Revised Meat reporting

SIL TECHNICAL NOTE

Relates to:	Reporting associated with the new Meat module being revised
Date:	January 2019

Background

The Meat module was updated in September 2018 to reflect change in carcass weights, composition and mix of current breeds. All genetic parameters were re-estimated and updated in SIL. This resulted in more accurate BVs for both CW and all meat BVs (SHLY, LNLY, HQLY and FATY). However, it resulted in significant changes relative to the old BVs.

The CW BV predicted in the revised Meat module uses all available sources of information. For most animals, this results in an increase in CW BV over the previous prediction, which was based solely on live weight information.

- CW BV is reported as part of the DPG and TSG sub-indexes, so there was a change – generally an increase in DPG and TSG.
- DPM and TSM decreased, as they contained the remaining meat yield variation across the three regions and the fat yield component (TSM only).

This made assessing the merit of individuals using the sub-index approach more difficult, as part of the Meat merit was being reported in the Growth sub-index.

Revised Meat reporting

The revised reporting separates the CW BV into two portions – one informed predominantly by live weights and the other by meat trait information:

- Carcass Weight (CW BV) – predominantly informed by live weight information, reported in the Growth sub-index.
- Carcass Weight Yield (CWY BV) – the change in CW prediction with the inclusion of Meat information, reported in the Meat sub-index.

In combination, these two BVs add together to have the same combined value as the single CW BV based on Growth and Meat information. There may be differences of 1-2c due to rounding up or down.

Table 1: Proportioning total merit for carcass weight into Growth and Meat components.

	CW BV (to Feb 2019)	CW BV in Growth sub-index	New CWY BV In Meat sub-index	Combined CW BV + CWY BV
Ram A	2.96	2.16	0.793	2.95
Ram B	2.11	1.31	0.796	2.11
Ram C	1.95	1.60	0.352	1.95
Ram D	4.11	3.10	1.010	4.11
Ram E	1.62	0.80	0.816	1.62
Ram F	1.30	0.96	0.341	1.30
Ram G	1.83	1.38	0.450	1.83

Changes to sub-index reporting

The revised Carcass Weight BV (CW BV), predominantly reflects live weight information, is still reported in DPG and TSG:

TSG = 61c x WWT BV + 243c x CW BV

DPG = 122c x WWT BV + 140c x WWTM BV + 467c x CW BV

The new Carcass Weight Yield BV (CWY BV), reflecting meat trait data, is added to the DPM and TSM sub-index:

TSM = 243c x CWY BV + 227c x SHLY BV+ 429c x LNLY BV + 301c x HQLY BV – 126c x FATY BV

DPM = 467c x CWY BV + 419c x SHLY BV + 791c x LNLY BV + 555c x HQLY BV

This re-balances the sub-indexes, with the Meat sub-index reflecting Meat merit clearly and the Growth sub-index reflecting Growth merit.

Impact on NZMW relative to pre-1 Feb 2019 single step

The revised meat module implemented in October 2018 used CW BV informed by meat and growth data in the Growth sub-index. For flocks recording meat traits, this resulted in an increase in DPG of about 200c on average.

Under the revised reporting implemented February 2019, the CW BV used in the Growth sub-index will predominantly reflect live weight data, as it had previously done. As a result, the increase due to meat data informing CW BV is removed from DPG. For flocks with meat data, this will result in a reduction in DPG.

Fig 1. NZMW with revised reporting

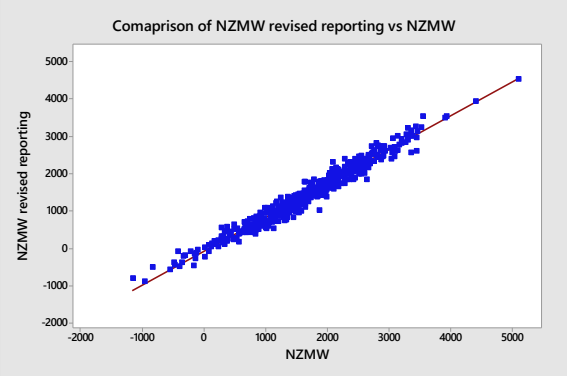
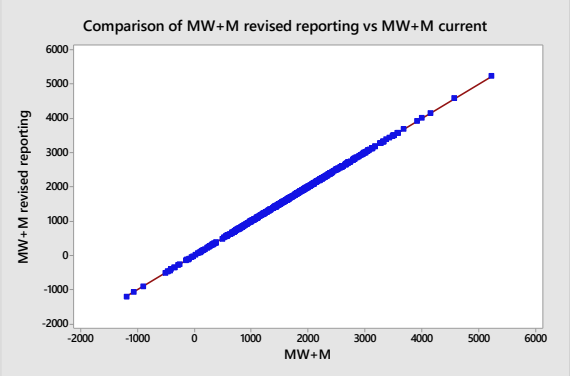


Fig 2. MW+M with revised reporting



This approach preserves the balance between the Growth and Meat sub-indexes, while still delivering the greater accuracy of prediction from the revised Meat Module.

Impact on MW+M compared to pre-1 Feb 2019 single step evaluation

There is no effect on the overall merit for MW+M. The decrease in the Growth sub-index is equal to the increase in the Meat sub-index, resulting in no change to MW+M. The Meat and Growth sub-indexes more clearly express the merit for each trait.

	MW+M	MW+M	DPG	DPG myr*	Chg in DPG	DPM	DPM myr*	Chg in DPM
Ram 1	984	985	1295	1089	-206	97	304	206
Ram 2	926	926	956	776	-180	28	208	180

* myr = modified yield reporting