



Improving Flock Connectedness

Across-flock breeding evaluations enable selection decisions to be made across a much wider population than simply selecting animals within a flock. To ensure that accurate comparisons are made flocks need to be genetically linked. This genetic linkage is referred to as “connectedness”.

It is important that flocks retain high levels of connectedness so that the comparison of EBVs between flocks is accurate. Signet’s breeding analyses are risk averse – so flocks with low connectedness may receive EBVs that underestimate the genetic merit of their flock unless they have acceptable levels of flock connectedness.

Flocks can improve their flock connectedness status by developing genetic links to other recorded flocks.

Options for breeders:

- The quickest, and best, way to generate high levels of flock connectedness is to mate a proportion of the flock (typically 30 ewes) to a Reference Ram or a Stock Sire that has been widely used in recorded flocks. This usually involves A.I., which for logistical reasons may not always be practical.
- In principal, the use of shared stock rams for natural service can generate similar levels of flock connectedness to using A.I. However, it is more difficult to obtain high numbers of progeny across several flocks using this strategy.
- Many breeders could improve their connectedness by purchasing rams from well-connected flocks. These new stock rams should produce high numbers of progeny, which are fully performance recorded, in order to create strong links.
- Where breeders are looking for a ram to improve their connectedness status it is important that the ram has been fully performance recorded. It helps if it has a lot of performance recorded relatives or is sired by a ram that has been widely used in recorded flocks.
- Once progeny are on the ground, retain high index lambs from these well-connected sires for breeding purposes.
- Flocks should try to use at least one ram in their flock for more than one year. This will improve genetic linkage between years, enabling BLUP to account for seasonal differences in management.



Comparing the genetic merit of rams between flocks

Here is an example of the way the offspring of a ram can be used to compare the genetic merit of other stock rams.

Which ram is best – B or C?

	Average 8 week weight of progeny (kg)
Flock 1.	
Ram A	18
Ram B	23
Flock 2.	
Ram A	32
Ram C	30

The best way to compare is to use Ram A as the benchmark. In this example the progeny from Ram B outgrew the progeny from Ram C.

So although Ram C had the heaviest lambs, we know that Ram B is genetically the better sire.

	Average 8 week weight of progeny (kg)	Performance relative to Ram A
Flock 1.		
Ram A	18	0
Ram B	23	+5kg
Flock 2.		
Ram A	32	
Ram C	30	-2kg