

Socratic Seminar

Air pollution from farms leads to 17,900 U.S. deaths per year, study finds

A study published in 2021 reveals the devastating deaths caused by air pollution from food production and agriculture. The scientists used advanced, new air quality models to estimate the number of air-quality related deaths from agriculture. 80 percent of deaths from farm related pollution is from animal agriculture, mainly from emissions from animals such as hogs. The emissions specifically come from manure and animal feed gases, which are able to carry lung-irritating particles over long distances. With new air-quality technology, scientists are able to assert the negative impact of air pollution is dependent on atmospheric chemistry, the water, as well as the size and health of neighboring communities to these farms. One of the most concerning forms of air pollution produced from farms is particulate matter (PM) 2.5, which are tiny enough to get into the lungs and even the bloodstream. Additionally, “secondary” particulate matter occurs when farm emissions interact with atmospheric gases and can be even more troublesome than particulate matter. One example of these gases is ammonia, which contributes to 12,400 deaths per year. While efforts have been made to better understand and mitigate the agricultural industry’s emissions, it can be difficult to regulate such a large and important industry.

Questions to think about

- 1) Are you surprised that representatives from groups like the National Pork Producers Council disagree with the findings of the study?
- 2) What are some of the ways that deaths related to air pollution from agriculture could be reduced?

References:

Link to an article about the study in the Washington Post:

<https://www.washingtonpost.com/climate-environment/2021/05/10/farm-pollution-deaths/>

Link to the study published in the Proceedings of the National Academy of Sciences:

<https://www.pnas.org/doi/full/10.1073/pnas.2013637118>