



Manure Pumping

- First priority is to keep people safe**
- Second priority is to keep animals safe**
- Every person should be aware of the hazards associated with manure removal and should comply with safety measures set forth to prevent loss of life of people and animals**

Manure needs to be removed from barns and outside storage at least every fall and usually in the spring as well. The manure is applied as fertilizer to farm fields in the area. The scheduling of manure hauling will depend on the weather, the availability of fields for application, the amount of moisture in the soil, and many other things. Sometimes manure pumping will be done to cover a certain field, and will leave some manure in the pit. Other times the main objective of the pumping crews is focused on getting the pits completely empty.

There are multiple types of gases that are released during manure pumping. The 2 most dangerous ones are **hydrogen sulfide and methane**. Hydrogen sulfide is the gas that has the smell of rotten eggs. Methane is odorless, but our primary concern with it is its potential to explode. Because of these risks, the best situation is to pump manure when there are no people and no animals in the barns. However, it is rarely possible to only pump barns once they are empty, so we want to do all that we can to be as safe as possible. As much as possible, plan your schedule to avoid working in the barns while pumping is occurring.

Turn on fans, open curtains, and unplug heaters **before the pumping begins** so there is good air movement.

When pumping manure, it is sometimes necessary to mix the manure so the solids are not all on the bottom of the pit. This mixing or “agitation” is done by pulling in manure through the bottom nozzle of the pump and pushing it out through the top nozzle. If both nozzles of the pump are submerged, the mixing is not forcing a lot of gases up into the room. But if the top nozzle is above the level of the manure, and you hear splashing, immediately leave the area and notify the pumping crew so they can stop the agitation and just pump the stirred manure. This is the circumstance that is usually responsible for creating dangerous gas levels in a room, even with lots of ventilation. Employees in Market Pig Production are never to enter barns while the manure is being agitated. At nursery and finishing sites, walking around the perimeter of the barn and checking animals is acceptable during manure agitation.

Even when there is adequate air movement, you may experience a headache and some dizziness from the smell of fuel burned in running the pumps and the manure being pumped.

For respiratory safety and fire safety, we need to make sure there is plenty of fresh air available in the barn when we pump manure, and that we reduce ignition sources like sparks or open flame (which includes unplugging heaters). Leaving curtains open may seem counterintuitive when we must pump at barns with smaller pigs where daytime and/or evening temperatures dip toward freezing. Visit with your production supervisor or one of our veterinarians to understand what prophylactic treatments may coincide with manure pumping to prevent the onset of illness.

General Information:

Especially in barns where insemination occurs, it is very important to keep the used breeding supplies such as bottles, insemination rods, and gloves from falling into the pit. When this happens, the manure pump sucks the trash into the pump, and the crew may end up spending many hours removing the obstructions from the pump and hose. It is a waste of time, and a preventable problem, so keep the trash contained within the barn and make sure it gets bagged and properly disposed of. Remember that the more smoothly manure pumping goes, the quicker it goes, and the sooner normal activity at the farm can be resumed.

Alarms:

When pumping starts in a given zone, disable the alarm for that zone, then enable that zone again when the pumping crew is finished.

