The Association of Public and Land-grant Universities’ (APLU) Board on Agriculture Assembly and National Association of State Departments of Agriculture (NASDA) recognize the critical role of U.S. public colleges of agriculture in developing and deploying practical applications for agricultural technologies, supply chain innovations, and a reliable pipeline for the domestic agricultural workforce. However, a report outlines the dire need for modernization of land-grant university research, teaching, and Extension infrastructure. In fact, 70% of the universities’ agriculture research facilities are at the end of their useful life, requiring a minimum of $11.5 billion to renovate these antiquated and crumbling facilities.

Public colleges of agriculture perform 70% of U.S. agricultural research and development (R&D). While these institutions face infrastructure challenges, China is seizing the opportunity to invest twice as much in public agriculture R&D as the U.S. The cost of inaction is an increased risk to our nation’s global agriculture leadership.

Public universities have a proven success record, with a return of $20 to the economy for every public dollar invested. National benefits include:

- Drought resistant, nutrient dense, disease-and-pest resistant, and water-efficient crops.
- Farming practices that streamline automation for sustaining healthy and fertile soil.
- Technologies and practices that ensure safety and quality of meat and produce.
- Early childhood development interventions that reinforce positive life-long development.
- Increasingly healthy communities that foster economic growth and development.
Current State Of Agricultural Research Facilities

Research, teaching, and Extension facilities should closely emulate industry standards. However, the following features of current facilities compromise student and faculty retention, research success, and demonstration and adoption of American innovation in agriculture. These issues ultimately delay innovation and foundational research critical to the agriculture sector stakeholder:

- Unreliable equipment, building roofs, fume hoods, septic/sewage.
- Failing building heating, ventilation, and air conditioning (HVAC) systems.
- Outdated bio- or research-oriented facilities and equipment.

A Future With Investment In Agricultural Research Facilities at Public Universities

U.S. leadership in agricultural innovation depends on an acceleration of cutting-edge science that provides the next generation of scientists with industry relevant experiences and reflect the need for public demonstrations of new technology. The Research Facilities Act (RFA) will allow for various improvements, including:

- **Crop facilities** that regulate temperature and humidity, utilize modern technology, and can safely perform pathogen and biological research with proper containment.
- **Livestock production and processing, and veterinary facilities** that enable innovative industry-relevant research.
- **Human health and nutrition facilities** devoted research, teaching and engagement that mitigates chronic diseases and enhances human and community health and well-being.
- **Forestry and wood products facilities** to modernize the timber and paper processing industries.

Our nation requires facility updates that add versatility, engagement opportunities, synchronous, and hands-on instructional spaces. These new facilities will attract and cultivate the best talent to the agricultural sciences, accelerate scientific leaps, foster the adoption of American innovation, and create opportunities for the U.S. to strengthen its global leadership.

ENDNOTES

3. USDA ERS - Chart Detail