

## How do you handle your cows safely and without causing stress?

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You handle your cows on a daily basis: you milk them, move them from one stall to another, treat them and glam them up for the show ring. You've spent your entire life with cows and these hefty animals hold no secrets for you now. But who amongst you hasn't been the target of a good kick in the shins, even from a cow you thought you knew well?

In Canada, working with animals is the main cause of injuries requiring hospitalization (18.7 per cent), and animal-related injuries accounted for nearly six per cent of deaths in the agricultural community from 1990 to 2000. Even when you're working with a cow you know well, an animal's reaction is always a risk for humans. Fortunately, it is possible to prevent some of the reactions that put you and your cows at risk. To ensure your handling is in line with natural cattle behaviour, it is important to have a good understanding of how cows communicate and respond to their environment.

### Humans are predators

With eyes located on the sides of their head, cows are prey animals in nature. Conversely, we humans, with eyes in the middle of our faces, are the predators! So it's unnatural for cattle to be domesticated by a predator, who would normally be considered an enemy. Hence the cow's first instinct is to be suspicious. Although temperament may be the result of genetics, an animal's disposition is often shaped by its past experiences. Cows handled from an early age tend to be less distrustful of humans. Because they are unable to comprehend our intentions during handling, they simply respond to specific commands. Animals that are under stress are completely unpredictable and present a definite risk for their handlers.

### Cow vision

A cow's vision is not sharply focused but can be improved by providing adequate lighting, specifically, 200 lux. Cows are more sensitive to warm colours (yellow, red) than to cold colours (dark blue, black). Because of the morphology of their eyes, cows require more time than we do

to adapt to sudden changes in light. For example, cows entering a dark building from outside, or vice versa, will need a few minutes to adjust their vision. Hence it's important not to rush your animals so they have time to adapt.

Cows are only able to see in three dimensions (3D) in a 30-degree angle in front of them. To see clearly, cows focus specifically on the object they want to see. Cows also have difficulty with depth perception, particularly in the dark, and will often take some time to judge the depth of a gutter, for example. Once again, it is important not to rush your animals and to give them time to put their minds at ease. Adding light-coloured bedding will also help your animals see depth more clearly. Any shadows or changes in texture or colour in your cows' path will cause them to hesitate in their movements.

Cows under extreme stress are practically blind in the area of binocular vision (in front) and must rely solely on their peripheral vision. So it's not surprising to see animals walking straight into a fence as they come out of the barn in the spring... to say nothing of the effect of the glaring sun on their vision.

### A good schnoz!

Thanks to their keen sense of smell, probably the most highly developed of their senses, cows are able to detect odours that are imperceptible to humans. A small organ located in the palate enables cows to smell pheromones, adrenalin and some toxins. In addition to detecting the estrus cycle, the organ also enables cows to sense danger

close by. A stressed cow in a restraining chute leaves an odour that may cause the next cow to suffer stress as it approaches the contaminated chute.

A new cow introduced into a group has her own particular odour and may become a target for congeners, who perceive the intruder in the pen. Camouflaging the new cow's odour with vinegar on the animal's back could help make the cow less discernible to pen mates. Introducing a number of new cows at the same time also helps dilute the attention that would otherwise be focused on a single animal.

Likewise, handlers each have an individual olfactory "ID card" that the cows come to associate with a positive or negative attitude. Cows are able to use their sense of smell to recognize individuals and associate them with treatments that may be more or less pleasant.

### A few tricks of the trade...

- **When entering a stall:** establish visual contact with the cow and place your hand firmly on the animal's back to indicate your reassuring presence. When a cow is taken by surprise, it can take up to 30 minutes before the stress hormones dissipate.
- **To avoid a head butt:** When a cow wants to butt a handler, the head movement and neck flexing will necessarily be preceded by a twisting of the animal's vertebral column and a shifting of her centre of gravity. That centre of gravity, located more or less in the middle of the cow's back, will move away from the person positioned near the animal's neck (Figure 1).
- **To avoid being kicked:** When

lifting a foot, a cow must necessarily realign her vertebral col-

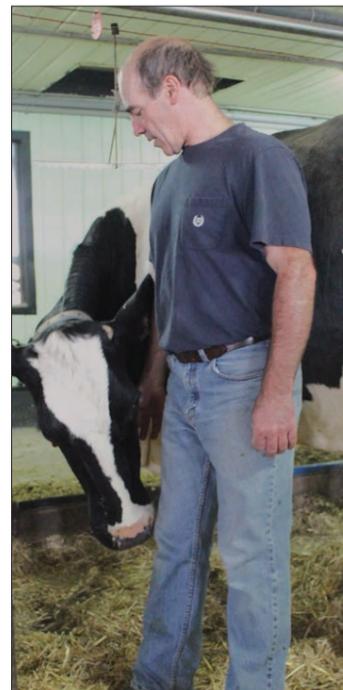
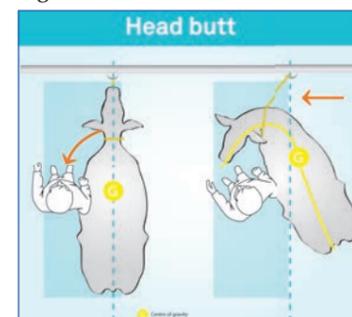
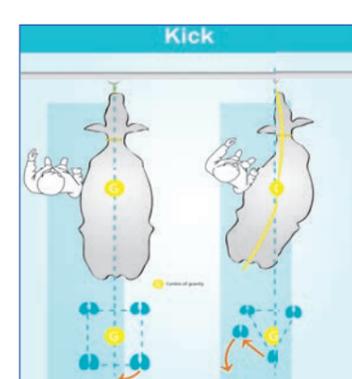


Figure 1



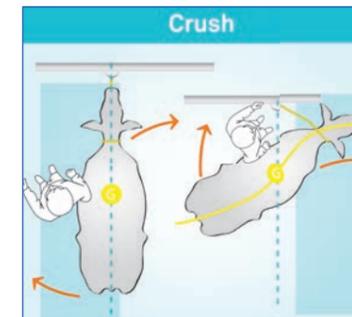
Representation of the handler's position

Figure 2



Ag = LF (left foreleg); Ad = RF (right foreleg); Pg = LH (left hind leg); Pd = RH (right hind leg)

Figure 3



presence of two people when the handling takes place in the stall. For more involved handling, a squeeze chute is an indispensable tool to ensure the safety of both the animal and the handler.

## Controlling cows from a distance

All animals have an invisible zone around them called the flight zone. When you enter this zone, the animal will try to move away in an attempt to maintain its distance from you. Beyond the flight zone, there is a pressure zone where you can position yourself in such a way as to induce the animal to move slowly, without triggering a flight reaction. The tamer the animal, the smaller the circumference of the flight zone.

To handle a cow without using a halter, position yourself beside the animal so that you have a clear view of her eye. Even so, it's important to remember that, due to their monocular vision (with one eye) to the side, cows have trouble judging the distance between themselves and their handlers.

Cows cannot see anything at all in a 60-degree angle immediately behind them. For that reason, you should avoid standing directly behind the cow when you want the animal to move forward because the cow will have a tendency to turn her head in an attempt to see you, which will affect the direction of her movement. If you walk faster than the cow, she will have a tendency to slow down and will be inclined to stop as soon as you pass her shoulder (point of balance).

You can use this technique to control the cow's speed and even get the cow to stop just by changing the position of your body. Walking in the opposite direction of the cow tends to make her advance more quickly.

*Adapted from: Manipulations et interventions sur les bovins, deuxième édition, ed. Educagri*

