

# **Be Aware of Agricultural Confined Space Hazards**

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A confined space is any area that has limited openings for entry and exit, unfavorable natural ventilation and is not designed for continuous worker occupancy. There can be many areas on a farm that fit this definition of a confined space. The real danger of confined spaces is that workers may not be aware of the potential hazards. Often people will not think of these areas as dangerous because they have entered them many other times without a problem and have been lucky. However, there have been cases where workers have entered confined spaces and not been so lucky. The potential dangers of confined spaces include displaced oxygen, toxic or explosive atmospheres, engulfment, entrapment, and entanglements. In confined space deaths, many of the victims are the rescuers who were the people that rushed in to attempt to save the first victim that was overcome or engulfed. The rescuers then become second, third, or fourth victims in some cases.

Confined space areas can be commonly found on farms. Some potential confined space areas can include:

- silos
- grain bins
- manure pits
- manure spreader tanks
- bulk milk tanks
- well shafts
- chemical storage tanks
- controlled atmosphere storage rooms

Some of the worst cases of confined space deaths have occurred in agriculture. On July 2, 2007, gas in a manure pit claimed the lives of five people on a Virginia farm. The victims included a 34-year-old farmer who climbed down into the pit to unclog a pipe and was overcome by manure gas. An attempted rescue claimed the lives of four more people that included a worker, the farm owner's wife, and two daughters aged 11 and 9. A similar incident occurred on a Michigan farm in 1989 when five family members died in a manure-receiving pit that had an oxygen deficient atmosphere. It was the same scenario. One person went down into a pit to make a repair and was overcome by manure gas. The other victims died attempting a rescue of the initial victim. There have been three known manure pit deaths here in New York in past years.

Do not become another victim. NEVER enter a confined space area to attempt a rescue without proper respiratory protection, positive pressure, self-contained breathing apparatus-note special training is required to use and maintain this equipment (Note: training is required to operate and maintain this equipment). If someone collapses in a confined space, call 911 immediately and ventilate the area. The local fire department or rescue squad has the equipment and training to conduct a confined space rescue.

To prevent these types of tragedies from occurring, always follow these guidelines:

- Train all workers and family members in the hazards of confined spaces so that everyone is aware of how dangerous these areas can be
- Always assume toxic or oxygen deficient atmospheres are present
- Before entry, ventilate the area with explosion proof, continuously powered equipment
- Use an oxygen meter to test the atmosphere before entering, and continuously test while workers are in the confined space. It may be necessary to use a Self-Contained Breathing Apparatus (SCBA) after receiving proper training.
- Standby attendants need to be in visual contact with the worker and if necessary, be prepared to lift the person to safety with a mechanical lifting device (winch, hoist, or pulley)
- Anyone who enters the confined space needs to wear a safety harness with a lifeline that is attached to the lifting device

Some other things that can be done to make confined spaces safe include:

- Post warning signs at all confined space openings. These signs should be in dual languages if necessary
- Eliminate the need for entry by providing access to all serviceable parts (shear pins, cleanouts, etc.) from the outside
- Modify existing systems to relocate serviceable parts to the outside
- With manure pits, cover all openings to pits with substantial grates to provide some ventilation and to prevent falls or entries to the pit. Stainless steel or fiberglass covers will resist corrosion from hydrogen sulfide. Remember, if it becomes necessary for anyone to enter the pit, continuous powered ventilation must be used.

NYCAMH is available to come to your farm and provide confined space hazard awareness training. We can also conduct a safety assessment of your confined spaces or a safety survey of your entire farm. With grant funding from the New York State Department of Labor Hazard Abatement Board, all of these services are offered at no cost, and all information is kept strictly confidential. For more information, please contact Jim Carrabba, Agricultural Safety Specialist at (800) 343-7527 extension 239, or e-mail [jcarrabba@nycamh.com](mailto:jcarrabba@nycamh.com). NYCAMH, a program of Bassett Healthcare Network, is enhancing agricultural and rural health by preventing and treating occupational injury and illness.