

RUTGERS

New Jersey Agricultural
Experiment Station

2006 Annual Report

NJAES

Mission Statement

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.

Administration

Robert M. Goodman

Executive Dean of Agriculture and Natural Resources;
Executive Director of NJAES; Executive Dean of the
School of Environmental and Biological Sciences
732-932-9000 x500 • execdean@aesop.rutgers.edu

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

Gail Alexander

Senior Executive Associate
732-932-9000 x501 • alexander@aesop.rutgers.edu

Responsible for the daily management of the Office of the Executive Dean and the creation and oversight of annual advocacy efforts.

Arthur R. Brown, Jr.

Senior Associate Dean for Agriculture and
Natural Resources
732-932-9000 x502 • brown@aesop.rutgers.edu

Appointed in April 2006; responsible for legislative affairs associated with the school and experiment station.

Mark G. Robson

Director, NJAES
732-932-9000 x506 • robson@aesop.rutgers.edu

Appointed September 2006; leads all NJAES extension and research programs.

Daniel Rossi

Senior Associate Director of Administration
732-932-9000 x505 • rossi@aesop.rutgers.edu

As of February 15, 2007, Rossi will serve as executive director of the Northeastern Regional Association of State Agricultural Experiment Station Directors.

Karyn Malinowski

Associate Director, NJAES;
Director of Cooperative Extension
732-932-5000 x591 • malinowski@aesop.rutgers.edu

Oversees all NJAES extension programs.

Bradley I. Hillman

Associate Director, NJAES;
Director of Cooperative Research
732-932-9000 x505 • hillman@aesop.rutgers.edu

Appointed October 2006; oversees all NJAES research programs.

Edward V. Lipman, Jr.

Associate Director, NJAES;
Director of Office of Continuing Professional Education
732-932-9271 • lipman@aesop.rutgers.edu

Oversees courses that serve the continuing education needs of professionals throughout New Jersey.

Jack Rabin

Associate Director, NJAES;
Director of Farm Programs
732-932-5000 x610 • rabin@aesop.rutgers.edu

Oversees the operation and maintenance of all outlying research farms.

Margaret F. Brennan

Associate Director, NJAES;
Director of Economic Growth and Development
732-932-1000 x569 • brennan@aesop.rutgers.edu

Leads NJAES' economic development initiatives.

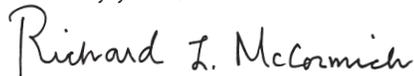
A Message from the University President

Rutgers University and the New Jersey Agricultural Experiment Station (NJAES) are united by a deep commitment to serving the people of the Garden State. Together, we are bringing the best in research, education, and outreach to bear on New Jersey's future through programs tailored to meet the diverse needs of our state's residents.

Our efforts in this regard are far-reaching and forward-thinking. Take, for example, our work to investigate alternative energy sources. A recent grant from the New Jersey Board of Public Utilities will bring NJAES faculty and staff, as well as industry consultants, together to conduct the first comprehensive waste/biomass inventory assessment of New Jersey. This study will provide information critical for the development of a bioenergy strategy for the state.

Such efforts, which link research with outreach, education, and economic development in unique and synergistic ways, exemplify the future direction of NJAES. By working closely with partners in industry and government, NJAES is delivering daily on its mission to enhance the viability, health, sustainability, and overall quality of life in New Jersey.

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



The State Legislature created the New Jersey Agricultural Experiment Station in 1880 to provide research and outreach in agriculture and related fields. Your Experiment Station has changed in many ways since then, and will continue to do so as it works to meet New Jerseyans' needs in the 21st century.

In September 2006, I appointed Drs. Mark Robson and Brad Hillman to new leadership positions in NJAES: Mark as director and Brad as associate director with responsibility for research. Mark brings experience as an extension specialist and in state government, and extensive work in the field of public health. Brad is a distinguished microbiologist and plant pathologist whose recent research has focused on diseases of turf and cranberries. With our leadership team in place, we will pursue new research, education, and outreach efforts, as well as efforts that make New Jersey's economic growth a priority, and we will work to expand the scope of our programs and partnerships throughout the state.

The NJAES today is a strong partnership among Rutgers University, New Jersey state government, County Boards of Chosen Freeholders, and the U.S. Department of Agriculture. We conduct research and outreach in the areas that matter to New Jersey: agriculture, public health, fisheries and aquaculture, economic and community development, nutrition, and environment and natural resources, and we remain firmly committed to our land-grant mission of providing New Jerseyans with the tools and information necessary to improve their lives and communities.

Best regards,



Robert M. Goodman
Executive Director
New Jersey Agricultural Experiment Station

New Jersey Agricultural Experiment

January

Cooperative Extension, a unit of Rutgers NJAES, opens registration for the statewide Environmental Stewardship Certification Program. Participants receive 60 hours of training to prepare them for environmental stewardship in their communities. The program features classroom lectures and field trips that illustrate the science behind today's most pressing environmental issues. Communication, conflict resolution, and leadership skills are taught to enable students to be effective in the real world of community action and political discourse, where many environmental issues ultimately play out.

Visit: njaes.rutgers.edu/envirostewards



The Office of Continuing Professional Education (OCPE) begins a yearlong celebration of its 100th anniversary. When OCPE was founded, semester-long courses attracted about 40 students per year. Today, OCPE provides continuing education to about 24,000 students through more than 400 short courses, symposia, and conferences each year. Students from all 21 New Jersey counties and around the world can choose from courses in public health and safety, integrated pest control, food science, landscaping, turfgrass management, and much more.

Visit: cookce.rutgers.edu

February

To help consumers to better understand recent reports about the health benefits of seafood, marine extension agents at Rutgers Cooperative Extension, created a new web site, "Seafood Safety: Assessing the Benefits and Risks," to help consumers to shop smart when they shop for seafood. The new web site—njaes.rutgers.edu/seafoodsafety—covers a comprehensive list of seafood-related topics. NJAES researchers also work to support New Jersey's \$4.5 billion fisheries industry through stock assessments, migration tracking, disease eradication, and genetic study.

Visit: njaes.rutgers.edu/seafoodsafety



The Philip E. Marucci Blueberry and Cranberry Research and Extension Center is using a two-year U.S. Environmental Protection Agency grant to explore novel, reduced-risk methods to control pests in cranberry production. The center is partnering with state and county organizations and five farms in Burlington County to identify cost-effective ways to monitor pests and track the impacts of reduced chemical pesticide use in cranberry fields while measuring and recording the amounts of insecticides used.

Visit: aesop.rutgers.edu/~bluecran

March

Rutgers Cooperative Extension receives a major Cultivating Youth and Communities for Positive Futures Project—Children, Youth, and Families at Risk grant from the USDA. The project builds the capacity of children and youth in at-risk areas to become healthy and contributing citizens of their communities. Extension professionals in the areas of youth development, family and community health sciences, and agriculture collaborate to develop and deliver hands-on education programs in partnership with local schools and community-based organizations.

Visit: cyfar.rutgers.edu



The New Jersey Department of Agriculture and NJAES are partners, along with the State Agriculture Development Committee and American Farmland Trust, in presenting a Farmland Preservation Summit on Cook Campus. The summit brings NJAES faculty together with farmers, planners, and representatives from municipal, county, and state government to work on future strategies to protect New Jersey's farmland base and maintain the state's vibrant agricultural industry. Preserving farmland keeps municipal taxes down, increases property values, and benefits the environment.

Visit: njaes.rutgers.edu/environotes/v02n02.htm

April

April is National Volunteer Recognition Month. In New Jersey, more than 2,283 adult 4-H volunteers donate an average of 220 hours each per year—equivalent to more than \$10.5 million of their time. These volunteers serve as 4-H club leaders, project judges, camp counselors, and more. In addition, Master Gardener volunteers donated 102,352 hours in 2005 alone, or some \$2.2 million of their time. Master Gardeners educate and aid the public through gardening demonstrations, telephone helplines, and community and youth gardening programs.

Visit: nj4h.rutgers.edu and njaes.rutgers.edu/mastergardeners



Johnson & Johnson awards a grant to Sue Shapses, associate professor of nutrition and director of the New Jersey Obesity Group (NJOG). The grant funds the study "Obesity Prevention and Treatment: Populations at Risk in NJ." NJOG increases inter- and multidisciplinary research by facilitating collaboration and communication among researchers at Rutgers University, the University of Medicine and Dentistry of New Jersey, and in industry and universities in the New York metropolitan area. Obesity prevention is part of a broader Rutgers and NJAES initiative to take a multidisciplinary approach to nutrition research.

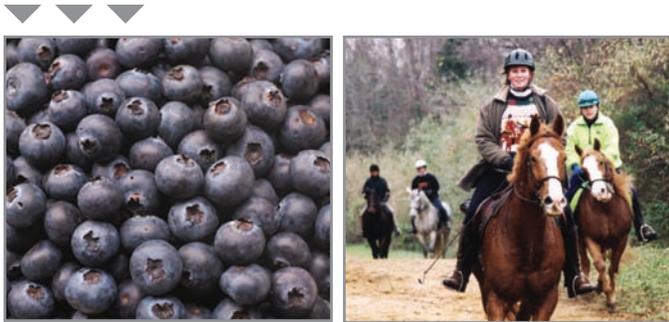
Visit: nutrition.rutgers.edu/njog

New Jersey Agricultural Experiment

May

The U. S. Department of Agriculture awards \$650,000 to the Philip E. Marucci Center for Blueberry and Cranberry Research and Extension. Funded projects will include breeding insect- and disease-resistant varieties, satellite mapping and tracking of insect infestation patterns, and investigating the possibility that berries may prevent diabetes. Researchers will look at the berries' antioxidant qualities and ability to prevent tooth decay and to keep harmful bacteria from sticking to the urinary tract and stomach. New Jersey ranks second nationally in blueberry production and third in cranberry production.

Visit: aesop.rutgers.edu/~bluecran



The Rutgers NJAES Equine Science Center leverages NJAES state funding with monies from individuals and partners such as the New Jersey Sports and Exposition Authority, the Standardbred Breeders and Owners Association of New Jersey, the New Jersey Thoroughbred Breeders Association, the New Jersey Department of Agriculture, and the Gloucester County Board of Agriculture for an economic analysis of the New Jersey horse industry. New Jersey's equine industry is a multibillion-dollar contributor to the state's economy.

Visit: esc.rutgers.edu

June

The Rutgers NJAES Food Policy Institute concludes its emergency preparedness training program for retail food establishment management teams. More than 660 supermarket executives, store managers, and local health officials completed the course. The course emphasized preventing, mitigating, and recovering from accidental, naturally occurring, or intentional disruptions in the industry. The New Jersey Food Council and NJAES Office of Continuing Professional Education were partners in this project. Funding was provided by the New Jersey Department of Health and Senior Services.

Visit: foodpolicyinstitute.org



Funding for the Rutgers NJAES Food Innovation Center's Food Business Incubator is completed, and a groundbreaking is held with federal, state, and community supporters in attendance. The new 23,000-sq.-ft. facility in Bridgeton will offer food-processing equipment, technical and business support, and distance and continuing education for food entrepreneurs. Outcomes for New Jersey include higher-paying jobs and opportunities for farmers to increase their economic viability through the production of value-added products.

Visit: foodinnovation.rutgers.edu

July

Anne Bellows receives a grant from the Johnson & Johnson Foundation. The monies will fund the study "Health Needs, Knowledge, and Practice: Oaxacan Women, Their Children, and Extended Families in the Migration Cycle Between New Brunswick and Mexico." Bellows will examine linkages between mobility, health, and nutrition for New Brunswick Oaxacan-Mexican families and related families in the state of Oaxaca in Mexico. Bellows is a research associate at the Rutgers NJAES Food Policy Institute.

Visit: foodpolicyinstitute.org



Each spring and summer, county fairs throughout New Jersey showcase 4-H programs. More than 750,000 people attend these fairs each year. These events are a team effort among 4-H faculty and staff, thousands of adult and youth volunteers, and hundreds of county and community organizations and non-profit groups. During 2006, 4-H offered programs and events in citizenship and civic education, communications and expressive arts, environmental education, personal development and leadership, and science and technology.

Visit: nj4h.rutgers.edu/fairs

August

The Department of Family and Community Health Sciences presents a Children's Health Summit—Fighting Back Against Childhood Obesity. The conference attracts foodservice professionals, teachers, school nurses, dieticians, coaches, health care providers, and parents. Since 2003, summits have been successfully conducted in Cape May, Atlantic, Union, Passaic, Cumberland, Hunterdon-Somerset, and Middlesex counties, training more than 800 professionals in the causes, consequences, and solutions surrounding childhood obesity.

Visit: njaes.rutgers.edu/fchs



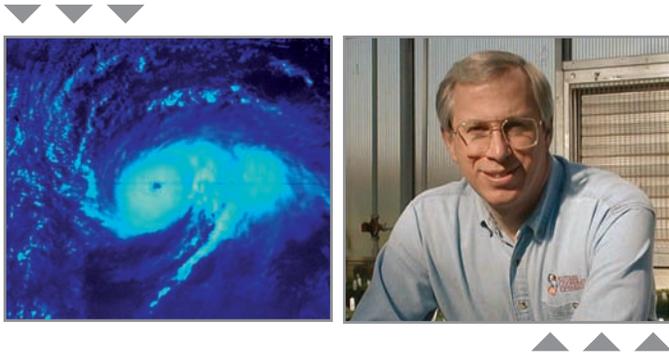
Chris Obropta, extension specialist in water resources, receives a major grant from the Hackensack Meadowlands Commission for "A Feasibility Study on Development of a Stormwater Utility for the Meadowlands Commission." A stormwater utility could remedy declining flood-prevention structures in the Meadowlands, which is one of the largest wetlands complexes in the Hudson Raritan Estuary. The 32-square-mile area comprises 8,400 acres of wetlands and waterways that provide habitat for federally listed wildlife species.

Visit: njwrri.rutgers.edu

September

Executive Director of NJAES Robert Goodman convenes a symposium called "The Climate Ahead: Global Change, Local Impacts." The symposium highlighted the importance of addressing climate change issues. Rutgers researchers from various disciplines came together to examine the possible effects of climate change on agriculture, business, water resources, public health, and industries such as tourism and insurance. A 2007 climate change summit will bring together researchers from other universities, industry, and government to discuss future steps.

Visit: envsci.rutgers.edu/~broccoli/climate_symposium



"Challenges to Maintaining Golf Courses in the 21st Century," the first in the Ralph Geiger Turf Symposium Series, honors the late Ralph Geiger. Geiger established the Ralph Geiger Endowed Chair in Turfgrass Science at the School of Environmental and Biological Sciences and donated more than \$2 million to the Center for Turfgrass Science over the past decade. Bruce Clarke, director of the Center for Turfgrass Science, was named the first holder of the chair in 2005. Geiger's generous donations fund and promote turfgrass research, teaching, and extension, and student scholarships.

Visit: turf.rutgers.edu

October

Randy Gaugler, distinguished professor of entomology, is appointed director of the Mosquito Control Program. Gaugler is the past recipient of the Rutgers Board of Trustee's Excellence in Research Award and was named a 2006 Chinese Academy of Sciences Albert Einstein professor. Gaugler will head the new Rutgers NJAES Center for Vector Biology, which focuses on all aspects of vector biology and control. The program works closely with the New Jersey Department of Environmental Protection and county mosquito-control offices to provide surveillance and control of mosquito populations.

Visit: njmosquito.org



The NJAES is awarded a major grant from the New Jersey Board of Public Utilities Office of Clean Energy to pursue a comprehensive state-wide waste/biomass inventory assessment of New Jersey. The project, which will be a collaborative effort between NJAES faculty and staff and industry consultants, will provide information critical for the development of a bioenergy strategy for the state. The project complements the new Rutgers Energy Institute, which brings together Rutgers researchers to educate the public and advise policymakers, and the Bloustein School of Planning and Public Policy, which is working to set state sustainable energy targets.

Visit: ruei.rutgers.edu

November

Researchers at NJAES invite state residents to participate in the new state-wide program, "Get Moving, Get Healthy New Jersey," which aims to help youth and adults to be more physically active and to eat healthier diets. Faculty in Family and Community Health Sciences and 4-H Youth Development, along with partners, are collaborating in this project to help state residents stay healthy. It includes youth and adult educational programs, a social marketing campaign, and an interactive website to disseminate information.

Visit: nj4h.rutgers.edu/getmoving



Eleanor Bochenek, a marine scientist at the Rutgers NJAES Haskin Shellfish Research Laboratory, is selected by the Jersey Coast Angler's Association as their Sportsperson of the Year. She joins a distinguished list of past recipients, which includes state and federal legislators, newspaper reporters, environmentalists, and sportsperson volunteers. She was nominated in recognition of the hundreds of hours she has volunteered to support the "Hooked on Fishing, Not on Drugs" program, her extensive outreach, and her standing as a respected research scientist.

Visit: hsrl.rutgers.edu

December

Karyn Malinowski, associate director of Rutgers NJAES, director of Cooperative Extension, and director of the Equine Science Center, is chosen as a distinguished alumna of the Rutgers Graduate School–New Brunswick. The award, which will be presented in March 2007, recognizes her leadership in her field and contributions to equine science and Cooperative Extension. Malinowski oversees all NJAES extension programs. Her current research expertise lies in the area of the physiology of aging in horses.

Visit: njaes.rutgers.edu/extension



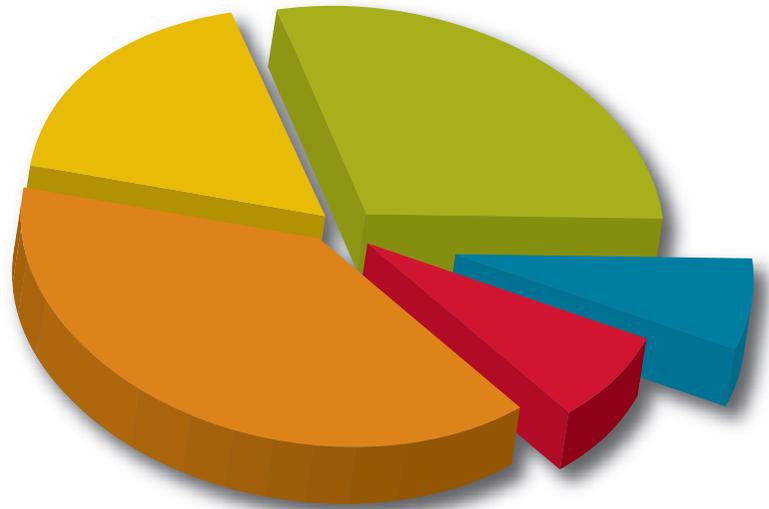
William Meyer, professor of plant biology and pathology and director of the Turfgrass Breeding Program, is chosen to receive the 2007 Golf Course Superintendents Association of America (GCSAA) Distinguished Service Award. The award recognizes his contributions as a turfgrass breeder and administrator in the development of improved turfgrass cultivars, which have directly benefited golf course superintendents throughout the world. The award will be presented at the 2007 GCSAA Education Conference.

Visit: turf.rutgers.edu

New Jersey Agricultural Experiment

Sources

- 29.3% State Appropriations
- 7.4% Federal Appropriations
- 7.5% County Appropriations
- 39.8% Federal Grants & Contracts
- 16.0% Other



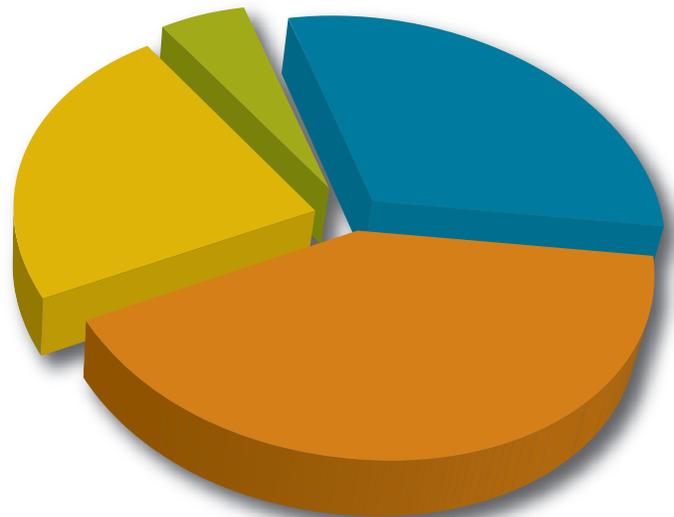
Breakdown

Research

- 30.2% Unrestricted
- 41.4% Restricted

Extension

- 22.9% Unrestricted
- 5.5% Restricted



Total Funding: \$87,700,000



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	Robert Fenton
Bergen County	Vacant
Burlington County	Marilyn Russo
Camden County	Vacant
Cape May County.....	Allen Carter, Vice President
Cumberland County	Philip Neary
Essex County	Frances Kroeckel
Gloucester County	Douglas Zee, Jr.
Hudson County.....	Frances O. Bowen-Thompson
Hunterdon County	Thomas Michalenko
Mercer County.....	Louis Makrancy
Middlesex County	George Conover
Monmouth County.....	Stephen Dey
Morris County	Carol Davis
Ocean County	Jeffrey Adams, Secretary-Treasurer
Passaic County	David Longo
Salem County.....	Joel Rudderow
Somerset County.....	Chan Leung
Sussex County	Carladean Kostelnik
Union County	Richard Montag
Warren County	Mitchell Jones

Statewide Advisory Committee

Biotechnology	Ramesh Pandey
Community Resources	Vacant
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 x227
Cape May County.....	609.465.5115
Cumberland County	856.451.2800
Essex County	973.228.3179
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 Controlled-Environment Agriculture
aesop.rutgers.edu/~horteng
- Center for Deep-Sea Ecology and Biotechnology
njaes.rutgers.edu/cdseb
- Center for Turfgrass Science • turf.rutgers.edu
- Center for Urban Restoration Ecology • i-cure.org
- Food Policy Institute • foodpolicyinstitute.org
- IR-4 Project: Center for Minor Crop Pest Management
ir4.rutgers.edu
- Rutgers Equine Science Center • esc.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 • aesop.rutgers.edu/~bluecran
- Rutgers Agricultural Research & Extension Center, Upper
Deerfield • aesop.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 Tree Fruit Research & Extension Center, Cream Ridge
creamridge.rutgers.edu

Middlesex County	732.398.5262
Monmouth County.....	732.431.7261
Morris County	973.285.8307
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

Acknowledgments:

This publication was designed and produced by Rutgers New Jersey Agricultural Experiment Station, Office of Communications.

Photo credits: Bruce Barbour, Eleanor Bochenek, Helene Dunn, Food Innovation Center, freerangestock.com, Randy Gaugler, iStockphoto.com, National Weather Center-NOAA Photo Library, New Jersey 4-H Youth Development Program, New Jersey Department of Agriculture, Jack Rabin, Nick Romanenko, richc.treo@yahoo.com, U.S. Department of Agriculture, Sean Walsh, Keith Weller - USDA

Rutgers NJAES Cooperative Extension provides information and educational services to all people without regard to race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Rutgers NJAES Cooperative Extension is an Equal Opportunity Program Provider and Employer.