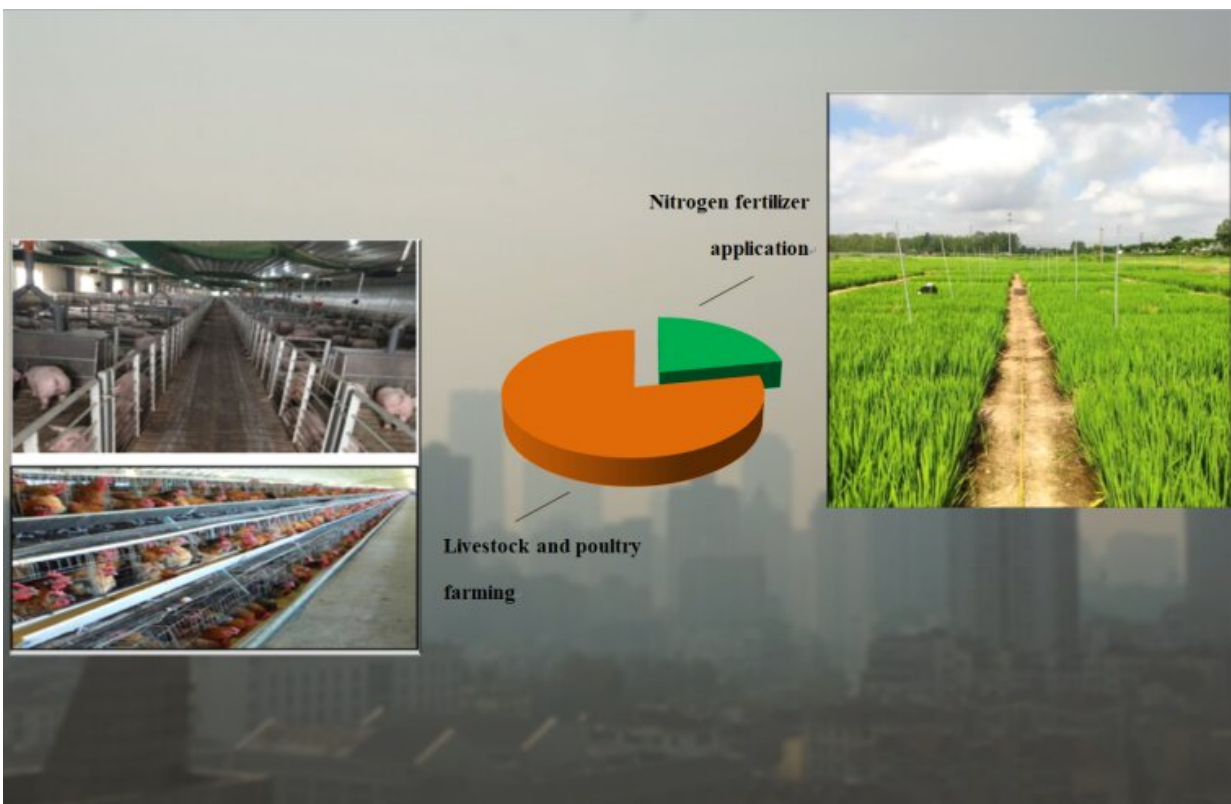


# Livestock and poultry farming should be the future focus of agricultural ammonia emissions control

April 13 2020



Livestock and poultry farming is the largest contributor to agricultural ammonia emissions. Credit: Jiayu Huang

As the only alkaline gas in the atmosphere, ammonia can react with

sulfur dioxide and nitrogen oxides to form secondary fine particles, accelerating the generation of atmospheric haze. Ammonia is therefore considered as a catalyst and accelerator for the widespread haze pollution problem in China. In the past decade, China has made great progress in the prevention and control of atmospheric sulfur dioxide and nitrogen oxide pollution, but little has been done in terms of ammonia emissions control.

Compiling an emissions inventory is an important basis for ammonia control. Although there are some existing global or national emission inventories, they are not very applicable to regional-scale ammonia emission reduction policies due to the lack of specific regional information. Professor Weishou Shen's research group at Nanjing University of Information Science and Technology (NUIST) investigated ammonia emissions from agriculture in Jiangsu Province from 2000 to 2017 based on the emissions factor method, and the findings have been published in *Atmospheric and Oceanic Science Letters*.

"Jiangsu is where our research team is based, and it happens that this province ranks first in ammonia emissions from agriculture in key areas of national air pollution control in China," explains Shen. "We therefore feel it's our duty to investigate the characteristics and trend of change of ammonia emissions from agriculture here."

The team selected five regional representative [nitrogen](#) fertilizers and four typical livestock types and calculated their corresponding emission factors to investigate the characteristics and trends of agricultural ammonia emissions in Jiangsu from 2000 to 2017. They found that ammonia emissions from [agriculture](#) were mainly contributed by livestock and poultry farming (78.08%) and nitrogen fertilizer application (21.92%), and presented a fluctuating interannual trend during the study period.

"We suggest that ammonia emissions control from livestock and poultry farming should be a future focus of agricultural [ammonia](#) control," concludes Shen.

**More information:** Jiayu Huang et al, Estimation of interannual trends of ammonia emissions from agriculture in Jiangsu Province from 2000 to 2017, *Atmospheric and Oceanic Science Letters* (2020). [DOI: 10.1080/16742834.2020.1736499](#)

Provided by Chinese Academy of Sciences

Citation: Livestock and poultry farming should be the future focus of agricultural ammonia emissions control (2020, April 13) retrieved 26 April 2024 from <https://phys.org/news/2020-04-livestock-poultry-farming-future-focus.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.