able to suckle in extreme cold weather and others died.

24th November 2007

Drove to Palmeston to near Mount Hutt where we stayed on a 1200 acre farm. The farmer was kind enough to show us around his farm.

25th November 2007

Went to meet a Poll Dorset Breeder. In the afternoon we drove back up to Christchurch.

26th November 2007

Drove out to Lincoln University to meet John Hickford again. He showed us how the DNA marking worked. He then gave us a tour of the University farm. Caught the plane from Christchurch to Auckland in the afternoon and then flew back to Wales.

Outcomes

The trip was very successful. We met a lot of keen ambitious farmers with good business sense. I learnt that the New Zealanders placed great emphasis on looking after their pastures and soil testing regularly. As part of their pasture management, a high inclusion of clovers are essential as these fix the nitrogen

and so avoid purchasing expensive fertilizer. Any field that is not performing well is sprayed off with 'Round-up' and sown with a brassica crop, and then reseeded the following year. They utilize gene marking well and performance test the livestock. None of the stud breeders overfed their rams before selling as they felt this would be unfair to the purchaser as once that tup was turned out to the sheep that the ram would lose condition. Due to the tup being fit and not fat, it was able to cover approximately 100 ewes each, something I would like to see implemented in this country. They avoided spending money on expensive machinery and preferred to use contractors to do the work.

Conclusion

On returning home I have been fortunate to purchase an additional 99 acres of land in Ffostrasol and I am intending to run it using a combination of New Zealand and British farming methods. I hope to grow enough fodder crops e.g. swede, swift to finish the lambs for slaughter and also winter the ewes so hoping to avoid having to purchase expensive concentrate feed. I do not intend purchasing my own cattle in Ffostrasol, I'm hoping to have tack cattle in for the summer to graze with the sheep.

As I am a member of the M&S Supplier Group, I intend on purchasing ewe lambs from within the group annually, these being Highlander crosses. All the ewes in Ffostrasol will be tupped by Primera rams and hopefully all the lambs will be sold to M&S, receiving a bonus for being Primera cross.

I will be testing the soils far more frequently, especially with the increasing cost of fertilizer and lime. Apparently, if you have a soil ph below 5.9, as much as 50% of the fertilizer may be lost to leeching, therefore, it is imperative that soil ph is above 6.0. Since returning home, I have already spread 200 tons of lime, on top of the 200 which was spread 2 years ago.

I will be sending blood samples of breeding rams to Lincoln University to test for the foot rot marker gene. Hopefully, this will eliminate any foot rot over time.

On Maesglas Farm, where I rent 200 acres, I have been breeding my own Welsh ewes, crossing approximately 200 to the Welsh tups and approximately 200 to the Blue Face Leicester to produce mules to keep in Pontargamddwr. This year I am hoping to purchase an Inverdale Texel to try to improve the scanning percentage in Maesglas. I hope that I will have better male lambs to sell. I intend to over seed the pastures in Maesglas with rye grass and clover. This should improve the live weight gain of the lambs off those fields.

Next year, I intend to lamb later in the season in order for the grass to grow at lambing time. This should aid to lower concentrate costs which seem to be increasingly expensive.

I intend keeping in touch with the people I met in New Zealand and therefore receiving regular updates on their farming methods and hope to return with my family one day.