



RUTGERS

New Jersey Agricultural
Experiment Station

2008 Annual Report

Jersey Roots, Global Reach

NJAES

Mission

To enhance the vitality, health, sustainability, and overall quality of life in New Jersey by developing and delivering practical, effective solutions to current and future challenges relating to agriculture; fisheries; food; natural resources; environments; public health; and economic, community, and youth development.

Robert M. Goodman

Executive Dean of Agriculture and Natural Resources;
Executive Director of NJAES
732-932-9000, ext. 500
execdean@aesop.rutgers.edu

Leads NJAES, Rutgers' largest research unit and home to Cooperative Extension and Cooperative Research, as well as the School of Environmental and Biological Sciences.

Gail Alexander

Chief of Staff
732-932-9000, ext. 501
alexander@aesop.rutgers.edu

Responsible for the daily management of the Office of the Executive Dean.

Mark G. Robson

Director, NJAES
732-932-9000, ext. 506
robson@aesop.rutgers.edu

Served through November 2008. Led all NJAES Cooperative Extension and Cooperative Research programs.

Larry Katz

Associate Director, NJAES;
Director of Cooperative Extension;
Executive Director, Rutgers Against Hunger
732-932-5000, ext. 591
katz@aesop.rutgers.edu

Oversees all NJAES Cooperative Extension programs.

Bradley I. Hillman

Senior Associate Director, NJAES;
Director of Cooperative Research
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Oversees all NJAES Cooperative Research programs.

Jack Rabin

Associate Director, NJAES;
Director of Farm Programs
732-932-5000, ext. 610
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Oversees the operation and maintenance of all outlying research farms.

Margaret F. Brennan-Tonetta

Associate Director, NJAES;
Director of Economic Growth and Development
732-932-1000, ext. 569
brennan@aesop.rutgers.edu

Leads NJAES' economic development initiatives.

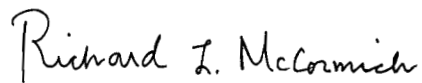
A Message from the University President

Rutgers New Jersey Agricultural Experiment Station (NJAES) was established in 1880 to provide science-based solutions to our state's residents. We remain true to that mandate today by tapping into the wealth of knowledge and research available at Rutgers, The State University of New Jersey.

In these difficult economic times, NJAES faculty and staff play a key role in helping New Jerseyans to meet the challenges that face them in every aspect of their lives. While New Jersey, along with the rest of the nation, has experienced a year of financial uncertainty and slowed economic growth, NJAES has taken the lead with new business incubators, workforce training, and technology and innovation transfer to industry.

Over the past year, the Food Innovation Center's business incubation facility in Bridgeton has opened its doors, the EcoComplex has been awarded the Governor's Environmental Excellence Award in the innovative technology category, and Rutgers has received the second patent ever awarded for a new cranberry variety. In these tough times, NJAES has proven that it is a true partner in driving New Jersey's economy forward.

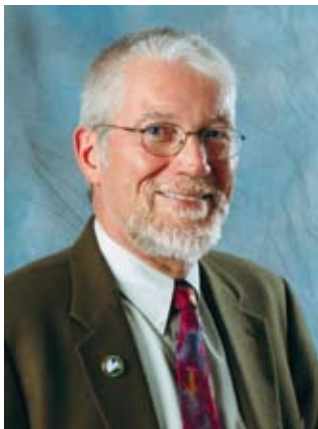
Sincerely yours,



Richard L. McCormick
President
Rutgers, The State University of New Jersey



A Message from the Executive Director of the New Jersey Agricultural Experiment Station



Supporting the viability of agriculture in the Garden State continues to be a central aim of Rutgers New Jersey Agricultural Experiment Station (NJAES) and Rutgers School of Environmental and Biological Sciences. In 2008, we renewed our commitment to New Jersey agriculture by pledging to revitalize and invigorate the agricultural sciences major at Rutgers.

In November 2008, I asked Mark Robson to build on his outstanding performance as director of NJAES in a new capacity as dean of agricultural and urban programs for the school. In this new position, his mandate is to draw anew on the resources available to us at the experiment station and the school and to engage practitioners in the field, government partners, county college partners, and likeminded institutions as we create a new agricultural science major aimed at those who are interested in an entrepreneurial and innovative education in the agricultural sciences. I envision this as an important step forward in our continuing commitment to agriculture as a key sector of New Jersey's economy.

New Jersey farmers have always been on the leading edge of new technology and business ventures, and for more than a century they have had a strong partner in NJAES. We shall continue to build upon that history of service to New Jersey.

Best regards,



Robert M. Goodman
Executive Director
New Jersey Agricultural Experiment Station

January

The Youth Education and Employment Success Center (YE²S Center) opens on January 1 with a press conference featuring Newark Mayor Cory Booker and county and state officials. The center, an outgrowth of a small agricultural program developed for youthful offenders in the 1990s, is run under the direction of Rutgers NJAES. The center provides one-stop help for young adults ages 16 to 21 who are out of school, out of work, and possibly out of hope. It brings under one roof a host of organizations providing counseling, education, and job training for youth who have criminal records or who have dropped out of school.

Visit: teemgateway.rutgers.edu/yescenter.html



Experts from Rutgers NJAES Equine Science Center offer advice to more than 100 new and prospective horse owners during Rutgers Annual Horse Management Seminar. "So you want to own a horse? And if you already do, what next?" is the theme of the 2008 seminar held on January 26. In addition to educational presentations, the seminar features door prizes, informational displays, networking opportunities, and time for one-on-one discussions. The event is sponsored by Rutgers NJAES Equine Science Center, Rutgers NJAES Cooperative Extension, and the New Jersey Horse Council. Carey Williams, an extension specialist in equine management, coordinated the event.

Visit: esc.rutgers.edu

February

In 1999, New Jersey farmers started implementing food safety practices prompted by a request from supermarkets. The New Jersey Department of Agriculture (NJDA), in collaboration with Rutgers NJAES, took the lead in developing the first statewide third-party audit system in the country to help growers to evaluate their operations for food safety. This system was incorporated into the USDA's Good Agricultural Practices and Good Handling Practices Audit Verification Program. Today, New Jersey is a leading state in grower training and participation in food safety audits. Since 2007, NJAES and NJDA have provided food safety training to more than 1,000 individuals.

Visit: njaes.rutgers.edu/foodsafety/food-safety-practices.asp



Bill Sciarappa, Monmouth County agricultural agent, organizes the Central Jersey Vegetable Growers Conference in Freehold. Nearly 140 people attend to hear various Rutgers specialists and agents speak on crop production issues, as well as to get updates from the Natural Resources Conservation Service, Farm Service Agency, Farm Bureau, and New Jersey Department of Agriculture. Meetings such as the Central Jersey Vegetable Growers Conference are an example of the close partnerships Rutgers NJAES has with agricultural agencies in the state and throughout the mid-Atlantic region.

Visit: njveg.rutgers.edu

March

Rutgers Cooperative Extension personnel collaborate with the New Jersey Environmental Federation, New Jersey Department of Environmental Protection, and others to conduct Integrated Pest Management (IPM) training sessions focused on the landscape and turf components of the School IPM program. To date, nearly 3,000 School IPM coordinators have been trained. School IPM is a long-term approach to maintaining healthy landscapes and facilities while minimizing risks to people and the environment. Through site assessment, monitoring, and pest prevention, in combination with pest-management tactics, School IPM keeps pests within acceptable limits.

Visit: pestmanagement.rutgers.edu



Rutgers NJAES research and extension faculty support the multibillion-dollar green industries in New Jersey through research, education, and outreach. Nicholas Polanin, agricultural agent, and Jason Grabosky, associate professor of urban forestry, facilitate the 2008 Garden State Tree Conference, attended by more than 140 arborists and landscape professionals. Rich Obal, agricultural agent, and Polanin also host the Central Jersey Turf and Ornamental Institute at the New Jersey Nursery and Landscape Association's Annual Meeting. The meeting is attended by 170 licensed pesticide applicators, landscapers, and arborists.

Visit: cpe.rutgers.edu/programs/landscape.html

April

Extension Specialist Christopher Obropta arranges a memorandum of understanding between the New Jersey Department of Environmental Protection (NJDEP) and Rutgers Cooperative Extension to develop a pilot program that hires five new environmental county agents. This provides Rutgers NJAES with the opportunity to work with local communities to address suburban and urban environmental issues. The NJDEP will provide \$750,000 for the first three years of this pilot program. The hires will allow NJAES to pursue projects like the Water Resources Program's work to develop a model community-based water conservation program.

Visit: water.rutgers.edu



The Garden State Harvest: New Jersey's Agricultural Heritage Exhibition opens and highlights New Jersey's agricultural heritage from pre-colonial times to the present through diaries, letters, journals, trade catalogs, and museum objects. Charles Hampton Harrison, author of *Tending the Garden State: Preserving New Jersey's Farming Legacy*, opens the exhibition, which also features a lecture by Executive Director of Rutgers NJAES Robert Goodman and a panel discussion led by NJAES Director Mark Robson. The exhibition is a joint effort of the Rutgers University Libraries, NJAES, and the New Jersey Museum of Agriculture.

Visit: www.libraries.rutgers.edu/rul/news/08/01_garden_state_harvest.shtml

May

Joel Flagler, Bergen County agricultural agent, completes a successful pilot program with Transitions School in Wood-Ridge, serving youth with developmental disabilities. The youth work in a greenhouse for more than four months, learning propagation, plant culture, and other valuable skills. Evaluations indicate that the program has strong positive impacts on the participants. All 25 students express great pride in their plant projects and nature craft activities, and several express a desire to work in a greenhouse and learn more about horticulture. Based on these results, the principal of Transitions School secures additional funding in excess of \$15,000 to extend the program through July 2008.

Visit: bergen.njaes.rutgers.edu/ag



Donald W. Schaffner, extension specialist and professor of food science, accepts the position of director of the Center for Advanced Food Technology (CAFT). Schaffner brings to the table almost 20 years of experience in working closely with the food industry. The center aims to be a leader in the development of new knowledge and its application to improve the safety, quality, and healthfulness of the food supply. Staff at CAFT work in partnership with industry, government, and university researchers to conduct basic research. They also work on product and process development for clients ranging from major food companies to sma ll

Visit: caft.rutgers.edu

June

Gef Flimlin, marine agent, is presented with the Jersey Shore Partnership's Seafood Industry Award on June 9. Flimlin is selected for his leadership and outstanding commitment to the growth and revitalization of the seafood industry in New Jersey. The Barnegat Bay Shellfish Restoration and ReClam the Bay programs were also recognized with the Governor's Tourism Award on April 10 at the Governor's Conference on Tourism. Gef Flimlin and fellow marine agent Cara Muscio run the Barnegat Bay Shellfish Restoration Program in conjunction with ReClam the Bay and the New Jersey Department of Environmental Protection, Division of Fish and Wildlife, Bureau of Shellfisheries.

Visit: ocean.njaes.rutgers.edu/marine/bbsrp.html



Brian Schilling, associate director of the Food Policy Institute, is elected as president of the New Jersey Agricultural Society. The society sponsors several programs, including a Learning Through Gardening program for elementary school students, the New Jersey Agricultural Leadership Development Program, and Farmers Against Hunger. During his more than 13 years at Rutgers, Schilling has focused on New Jersey farm viability and agricultural economic development at the urban-rural fringe. Throughout his career, Schilling has worked closely with the agricultural and food industries and has served on a number of industry and government task forces and working groups.

Visit: fpi.rutgers.edu

July

Larry Katz accepts an offer to serve as the director of Rutgers Cooperative Extension (RCE) and as an associate director of Rutgers NJAES. Katz succeeds Karyn Malinowski, who served with distinction in this leadership role for six years. Katz joined Rutgers in 1989 and chaired the Department of Animal Sciences for seven years. As chair, Katz oversaw a period of significant enrollment growth in the major and in the number of graduates who went on to veterinary school. As RCE director, Katz aims to further a commitment to the land-grant mission and to pursuing opportunities to advance the health and well-being of New Jersey's residents.



The 2007 *New Jersey Equine Economic Impact Study* is honored as one of three recipients of the Award of Excellence from the Northeast Cooperative Extension Directors. This is the highest award presented by the directors of extension in the Northeast. It recognizes extension outreach programming that has achieved outstanding results in addressing contemporary issues. The study indicates that the total economic impact of the equine industry in New Jersey is \$1.1 billion annually. The industry employs nearly 13,000 and generates an estimated \$160 million annually in federal, state, and local taxes.

Visit: esc.rutgers.edu

August

The Center for Turfgrass Science is selected as the recipient of the 2008 New Jersey Golf Course Owners Association's President's Award. The New Jersey Golf Course Owners Association is an affiliate of the National Golf Course Owners Association, which represents thousands of golf courses across the nation. The President's Award is given annually to "the individual or organization that has contributed greatly to the game and business of golf in New Jersey." The center is selected for its "many contributions to the game, industry, and science of golf." The award is presented at the association's annual golf outing and meeting in October at the Fiddler's Elbow Country Club.

Visit: turf.rutgers.edu



A Taste of Jersey Fresh: Annual Open House and Tomato Tasting is held at the Clifford E. and Melda C. Snyder Research & Extension Farm. The event provides guests with opportunities to taste approximately 80 varieties of tomatoes suitable for New Jersey farms and gardens, along with a sampling of other farm-grown produce. Visitors try samples of the Ramapo tomato. The tomato, developed at Rutgers NJAES in 1968, had disappeared from seed catalogs, but Rutgers continued to get requests to bring it back. In response, NJAES staff made the first commercial lot of organically grown, genuine Ramapo F1 hybrid seed available in 2008.

Visit: njfarmfresh.rutgers.edu/JerseyTomato.html

September

Nicholi Vorsa, a professor in the Department of Plant Biology and Pathology and the Marucci Blueberry & Cranberry Research Center, receives the 2008 Thomas Alva Edison patent award from the Research and Development Council of New Jersey for his cranberry hybrid, the Crimson Queen. Vorsa, along with fellow Marucci members Jennifer Johnson-Cicalese and Ajay Singh, James Polashock from USDA-ARS, and Kim Patten from Washington State University, is also notified of a \$996,687 USDA grant to fund research on the breeding and genetics of fruit-rot resistance and polyphenolics in the American cranberry. New Jersey is the third leading cranberry-producing state in the United States.

Visit: pemaruccicenter.rutgers.edu



The grand opening of the Endocrine Research Building and the inaugural Endocrine Research Showcase are held on September 8. More than 100 participants attend a ribbon-cutting ceremony and lectures given by Ronald Evans of the Salk Institute for Biological Studies and Andrew Feinberg of John Hopkins University School of Medicine. The Endocrine Program, a joint effort of Rutgers and UMDNJ Robert Wood Johnson Medical School, brings researchers from Rutgers NJAES, the School of Environmental and Biological Sciences, and other Rutgers units together with UMDNJ-Robert Wood Johnson Medical School to conduct groundbreaking research that could greatly improve human health.

Visit: endocrine.rutgers.edu

October

Rutgers NJAES officially opens the 23,000-sq-foot Food Innovation Center (FIC) business incubator and food-processing facility in Bridgeton, N.J., on October 17. FIC is a leading catalyst for economic development in the state and the surrounding region. With the opening of the new facility, FIC is well equipped to cultivate and advise new businesses, act as a hub for continuing education, and promote collaborative research and learning opportunities. Approximately 90 percent of the construction funding for the FIC incubator facility originated from outside of the university. Since 2001, FIC has assisted over 1,000 companies and entrepreneurs from every county in New Jersey.

Visit: foodinnovation.rutgers.edu



New Jersey 4-H celebrates National Science Experiment Day with a day of learning on the G. H. Cook Campus. The inaugural event is part of a larger effort to help build America's future science, engineering, and technology workforce. New Jersey 4-H members conduct an experiment using the super-absorbent hydrogel packs in disposable diapers. The hydrogels act in a manner similar to wetlands, which hold water run-off and slowly allow the held water to seep into the ground. By using the hydrogels, the 4-H participants learn about the importance of water and the water cycle. They also learn about the link between soil, water conservation, and climate change.

Visit: njaes.rutgers.edu/spotlight/4-hscience.asp

November

Rutgers Against Hunger is launched by President McCormick as a long-term, universitywide effort. Students, faculty, and staff join together to seek solutions and strategies to combat hunger. Representatives from throughout the university are asked to develop teaching, research, and outreach programs that address the issue of hunger, as well as the related issues of food systems, nutrition, and health. To kick off the initiative, volunteers from the Rutgers community joined with Farmers Against Hunger, a program of the New Jersey Agricultural Society, on two gleanings at Giamarese Farm in East Brunswick. The volunteers gathered some 2,000 pounds of collard greens and turnips.

Visit: rah.rutgers.edu



As part of a concerted effort to reinvigorate the agricultural science major at Rutgers, Mark Robson, director of NJAES, accepts a new position as dean of agricultural and urban programs in the School of Environmental and Biological Sciences. As dean, Robson will oversee the re-engineering and revitalization of undergraduate agricultural education at the school. The new agricultural science major aims to appeal to those who are interested in an entrepreneurial and innovative education in the agricultural sciences and will target students who seek careers in agricultural education, government service, and agribusiness.

Visit: sebs.rutgers.edu/news/release.asp?n=683

December

Dear Friends of NJAES:

Over the past year, the faculty and staff at Rutgers NJAES have forged new partnerships and strengthened existing ones. We've teamed with the New Jersey Agricultural Society for farm gleanings, with the New Jersey Federation of Food Banks on Rutgers Against Hunger, with the New Jersey Department of Environmental Protection for IPM training, and with the New Jersey Department of Agriculture on food safety training. Many of these partnerships represent longtime collaborations. Working together, we are better able to serve New Jersey and its residents.

I am incredibly proud of the work that we do at NJAES and proud to have served as director. Now, I look forward to taking a fresh look at the agricultural sciences major in my role as dean of agricultural and urban programs. I will be visiting with many of our friends at county colleges, in state and local government, and industry to brainstorm a new approach to teaching agricultural science. Many new farmers today have not previously worked on a farm, and existing farmers are constantly looking for new ways to add value to their operations. Our new major will take an entrepreneurial and innovative approach to the agricultural sciences and will cover everything from controlled-environment agriculture; agricultural policy and entrepreneurship; and energy efficiency to niche agriculture; agro-tourism; and community-supported agriculture.

I will call on many of the resources we have available through the school and experiment station to make this new major one with broad appeal and usefulness. But I will also look to you, our partners, to ensure that this initiative, like so many before, is a success.

With warm regards,

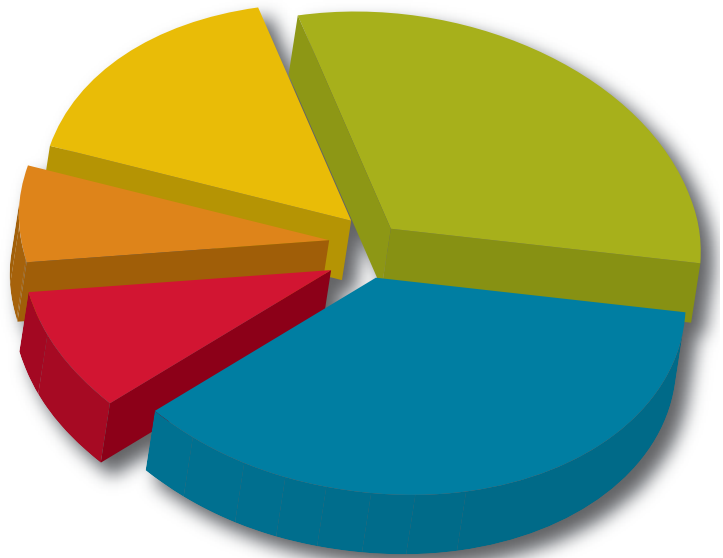
Mark Gregory Robson

Dean of Agricultural and Urban Programs

Income and Expenditures

Funding Sources

- 37.0% Federal Grants & Contracts
- 30.7% State Appropriations
- 16.1% Other
- 8.9% County Appropriations
- 7.3% Federal Appropriations



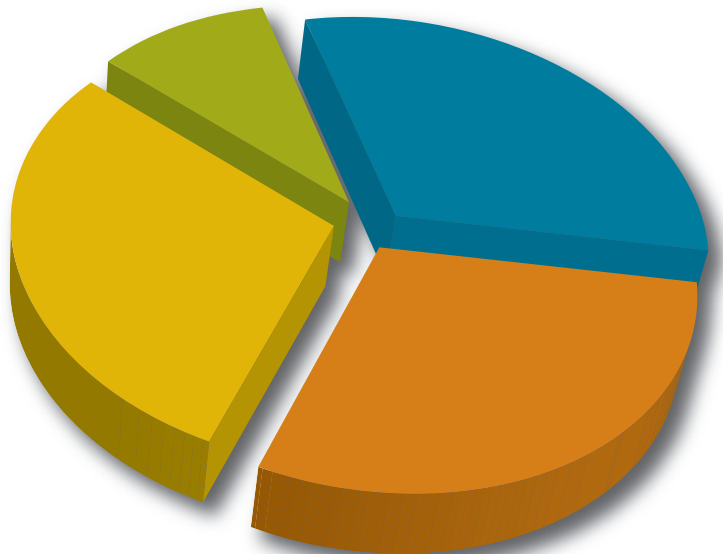
Expenditure Breakdown

Cooperative Research

- 30.6% Unrestricted Funds
- 30.1% Restricted Funds

Cooperative Extension

- 29.4% Unrestricted Funds
- 9.9% Restricted Funds



Total Funding: \$89,831,489



NJAES Board of Managers

The New Jersey Agricultural Experiment Station Board of Managers, appointed by the Rutgers Board of Governors, is an advisory group to the executive dean of agriculture and natural resources and executive director of NJAES. The board consists of a representative from each county; the president of Rutgers, the executive director of NJAES, and the state secretary of agriculture as ex officio members; and a six-member statewide advisory committee.

Atlantic County	August Wuillermin
Bergen County.....	Guy Nicolosi
Burlington County	Marilyn Russo
Camden County.....	Vacant
Cape May County.....	Warren C. Stiles
Cumberland County.....	Maurice Sheets
Essex County	Frank Yesalavich
Gloucester County	Douglas Zee, Jr., President
Hudson County.....	Vacant
Hunterdon County	Meredith Compton, Sec.-Treas.
Mercer County.....	Louis Makrancy
Middlesex County	George Conover
Monmouth County.....	Stephen Dey, Vice President
Morris County	Carol Davis
Ocean County	John Van Pelt
Passaic County	Edith Wallace
Salem County.....	Vacant
Somerset County.....	Chan Leung
Sussex County	Carladean Kostelnik
Union County	Richard Montag
Warren County.....	Anna Sodalbers

Statewide Advisory Committee

Biotechnology	Ramesh Pandey
Community Resources	Kate Sweeney
Environment.....	Vacant
Food Science.....	Pearl Giordano
Marine Science	Stephen Carnahan
Public Policy.....	Vacant

County Offices

Atlantic County	609-625-0056
Bergen County	201-336-6781
Burlington County	609-265-5050
Camden County	856-566-2900
Cape May County	609-465-5115
Cumberland County	856-451-2800
Essex County	973-228-5525
Gloucester County	856-307-6450
Hudson County	201-915-1392
Hunterdon County	908-788-1339
Mercer County	609-989-6833

Centers and Institutes

- Center for Advanced Food Technology • caft.rutgers.edu
- Center for Controlled-Environment Agriculture
aesop.rutgers.edu/~horteng
- Center for Deep-Sea Ecology and Biotechnology
deepseacenter.rutgers.edu
- Center for Turfgrass Science • turf.rutgers.edu
- Center for Urban Restoration Ecology • i-cure.org
- Center for Vector Biology • vectorbio.rutgers.edu
- Equine Science Center • esc.rutgers.edu
- Food Policy Institute • fpi.rutgers.edu
- Rutgers Energy Institute • rei.rutgers.edu
- Wildlife Damage Control Center • njaes.rutgers.edu/wdcc

Off-Campus Stations

- Clifford E. and Melda C. Snyder Research & Extension Farm
Rutgers Center for Sustainable Agriculture, Pittstown
snyderfarm.rutgers.edu
- Food Innovation Center, Bridgeton
foodinnovation.rutgers.edu
- Haskin Shellfish Research Laboratory, Bivalve
hsrl.rutgers.edu
- Lindley G. Cook 4-H Youth Center for Outdoor Education,
Branchville • nj4hcamp.rutgers.edu
- Philip E. Marucci Center for Blueberry & Cranberry Research
& Extension, Chatsworth • pemaruccicenter.rutgers.edu
- Rutgers Agricultural Research & Extension Center, Upper
Deerfield • njaes.rutgers.edu/rarec
- Rutgers EcoComplex - Rutgers Environmental Research &
Extension Center, Bordentown • ecocomplex.rutgers.edu
- Rutgers Plant Science Research & Extension Farm, Adelphia
njaes.rutgers.edu/plantscience
- Rutgers Fruit and Ornamental Research Extension Center,
Cream Ridge • creamridge.rutgers.edu
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- Monmouth County
- Morris County
- Ocean County
- Passaic County
- Salem County
- Somerset County
- Sussex County
- Union County
- Warren County

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Ocean County	732-349-1152
Passaic County	973-305-5742
Salem County	856-769-0090
Somerset County	908-526-6295
Sussex County	973-948-3040
Union County	908-654-9854
Warren County	908-475-6505

For more information, visit us at njaes.rutgers.edu.

Acknowledgments:

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Cooperating Agencies Rutgers, The State University of New Jersey, U.S. Department of Agriculture, and County Boards of Chosen Freeholders. Rutgers Cooperative Extension, a unit of the Rutgers New Jersey Agricultural Experiment Station, is an equal opportunity program provider and employer.