

Safety With Animals

Old MacDonald had a farm . . . e-i, e-i, oooohh. And on that farm he had a virtual menagerie of four-legged and feathered friends. But modern agricultural specialization has changed all that. Now, if we're into animals, we're usually in big and stick to one or two kinds--Old MacDonald type operations though fondly remembered are few and far between.

Animals have been entwined in agriculture since primitive times. Being both fond of and dependent on them, we dislike viewing them as potentially dangerous. But, accident figures show that animals are involved in many thousands of farm injuries and several deaths each year. Therefore, preventing animal-related accidents is an important part of agricultural safety.

The Accident Problem

A recent summary of farm accidents data from 15 states shows that animals were a factor in about one of every eight injuries reported, ranking second to farm machinery in total number of cases. However, animal-related injuries on the average are less severe than those involving machinery with fewer than 100 resulting in death each year. Still, many animal related injuries are serious and involve considerable loss of time, money and productivity.

A closer look at animal related injuries from farm accident survey data indicate that most of the victims were males when it came to cattle and hogs, but females approached males in the number of injuries involving horses and pets.

As to age of victim, youngsters (5- 14) were most often bitten by dogs, but cow-related accidents found more victims among the 45-

64 age group. Horse-related injuries were suffered most often by youngsters (5-14) and young adults (15-24) while the mature folks (25-44, 45-64) were the target of most mishaps involving hogs.

Most of the cattle and hog-related injuries were suffered in farm buildings or adjacent lots. Most with horses happened outside in barnyards, fields, lanes, woods and along public roads. Dogs more often than not bit people in home yards.

Common things cows did to hurt people were to kick or step on them, and catch people or their limbs between themselves and hard objects or surfaces. Many falls also occurred while tending cows. Hogs bit, stepped on and knocked people down. Dog bites were a common source of injury. Accidents involving horses and bulls were more likely to result in serious injury than mishaps with other animals.

Importantly, farm family members were by far the most frequent victims of animal-related accidents, with hired help and visitors accounting for less than 10 percent.

Livestock Handling Operations

Any operation involving restraint of an animal or sorting and loading is much less hazardous if solid facilities are provided. Makeshift gate arrangements and rope

restraints can lead to injury of both the animal and the human worker.

Handling facilities deserve careful planning for efficiency as well as for safety. Animals will move more willingly through a chute if they cannot see excitement up ahead. Facility design should be such that it is never necessary for workers to enter a small or enclosed area with the animals. All holding pens should be equipped with a man-gate or other means of quickly vacating the pen if necessary. Crowding into sorting or working chutes can usually be done with crowd gates, not with drivers.

Catwalks along chutes and alleys eliminate the need for working in the alley. If the catwalk is more than 18" or so off the ground, it should be protected by a guard rail to prevent falls. Walking or working surfaces should be free of tripping and slipping hazards. Check for protrusions, sharp corners or pinch points that could cause injury and then eliminate them.

Head gates and squeeze chutes can be the scene of excessive animal excitement. Makeshift latches and levers can fly open inflicting serious injuries. Commercially designed and manufactured facilities at these key points can improve both efficiency and safety.

Here are more safety pointers: Lighting of facilities should be even and diffused. Bright spots mixed with shadows in alleys and crowding pens will often cause cattle to balk. Lighting in the squeeze and loading chute areas should be at least 10 footcandles. Guard the moving parts of a hydraulically operated squeeze chute and tilt table. Use solid panels for moving swine. Never prod animals if they have no place to go. As both cattle and hogs are very sensitive to noise, keep the decibel level down as low as possible.

Special Considerations

Each farm animal has its own set of safety considerations different from others, some of which are discussed in this section. For more information on accident prevention connected with any particular animal enterprise, contact your extension service.

Beef Cattle

Beef cattle are known for an even disposition. But when startled, they can inflict injury to anyone in their way. Groups of animals are easy to "spook." Bovines can see nearly 360° without moving their heads; therefore, a quick movement behind is just as apt to "set them off" as a frontal one. Small animals such as dogs tend to upset cattle and they are very sensitive to sudden or unexpected loud noises.

Although cattle are not apt to attack you, they can overwhelm you with their size and weight. Leave yourself an "out" when trying to corner or work with cattle. Keep small children and strangers out. Beware of the area in front of the rear leg when working with cattle. They tend to kick forward, then back. Pulling the kicking leg forward can be used as a means of preventing a kick while working in the udder or flank area.

Dairy Cattle

Milk cows may look contented in the pasture, but they are generally more nervous than other animals. Creatures of habit, they are easily startled, especially by strange noises and persons. Always announce your presence when approaching a cow. Gently touch the animal rather than let the first contact be a bump or shove. When moving cows into a constraining space such as a milking parlor stall or squeeze chute, give animals time to adjust before starting the work at hand.

If a cow tends to kick, consider using a hobble. Consider a squeeze chute and head gate as an investment in safety as well as efficiency. Don't permit workers to talk loudly, clatter and bang equipment around or handle cows roughly. Gentle cows can become dangerous when defending calves and this fact should be impressed on children, visitors and new workers. Special facilities should be provided so that a bull can be fed, watered, exercised and used for breeding without the dairy man coming into direct contact with him.

Swine

Hogs can bite with enough force to cause serious injury, and they pack enough weight to bowl people over or cause injury by stepping or laying on them.

Though normally docile, a sow will become aggressively protective if any of her offspring is hurt or threatened. Veterinary work and treatment of pigs should be done only when they are separated from the sow, or when she is restrained in the crate or separate pen.

Guiding hogs for sorting or moving to new quarters calls for patience and reasonably good facilities. Your best safety aid for these jobs is a lightweight hurdle or solid panel with a handle attached. The panel should be slightly narrower than the alleys through which the animals are being driven. A hog can be easily guided backwards by placing a basket or box over its head as it will try to back out of the basket.

As with most animals, make yourself known quietly and gently to avoid startling your hogs. A knock on the door or rattling the door handle will usually suffice. Don't let small children reach through pens or fences to pet or feed hogs, nor let them (and strangers) climb into pens or roam around hog lots. Horses

Mechanical power spelled doom to the horse as the prime mover of agricultural implements. But he is a long way from extinction on the farm, and instead of a collar around his neck he has a saddle on his back.

Millions of Americans--rural and urban residents alike--enjoy horseback riding, and the horse is still a useful partner in many range and ranching operations. Unfortunately, many are injured--even killed--while riding or tending horses.

Basic general reminders include: have good equipment and maintain it; take good care of your horses and respect them, make sure a youngster can ride and handle a horse before turning him or her loose on it; only a skilled rider should mount a temperamental or high-spirited horse; and, ride with extra care when the going is rough or slippery, and among trees with low branches.

Safety with horses is too broad a subject to cover in this bulletin. There are many publications available that spell out these matters in much detail. Therefore, visits to your extension agent, library, dealers in riding equipment and horse supplies, local breeders and stables, and such should fulfill your information needs.

Sheep

A common accident involving sheep is being butted by a ram, which could be especially serious for a child or an elderly or handicapped person. Ewes will also protect their young and should be handled carefully.

A sheep can be immobilized for safe handling by sitting it up on its rump and tilted back enough to keep the rear hoofs off the ground.

Poultry

Chickens and other domesticated fowl are

relatively harmless, though geese, gobblers and roosters could cause injury to small children or the elderly. Most of the hazard, then, lies with faulty or improper use of equipment, poor housekeeping and dusts in poultry facilities. If these things are properly tended to, accident and health risk is low.

Other Animals

Pets sometimes inflict injuries-- usually minor--on youngsters who mistreat or annoy them. But, children and intruders have been seriously hurt and even killed by dogs. Proper care and handling of pets can minimize the number and severity of pet-induced injuries.

Teach small children how to handle pets and to be kind to them.

If you have a guard dog or one with a cross or unreliable temper, keep it tied or confined to certain areas.

Wild animals native to your area should be avoided or approached in the proper manner as suggested by local wildlife authorities. Warn visitors to your place about any animal hazards.

Animal Diseases That Threaten Man

Animals, domesticated or wild, can be a source of human illness and parasite infestation. Such diseases transmitted between animals and man are often referred to as zoonoses.

Probably the animal-inflicted malady that inspires the most fear is rabies, a virus that attacks the nervous system. The saliva of an infected animal contains the deadly virus and comes to us through a bite or open sore or wound.

Because of vigorous anti-rabies programs and widespread inoculation of pets rabies is a rare disease. However, rural people are at

greater risk than urban because of the proximity of wild animals and many free-roaming unvaccinated dogs and cats. Warn children about petting or feeding any animal acting abnormally. Have your family pets inoculated. Take immediate action if someone is bitten --try to capture the animal for examination by a veterinarian and seek prompt medical consultation.

Brucellosis or Bangs disease (called undulant fever in man) afflicts cattle, goats and swine. It can be transmitted from infected animals to man through raw milk, contact of an open sore or wound with an aborted fetus or after-birth, or from carcasses at the time of slaughter. Undulant fever is a severe and tenacious malady that you can avoid through good sanitation and management. Animals should be tested regularly and removed if infected. Check with your state regulatory officials regarding vaccination.

Bovine tuberculosis is much less common today due to rigorous testing and elimination of infected animals. It still can be found in some areas or on farms where untested cows are kept to supply family needs. As bacteria are found in any body secretion or discharge, handling tubercular cattle is a health risk. Protective measures are regular testing and slaughter of those showing positive reaction, and pasteurization of family-consumed milk.

Trichinosis, caused by a tiny parasite, is a painful and sometimes fatal disease in man. Eating uncooked or partially cooked infested pork is how we get it. Thorough cooking of pork is the best prevention. Salmonella organisms are found in a variety of domestic and wild animals and poultry. Transmission to people occurs through contaminated food or water. The disease causes severe gastrointestinal distress, fever and loss of appetite, and can be serious for the very young or old, or those with debilitating ailments.

Prevention includes proper cooking and storage of animal-derived foodstuffs. Food handlers should keep their hands well washed.

The natural reservoir of tetanus organisms is the intestinal tract of animals, especially horses. The spores are introduced into a person's body by contamination of a wound with soil, street dust or fecal material. Tetanus is a horrible disease with a high fatality rate; therefore, all rural people should be immunized.

Leptospirosis in humans can be a serious ailment. Carriers include domestic animals, rats and wild rodents. It is passed from animal to animal or to people through contact with infected urine, or with soil, feed, water or other materials so contaminated. Once on a farm, the disease is difficult to eradicate.

Tularemia, often called rabbit fever, is usually acquired by handling wild rabbits (dead or alive) and eating imperfectly cooked contaminated meat. Though the disease is not usually life-threatening, it is disabling and characterized by a high fever.

Other zoonoses that farm people should guard against include swine erysipelas, animal pox disease, ring worm, tape worm, Newcastle disease, histoplasmosis, psittacosis (parrot fever), and insect-borne animal diseases such as spotted fever (ticks) and equine encephalitis (mosquitoes).

Your extension service and veterinarian can probably supply more information on these important health menaces that you should study and keep for reference. Here are a few general preventive measures:

- Keep animal quarters clean.
- Immunize animals and keep them free of parasites.

- Quarantine or remove sick animals. Don't unduly expose yourself to any sick animal.
- Wear rubber gloves when treating sick animals or assisting at birth, and without fail if you have open sores or wounds on your hands and arms. Wash up and change clothing when finished.
- Call your doctor if you become ill after contact with animals.

Personal Protective Equipment

The well-dressed livestock, dairy or poultry farmer should include several items of personal protective equipment in his wardrobe of work garb.

Bump caps can protect heads from the bumps and bruises bound to be theirs when working in and around livestock facilities.

Respirators have a place when cleaning up, handling dusty or moldy hay, working in silos and manure storage facilities, and for some pest control operations. Select the proper respirator for the job.

Safety eyewear can shield eyes from dust, chaff, chemicals, and flying pieces. Also, all prescription eye and sun glasses worn at work should have impact resistant lenses and sturdy frames.

Hand can be protected with several types of gloves including rubber ones to be worn when assisting birth or treating a sick animal.

Safety shoes should be standard equipment on any farm job. The metal toe cap and rugged soles can give some protection against animal hooves, dropped items and sharp objects. Skid-resistant soles will give better traction on wet, muddy or manure covered surfaces.

Facilities

Many of the injuries related to the care and handling of animals are inflicted by inanimate machines, tools or structures rather than by the living creatures themselves.

People fall or are hurt in and around lots, pens, chutes, barns, sheds, mows, milking parlors and while using weighing, sorting and restraining equipment. Rather than any fault of the animals, it involves sloppy housekeeping, poor lighting, defective or worn equipment, inexperience, improper footwear, inattention, haste and such.

Electric shock hazard is considerable in the wet or damp environment of barns, lots and milking parlors. Strains and dislocations can result from improper lifting of heavy objects and bags of feed or supplies. Concentrations of manure in pits, tanks or lagoons create dangerous gases (and a most unpleasant place into which to fall). Silos present a three-way danger--falls from silo ladders, poisoning or suffocation from silage gases or oxygen deficiency, and entanglement in filling or unloading equipment.

Faulty steps and flooring, also lack of handrails, are known causes of falls. Feed and grain storage places are sites of several accidents yearly to workers and sometimes children who climb inside and suffocate, "drown" or get drawn into the unloading mechanism. Feed sometimes "bridges" (a large airspace near the bottom) as it is drawn out, and could suddenly collapse from under someone on the top surface.

Electrical tools and equipment left plugged in with switches or controls operative and within reach of little hands present more hazard. Lack of guarding on materials handling equipment is a hazard to young and old alike as well as to the animals

Reduce the risk of injuries in and around your animal facilities:

- Be a good housekeeper. Put things away after use. Keep aisles, steps and work areas free of clutter. Keep walking and working surfaces cleared of manure, mud, ice and grain spills. Sand or ag lime can be used to aid footing.
- Keep facilities and equipment in good repair. Check out pens, chutes, stalls, fences, ramps and confinement devices. Make sure ladders, steps, flooring and such are sound.
- Check out electrical system in buildings. Is it adequate for the load and properly grounded? Overloading or deterioration not only means lower productivity and inconvenience, but also added risk of fire and shock.
- Is electrical barn machinery properly installed, grounded, maintained and shielded? Can equipment be locked out? Starting switches should be convenient and in full view of others who may be working in the area but yet out of easy reach of children. Lock out switches when working on equipment.
- Keep power tools in good condition. Avoid using them while standing in water or mud. Unplug tools and put them away, especially if you have children or visitors.
- Consider using ground fault interrupters (GFI) especially with equipment or power tools used in damp or wet places, and with stock water heaters. GFI's can be had in portable plug-in types or built into circuit breakers.
- Never enter a sealed silo or manure facility without a self contained or supplied air breathing device. When

agitating or pumping manure, open windows and doors and turn ventilating fans to maximum.

- Never enter a grain or feed bin when unloading is in progress or could start. Lock out mechanical unloading auger power. Break bridges with a pole from outside the bin.
- Store barn chemicals and pharmaceutical in a clean, cool, dry place where children and visitors cannot get to them.
- Check all facilities for protruding nails, sharp edges and such.
- Keep children out of animal quarters and work areas. Keep doors and gates closed. Dangerous areas could be locked if necessary to keep children and visitors out.
- Heat lamps for brooding should be solidly supported and shielded,
- Have a safety fence around a manure disposal lagoon.

Electric Fences

Numerous animal and some human deaths have occurred from the use of faulty or homemade electric fence controllers and other system components. Buy and use only controllers that are approved by a recognized testing agency such as Underwriters Laboratories . Install the system properly.

Have a Heart

Remember, animals have feelings, too. Just as we, they can suffer from hunger, thirst, fear, abuse, illness and injury. Don't mistreat or neglect them, nor allow children or employees to abuse them. Respect and take good care of them and they'll do a better job for you.

Accident Case Analysis and

Safety Countermeasures

Five states which conducted NSC's farm accident survey were able to supply 120 supplemental reports on animal-involved accident cases with more detail than in the regular accident reports.

The Farm Department analyzed these reports to get at some of the causes of animal-related mishaps and to help it formulate suggestions to aid in their prevention.

Accidents that occurred with some frequency were: kicked by a cow or horse; butted or struck by a ram, hog or bovine; bitten by a dog or hog; fell (or thrown) from a horse; dragged by a horse or bovine; limb or body caught between the animal and an object or surface; and, fell while chasing or tending animals.

Based on this animal accident analysis, the following safety measures would have prevented most of them:

- Use adequate restraining and handling facilities.
- Be calm and deliberate. Speak gently -- do not startle animals.
- Leave yourself an "out" when working in close quarters. Work outside chutes.
- Stay clear of animals that are frightened, hurt, sick or look suspicious.
- Be alert for sudden movements, kicking, etc.
- Use extra caution around strange animals.
- Provide good footing for handling operations. Keep floors and ramps clean. (Floors in areas that are often wet and slippery should be made of rough textured concrete or other non-skid

material.) Be extra cautious where slippery conditions are unavoidable.

- Provide training in livestock handling under controlled conditions for youth and other inexperienced workers.
- Entrust livestock handling jobs only to persons with adequate strength and experience.
- Wear protective footwear and headgear.
- Encourage moderate play activity around animals.
- Use extra caution while riding a horse on slippery or hazardous footing.
- Use extra caution around livestock with young.
- Never tie a lead line to your body or become entangled in the line.
- Check equipment carefully before riding a horse.
- Keep unneeded animals away from the work area.
- Assume that rodeo riding entails high risk of injury.
- Be alert to actions of animals nearby.
- Be patient with animals.
- Restrain known kickers and biters.
- Use extra caution with animals around crowds.
- Provide separate facilities for dairy bull.
- Use proper lifting techniques when handling livestock.
- Have enough help for the job at hand.
- Get enough rest.
- Don't allow children to approach strange animals.
- Don't lead an animal from a vehicle.
- Eliminate sharp edges and projections around livestock equipment and gates.
- Avoid "horseplay".

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