

Penn State College of Agricultural Sciences

AGRICULTURAL RESEARCH AND EXTENSION FUNDING

Building Resilience Through Research

Scientific research and new technologies drive our economy, address our most challenging issues, and improve our lives. The Penn State College of Agricultural Sciences—as part of

Pennsylvania’s sole land-grant institution—and with a Penn State Extension presence in each of the state’s 67 counties—puts knowledge and education to work for Pennsylvania.

College Funding from All Sources

The College of Agricultural Sciences relies on the land-grant partnership between federal, state, and county governments for its agricultural research and statewide extension educational programs. These programs drive progress by translating scientific research into real-world applications. They are not supported by undergraduate tuition or state-appropriated general education dollars.

The **State Ag Research and extension** funding segments represent Pennsylvania’s investment in agriculture and the food and fiber sectors. This state support allows us to leverage other sources of revenue for Pennsylvania, such as federal formula funding and competitive grants. Without these funds, extension would cease to exist, and the college’s research capacity would be greatly diminished.

The University **State Education/Tuition** portion funds undergraduate/graduate education in the college. State appropriations represent approximately 13 percent of this funding.

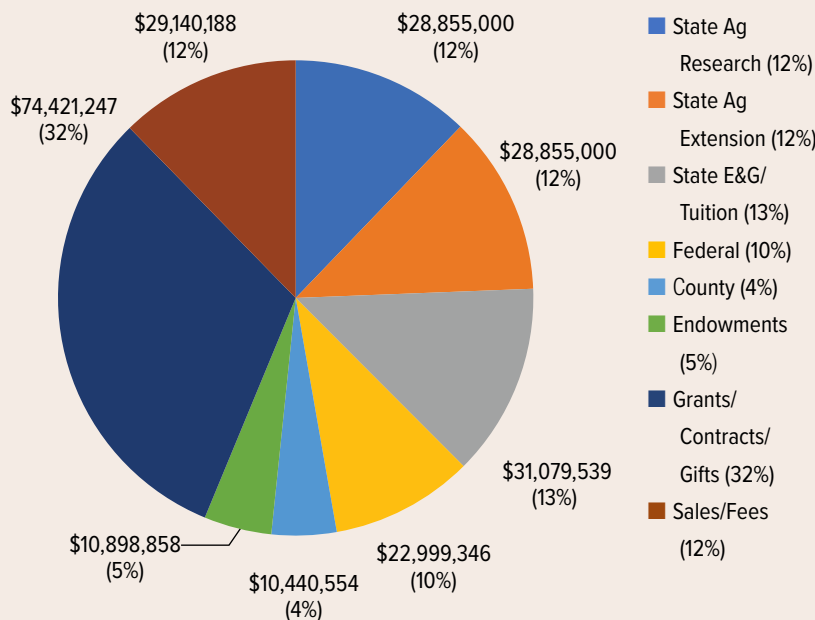
The **Federal** segment comprises the federal land-grant formula funding for both research and extension, which by law mandates matching appropriations. State research and extension appropriations are used almost exclusively to cover this required offset. Without state funding, these federal funds would disappear.

The **County** segment reflects the financial commitment the counties make to extension. Counties have traditionally provided local office facilities, administrative support staffing, some program position funding, and general office operational funding.

Researchers and educators funded by state, federal, and county appropriations secure grant funding more than the entire state contribution. The current year’s budget shows a projected level of over \$74 million in **Grants/Contracts/Gifts**. These funds, mainly from federal sources, are coming to Pennsylvania to solve problems and create jobs.

These investments reap huge dividends for the state, both in direct dollars leveraged from other sources (resulting in more than \$100 million) and economic impacts from research and extension programs that support agriculture, create, and retain jobs, and drive economic growth.

FY2022–2023 Total Sources:
\$236,689,732



COLLEGE OF AGRICULTURAL SCIENCES AGRICULTURAL RESEARCH AND EXTENSION PROGRAMS

The 2023-24 budget plan proposes a 5% increase of \$2.89 million in the Land Scrip Fund, which represents the Commonwealth's investment in the Agricultural Research and Penn State Extension programs in support of Pennsylvania agriculture and rural communities. The

college is also seeking an additional \$2 million for an Emerging and Advanced Technology Initiative to enhance the competitiveness and profitability of Pennsylvania agriculture through emerging technology applications specifically targeted for agricultural uses.

Select Program Priorities

HIGHLY PATHOGENIC AVIAN INFLUENZA (HPAI) AND OTHER INVASIVES

An ongoing and critical priority is addressing invasive threats as they emerge and working with state and federal governments to deploy experts when confronted with challenges such as the spotted lanternfly and highly pathogenic avian influenza. Responding to outbreaks of HPAI in Pennsylvania in 2022, the college participated on the PA HPAI Task Force and served as emergency responders, providing research and expertise related to biosecurity, surveillance, diagnosis, depopulation, disposal, and issues relevant to small/backyard flocks. As of 11/17/2022, 4.4M birds were affected in Pennsylvania.

CLIMATE-SMART FOOD SUPPLY CHAINS AND COMMODITIES:

Agricultural sectors are facing challenges—and opportunities—around climate-driven issues. The college has extensive expertise, research, and outreach programs and has been awarded a USDA grant of \$25 million to help dairy

farmers develop climate-smart commodities, as well as a grant to teach private forest owners how to adapt to climate change and take advantage of carbon markets. The college is also doing research using remote sensor data collection on climate patterns, yields, and inputs to build models that can help producers make informed decisions to improve profitability under changing conditions.

EMERGING TECHNOLOGIES AND AG APPLICATIONS

Emerging technologies—such as virtual and augmented reality, and business blockchain, as well as expanding rural broadband accessibility—create enormous opportunities for agriculture, rural development, and job creation in Pennsylvania. The college is seeking funding to launch an Emerging and Advanced Technology Initiative to focus on agricultural applications and rural development.

WORKFORCE DEVELOPMENT AND STACKABLE CREDENTIALS

Personalized education paths present

unique opportunities for educational institutions, industry sectors, and learners. There is enormous potential for increased online/hybrid short courses, micro credentials, and apprenticeship training programs. Extension is working with industry sectors on employer bulk purchasing options and tracking of specialized employee education for ongoing training and advancement purposes.

CRITICAL INFRASTRUCTURE NEEDS

In 2021, A National Study of Capital Infrastructure at Colleges and Schools of Agriculture, produced by Gordian, noted in 2020 the total deferred maintenance was estimated to be over \$11.5 billion. Between 2015 and 2020 alone, the problem grew by 37%. About 69% of the infrastructure at colleges/schools of agriculture is more than 25 years old. Our college is no exception. Of critical concern is our plant science program. The college is currently working to garner funding to modernize plant research facilities that are critical to attract and retain top researchers and students.

