Farmers may soon use drones to battle herbicide-resistant weeds

Remote sensing provides an alternative to ground-based manual scouting for weeds in agriculture fields. And, while many advances have been made, many are still needed in the area of weed detection and differentiation, according to Texas A&M AgriLife researchers.

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The team spent the past four years utilizing remote-sensing technology for weed detection and management.

"We are excited about the potential for remote sensing to facilitate precise and timely data collection regarding weeds, which can help producers and crop advisors make appropriate management decisions," [said Muthu Bagavathiannan, a Texas A&M AgriLife Research weed scientist]. "We believe its inclusion in an integrated weed management approach can help optimize herbicide use and, perhaps, address some of the herbicide-resistant weed issues we currently face."

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Their paper outlines what they have learned and what technological advances they believe still need to be made to make the system more reliable and efficient.

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"Perhaps our biggest challenge is the need to establish a framework for information synthesis and robust decision-support capabilities that account for uncertainty and risk," Bagavathiannan said. "With respect to weed characterization, we require precise identification and mapping of a weed species embedded within a mixture of other weed or crop species."

Read full, original article: More advanced remote-sensing technology needed for weed detection, management