



Farm Safety Association

FARM ACCIDENT RESCUE



Success hinges on knowledge, preparedness

Basic knowledge of first aid measures and standard rescue procedures is vitally important to rural residents.

Quite simply, medical assistance and emergency rescue personnel usually have to cover a greater distance than would be the case in an urban setting. Life may hang in the balance during those extra few minutes it takes for help to arrive. Your ability to deal with an emergency can most certainly mean the difference between life and death!

There is a strong element in human nature that leads us to ignore the possibility of disaster striking our lives -- it always happens to 'the other guy'. We have to make a conscious effort to prepare for emergencies, even though such situations seem to be impossibly remote from our day-to-day lives.

First Aid training a must

Ideally, there should be at least two individuals on every farm with first aid training. What happens if just one person has knowledge of first aid procedures, and it is that individual who gets hurt?

Knowledge of what to do in an emergency situation is vital. Develop a file of information on measures for dealing with accidents, health problems and natural disasters.

Prepare a 'what if' plan that involves everyone living or working on your farm. Each person should have a good basic grounding in how to deal with emergencies. Knowledge and preparedness are the best antidotes for panic and fear -- calmness also reassures an accident victim.

Rely on the experts

When confronted by an emergency, assess the situation carefully. Calmly decide what steps need to be taken, and in what order.

In many cases, speed *is* vital. Work quickly and do your best with the available resources.

Remember that first aid is temporary, on-the-spot assistance. It is *not* a substitute for expert medical care. Call for help as soon as possible. Telephone numbers of emergency medical services, rescue experts, fire department, and police should be posted by every telephone as part of your 'what if' plan. Can you quickly and accurately describe the precise location of your farm?

Provide aid agencies with as much information as possible regarding the emergency. Rescue teams and medical personnel will be able to think out a strategy en route if they are given basic information

on the nature of the emergency. Special procedures may be required to free a victim who is entangled in heavy equipment, for example. If an accident has occurred in a muddy field, access may require a four-wheel-drive vehicle. Such information could save valuable minutes from the time required for rescue.

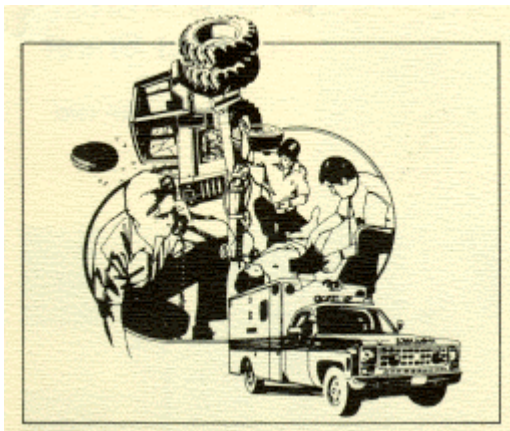
Victim's needs come first

In any emergency, physical care for the victim(s) is priority one. Establish breathing and heart function - if either has stopped, immediate resuscitation procedures are essential to survival (see page 4). Control bleeding and administer other required first aid. Psychological reassurance and physical warmth can also improve a victim's survival chances.

Rescue situations

It isn't possible to detail rescue procedures for every type of emergency in such limited space. The following pages highlight measures for dealing with some of the most common farm accident situations.

Information on rescue procedures for a wide variety of on-farm emergencies may be obtained from extension services, health facilities, insurance companies, fire departments, St John Ambulance, and a variety of other sources. Readers are urged to acquire this information and use it to develop contingency plans.



Tractor rollovers

Victims of tractor overturns usually suffer crushing injuries to the head, chest and pelvic areas. Movement may aggravate injuries and cause extensive internal bleeding. In many cases, it is best to transport the victim in the position found.

Emergency medical and rescue personnel should be summoned to deal with tractor accidents. Overturns frequently result in fatalities. At best, entrapment and serious injury are likely to be encountered

Following are key points to consider during a tractor rollover rescue:

1. Fire is a threat in an overturn situation, since large amounts of spilled fuel are often present. A charged fire hose or an ABC-type extinguisher should be available throughout the rescue.

Because of the fire-hazard, rescuers should consider alternative methods before using oxyacetylene cutting equipment to free a victim.

2. Shut off the engine -- even if it isn't running, rear wheel movement could start it up.
3. If the ground is soft, it may be possible to dig the victim out from under the tractor. Always block or crib the machine to prevent it from tipping and causing further injuries.
4. Lifting is the preferred method for dealing with rollovers of large, modern tractors. A second tractor or a tow truck will be needed to perform the lift.

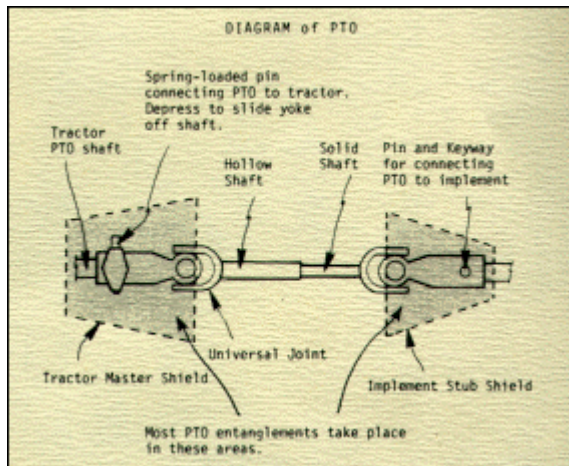
If a tractor must be rolled away from the victim, careful blocking is required to minimize settling of the lower side.

5. Place cribbing under the tractor as it is raised. Non-essential rescuers should stand well clear to avoid injury in the event of cable or chain breakage.
6. Hydraulic jacks can be used to lift smaller tractors (up to 10,000 pounds in weight). Block the axle on *both* sides to prevent the tractor from rocking onto the victim.
7. Air bags can be used to raise an overturned tractor. They are more stable if stacked alternately with the blocking.
8. If a victim is pinned under one side of a small tractor, eight to ten men may be able to roll the machine enough to permit

extrication.

PTO entanglement

1. Block the implement to ensure firm support throughout the rescue.
2. Attempt to telescope the two ends of the PTO shaft apart. It may be necessary to roll the tractor ahead to slide the stub shaft out of the front yoke, or to separate the shaft.
3. Single-piece PTO shafts may have to be cut or disassembled at either end to free the victim.
4. It may be possible to free the victim by turning the shaft backward. *Under no circumstances should tractor power be used to rotate the shaft!*
5. Sometimes it is best to transport a stabilized victim still entangled with part of the PTO shaft. Extrication can be completed by a surgeon under hospital conditions.
6. All amputated tissue should be transported to the hospital with the victim (see page 4).
7. Spine and neck injuries are common in PTO entanglements. Appropriate stabilization procedures must be followed.
8. If the accident involves complex or unfamiliar equipment, seek advice from a local implement dealer. This may prove to be faster and more efficient than the trial and error approach.



Electrocution

1. Always assume that any downed power line or any piece of equipment in contact with a power line is energized! If the victim is still in contact with the

downed line or energized equipment, *do not* touch him/her. Direct contact with the injured party is certain to make you a secondary victim!

2. If you have not been trained to handle high voltage lines, call Ontario Hydro or your local utility company for emergency assistance. You can then protect the accident site until help arrives.
3. Only if it appears that the response time will be dangerously long should an untrained individual attempt a rescue. Wear rubber-soled boots and nonconductive gloves. Use a *dry* board or a tool with a long wooden handle to remove the power line. If the victim is in contact with energized equipment, it will be necessary to push or pull them away. A piece of dry, nonconductive rope can be used for this purpose.
4. Check for breathing as soon as the victim is freed from electrical contact. Start artificial respiration immediately if required. Mouth-to-mouth resuscitation has saved many electrical shock victims. Cardiac resuscitation may also be necessary (see page 4).
5. Anyone who has received a high voltage electrical shock should be examined by a doctor as soon as possible. Physical damage may have occurred, even though the victim appears to 'feel fine'.

Silo Rescues

Most silo rescue situations will require extrication by litter, backboard, body sling, or harness.

The Hillsburgh, Ontario Fire Department has developed a simple device that allows a trained rescue team to extricate a victim in 30 minutes or less. The equipment is economical and can easily be fabricated by a local welding shop.

Because of the complexities involved in extricating accident victims from silos, rescue procedures must be carried out by trained personnel. Following are a few cautionary notes concerning silo rescues:

1. Self-contained breathing equipment is a must for rescue personnel if there is even a remote chance that silo gas may be present in the structure. Remote air lines are usually required, since a back pack of air is too bulky to wear inside of the silo chute.

2. Lift the victim off the silage surface immediately to get them away from the area of potential gas concentration.
3. Rescue teams should be equipped with sufficient rope to lift a victim out of the tallest silo, regardless of the silage level.
4. Be certain that the silo unloader *cannot* be switched on during rescue and extrication procedures.



Silo rescue must be carried out by trained personnel.



*Use a dry wooden tool to remove a downed power line in an emergency only (Caution: some wooden handles or boards **can** conduct electricity).*

Is your community ready for emergencies

While you may be well prepared for emergency situations, it usually isn't possible for an individual or farm family to handle a major crisis completely on their own.

Communities must be ready to assist when emergencies strike. A good emergency medical service is needed to respond quickly, carry out rescue procedures, administer proper treatment and transport victims to the hospital. Adequate police and fire protection are also vital elements of emergency rescue.

Many rural communities cannot provide competent service in all key areas. However, good planning, cooperation, wise use of available resources and working closely with other municipalities could improve many existing services.

Manure gas poisoning

1. Gases present in and around liquid manure storage facilities are *extremely* toxic. Rescue personnel must use self-contained breathing equipment *at all times*. To safely enter a manure storage pit, an individual must have that supply of air and assistance from a back-up crew using a life line.

2. Restore ventilation to facilities with beneath-the-floor manure storage as rapidly as possible. Open windows and doors, activate the building's ventilation system, or use smoke evacuation equipment.

3. If there is any possibility of reviving a victim, cardiopulmonary resuscitation procedures should begin immediately (see page 4).



Self-contained breathing equipment is essential for safe manure storage entry. Caring for amputated tissue.

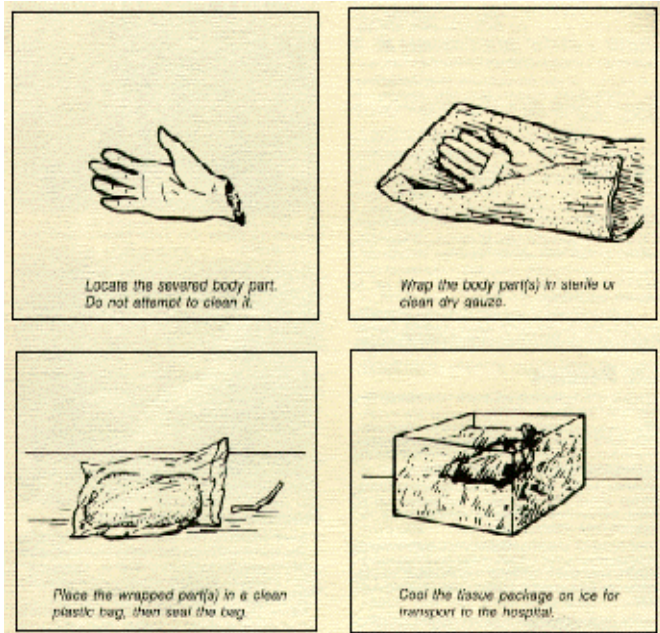
important. Modern surgical techniques have made it possible to restore badly mangled tissue and reattach limbs.

CPR can be a lifesaver

If breathing and blood circulation stop, a victim is a scant four minutes away from permanent brain damage! Life quickly slips away from a body that is deprived of oxygen.

Cardiopulmonary resuscitation (CPR) combines mouth-to-mouth breathing with external cardiac compression to maintain circulation for life support. In a rural emergency, CPR may be the only way of keeping a heart attack or accident victim alive until help arrives.

Experts say that CPR procedures should not be attempted without formal training. All rural residents would be well advised to develop competence in this life-saving technique. CPR classes are held in most communities on a fairly regular basis.



Preserve tissues for reattachment

It is rather gruesome to think about searching for a severed hand or a missing limb at an accident site. However, recovery of amputated tissue is extremely

The information and recommendations contained in this publication are believed to be reliable and representative of contemporary expert opinion on the subject material. The Farm Safety Association does not guarantee absolute accuracy or sufficiency of subject material, nor can it accept responsibility for health and safety recommendations that may have been omitted due to particular and exceptional conditions and circumstances.