



2024-2025 agInnovation Priorities

Enhance Funding for Agricultural Research:

- Advocate for increased appropriations for USDA-NIFA to boost capacity program funding.
- Engage relevant federal funding agencies and organizations to diversify and expand the competitive research funding portfolio.

Address Critical Infrastructure Needs:

- Identify and implement both short- and long-term funding strategies.
- Provide guidance on the Research Facilities Act implementation to meet the infrastructure needs of colleges of agriculture at Land-grant universities.

Promote Diversity, Equity, and Inclusion:

- Integrate diversity, equity, and inclusion as fundamental components of all agInnovation activities and programs.

Lead in Environmental and Sustainability Solutions:

- Emphasize agInnovation's role in discovering solutions to climate change, water resilience, and sustainable food systems through continuous research and activities.

Strengthen Collaborative Partnerships:

- Enhance partnerships and engagement within the Land-grant University community and with federal agencies, industry, and foundations to support collaborative initiatives.

Increase Organizational Visibility and Impact:

- Strategically enhance external communications, marketing, brand recognition, and public relations efforts to elevate the visibility and impact of the organization.

2024-2025 Chair's Initiatives

1. Finalize and implement the stakeholder-informed agInnovation Research Roadmap.
 - Complete the agInnovation Research Roadmap document and deploy Research Roadmap implementation strategies.
 - Strengthen strategic partnerships with federal agencies, foundations, NGOs, and corporate partners by building on previous efforts to engage traditional and non-traditional entities.
2. Create a formal framework to facilitate research collaborations among 1862, 1890, and 1994 Land-grant universities.
 - Use the multistate project portfolio as a tool to facilitate research collaborations across the Land-grant system, institutionalizing relationships among all LGUs.
 - Develop topic areas that would bring researchers together to form multistate projects that incorporate indigenous knowledge with scale-appropriate technologies to serve small, resource-limited farms.
3. Massively accelerate the development and release of important food crops.
 - Agriculture is a solution to address climate change, sustainability, and global food security. Rapid environmental changes demand accelerated genetic enhancement of plants and animals using existing and emerging technologies to strengthen food security, nutritional quality, and sustainability by adapting to local environments.
 - The goal is to develop a unified national initiative to integrate, automate, and multiplex current and emerging technologies into platforms and pipelines for deployment across important agricultural commodities.

2024-2025 Chair's Initiative #1

Finalize and implement the stakeholder-informed agInnovation Research Roadmap.

- Complete the agInnovation Research Roadmap document and deploy Research Roadmap implementation strategies.
- Strengthen strategic partnerships with federal agencies, foundations, NGOs, and corporate partners by building on previous efforts to engage traditional and non-traditional entities.

Roadmap Document Completion. Feedback from key internal (within BAA) and external partners and stakeholders on the draft roadmap will continue to be collected and analyzed by the agInnovation Research Roadmap Working Group through November to further refine the three roadmap pillars and to contribute to the implementation plan. The roadmap document will be completed in early 2025. The implementation plan with the following elements is intended to ensure oversight, transparency, and accountability as we achieve our goals.

Continued Partnership Engagement. Strategic engagement with a diverse range of stakeholders has been essential in developing the agInnovation Research Roadmap. Stakeholder input will continue to shape the roadmap as we move toward its completion. During the implementation phase, we will have a continued focus on building partnerships, particularly with federal agencies, foundations, NGOs, corporate partners, and other key entities. Building on our past and current engagement efforts, we will bring together potential partners and advocates through action-oriented agInnovation sponsored events like roundtables and small forums.

Strategic Communications. To effectively communicate the research roadmap, a communications strategist will be engaged to lead the development and execution of a communication plan. This strategist will coordinate strategy workshops, secure stakeholder buy-in, and identify key spokespeople. Their responsibilities could include crafting and distributing press releases and op-eds, conducting focus groups to refine messaging, and establishing a standardized communication approach for consistent and impactful messaging across all platforms.

The strategist will also facilitate collaboration among LGU communicators from different institutions to ensure alignment. A clear process and timeline for communication efforts will be developed, with specific milestones for message development and audience engagement. Additionally, the effectiveness of these strategies will be regularly measured, ensuring transparency and accountability in reporting outcomes. This approach will ensure all communication efforts are well-coordinated and effectively support the research roadmap.

agInnovation Standing Committees. The standing committees of agInnovation will play important roles during the implementation phase. The Budget and Legislative Committee (BLC) is charged with developing a funding strategy aligned with the roadmap priorities. BLC will provide input on securing appropriations and legislative support, justifying increased funding, targeting budget lines, aligning with agency priorities, and liaising with LBA, BAC and CLP. The Science and Technology Committee (STC) is charged with developing metrics for roadmap activities and action plans to focus research initiatives for each pillar area. STC will provide input to requests from federal and other funding organizations on national science direction and priorities that align with the roadmap.

As roadmap priorities are funded, agInnovation will engage an external evaluator to comprehensively assess our progress, communicate it effectively, and evaluate further funding needs. The evaluator will collaborate with BLC and STC to, for example, establish measurement plans, monitor success, validate outcomes with baseline data, and determine reporting frequency.

2024-2025 Chair's Initiative #2

Create a formal framework to facilitate research collaborations among 1862, 1890, and 1994 Land-grant universities.

- Use the multistate project portfolio as a tool to facilitate research collaborations across the Land-grant system, institutionalizing relationships among all LGUs.
- Develop topic areas that would bring researchers together to form multistate projects that would incorporate indigenous knowledge with scale-appropriate technologies to serve small, resource-limited farms.

The Land-grant University system, encompassing 1862, 1890, and 1994 institutions, addresses diverse stakeholder issues. These universities uniquely integrate education, research, and Extension, fostering innovation in agriculture, natural resources, sustainability, and socio-economic development. By collaborating with a broad range of communities and stakeholders, they provide tailored solutions to urban and rural challenges. Their diverse approaches are designed to ensure inclusive, impactful outcomes, reinforcing the pivotal role of the Land-grant universities in advancing societal progress.

However, developing collaborations among our Land-grant institutions presents challenges. Our institutions differ in historical missions, funding structures, and stakeholder priorities. Coordination requires overcoming disparities in resources, expertise, and regional focus. Ensuring equitable participation and addressing unique community needs can be complex. Fostering collaboration while respecting each institution's distinct identity demands careful navigation of institutional cultures and bureaucratic hurdles. Despite these challenges, unified efforts can yield innovative solutions and robust, inclusive outcomes.

The goal of this initiative is to create a formal framework to facilitate research collaborations among 1862, 1890, and 1994 Land-grant universities. The initiative builds on previous work within our system. In 2016, leaders met in Jackson Hole, Wyoming to explore opportunities for 1994/1862 collaborations, including piloting a multistate research platform. In 2023, a meeting of the Association for 1890 Research Directors (ARD) and the Southern Association of Agricultural Experiment Station Directors resulted in four key take-aways: 1. create positive interactions, 2. establish joint collaborations, 3. develop joint outreach and communications programs, and 4. ensure administrative structures support research collaboration. This work will be further informed by an ongoing study of *“Research Collaborations that Work”* among 1862 and 1890 colleges of agriculture. The initiative expands this ongoing work to fully engage the 1994 universities, representing the entire Land-grant university system.

The initiative proposes to use the multistate project portfolio as a tool to facilitate research collaborations across the Land-grant system, institutionalizing research relationships among all Land-grant universities. To do this we propose to develop (10) topic areas that would bring researchers together to form viable multistate projects, incorporating indigenous knowledge with scale-appropriate technologies to serve small, resource-limited farms. We will engage USDA NIFA, as the capacity programs funding agency, to determine appropriate structures for the collaborative (multistate) projects in this novel context, pursue conference grants to engage the system broadly in developing projects, and advocate for fellows and mentorship programs to build human capacity throughout the system.

2024-2025 Chair's Initiative #3

Massively accelerate the development and release of important food crops.

- Agriculture is a solution to address climate change, sustainability, and global food security. Rapid environmental changes demand accelerated genetic enhancement of plants and animals using existing and emerging technologies to strengthen food security, nutritional quality, and sustainability by adapting to local environments.
- The goal is to develop a unified national initiative to integrate, automate, and multiplex current and emerging technologies into platforms and pipelines for deployment across important agricultural commodities.

Agriculture is at the nexus of climate change, sustainability, human nutrition (including protein, both animal and non-animal), feeding the world population, geopolitics, drought, soil fertility, yield, efficiency, chemical residue, and more. With the accelerating rate of environmental degradation and climate change effects, particularly in the major agricultural regions of the world, a transformative approach to accelerating genetic enhancement is imperative. The good news is that this is an achievable goal that will substantially mitigate negative trends. Additionally, the technologies required to meet multiple goals for food security, human nutrition and health, environmental impact, and sustainability, all exist today.

Even with the incorporation of improved breeding technologies, genetic improvement for the world's most critical crops is currently too slow given the urgent needs. For any individual crop breeding program, perhaps 2-4 traits are being simultaneously selected, with new varieties being released every 5-10 years. The traits being bred for primarily focus on yield, disease resistance, and drought tolerance. However, many other vital traits, including nutrition, flavor, low inputs, sustainability, carbon capture and reduced release, microbial and pollinator associations, and traits that significantly impact human health beyond nutrition remain aspirational due to the complexity of juggling multiple traits in a single breeding program. All the necessary technologies exist to accelerate improved variety development while vastly increasing the number of traits incorporated simultaneously. To achieve this, a concerted national effort to integrate, automate, and multiplex all technologies is required, alongside the development and integration of new and emerging technologies.

Precision farming on the best land with the most well-adapted genetics is a key tenet guiding this initiative. Developing platform technologies for multiplexing complex traits and reducing the generation time for new cultivar development will incorporate the full range of plant breeding/improvement methods, combined with analytics, sensing, and autonomous technologies. Technology platforms and pipelines will be deployed across a wide range of important food crops with multiple societal benefits.

This initiative is envisioned as a national, multiagency collaboration. Potential partners include USDA NIFA, NSF, NIH, EPA, DARPA, DOE, and DOD, and others such as ARS and NRCS. Given the broad scope of this effort and its potential to enhance agriculture globally, it is likely to attract significant interest from major philanthropic funders such as Novo Nordisk Foundation, Bill & Melinda Gates Foundation, Bezos Earth Fund, among others.

This initiative aligns with the core pillars and cross-cutting goals of the 'outcomes-driven' AgInnovation Research Roadmap and the BAC Decadal Vision by crafting an action plan that fosters strategic partnerships and focuses on targeted investments to shape the future of agriculture.