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What if AI could help farmers detect crop stress earlier and guide timely responses?

A multidisciplinary Purdue team is taking important first steps toward this vision through a [Defense Advanced Research Projects Agency \(DARPA\)](#) Ag x BTO award for SignAI, a system that combines advanced sensing, bio-inspired generative AI, and farmer-in-the-loop feedback to explore new ways of monitoring and improving crop performance.

The goal: develop an AI approach that can interpret subtle crop signals and translate them into practical insights for farmers. This work aims to connect cutting-edge research with real-world decisions that support productivity, sustainability, and resilience.

Led by [Christopher Brinton](#) (Electrical and Computer Engineering) with [James Krogmeier](#) (Electrical and Computer Engineering), [David Love](#) (Electrical and Computer Engineering), [Lia Stanciu](#) (Materials Engineering), [Christian D. Cruz](#) (Botany and Plant Pathology), [Mohit Verma](#) (Agricultural & Biological Engineering), and [Yaguang Zhang](#) (Agricultural & Biological Engineering), this collaboration highlights how interdisciplinary engineering can advance solutions for biosecurity and agricultural innovation.

We're excited to see where this journey leads. Congratulations to the team on this [Defense Advanced Research Projects Agency \(DARPA\)](#) award!

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Congrats on the award. 🎉

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Thanks **Dharmendra!** 😊

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