

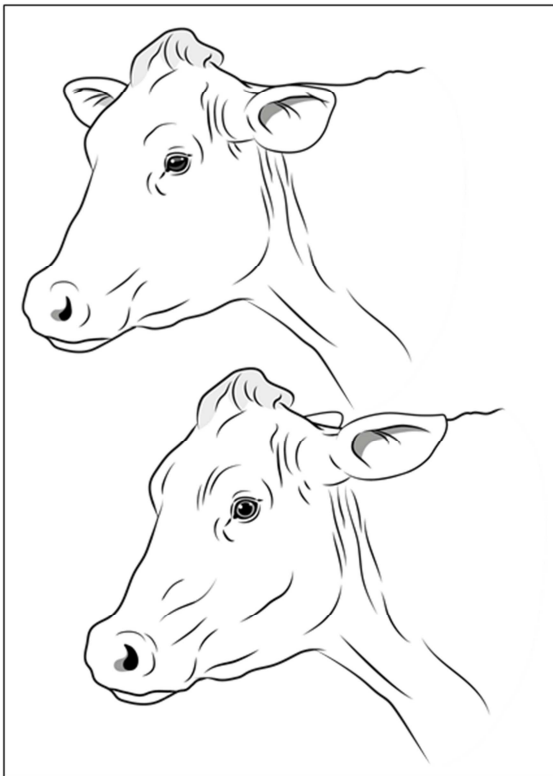
Pain evaluation in cattle

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Pain in animals is a welfare concern and it is therefore important to minimize the prevalence of pain in our cattle herds. A prerequisite for alleviating pain is the ability to recognize it. In many animal welfare protocols, pain is assessed through measuring conditions that are believed to be related to pain, e.g. wounds or lameness. More direct measures of pain have traditionally relied on physiological parameters. However, recent years of research into pain evaluation, has demonstrated that behaviour is the most reliable measure for evaluating pain in animals. The Cow Pain Scale was developed by investigating potential behavioural signs of pain in dairy cattle, with the aim of constructing a pain scale, useful under production conditions. The pain scale includes six behavioural parameters: 'attention towards the surroundings', 'head position', 'ears position', 'facial expressions', 'response to approach' and 'back position'. Evaluating facial expressions of pain is an interesting novel measure for animal pain, because it utilizes the human skill of decoding facial expressions, used whenever humans communicate with one another. Using facial expressions for evaluating pain in a different species, does however take a minimum of training.



The Cow Pain Face.

Top illustration: a cow with no pain.

Bottom illustration: a cow with pain face.

The pain face features of the cow comprise changes in 4 areas:

1. Ears: ears are tense and backwards or low/lambs ears.
2. Eyes: eyes have a tense stare or a withdrawn appearance, also tension of the muscles above the eyes may be seen as 'furrow lines'.
3. Facial muscles: tension of the facial muscles on the side of the head.
4. Muzzle: strained nostrils, the nostrils may be dilated and there may be 'lines' above the nostrils and there is increased tonus of the lips.

Illustrator Anders Rådén,

from: Gleerup, K.B., et al., Pain evaluation in dairy cattle. *Appl. Anim. Behav. Sci.* (2015), <http://dx.doi.org/10.1016/j.applanim.2015.08.023>

The study found that 43% of randomly sampled lactating cows had a pain score, allocating them to the pain group. These results indicate that dairy cattle, seemingly performing well in the herd, may be in pain. Pain seems to be relatively prevalent and a pain scoring protocol is useful for identifying cows in pain.