

Revision of Dag Score genetic evaluation module

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What & why

SIL released a revised Dag Score module effective 1 September 2011 based on new research results. The new module addresses problems arising from sub-optimal data recording practices. With the previous evaluation module, such data recording practices resulted in some extreme breeding values being produced in some situations e.g. too few animals with dag scores greater than zero or use of a 3 point scale rather than the recommended 5 point scale (see SIL Technical Note on Dag Score).

The revised module produces a more realistic range of breeding values. It has been tested on a range of flocks, including several where dag score breeding value issues had been identified under the previous evaluation module.

Best practice for Dag Score Data Recording:

1. Dag score should be scored on a 0 - 5 scale. Breeders must not use a shorter 0-3 scale.
2. DAG3 = dag taken at weaning, average age < 150 days. Typically December - February.
3. DAG8 = post-weaning dag score, average age > 150 days. Typically March-May.
4. There must be a "good" range of dag scores in the mob. If there is little variation in dag score data this has an adverse effect on breeding value estimation. Typically we want 50% of animals with dag scores greater than zero (see SIL Technical Note on Dag Score)
5. Dag scores mob averages must be greater than 0.5 for DAG3 and 0.25 for DAG8. If averages are lower than this, data for that mob will be dropped.

It is in the best interest of the breeder to allow sufficient time for the trait to be expressed before measuring i.e. average dag score of a mob should be at least 1 before measurement and there must be a range in dag scores in the mob.

Dag score analysis

DAG3 and DAG8 are now analysed as separate, correlated traits rather than as repeat measurements of the same trait as was done in the previous evaluation module.

Data is censored. This means that data from small contemporary groups (less than 5 animals in a mob) and groups with low means (DAG3 mean <0.5 or DAG8 mean <0.25) are dropped out of the evaluation. The same breeding values are produced by the new evaluation module - LDAGeBV and ADAGeBV.

Dag Score in Indexes

Dag Score REVs have been updated and have lower values. These have been "optimized" for the revised eBVs.

- DPD index weighting for lamb dag score = -48 (old value -254)
- DPD index weighting for adult dag score = -51 (old value -687)
- TSD index weighting for lamb dag score = -14 (old value -254)
- SIL Dual Purpose Dag Score (DPD) = $-48*LDAGebv - 51*ADAGeBV$
- SIL Terminal Sire Dag Score (TSD) = $-14*LDAGebv$

This document replaces one dated 16-sep-2011 which had different index weightings.

These can be used independently as Dag Score sub-index (DPD or TSD) or as part of an overall index (DPO or TSO). The new lower REVs reduce the impact of dag score in combined trait indexes.

SIL-ACE will include a trait Sire Leader List for Dag Score, for connected flocks, from December 2011.

Need more information?

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