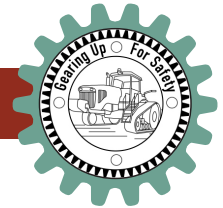


Name: \_\_\_\_\_



## ACTIVITY WORKSHEET 11.1

# Deadly Gases in Agriculture

**Directions:** Based on the descriptions provided in Lesson 11, identify the potential gases present in different locations in agricultural work places.

1. Manure storage and handling facilities have proven to be extremely dangerous places. There have been several cases of multiple people being overcome by the deadly gases produced by livestock manure. Identify the potential gases based on the following characteristics.

\_\_\_\_\_ The deadliest gas found in a manure pit. Generally, the gas that is responsible when fatalities occur. Has a rotten egg odor.

\_\_\_\_\_ The gas produced when manure decomposes. It is colorless, odorless and tasteless. It is lighter than air and flammable, and in sufficient quantities would explode.

\_\_\_\_\_ This gas is colorless, odorless, non-toxic and non-combustible. It's a by-product of the decomposition of organic matter. It can cause death if the concentration is so high that sufficient oxygen is not available in the air.

\_\_\_\_\_ This gas is produced from internal combustion engines. When engines are operated inside livestock confinement buildings, the concentration level could be harmful to workers. It is colorless, odorless, tasteless but is very toxic.

2. Silos can be deadly, especially during and following filling of the silo with new silage. During the fermentation process (usually 3-4 weeks following filling of the silo), deadly gases can be produced. Identify the potential gases based on the following characteristics.

\_\_\_\_\_ This gas is considered the deadliest gas produced in a silo. It is heavier than air, very toxic, and may have a bleach like odor and a yellowish-brown color. It is commonly referred to as "silo gas."

\_\_\_\_\_ This gas is commonly referred to as "laughing gas." It is colorless, non-flammable with a slight metallic taste. In great enough concentrations it can pose an asphyxiation risk.

\_\_\_\_\_ This gas may also be present in manure pits. Its greatest danger is when its concentration in the air becomes so great that it limits the amount of oxygen you are able to inhale. It is colorless, odorless, non-toxic and non-combustible.