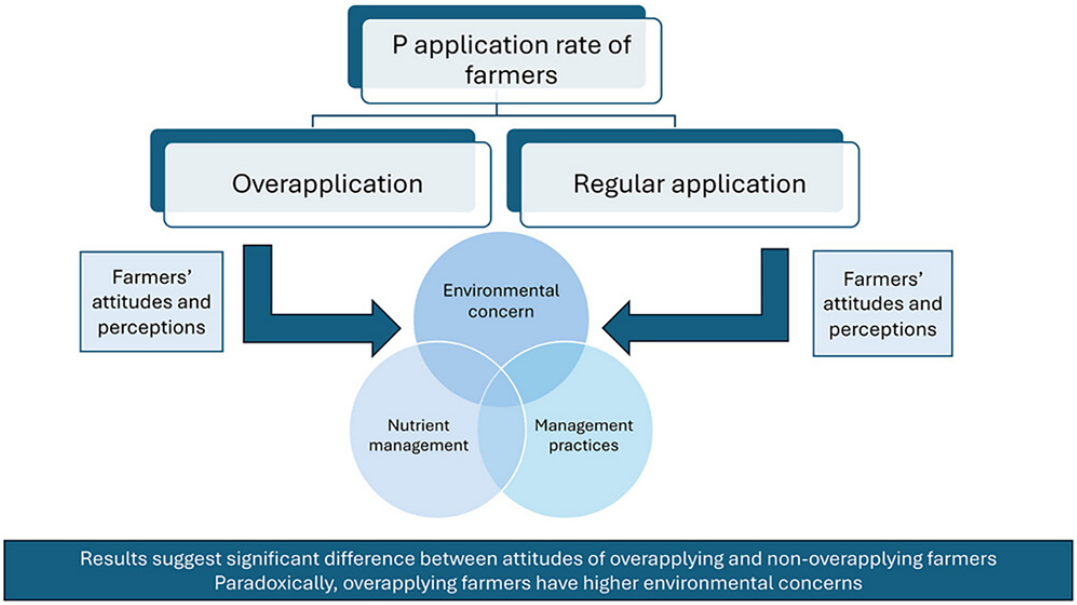
Science Societies

Farmer perceptions are important for phosphorus fertilizer management

August 4, 2025



Farmers' concerns surrounding the environmental impact of their fertilizers often conflict with their actual application rates. This study in Agricultural & Environmental Letters highlights a need for better communication of phosphorus fertilizer guidelines. Image courtesy of Michigan State University.

Fertilizers can improve crop yields, but applying more than what crops need can harm water quality and decrease profitability.

Farmers' perceptions and attitudes affect their management decisions, yet there is limited understanding of how these attitudes relate to phosphorus fertilizer use. To address this gap, a team from Michigan State University conducted a survey of 1,650 Michigan corn farmers focused on phosphorus management.

The results show that about 30% applied more phosphorus fertilizer than recommended for crop growth. Interestingly, these farmers also expressed greater concern about the environmental impacts of fertilizer runoff. Many were open to changing their management practices but had not received information on how phosphorus fertilizer affects crop yields.

The findings highlight opportunities to improve both farm profitability and environmental outcomes through better information sharing. Trusted sources like agricultural consultants, soil-testing labs, and university extension programs can play a key role in better informing growers on best practices. These findings are relevant for policymakers, academics, and farmers interested in better management of phosphorus fertilizer and improving environmental outcomes.

Dig deeper

Sarkar, S., Lupi, F., & Basso, B. (2025). Phosphorus application rates and farmers' perceptions of environmental concerns. *Agricultural & Environmental Letters*, *10*, e70014. https://doi.org/10.1002/ael2.7001