

Research Excellence

Achieving the AgResearch Mission

Seeking Excellence: Introduction

The ultimate goal of the University of Tennessee Institute of Agriculture is to excel in fulfilling the land-grant mission that sets it apart from other institutions within Tennessee and across the nation. Within that framework, our goal as UTIA AgResearch is to use our resources effectively to deliver service for the public good through solutions to problems facing agricultural producers and businesses, natural resource managers and industries, and the public.

Achieving this goal begins with a clear, shared vision of the AgResearch values and mission, the services we excel at providing, and the resources we need to provide those services. We recruit and retain highly qualified and passionate faculty and staff who embrace AgResearch's core values and mission, and we provide the environment and resources to enable their successes. We develop a clear understanding of the contributions AgResearch is uniquely positioned to deliver, and we maintain a sharp focus on providing those services to our clients. Our long-term success is linked directly to the ability of our exceptionally skilled and highly valued faculty and staff to deliver these unique contributions, establishing a valuable AgResearch "brand" for our clients. Building that brand as a result of tangible, relevant, objective results and an emotional connection ensures that our clients believe not only in our commitment but in our capacity to deliver. To this end, we rely on high-quality objective science, political skill, public support, personal relationships and an emotional connection with all those who need our programs.

We envision that this document may ultimately serve as the framework for assessment of AgResearch productivity, allowing us (faculty and administrators) to determine our standing in relation to our personal target of research excellence, the path we must take to achieve that goal, and the progress we are making toward that end. Each of us has a unique combination of talents, research area(s), potential clientele and corporate responsibilities, which will be reflected in the indicators (see below) that demonstrate AgResearch excellence. This document does not supplant Section 3.8 (Faculty Review and Evaluation) of the UT Faculty Handbook nor corresponding bylaws, but rather provides a framework on which to base such evaluations.

This document is primarily intended to serve as a set of guiding principles for how we achieve the AgResearch mission. It describes the successful mission **outcomes**, the **elements** critical to achieving those outcomes, and **indicators** we can use to determine our success in incorporating those elements. This document is divided into two general sections, describing respectively the essential commitments of faculty and administration to research excellence. With a program outline clearly in focus, we can be certain of our success in enhancing the lives of Tennesseans and others in the world, raising our stature as a public land-grant institution, increasing our competitiveness, and enhancing UTIA AgResearch's importance and reputation.

Excellence Defined: Key Outcomes for Research, Critical Components and Indicators for AgResearch Faculty

AgResearch is successful when we, as a collective, achieve the three key **outcomes** listed in this document. An excellent individual research program will similarly achieve each of these **outcomes**, incorporating all of its associated **elements** (A, B, C, etc. below), as demonstrated by one or more of the listed indicators (bulleted items). These **indicators** are in first-person form to emphasize that only with the personal commitment of every AgResearch team member will we achieve our mission.

Outcome 1. We achieve sustained, superior short- and long-term scientific research performance.

As an AgResearch faculty member, I ensure that my research program contains each of the following five **elements**, as demonstrated by one or more of the listed **indicators**:

A. I have a unique, independent research program based on high-quality, state-of-the-art science.

- *My research team (students, postdocs, research associates, etc.) and I produce peer-reviewed publications, and I can show a measure of their impact, though that measure may vary by discipline and individual.*
- *Where appropriate, I develop, protect and extend my intellectual property into the commercial sector.*

B. My program has peer recognition at the state, regional, national and/or international levels.

- *My research team and I play significant roles in professional societies, regional research groups, etc., including leadership, organizational and peer review responsibilities.*
- *I provide invited service in international research activities.*
- *I serve on institutional and/or proposal review panels.*
- *My graduate students and postdocs are successful in obtaining significant positions.*

C. My program evolves to address changing or emerging scientific needs and issues.

- *My program has ongoing linkage to priority needs as established by recognized state, regional, national or international groups or organizations.*

- *My program has support from end-user communities (industry, field professionals, etc.) or citizen groups to address critical issues.*
- *I seek professional development opportunities (from seminars to sabbaticals) that advance my knowledge of my field of study and of new opportunities.*

D. Scientific, agency or end-user communities support my program with their resources.

- *My program is supported by funding from the scientific community through competitive grants.*
- *My program is supported by directed funding from government agencies, end-user communities, alumni or citizen groups.*

E. I provide collaborative support for the high-quality science programs of colleagues and peers, within or outside my discipline and the institute.

- *I play a significant supportive role in peer-reviewed publications resulting from my collaboration.*
- *I actively participate in seeking support for that work from the scientific community and others.*
- *I support colleagues' programs through service on graduate committees and other roles.*



Outcome 2. We engage and maintain a satisfied and loyal clientele.

As an AgResearch faculty member, I ensure that my program contains each of the following two **elements**, as demonstrated by one or more of the listed **indicators**:

A. My research program addresses the needs of—and is linked to—a significant state, regional, national or international end-user community.

- My program addresses the expressed needs of a significant state, regional, national or international end-user community.
- My program supports an active Extension and/or teaching program.
- My program is supported by directed funding from agencies, end-user communities or citizen groups to address specific questions.

B. I actively provide mechanisms for knowledge or technology transfer to the end-user community.

- I provide wide access to my science through publications including books, conference proceedings, abstracts and the full range of clientele-base publications.
- My research supports an active Extension and/or teaching program in the area.
- I participate in the development of portfolios, fact sheets, public media releases, recommendations, etc.
- I participate in the development and support of software, Web pages and other electronic distributions of my science.
- I participate in direct presentation of my work to end-user communities through field days, commodity meetings, etc.

Outcome 3. We attain a culture of highly engaged and loyal faculty, staff and students with a passion for high performance.

As an AgResearch faculty member, I ensure that my program contains each of the following three **elements**, as demonstrated by one or more of the listed **indicators**:

A. I support other faculty members in their programs.

- I participate in a supporting role in the research programs of others, including material support, time, equipment, etc.
- I support an active Extension and/or teaching program in my area of expertise.

B. I include other faculty members in support of my program.

- I incorporate other faculty members in my research program as appropriate.
- I support an active Extension and/or teaching program in the area.

C. I actively support the education of graduate and undergraduate students through involvement in research.

- I am active in advising graduate students or serving on graduate committees.
- I provide opportunities for undergraduate research.

D. I help build and maintain the infrastructure required for a successful department and institute.

- I provide mentorship and support to junior faculty.
- I actively serve on core long-term committees, groups, etc.
- I participate fully in the hiring, tenure and promotion process.
- I serve on short-term ad hoc groups to meet special needs.
- I take part in special public outreach events.
- I participate in a professional manner as a good citizen in the daily life of the department and institute.
- I seek professional development opportunities that allow me to better carry out service roles within my department and the institute.

In summary, a faculty member with an excellent research program in a land-grant institution demonstrably performs independent high-quality research (**outcome 1**) that ultimately addresses meaningful problems (**outcome 2**) while being a good citizen and team member (**outcome 3**), as displayed by one or more **indicators** for every **element** within each **outcome**.

Excellence Enabled: Key Outcomes for Research, Critical Components and Indicators for AgResearch Administration

Achieving AgResearch's mission requires not only the commitment of faculty members to the excellence of their research programs, but also active participation of the AgResearch administration in achieving each of the key **outcomes**. What follows is a description of administration's role in enabling the excellence of faculty programs, again detailed in terms of each of the three **outcomes** by incorporating all of its associated **elements**, as demonstrated by one or more of the listed **indicators** (bulleted items). These criteria are in first-person form to emphasize that only with the personal commitment of every AgResearch administrator will we achieve our mission.

Outcome 1. We achieve sustained, superior short- and long-term scientific research performance.

As an AgResearch administrator, I enable high-quality research by providing each of the following five **elements**, as demonstrated by the listed **indicators**:

A. I provide the best possible facilities and services, including:

- Sound office infrastructure with trained, dedicated support staff.
- Access to state-of-the-art technology and associated support.
- Grants and contracts development and management support.

B. I provide the best possible research resources, including:

- Expertise, land, animal and equipment resources at the AgResearch and Education Centers.
- Support in the form of laboratories, major instrumentation, graduate students, postdocs, technical staff, publication fees, etc., with special support for new faculty and for those evolving new, promising research directions.
- Stabilizing fill-in support for shared research resources, including instrumentation, technical staff, etc.
- Assistance in developing intellectual property.

C. I work to provide support that actively fosters new outstanding research by:

- Actively helping faculty identify new research opportunities and directions commensurate with their competence and expertise.
- Assisting researchers in identifying new and ongoing funding opportunities.
- Working directly with scientific funding agencies and other groups to determine their needs, point out direct connections to AgResearch programs, and request funding.
- Interacting with local, state and federal agencies and elected officials to seek support for ongoing or new research programs.

D. I help faculty achieve their full potential through professional development activities, including:

- Helping identify needs for training and development.
- Supporting professional development opportunities (from seminars to sabbaticals), especially for faculty members interested in evolving their research direction.
- Presenting or supporting participation in workshops and training activities, especially those designed to provide new skills.
- Providing development and training opportunities for graduate students, postdocs and technical staff.

E. I provide and support opportunities for scientific collaboration through:

- Actively seeking to establish contacts between complementary researchers.
- Providing special support to collaborative efforts within AgResearch and the university.



Outcome 2. We engage and maintain a satisfied and loyal clientele.

As an AgResearch administrator, I ensure strong linkages to significant clientele groups by providing each of the following two **elements**, as demonstrated by the listed **indicators**:

- A. I establish and nurture linkages with potential clientele groups and extend those to include the faculty by:**
- *Serving a liaison role with clientele groups, meeting regularly with them, understanding their needs, involving faculty in meeting those needs, and requesting support for those efforts.*
 - *Establishing similar contacts with advocacy and citizen groups.*
 - *Supporting faculty participation in field days and similar researcher-clientele interactions.*
 - *Pursuing and nurturing development opportunities to support centers, research programs, endowed chairs or other long-term support.*
 - *Supporting joint efforts of research, Extension and teaching faculty.*
- B. I provide mechanisms for faculty to disseminate knowledge or technology to the end-user community by:**
- *Seeking opportunities for faculty to “tell their story” to non-technical clientele, and providing the expertise and technology to present technical information to a non-technical audience in the most attractive and informative way.*
 - *Supporting efforts to translate research results and activities into the university’s undergraduate educational programs.*
 - *Supporting research faculty efforts in the production of Extension publications and other clientele-based forms of communication.*



Outcome 3. We attain a culture of highly engaged and loyal faculty, staff and students with a passion for high performance.

As an AgResearch administrator, I ensure a culture of respect, loyalty and commitment by providing each of the following four **elements**, as demonstrated by the listed **indicators**:

A. I acknowledge recruiting, hiring and retaining excellent faculty and staff as a top priority.

- I provide the resources necessary to examine the best possible candidate pool.
- I insist on consideration of all three mission outcomes (research excellence, addressing meaningful clientele issues, good citizenship) in judging a faculty candidate.
- I support continued searching if an excellent candidate is not found.

B. I recognize both improvement and excellence.

- I strive to provide faculty financial compensation commensurate with their contributions to the three outcomes of the AgResearch mission.
- I provide additional awards and recognition for exemplary service of all types.
- I actively seek out and support nomination of the faculty for national and international awards.

C. I actively support the education of graduate and undergraduate students through involvement in research.

- I support graduate assistantships and development activities for graduate students.
- I provide support for undergraduate research and encourage faculty to provide such opportunities.

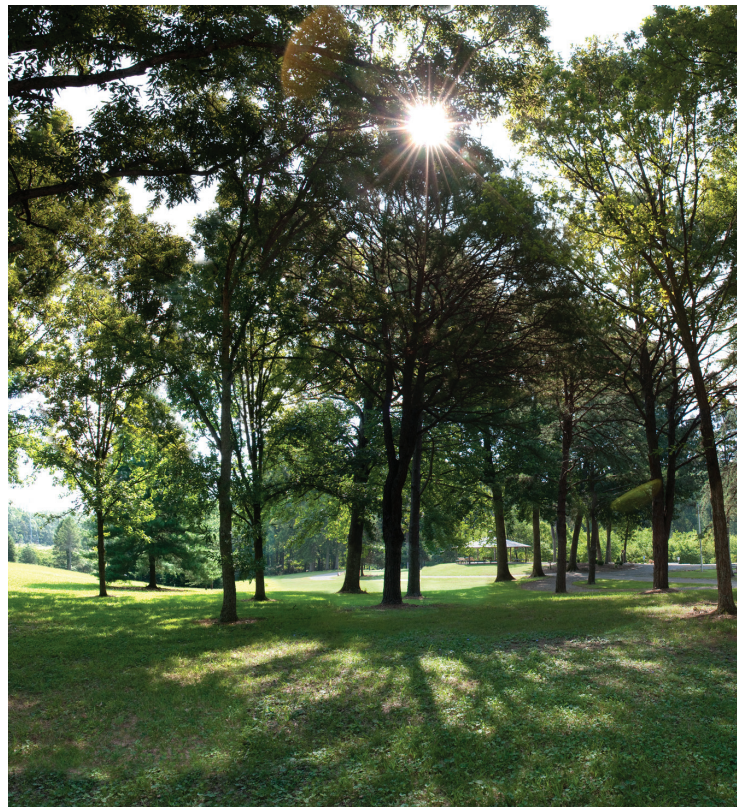
D. I actively include faculty members in decisions regarding AgResearch mission, directions and faculty issues.

- I take very seriously the counsel of advisory councils and other formal and ad hoc groups.
- I informally seek feedback from a diverse range of faculty members on the current status and future directions of our efforts.

E. I provide mission-driven departmental leadership.

- I acknowledge and support the importance of all three outcomes.
- I foster senior faculty leadership and involve those faculty members in significant decisions.
- I provide timely information on the status of shared resources and ensure that those are distributed transparently.
- I insist on respect and professionalism among all departmental personnel.
- I protect the faculty from unreasonable bureaucratic demands and obstacles.
- I provide a trained and cooperative staff to maximize faculty efficiency.

In summary, an excellent research administration program in a land-grant institution demonstrably supports independent high-quality research (**outcome 1**) and builds linkages to and support from the broadest possible clientele (**outcome 2**), while creating an environment that rewards and maximizes contributions to the mission (**outcome 3**) as displayed by one or more **indicators** of each **element** within each of the **outcomes**.



Excellence Displayed: The Importance of Quantifiable Measures

Relevant for individual research and administrative programs, the aforementioned indicators provide measures of both productivity and quality. They also serve as tools for faculty members and AgResearch administrators to gauge themselves relative to their past performance and to their peers, answering questions such as: Am I improving? Am I competitive in the field? Is AgResearch making progress? Identifying measures of research productivity and administrative effectiveness and tracking their progress also facilitates benchmarking UTIA AgResearch relative to peer units at other institutions, helping us understand AgResearch's strengths and weaknesses while justifying requests for additional support.

The land-grant research mission conceived in the 1800s continues to evolve, both shaping the research mission and being shaped by it. The trends in our measures can therefore be vital in understanding and foreseeing that evolution. For example, a declining measure associated with a specific aspect of an individual research or administrative program may indicate that it should aim in a new direction to meet evolving needs. Today's issue is to accurately view current challenges and especially to anticipate future challenges, so that our research can address those. Specific quantifiable measures should be useful to both researcher and administrator in understanding our effectiveness in addressing the challenges, the breadth and depth of our impact, and ultimately whether we are fulfilling our mission of meeting the needs of current and future clients.

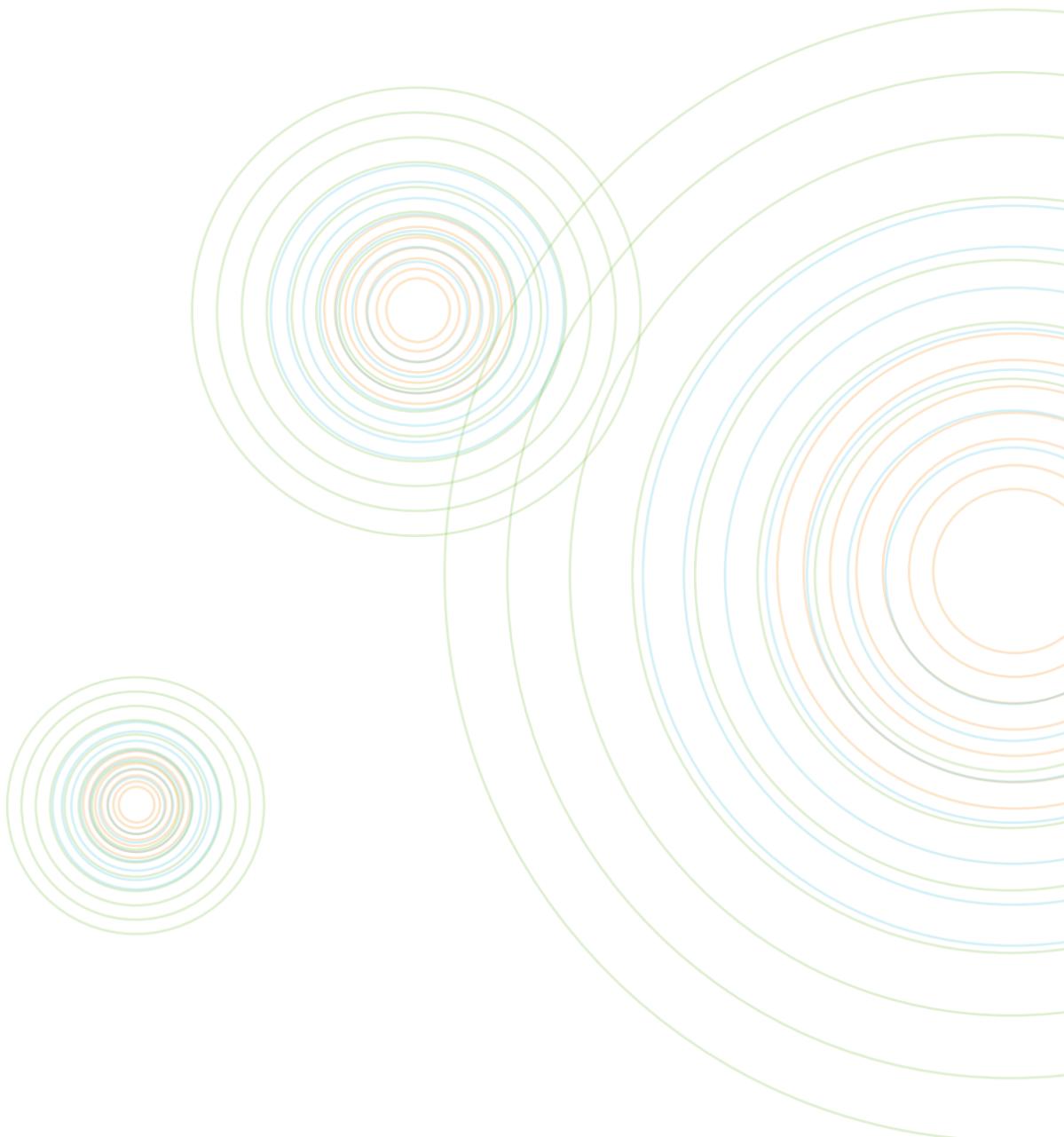


Excellence Achieved: Summary

It is not difficult to define the AgResearch mission in general and rather philosophical terms, as in the introduction of this document. What is more difficult is to gauge our success at achieving that mission. Only through such gauging can we celebrate our strengths and address our weaknesses. The purpose of this document is to establish an ideal target based on the **outcomes** required to demonstrate that we have achieved our mission, the necessary **elements** that must be in place to reach each of those **outcomes**, and some **indicators** that demonstrate each **element**.

With this ideal target in place and using appropriate individualized quantifiable measures, we can individually and as a group determine where we are successful and where we are falling short or missing the mark. Such frank assessment is essential not to drive rewards and punishments, but to enable us as individuals and jointly as AgResearch to reach our potential and as fully as possible achieve our mission.





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