

Single Step genetic evaluation system

Internationally, Single Step is the best practice genetic evaluation system for production species. B+LNZ Genetics' investment in this technology will provide you with more accurate genetic information and a much quicker turnaround time between information in and out. Single Step enables the genetic potential of younger breeding animals to be identified much earlier and therefore speeds up your genetic gain by years.

Here are some FAQs:

Q: What is single step?

A: Single step is a genetic evaluation method that uses all available information sources – including genomic information from SNP chip genotyping – to make the best predictions of genetic merit for traits. It is faster and more accurate, because it processes the genotype, pedigree, performance and progeny data simultaneously.

Q: Explain the differences between genomics, single step and whole-flock genomics?

A:

- Genomics is DNA testing using SNP chip genotyping.
- Single step is the process, whereby this DNA information is included in animals' breeding values at the same time as their family and performance information.
- Whole-flock genomics maximises the benefit of the new single step evaluation.

Q: What is the main practical benefit to breeders?

A: Single step provides more accurate breeding values in young animals, which – in turn – enables more reliable use of younger breeding animals in seed-stock breeding programmes – i.e. faster genetic gain.

Q: As a breeder, will I notice the changeover to single step?

A: You won't necessarily notice any change. Single step is an "under the bonnet" improvement that will increase the accuracy of your genetic data and deliver information back to you very quickly.

- If you do use genomics, you may see some re-ranking initially. Any future changes will be incremental.
- If you don't use genomics, you won't see any change, except if:
 - a. You have rams closely related to genomic-tested sires, and/or
 - b. Your rams are tested elsewhere (e.g. post sale or in progeny tests).

In both cases, the genomic information from the tested sires will flow across to you and benefit your breeding programme.

Single Step timeframes

June:

- Results of data review shared with breeder pilot group
- Single-step process running in parallel with NZGE to identify any bugs or discrepancies

July-Sept:

- Extensive validation phase
- Re-ranking of sires reviewed to ensure accuracy

Late 2018:

- Launch (Oct)