

GRAND CHALLENGES IN FOOD & AGRICULTURAL RESEARCH:

Addressing crucial issues through our Land-grant Universities and Agricultural Experiment Stations

Borne out of the **Hatch Act of 1887** and the **Evans-Allen Act of 1977**, the United States' Land-grant Universities (LGUs) and their partnered Agricultural Experiment Stations (AES) are supported programmatically by USDA NIFA (National Institute of Food and Agriculture). These premier institutions operate on the forefront of basic and applied research, education, and outreach (Extension), thus sustaining our critical agricultural and natural resource systems – safe, secure and nutritious food, clean drinking water, sustainable and productive forest and range resources, fuel to power the nation, healthy families and communities, national security, equitable trade and jobs that support a prosperous economy in rural and urban settings. Our innovation and discovery was built upon and evolves through collaborations and partnerships across federal, regional, state, and private organizations. This national research enterprise is governed by ESCOP (Experiment Station Committee on Organization and Policy), a unit of APLU (Association of Public & Land-grant Universities). Our **Grand Challenges** strategically reflect future activities and aspirations across local, state, regional, national and global scales reflected in the following focal areas (see this ESCOP series).

KEY RESOURCES

Our preeminent agricultural research institutions, the Land-grant colleges and universities, exist across the nation, located in all 50 states, Puerto Rico, and several of the territorial islands in the Pacific Basin (see map on back page). Some key resources include:

- Local state and county entities significantly match federal funds, thus supplying people, buildings, equipment, and student opportunities to address our **Grand Challenges**.
- Main campus-based resources and additional time-tested networks of research centers, stations, farms, and cooperative locations are key for on-site research and outreach.
- Our regional associations (see back page) provide additional leadership and management to facilitate collaborations, cooperation, and partnerships.

KEY CHALLENGES

Land-grant institutions and their component missions -- research, education and Extension, have dramatically changed over time in response to technologies, efficiencies, finances, needs and demands, such that they individually are more distinctive in their mission and focus.

Thus, the opportunity to collaborate, partner, engage and integrate across a multitude of needs and entities has never been more appropriate and, in many cases, necessary.

Communicating a problem and developing a common understanding and interest will lead to quality leveraging across public and private sector resources, leading to advancement of knowledge and development of solutions to critical issues.

EXPECTED OUTCOMES/IMPACTS

The physical, chemical and biological environment, coupled with evolving human aspirations and needs, is constantly changing. This creates new questions and challenges for an engaged research community. The discovery of new information and innovations to address our **Grand Challenges** must result in tangible and quantifiable outcomes and impacts that justifies the public and private investments. Ultimately, this will advance and strengthen our global community.



Experiment Station Committee
on Organization and Policy
(ESCOP)

Learn more about ESCOP at <http://escop.info/> and explore the impacts of our Land-grant research at <https://www.mrfimpacts.org/> and <https://landgrantimpacts.tamu.edu/>.

1862 and 1890 Land-grant Colleges and Universities



Regional Research Associations

All Agricultural Experiment Station Directors also belong to a regional association that supports multistate collaborations and strategic focus significant to geography. These regional associations are comprised of the Association of 1890 Research Directors (ARD, www.umes.edu/ard), North Central Association of Agricultural Experiment Station Directors (NCRA, www.ncra-saes.org), Northeast Regional Association (NERA, www.nerasaes.org), Southern Association of Agricultural Experiment Station Directors (SAAESD, www.saaesd.org), and Western Association of Agricultural Experiment Station Directors (www.waaesd.org).



ARD



NCRA



NERA



SAAESD



WAAESD



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