



Buying rams

Mark Young, SIL
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Rams are the key to flock improvement

Decisions made when buying rams have a big impact on the future production of your sheep flock. Rams you buy can lift, maintain, or (let's hope not) pull down your flock performance.

So how can we maximize the returns we will get? By making best use of all information available, and by putting the appropriate emphasis on the different sources of information.

Firstly, why are rams so important? Simply because only a few rams pass on genes to the next crop of lambs, and to your ewe flock when you breed your own replacements. This means a few very good rams can really lift performance while a dodgy ram or two can really knock it!

What is performance?

By this I am talking about the things that give you profit. Faster growth (away to works faster or heavier weights at a given age), more lambs, better survival, better disease resistance are all traits we know have economic value. We can also readily measure these in our breeding flocks and apply selection pressure to improve them.

Measurement is important. In essence, "If you don't measure it, you can't manage it". But that is only part of the story. We also need to consider "genetic merit" which is not based solely on an animal's actual performance. The breeding industry is awash with stories of animals that were poor performers themselves but which left terrific offspring, and conversely terrific animals that left poor offspring. This can happen. We all know that in poor years animals perform less well so nutrition is an important non-genetic factor.

What affects performance?

What we want to do is maximize the chance that the rams we buy will improve flock performance, while minimizing the chance they will cause a reduction in flock performance. This is where two things are important; 1. a knowledge of non-genetic factors that affect performance and, 2. the performance of relatives.

We all know that a triplet born lamb from 2-tooth ewe born late in the season is likely to be smaller, perhaps for all it's life, compared to a single-born lamb from a mature ewe born early in the season. It is simply a case of a lower level of nutrition at critical times in the animal's life. But is this triplet lamb genetically any worse than the single lamb it's mother has the next year? We have no reason to believe so. Examples of non-genetic effects causing differences between animals in a season are; birth date, age of dam, birth rank and grazing mob. Modern genetic evaluations correct for these non-genetic effects so they do not cause biases in our evaluation.

How do relatives help? The pedigree is critical! In fact, modern genetics is becoming more similar to the tried-and-true methods used by breeders for centuries because it makes use of information from all known relatives. By assessing an animal's own performance and through knowledge of the performance of relatives, breeders can predict with varying degrees of accuracy the genetic merit of their animals.

Let's consider an example. If you had to choose between two animals with similar actual performance, would you pick the one from the good family or the one from a poor family? What about an average animal from a good family compared to a good animal from an average family? Bear in mind the family isn't everything. There will still be outstanding and poorer animals in any family, but the chances of finding a good animal are better if you look in a good family. This is really a case of using all the information available to arrive at a "best bets" estimate of genetic merit.

If you buy rams without considering both performance and pedigree, you are taking a big risk. Through use of this information you will have a much greater chance the rams you buy will lift your flock

performance. However, efficiently using all the information that may be available is not possible for a breeder in their own flock, let alone for you in the time you have to buy rams. That is why there are specialist systems like SIL to do this quickly and efficiently for New Zealand sheep flocks. SIL uses powerful computers to and produce simple summaries of the most accurate estimates of genetic merit based on available information.

Should I just select on figures?

Figures alone do not fully characterise a ram. SIL advocates the use of figures with physical inspection for traits that are important but which SIL does not evaluate. SIL figures are a powerful tool that breeders and buyers can use to maximize the chance that animals chosen will be “improvers”. And contribute to increased farm profit.

What do SIL figures mean?

SIL characterises the genetic merit of animals from a wealth of information. To keep this **Simple, Accurate** and **Relevant**, there is a simple system to summarise merit across traits on a profit basis using indexes.

Genetic merit is assessed for a number of traits, as “breeding values” which are measured in a variety of units (e.g. kilograms, percentages, number of lambs). For some traits an increase is worth more, while for others a decrease is worth more (e.g. wool fibre diameter, amount of carcass fat or ewe body weight). SIL economic indexes combine information across traits based on financial returns from improvements. This simple summary allows you to quantify the relative value of rams overall. SIL indexes have units of “cents per ewe lambing”. So the advantage gained from use of a good ram depends on how many ewes he is mated to and how many years he is used.

SIL performs genetic evaluations for sheep breeders in New Zealand using state-of-the-art methods. The aim of this service is to provide you, the buyer, with the most accurate measure of genetic merit possible and to allow you to fairly compare animals among those on offer for sale. If you don't fully understand the figures a breeder has available, ask questions. Most breeders are only too happy to help you get the rams best suited for your farming operation.

What to do at the breeders property

- You are best to select a few more rams than you need to purchase. You can either select on index figures first, then reject some on the basis of physical soundness or select on visual inspection then reject animals with poorer figures.
- At the very least, you should use the figures available to minimize the risk of purchasing low merit rams!
- You can inspect the rams to ensure they pass your standards for physical soundness and any other traits the figures do not consider. However, many breeders will only present for sale animals without physical faults. After all, they want your repeat business! So it is reasonable for you to put most emphasis on the figures for animals that you buy.

Don't take risks buying rams
Make best use of the information available

Need more information?

If you have any queries about the ideas and terms in this document, please send them by email to silhelp@sheepimprovement.co.nz or telephone 0800-silhelp (0800-745-435)

About Sheep Improvement Ltd (SIL)

NB: Sheep Improvement Ltd (SIL) is the national performance recording and genetic evaluation system, and is part of Meat & Wool New Zealand. It is funded by fees from breeder's using the system and from levy money.