AGRONOMY SEMINAR SERIES

FALL 2025

DECEMBER 8, 2025

1:30 P.M. LILY 2-425

Attend virtually via Zoom

Seminar links will be posted at: purdue.ag/agryseminars

Lisa Ainsworth is the Charles Adlai Ewing Chair of Crop Physiology in the Department of Crop Sciences and the Department of Plant Biology. She received her BS in Biology at UCLA, PhD in Crop Sciences from the University of Illinois, and was an Alexander von Humboldt Postdoctoral Research Fellow in Germany. Her research addresses crop responses to climate change and tests potential solutions for mitigation of climate change through agriculture. She studies photosynthetic responses of plants to changes in atmospheric composition, and her research is broadly integrative, from genetic to agronomic scales. Lisa has been an editor for seven peer reviewed journals, held leadership positions in the American Society of Plant Biologists, the American Association for the Advancement of Sciences, and serves on Science Advisory Board for Nestle, the Board of Directors for the Charles Valentine Riley Memorial Foundation and the Donald Danforth Plant Science Center. She is a fellow of the American Association of the Advancement of Sciences, was awarded the National Academy of Sciences Prize in Food and Agricultural Sciences in 2019, and was an elected member of the National Academy of Sciences in 2020.

DR. LISA AINSWORTH

CHARLES ADLAI EWING CHAIR OF CROP PHYSIOLOGY
DEPARTMENT OF CROP SCIENCES & DEPARTMENT OF PLANT BIOLOGY
UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

HOST: DR. JIANXIN MA

Optimizing soybean canopies for improved photosynthesis in current and future atmospheres

Modern soybean varieties have very high leaf area index (LAI), which could divert resources from reproductive growth and yield. Altering leaf shape could be a simple strategy to reduce LAI and improve light penetration through canopies. We developed near-isogenic soybean lines differing in leaf morphology by introgressing narrow-leaf alleles into an elite, broad-leaf cultivar. This talk will describe our experiments to phenotype these lines using drone and satellite imagery and our experiments in ambient and elevated carbon dioxide concentrations. Our studies have identified a tractable strategy for reducing LAI and maintaining high productivity in current and future atmospheres. This could reduce the metabolic costs associated with excessive canopy development and support sustainable soybean production under increasing climate variability.

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