



**Ben Todhunter**  
**Cleardale Station**

The autumn is a busy time on the farm for us — we've sorted our cows and wandered them up the road for their annual winter pilgrimage and have just put the rams out. We went through all the ewes and it was really satisfying to see some of the progress we've made in a relatively short time. As an illustration, take a look at the data for footrot (over the page) and you can see the real progress made on this trait since we've had a good tool - <http://www.perfectsheep.co.nz/feetfirst> - it's a great resource for understanding footrot. Prior to the availability of the EBV for footrot resistance, The Lincoln Gene Marker Test was promoted and used. An independent review of the Lincoln Test showed it had limited effectiveness — the paper that shows these findings can be read on the Perfect Sheep website or via this link: <https://bit.ly/42gt4Xs>

I struggle with how a university can still offer this test. The last time I asked the question the reason provided was, "People are still asking for it." That doesn't seem good enough for me.

That's enough of the soap box!

Weaning rate, growth rates, muscle and fat, and worm egg count are all also trending in the right direction while maintaining micron. Interestingly we've been trying to challenge our ram lambs for worms so we can individually sample their worm egg output and the mob worm count has been reducing for the last month!

We've also done a bit of thinking and had a look at where we are heading with our cattle genetics. As a breeder, we need to consider the whole value chain and ensure that our genetics have relevance to that entire chain. For New Zealand beef farmers I am increasingly of the view that we need to provide a first-class eating experience, leveraging our pasture-based systems.

So, for the consumer it needs to be taste, tenderness and flavour — marbling, temperament and size are the key determinants here.

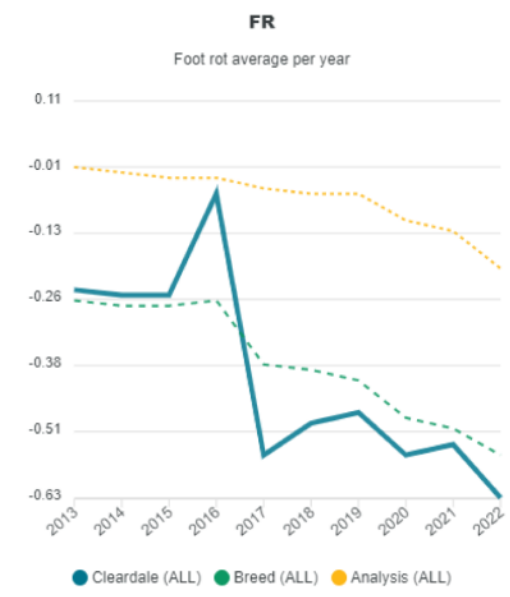
For the finisher, growth to market size and carcass merit are critical factors.

For the breeder, they are looking for good reproduction and growth in an efficient system — kilograms at weaning for the least cost.

Some of these factors are aligned and others are not but the real tension point in the system is growth and cow cost — higher growth tends to lead to higher birth weight and bigger cows.

The balance then, that we are striving for, is maintaining that functional cow while still increasing growth and carcass merit. The nearest index to use for this is the AngusPRO index (\$PRO).

When looking at our genetic progress over the last few years, we are advancing a little faster than the average gain for the \$PRO index and we're keeping more fat on our cows, with less mature cow-size. We are happy with the recent progress and the place for those genetics.



## AngusPRO Index (\$PRO)

The AngusPRO index (\$PRO) estimates the genetic differences between animals in net profitability per cow joined in a commercial self-replacing herd based in New Zealand that targets the production of grass-finished steers for the AngusPure programme.

Daughters are retained for breeding and therefore female traits are important.

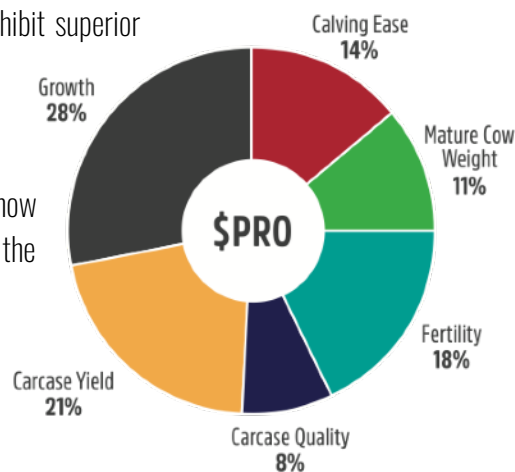
### Selection Index Summary

- New Zealand production system
- Self replacing herd
- Daughters are retained for breeding
- Steer progeny are finished on pasture for the AngusPure programme.
- Steer progeny slaughtered at a carcass weight of 290 kg at 20 months of age
- Significant premium for steers that exhibit superior marbling

Steers are assumed marketed at approximately 530 kg live weight (290 kg carcass weight with 10 mm P8 fat depth) at 20 months of age, with a significant premium for steers that exhibit superior marbling.

### Trait Contributions

Figure 1 (right) shows the traits that are considered in the \$PRO index, and how much they contribute to the overall balance of the selection index. The larger the segment, the greater the impact on the selection index.

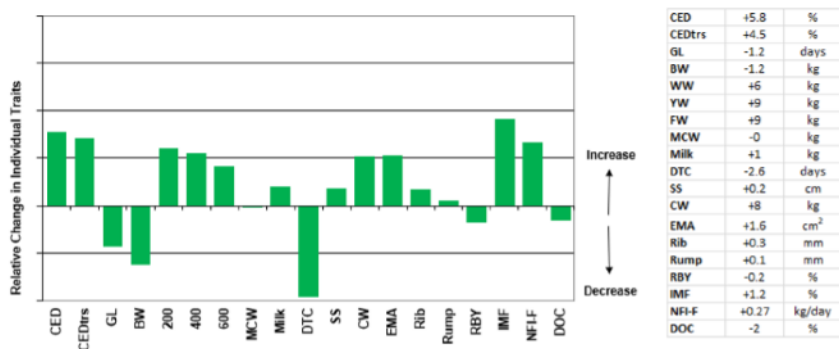


### Selection Advantage

Figure 2 (below) shows the selection advantage if animals are selected using the \$PRO index.

The selection advantage is calculated by ranking well-used sires within the Angus breed on the \$PRO index and comparing the average EBVs of the sires in the highest 10% with the average EBVs of all sires from which they were selected. For example, the sires ranked in the highest 10% based on the \$PRO index had 9 kg higher 400 Day Weight EBVs and 1.2 kg lower Birth Weight EBVs than the average EBVs of the sires from which they were selected.

Figure 2 - Selection Advantage for the AngusPRO Index



The selection advantage is indicative of the long-term direction and relativity of response that will occur in individual traits if the selection is based on the \$PRO index. The actual response that is observed will vary depending on the features of the individual breeding program.

A feature of the \$PRO index is a selection advantage of close to 0 for mature cow weight, meaning that selection on this index will maintain mature cow weight, while still increasing growth to 200, 400 & 600 days of age.

## Doing our Homework in the USA

I recently joined Guy Sargent and half a dozen other progressive AngusPRO members on a bull scouting trip in the United States. This trip confirmed the opportunities that exist to incorporate US genetics into the Cleardale herd, to build on the eating experience.

I travelled through California, Colorado, Nebraska, South Dakota, Missouri, Kansas, Montana, Illinois and Ohio, looking at bulls and talking to American Angus breeders and marketers.



They are significantly ahead of us in the US in terms of their carcass traits, driven largely by the Certified Angus Beef programme they run as part of their branding.

CAB has grown in 40 years to now supply over 1.2 billion pounds of branded sales into the market. For a program that was nearly shut down twice in its early days, its focus on delivering great customer experiences is something everyone in the industry can learn from. Assessment of quality at the processor is based on 10 science-based quality criteria, with marbling, size and appearance key.

I was lucky to dine with CAB's invited chefs at their 'Chefs Summit' — To be able to talk to some of the industry stars about what was important to them in order to consistently exceed customer expectations was a real privilege.

The priority for them is a consistent, tasty, tender steak.

The opportunity for New Zealand in the US is to nail this quality and then layer in the grass-fed environmental story into that product, to specific segments of that large US market.



The visit has me keen to continue to incorporate some US Angus genetics into Cleardale's bloodlines, to continue to enhance our marbling. Marbling is a reasonably heritable trait and is so integral to the final product's taste and the overall eating experience.

The US consumer palate is heavily influenced by grain-finished cattle and I also feel that maybe there is a greater opportunity for us in Asia than in the United States, playing off the grass-fed, pure quality offering we have.

Beef on dairy has grown rapidly with large dairy beef businesses sourcing top beef genetics and supplying those to dairy farmers, then buying the progeny back and finishing as a consistent quality eating product. With the right sires, these animals are growing, looking and grading similarly to straight beef animals and providing the opportunity to supply really consistent grading and sizing products into the market. Young calves are raised in individual stalls and then lot-fed for their whole lives. The cattle appeared healthy at all their growth stages but these confinement systems are viewed negatively in NZ from both animal welfare and environmental perspectives.

It's interesting to look at some of the technologies used in the US that are not used in NZ - and are not even on the discussion radar. Hormone growth promotants are used widely, as are genetically modified crops and now even gene editing of food animals has gained approval. The Red Angus Association of America provides a herdbook registry of Red Angus animals carrying gene-edited traits for heat tolerance and coat colour. Both trait approvals emanate from specific genetic alterations designed and submitted by Acceligen, a technology company pioneering the commercialisation of gene-edited food animals.

For NZ it's important for us to understand our customers and some of these technologies may not be acceptable, however, they do provide a competitive advantage to US producers and as time goes on NZ runs the risk of becoming uncompetitive.

Years ago, I wrote a Kellogg report arguing that new technologies should be assessed on a case-by-case basis, using a sound ethical framework rather than blanket approvals or denials. I think that approach is still sound and I'd encourage NZ to have another look at how we handle novel food technologies.



Travelling down through Kansas in a dry spring with dust clouding the horizon had a feeling eerily like what I'd heard about the dust bowl in the thirties. The area has had a long dry spell, but when I asked the locals whether the dust was unusual they said no. It's one of the easiest things in the world to farm someone else's land as you drive past, but the impression I was left with was, here is an area where the term regenerative agriculture could have started and would have real benefits. Corn stubble left fallow over winter and grazed by cows provides an ideal environment for bare soil to be exposed to frost and damage from hooves — weakening an already fragile soil and exposing it to wind or rain erosion. Our temperate climate is so different from a continental one and building a system that can maintain and enhance the soils in that climate looked to be a challenge, but also an opportunity.

Angus America and Angus Australia are looking to do a global Angus genetic analysis in June this year. This will have real benefits for Australasian breeders to help compare data on US sires and will also have benefits for US breeders who will have access to the structural EBVs that Angus Australia leads on at the moment. The Claw Set and Foot Angle EBVs published by Angus Australia are calculated in an international Angus genetic evaluation where structural score information on Angus animals born in New Zealand, Australia, the United States and Canada is combined to calculate a single EBV. The EBVs are calculated based on over 100,000 structural scores that have been collected across the four countries on both yearlings and mature cows, with animals scored multiple times during their life. Genomic (DNA) information is also incorporated into the genetic evaluation, adding considerable accuracy to the EBVs.

## Progeny Tests

We're big fans of progeny tests as it's really hard to pull the wool over people's eyes in them, so to speak. We have extensively supported the NZ Merino Central Progeny Test and it was great to take a look over the progeny from Cleardale 171230, who was used as a link sire in the 2021 CPT. After a few tries, we have been allowed to enter 171230 in the 2023 mating for the B+LNZ Genetics Sheep Progeny Test. A requirement of this is that we enter our data on the SIL database so that they can be compared to where crossbred performance is at. There is a perception that fine wool sheep are less robust and have smaller growth rates than crossbred sheep, so having 171230 in this progeny test and our data on SIL will provide a real reference point as to where we do sit when compared to crossbreds.

We've gone a step further and will use a heavily linked crossbred ram, with proven performance in a trait we are looking for, over some of our SX Fine Wool ewes, providing real linkage and data so commercial farmers are able to make informed decisions on the use of our genetics.

Another advantage of recording with SIL is that we have been able to test the progeny of 14 sires for methane output. This is another area to learn about but appears to have the potential to reduce methane output over time and seems to have few negative breeding consequences.



On the cattle front, we've had Hallmark Stirling Q016 selected for Cohort 2 (2021 mating) of the B+LNZ Genetics Across-Breed Beef Progeny Test. We purchased Stirling a few years ago and have sold semen to a range of studs. What we like about Stirling is that we think he will breed great cows and we are keen to see how they go in this progeny test. Calves are on the ground and have just been weaned.

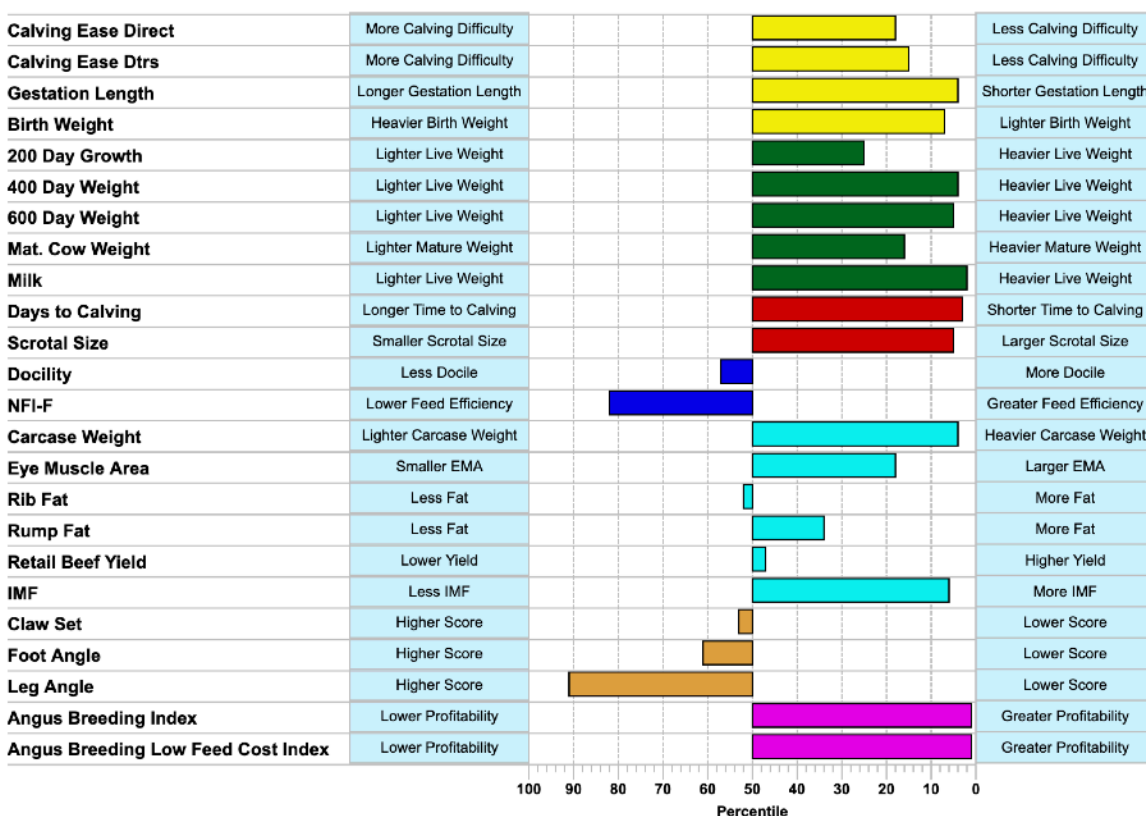
## Bull Sale - Monday, June 12<sup>th</sup> 2023 11.00 am at 6587 Arundel Rakaia Gorge Rd

We will be hosting our second bull auction this year, held at our Gorge property. We welcome everyone to come and have a look or inspect bulls at any time prior to the sale. The progeny of Waitangi N221 will be interesting for all cattle people to view. Cleardale is one of the only places you'll be able to purchase his genetics in the South Island this year. He's a bull that is easily in the top percentile for every Angus index. We've used sons in our herd and will have a good group of sons in the auction on Monday, June 12th.

Scan the QR link to view Waitangi N221 on angus.tech



### Waitangi N221 - May 2023 TransTasman Angus Cattle Evaluation



## Bull Sale Catalogue - angus.tech

Bull sale catalogues will be able to be found on angus.tech and on our website at cleardale.co.nz

Scan this QR link to view the sale catalogue on angus.tech.



## Bull Walk – Tuesday, May 23<sup>rd</sup>

Be sure to join us for our Bull Walk on Tuesday 23<sup>rd</sup> May to view the bulls prior to sale day and have a chat with Ben and Ryan about how Cleardale can assist you in making genetic progress within your breeding programme.

## Genetic Advice

As always we are happy to discuss any questions clients may have and are also able to access the services of Dr Mark Ferguson of neXtgen Agri for clients who would value a different perspective.



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## Contact the Team

Ben Todhunter	021 140 3760	genesforprofit@gmail.com
Ryan Esler, farm manager	021 227 5216	cleardalemanager@gmail.com

29 Double Hill Run Road  
RD 12  
Rakaia 7782

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