



Reading the SIL ACE Percentile Band tables

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These tables are designed to enable breeders participating in SIL ACE to benchmark animals in their flocks for indexes, sub-indexes and breeding values based on the SIL ACE analysis.

The left hand column shows percentile bands at specified intervals. Columns correspond to SIL ACE indexes, sub-indexes and breeding values. Within a column we see threshold values which represent the index or BV that must be exceeded for an animal to be in that top X%.

For example if the value at the 50% band for the ACE Dual Purpose index is 600 cents, then rams with index values above this are in the top 50%. To refine this further, look at threshold values for the higher bands. If a ram has an ACE DP index value of 900 cents with the value at the 30% threshold being 800 cents and the value at the 20% threshold being 950 cents, then we know the ram is in the top 20-30% of animals in the evaluation.

SIL indexes have units of cents per ewe lambing and so higher values always indicate higher genetic merit. For most breeding value traits higher values are better, but this is not always the case. For example, fat weight and faecal egg counts (FEC) are better if lower.

Description of SIL ACE Indexes and Breeding Values

A full description of indexes and breeding values is available on the front page of each SIL ACE listing report. A prefix of DP indicates a Dual Purpose index or sub-index while a prefix of TS indicates a Terminal Sire index or sub-index. All indexes use the same set of breeding values, but combine information on different traits and/or different multipliers (economic weights) to suit typical farm production systems.

The broad traits included in each Index or sub-index are specified in the first row below the percentile values of the SIL ACE Index Percentile Band table.

Units that breeding values are expressed in, are shown at the bottom of the SIL ACE BV Percentile Band table. NB: NLB or number of lambs born is expressed as a proportion of a lamb per ewe; if multiplied by 100 it gives a value in the units of lambing percentage.

Number of connected flocks and sires

As part of each SIL ACE analysis, flocks are tested for genetic connectedness (linkage) to ensure that only those flocks that can be validly compared are included in the SIL ACE lists reported.

A flock may be connected for some traits but not others. For example, a Terminal Sire flock that records weaning weight and autumn weight may be linked for Growth but not for Wool, since fleece weights are not recorded for these animals

The number of flocks and the number of sires in these flocks that meet the connectedness criteria are specified in the last rows of the SIL ACE Index Percentile Band table.

More flocks are included in the overall SIL ACE analysis than are shown in this table. As they strengthen their genetic links to other SIL ACE flocks the number of flocks and sires that can be validly compared will increase.

Generating a Within Flock Sire Summary using SIL ACE results

A ram breeder participating in SIL ACE may request from their bureau a Sire Summary based on the latest SIL ACE breeding values. It may consist of whichever Indexes, sub-indexes or breeding values are relevant to the breeder or their clients. The breeder should specify the Date and GE number of the ACE evaluation to their bureau. Both are on the front page of SIL ACE reports on the SIL ACE downloads web page.

SIL ACE indexes and BVs can be compared against the SIL ACE Percentile Band tables to see where individuals rank relative to the rest. Previously it was not possible to see how well rams rated unless they were in the published top 200 list, roughly the top 5-10% of animals considered.

Indexes or Breeding Values?

Indexes have the advantage that they combine information for different traits into a common monetary value scale, cents per ewe lambing. However, there are situations where breeding values may be needed to allow a breeder or their client to apply other criteria for selection that are important to them. For example a breeder or farmer that achieves a very high lambing percentage may choose a ram that is in the top 30% -50% band for number of lambs born, but in the top 20% for weaning weight and carcass weight.

Things to take care with

For most traits, more is better! However, sometimes a negative BV is more desirable. In the indexes, these BVs have a negative weighting, (e.g. fat, FEC and adult ewe weight) so "less" is considered better.

Weaning weight and carcass weight BV's characterize early growth, and ewe weight characterizes later growth. There is a strong relationship between these so that rapid early growth is associated with larger adult size. For dual purpose sheep, the SIL ACE Growth sub-index favours animals that are in the top percentage for early growth (weaning weight and carcass weight) but lower down in the ratings for late growth (adult size). So, while we may want animals in the top percentiles for weaning weight, carcass weight and lean weight, we want them to rate more lowly for fat weight and for ewe weight (adult size).

CAUTION - Making valid comparisons

As each table is generated from a specific data set, only rams with values from the **same** SIL ACE genetic evaluation can be compared against the table. This is indicated in the **red warning section** below each SIL ACE Percentile Band table. These tables should contain the SIL seal in the lower right hand corner.

To validly compare ram figures from a SIL Sire Summary against a SIL ACE Percentile Band table, check that the **date and SIL GE** (genetic evaluation) **number** are the same. These are found on the top right of the front page of a SIL Sire Summary and at the top of the Percentile Band tables.