



Assessing beef cattle for fat depth at the P8 site

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Fatness is an important component of the beef carcass. Red meat consumers in both domestic and export markets are becoming increasingly specific in their requirements, particularly in relation to the fatness of meat. Successful beef producers of the future will need to breed and manage their cattle to suit the requirement of a particular market, and to do this, they must be able to assess the fatness of live cattle.

The purpose of this Agriculture Note is to describe techniques for assessing the fat depth of cattle at the P8 (rump) site, which reflects the percentage of fat in the carcass and the likely yield of saleable meat. Producers can improve their skills in this area by participating in carcass competitions and field days, or by closely observing their own cattle. The important thing is to regularly practice assessing small groups of four or five cattle, and then following them through the abattoir.

Premium prices are paid for carcasses that have the acceptable fat depth for a particular market. While very lean carcasses with fat depths of 0, 1 and 2 millimetres may be considered too lean, carcasses with more than 12 or 15 millimetres could be considered too fat. For example, a particular market requiring carcasses weighing between 180 and 220 kilograms (hot standard carcass weight) ideally requires a fat cover of from five to nine millimetres at the P8 rump site. Carcasses of this weight with less fat may be bare on primal cut areas and are therefore difficult to market. On the other hand, the same carcass with from 12 to 15 millimetres will require trimming, which is expensive in terms of time and lost weight.

P8 site for measurement of fat depth

Fat depth in cattle refers to the depth of fat at one particular point on the animal (in this case, the P8 site). The depth of fat at this site reflects the percentage of fat in the carcass and the subsequent meat yield.

Locating the P8 site

The two intersecting lines on Figure 1 indicate the position of the P8 site on the animal.

Technique for assessing P8 fat depth

To assess fat depth on live cattle it is necessary to both visually appraise cattle and, wherever possible, handle the animals at particular reference points.

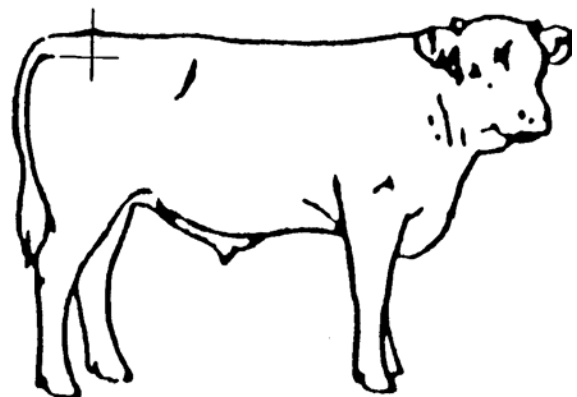


Figure 1. Locating the P8 site on cattle

Handling the animal

This is the technique by which fat depth at the P8 (rump site) can be assessed where cattle can be handled.

When an animal is handled, bone feels hard, muscle feels firm and fat feels quite soft. The main sites to feel on an animal for fat depth are:

- **over the hip where fat will be deposited**
 - (i) a "soft" hip indicates that fat is present
 - (ii) a "hard" hip indicates the lack of fat
- **thickness of the anal fold (where tail joins body)**
 - (i) a thick, spongy fold indicates that fat is present
 - (ii) a feel of a double fold of skin without "padding" in between indicates the lack of fat
- **feeling along the backbone over the rump area**
 - (i) a soft, spongy feel indicates fat
 - (ii) a hard, solid feel indicates the lack of fat
- **feeling the P8 site**

The final area of assessment is on the P8 site, which is over a large layer of muscles. In assessing this site, the assessor needs to develop the skill of determining the fat depth without becoming confused with "muscle bounce".

A guide to assessing fat depth at the P8 site is:

- Hip bone highly visible and easily felt as hard bone; no fat in brisket (lower point of the skeleton where the foreribs join together) or flank (the fleshy part of the side between the ribs and the hip). No filling in anal fold. Spine easily felt over the rump (individual vertebrae felt): the depth of fat is **0-2 mm (fat score 1)**.
- Hip bone feels hard because of lack of fat cover; a light deposit of fat in brisket and flank. Anal fold has soft feeling indicating presence of small amount of fat.
- Spine over the rump area can be felt but vertebrae feel rounded: the depth of fat is **3-6 mm (fat score 2)**.
- Hips tending to feel layered with fat, giving a feeling of soft tissue beneath the hide. Fat in brisket and flank is obvious. Anal fold filled with fatty tissue, which can be easily detected when pinched. Spine over the rump area can be felt with firm pressure: the depth of fat is **7-12 mm (fat score 3)**.
- Hips are no longer noticeable because of heavy layer of fat. Brisket appears to be well developed, flank fat very obvious. Anal fold bulging with fat, feeling thick and spongy. Spine cannot be felt because of a heavy layer of fat, which tends to 'bounce' when tapped: the depth of fat is **13-22mm (fat score 4)**.
- All bone structure and tail are buried in fatty tissue with folds of fat covering hips. Anal fold extremely full. Heavy layer of fatty tissue over rump area, very 'bouncy' when tapped: the depth of fat is **23-32mm (fat score 5)**.
- Grossly fat animal, giving an appearance of blockiness with folds of fat around hips, tail and ribs. A very large brisket and deep body because of heavy layer of fat along underline: the depth of fat is **33+ mm (fat score 6)**.

When assessing fat cover, it is important to be able to distinguish between fat deposit and muscle as they both influence the shape of the animal.

Visual assessment

When assessing cattle visually, as can be done both in the yards or in the paddock, there are particular reference points to study.

The three main sites used in visual appraisal are:

- brisket
- the underline including the flank
- the rear view taking in the twist, cod and tailhead area.

The brisket and the rear view are probably the most useful reference points when assessing for fat cover.

The brisket is the lower point of the skeleton where the foreribs join together. In this area, little muscle is laid down and excess tissue will be fat. Ideally, the brisket should be partly filled, trim, and high above the knee joint. Deeper, fuller briskets are only filled with fat, and this indicates that there could also be excessive fat deposits on other areas of the carcass.

When viewing the leaner type of animal from the rear, the leanness will be indicated by roundness over the top, the prominence of the tail head, a cut-up and wrinkled appearance in the twist and little or no cod development. Animals carrying a heavy fat cover, when viewed from the rear, will have a square appearance over the top, knobs (of fat) on both side of the tail head, a fuller and deeper twist and greater development of the cod.

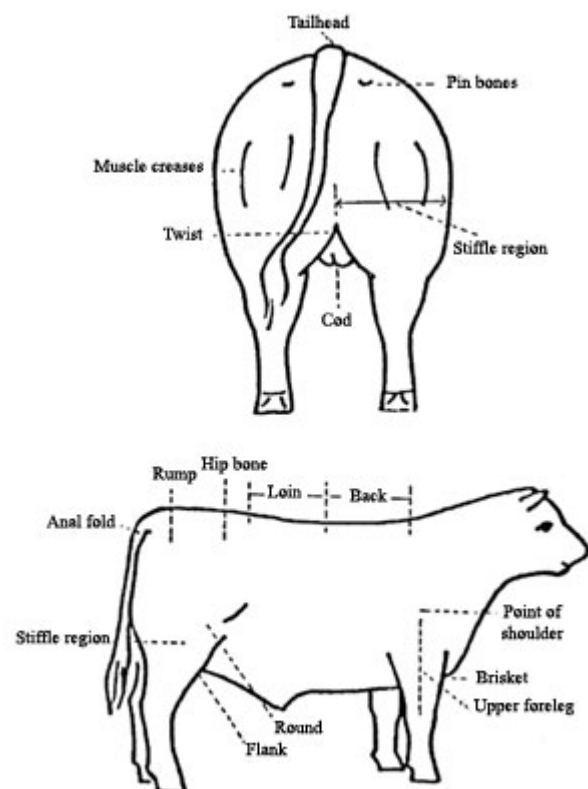


Figure 2. Reference points used in describing cattle

The flank area is an area where muscles do not develop. In lean animals, the underline will be trim under the rib cage, high above the knee and will cut up in the flank.

If the underline is deeper and does not cut up in the flank, this indicates the presence of fat. Fat cover is difficult to estimate and can be confusing because it may be poorly distributed throughout the body.

The main problem is that steers rarely display all the correct features at any time. Therefore, it is best to appraise all of the reference points mentioned and arrive at a balanced estimate.

To develop and use this skill with confidence, you need carcass feedback. At present the only alternatives available to you are to:

- follow your own cattle through meatworks to see the fat cover of the carcass and study the carcass feedback,
- participate in exercises of live animal assessment and in carcass competitions,
- use an ultrasonic fat measuring device.

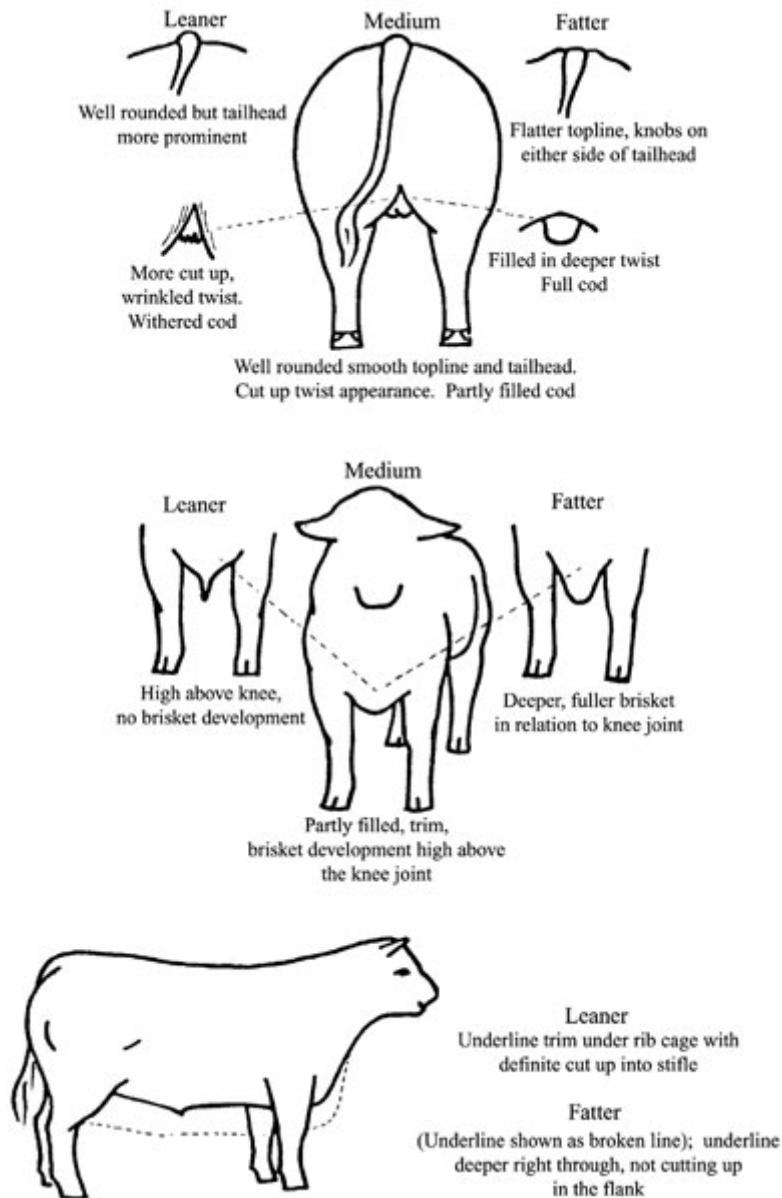


Figure 3. Fat cover

The previous version of this note was published in March 1995.

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