

# The one constant is change

**Did you know?** The phrase “raining cats and dogs” originated in 17th-century England. During heavy rainstorms, many homeless animals would drown and float down the streets, giving the appearance that it had actually rained cats and dogs.



**GENE TALK**  
**Mark Young**

An often quoted saying goes “The one thing that is constant in our lives is change.”

Then again, “Change is only a good thing, if you are not where you want to be”. Which just goes to show that you can find a saying for any situation.

Historically, we had sheep and beef cattle producing carcasses that were too small and too fat for our changing markets. As well, sheep flocks produced an average of one lamb to a ewe, well below the level sheep were capable of.

Since those times we have seen dramatic increases in the productivity of our sheep and beef farms, due partly to improved management of feed and partly through genetic improvement. We should celebrate the remarkable successes some of our ram and bull breeders have achieved in such a short time.

While there is still great potential for further improvement of productivity on a national basis, some traits may be near to their optimum for certain farming systems and environments - for example, commercial farms with lambing percentages heading toward 200%, that are producing heavyweight, lean lambs with low levels of fat.

How does this affect the way genetics should be sourced when this is the case?

Ram and bull breeders in New Zealand make use of selection indexes to rate animals for overall merit. Such indexes put pressure on the component traits to change in the “desired” direction (see table). While individual animals vary in their relative strengths, using indexes to buy rams or bulls will cause a directional change in all traits over time in your flock or herd.

It is implicit that we want to move from where we don’t want to be, to where we do want to be. So what do we do when we get to the objective for one or more traits? Further

change is not what we want. An example in our sheep and beef industries is fatness in some maternal ewe and cow lines. Some people believe that the animal types with optimal level of fatness for

lamb and beef carcass production have insufficient fatness as ewes and cows to act as a buffer when feed is short and conditions challenging, eg through winter and peak lactation.

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## Directional changes using NZ industry selection indexes

	Breeding ewe type	Ram terminal sire type	Breeding cow type	Beef terminal sire type	Notes
Male reproductive potency	NC	NC	NC	NC	
Fertility in young females	More	n/a	n/a	n/a	Heifer or hogget pregnancy rate
Fertility – adult females	NC	n/a	Less	n/a	Adult ewe pregnancy rate, or calving interval
Litter size	More	n/a	n/a	n/a	Generally not relevant for beef
Twinning	More	n/a	n/a	n/a	More twins with fewer singles and triplets
Survival, maternal	More	n/a	More	n/a	Mothering ability of dam
Weaning weight, maternal	More	n/a	More	n/a	Milking ability of dam
Survival, direct	More	More	More	More	Lamb or calf thrift
Birth weight	NC	NC	Less	Less	
Weaning weight, direct	Faster growth	Faster growth	Faster growth	Faster growth	Pre-weaning growth
Carcass weight	Faster growth	Faster growth	Faster growth	Faster growth	Post-weaning growth to slaughter
Maternal adult size	Slow increase	n/a	Slow increase	n/a	
Maternal fatness	**	n/a	Slightly less?	n/a	Inferred from carcass fat for beef
Feed efficiency	NC	NC	NC	NC	
Longevity	**	n/a	NC	NC	Longer lived ewes or cows
Carcass lean yield	More	More	More	More	
Carcass fat yield	**	Less	Slightly less	Low	
Fleece weight	More	n/a	n/a	n/a	
Fibre diameter	Less in some types	n/a	n/a	n/a	
Dags	Fewer	Fewer	n/a	n/a	
Internal parasite resistance	More	More	NC	NC	
Internal parasite resilience	More	n/a	NC	NC	
FE Tolerance	More	n/a	NC	NC	

Key: \*\* – not in indexes; n/a – not applicable; NC – not considered



# Delay lies in the detail

Lynda Gray

Yield payment for venison is still a work in progress for most processors.

At last year's Deer Industry New Zealand (DINZ) conference processors said yield payments were 18 months to two years down the track. One year on they're still saying the same thing. As yet Firstlight Foods is the only supplier paying according to yield.

Processors put the delay down to getting the detail right. They want to be 100% confident in the methodology underpinning any yield-based payment. The stumbling block, perhaps, is deciding how far they're prepared to push a yield payment system; while most want to reward suppliers for high-yielding animals, the question is if, and to what extent, they're prepared to penalise below-par animals relative to the schedule price.

Duncan & Co is testing a yield scoring system with a development group of suppliers. At the DINZ conference chief executive Andrew Duncan said the final per-animal payment under the system being tested was schedule-based with the addition of a yield-based premium or penalty, defined by a 1:5 yield scoring

system. Trials to date using this formula had produced variations of up to \$1 a kilogram between the best and poorest animals.

The system was in the process of being fine-tuned and automated, with wider implementation expected within one to two seasons. Alliance is establishing a yield-based algorithm using VIAscan. Livestock general manager Murray Behrent said several venison bone-out trials had been done but more were needed to get the necessary data to underpin the yield-based system.

"By next season we should have enough data, then it will be a matter of telling farmers how the system and structure works."

He said venison yield payment would be closely modelled on the system used for lamb since 2003. Silver Fern Farms was working towards inclusion of yield data information on venison kill sheets later this year, SFF venison marketing manager Karl Buchannan said, but there were no plans to introduce a yield-based payment system.



Andrew Duncan:  
Scoring system

indexes will be as good at meeting their needs.

How can you help your breeder to address your needs? Provide feedback to them about performance of meat animals you send for slaughter and of your ewe flock or cow herd. Pay attention to things you use to assess performance or that indicate animals are under pressure.

Ram and bull breeders want repeat business, so they will want to help you get what you need. Take the time to identify your needs and inform them before you arrive to buy rams or bulls.

- B+LNZ and SIL are interested in your views. You can send us your thoughts by email to [silhelp@sil.co.nz](mailto:silhelp@sil.co.nz) or by leaving a phone message on 0800-silhelp (0800-745-435).

*Dr Mark Young is the genetics manager for Beef + Lamb New Zealand and SIL.*

## DINZ rethinks approach

DINZ has had to rethink the details of how to produce more deer heavier, earlier and better after being turned down for funding by the Ministry for Primary Industry's Primary Growth Partnership (PGP).

In October last year DINZ applied for \$9 million over seven years but was told no in December because the proposal was not sufficiently market-focused.

PGP has not completely closed the door, offering DINZ the opportunity to present a proposal for the August round of funding.

DINZ chief executive Mark O'Connor says PGP's response to the application was "surprising" but would not elaborate. The overall structure and thinking behind better meeting market needs remained the same, but on a slower path and smaller scale, O'Connor said. The formalised initiative was launched recently as "Passion 2 Profit" (P2P), and was the next step on from the Productivity Improvement Plan (PIP) much talked about at last year's conference.

An important new component of P2P was Advance Parties, groups of up to 12 people - that could include representatives from throughout the industry - working together to achieve a goal aligned to P2P. Their plans would be put into action and results measured. Key findings would be fed back to farmers and the wider industry through field days and various news media.

It was a new approach, different from Focus Farms that were regional and issues-based, and one that DINZ was keen to get off the ground by July. Potential Advance Party members were asked to register their interest at the conference.

O'Connor said Advance Parties would be possible under the existing funding structure.

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If you do not want some traits to change in the direction an index favours, these indexes will not identify the best animals for you. You may wish to "hold" traits that are near their optimum or even "reverse" any that have overshot the mark. You will need to work with your ram or bull breeder to find the rams or bulls that will improve performance of your flock or herd. Make your needs known to them with respect to traits that are near an optimum or past that optimum. They can then help identify the best animals for your situation.

Selection indexes are still a powerful tool. Their strength is in assessing overall merit for a basket of traits.

Different indexes targeting different users are a feature in NZ, but where individual farms have different needs, not all animals with high overall