ENHANCING RESEARCH CAPACITY AND INCREASING RETURN ON INVESTMENT

Benefit to Texans
An investment in upgrading facilities and technology will allow Texas A&M AgriLife Research and our partners to better address public needs, and to increase our ability to engage in new research opportunities to promote regional and state economic development. Support for this exceptional item will enhance the national and international reputation of Texas for using cutting-edge technology to find life-changing solutions. The approximately 500 doctoral scientists employed by AgriLife Research generate about $1.50 in external funding for every $1 invested by the state. They also facilitate the development of new research partnerships across government agencies, foundations, and corporations. State investment will allow AgriLife Research to attract, train, and retain top scientists from across the United States and throughout the world. This investment will also enhance the state’s scientific workforce by developing an increased number of graduate students. This initiative supports the state’s goals of furthering the research, development, and application of knowledge through enhanced programmatic impact and will yield significant economic returns through increased leveraging of external funding for research.

Description and Justification
Texas A&M AgriLife Research facilities, equipment, and human capital are critical components of the agency’s ability to serve the citizens of Texas in agriculture, natural resources, and the life sciences. An investment in our capabilities to conduct cutting-edge research will increase our acquisition of external funds, enhance our programmatic impacts for consumers and producers, and help us attract and retain the best personnel.
This request for resources (which the agency will match on a one-to-one basis, with non-state funds) will also significantly increase our ability to attract and train graduate students at Texas universities.

To advance our current research endeavors, AgriLife Research needs the capability to upgrade laboratory space and access state-of-the-art instrumentation and equipment. State funding for this exceptional item will help us to:

- Increase our ability to attract and retain top-quality scientists, graduate students, and staff
- Modernize the agency’s facilities, especially those at AgriLife Research and Extension Centers across Texas, which were built approximately 40 years ago and need significant upgrades. This includes utility systems that do not allow experimental isolation or precise measurements of chemical and/or biological parameters
- Acquire state-of-the-art equipment to allow our scientists to expand research and development programs by using advanced technologies across economically important research areas, including:
  - animal, plant, and microbe physiology, biochemistry, and genetics
  - DNA or marker-assisted genetic selection
  - chemical and biological analyses of air, water, and waste constituents
  - specialty and bioenergy crop development
  - microbial and viral disease research in both plants and animals
- Recruit qualified graduate students, visiting scientists, and postdoctoral fellows who will significantly enhance our research and commercialization efforts
- Increase the capabilities and capacities across priority research and development programs that will yield improvements to help farmers and ranchers produce higher quality products with fewer inputs and less impact on the environment

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