

Reducing Stress When Handling Livestock is a Two Way Street

John Popp, Manitoba Agriculture, Food and Rural Initiatives

Introduction:

The two greats of animal handling are undoubtedly Bud Williams and Dr. Temple Grandin. Their practices and principles in understanding low stress handling of livestock are far reaching. Undoubtedly, as you delve into this subject – you will come across these two names. We will not go on to review their published materials, but rather attempt to provide some perspective on the value and power of low stress handling and briefly outline the major principles. Low stress handling means profit – which may be a greater motivator for some people - than just lowering stress. It can only be achieved by understanding and training your livestock to do what you want them to do – rather than you reacting to what they want to do. Cattle have a spatial and fear memory, as well as natural instincts, which can contribute to the success or failure of your method of handling cattle with reduced stress. Cattle can become excited in a matter of only a few seconds, but require 20 to 30 minutes for their heart rate to return to normal. The degree of stress an animal experiences is related to three major factors – 1) amount of contact with people, 2) quality of handling (quiet vs. forceful and loud) and 3) genetics. Push, release and reward are the simplest tricks of a good handler of dog, stock horse or cow. A respectable stockman has an impeccable and refined sense of timing.

Genetics and Temperament

Each animal, just as each person, has its own personality resulting from genetics and previous life experiences. All animals are unpredictable and all animals react differently. Signs of aggression are characterized by dropping the head, turning to the side, pawing, raised ears, snorting, quick and erratic movement and a raised tail. Aggression in cattle can be triggered by yelling, whistling, erratic

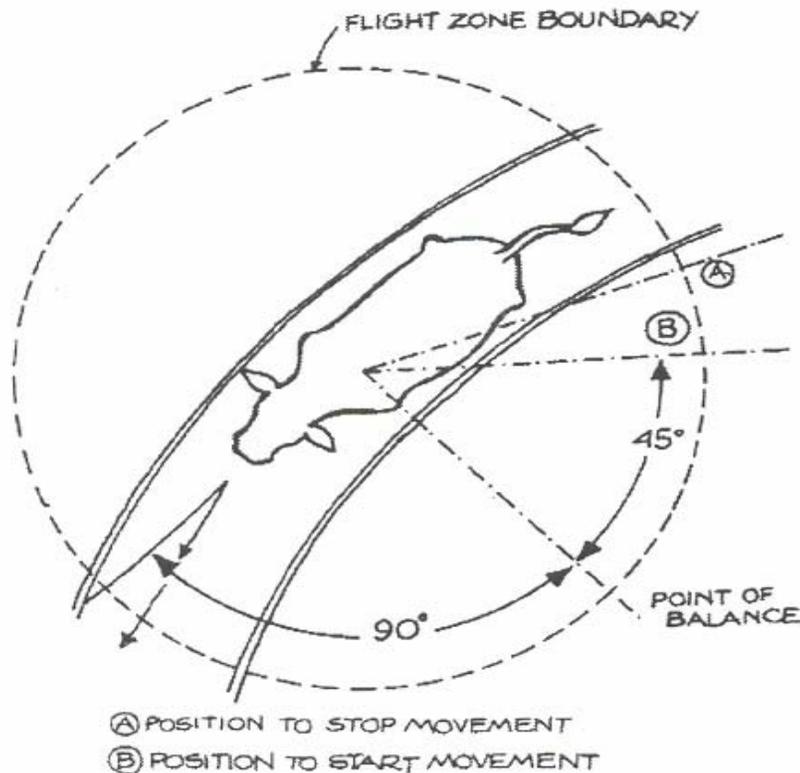
movements and waving arms. Any areas which are new to cattle will also trigger this response. Shades of light, new and unfamiliar objects, enclosed spaces, restraint and ground conditions are critical factors in triggering natural fear and flight responses. Following is a chart developed by the Institute of Agricultural Rural and Environmental Health in Saskatchewan.

Natural Instinct	Reason for Instinct	Situation that challenges instinct	Cattle Reaction	Safe Handling
Herding	Herding offers shelter and safety from predators.	Singling out an animal.	Anxious, lonely or depressed.	Limit the amount of time that an animal is alone. If an animal must be separated from the herd, keep the herd nearby. Move the animal slowly with minimal noise.
Habitual	Comfort is derived from routine.	Dairy cows not allowed to enter the barn for milking.	Frightened or agitated	Maintain a routine for the animals.
Flight Zone	The Flight Zone is considered safe, personal space.	Movement towards animals in a corral.	Cattle move away from you to keep you out of their Flight Zone.	If you penetrate the Flight Zone too deeply, the animal will bolt away. The proper use of this zone will enable you to move cattle in a desired direction.
Territorial	Animals are attached to their own territory and derive comfort from this area. Male animals dominate an area.	Moving animals off a well-worn path or removing a bull from its pen.	An animal may protect its territory. This is compounded by the insecurity of being removed from the herd.	Try not to separate or move animals at feeding time. Never turn your back on bulls or on anxious animals.
Maternal	Cows normally protect their young from danger. They sometimes do this prior to calving, too.	Removing a calf from a cow.	A docile animal may become aggressive and could kick or charge you.	Do not go between a mother and its young. When entering a pen, if possible, separate the mother in a nearby holding area. Anticipate aggression

Behavior Principles for Handling

Cattle have wide angle vision and have the ability to see 90% of what is behind them. The blind area behind cattle is between the hips; if you draw a straight line from the eye to the pin bone – the animal can see everything outside this angle – disappear behind the hip past this line and they are unable to see you.

In the diagram below (Canadian Federation of Agriculture) the point of balance as well as angles to start and stop movement are marked by letters A and B.



These points are crucial as they allow animals to stay together as a herd. When a group of animals move, the animals maintain visual contact with each other. This enables the herd to stay together. An animal following another will move within position A and B. The dominant strong animals will be at the core of the herd, while the weaker will remain more peripheral. Understanding the point of balance and flight zones is crucial to creating, stopping and directing

movement. Entry and exit of the point of balance and pressure to and from the flight zone is shown in Figures 2 and 3. The most common mistake made by handlers is inadvertent entry into the blind spot. Inevitably this causes cattle to stop and ‘hook’ – meaning they will turn to see you and stop. The handler must be close enough to the animal to make it move, but not so close as to cause it to panic and flee. If cattle move too fast, you need to come back out of their flight zone – if they slow too much – gently move back into the flight zone. Give the signal and reward the behavior by releasing your pressure.

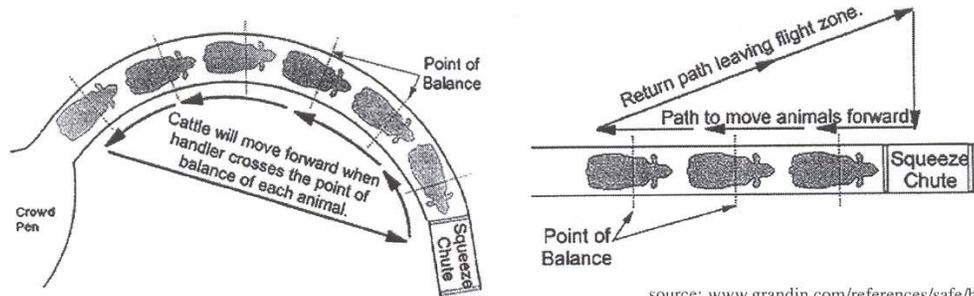


Figure 2

source: www.grandin.com/references/safe/html

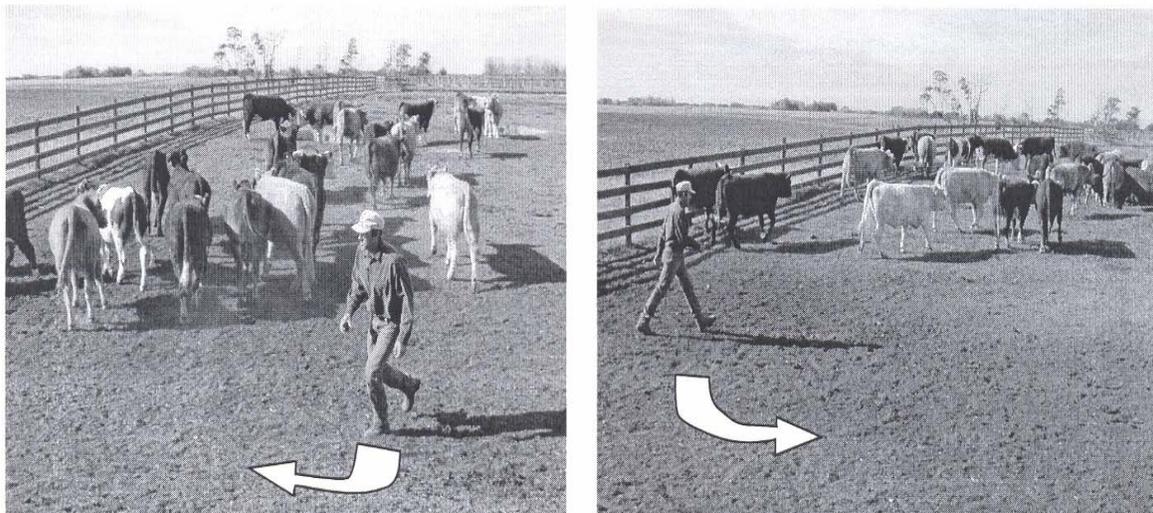


Figure 3 source: Division of Media and Technology, UofS

A crowd pen should always be filled only one-third or one-half full allowing cattle to find a point of exit more easily. If exit points are clearly lit and no handlers or ‘strange objects’ (eg. Jacket flapping in wind) are visible within the flight zone at the exit points, cattle will flow freely in the desired direction. The handler in Figure 3 is simulating

predatory movement in order to first create herd cohesion and then create herd movement. This is done by moving across at a 90 degree angle to the direction of desired movement.

Troubleshooting Handling Problems:

To solve a handling problem one must determine the cause of the problem. Difficulties can arise from any one of the following factors:

1. Facility design problem – for example a dead ended chute.
2. Dark spots in the chute as cattle are expected to move forward (eg. Moving into a building that is dark)
3. Too many animals in the crowding tub. Fill it ½ full.
4. Handlers are getting animals excited and scared.
5. Problems in animal temperament due to genetics used.
6. Open/lighted spot directly beside exit point of crowding tub.
7. Animals stop movement as something appears unfamiliar to them. (eg. Someone's coat draped over a post).

This factsheet touches only the mere surface of the principles of low stress animal handling and acts as an introduction. Cattle are different from their human predator counterpart in that they have a different range of vision, a different depth perception and an individualized flight zone. This can be used as a way to control the animal by using its point of balance and simply pushing and releasing. To be better at moving stock you have to learn to see the world through their eyes.

Links:

www.grandin.com; Livestock Behaviour, Design of Facilities and Humane Slaughter; Dr. Temple Grandin

www.managingwholes.com; Low stress cattle handling; Bud Williams.

Manitoba 

Building for the Future