Five things to consider

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Cattle are regularly taken from comfortable surroundings, in their paddock or pen, into an unfamiliar environment where they may be prodded with a needle or have a dosing gun shoved into their mouth. Remind you of anything? A dental visit perhaps?

When it is put like that, from the animal's point of view, it is not hard to see why they might find any handling operation a stressful experience. If the animals find it stressful they may not co-operate, making the experience stressful for the handler too.

Stressed animals are much more prone to picking up infections, which can lead to reduced performance. Animal handling need not need be overly stressful. Small changes can yield significant benefits for all involved.

The Flight Zone

Cattle are prey animals, and they view humans as predators. We've all hear of the 'fight or flight' response and cattle will usually choose flight, though newly calved cows are likely to stand and fight.

The animal's flight zone is its personal space. The size of the animal's flight zone is an indicator of just how tolerant it is of human interaction. In other words, it is an indication of how wild or tame the animal is.

Dairy cows, for example, have a very small flight zone, indeed many may have virtually none at all. This results from close daily human contact since birth. Young calves reared artificially are totally dependent on humans for feed. This creates a positive association with humans. As adults, daily milking reinforces this close animal/human bond. As a result, dairy animals are generally tame and relatively easy to handle.

At the other end of the scale you have suckler-bred beef animals that may well have had minimal human contact from birth and are almost completely unaccustomed to people entering their personal space. These animals will frequently have a very large flight zone and will not let a person get close to them.

Extreme care needs to be taken when handling these types of fractious animals, especially in the confines of a handling yard, as serious accidents can and frequently do occur in these scenarios.

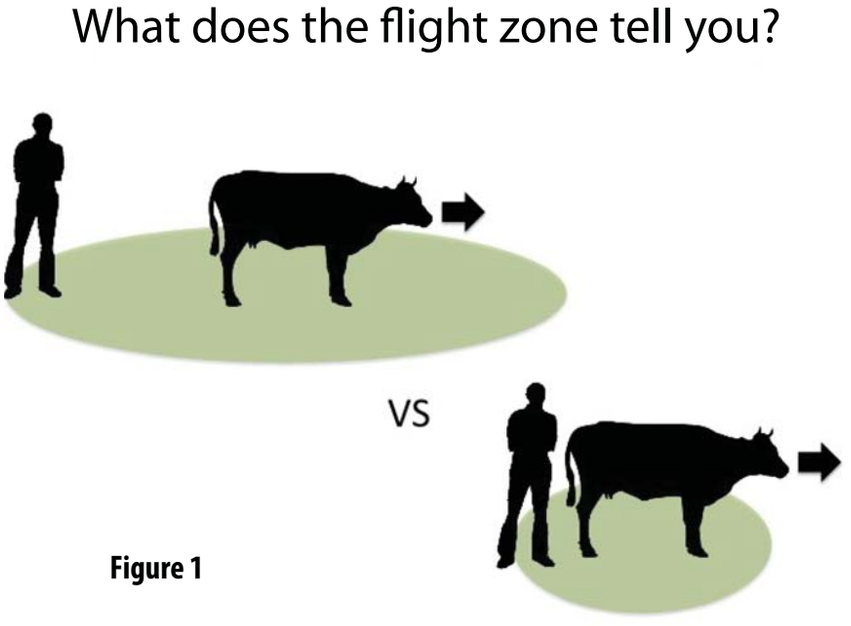


Figure 1

An experienced handler can quickly identify an animal's flight zone and can use this awareness when carrying out handling tasks. If you step in and out of an animals flight zone at the correct times, you can get them to move in the direction you want.

An experienced handler will easily identify a particularly difficult animal and be aware of them at all times, in order to prevent a fight or flight scenario developing. In a field, the animal will opt for the flight option, in a confined space, such as a handling yard where flight is not an option, it may choose to fight or attack.

Animal's point of balance

The animal's point of balance is at its shoulder. Allowing for the animals flight zone, if the handler stands at its shoulder, the animal, if settled, will not move (Figure 2). Move in front of the shoulder, the animal will move backwards (Figure 3), move behind the shoulder it will move forwards (Figure 1).

A good knowledge and experience with these movements can make tasks such as sorting cattle and moving cattle through a crush much simpler. It can also greatly reduce the need to resort to the use of stick and prods.

> The size of the animal's flight zone is an indicator of just how tolerant it is of human interaction

When using its point of balance to get an animal to move in the required direction, you are working the animal from its front and side rather than from behind. This has the benefit of the animal being able to see you at all times, as you are not dipping in and out of its blind spot which is to its rear. Animals will be calmer and less likely to get agitated.

Handler's attitude and skill level

Starting any task with the right at-

when handling cattle

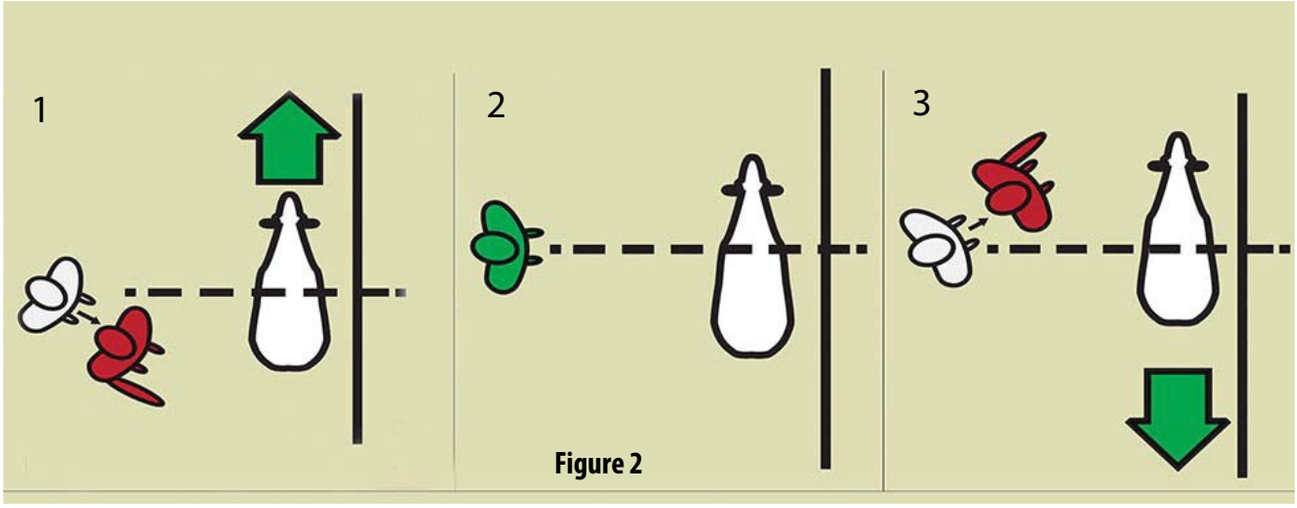


Figure 2

titude is crucial. If we expect the process to be stressful, it will be.

Patience is essential when working with cattle. A calm handler has a much better chance of achieving their objectives. When handling cattle, it is often said that 'slower is faster'. This is particularly relevant where fractious cattle are involved. Excitable animals that have become agitated are often best left alone for at least 30 minutes to allow them time to calm down.

The most expensive, best laid out facilities will not work well where the handler has the wrong attitude. The opposite is also true, in that a basic, well maintained unit can work satisfactorily when being used by a handler with the right attitude.

Not everyone has the natural instincts to be a good handler. Skills and good handling habits can, however, be learned at any stage, but bad habits can also be easily handed down.

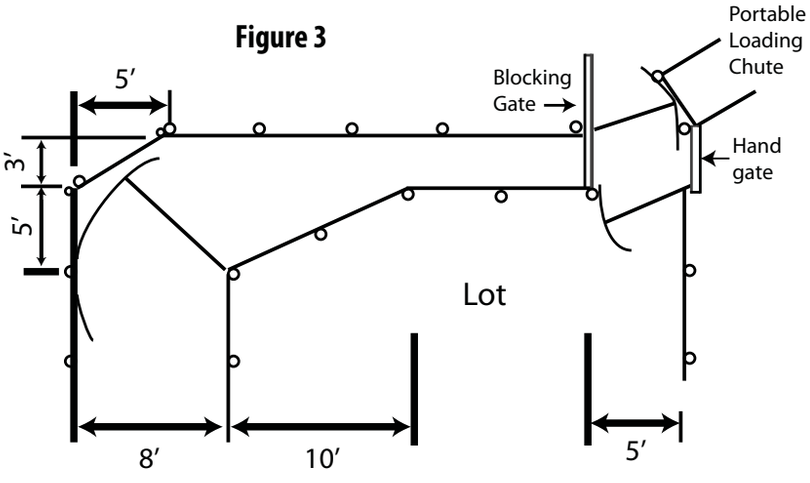
Layout of Facilities

In Ireland we tend to focus more on our facilities being of solid construction rather than how we have them laid out. Sturdy construction is obviously of huge importance, but does not necessarily mean that the workings of these units will be good.

The basic elements of a good cattle handling unit should include:

- Good secure access to the unit from sheds and fields.
- Sufficiently high internal and external gates and barriers to prevent escape.
- A good sized collecting area in which yarded cattle will not be packed too tightly.
- At least one smaller sorting pen adjoining the collecting area. This can lead directly to the crush, or on to another small pen feeding the crush. Ideally, this pen would be no more than 3m wide, as this is the maximum width a handler can control to prevent cattle passing.
- A crush made up of heavy duty gates that can be opened individually to release an animal which has gone down.
- A good quality head gate to catch an animal for tagging, injecting etc (an anti-backing bar or sliding gate set up approximately 2.5m back from head gate is useful also).
- A solid, level, preferably non-slip floor.

Figure 3



Basic improvements

Good handling facilities will effectively draw the cattle through. In poorly designed facilities, bottlenecks will appear, which cattle do not want to pass, examples include:

- **Blind 90° corners** – cattle can't see where they are supposed to go. Curved or angled corners work better and prevent cattle baulking.
- **Square pens where cattle bunch head-first into the corners** – putting some form of barrier into these corners can prevent this bunching and improve cattle flow.
- **Cattle getting stuck at the crush entrance** – install a properly funnelled entrance, ensure one side is in line with the crush, with the other coming out at a 30° angle (allowing for the standard crush gate to open).
- **Excessive cattle movement/ baulking in the crush** – put some form of sheeting on the side of the crush panels to cut down on external distractions.

Research into human-animal relationships (HAR)

An investigation of the HAR using housed pregnant dairy and beef origin heifers

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A detailed understanding of how livestock perceive and communicate with stockpersons is crucial to improving animal welfare and farmer safety. However, research into how animals, and people, experience these interactions is still limited.

To lead and handle animals, a farmer must first understand the way in which the animal perceives its environment. This is essential to understanding and anticipating its reactions.

Thus, it is important to assess the situation (low stress or high stress), attitudes and handler behaviour; the human-animal interactions and the handling facility characteristics.

The outcome of any livestock handling event depends on a combination of factors that are associated with the event.

The human-animal relationship (HAR) can be defined as the perception between the animal and the human, which develops and expresses itself in their mutual behaviour. The level of fearfulness of animals is determined by the experiences the animal has gained, in association with their individual genetic disposition.

This study assessed fear responses and HAR, over time in housed pregnant dairy (20) and beef (43) origin heifers using three behavioural tests; crush agitation (CA), exit speed from the crush (ES) and avoidance distance at the feed face (AD). The CA and ES were recorded consecutively on days 43 and 86 post-housing;

Avoidance distance (AD)

Avoidance distance was measured on day 51 and 99 post-housing by a familiar and an unfamiliar human.

The human was positioned 2m from the feed face and approached the animal slowly with their left arm raised at a 45-degree angle from the hip.

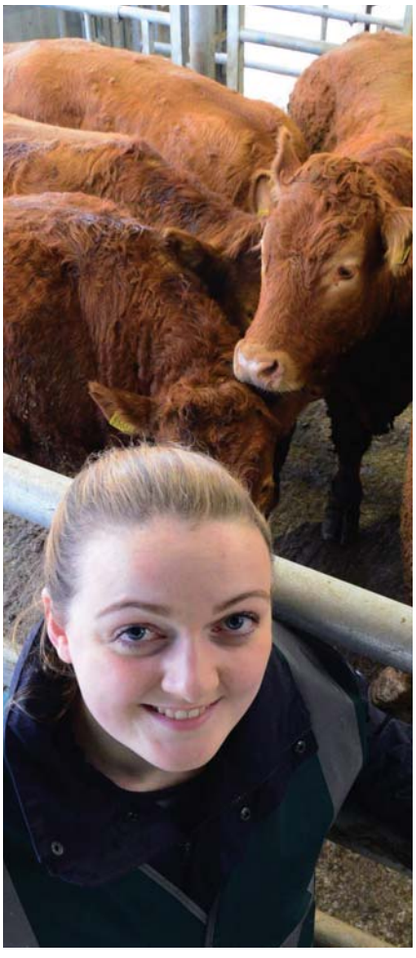
The withdrawal distance of each animal was recorded using a laser distance measure. If the animal did not withdraw, it was recorded whether or not the animal could be touched by the human.

The beef-origin heifers habituated to both the familiar and unfamiliar humans, whereas the dairy-origin heifers only habituated to the familiar human, over time. From the three investigated tests, AD proved to be a more sensitive measure of the human animal relationship and how cattle perceive humans, whether they are familiar or unfamiliar.

SAFETY

The three main themes with an impact on risk and safety during livestock handling are:
- The handler.
- The handling facilities.
- The cattle.

The AD test being carried out by an unfamiliar human.



Niamh Woods.

Implications

Development of a positive human animal relationship (low levels of fear in animals and high levels of confidence in humans) can be beneficial, e.g. the presence of a familiar human, providing gentle handling may calm animals in potentially aversive situations (e.g. isolation, calving) thereby reducing distress and risk of injury to the animal and the human.

Further work assessing the human-animal relationship is ongoing, with a primary focus on safety implications when working with cattle.

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