

HEREFORD YOUTH AMBASSADORS STUDY SOUTH AUSTRALIAN FARMING

By Natalie Campbell

Seeing a large scale commercial Hereford herd with stringent selection criteria and a predominately Hereford feedlot caught the imagination of the 2008 NZ Herefords Youth Ambassadors during a technical tour to South Australia.

The sheer ruthlessness and scale of the commercial operation left most of the participants in awe and could easily be seen as the industry leaders in Australia – it graphically illustrated why not to lose sight of the importance of the commercial cattle industry. While the feedlot was the perfect example of efficiency and knowing your business.

Seven ambassadors were hand picked to attend. They covered close to 4000km, visited 12 farms, one meat plant, an animal health manufacturing factory, a sale yard and listened to eight scientists.

All the stud cattle viewed were deemed a credit to the breeders by the ambassadors with a pleasing presence of NZ genetics evident. All the breeders' visited extended first class hospitality and had made a huge effort when it came to displaying their stock and opening their breeding operations up - unreservedly. Their enthusiasm and staying power when times are tough was humbling to witness. Passing on particular enthusiasm was Mark Scown, Markowen Herefords, who helped co-ordinate the last leg of the journey and joined the group for three days.

New Zealand Herefords' **Natalie Campbell** joined the youth ambassador study trip and outlines what they saw.

Participating on the technical tour:

David Bradley
Rob Stokes
Mike Cranstone
Andrew Russo

Marc Robertson
David Steele
Richard Morrison

Accompanied by: David Henderson, Jane Allan and Natalie Campbell.

DAY ONE:

Argenta Animal Health Company, Auckland.

Argenta is contracted by NZHA gold sponsor Merial-Ancare to produce animal health remedies. Merial-Ancare veterinarian Justin Hurst accompanied the group to the factory. It's NZ owned and contracted by animal health companies such as Merial-Ancare.

Most of the products are made from scratch and a large volume exported. Argenta also employs some of the latest technology, including two fully automated sheep drench capsule machines – German engineered, fully assembling the sheep capsules.

Stringent quality control systems are enforced with exhaustive testing throughout all stages of the production process. Graphically reinforcing the quality control measures is the fact that Argenta produces the world production of Exprinex pour on and Ivomec oral drench.

There is also a large research and development centre, which is responsible for Triton – the first triple combination drench for sheep. It was good to see a company putting plenty of emphasis on quality control, confirming for the NZHA Youth Ambassadors that Merial-Ancare are dedicated to providing high quality, premium products that are developed and tested under NZ conditions.



A group photo in the Australian outback. Rear, from left: David Steele, Andrew Russo, Rob Stokes, Jane Allan, Marc Robertson and Richard Morrison. Front, from left, Mike Cranstone, David Bradley and David Henderson.



The sire Warrensville Destiny A203, Chris Steer stud principal describes as his ideal bull and one that has the potential to become the backbone of his herd.

DAY TWO:

Herefords Australia Limited, Armidale, Australia.

The 2008 NZ Hereford Youth Ambassadors made a brief stop at the new Herefords Australia Limited (HAL) office. Staff said there is still plenty of work to do since the polled and horned association joined forces last year.

There are 900 registered horned members and 1250 polled members. Cattle registrations have increased since the merger last winter. In 2007 there were 15,500 horned females registered and 23,500 polled registered females.

Beef CRC, University of New England, Armidale Australia.

Beef CRC has the responsibility of maintaining Australia's position as a major exporter of beef. Their goal is to add value of A\$179 million to the beef industry annually.

To achieve this they have undertaken research in three main areas:

- 1) Improving beef quality
- 2) Improving animal production
- 3) Addressing animal welfare issues

Meat Standards Australia (MSA) was explained. It is a brand that Australian meat may be marketed under and beef sold with this brand commands a premium of up to 39c/kg.

Beef Profit Partnerships (BPPs) were discussed and are an initiative that has a presence in New Zealand. It's a government subsidized free consultancy service for farmers and the goal is to improve profitability through the adoption of Beef CRC technologies. Meat & Wool New Zealand is a partner of the Beef CRC, giving NZ farmers unlimited access to the research and expertise. Two BPP groups have been established in NZ – in Gisborne and Northland.

DAY THREE:

AGBU, University of New England, Armidale, Australia.

The work involved with identifying gene markers and developing a Breedplan EBV for each was discussed at AGBU. Meat marbling, tenderness and feed intake efficiency are the three particular traits currently being targeted.



Mark Scown had his latest grouprun figures on hand to show the Youth Ambassadors. He's pictured with Marc Robertson, Richard Morrison, David Steele (obscured), Andrew Russo and Councillor Jane Allan.

Marker assisted selection was also discussed. This complex science was explained in an easy to understand manner and the scientists revealed, the more they know, the more they realize there is even more they don't know.

There are 30 chromosomes in cattle and a map of the bases of that DNA has been developed. The bases are thymine, adenine, guanine and cytosine. Where a change in the sequence of those bases is identified is it known as a single nucleotide polymorphism (SNP) which can lead to the particular trait being expressed differently in individual animals.

SNP-chips, a piece of hardware, have been developed allowing scientists to identify the change in the base sequence. The chip is based on as many useful SNPs as possible for a particular breed.

The goal is to produce a SNP chip containing several thousand SNPs for commercial use – this has the potential to allow animals with the most number of valuable SNPs to be selected for. However this technology is in its infancy.

The biology is more complex than the action of one gene and has been the catalyst for the development of the SNP Chip technology where up to 50,000 sites of individual differences are incorporated into one DNA test. The next step is to identify associations between how a combination of these genetic differences are represented in



A rare sight – a BMW rounding up Herefords in South Australia.

the phenotypic performance of an animal. However performance recording is necessary to illustrate the entire picture in conjunction with the gene markers.

The Ambassadors were also told the results of the Global Breedplan Analysis are to be presented at the World Hereford Conference in Europe this winter.

ABRI, University of New England, Armidale Australia.

Christian Duff and Jo Squires provided a brief reminder of how to correctly interpret EBVs and encouraged NZ breeders to use the EBV percentile graph more, in particular making it available to commercial clients, which should assist them in understanding EBVs better. It should be included in all sale catalogues.

ABRI host client care days, free and open to anyone wanting to further their knowledge of EBVs. They are practical and down to earth and ABRI believes these days have contributed to the success of EBVs in Australia.

DAY FOUR:

Wirreanda Feedlot, Snowtown, South Australia.

Nick and Chris Ashby own the Wirreanda feedlot and formerly owned a registered Hereford herd. Nick is fourth generation on the property which once ran only sheep.

The poll Hereford stud was established in 1962 but was sold 14 months ago.

“We had a lot of fun in that time and we met a lot of people. We miss that but we are now going down a track that suits our environment,” says Nick. His parents help in the administration of the farm and feedlot business.

The feedlot is on 2200ha of which 1600ha is cropped in what was once a large wool producing area, but sliding wool returns have prompted farmers to diversify. They grow all their own hay and straw and 70% of the barley inputs needed for the feedlot. Rainfall averages 343mm. During winter they feed out 60 tonne/week of barley.

Nick and Chris focus on sourcing the right type of cattle to ensure a profit. It is not unusual for them to travel up to 2000km to buy cattle and Nick targets animals over 330kgs. He prefers to source

his own stock as it can often provide an invaluable insight and a look at the originating cow herd. “We buy and sell direct so there are no agent fees.”

They avoid buying from stock sales but will buy from on-line auctions if necessary. However the Ashbys are conscious of stock travelling for more than 14 hours as it can cost up to three weeks growth in the feedlot system because of the negative impact on the rumen. “After 14 hours the gut starts to shut down and it can take three weeks for them to get going again.”

Currently about 4000 head of cattle are finished annually with 80 slaughtered a week after being fed for around 75 days. The feedlot animals gain between 1.8-2kg/day and leave at between 480-530kg, with about 5mm fat at about 20 months old. Their market is predominately Coles Supermarket (local trade) and the cattle must have baby teeth and no more than two full teeth. Nick revealed that other breeds don’t meet this criteria as well as Hereford, hence the feedlot carries predominately Hereford cattle. The biggest attribute being the Hereford temperament. They also cope better with the heat.

“There are other breeds that don’t allow us to work with them so easily.”

Fertiliser costs are astronomical with the cost of DAP currently A\$1200/tonne. But plenty of manure is generated by the feedlot, Collected in winter and spread to help reduce fertiliser costs. The Ashbys have calculated the manure to be worth up to A\$200/t.

The feedlot largely consists of solar powered electric fences, however the pens where cattle are first held are pipe until they settle in.

Kerlson Pines Stud, Port Broughton, South Australia.

Brothers Mark and Andrew Wilson run the Kerlson Pines Hereford Stud. They are young and keen to establish credibility and make a positive contribution to the Hereford industry and community, already achieving numerous successes at major shows. The stud was established by the family in 1976.

They have a team of four bulls to take to the national show and sale at Dubbo – a 16 hour drive. 2007 was the first time they had participated at Dubbo. In 2005 the brothers took a team of seven bulls to the Naracoorte Poll Hereford Show and Sale – every animal was a prize winner, including junior, senior and grand champion. Six of the seven were sold to studs.

The brothers’ aim is to breed deep red Herefords with well hooded and pigmented eyes, soft skins indicative of easy doing cattle and top growth measured at all ages and a mid-to later maturing pattern allow flexibility to target a wider range of commercial markets by clients. The main attributes the Wilson brothers see in the breed are the doing ability, feed efficiency and temperament.

When it comes to selecting bulls for purchase the brothers place emphasis on Breedplan figures in conjunction with a thorough eye appraisal for structural correctness and studying the pedigree.

The property is 1050ha running 150 stud Hereford cows. Cropping is also an integral part of the business with up to 689ha cropped annually. It is a dry farm with an average rainfall of 330mm annually.

Weaning occurred in January and since then the yearling bulls have been fed on barley straw and oats. Herd replacements are also selected at weaning with about 50 heifers selected for joining to the bull annually. The top 30 of these will generally make it into the herd.

DAY FIVE:

Minlacowie Stud, Honner family, Minlaton, South Australia.

The Honner family farm a total of 2424ha (in two blocks of 1212ha) of which 1818ha is cropped each season.

The region, on the Yorke Peninsula, is known as the barley capital of the world and it has produced the highest quality malting barley globally for many generations with silverware from the 1900s for best barley at world fairs in Canada and the UK on display in the homestead.

But barley is not all the Honner family are renowned for. Their Hereford stud was established in 1961 and currently they calve 180 registered cows in spring and autumn with natural mating and AI employed. One of the most notable sires used to date is Doonbiddie Hustler having purchased a half share in the sire as a six-month-old calf. He is still an active sire at 12-years-old.

Most of the bulls are sold privately into the large pastoral properties in the north of South Australia and towards Alice Springs. A quick trip around the farm was made and will probably be the only time the NZ Youth Ambassadors see a brand new BMW used to round up bulls!

Anthony said the region always looks desolate in March. "It's a great attribute of the breed that they do so well with very little. Herefords do well on nothing," he said.

Brontannia Border Leicester Stud, Minlaton, South Australia.

Bob Mumford began breeding Border Leicesters in 1955 and is one of the most well established studs in South Australia. In the early days the property was expanded by purchasing land when and where it could be afforded. In total he and his sons run 2222ha.

He sells about 150 rams on farm each year averaging about A\$800. The stud ewe flock records an average lambing tally of 130%. Bob and his two sons also have a cropping component to their business and this is the main focus for them.

Grain farmer, Scott Hoyle, Minlaton, South Australia.

Size definitely mattered to South Australian grain farmer Scott Hoyle. He discussed the impact the drought has had on the grain industry in South Australia and he's confident returns will bounce back this year. So confident he has recently purchased a 450hp



Two Okawa Commodore sons on display at Lauke-Merrina Herefords.



A handsome lineup of bulls on the Honner property.

tractor and 42foot air seeder that can sow about 12ha an hour. The Ambassadors hope for his sake his predictions are correct.

The 450hp tractor recently purchased will cost A\$40,000 to replace the tyres alone. Scott plans to use the tractor for 200hours/year. "It takes half a day to empty the seeder it tows," he said.

If contracting, Scott said on average a typical charge for machinery like his would be about A\$500/hour – but it's not so bad when you consider the tractor and air seeder can sow 12ha/hour. Sowing 101ha in a nine hour day isn't a bad effort.

Australian arable farmers are making the move towards no tillage in a bid to enhance moisture retention.



DAY SIX:

Markowen Stud, Bordertown, South Australia.

Mark and Jade Scown had put a lot of effort into displaying bulls and cows with calves at foot on their property.

Mark, president of the South Australian Hereford Club, said his interest in Herefords began as a hobby and now they calve 100 cows, milk 120 dairy cows, run 600 sheep and crop 121ha. In total they run 589ha in two properties. The cropping country is under irrigation and is used to grow Lucerne seed. They recently harvested 8T from 11ha.

The Scowns held their first bull sale two years ago in conjunction with another stud and recorded an average price of A\$4000.

When selecting bulls to purchase Mark says he puts a lot of emphasis on Breedplan figures.

Yearling bulls inspected at Markowen illustrated tremendous muscle and structure. There was also a son of Okawa Commodore, demonstrating how NZ genetics are being put to use in Australia and working well. The Commodore son is being offered at the National Show and Sale at Dubbo. Koanui Rocket also featured in the pedigrees of Markowen cattle.

Warrensville Herefords, Bordertown, South Australia.

The Steer family run Warrensville Herefords on 1616ha and 1454ha leased with a total of 1010ha sown in cash crops and summer feed. They have 121ha under irrigation which they use to grow lucerne and sorghum for silage. Canola and some lucerne are sown for seed. The lucerne seed should return A\$5/kg.

The Steer family calves 500 cows with up to 70 bulls being sold annually, but sales are reliant on rains on the big pastoral country stations. Without the rains the cows don't cycle, which means a large number of South Australian Hereford studs depend on this rain for sales.

Chris Steer revealed he has bred his ideal sire – Warrensville Destiny A203 and will be using him extensively this season. "He could well become the backbone of our herd."

Chris says this sire combines the exceptional easy doing ability of the Hereford with the growth and muscle pattern of the modern Hereford. They also showed a great line of productive cattle run and bred with commercial buying in mind.

The family aims to have the cows in peak condition by January as that is when the feed pinch starts and in general the animals start gaining weight again in August.

Bendulla Stud, Bordertown, South Australia.

Herefords couldn't be in a more typical Australia setting than at Bendulla stud, surrounded by gum trees, dry flats, kangaroos and cockatoos.

Run by Ross and Raelene Bennett with son Andrew and partner Tiffany the stud comprises of between 200-300 breeding cows running with 2500 breeding ewes on the 1616ha property. There is a second property of 404ha where cropping is done.



Anthony Honner of the Minlacowie Hereford Stud presented an impressive range of Herefords on behalf of his family.



Yearling bulls under the iconic Australian gum tree.

The soil type is complex with sand ranging from 0.5m-30m deep sitting over a clay base – prone to drying quickly in summer. A second property, 404ha, just a short drive away, provides a more reliable soil type and plays an invaluable role in producing the vital supplementary feed and cropping country for additional cash flow.

A land development programme is in place on the home block of 1616ha which will improve land value, production and soil type. The process is known as “claying” and is done to develop a soil type that retains moisture. However it is only an economic move when the clay is covered by shallow sand. Massive excavation works are undertaken with the sand being scraped off and the clay dug up and spread over the sand at a rate of between 100-300tonne/acre – at a cost of A\$735/ha to spread 300t. A layer of sand is then spread over the clay and disced.

It costs A\$240/hour to spread the clay and in a good day the spreader can cover 4ha. A good Lucerne crop harvesting 200kg/ha at A\$5/kg usually pays for the cost of soil improvement. The Bennetts say the benefits become clearly evident several years after development.

Large pits are dug on the parameters of the paddocks being clayed and left open – there might be four pits in a 73ha paddock. After claying two barley crops are sown (assisting weed control) and harvested followed by pasture or lucerne ensuring the sand and clay are sufficiently mixed to form a sandy loam and return organic matter to the soil. This year they have cropped a total of 728ha.

Calving is typically over autumn but can run through to September. The Bennetts are targeting moderate birthweight cattle with a good carcass and growth and use EBVs to identify the correct animals – a large number of their clients also use EBVs to select bulls.

They sell bulls on farm as two-year-olds with large numbers heading on to central Australian cattle stations with extraordinarily large herds. The family said these properties only tend to buy bulls when it rains – which could be only once every three years. This poses the challenge of forecasting appropriate bull numbers as when those central properties do buy they buy by the unit load and pay up to A\$4000/head. Typically the Bennetts sell about 90 rising-two-year-old bulls.

The Bennetts use EBVs to make their own bull selection and focus on a moderate birthweight and structural soundness.

DAY SEVEN:

Allendale Stud, Bordertown, South Australia.

The Allendale Stud was established in 1949 by the Day family. Lachie Day, a Herefords Australia Limited board member hosted NZ Hereford Youth Ambassadors on the visit.

Allendale is home to a herd of 300 breeding cows and a Poll Dorset, Suffolk and White Suffolk studs. They sell about 350 rams annually on farm.

The Day family offer about 60 bulls annually at an on-farm auction and usually take a team of six to the major shows and sales including Dubbo National Show and Sale and the Sydney Royal show. They've been quite successful at Dubbo and in 2003 of-



Lachie Day of Allendale Hereford stud explained his philosophy for bull selection.



The ruthless culling criteria on the commercial Hereford operation of the Ogilvie family was inspirational and a good example of why not to lose sight of the importance of the commercial cattle industry.



Herefords featured predominately on the Wirreanda Feedlot of Nick and Chris Ashby.

ferred Allendale National that went on to command A\$85,000. The genetics of that sire regularly feature throughout the herd. Some of these top bulls are used in stud as yearlings and semen often taken for in herd use.

The Allendale operation is spread over 1550ha with two distinctive soil types. These being clay loam with some irrigation and sand country. Typically rainfall is about 508mm and generally falls



One of the pits left after “claying” was undertaken on the Bennett family farm to improve soil type and moisture retention. It’s a costly process but a good lucerne harvest can cover the cost of the process.

during the growing season (April – October). But Lachie says like much of Australia, rainfall has declined in the past three years.

The 300 registered cows autumn calve with peak calf drop April to May, however the calf drop can spread through to winter with a June calving probably the ideal time feed wise. AI is extensively used over all heifers and about 60% of the cows. A handful of ETs are also done and a commercial herd of 50 is used for this.

NZ sire Okawa Commodore featured here and his length complimented the thick deep bodied Allendale females. Hereford genetics are sourced from around the world if the correct ones are identified. “If it works it doesn’t matter where it comes from,” says Lachie.

Great cattle were displayed and the studs’ presence at the national show and sale each year reflects the strength and repeatability of their breeding programme.

Laucke-Merrina Hereford Stud, Bordertown, South Australia.

The stud was established in 1972, 100kms north of Adelaide and relocated to Bordertown in 2002. Nick and Justine Laucke farm 240 breeding cows and own two properties of 850ha each. Nick says the two properties compliment each other with one located in a strong cropping area and the other featuring heavier soils and more reliable rainfall.

The herd females are sired by Keswick Roger Moore (by Bond), Summit Manfred Man, Wairanga Batavia and more recently Okawa Commodore, Koanui Rocket and Merrina Grungo. These all boasted very good calves.

Two new sires have recently been used and the Lauckes are awaiting the arrival of these calves. Both these sires are from the Allendale stable.

The couple hold two bull sales annually and sell up to 62 sires, this combined with a new selling complex makes for exciting times for the couple.

Marc Robertson helps illustrate the size of the 450hp tractor recently bought by a South Australian grain farmer. It will cost A\$40,000 to replace the tyres alone.

Ogilvie Family Operation, Naracoorte, South Australia.

A commercial Hereford farmer running an extensive operation exhibited a ruthless selection programme in his commercial and stud herds.

No second chances are given – any indication of a poor temperament, assisted calving, or dry females are culled, all females stay on the property until they fail to produce a calf. A moderate type animal is his aim. “We’ve been working on temperament for four years and there is a marked difference,” says Richard Ogilvie.

“I’ve gone for Herefords because they make money. They are really easy to handle.”

The Ogilvie operation is a very extensive business and property with the family owning 18,180ha and leasing 6464ha spread over South Australia and western Victoria.

The enterprise consists of two feedlots, a commercial Hereford herd (including an ‘elite’ herd) of 5000 head and a registered Hereford herd – Spotshill. The registered herd was established to provide a reliable source of bulls for the commercial herd in the future.

The Ogilvie feedlots turnout more than 10,000 animals annually on a 60 day feeding regime three-and-a-half-times a year. They opt not to feed during summer months as there are enough grass finished cattle to meet demand over that period. The feedlot cattle are fed on oats, hay, barley and lupins. The Ogilvie family also supply the domestic market (Coles Supermarket) with 15,000 head annually.

The cattle operation comprises a 5000 head commercial polled Hereford cow herd which has been the basis of an intensive breeding programme for the past 20 years. It starts with the purchase of up to 15 weaner bulls from a NSW stud annually – all meeting the strict selection criteria for colour, eye pigmentation, quiet temperament, well muscled, structurally correct and from good milking mothers and he won’t buy grain fed bulls. But the most vital aspect is the bulls all need to be by the same sire. Buying one line of bulls allows consistency in the cow herd. EBVs are not used in selection for the commercial herd but are used in the stud herd.



Yearling bulls doing exceptionally well on little else other than scenery at Kerlson Pines Herefords.



One sire line of bulls will be used in an “elite” herd of about 700 cows to breed a large number of bulls for use over the remaining 4000 cows. Sire lines are used for three years.

On display were large lines of cows all from one bloodline with calves at foot from another single bloodline.

Cows remain in their age group for the entire time they are on the property. All cows are set stocked year round at one cow-calf/1.7ha. Supplementary feed is only given to first calvers. No checking is done during calving, the exception being first calvers, and Richard says because the cows are from a stabilised line of females, any calving difficulties can be attributed to the bull.

Five substantial sets of cattle yards are spread around the property and feature an “Argentinian V” type race which prevents cows from ducking their heads under the cow in front allowing for seamless handling.

Up to 1500 yearling heifers are joined with a yearling bull annually in the commercial herd. The elite herd heifers are artificially inseminated when cycling is observed and tailed up for three weeks. All other heifers are naturally mated for six weeks. Any empty heifers enter the feedlot system. All bull calves from the commercial herd are steered and bull calves born from the elite herd are put over the commercial cows.

Richard says maintaining the quality of his herd is the biggest challenge he faces in the future, another reason the stud was established, securing a future source of appropriate sires for the commercial operation. The Spotshill stud herd will also be used to evaluate new sires that may be used in the commercial operation. The Ogilvie operation employs five staff plus four family members.

DAY EIGHT:

Morganvale Herefords, Naracoorte, South Australia.

Morganvale Hereford stud was established in 1978, 250km north of Adelaide in typical wheat and grazing country. In 2001 the stud was relocated to Willalooka and in 2005 Heather and Alan Morgan purchased the Heatherdale herd and property, next door.

The property is currently 1330ha with 80ha flood irrigated.

They run 420 breeding females and sell about 80 bulls annually with many clients in the south east and western districts of Victoria. The herd typically calves in autumn to meet the age demand from clients for younger bulls.

The Morgans aim to run the cattle as commercially as possible to illustrate the true genetic capabilities of the herd to clients. They have also developed a low birthweight line for dairy and specialist heifer joinings.

The couple are currently focusing on positive fat in the herd to counter the rising feedlot costs and also positive IMF to maintain the grass-fed do-ability in the herd.

Naracoorte Sale Yards

A brief visit to the weekly Naracoorte sale yards saw Herefords commanding premium prices.

T&R Meatworks, Murray Bridge, South Australia.

Privately owned T&R is one of the largest meat processors in Australia. It processes both beef and sheepmeat on site at Murray Bridge with several other plants located around Australia.

The plant kills 9500 sheep and 470 cattle a day, five days a week. Most of the cattle are killed between 480-530kg LW and lambs 28kg for the USA and Japanese markets. It employs 900 people with multiple nationalities represented. Most of the meat is exported to Asia and the USA with the rest being sold on the local trade market. Product is packed under several different labels according to customer demand.

Much of the technology software T&R employed has been developed in NZ and it was felt NZ meat processing plants are slightly more advanced – boding well for NZ.