Pwyso A Mesur Recordio Defaid yn Seland Newydd

Gan

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INDUSTRY OVERVIEW

Dairy

The booming Dairy Industry in New Zealand at the moment is affecting a lot of different issues within agriculture.

With returns per hectare nearly ten times better than beef, sheep and deer, and around five times better than corn, the change around into dairying is huge.

Land prices for good flat ground has risen dramatically in the last few years with a few good dairy farms going for over £10,000 an acre.

Most dairy farms north of Southland will have huge irrigators to supply water all year round for grass growing, either from boreholes of lakes.

A typical farm with own water supply can be worth up to 35% more in land value.

Over 100 farms in Southland alone converting or in the process of converting into dairy within the next year.

For every one conversion another farm will become a support unit (heifer rearing and cow wintering)

Huge borrowing against milk prices, with also a lot of city money being invested in dairy farms.

BEEF

The return from beef herd was not that good due to the value of New Zealand $ for exporting and also Australia killing a lot of cattle due to the drought in some parts.

Roughly comparing beef prices between Wales and New Zealand for instance a £500 animal in Wales would roughly make NZ $500, so with exchange rate we are getting 2.6 times more.

Their wintering costs are a lot less with shorter winters and no animals having to be kept inside. A lot of winter feed is grown, (turnips, kale, rape etc) also most of the cows after weaning are turned onto the hills to graze grasses through the winter with calves being weaned onto winter feed and strip grassed.

SHEEP

A lot of sheep farmers have gone out of the industry either selling their farms, or getting into dairying with ewe numbers declining from 70 million 15 years ago to around 38 million this year.

Sheep farmers have had two bad years of lamb prices with this year's selling season starting (November) around 10% lower than this time last year. But they are hoping for a more even price schedule for the coming months.

Even though the ewe numbers are going up every year, with some farms scanning over 200%, something unheard of in New Zealand some 10 years ago. A lot of this has occurred for developing new breeds (composite) and introducing the very fertile Finn, Texel and Suffolk.

Farmers and industry leaders reckon it will be 2 years before things improve. With the optimism coming from China and South East Asia. At the moment they are only buying the cheapest cuts, flanks and internal organs, and getting their protein from milk solids. They hope through educating and promoting they will be able to sell more meat cuts to a growing economy and wealth of China and Asia.

DNA Recording of Sheep

Catapult Genetics

Catapult Genetics was formed following the merge of Catapult Systems and Genetic Solutions, global leaders in sheep and cattle DNA testing technologies.

They provide leading edge genetic solutions for livestock industries all over the world.

Their products and services are designed to improve product quality and production efficiency both on farm and through value supply chains. They have commercial operations in New Zealand and Australia and partners in the UK, North and South America, Europe and South Africa, with Innovis based in Aberystwyth, responsible for the UK market.

Most clients are purebred and commercial breeders/farmers. Some big co-operate farming companies food processors and biotechnology companies.

DNA Technology for the Sheep Industry

LOINMAX is a test for a DNA marker that affects the size of the loin muscle area in an animal, the most valuable muscle in a carcase. Identifying and selecting rams carrying the loinmax or loinmax gold effect to join to your ewes will mean that progeny that inherit the favourable markers from the ram and will have an increased loin muscle weight.

MYOMAX tests for a DNA marker that increases overall carcase weight and muscle yield. An animal that carries the myomax marker will have increased muscling in the leg and loin, less carcase fat and a higher carcase weight compared to non-myomax carriers. A lamb that receives one copy of the marker from one parent will have 5% more muscling in the leg and 7% less carcase fat. A lamb with myomax from both parents will have up to 10% more muscling and 14% less carcase fat.

SHEPERD uses DNA to generate pedigree and family information. Rather than traditional parentage recording at mating or lambing a DNA sample is taken from each sire, dam and lamb along with ewe scanning data and mob records. Our DNA profiling and analytical software generates the family information and interfaces with breeding value software to produce breeding values and genetic indexes.

INVERDALE is a naturally occurring DNA marker that can be introduced to your flock to produce fertility gains of 30-50%. As the number of lambs weaned per ewe is a key driver of on-farm profitability, using an Inverdale ram to increase the scanning and lambing percentage in your flock will make huge efficiency gains in just one generation. Results of the Inverdale test are used to generate feed availability and the management of Inverdale and non-Inverdale stock.

TAKING A DNA SAMPLE FROM SHEEP

All that is needed for a DNA sample is a small amount of blood. This is taken from the nose by using a sterile needle to draw some blood then place the sticky tape on the nose to have a blood sample. Place on a card and write the tag number down and it is ten ready for posting.

IMPLEMENTATION ON OWN FARM

In the future I hope to get involved with DNA testing, probably only on parentage recording, depending on cost. This will help me cut down on labour and time involved with recording manually at lambing time. I can also multi-sire mate in the autumn which is very difficult on an open hill farm. By multi-sire mating I can leave the ewes on the hill or ffridd for tupping which will give me a better knowledge of which ewes/rams are performing on the hill instead of giving them better paddocks at mating and lambing time.

At ear marking/tailing at 3-4 weeks of age a DNA sample will be taken from all lambs and they will be tagged (maybe electronically) for identification.

At around 8 weeks they will be weighed, then at weaning I could scan for muscle and back fat and weigh again, this information will then give me figures on which ewes and rams are performing best and which are the poorer performing ewes/rams.

Using this information, together with good stockmanship I can select my ram lambs and replacement ewe lambs for future breeding. This will also give my ram buyers the confidence to buy animals that are performing at the top.

COSTS

The cost of DNA sampling at the moment is very expensive compared to returns in the sheep industry at the moment. The same is relevant for sheep farmers in New Zealand with very little returns for sheep meat across the world.

FURTHER GENE TESTING

I do not see myself testing to find genes for better muscling, bigger loins, fertility gene, foot rot and worm resistant genes. All these can be looked for by a good stockperson.

Loins and Muscling: can be achieved by handling and visual assessment of an animal.

Foot rot: does not work (words of Bill Lotts, Fairly NZ. A farmer with a wealth of knowledge and experience of DNA testing sheep recording, genetics, embryos and semen with his on-farm laboratory, also working with Australian and South African breeds of sheep) Even if both parents had the gene to resist foot rot, its progeny could still develop foot rot. Bill reckons it's all down to foot soundness and formation.

Fertility: not a problem to most farms in the UK (used to be New Zealand) there is a limit to how much lambs your own farm can carry/fatten. Every farm has its own level of potential lambing % that must be targeted, but there

is a point where too many lambs can create more problems and extra cost.

CONCLUSIONS OF SHEEP DNA RECORDING

On my visit to New Zealand I have met top breeders and commercial farmers.

With most top breeders telling you how well their rams are and not so prepared to give you other information.

When visiting commercial/ordinary farmers I got to see a better picture regarding sheep recording, figures, index, DNA etc.

While most see a benefit to some recording they also pointed out that what they have seen by 'chasing figures' you lost out on other characteristics. So they have seen their figures on paper going up but their stock getting poorer. What a few told me was that too many academics and scientists getting involved in farming and good stockmen are hard to find.

DNA will still be done by a small minority, mainly specialist ram breeders, and mainly specialist ram breeders, and mainly on the percentage side, further gene testing, myomax, loinmax etc, will only be done by bigger co-operate farm business, with money derived from other sources (city investors)

I strongly suggest that in the future we use the technology available to us to explore ways of getting genetic gain, but to use it sensibly, not get carried away with genes and figures, and that good stockmanship will always be at the forefront of sustainable and profitable sheep farming.

Trying to compare Wales to NZ is difficult, because different things contribute to the different style of sheep seen in both countries. In NZ conformation is totally different especially the Suffolk and Texel having been developed into an animal that is narrower at the shoulder but has more length and depth, compared to the UKs shorter, stockier animal.

With larger flocks in NZ lambing ease is number one, with survivability at birth and growth rate very important, and all of this off grass, no sign of a feed bag anywhere.

This is where I can see our downfall in Wales with pressure from certain bodies to produce leaner lambs, and most terminal sires in this country being overfed from the 'bag'. Going for leaner lambs will only put emphasis on the 'bag' making it more difficult to fatten lambs on grass.

In NZ they have already seen this by producing composite breeds with high muscling, growth rate and lean fat cover (this being the most influential figure I believe in breeding stock). They have ended up not being able to fatten these lambs on grass.

In NZ they have already seen this by producing composite breeds with high muscling growth rate and lean fat cover (this being the most influential figure I believe in breeding stock) They have ended up not being able to fatten these lambs on grass and this for the NZ farmer is 'his worst nightmare'.

This is why a lot of commercial farmers are switching back to more traditional ewe breeds like the Romney, Perindale and Coopworths where they have, firstly a bigger gene pool. Secondly, there hasn't been as much emphasis on leaner and faster growing animals. Most farms I went on were having very good results using a first cross ewe e.g. Romdale (Romney x Perindale) or Coopdale (Coopworth x Perindale) crossing these with a Texel or Suffolk or Sufftex (first cross terminal sire) to produce fat lambs. Most reckon that a first cross ewe performs better than going for a three or four cross composite breed.

Their reasons for turning away from composite breeds include

Lambs hard to fatten (too much emphasis on leaner carcase)

High losses from scanning to weaning (high fertility gene producing too many lambs for type of farm)

Ewe survivability in winter (high ewe losses due to low fate cover)

With ram breeders having 'chased the figures' other things that contribute to the sheep soundness like teeth, feet, wool etc have been forgotten.