

Resource Concerns

Soil

Water

Air

Air Quality Impacts

Greenhouse Gases

Odors

Ozone Precursors

Particulate Matter

Plants

Animals

Energy

Air Quality Impacts - Odors

Emissions of odorous compounds - VOCs, ammonia, and odorous sulfur compounds - cause nuisance conditions.

What is it?

Agricultural odors are a complex mixture of gases that can evoke a wide range of emotional and physiological responses when encountered via the sense of smell. Many different compounds can be the potential cause of odors from agricultural operations. These compounds can generally be classified as VOCs, ammonia, or odorous sulfur compounds. The three primary sources of odor are manure storage facilities, animal housing, and land application of manure. Other sources can include burning, silage storage, and fertilizer and pesticide applications.

Why is it important?

Odors are mainly a community or individual perception issue; although some odorous compounds can cause health problems when encountered in high concentrations. Greater emphasis on addressing odors is likely to occur in areas that have negative community and individual perceptions of odors, especially in areas with a strong rural/urban interface.

What can be done about it?

Many common practices and management activities can help reduce the likelihood of odor impacts from animal operations. Among them are maintaining appropriate moisture content in and on open lot surfaces and using manure management techniques that minimize, recover, or control emitted gases. Windbreaks can be used to diffuse odor from animal confinement areas, and prescribed grazing can be used to minimize manure accumulation. Prescribed grazing and/or development of biofuels can be used as alternatives to burning excess biomass on rangelands. When rangeland burning is necessary, the development and implementation of prescribed burning and smoke management plans promote an efficient and effective burn.

Odors at a Glance

Problems / Indicators - Manure storage facilities, animal housing, manure and land application	
Causes	Solutions
<ul style="list-style-type: none"> • Confined animal areas • Manure application • Burning 	<ul style="list-style-type: none"> • Moisture management to control dust and odors associated with livestock confinement areas • Manure injection for land application • Managing manure applications to reduce odor impacts • Manure treatments to control ammonia • Prescribed burning management • Windbreaks