Ram selection, getting it right is very important
By Robert Pattison, Otago Regional Manager

10 commandments for ram selection

Thou shalt:

    I.   **Decide what production traits are important for genetic gain in your flock.**

   II.   **Remember the more traits selected for the less progress made in individual traits.**

  III.   **Know that selecting the right ram breeder is the most important step in the process.**

  IV.   **The ram breeder's flock must show genetic gain in the production traits important to your own flock.**

   V.   **Know that the ram breeder's flock must be genetically superior to your own flock.**

  VI.   **Understand your flock's production will track the genetic improvement of your ram breeder's flock.**

 VII.   **Spend time reading the records and select rams from their production records before making your final choice by inspecting each animal.**

VIII.   **The ram breeder should have the rams ranked from best to worst for each trait, or ranked on breeding value or breeding index.**

  IX.   **Make sure the productive traits you are interested in are in the index.**

   X.   **SIL index information is a big advantage in ram selection.**

There are three important steps in selecting commercial flock rams.

The first step is selecting what production characteristics you want to improve, the next one is selecting a ram breeder and the final step is selecting the rams themselves. Each step in the process is very important.

Identify the performance traits where your existing flock rates highly or poorly.

Score your flock for performance against measurable productive traits. Ask if the weaknesses can be improved by **management and feeding**, or is it a **genetic** problem?

Ewes	Lambs	Wool	Health & Soundness
Fertility	Birth weight	Fleece weight	Parasite resistance
Mothering ability	Growth rate	Fineness	Feet
Milk production	Muscling	Bulk	Structural soundness
Easy care	Leanness	Colour	
Dagginess	Grading	Faults	

From this information identify the strengths and weaknesses within your existing flock and identify the traits where production gains can be achieved. The challenge is then to find a ram breeder who can supply rams that will produce progeny to meet your expectations for the performance of your flock. **Choose carefully!!!!**

Most farmers have breeding objectives that are reasonably long-term and don't change much from year to year. However market trends change faster than breeding objectives, so occasionally the breeding objectives on a farm may change. Also if a hill country farmer decides to specialise in breeding and selling store lambs, rather than breeding <u>and</u> finishing, different performance characteristics may be emphasised at the expense of others.

The major production characteristics (traits) of economic importance
These include - number of lambs born, lamb survival, lamb growth rate (an expression of both the ewe's milking ability and the lamb's growth potential), muscling and leanness of the lamb, fleece weight, wool characteristics and disease resistance (internal parasite resistance is the main one, but resistance to ryegrass staggers is also heritable).

Some farmers may focus on maximising lambing performance, whereas others may want to maximise growth rates and meat production per lamb. Others may want to emphasise easy care and disease resistance in their flock – characteristics that generally make sheep farming easier and more profitable. Easy care sheep require less shepherding and supervision at lambing and may be less prone to dags. There are farmers who consider wool production and quality are an important part of their sheep breeding objectives.

Farmers **must** decide their own breeding objectives, but they should be aware that the more traits selected for, the less progress is made in individual ones, but with the appropriate combination overall productivity will improve.

The extent to which the major characteristics respond to selection varies and can be categorised as high, medium or low. Highly responsive traits include fibre diameter, black fibres, and hairiness, while there are medium selection responses for fleece weight, yellowness, lamb weaning weight and liveweight and low responses for ewe fertility and fecundity.

Choosing a ram breeder
The most important decision to achieving improvement in a commercial flock is selecting the ram breeder. The future performance of a commercial flock will be directly linked to the genetic improvement of the ram breeder's flock. The ram breeder's flock must have higher genetic merit than your own flock.

Sheep Improvement Limited (SIL)
The SIL data processing bureaus in NZ produce genetic trend graphs that show the average genetic gain for traits over time. They let farmers see if the ram breeder is improving the breeding traits you are interested in.

Ask to see the breeder's trend graphs for the traits you wish to improve, and compare the ram breeders flock performance to your own flock performance. The ram breeder's breeding programme should be clear and easy to understand. It is important to know what the breeder is selecting for and how the selection is done.

The most important criteria when buying rams is that the breeder's flock <u>must </u>have higher genetic merit than your own flock. Compare the breeders sheep performance with yours. It is possible to compare the genetic trends from a number of ram breeders to see the relative gains that can be made in various traits when buying rams from different breeders.

SIL has developed an across flock and breed evaluation programme called the Advanced Central Evaluation (ACE) to identify the highest performing rams for economic traits for growth

and reproduction. They have evaluated animals from 150 flocks to identify the best performing animals.

Once you have established that you and your ram breeder are travelling along the same path you can be assured that you are improving the genetic merit of your flock.

Selecting the rams
Having selected the ram breeder, next comes the selecting of individual rams. This is not quite as important as choosing the ram breeder, because any ram from a breeder whose flock is much superior to your own and who is making good genetic progress will invariably lead to genetic improvement of your own flock.

Choosing rams is made easier if the ram breeder has them sorted into index or price groups and has well-presented and organised records. There are two ways of selecting the rams. The first is to select them visually by how the rams look and then go to the records for the final choice. The second and preferable method is to use the records for the initial selection and then look at each animal before making your final choice.

Ram breeders may present the records in a variety of ways. Some breeders present rankings for each trait. Breeding values are a more reliable form of record and are often ranked from best to worst on a ram selection list. Breeding values differ in their reliability and are based on the amount of data processed. The least reliable are based on data only from the individual ram, but as more family and progeny data is included in the process, the more reliable the breeding values.

The index is the usual means to present various combinations of traits weighted for the relative value of each trait.

Rams can be reliably selected using index information.

It is important that you know that the index is composed of the traits that you want to improve in your flock. Ram breeders that belong to the SIL recording scheme will have an SIL index available for each ram.