



Ag Research Grant Program 2023-24 Awardees

Following are grant recipients, amounts, and project descriptions:

Pasa Sustainable Agriculture - Harrisburg and Philadelphia – \$100,000

Advanced Analysis & Reporting for Farm Soil Conservation, Financial Viability, and Nutrient Density – Project aims to continue ongoing benchmark studies to assist Pennsylvania farmers with tools to assess their soil health, set management goals, and track progress toward improving the long-term health of their soil and farm profitability.

Rodale Institute - Kutztown, Berks County – \$500,000

Funding will support the institute's groundbreaking research and training programs in organic and regenerative agriculture.

TeamAg, Inc. - Ephrata, Lancaster County - \$75,000

This project will assist farms with designs and technical assistance to implement climate smart practices that mitigate emissions, make sound decisions on the implementation of solar photovoltaic power systems in grazing areas, and provide additional revenue opportunities.

Think and Grow Farms, LLC. - Philadelphia, Philadelphia County - \$75,000

Developing Markets for Industrial Hemp as an Energy Feedstock – A research project to explore the marketability of secondary processing of hemp hurd (wood stalks) into energy pellets and biochar, two additional products created from the waste of hemp fiber and grain production. The project will measure the ability to generate electricity and capture carbon.

Econsult Solutions, Inc. - Philadelphia, Philadelphia County - \$112,424

A project to study the economic impact of county and local fairs across Pennsylvania to determine the direct, indirect, and induced economic, employment, and income impacts that are supported by these fairs. This research will determine and highlight the importance of local and county fairs for the Commonwealth, including calculated tax revenue.

Daniel Dotterer - Mill Hall, Clinton County - \$60,000.00

The project seeks to integrate Artificial Intelligence (AI) and Augmented Reality (AR) into remote veterinary services, to improve accessibility, efficiency, and health outcomes for production and companion animals while reducing costs, increasing accessibility to veterinary care, and enhancing the quality of life for veterinarians.

The Pennsylvania State University - University Park, Centre County

1. **The Pennsylvania State University Center for Agricultural and Shale Law – \$100,000**
2. **The Pennsylvania State University Agriculture and Environment Center – \$500,000**
3. A project to test the effectiveness of planting hairy vetch and industrial hemp to remediate abandoned coal mine land, sequester carbon, and serve as a potential market commodity for climate-friendly technology practices. - \$127,424
4. To minimize the loss of prime agricultural land, this research project will identify marginal lands across Pennsylvania that could be suitable for solar energy production and determine best management practices for solar farms to implement on those marginal lands that benefit

soil, water, and vegetation. - \$75,000

5. A project to determine the effects of acetylsalicylic acid (ASA; aspirin) during the dry off period of Holstein Dairy cows, approximately 60 days prior to calving. The study will assess the metabolic status, daily milk yield, and clinical health of the animals to better understand the effects of ASA during that period. - \$74,866

University of Pennsylvania – Philadelphia, Philadelphia County

1. Update and redesign a suite of dairy visual analytics to assist dairy producers in making decisions on the feasibility and risk of methane digester construction on dairy farms, updating and reformatting the BaseCow excel program, and incorporating Penn State Extension dairy summaries as benchmark data. - \$44,264
2. A study to determine the effects of utilizing probiotic bacterial isolates on dairy calves from birth to 6 months, and to measure the probiotics effects to minimize methane (CH₄) emissions, improve animal growth, and benefit productive performance through the first year of life. - \$60,376
3. A study to test the hypothesis that specific chemical compounds (IgA and IL-10) in saliva decrease in swine when faced with chronic stress as a novel, noninvasive way to measure the well-being of production animals. - \$28,671
4. A study to investigate three specific possible causes of lameness in finisher pigs through various stages of their life. - \$27,025
5. A study to determine the transmission of antimicrobial resistant genes and organism between animals and people, using fecal samples from humans after taking a course of prophylactic antibiotics for a surgical procedure and their pets to determine if these genes are transmitted from human to animal. - \$37,967
6. A study of dogs trained to detect chronic wasting disease (CWD) on their odor recognition and field detection performance through objective assessment and collected survey characteristics to identify the optimal characteristics for bio-detection dogs. - \$46,777

Temple University – Philadelphia, Philadelphia County

1. Research on the spotted lanternfly (SLF) invasion to produce models and risk maps to better understand how the types of locations, landscape variables, and control methods influence the distribution of SLF, in order to build prediction models that will aid in the control efforts of the invasive insect. - \$75,000
2. A study to analyze the role of invasive plants play in contributing to the high rates of ticks infected with human pathogens, including Lyme disease, to help inform control strategies. - \$60,000