

**4529 - Land-Based Solutions for Agricultural/Municipal/Industrial Waste Disposal**

**Scheduled to Terminate:** 06/30/18

**Department Responsible for Report:** [Agricultural and Biological Engineering](#)

**Investigator(s):**

R. D. Shannon (Leader)

**Other Department(s):**

None

**4547 - Integrated Systems Research and Development in Automation and Sensors for Sustainability of Specialty Crops**

**Scheduled to Terminate:** 09/30/18

**Department Responsible for Report:** [Agricultural and Biological Engineering](#)

**Investigator(s):**

P. H. Heinemann (Leader)

T. A. Baugher

D. Choi

J. Liu

J. R. Schupp

J. R. Schupp

J. R. Schupp

**Other Department(s):**

District 16

Fruit Research and Extension Center

Plant Science

**4561 - The Science and Engineering for a Biobased Industry and Economy**

**Scheduled to Terminate:** 09/30/18

**Department Responsible for Report:** [Agricultural and Biological Engineering](#)

**Investigator(s):**

A. Demirci (Leader)

T. L. Richard

H. M. Salis

P. M. Smith

**Other Department(s):**

None

**4574 - Beneficial Reuse of Residuals and Reclaimed Water: Impact on Soil Ecosystem and Human Health (formerly W2170)**

**Scheduled to Terminate:** 09/30/19

**Department Responsible for Report:** [Agricultural and Biological Engineering](#)

**Investigator(s):**

H. A. Elliott (Leader)

H. E. Gall

R. C. Stehouwer

J. E. Watson

**Other Department(s):**

Ecosystem Science and Management

**4594 - Engineering for Food Safety and Quality**

**Scheduled to Terminate:** 09/30/20

**Department Responsible for Report:** [Food Science](#)

**Investigator(s):**

R. C. Anantheswaran (Leader)

R. C. Anantheswaran

A. Demirci

V. Puri

**Other Department(s):**

Agricultural and Biological Engineering

Agricultural Experiment Station

**4602 - Characterizing, Measuring, and Modeling the Properties of Native and Treated Biological and Biobased Materials for Processing and Novel Materials**

**Scheduled to Terminate:** 06/30/21

**Department Responsible for Report:** [Agricultural and Biological Engineering](#)

**Investigator(s):**

V. M. Puri (Leader)

N. R. Brown

J. M. Catchmark

J. J. Janowiak

J. Liu

J. H. Michael

**Other Department(s):**

None

**4614 - Impacts of Stress Factors on Performance, Health, and Well-Being of Farm Animals (from W2173)**

**Scheduled to Terminate:** 09/30/21

**Department Responsible for Report:** [Agricultural and Biological Engineering](#)

**Investigator(s):**

E. F. Fabian (Leader)

E. F. Fabian

**Other Department(s):**

None

**4629 - Quantification of Best Management Practice Effectiveness for Water Quality Protection at the Watershed Scale**

**Scheduled to Terminate:** 09/30/19

**Department Responsible for Report:** [Agricultural and Biological Engineering](#)

**Investigator(s):**

C. Raj (Leader)

**Other Department(s):**

None

**4499 - Renewing an Agriculture of the Middle: Value Chain Design, Policy Approaches, Environmental and Social Impacts**

**Scheduled to Terminate:** 09/30/17 **\*\*\*Final Report\*\*\***  
**Department Responsible for Report:** Agricultural Economics, Sociology, and Education  
**Investigator(s):** **Other Department(s):**  
C. C. Hinrichs (Leader) None

**4500 - Benefits and Costs of Natural Resources Policies Affecting Ecosystem Services on Public and Private Lands**

**Scheduled to Terminate:** 09/30/17 **\*\*\*Final Report\*\*\***  
**Department Responsible for Report:** Agricultural Economics, Sociology, and Education  
**Investigator(s):** **Other Department(s):**  
D. H. Wrenn (Leader) Ecosystem Science and Management  
C. W. Abdalla  
K. A. Fisher  
M. G. Jacobson  
J. S. Shortle  
K. Y. Zipp

**4503 - Community Health and Resilience**

**Scheduled to Terminate:** 09/30/17 **\*\*\*Final Report\*\*\***  
**Department Responsible for Report:** Agricultural Economics, Sociology, and Education  
**Investigator(s):** **Other Department(s):**  
S. J. Goetz (Leader) None  
T. R. Alter  
T. W. Kelsey

**4504 - The Great Recession, Its Aftermath, and Patterns of Rural and Small Town Demographic Change**

**Scheduled to Terminate:** 09/30/17 **\*\*\*Final Report\*\*\***  
**Department Responsible for Report:** Agricultural Economics, Sociology, and Education  
**Investigator(s):** **Other Department(s):**  
L. I. Jensen (Leader) None  
G. Chi  
L. Kulcsar  
S. M. Monnat  
B. C. Thiede  
A. R. Tickamyer

**4510 - Improving Economic And Environmental Sustainability In Tree-fruit Production Through Changes in Rootstock Use**

**Scheduled to Terminate:** 09/30/17 **\*\*\*Final Report\*\*\***  
**Department Responsible for Report:** Plant Science  
**Investigator(s):** **Other Department(s):**  
J. R. Schupp (Leader) Agricultural Economics, Sociology, and Education  
R. M. Crassweller Fruit Research and Extension Center  
R. M. Crassweller  
J. K. Harper  
R. P. Marini  
J. R. Schupp

**4521 - Agriculture Instructional Effectiveness Impact on Program Graduates Entering Postsecondary Education or Employment in Local Communities**

**Scheduled to Terminate:** 03/31/18

**Department Responsible for Report:** Agricultural Economics, Sociology, and Education

**Investigator(s):**

J. C. Ewing (Leader)  
D. D. Foster

**Other Department(s):**

None

**4526 - National and International Community and Leadership Development**

**Scheduled to Terminate:** 07/31/18

**Department Responsible for Report:** Agricultural Economics, Sociology, and Education

**Investigator(s):**

M. A. Brennan (Leader)  
C. D. Baggett  
C. C. Mincemoyer

**Other Department(s):**

None

**4542 - Intergenerational Strategies for Promoting Healthy Aging, Supporting Families, and Strengthening Communities**

**Scheduled to Terminate:** 09/30/18

**Department Responsible for Report:** Agricultural Economics, Sociology, and Education

**Investigator(s):**

M. S. Kaplan (Leader)

**Other Department(s):**

None

**4544 - Building Social Capital through Positive Engagement for Youth**

**Scheduled to Terminate:** 11/30/18

**Department Responsible for Report:** Agricultural Economics, Sociology, and Education

**Investigator(s):**

N. S. Webster (Leader)

**Other Department(s):**

None

**4567 - Retail Food Prices, Shopping Behavior, Health, and the Food Environment**

**Scheduled to Terminate:** 06/30/19

**Department Responsible for Report:** Agricultural Economics, Sociology, and Education

**Investigator(s):**

E. C. Jaenicke (Leader)  
S. J. Colby

**Other Department(s):**

None

**4599 - Specialty Crops and Food Systems: Exploring Markets, Supply Chains and Policy Dimensions**

**Scheduled to Terminate:** 09/30/20

**Department Responsible for Report:** Plant Science

**Investigator(s):**

K. M. Kelley (Leader)  
K. M. Kelley  
R. D. Weaver

**Other Department(s):**

Agricultural Economics, Sociology, and Education

**4603 - Supporting Military Families Through Dissemination and Implementation Science**

**Scheduled to Terminate:** 06/30/21

**Department Responsible for Report:** Agricultural Economics, Sociology, and Education

**Investigator(s):**

D. F. Perkins (Leader)  
C. C. Mincemoyer

**Other Department(s):**

None

**Progress and/or Final Reports Due**

***Agricultural Economics, Sociology, and Education***

October 1, 2016 through September 30, 2017  
*as of October 6, 2017*

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**4611 - Economic Incentives to Achieve Climate-Friendly Agricultural Production Systems**

**Scheduled to Terminate:** 09/30/21

**Department Responsible for Report:** [Agricultural Economics, Sociology, and Education](#)

**Investigator(s):**

D. G. Abler (Leader)

**Other Department(s):**

None

**4612 - Impact Analyses and Decision Strategies for Agricultural Research (NC1034)**

**Scheduled to Terminate:** 09/30/21

**Department Responsible for Report:** [Agricultural Economics, Sociology, and Education](#)

**Investigator(s):**

L. L. Glenna (Leader)

R. M. Chiles

J. K. Harper

**Other Department(s):**

None

**4618 - Catalysts for Water Resources Protection and Restoration: Applied Social Science Research**

**Scheduled to Terminate:** 09/30/21

**Department Responsible for Report:** [Agricultural Economics, Sociology, and Education](#)

**Investigator(s):**

K. J. Brasier (Leader)

K. J. Brasier

**Other Department(s):**

None

**4511 - Ovarian Influences on Reproductive Success in Ruminants**

Scheduled to Terminate: 09/30/17 **\*\*\*Final Report\*\*\***

Department Responsible for Report: [Animal Science](#)

Investigator(s):	Other Department(s):
J. L. Pate (Leader)	None
F. J. Diaz	
T. L. Ott	

**4512 - Mycobacterial Diseases of Animals**

Scheduled to Terminate: 09/30/17 **\*\*\*Final Report\*\*\***

Department Responsible for Report: [Animal Science](#)

Investigator(s):	Other Department(s):
V. Kapur (Leader)	None

**4539 - Metabolic Relationships in Supply of Nutrients for Lactating Cows (NC-1009)**

Scheduled to Terminate: 09/30/18

Department Responsible for Report: [Animal Science](#)

Investigator(s):	Other Department(s):
A. N. Hristov (Leader)	None
K. J. Harvatine	
G. A. Varga	

**4541 - Management Systems to Improve the Economic and Environmental Sustainability of Dairy Enterprises (Rev. NC-1119)**

Scheduled to Terminate: 09/30/18

Department Responsible for Report: [Animal Science](#)

Investigator(s):	Other Department(s):
A. J. Heinrichs (Leader)	None
L. A. Holden	
L. A. Holden	

**4549 - Genetic Improvement of Dairy Cattle Efficiency and Well-being**

Scheduled to Terminate: 09/30/18

Department Responsible for Report: [Animal Science](#)

Investigator(s):	Other Department(s):
C. D. Dechow	None

**4552 - Nutritional Influences on Gastrointestinal Health in Horses**

Scheduled to Terminate: 09/30/18

Department Responsible for Report: [Animal Science](#)

Investigator(s):	Other Department(s):
W. B. Staniar (Leader)	None
P. A. Bartell	

**4554 - National Animal Genome Research Program**

Scheduled to Terminate: 09/30/18

Department Responsible for Report: [Animal Science](#)

Investigator(s):	Other Department(s):
W. Liu (Leader)	None

**4562 - Exploring the Validation & Safety of Meat Processing Procedures**

**Scheduled to Terminate:** 03/31/19

**Department Responsible for Report:** [Animal Science](#)

**Investigator(s):**

J. A. Campbell (Leader)

E. W. Mills

**Other Department(s):**

None

**4575 - Poultry Production Systems and Well-being: Sustainability for Tomorrow**

**Scheduled to Terminate:** 09/30/19

**Department Responsible for Report:** [Animal Science](#)

**Investigator(s):**

P. H. Patterson

P. H. Patterson

**Other Department(s):**

None

**4580 - Advanced Technologies for the Genetic Improvement of Poultry (was NC-168)**

**Scheduled to Terminate:** 09/30/18

**Department Responsible for Report:** [Animal Science](#)

**Investigator(s):**

A. L. Johnson (Leader)

R. Ramachandra

**Other Department(s):**

None

**4615 - Reproductive Performance in Domestic Ruminants**

**Scheduled to Terminate:** 09/30/21

**Department Responsible for Report:** [Animal Science](#)

**Investigator(s):**

W. Liu (Leader)

**Other Department(s):**

None

**4617 - National Animal Nutrition Program**

**Scheduled to Terminate:** 09/30/20

**Department Responsible for Report:** [Animal Science](#)

**Investigator(s):**

A. N. Hristov (Leader)

**Other Department(s):**

None

**Progress and/or Final Reports Due**

***Cooperative Fish and Wildlife Research Unit***

October 1, 2016 through September 30, 2017  
*as of October 6, 2017*

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**4570 - Linking Fish and Wildlife Habitat and Population Dynamics for Managed Species in Pennsylvania**

**Scheduled to Terminate:** 06/30/19

**Department Responsible for Report:** Cooperative Fish and Wildlife Research Unit

**Investigator(s):**

D. R. Diefenbach (Leader)  
M. E. McDill  
D. A. Miller  
T. Wagner  
W. D. Walter

**Other Department(s):**

Ecosystem Science and Management



**4500 - Benefits and Costs of Natural Resources Policies Affecting Ecosystem Services on Public and Private Lands**

**Scheduled to Terminate:** 09/30/17

**\*\*\*Final Report\*\*\***

**Department Responsible for Report:** Agricultural Economics, Sociology, and Education

**Investigator(s):**

D. H. Wrenn (Leader)  
C. W. Abdalla  
K. A. Fisher  
M. G. Jacobson  
J. S. Shortle  
K. Y. Zipp

**Other Department(s):**

Ecosystem Science and Management

**4516 - Developing Silvicultural Strategies for Guiding Forest Structural Complexity to Achieve Desired Ecosystem Services**

**Scheduled to Terminate:** 12/31/17

**\*\*\*Final Report\*\*\***

**Department Responsible for Report:** Ecosystem Science and Management

**Investigator(s):**

E. K. Zenner (Leader)  
J. C. Finley  
K. C. Steiner

**Other Department(s):**

None

**4524 - Linking Aquatic Habitat, Freshwater Fishes, and Benthic Macroinvertebrates**

**Scheduled to Terminate:** 03/31/18

**Department Responsible for Report:** Ecosystem Science and Management

**Investigator(s):**

C. P. Ferreri (Leader)

**Other Department(s):**

None

**4525 - Impacts of Land-use History, Fire, Deer Browsing and Global Change on Forest Structure and Function in the Eastern United States**

**Scheduled to Terminate:** 06/30/18

**Department Responsible for Report:** Ecosystem Science and Management

**Investigator(s):**

M. D. Abrams (Leader)  
M. W. Kaye

**Other Department(s):**

None

**4532 - Biological Improvement of Chestnut through Technologies that Address Management of the Species, its Pathogens and Pests**

**Scheduled to Terminate:** 09/30/18

**Department Responsible for Report:** Ecosystem Science and Management

**Investigator(s):**

J. E. Carlson (Leader)  
C. D. Ray  
C. D. Ray

**Other Department(s):**

None

**4558 - Effects of unpredictability and uncertainty during development on animal cognition and behavior**

**Scheduled to Terminate:** 12/31/18

**Department Responsible for Report:** Ecosystem Science and Management

**Investigator(s):**

V. A. Braithwaite (Leader)

**Other Department(s):**

None

**4563 - Conservation and Management of Pennsylvania Birds**

**Scheduled to Terminate:** 03/31/19

**Department Responsible for Report:** Ecosystem Science and Management

**Investigator(s):**

M. Brittingham (Leader)

**Other Department(s):**

None

**4564 - Ozone Monitoring in Non-urban Regions of Pennsylvania and Effects of Ozone on Vegetation**

**Scheduled to Terminate:** 04/30/19

**Department Responsible for Report:** Plant Pathology and Environmental Microbiology

**Investigator(s):**

D. D. Davis (Leader)

J. E. Carlson

D. R. Decoteau

**Other Department(s):**

Ecosystem Science and Management

Plant Science

**4566 - Synthetic Nanoclays, Nanophases, and Nanocomposites for Remediation of Cations and Anions**

**Scheduled to Terminate:** 06/30/19

**Department Responsible for Report:** Ecosystem Science and Management

**Investigator(s):**

S. Komarneni (Leader)

**Other Department(s):**

None

**4570 - Linking Fish and Wildlife Habitat and Population Dynamics for Managed Species in Pennsylvania**

**Scheduled to Terminate:** 06/30/19

**Department Responsible for Report:** Cooperative Fish and Wildlife Research Unit

**Investigator(s):**

D. R. Diefenbach (Leader)

M. E. McDill

D. A. Miller

T. Wagner

W. D. Walter

**Other Department(s):**

Ecosystem Science and Management

**4571 - Fates of Soil Carbon and Nitrogen in Agricultural and Bioenergy Crop Systems**

**Scheduled to Terminate:** 06/30/19

**Department Responsible for Report:** Plant Science

**Investigator(s):**

A. R. Kemanian (Leader)

M. A. Bruns

J. P. Kaye

**Other Department(s):**

Ecosystem Science and Management

**4573 - Hydrogeology of Vernal Pool Systems**

**Scheduled to Terminate:** 09/30/19

**Department Responsible for Report:** Ecosystem Science and Management

**Investigator(s):**

P. J. Drohan (Leader)

H. S. Lin

**Other Department(s):**

None

**4574 - Beneficial Reuse of Residuals and Reclaimed Water: Impact on Soil Ecosystem and Human Health (formerly W2170)**

**Scheduled to Terminate:** 09/30/19

**Department Responsible for Report:** [Agricultural and Biological Engineering](#)

**Investigator(s):**

H. A. Elliott (Leader)

H. E. Gall

R. C. Stehouwer

J. E. Watson

**Other Department(s):**

[Ecosystem Science and Management](#)

**4578 - Soil, Water, and Environmental Physics Across Scales**

**Scheduled to Terminate:** 09/30/19

**Department Responsible for Report:** [Ecosystem Science and Management](#)

**Investigator(s):**

H. S. Lin (Leader)

**Other Department(s):**

None

**4584 - Ecology and Systematics of Freshwater Fishes**

**Scheduled to Terminate:** 01/31/20

**Department Responsible for Report:** [Ecosystem Science and Management](#)

**Investigator(s):**

J. R. Stauffer (Leader)

**Other Department(s):**

None

**4585 - The National Atmospheric Deposition Program (NADP)**

**Scheduled to Terminate:** 09/30/19

**Department Responsible for Report:** [Ecosystem Science and Management](#)

**Investigator(s):**

E. W. Boyer (Leader)

**Other Department(s):**

None

**4591 - Root Biology, Physiology, and Ecology in Woody Species**

**Scheduled to Terminate:** 06/30/20

**Department Responsible for Report:** [Ecosystem Science and Management](#)

**Investigator(s):**

D. M. Eissenstat (Leader)

**Other Department(s):**

None

**4610 - Preferential Flow (PF) Patterns in Different Soil-Landscapes**

**Scheduled to Terminate:** 06/30/21

**Department Responsible for Report:** [Ecosystem Science and Management](#)

**Investigator(s):**

H. S. Lin (Leader)

**Other Department(s):**

None

**4616 - Penn State RREA Program**

**Scheduled to Terminate:** 09/30/21

**Department Responsible for Report:** [Ecosystem Science and Management](#)

**Investigator(s):**

C. Houser (Leader)

M. G. Messina

**Other Department(s):**

None

**4622 - Towards a Better Understanding of How Ecological and Environmental Stressors Impact Animal Populations**

**Scheduled to Terminate:** 06/30/22

**Department Responsible for Report:** [Ecosystem Science and Management](#)

**Investigator(s):**

M. J. Sheriff (Leader)

**Other Department(s):**

None

**4553 - Management of the Brown Marmorated Stink Bug**

**Scheduled to Terminate:** 09/30/18

**Department Responsible for Report:** [Entomology](#)

**Investigator(s):**

G. Krawczyk (Leader)

G. Krawczyk

**Other Department(s):**

Fruit Research and Extension Center

**4576 - Invasive Insect Pests of Ornamentals, Forest Trees, and Crop Plants**

**Scheduled to Terminate:** 09/30/19

**Department Responsible for Report:** [Entomology](#)

**Investigator(s):**

K. Hoover (Leader)

G. W. Felton

R. J. Schilder

J. M. Urban

**Other Department(s):**

None

**4579 - Sustainable Solutions to Problems Affecting Bee Health**

**Scheduled to Terminate:** 09/30/19

**Department Responsible for Report:** [Entomology](#)

**Investigator(s):**

C. M. Grozinger (Leader)

H. M. Hines

M. M. Lopez

M. M. Lopez

N. M. Ostiguy

H. M. Patch

E. G. Rajotte

E. G. Rajotte

**Other Department(s):**

None

**4595 - Ecology and Management of Arthropods in Corn**

**Scheduled to Terminate:** 09/30/20

**Department Responsible for Report:** [Entomology](#)

**Investigator(s):**

J. F. Tooker (Leader)

J. F. Tooker

**Other Department(s):**

None

**4596 - Harnessing Chemical Ecology to Address Agricultural Pest and Pollinator Priorities**

**Scheduled to Terminate:** 09/30/20

**Department Responsible for Report:** [Entomology](#)

**Investigator(s):**

G. W. Felton (Leader)

J. G. Ali

J. F. Tooker

J. F. Tooker

J. H. Tumlinson

**Other Department(s):**

None

**4598 - Facilitating Registration of Pest Management Technology for Specialty Crops and Specialty Uses**

**Scheduled to Terminate:** 09/30/20

**Department Responsible for Report:** [Entomology](#)

**Investigator(s):**

G. Krawczyk (Leader)  
G. Krawczyk  
G. Krawczyk  
G. Krawczyk

**Other Department(s):**

Fruit Research and Extension Center

**4606 - Insect Ecology and Management in Agroecosystems**

**Scheduled to Terminate:** 06/30/21

**Department Responsible for Report:** [Entomology](#)

**Investigator(s):**

A. R. Deans (Leader)  
M. E. Barbercheck  
M. E. Barbercheck  
S. J. Fleischer  
J. F. Tooker

**Other Department(s):**

None

**4608 - Interactions between Insects and Pathogens/Parasites**

**Scheduled to Terminate:** 06/30/21

**Department Responsible for Report:** [Entomology](#)

**Investigator(s):**

D. P. Hughes (Leader)  
O. N. Bjornstad  
L. Cui  
E. T. Machtinger  
A. F. Read  
M. B. Thomas

**Other Department(s):**

None

**4609 - Chemical Ecology of Multi-trophic Interactions Among Insects, Plants and Microorganisms**

**Scheduled to Terminate:** 06/30/21

**Department Responsible for Report:** [Entomology](#)

**Investigator(s):**

T. C. Baker (Leader)  
J. G. Ali  
E. Amsalem  
T. Renner  
J. H. Tumlinson

**Other Department(s):**

None

**4619 - Understanding and Managing Arthropod Pests, Natural Enemies and Pollinators Through Ecologically-Based Integrated Pest Management Approaches On Tree Fruits in Pennsylvania**

**Scheduled to Terminate:** 12/31/21

**Department Responsible for Report:** [Entomology](#)

**Investigator(s):**

D. J. Biddinger (Leader)  
D. J. Biddinger  
C. M. Grozinger  
G. Krawczyk  
G. Krawczyk  
M. M. Lopez  
M. M. Lopez  
E. G. Rajotte

**Other Department(s):**

Fruit Research and Extension Center

**4620 - Tracking Feral Honey Bee Health: Using Citizen Science and Next Generation Sequencing to Improve Honey Bee Resistance to Disease**

**Scheduled to Terminate:** 09/30/19

**Department Responsible for Report:** [Entomology](#)

**Investigator(s):**

M. M. Lopez (Leader)  
C. M. Grozinger

**Other Department(s):**

None

**4522 - Reducing Incidences of Foodborne Disease through Preharvest Intervention, Postharvest Control, Molecular Tracking and Knowledge of the Biological Basis of Pathogen Function**

**Scheduled to Terminate:** 03/31/18

**Department Responsible for Report:** Food Science

**Investigator(s):**

E. G. Dudley (Leader)  
C. N. Cutter  
C. N. Cutter  
K. E. Kaylegian

**Other Department(s):**

None

**4528 - Enhancing Microbial Food Safety by Risk Analysis**

**Scheduled to Terminate:** 06/30/18

**Department Responsible for Report:** Food Science

**Investigator(s):**

C. N. Cutter (Leader)  
C. N. Cutter  
L. F. LaBorde

**Other Department(s):**

None

**4565 - Improving the Physical and Nutritional Functionality of Food Ingredients**

**Scheduled to Terminate:** 06/30/19

**Department Responsible for Report:** Food Science

**Investigator(s):**

J. D. Lambert (Leader)  
J. N. Coupland  
R. J. Elias  
F. M. Harte  
J. E. Hayes  
K. L. Keller  
R. F. Roberts  
J. K. Vanamala  
G. R. Ziegler

**Other Department(s):**

None

**4583 - Nutrient Bioavailability--Phytonutrients and Beyond**

**Scheduled to Terminate:** 09/30/18

**Department Responsible for Report:** Food Science

**Investigator(s):**

J. Vanamala

**Other Department(s):**

None

**4594 - Engineering for Food Safety and Quality**

**Scheduled to Terminate:** 09/30/20

**Department Responsible for Report:** Food Science

**Investigator(s):**

R. C. Anantheswaran (Leader)  
R. C. Anantheswaran  
A. Demirci  
V. Puri

**Other Department(s):**

Agricultural and Biological Engineering  
Agricultural Experiment Station

**Progress and/or Final Reports Due**

***Food Science***

October 1, 2016 through September 30, 2017  
*as of October 6, 2017*

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**4624 - Linking Food Composition to Food Choice and Nutrition: Understanding Consumer Perception and Attitudes From A Compositional, Functional, and Sensory Point of View**

**Scheduled to Terminate:** 06/30/22

**Department Responsible for Report:** Food Science

**Investigator(s):**

H. Hopfer (Leader)

**Other Department(s):**

None



- 4508 - Biology and Management of Iris Yellow Spot Virus (IYSV), Other Diseases, and Thrips in Onions (from W1008)**  
**Scheduled to Terminate:** 09/30/17 **\*\*\*Final Report\*\*\***  
**Department Responsible for Report:** Plant Pathology and Environmental Microbiology  
**Investigator(s):** B. K. Gugino (Leader) **Other Department(s):** None
- 4509 - Collaborative Potato Breeding and Variety Development Activities to Enhance Farm Sustainability in the Eastern US**  
**Scheduled to Terminate:** 09/30/17 **\*\*\*Final Report\*\*\***  
**Department Responsible for Report:** Plant Pathology and Environmental Microbiology  
**Investigator(s):** X. Qu (Leader) **Other Department(s):** None
- 4517 - Ecological and Genetic Diversity of Soilborne Pathogens and Indigenous Microflora**  
**Scheduled to Terminate:** 09/30/17 **\*\*\*Final Report\*\*\***  
**Department Responsible for Report:** Plant Pathology and Environmental Microbiology  
**Investigator(s):** M. M. Jimenez **Other Department(s):** None
- 4527 - Genomic Approaches to the Identification of Fungal Plant Pathogens and Understanding Host Defense Response**  
**Scheduled to Terminate:** 06/30/18  
**Department Responsible for Report:** Plant Pathology and Environmental Microbiology  
**Investigator(s):** D. M. Geiser (Leader)  
M. M. Jimenez  
S. Kang  
Y. Yang **Other Department(s):** None
- 4564 - Ozone Monitoring in Non-urban Regions of Pennsylvania and Effects of Ozone on Vegetation**  
**Scheduled to Terminate:** 04/30/19  
**Department Responsible for Report:** Plant Pathology and Environmental Microbiology  
**Investigator(s):** D. D. Davis (Leader)  
J. E. Carlson  
D. R. Decoteau **Other Department(s):** Ecosystem Science and Management  
Plant Science
- 4589 - Developing Management Strategies for Mushroom Cultivation to Improve Substrate Utilization, Manage Diseases, and Improve Yield and Fresh Quality to Increase Profitability**  
**Scheduled to Terminate:** 06/30/20  
**Department Responsible for Report:** Plant Pathology and Environmental Microbiology  
**Investigator(s):** D. M. Beyer (Leader)  
J. A. Pecchia **Other Department(s):** None
- 4593 - Mycotoxins: Biosecurity, Food Safety and Biofuels Byproducts (NC129, NC1025)**  
**Scheduled to Terminate:** 09/30/20  
**Department Responsible for Report:** Plant Pathology and Environmental Microbiology  
**Investigator(s):** G. A. Kuldau (Leader) **Other Department(s):** None

**Progress and/or Final Reports Due**

***Plant Pathology and Environmental Microbiology***

October 1, 2016 through September 30, 2017  
*as of October 6, 2017*

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**4604 - Biology, Epidemiology, and Management of Foliar Diseases**

**Scheduled to Terminate:** 06/30/21

**Department Responsible for Report:** [Plant Pathology and Environmental Microbiology](#)

**Investigator(s):**

W. Uddin (Leader)

C. T. Bull

S. A. Isard

T. W. McNellis

M. J. Roossinck

C. Rosa

**Other Department(s):**

None

**4510 - Improving Economic And Environmental Sustainability In Tree-fruit Production Through Changes in Rootstock Use**

**Scheduled to Terminate:** 09/30/17 **\*\*\*Final Report\*\*\***

**Department Responsible for Report:** Plant Science

**Investigator(s):**

J. R. Schupp (Leader)  
R. M. Crassweller  
R. M. Crassweller  
J. K. Harper  
R. P. Marini  
J. R. Schupp

**Other Department(s):**

Agricultural Economics, Sociology, and Education  
Fruit Research and Extension Center

**4534 - Conservation and Utilization of Plant Genetic Resources**

**Scheduled to Terminate:** 09/30/18

**Department Responsible for Report:** Plant Science

**Investigator(s):**

M. R. Foolad (Leader)

**Other Department(s):**

None

**4547 - Integrated Systems Research and Development in Automation and Sensors for Sustainability of Specialty Crops**

**Scheduled to Terminate:** 09/30/18

**Department Responsible for Report:** Agricultural and Biological Engineering

**Investigator(s):**

P. H. Heinemann (Leader)  
T. A. Baugher  
D. Choi  
J. Liu  
J. R. Schupp  
J. R. Schupp  
J. R. Schupp

**Other Department(s):**

District 16  
Fruit Research and Extension Center  
Plant Science

**4550 - Enhancing Green Infrastructure in Pennsylvania**

**Scheduled to Terminate:** 09/30/18

**Department Responsible for Report:** Plant Science

**Investigator(s):**

R. D. Berghage (Leader)  
R. M. Bates  
J. C. Sellmer

**Other Department(s):**

None

**4551 - Integrated Weed Management at a Crossroads**

**Scheduled to Terminate:** 09/30/18

**Department Responsible for Report:** Plant Science

**Investigator(s):**

D. A. Mortensen (Leader)

**Other Department(s):**

None

**4564 - Ozone Monitoring in Non-urban Regions of Pennsylvania and Effects of Ozone on Vegetation**

**Scheduled to Terminate:** 04/30/19

**Department Responsible for Report:** Plant Pathology and Environmental Microbiology

**Investigator(s):**

D. D. Davis (Leader)  
J. E. Carlson  
D. R. Decoteau

**Other Department(s):**

Ecosystem Science and Management  
Plant Science

October 1, 2016 through September 30, 2017  
as of October 6, 2017

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**4569 - Endowed Program in the Molecular Biology of Cacao: Discovery and Functional Analysis of Genes for Disease Resistance**

Scheduled to Terminate: 06/30/19

Department Responsible for Report: Plant Science

Investigator(s):

M. J. Gultinan (Leader)

Other Department(s):

None

**4571 - Fates of Soil Carbon and Nitrogen in Agricultural and Bioenergy Crop Systems**

Scheduled to Terminate: 06/30/19

Department Responsible for Report: Plant Science

Investigator(s):

A. R. Kemanian (Leader)

M. A. Bruns

J. P. Kaye

Other Department(s):

Ecosystem Science and Management

**4572 - Multi-state Evaluation of Winegrape Cultivars and Clones**Scheduled to Terminate: 09/30/17 **\*\*\*Final Report\*\*\***

Department Responsible for Report: Plant Science

Investigator(s):

R. M. Crassweller (Leader)

M. Centinari

R. M. Crassweller

Other Department(s):

None

**4582 - Root Traits for Better Crop Performance Under Abiotic Stress**

Scheduled to Terminate: 12/31/19

Department Responsible for Report: Plant Science

Investigator(s):

K. M. Brown (Leader)

J. P. Lynch

Other Department(s):

None

**4590 - Improving Berry Crop Cultural Systems and Productivity**

Scheduled to Terminate: 06/30/20

Department Responsible for Report: Plant Science

Investigator(s):

K. Demchak (Leader)

R. P. Marini

Other Department(s):

None

**4592 - A multidisciplinary approach to sustainable turfgrass systems management**

Scheduled to Terminate: 06/30/20

Department Responsible for Report: Plant Science

Investigator(s):

M. J. Schlossberg (Leader)

D. R. Huff

J. E. Kaminski

P. J. Landschoot

B. A. McGraw

A. S. McNitt

Other Department(s):

None

**4597 - Regulation of Ethylene Biosynthesis**

**Scheduled to Terminate:** 09/30/20

**Department Responsible for Report:** Plant Science

**Investigator(s):**

R. N. Arteca (Leader)

**Other Department(s):**

None

**4599 - Specialty Crops and Food Systems: Exploring Markets, Supply Chains and Policy Dimensions**

**Scheduled to Terminate:** 09/30/20

**Department Responsible for Report:** Plant Science

**Investigator(s):**

K. M. Kelley (Leader)

K. M. Kelley

R. D. Weaver

**Other Department(s):**

Agricultural Economics, Sociology, and Education

**4600 - Advancing Agronomic Cropping Systems in the Northeast**

**Scheduled to Terminate:** 03/31/21

**Department Responsible for Report:** Plant Science

**Investigator(s):**

W. S. Curran (Leader)

R. L. Day

S. W. Duiker

M. H. Hall

H. D. Karsten

A. R. Kemanian

G. W. Roth

J. A. Williamson

**Other Department(s):**

None

**4613 - Identification of Epigenetically Modified Genes in Maize and Their Role in Trait Stability**

**Scheduled to Terminate:** 09/30/21

**Department Responsible for Report:** Plant Science

**Investigator(s):**

S. Chopra (Leader)

**Other Department(s):**

None

**4470 - Regulation of Immune Function and Gastrointestinal Homeostasis by Nutrients: Especially Vitamin D**

**Scheduled to Terminate:** 03/31/17 **\*\*\*Final Report\*\*\***  
**Department Responsible for Report:** Veterinary and Biomedical Science  
**Investigator(s):** M. T. Cantorna (Leader)  
N. Xiong  
**Other Department(s):** None

**4514 - Mastitis Resistance to Enhance Dairy Food Safety**

**Scheduled to Terminate:** 09/30/17 **\*\*\*Final Report\*\*\***  
**Department Responsible for Report:** Veterinary and Biomedical Sciences  
**Investigator(s):** E. P. Hovingh (Leader)  
**Other Department(s):** None

**4581 - Mechanisms Regulating the Response to Anemic Stress**

**Scheduled to Terminate:** 12/31/19  
**Department Responsible for Report:** Veterinary and Biomedical Sciences  
**Investigator(s):** R. F. Paulson (Leader)  
P. H. Hankey  
**Other Department(s):** None

**4588 - Application of Veterinary Diagnostic Medicine to Detect and Diagnose Mammalian and Avian Diseases**

**Scheduled to Terminate:** 06/30/20  
**Department Responsible for Report:** Veterinary and Biomedical Sciences  
**Investigator(s):** B. M. Jayarao (Leader)  
V. R. Beasley  
J. W. Brooks  
L. C. Griel  
S. Kariyawasam  
**Other Department(s):** None

**4605 - Redox Modulation of Inflammatory Pathways by Micronutrient Selenium in Health and Disease**

**Scheduled to Terminate:** 06/30/21  
**Department Responsible for Report:** Veterinary and Biomedical Sciences  
**Investigator(s):** K. S. Prabhu (Leader)  
M. T. Cantorna  
M. J. Kennett  
G. S. Kirimanjeswara  
A. P. Schmitt  
N. Xiong  
**Other Department(s):** None

**4607 - Environmental Stressors of Cellular Receptors and Disease Response**

**Scheduled to Terminate:** 06/30/21  
**Department Responsible for Report:** Veterinary and Biomedical Sciences  
**Investigator(s):** C. J. Omiecinski (Leader)  
A. B. Glick  
A. D. Patterson  
G. H. Perdew  
J. M. Peters  
J. P. VandenHeuvel  
**Other Department(s):** None

**4621 - To Characterize Pathogenesis of Zika Virus Infection in Chicken**

**Scheduled to Terminate:** 09/30/19

**Department Responsible for Report:** [Veterinary and Biomedical Sciences](#)

**Investigator(s):**

B. M. Jayarao (Leader)

I. Albert

S. V. Kuchipudi

**Other Department(s):**

Biochemistry and Molecular Biology