



A SIL Web Note

ACE adds breeding value for “maternal” weaning weight

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SIL now has the capability to analyse Growth information to produce maternal weaning weight (WWTM) breeding values. This is sometimes thought of as a measure of “milking ability”. Previously, this breeding value (BV) was produced for all genetic evaluations except the ACE evaluation. This was due to the large size of the ACE dataset which precluded evaluation of WWTM with existing hardware and software.

Routine SIL evaluations split the weaning weight genetic effect into a lamb effect (WWT) and a dam effect (WWTM). SIL now has the capacity to analyse growth information to produce both Growth BVs for ACE analyses. The change will have some effect on the rankings of some animals.

The greatest change is in the WWT BV. Since the analysis now partitions the variation between that due to the genes for lamb growth (WWT) and that due to the genes expressed by the dam (WWTM) this may cause some reranking. By estimating genetic merit for WWTM (milking ability) we get a better focus on genetic merit for lamb growth before weaning (WWT). We are separating out the genetic effect of the dam from that of the lamb.

The two traits are not related to each other so an animal might be very good for lamb growth but this will not be related to how good it is for ewe milking genes – it may be high, low or indifferent for genetic merit of WWTM.

This change in the genetic analysis will not influence BVs in other sub-indexes (goal trait groups). Consequently any rerankings in Growth will have a relatively smaller effect on rankings for the overall index.

A few animals have shown big changes in growth BVs between the June 2007 and August 2007 ACE evaluations. These are partly due to the splitting of pre-weaning growth into lamb (WWT) and dam (WWTM) genetic effects. They also reflect the addition of data from flocks already participating in ACE and the addition of data from flocks new to the ACE evaluation. Adding such data has also caused changes in non-growth BVs and indexes for some animals.

More flocks are present in this ACE evaluation run than previously, and more flocks are reported on. Remember that an animal might have no change in BV or index but its ranking can change if it is now being ranked within a larger group than previously.

If you have any queries about these changes please direct them to silhelp@sheepimprovement.co.nz or telephone 0800-silhelp (0800-745-435)