K-State weed scientist named Fulbright Specialist

Jugulam will share her research on weed resistance in India

By Pat Melgares, K-State Research and Extension news service

MANHATTAN, Kan. – A Kansas State University agronomy professor whose work has helped farmers understand the mechanisms of herbicide resistance in weeds has been named a Fulbright Specialist by the U.S. Department of State.

Weed scientist Mithila Jugulam will share her work this summer at Tamil Nadu Agricultural University in India, a country that is experiencing a spike in weed resistance to herbicides.

“The use of herbicides for weed management is increasing in India and several cases of weed resistance to herbicides have been reported,” Jugulam said. “However, the expertise in weed molecular biology and mechanisms of herbicide resistance is limited in that country.”

Jugulam will teach a short course titled, “Physiology and Molecular Biology of Herbicide Resistance in Plants.” She said in addition to general knowledge for students, the course will help researchers develop and characterize herbicide-resistant crops, such as rice, one of the major crops in Tamil Nadu.

At K-State, Jugulam and her research team have uncovered novel mechanisms of weed resistance to herbicides in such major weeds as Palmer amaranth, kochia and common waterhemp.

“However, recent findings of metabolic resistance to multiple herbicides in these weed species pose a great challenge for managing these weeds,” she said, including concerns that such weed populations are prone to evolving resistance to yet-to-be-released herbicides.
“There is more work needed to understand the basis of metabolic resistance in weeds,” Jugulam said.

The U.S. Fulbright program supports more than 400 citizens each year who share their expertise with institutions abroad. The Fulbright program operates in more than 160 countries. Since it was established in 1946, the Fulbright program has provided support for more than 400,000 citizens to share their work abroad.

Jugulam, who has been at K-State since 2011, has published more than 100 scholarly articles and received past international acclaim for her work in weed resistance.

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FOR PRINT PUBLICATIONS: Links used in this story
K-State Department of Agronomy, https://www.agronomy.k-state.edu
Fulbright program, https://eca.state.gov/fulbright

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