

Research Experiences in Preparation for an Academic Position in Horticulture

Science and Mathematics

Colloquium Series

Wed., April 1, 3 p.m.

Zoom Link: <https://asu.zoom.us/j/507645643>

The persisting drought conditions in the southwestern U.S. are limiting water allocated for landscape systems. Increasing the water use efficiency and replacing the irrigation source with lower quality water sources are common practices in landscape management.

Turfgrass is a common part of landscapes and, like other plants, can be affected by diseases. Zoysiagrass is a warm-season turfgrass commonly used in landscapes in the southern U.S. and the transition zone in the central U.S. The most common disease on zoysiagrass is large patch, caused by *Rhizoctonia solani*. Fungicides are often very useful for large patch management; however, their use in the landscapes can be limited due to cost, labor availability, and other application restrictions. Research at K-State helped to identify zoysiagrass genotypes with large patch tolerance.

Homeowners often prefer cool-season grasses in lawns in the Midwest because they retain green color most of the year. However, cool-season grasses require more water. Research was done to evaluate techniques to improve the color of zoysiagrass used in the landscape by mixing with a cool-season grass. Ultimately, this improved overall quality and disease resistance of the sward.

Dr. Xiang will present information on all these areas and also discuss future research plans, which will focus on sustainable horticulture with the aim of reducing water, pesticide, and fertilizer inputs in landscape systems.



Mingying Xiang

Postdoctoral Research Associate

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Dr. Mingying Xiang is a postdoctoral scholar from the University of California, Riverside, and her research focuses on water conservation and salinity management in turfgrass and other landscape systems.

She received a PhD in horticulture from Kansas State University. In Kansas, her research focused on reducing turfgrass management inputs. She also led a collaborative study with researchers from nine other universities to evaluate unique zoysiagrass genotypes for disease resistance. Before joining Kansas State University, she worked on salinity tolerance of turfgrass during her MS in horticulture at Oklahoma State University.

Faculty and practitioners discuss their current research and field projects in the Science and Mathematics Colloquium Series, held throughout the academic year at ASU's Polytechnic campus. All seminars are free and open to the public.