
SIL Short Note

Using the SIL Growth and Meat sub-indexes

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SIL indexes summarise genetic merit across traits. Sometimes this can mask differences between animals e.g. the Meat sub-index can be high because an animal is above average for Lean BV or because it is low for Fat BV. It is desirable to best characterize animals for genetic merit while minimizing the information presented i.e. summarizing is good as long as it doesn't hide something important!

Often it is helpful to understand relationships by looking at variables plotted against each other. Plots are used to illustrate points made in this document.

Key points

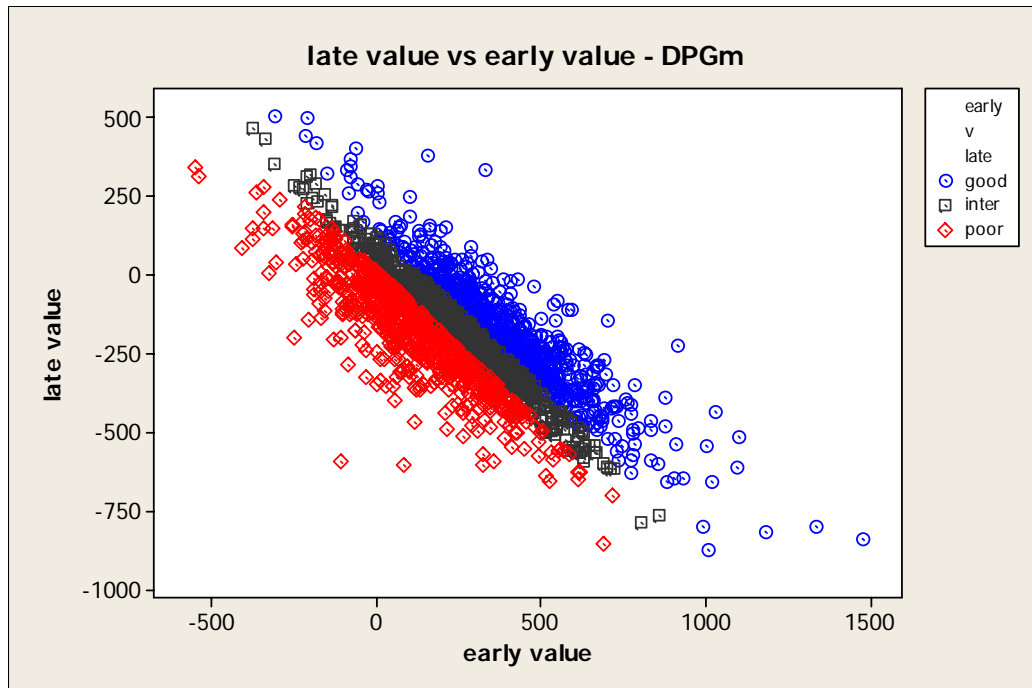
- Early growth is weighted against late growth in the SIL Growth sub-index for Dual Purpose sheep (DPGm and DPG)
- Early growth and late growth are strongly related
- To discriminate early growth from late growth requires measurement of LW18 (2-tooth pre-mating LW) and recording of hogget lambing outcomes for these ewes
- Lean dominates the SIL Meat sub-index. Fat is less important.
- Good Meat sub-indexes associated with high early growth are due to high lean BV
- Good Meat sub-indexes associated with modest early growth are due to low fat BV

Conclusion

- You can use SIL sub-indexes (DPGm & DPMg) with one key BV to discriminate these effects. Options are:
 - Carcass weight (CW) BV is a marker for **“early” growth**, and it indicates where value in the Meat index comes from
 - Lean BV is strongly related to **“early” growth**, and it shows where value in the Meat index comes from
 - EWT is a marker for **“late” growth** (adult size)

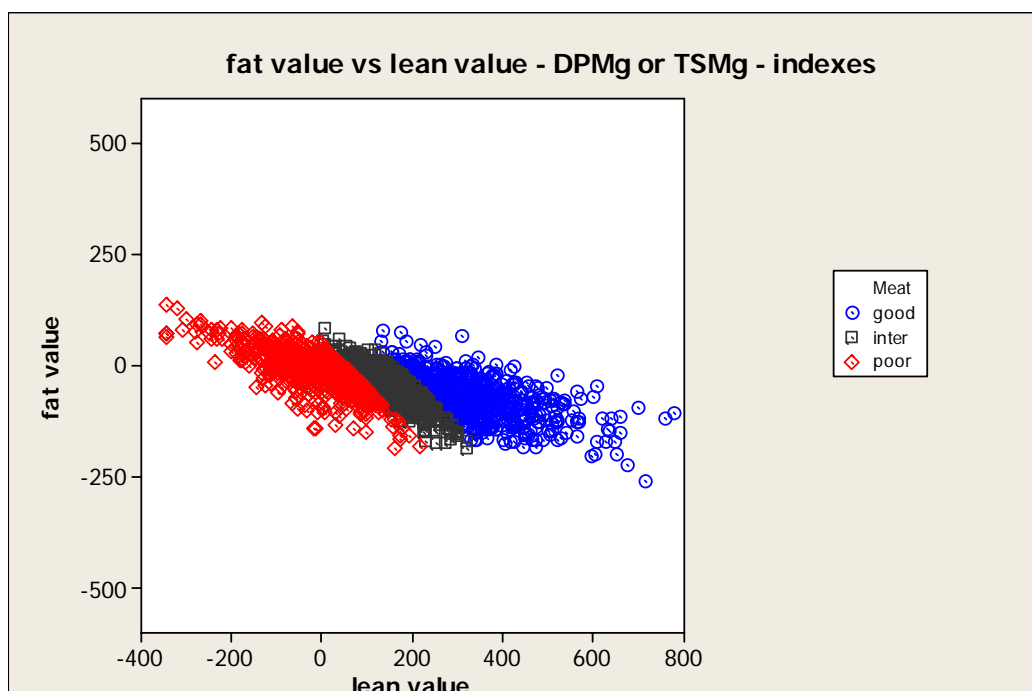
Early vs Late growth

- Measures of LW at any given age are strongly related to measures at other ages.
- The SIL Growth sub-index for Dual Purpose sheep balances gain in value from early growth against loss in value from later growth
- For best discrimination between early and late growth SIL recommends collection of LW18 (pre-mating LW for 2-tooth ewes) on as many animals as possible, with the recording of hogget mating & lambing outcomes for these ewes.



FAT vs LEAN

- Lean dominates the Meat sub-index (DP and TS SIL indexes)
- Fat has relatively less effect



Growth vs Meat

- Good carcass Lean BVs are associated with good early growth
- Higher early growth tends to be associated with higher Fat BVs, and hence lower “value” due to fat

