

## CARBON MONOXIDE POISONING

David W. Smith, Extension Safety Program

**December 22, 1990.** A 65-year-old rancher died inside a converted semi-truck after being exposed to carbon monoxide from the exhaust of a portable gasoline engine-powered generator. The exhaust from the generator was vented to the outside with flexible ductwork placed through a small hole cut into the side of the trailer. On the night of the incident, the victim is thought to have pulled the generator away from the wall to refuel it, subsequently pulling the end of the exhaust tubing through the wall and into the trailer. The victim is thought to have pushed the generator back against the wall without noticing the displaced ductwork, started the generator and gone to bed to watch television. *Source: Colorado FACE Report.*

### WHAT IS CARBON MONOXIDE?

Carbon monoxide (CO) is an odorless, colorless gas that can cause sudden illness and death. Carbon monoxide interferes with the blood's ability to carry oxygen to internal organs. Symptoms of CO poisoning are similar to cold, flu, and allergies. Low level exposure can result in headaches, lethargy, weakness, nausea, and muscle aches. High level exposure can cause paralysis, impaired judgment, and even death.

### HOW IS CARBON MONOXIDE PRODUCED?

Carbon monoxide is a by-product of the combustion process. It is produced when any carbon-based fuel such as natural gas, heating oil, wood, reconstituted wood logs, gasoline, and charcoal is burned.

### WHAT ARE THE SOURCES OF CARBON MONOXIDE?

Gas appliances including water heaters, stovetops, water heaters, and fireplaces produce carbon monoxide. These appliances are designed with

exhaust vents to direct gases outdoors. However, if the exhaust vent becomes clogged, or if there is a leak, carbon monoxide may accumulate indoors posing a significant safety hazard.

Numerous carbon monoxide poisonings are reported on farms. Gasoline-powered generators, tractors, and other equipment used on the farm can pose a deadly hazard when operated in a confined barn, animal confinement structure, or other enclosed building.

### WHAT CAN I DO TO GUARD AGAINST CARBON MONOXIDE POISONING?

#### In the Home

- Install carbon monoxide detectors in the home and in the garage.
- Make sure all gas appliances in the house are UL listed for indoor use.
- Never burn charcoal or gas grills indoors.
- Ventilate the garage. Never idle a car parked inside a garage.
- Keep all exhaust vents and chimneys clear of debris, such as bird nests.

#### On the Farm

- Never operate or idle a tractor inside an enclosed barn.
- Keep gasoline-powered generators outdoors and the exhaust directed away from enclosed structures.
- Install ventilation systems, such as fans, in barns, animal confinement areas, and other enclosed buildings where gas heaters are used.
- Never operate gasoline-powered tools and equipment, such as pressure washers, in barns or other buildings without proper ventilation.

---

Education programs and information of Texas Cooperative Extension are available without regard to race, color, religion, sex, age, handicap or national origin.