

# What is carcass meat yield?



**GENE  
TALK**  
Mark Young

**M**eat yield is of interest to sheep farmers and breeders. In recent years, some meat companies have begun to report back carcass meat yield information. Breeders have been quick to see the potential value of yield information for individual animals, and some have begun collecting this.

“Yield” has a variety of definitions which can cause confusion. We will put to one side dressing out %, sometimes called killing out % or “carcass yield”. This is the body proportion that is carcass (in sheep this percentage is in the low to mid-forties). Carcass meat yield is not dressing out %.

When two 18kg carcasses are processed and one produces more saleable meat, it is “higher yielding”.

Yield can be expressed as an absolute amount (kilograms) or a proportion (e.g. lean %). Proportions are better than absolute yield because tissue weight is a function of size (or carcass) and proportion. Separating size from proportions shows why an animal has high absolute yield - because it is big, because it has excellent tissue proportions, or both.

Sheep meat cuts may contain bone and some fat, not just muscle. Carcass meat yield may also consider the value of different cuts.

We get different “numbers” depending on definition of yield e.g. weight of “lean meat” could be 54% of carcass weight, while weight of “meat in higher priced cuts” is 38% of carcass weight. Or an animal may be 2% below average in shoulder proportion compared to loin plus leg.

Progressive Meats Ltd has a 100% average scale of carcass value at a given carcass weight based on weights of different cuts and cut values. Better



Video image analysis calibrated with cutting room data.

animals are above average e.g. 105%.

Alliance Group report on lean tissue yields in three carcass regions with typical values of 19-25% (shoulder), 12-17% (loin) and 14-20% (hind leg). These are from VIAscan, a video image analysis system calibrated with cutting room data.

Silver Fern Farms rate animals for percentage of carcass that is shoulder, middle or leg (hindquarter), so these figures total 100%. SFF found that half the variation in carcass value is due to variation in relative size of these regions. X-ray information is used to determine where to separate carcasses into these sections. The next development of their system will consider variation within these regions.

SIL indexes for meat yield use eBVs adjusted to constant carcass weight, equivalent to proportions. SIL genetic evaluations are primarily based on ultrasound scan data, with some CT and VIAscan data being used as well.

Different definitions and scales prevent us making simple comparisons of figures between systems. I have heard farmers say they get higher “yields” if they send sheep to one meat company rather than another. The sheep aren’t different, just the definitions used for carcass meat yield.

A useful analogy is a car speedometer. Being marked in kilometres an hour doesn’t make it faster than one marked in miles an hour. They are just different scales for speed.

Carcass returns are dominated by carcass size. “Carcass meat yield” is

most valuable when it tells us something beyond size. Superior carcass tissue yield should tell us about relative returns from carcasses of the same size. Carcasses are “better” if they have a greater proportion of lean tissue, more tissue in higher valued regions, or greater total value in key cuts. Some of the anatomical reasons animals have “better” yield are common to different definitions. So animals rated highly on one system will be more likely to rate highly on another.

Do we need a common scale of merit for describing carcass tissue yield? While meat companies can justify different scales to valuing carcasses in different ways for different markets, ram breeding will be most effective when there is a set of common traits with their relationships defined.

To use information on carcass meat yield from different systems we need to know how they relate to a common set of variables for describing carcass merit. While we have some of this information, we do not have it all. Further work is needed to understand the relationships between different systems used to rate animals for carcass meat yield in the live animal and by meat companies.

Beef + Lamb New Zealand is committed to providing better access to better information. Refocusing SIL indexes on carcass meat yield in 2010 is an example of this. To send feedback, you can email [silhelp@sil.co.nz](mailto:silhelp@sil.co.nz) or telephone 0800 silhelp (0800-745-435).

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