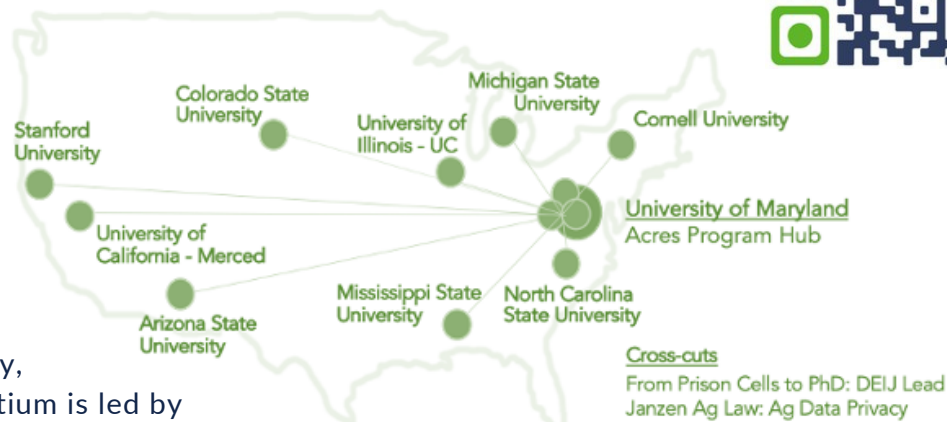# Acres

OUR MISSION

NASA Acres brings the value of Earth observation (EO) technology down to Earth. We bridge the gap from space-to-farm and education-to-impact together with U.S. farmers, ranchers, and other agrifood system decision makers who are charged with addressing the most pressing challenges to sustainable, productive, and resilient agriculture, both today and into the next generation.

LEARN MORE

ABOUT NASA ACRES

NASA Acres is NASA's U.S.-focused agriculture and food security Consortium of more than 25 top-of-the field scientists and practitioners in agricultural remote sensing, artificial intelligence, soil science, specialty crop, row crop, rangeland agronomy, sociology, economics, and data policy. The Consortium is led by the University of Maryland with Research, Development, and Extension Partners at nine other universities and two supporting private organizations.

Stanford University
Colorado State University
Michigan State University
University of Illinois - UC
Cornell University
University of California - Merced
Arizona State University
Mississippi State University
North Carolina State University

University of Maryland
Acres Program Hub

Cross-cuts
From Prison Cells to PhD: DEIJ Lead
Janzen Ag Law: Ag Data Privacy

OUR VISION

- Richer knowledge about past and present agricultural land use, productivity, and sustainability in the U.S.
- More tools that use satellite-based Earth observations in the hands of farmers, ranchers, and other agrifood system actors
- A stronger agricultural technology workforce ready to tackle the challenges of climate change and global hazards to U.S. agriculture and food security

"WE WANT FARMERS TO KNOW THAT THEIR SPACE AGENCY HAS AN AGRICULTURE PROGRAM THAT IS FOCUSED ON UNDERSTANDING THEIR NEEDS AND FINDING SOLUTIONS WITH THEM."
Bradley Doorn, Program Manager, NASA Water Resources and Agriculture

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THE NASA ACRES APPROACH

Collaboration underpins our work at every stage of design and execution because those closest to their communities know best what is needed and are the key partners to develop sustained impact. We are building a Consortium where all are encouraged to bring their best selves to work to build a more diverse, equitable, and inclusive workplace and world.

NASA ACRES APPLICATION AREAS

- Develop Essential Agricultural Variables (EAVs)
- Evaluate the outcomes and impacts of agronomic management practices
- Develop and test decision-support tools (DSTs)

LEARN MORE & FOLLOW ALONG

ESSENTIAL AGRICULTURAL VARIABLES

- Within-Season Yield Forecasting
- Historical Yield Estimation
- Cropland & Crop Type Mapping
- Crop Area Estimation
- Crop Planting & Harvest Dates

- Field Boundaries & Sizes
- Cover Crop Utilization & Performance
- Crop Residue & Tillage Mapping
- Canopy Nitrogen Content

- Rangeland Productivity & Utilization
- Pest & Disease Mapping
- Soil Organic Carbon & Other Metrics of Soil Health
- Evapotranspiration

TOGETHER WE WORK TO DEVELOP USER-DRIVEN, FIT-FOR-PURPOSE EARTH OBSERVATION PRODUCTS, TOOLS, AND APPLICATIONS TO EMPOWER U.S. AGRICULTURE TO BE MORE SUSTAINABLE, PRODUCTIVE, AND RESILIENT.

GET INVOLVED

NASA Acres welcomes participation in several ways:

1. **Research, Development, & Extension Partners:** organizations and individuals who receive funding or substantial in-kind support from NASA Acres to carry out defined projects
2. **Collaborating Partners:** those who participate in-kind sharing of data, imagery, time, knowledge, networks, or other non-cash or non-material goods or services
3. **Sustaining Partners:** organizations or individuals who contribute funding or substantial non-cash resources that support the core work of NASA Acres' activities and operations

Reach out to learn how to join the NASA Acres network!