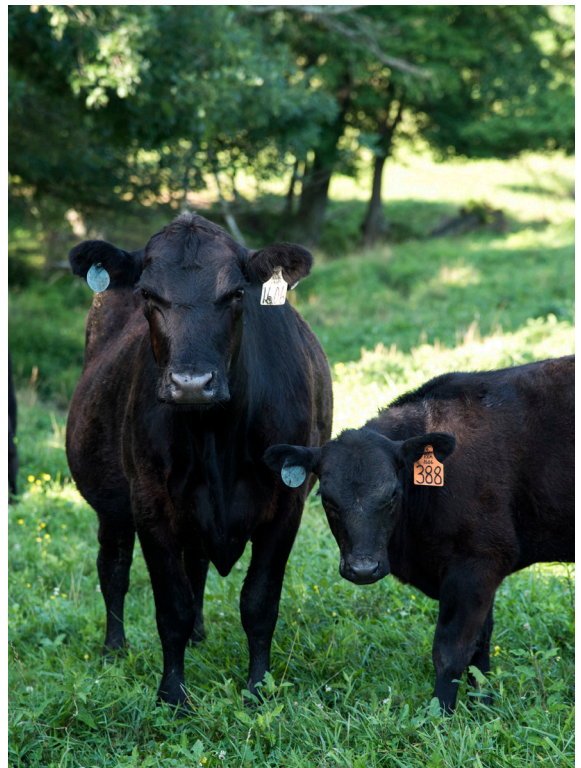
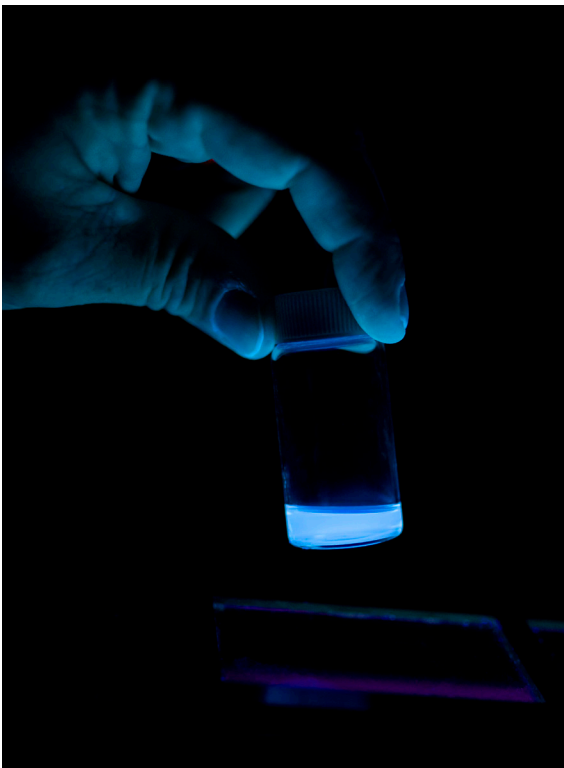




ENHANCING EXCELLENCE

AgRESEARCH STRATEGIC ACTION PLAN, 2021-2024





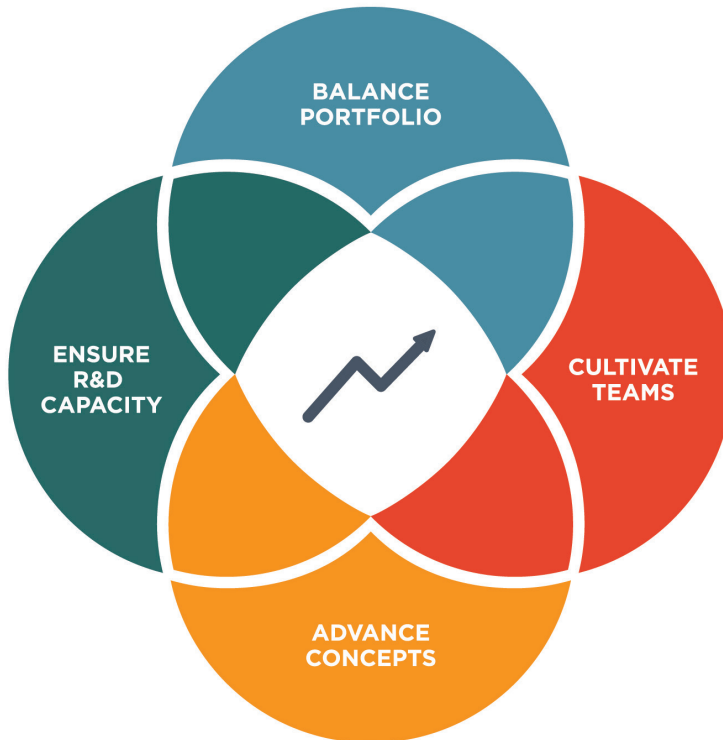
ENHANCING EXCELLENCE

AgResearch Strategic Action Plan, 2021-2024

The ten-year strategic plan for the University of Tennessee Institute of Agriculture outlines a plan for the Institute's next decade of excellence. It incorporates five major priorities:

- Supporting food, fiber, and energy systems
- Enhancing biodiversity and environmental quality
- Enriching our economy
- Developing our workforce
- Strengthening our health

UT AgResearch is committed to supporting these priorities. Throughout 2020, a dedicated and engaged committee of faculty and staff representing all of the departments and research and education centers—as well as UTIA research consortia—developed this three-year strategic **action** plan to guide us as we work to achieve the Institute's overarching goals of



driving innovation, expanding real life learning, strengthening and diversifying resources, and improving Institute effectiveness. The committee outlined four specific objectives that will drive UT AgResearch efforts:

BALANCE PORTFOLIO

Increase impacts with tightly integrated, multidisciplinary research and development programs that contribute solutions to the complex challenges confronting society.

ENSURE RESEARCH AND DEVELOPMENT CAPACITY

Strengthen our capability to address research problems with targeted investment in instrumentation, equipment, and scientists' skills.

CULTIVATE TEAMS

Enhance the culture of team research that fosters collaboration and creative problem solving.

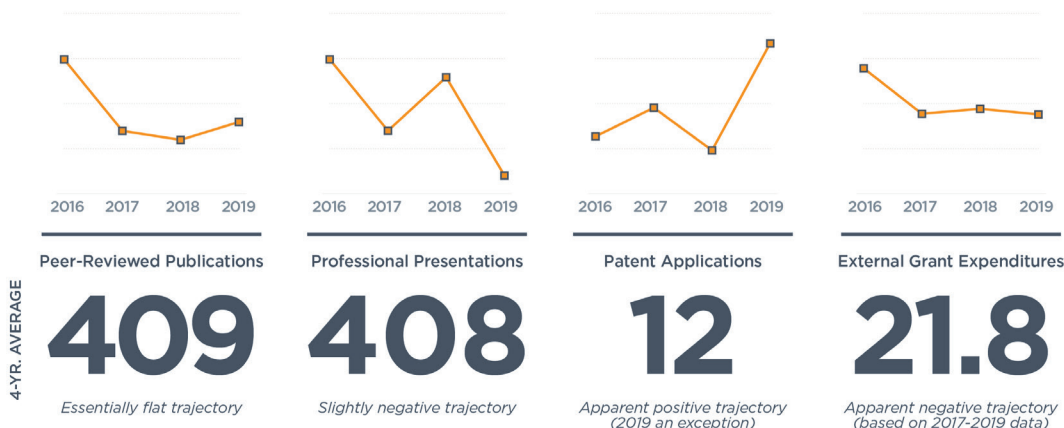
ADVANCE CONCEPTS

Introduce internal processes that encourage the advancement of broad, innovative research and development themes with targeted support.

The goals are lofty. The plan, ambitious. Our success will improve the quality of life of all Tennesseans and others throughout the region and beyond.

ASAP THREE-YEAR GOALS

-  Increase peer-reviewed publications to **490**
-  Invest **\$1M+** in research capacity
-  Increase external research expenditures to **\$24M**
-  Establish **2** effective new team initiatives
-  Submit **4** initiative-driven proposals (approx. \$1M+ ea.)



PATH TO SUCCESS

Before we chart our path to success, we must establish our starting point. Some metrics are easy to measure and help us establish goals that we strive for in three years. The starting metrics for UT AgResearch revealed 409 peer-reviewed publications; 408 professional presentations; 12 patent applications; and \$21.8 million external grant expenditures. If we hope to meet the UTIA ten-year goals, then our target by 2024 is to increase our peer-reviewed publications to 490; professional presentations to 489; patent applications to 13; and external grant expenditures to \$24.0 million. Also, to increase the impact of our work, we need to increase the academic degrees (master's and Ph.D.) awarded from the Herbert College of Agriculture and our departments.

Several objectives were established to help achieve UTIA's performance goals. We focus on ensuring UT AgResearch can provide the needed capacity for research and development. We identify and advance research foci and promising new concepts, including ASAP Strategic Planning Research Initiatives (SPRINT) projects. We support faculty as they seek grants and opportunities from a balanced portfolio of sources (government agencies, public-private partnerships, and more), and, by no means least important, we cultivate teams of researchers that can share the ideas, tools, and technologies needed to advance UT AgResearch while better serving society. This action would include seeking opportunities with research partners across all of UT Knoxville, Oak Ridge National Laboratory (ORNL), and beyond.



ONE HEALTH INITIATIVE



DIGITAL AGRICULTURE



AGRICULTURE GENOMICS/SYNBIO



BIOECONOMY ADVANCEMENT



THE NEXT BIG THING

ESTABLISHED ROUTES AND NEW DESTINATIONS

Key to advancing our research goals is to continue to focus efforts on topics and initiatives we have already defined among our research strengths: **One Health, Digital Agriculture, Agriculture Genomics and Synthetic Biology**, and **BioEconomy Advancement**. UT AgResearch scientists should strive to submit at least **four initiative-driven proposals** (at an award amount of \$1 million+ each).

As we advance our established initiatives, we also should look to the future. UT AgResearch is committed to supporting new faculty initiatives, with a goal of four new team initiatives in place by 2024 through an ASAP SPRINT program. This new program will include a targeted investment of approximately \$1 million in research capacity, progressing through several stages of development. The faculty-driven process

will initially involve development of broad, programmatic concepts for review and selection of five to six projects for support. The six-month period that follows will be used to solidify each research team and build out a research proposal for a second, intensive panel review of the science and potential for sustainable growth. Significant investment will be directed to one to two of the concepts to gather vital preliminary data, establish a collaborative record for the team, and further refine the proposal and business model. The ultimate goal of this recurring program is to form tightly integrated, cohesive, multidisciplinary groups of researchers who are driven to advance solutions to complex challenges in agriculture and natural resources.



SOLICIT CONCEPTS (5-6 weeks)

Request for application (RFA) targeting emerging issues requiring multidisciplinary, integrated research and extension teams.



ESTABLISH TEAMS (6 months)

Select 5-6 programs for Phase 2 based on alignment with expectations outlined in the RFA. Provides funds to solidify team and develop proposals (for external evaluation).



BUILD OUT PROGRAM (24 months)

Select 1-2 programs for Phase 3 based on review of preliminary proposals. Provides funds for graduate research assistant (GRA) and supplies for supporting data. Deliverables include manuscripts and at least 2 grant applications.



REVIEW & IMPLEMENT (TBD)

Select new, integrated program for continued growth and focused investment by AgResearch, including support for external funding. Assess resource gaps and limiting barriers.

ASAP SPRINT PROGRAM: PHASE 1

- *Well-defined program scope* (external proposal budget of \$1 million+ each)
- *Multidisciplinary team with integrated plan of work*
- *Emphasis on emerging issues*

ASAP SPRINT PROGRAM: PHASE 2

- *Plan for integrated work*
- *Clearly communicated expectations of the team*
- *Summary of investment needs and resource gaps*
- *Refined identification of sources of funding*

MAPPING THE ROUTE

To guide us throughout this strategic action plan, UT AgResearch has established a Faculty Innovation Council that will work in concert with a strategic action plan program director. The council will collect input on priorities from faculty or programs they represent, and serve as a “think tank” for the AgResearch Leadership Team by identifying and discussing emerging science/trends as well as perceived gaps in proposed efforts. The council will elect officers, and members will serve limited, staggered terms. Together with the Faculty Innovation Council, the strategic action plan program director will:

- Monitor and summarize progress.
- Coordinate reporting.
- Track communication activities.
- Finalize integrated project plans with an implementation team.
- Schedule regular programs with stakeholders (updates to UTIA leadership, department heads, faculty) to highlight progress and receive feedback.
- Initiate lunch-and-learn sessions to foster interaction between faculty with competitive grant success and junior faculty.
- Explore new methods to foster a culture of “team research” at UTIA.

Susan Schexnayder, a senior research associate in the Department of Forestry, Wildlife and Fisheries, has been appointed as the program director for the new strategic action plan, and members of the Faculty Innovation Council (and their terms of service) include:

- **Jamie Greig**, Department of Agricultural Leadership, Education and Communications (1 year)
- **Chris Boyer**, Department of Agricultural and Resource Economics (3 years)
- **Phil Myer**, Department of Animal Science (2 years)
- **Jenn DeBryun**, Department of Biosystems Engineering and Soil Science (2 years)
- **Meg Staton**, Department of Entomology and Plant Pathology (2 years)
- **John Munafo**, Department of Food Science (1 year)
- **Niki Labbé**, Department of Forestry, Wildlife and Fisheries (3 years)
- **Neal Stewart**, Department of Plant Sciences (3 years)
- **Dave Ader**, Smith Center (1 year)

ASAP COMMITTEE

T.G. Rials, Chair



Nour Abdoulmoumine,
Department of
Biosystems Engineering
and Soil Science



Dave Ader,
Smith Center



Chris Boyer,
Department of Agricultural
and Resource Economics



Feng Chen,
Department of
Plant Sciences



David Harper,
Center for
Renewable Carbon



Don Hodges,
Department of Forestry,
Wildlife and Fisheries



Justin McKinney,
Northeast Tennessee
AgResearch and
Education Center



John Munafo,
Department of
Food Science



Liesel Schneider,
Department of
Animal Science



Carrie Stephens,
Department of Agricultural
Leadership, Education and
Communications



Jennifer Tsuruda,
Department of Entomology and
Plant Pathology



Edward Yu,
Department of Agricultural
and Resource Economics

Serena Matsunaga, Facilitator

J. McCord, Project Manager

A NOTE OF THANKS

A committee of engaged faculty, staff, and administrators began work on this plan in April 2020 and contributed long hours to its development. UT AgResearch and the people of the state and region will long benefit from their efforts. Their time and commitment is greatly appreciated.



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