

Dressing percentages for cattle

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You need to know the main factors that affect dressing percentage, especially liveweight. For example, a 400 kg steer weighed 'full', i.e. straight off feed, might produce a carcass weighing 208 kg.

$$\text{Dressing \%} = (208 \div 400) \times 100 = 52\%$$

If the same steer had been held off feed overnight, he could have lost about 5% of his liveweight in gutfill, and weigh only 380 kg next day after the overnight curfew. His carcass weight would be unaffected, so his dressing percentage based on the 'empty' liveweight would be:

$$\text{Dressing \%} = (208 \div 380) \times 100 = 54.7\%$$

For this reason, it is best to use the same timing whenever you weigh cattle and estimate dressing percentage – such as two hours off feed.

Be wary of claims made about very high dressing percentages, i.e. 60% and over. Often they have been locked up a long time before their liveweights have been recorded.

You also need to know the type of carcass weight used – hot or cold.

If our 400 kg steer produced a 208 kg HSCW, his dressing percentage would be 52%. If, however, the processor had deducted 3% to bring it back to a cold carcass weight of 202 kg, the dressing percentage would be only 50.5% – a significant difference.

Mostly, abattoirs use HSCW, in line with AUS-MEAT standards. Beware though, as there are still some non-accredited works which pay producers on the basis of hot weight less 3%.

There are many other factors which affect dressing percentage, including the animal factors:

- sex
- age
- weight
- fatness
- muscularity
- pregnancy status.

Introduction

Dressing percentage is a factor used to calculate carcass weight from a known or estimated liveweight. It is also used to compare liveweight prices with dressed weight prices. The ability to determine dressing percentage allows a producer to estimate the carcass weight of a live animal, for example to compare the price that would be received on a liveweight basis with the price received on a carcass value basis.

Dressing percentage is simply carcass weight as a percentage of liveweight. Carcass weight can be estimated by multiplying liveweight by dressing percentage. The two calculations are:

$$\text{Dressing percentage} = (\text{carcass weight} \div \text{liveweight}) \times 100$$

$$\text{Carcass weight} = \text{liveweight} \times \text{dressing percentage}$$

The term 'yield' is often used instead of dressing percentage. This should not be confused with the retail yield of meat from a carcass. Unless specified otherwise, the dressing percentage guidelines given here are for average British breed cattle and saleyard liveweights after a 12 hour curfew, which is 15 to 18 hours from muster to weighing. They are based on the AUS-MEAT standard carcass – hot weight with kidney fats and channel fats out ('hot standard carcass weight' or HSCW).

Factors affecting dressing percentage

$$\text{Dressing percentage} = (\text{carcass weight} \div \text{liveweight}) \times 100$$



Guide to dressing percentages

Estimated dressing percentages based on HSCW, approx 2 hours off pasture

Fat score	Fat depth (mm) P8 rump site	Vealers/ yearlings	Young cattle/ steers & heifers	Heavy steers	Cows <200 kg	Cows 200-250 kg	Cows > 250 kg	Bulls
1	0-2	49-50	50-53	48-52	38-40	41-44	42-45	<200 kg 48-54
2	3-6	50-53	51-54	50-53	39-41	42-45	43-46	200-300 kg 53-57
3	7-9	51-55	52-55	51-54	40-42	45-50	44-48	>300 kg 54-58
	10-12	52-56	52-56	52-55	41-44	46-53	48-50	
4	13-15	53-57	54-57	53-56	43-48	47-52	49-51	
	16-21		55-58	54-57	46-49	49-51	50-55	
5 & 6	20+		56-59	55-58	47-50	50-56	51-56	

As a guide, use the lower figure of the range given for cattle with muscle score D, the upper figure of the range for cattle with muscle score B and the midpoint for cattle of muscle score C.

If the abattoir weighs carcasses on a 'fats in' basis, increase dressing percentage figures:

- by 2 units for fat score 5 and 6;
- by 1.5 units for fat scores 3 and 4;
- by 1 unit for fat scores 3 and 2;
- no change for fat score 1.

The most common deduction by meatworks for shrinkage is 3%.

For saleyard dressing percentage comparisons, allow for a higher dressing percentage as stock will generally be off feed for a long period prior to weighing, e.g. add 2% to the above figures.

Allowing for loss of gutfill

Any factor which affects either liveweight (such as gutfill) or carcass weight (such as bruising or deduction for shrink) affects dressing percentage, the ratio of carcass weight to liveweight. Cattle will start to lose liveweight as soon as they leave the farm as they lose their gutfill in faeces and urine. As liveweight **decreases**, dressing percentage **increases**. To estimate the dressing percentage at slaughter, the producer needs to allow for this loss in liveweight until slaughter.

Cattle lose liveweight quickly in the first 12–16 hours off feed and water, then the rate of loss gradually decreases. This liveweight loss will not affect the carcass weight unless the animal is off feed for more than 48–72 hours.

The following table shows expected weight loss in cattle depastured from average quality green temperate pastures, locked off feed and water.

Time off feed & water	Percentage liveweight loss	Increased dressing percentage
1 hour	1.5%	0.75%
2 hours	2.5%	1.25%
4 hours	4%	2%
12 hours	7%	3.5%
16 hours	8%	4+%

16 hours is a standard dry overnight saleyard curfew. If you are used to estimating dressing percentage on saleyard weight, full cattle would dress about 4% less.

Cattle removed from feed, but given water (wet curfew) are expected to lose about two-thirds of the weight loss given in the above table (about 6% after 16 hours).

Lotfed versus grainfed

Cattle on dry, fibrous pasture, or dry feedlot rations, lose gutfill more slowly than stock from soft green feed. The gutfill is also less. The higher the percentage of grain in a feedlot ration and the longer the feeding period, the more pronounced this effect is. This partly explains the higher dressing percentage of lotfed cattle. Their extra fatness also contributes.

With steers of equal fatness and weighed full, (no curfew) a feedlot steer may dress 2–4% heavier

than a crop-fattened steer with its heavy gut full.

When they have both emptied out, the difference may only be in the order of 1%. While lotfed cattle generally dress higher, this is variable and cannot be guaranteed. Watch feeding time in relation to weighing.

Average liveweight loss of grainfed cattle from feedlot to saleyard empty is 4–5% after a 12–16 hour curfew.

Transit loss

In transit, cattle may lose additional liveweight, lose it more quickly, or both. With prolonged trucking, cattle can lose an additional 2% of liveweight.

Weather conditions

Liveweight loss is also more rapid in hotter weather.

Other factors affecting dressing percentage

Muscling

Heavier muscled cattle have a higher dressing percentage than lighter muscled cattle, other factors being equal. Within a breed, allow a 1–1.5% increase in dressing percentage units per unit increase in muscle score.

Fatness

Fatter cattle tend to have a **higher** dressing percentage. Do not confuse this with saleable meat yield from the carcase, which will be lower in fatter cattle due to extra trimming.

Class of country

Cattle from more fertile ('heavy') country have a higher dressing percentage than cattle from lighter country. This is partly because they may have been fatter for longer and partly because they have had a better opportunity to more fully develop their bone and muscle tissue. Cattle bred and fattened on fertile country will generally dress out 1–2% higher than bought-in cattle which have only been on the better country for a short period.

Breed

Bos indicus type cattle dress higher than comparable British breeds, partly because of lighter gut contents. Add 1–2% for cattle with 50% or more *Bos indicus* content. European breeds also often dress higher than British breeds, due to heavier muscling. Add 1–3% if European content is sufficient to give **heavy** or **very heavy** muscling (see Primefact 328 *Muscle scoring beef cattle*).

Dairy breeds dress on average 1% below British beef breeds.

Carcase dressing procedure

Most direct-to-abattoir trading is now on HSCW. Some buyers may wish to use the standard domestic carcase (kidney fats and channel fats in). A carcase with fats in will, on average, weigh 3% more, raising dressing percentage by about 1.5%. For heavier, fatter cattle, dressing percentage can increase by 2–3% with fats in.

Bruising

Bruise trim, of course, reduces carcase weight and therefore dressing percentage.

Pregnant cows

Quite a high proportion of cull cows are pregnant. This naturally reduces dressing percentage and the effect is greatest in light cows. Compared with empty cows, cows 3–6 months pregnant will dress 2–5% less, and those 6–9 months 5–10% less.

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