Working Safely with Cattle

by Pat White, DVM

I did not grow up with livestock but adopted them relatively late (as an adult) in life. They have always been somewhat intimidating to me and as I have never been fast on my feet, even in younger, more svelte days, I retain a sense of awe and respect for the power, weight and size of our cattle. This is a breed that is often attractive to livestock novices, which we were when we purchased our first heifer calves in 1983. Highlands are just as capable of inflicting injury as any other large bovine, much as we like to think differently. Handling Highlands requires as much diligence as any other breed and this article is an attempt to remind readers about safe cattle handling. We all owe it to the novice cattle owner to supply realistic information concerning the keeping of cattle, any cattle.

As Highland cattle owners, we often have the privilege of bragging to our neighbors, colleagues and new acquaintances (particularly those thinking of getting into the Highland cattle business) that we have the gentlest, quietest cattle in the world. While in fact that very well may be true, that doesn't change the fact that these are cattle: large bovine creatures that are herd oriented with the added attraction of horns. Cattle have a mind of their own. We like to think that Highland cattle have larger minds than other breeds but that mind, regardless of size, is still their own. They don't speak our language, and while we don't officially speak theirs, we can learn and practice handling techniques that utilize commonly known behavioral techniques, body language and positioning to minimize animal-related injuries on the farm or ranch. Understanding animal behavior; why they do what they do, is paramount to learning safety techniques when handling them. People have a habit of giving animals human qualities and forget that our four legged friends can quickly revert to primal reactions when threatened or stressed.

First of all, there are excellent cattle handling guidelines that can be gleaned from the internet. Temple Grandin, Associate Professor of Animal Science at Colorado State University, and well-known livestock behavior specialist, has a website with a tremendous volume of information http://www.grandin.com/. She has also written many handbooks on simple cattle handling facilities that take into consideration cattle's natural instincts. I highly recommend any information she supplies, as she has done more to facilitate humane slaughter than any other single person. The simple basics of safe animal handling include:

- Don't use loud voices or noises and don't wave arms (white noise or radio music, however, is fine and actually can be calming to livestock).
- Approach animals slowly and from the side to avoid spooking them. Livestock have a blind spot directly behind them, so avoid this area.
- Eliminate shadows in working areas as much as possible. While cattle can see 340 degrees around them and have wide peripheral vision, they have poor depth perception. Shadows, bright colors, ruts and holes can cause them to spook.
- Keep areas clean and dry to avoid slips and falls by both handlers and livestock.
- Facilities should be designed to allow easy and rapid egress of human handlers.
- Proper clothing and protective wear are essential; particularly steel toed shoes.
- Sight reduction (solid sided facilities) reduces distraction and lowers stress levels in livestock.
- Cattle will move from dim lighting towards brightly lit areas as long as bright light does not hit them directly in the eyes.
- Anticipate how cattle might act in a given situation.

Cattle are essentially color blind and have very poor depth perception. This results in extreme sensitivity to contrasts. They may balk at shadows in their path; bright colors may produce striking contrasts or something as simple as a change in footing from dirt to concrete or pavement may spook them. Because of lack of depth perception, they cannot distinguish blind turns in buildings or alleyways. This will cause them to move very slowly, if at all, and can be a great source of frustration if you don't understand the reason for it. Cattle cannot see directly behind themselves, so they will invariably turn to keep a handler or a perceived threat in their sight of view. Once an animal has balked moving into a given area; they will likely refuse the next several times as well and may get a little more excited and a little more dangerous with each pass. It is wise to figure out what you want to accomplish; remove the obvious obstacles that may upset your cattle and try diligently to get them to move through an area the first time.

Cattle tend to follow a leader: if no member of the herd makes a move, it becomes less likely that anyone will. Many times it is easier to bribe or call to attract the lead cow; once she comes everyone else will follow. We find it is often difficult to herd our cattle away from us; it is usually easier to start them moving by calling them in. We often use both approaches to gather the herd. One person calling them in and one or two people on foot to roust out the stragglers and get them moving.

Cattle are also very sensitive to sudden noise: they will spook away from the source. Animals that are blind or deaf on one side will favor that side and may swing around suddenly to investigate sounds or sights occurring on the impaired side. If they don't know you are there, they may well move into you unintentionally.

Cattle are not big dogs: they are herd animals and do not form attachments similar to the pack leader like a dog will. Even the calmest, friendliest show cow or steer has the capability to revert to sheer instinct when frightened or startled. Handlers that are tired, frustrated or preoccupied are more likely to be caught unaware and injured. I have heard it said many times that it is not the wild cow that will hurt you, it is the pet cow. We are all much more complacent around the cattle we think we know, and do not expect belligerent, much less dangerous behavior from them.

Herd livestock such as cattle or sheep can become agitated or stressed when one animal is isolated from the herd. Any animal that lives in a flock or herd can become lonely, depressed, frightened or agitated if separated from its usual herd mates. I am sure that all of you have experienced an adult cow acting as if it has just been weaned when its close companion (even if for only a few days) is removed. This phenomenon is easily demonstrated at cattle shows where farm mates enter the ring in different classes and the one left in the alley or back at the barn acts like its throat is about to be slit. Certainly the more experience that animal receives in different situations, the more likely that it will remain calm but no one person can predict all the variations in environment that may occur at any given moment.

A frightened bovine, regardless of sex, is a dangerous animal. Cattle are the most nervous of all livestock and are easily startled. They consider themselves prey and everything else may well prove to be a predator. A frightened animal will plow right over you in an attempt to escape; if it sees no way out, it will attack aggressively out of shear panic. The smaller the enclosure, the more likely a frightened animal will see no escape route and attack instead. A friend was attacked by a Highland when he got into the trailer to unload it at the slaughterhouse. The animal was by itself and from the

Having good handling facilities is essential for working safely with cattle. Here the animal is restrained in the headgate, the side boards keep it from moving around and a back gate protects the handler from being kicked.

description; hysterical and scared. It did not want to leave the perceived safety of the trailer and turned on my friend. While there was an escape door on the trailer, it was not unlatched, and the slaughterhouse employee who was present apparently didn't have the presence of mind to get to that door in what my friend considered a timely fashion. Fortunately, he was not seriously injured but he certainly could have been. We schedule at least 2 animals for slaughter at the same time for this very reason. They have a companion to keep them comfortable and calm right up until the end. A Judas goat (or cow) would serve a similar purpose in getting a single animal to the abattoir safely and sanely.

If you enter a small area with a very nervous animal, they would probably preferentially flee. If the quarters are small enough, they will not have that opportunity and it leaves them with only one option: drive you out (if possible) or end up attacking you if you don't leave. Thus we learn the importance of an easily accessible escape route from all enclosures. Be aware of your surroundings and always leave an escape route when working in close quarters with livestock.

Maternal female livestock can become aggressive in an effort to protect their young. Granted, most Highland mothers are incredibly tolerant of human intervention but one can never assume that any new mother is safe in any circumstances. I have seen 1st calf heifers totally oblivious to us with their newborn calf, only to become far more apprehensive and defensive the following year with their 2nd calf. I have also seen the exact opposite. Maternal hormones can do strange and powerful things and you do not want to be caught unaware. Some cattle in the herd will react as violently to the cry of a herd mate's calf as they will to their own. There is little to rival the impending sense of doom when a calf bawls and the entire cowherd descends on you in a stampede. Some cows can go from placid and tolerant to aggressively protective in mere minutes, as the hormones in their bodies change as actual delivery of the calf approaches. A good rule of thumb – never get between a cow and her calf. (As an aside, never get your hand between the horns and the side of the chute.) New mothers seem particularly sensitive to being stared at: as if it brings out some instinctual fear of a predator (or Border collie) on the prowl. I know in the past I have confused my help with commands such as "don't look directly at her!"

Male livestock can become aggressive in an attempt to show dominance. I am a firm believer that Highland bulls are a breed apart in terms of disposition. I always try to impress on new buyers that as a general rule, the bulls are easier going and more laid back than the cows. Teenage bulls (yearlings or 2 year olds) can be somewhat idiotic and act fearful. We have found that once they have been out with the cow herd, they gain considerable confidence and no longer put on display behaviors with the approach of people. That being said, if you have a Highland bull with a bad disposition, get rid of it. With the pool of good natured bulls available, there is no excuse to keep a bad-tempered bull, regardless of cause. There are bulls out there that become mean due to handling or lack thereof. Bulls can develop a bad disposition if they are raised in isolation from herd mates. I know of Highland bulls who have been totally separated from the herd after breeding season with no bovine companionship. These bulls get bored, frustrated and lonely. It is not surprising they would attack any moving thing that might enter their stalling area, even if those "attacks" are really attempts at playing with something other than their hay bale. Giving them a companion such as a steer or bred cow can make all the difference in the world. One owner reported to me that his bull had to go to slaughter because he "turned mean". When the owner would take grain out in the pasture to give to the cattle, the bull would come on the run. The owner became more and more fearful of the size of the bull and decided to run, bucket in hand, out of the pasture. The bull soon would follow, at a run. I would be suspicious that this particular bull wasn't really aggressive but had been trained with grain, to run after the bucket and owner. Unfortunately for him, it still made him

dangerous, even though I am convinced the bull was innocent of any malign intentions.

Understand aggressive trigger codes. There are certain behaviors, we as people do, that unintentionally (or sometime intentionally) cause a predictable reaction from a bovine. Rubbing that cute little furry forehead in a calf will bring about an adorable little session of bunting and pretend fighting with you. It is very cute in a tiny calf but not cute at all in a ¾ or fully mature animal. Cattle must learn to stand still to have their face combed. It does not come naturally to them; their natural reaction is to bunt or push back at some-thing hitting them on the forehead. (Young bull calves will bunt at each other; no doubt learning to joust for later contests as to who is dominant bull in the herd.) One particular incident told to me by one breeder involved a newly pur-chased yearling bull, which he had tied on a halter. When he approached it, the young bull put his head down and came towards the man in a threatening fashion. The result of this was for the man to take a 2x4 and proceed to beat the bull on the forehead to "teach him a lesson". I wasted no time voicing my horror at what he had done. I believe there were two factors at work here. The bull was in relatively new surroundings, being approached by someone that he was not familiar with, and tied, so that he had no place to go. He could not leave an unpleasant and probably scary situation, so he took the next best option, which was to drive that which frightened him away. Then, the man comes back with a hunk of wood and proceeds to beat him on the head and forehead; intensifying his fear and bringing out an instinctual reaction to fight back. If this had occurred in a pen, with a bull that was not tied, serious injury to the man easily could have occurred. I never inquired as to whether the bull "adjusted his behavior" but I would venture to guess that he never learned to tolerate being close to a person. A situation poorly handled all the way around where everyone involved came out a loser.

Bulls may put on "display behavior" when approached by people; they will turn sideways, hump up their back, lower their head and bellow. This is the same behavior they exhibit when approached by another bull or even a new cow in the pasture. It is their way of making themselves look bigger and more intimidating to whatever is perceived as a possible threat. While you should be aware of what this behavior may indicate (you are perceived as a threat), I find that our own bulls may do this when we approach with strangers to view the herd. A word to them ("oh stop that, it's just us") is usually all it takes for them to relax and continue on their merry way. No, of course they don't understand me but the sound of a familiar voice has the same effect as if they do; we are people, not out to steal your herd and have no interest in hurting you.

Cattle have their own personal space; intruding into this space may be perceived as a threat and we need to respect this. There is no exact determination of how small or large that personal space may be and it will vary with each animal that cattle come in contact with. My cattle will tolerate a much smaller personal space with me but not with strangers, nor even with my husband. (This comes in very handy if I need to move cattle, they will move away from him much better than they move from me.) Just because your cattle are very well behaved with you doesn't mean they will exhibit the same behavior for everyone. People who encroach upon this personal space may be rudely surprised with a sharp smack on their arm with a horn or a sudden lurch forward in an attempt to drive an intruder back and away. Again, my own inclination is not to hug my cattle; it never has been and never will be. I know of a number of people who have misjudged a cow or bull and ended up with a nasty bruise. More than a few people have ended up in the emergency room to be stitched up because they thought they could get as close to someone else's cattle as they do to their own. We personally do not make pets of our cattle, although they are calm and easily approached, and most can be scratched (on the butt or side of the neck) by someone they know.

Show cattle usually have no fear of their handlers and have a very small or non-existent personal space with them. Yet maternal hormones may cause a sudden change in the way those handlers are perceived and it is wise to expect that a considerably larger personal space will be needed around calving time. When a cow perceives a threat, it will either flee or attempt to drive the threat away. **This is normal bovine behavior.**

That lack of personal space can backfire in other ways as well. One of my scariest moments was during mandatory TB testing in the state of Michigan, when I was working with a group of very friendly Hereford cows. There was a long, solid runway before the actual squeeze chute with no method of escape other than going over the top of the runway, exiting through the chute itself or back through the runway. Unbeknownst to me, as I followed one cow up the runway to be caught in the chute, the owner allowed another cow into the runway behind me. She was a big 1800# docile cow who wanted nothing else than to get out of that runway through the only exit she was aware. She crushed me up into the backend of another big cow and kept pushing. She was not scared, she had absolutely no fear of me whatsoever. She required no personal space, she just wanted to get out and was going through me no matter what. I, on the other hand, require a great deal more personal space than she had in mind. I could only move one arm at this point and the only thing that finally backed her off was grabbing my trusty farmer's hat off my head (yes, I usually wear one) and beating her on her face and eyes with it. She didn't fear me but she didn't like that hat in her face and finally gave me enough room to climb out. Two lessons here: one; make sure your help is competent and understands the full ramifications of what they are doing. This owner really was amused by my predicament; I don't think he had a clue as to what could have happened. Had it been him crushed between two cows, I doubt he would have seen any humor in it. Two, if you are working cattle on foot, they need to be cattle that respect people. These Herefords had been hand fed, babied and had absolutely no personal space requirements. If she hadn't respected my hat smacking her in her face, I have no doubt she would have crushed me with some substantial bodily injury.

Another anecdotal story concerned a handler being trapped by a large horned bull (Highland, so I am told) against a solid wall. The bull meant him no harm but just rested his large head on the man's chest. The horns prevented the man's escape and only when the bull finally lifted his head could his owner breathe again.

Avoid startling an animal by making it aware of your approach before getting too close. If you are coming up behind cattle, talk to them so they know you are there. If you are going to touch them, don't tickle them like you are a fly. This is more likely to get you kicked than touching them firmly after they know you are there. Some cows are natural born kickers and it seems like they teach their daughters the same trick. These animals may never be trustworthy to approach from the rear.

Excessively changing the animal's environment or daily routine can take the animal out of their comfort zone. The best example I can think of is to put a new mother and her calf into a stall or pen or small paddock and then peer over the top of the fence at her. This seems to make many of my ordinarily quiet cattle very nervous, to the point that they may act much more aggressive behind a panel or fence than they would in an open field.

Don't assume that cattle know children are little humans. Our own herd is not exposed to small children on a routine basis and although our cows are not aggressive towards them, it is obvious that they are uncomfortable around them. Probably the combination of unique noises and being close to the ground makes children appear threatening. I am extremely cautious when showing families our herd when we have newborn calves.

Know what kind of environment your cattle came from if they did not grow up on your farm. Everyone has their own handling techniques, some good and some bad, but all somewhat different and what works for my cattle may not initially work for your cattle. We work all our cattle on foot or at least one person on foot and another possibly on a small vehicle. We carry a cane and train our cattle to respect us. A tap on the horn or a poke with a cane will quickly teach most cattle that you demand respect. We have sold cattle to ranchers who work their cows all from horseback. There can be quite a learning curve for our cattle to adjust to be herded by horses. One of our purchases involved cattle that were always worked with a long gate held between two people. When we got those cattle to our place, we discovered that while they were not aggressive, they had absolutely no respect for a person on foot unless we held a large gate. They would literally walk (not run or trample) right into us and expect that we would be the one to get out of the way. It was quite the learning curve for both us and those cows.

Bottle fed or show livestock can become playful or even dangerous because of constant handling. After being placed back in with the general herd as an adult, they may still approach you in a playful manner when you are not expecting it. These animals may not respect you and could inflict great harm, even unintentionally. I find that our show animals won't move away from me if we are attempting to herd them somewhere. We are far better off either haltering and leading them, or bribing with grain to follow. As for bottle fed calves; the few we have ever had were not made pets but fed twice a day and released. Animal behaviorists warn that intact male bovines raised as bottle babies run a high risk of maturing into bulls that do not recognize humans as humans, but rather as either members of their herd or competition intent on usurping their herd. Bottle fed bulls should be considered dangerous as adults, regardless of breed. It is very possible that dairy bulls with their deserved reputation for aggression as adults may very well become that way because they are bottle fed and do not differentiate humans from cattle.

Be patient and avoid frustration when working with difficult or stubborn livestock. Back injuries, muscle strains and slip/fall injuries can occur when frustrations lead to overly aggressive handling practices. You can't physically lift a 1200 pound cow into the trailer.

Feed distributed uniformly or in predictable patterns often results in territorial behavior, with boss cows rousting out subordinate cattle. This can be a situation where the submissive cattle dodge out of horn's reach from the boss cows, only to trample their human owners. Great care must be taken to avoid putting yourself in a situation where you become the obstacle of least resistance. These animals outweigh the average human by well over ½ ton, you will not come out ahead in a contest with something that size. We carry a cane with us when we are working cattle for this very reason. While a cane won't stop a 1200 pound cow in and of itself, our cattle learn that we are not the path of least resistance. A well-timed poke in the side will remind those cattle that we are to be respected. If you hand feed treats to train your cattle to be more friendly make sure you are accomplishing your goal and not actually creating a potentially dangerous situation. Cattle will push and prod each other, and again, whirl out of the way of a boss cow. Hand fed treats should be held high in the air so that your animals have to stretch their necks out and up to access the treat. This puts these animals in a submissive posture similar to the position a calf takes when its neck is being groomed by its dam. Many cows that have learned to love grooming will do the same thing when you comb their neck; stretch that head out and up. This posture helps to reinforce that you are the dominant being. However, you should expect that the bossier cows will cause rapid movement of subordinates. You should be prepared to move rapidly out of the way if necessary.

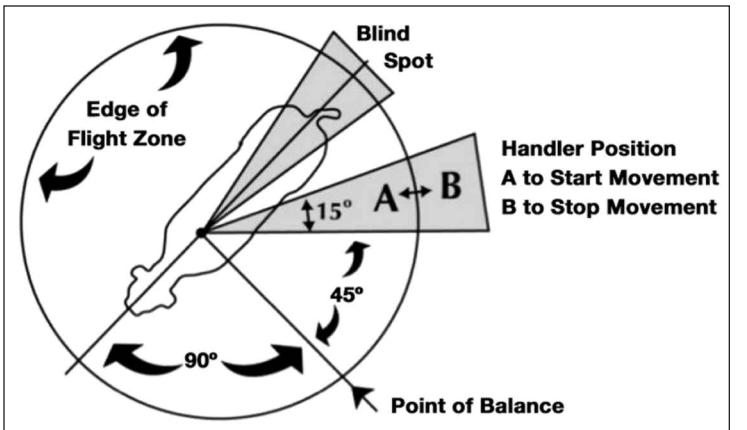

Figure 1. Flight Zone
Taken from "The Cattle Industry's Guidelines for the Care and Handling of Cattle", National Cattlemen's Beef Association

Farm dogs can be a help or a hindrance when it comes to working cattle. If well-trained, the dog may pose no threat and may be useful in certain situations. If the dog is not obedient, it would be wise to prevent it from interacting with the cattle. This will probably require forced confinement, as dogs often sense when something is non-routine, and want in on the action. Cattle being moved, bred, examined or near delivery are all possible activities that may arouse a dog's interest. Even when cattle are familiar with dogs, a change in circumstances (such as calving) may change its perception of a dog that it usually tolerates. The other very unfortunate tendency of an untrained dog is to rile up the cattle and then seek protection behind its owner's legs. An aggressive, dog-hating cow may come right through you to get to the dog. Our own cattle are pretty much used to our dogs but new purchases have not been. These cattle distrusted the dogs and would chase them out of their immediate vicinity; something our home-raised cattle rarely do.

If you are heading out to work with the cows tell someone what time you will be home. It is wise to carry a cell phone, just in case something untoward occurs. One rather comical story related to me by an old dairy farmer with a small herd of Highlands involved his venturing out to the barn to check on a Highland cow about to calve. She did not appreciate his presence, knocked him down and proceeded to attempt to butt him, but her horns were so large that all she ended up doing was pushing him around on the concrete, nestled safely between those horns, without inflicting any injury. He had swept quite a bit of the floor by the time his wife came to his rescue. He was in his 70s when this happened.

Farming is considered one of the most dangerous of all occupations in this country. While most injuries are due to machinery, don't discount animals as a cause of injury and death. There have been fatalities nationwide that have been directly or indirectly related to livestock handling. On average, 20 people per year are killed by cows in the United States. Analysis of many of these cases conclude that the animal purposefully struck the victim; ramming them, knocking them down and/or goring them. Casualties may also have been trampled, kicked in the head or crushed against a solid object.

Statistically, most cattle-associated deaths occur from head or chest injuries and the highest risk for injury from cattle is in older men (60+) with arthritis and hearing aids. No doubt they can't hear the animal coming and can't move fast enough to get out of the way. Actual deaths reported from cattle encounters include a number of scenarios already discussed and it is alarming that many times an animal was known to have exhibited aggressive behavior in the past (both bulls and cows).

Highland cattle are incredibly good natured but also powerful, quick and can be protective of their territory and offspring. They may be unpredictable during breeding and birthing periods, just like any other breed. We like to think that they will never harm us, and all of us should endeavor to make sure our thoughts prevail.

Remember:

- Use a head gate and squeeze chute to restrain cattle when possible.
- Always have an easily accessed escape route.
- Always use caution approaching a cow with newborn calf.
- Use extreme caution around frightened cattle.
- Work calmly and patiently; take frequent breaks if necessary to maintain your sense of humor.
- Practice common sense, it goes a long way.

For those of you without a chute set up for your cattle, consult www.ag.ndsu.edu/aben-plans. This page contains instructions for building a variety of cattle facilities by hand. You may download copies in a pdf file or order larger blueprint size copies for $4.00 each. See plans 5465, 5778, 5789 and 5791.