

# Ocean County Rutgers Cooperative Extension

## 2023 Annual Report



Rutgers Cooperative Extension helps the diverse population of New Jersey adapt to a rapidly changing society and improve their lives and communities through an educational process that uses science based knowledge. Through science-based educational programs and applied research, Rutgers Cooperative Extension truly enhances the quality of life for New Jersey's residents and brings the wealth of knowledge of the state university to local communities.

Our Ocean County Extension office continued to meet the needs of residents and businesses in 2023 by offering educational programs on a wide-range of topics via classroom-, field-, and webinar-based educational programs. These science-based programs met the needs of clientele by helping to ensure healthy lifestyles; providing productive futures for youth, adults, and communities; enhancing and protecting environmental resources; ensuring economic growth and agricultural sustainability; and improving food safety and nutrition.

Visit our Ocean County Extension office or another local Extension office throughout New Jersey to access a wide range of science-based information and assistance regarding 4-H, agriculture, family and community health sciences, marine science, and natural resources and the environment. The following report outlines educational programming and other activities in these areas which occurred at our Ocean County office in 2023.



*Cooperating Agencies:* Rutgers, The State University of New Jersey, U.S. Department of Agriculture, and Boards of County Commissioners. Educational programs are offered without regard to race, sex, disability, color, national origin, or age. Rutgers Cooperative Extension is an Equal Opportunity Employer.



**RUTGERS UNIVERSITY**  
**New Jersey Agricultural**  
**Experiment Station**



Cooperative Extension of Ocean County  
1623 Whitesville Road  
Toms River, NJ 08755  
[ocean.njaes.rutgers.edu](http://ocean.njaes.rutgers.edu)

# RCE Outreach Programs

Rutgers Cooperative Extension of Ocean County offers a variety of informational and “hands-on” educational programs to Ocean County residents. In 2023, we offered 31 educational programs to our residents with 1,935 attendees. The following educational programs were delivered by our staff:

## 2023 PROGRAMS

### **4-H Youth Development**

- Spring Cloverbud Day
- Fall Cloverbud Day
- Give Thanks
- Discover the World of Rabbits Part I - IV
- Reel Into Fishing
- STEM Challenge
- Ocean County Fair
- Learn2Lead, Lead2Serve

### **Environmental Resource Management**

- Earth Day, Every Day Webinar Series
- Jersey-Friendly Yards Webinar Series
- Understanding Soil Compaction
- “Water’ You doing to Your Yard? How to Water Wisely
- Build a Rain Barrel Workshop

### **Family and Community Health Sciences**

- Breathe Your Stress Away
- Supporting A Strong Immune System

### **Fisheries, Aquaculture, and Coastal Resource Management**

- Marine Extension Program Seminar Series (MEPSS)
- Barnegat Bay Shellfish Restoration Program (BBSRP)
- Introductory Fisheries Science for Stakeholders (IFSSH)

### **Horticultural Programs**

- Light Up Your Shade Garden
- Horticulture for the Health of It
- Invasive Species
- Spotted Lanternfly Trap Workshop
- Pests in the Vegetable Garden
- Succulent Jewelry Making Workshop
- Attracting Butterflies to Your Garden
- Butterfly Tent Event
- The History of Cranberries in Ocean County
- Trench Composting
- The Facts About Bats of New Jersey
- Basic Seed Sowing and Seedling Care
- Holiday Centerpiece Workshop



## 2024 UPCOMING PROGRAMS

- Winter Seed Sowing
- NJ Ticks 4 Science
- Tried and True Easy-Care Native Plants
- Home Vegetable Gardening for Food, Fun, and Stress Management
- Tree Fruit
- Succulent Wreath Workshop
- Summer Garden Talk and Flower Pounding
- Rain Barrel/Mosquito Study
- Rutgers Garden Bus Trip
- A Pinelands Road Trip



**Trench Composting**



**Butterfly Tent Event**

## **CURRENT STAFF**

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# Agriculture and Natural Resources

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Throughout 2023, the Agriculture & Natural Resources (ANR) team continued to offer many programs to promote and sustain Ocean County's environment and farming communities. The goal of our programs, our research, and our technical assistance is to maintain a healthy environment for county residents with a large focus being on protecting the water quality of Barnegat Bay.

Programming continued to be offered online and as in-person presentations during 2023, for both residents of Ocean County and others throughout New Jersey. We conducted 15 classes, workshops, and webinars to 398 farmers, educators, horticulturists, environmental professionals, and the public. These presentations were on a variety of topics that included maintaining healthy soils, sustainable landscaping, and protecting water resources. In addition, Ocean County ANR partnered with other County Agents and organizations to coordinate and implement an additional 10 webinars to 544 participants.

**Earth Day, Every Day** – More people are looking for ways to protect our natural resources and leave the environment in better shape for the future. We partnered with other Environmental County Agents throughout the state to develop and conduct the 'Earth Day, Every Day' webinar series. 'Earth Day, Every Day' classes focus on actions everyone can take to improve our surroundings, from environmentally-friendly lawn care, reducing plastic waste, conserving water, controlling invasive insects, and protecting wildlife habitat. The 2023 series of webinars focused on environmental problems created by small changes and renewable energy. There were 544 attendees at these 10 webinars, with an additional 1,722 views to the recordings on YouTube. More information on the 'Earth Day, Every Day' program is available at <https://envirostewards.rutgers.edu/earth-day-every-day/>.

The 'Earth Day, Every Day' Team was presented with the 2023 Team Excellence Award from the Rutgers School of Environmental and Biological Sciences (SEBS) at a ceremony in November 2023. This award recognizes outstanding work conducted by a team of faculty within SEBS and the New Jersey Agricultural Experiment Station whose creativity, innovation, engagement, and impact stand out as exemplars for how Rutgers achieves its mission as a land-grant university.



Water conservation display at the Stafford Municipal Building.

**Water Conservation Displays** – After a hiatus due to the pandemic, we worked with municipalities to host displays educating residents on ways to save water. Throughout 2023, water conservation displays were exhibited at the Stafford Township Municipal Building, Manchester Municipal Building, the Long Beach Township Field Station, and the Brick Municipal Building. These displays have distributed 532 flyers with tips to conserve water to residents throughout Ocean County. The display helps fulfill the public education requirements for both a town's Sustainable Jersey certification application and their Municipal Stormwater Permit.

In 2023, we worked with the Atlantic County Utilities Authority to develop a Spanish-language version of the display and flyer as well as a supporting website of water saving resources (<https://ocean.njaes.rutgers.edu/anr/save-water-ahorra-agua-espanol/>). These materials are being exhibited at Manchester's Municipal Building, with the web page getting 197 views since debuting in July 2023.

**Controlling Mosquitoes in Rain Barrels** – Practices that involve the collection of rain water, such as rain barrels, are seen as activities that save water but also as the opportunity to increase mosquito breeding sites around one's home. To deter mosquito breeding in rain barrels, several recommendations are available: window screen, BTI larvicides ("dunks"), and a surface barrier of oil or soap. However, the relative success of these practices is currently unknown. Starting in summer of 2021, Rutgers Cooperative Extension of Ocean County partnered with the Ocean County of Ocean Mosquito Extermination Commission to evaluate the effectiveness of various

types of mosquito control methods appropriate for rain barrels. The research completed in 2023 with the partners planning on publishing their results in 2024. Dr. Steve Yergeau, County Agent / Associate Professor presented the team's results at the NJ Mosquito Commission Association's Annual Meeting in March 2023 in Atlantic City.

# Horticulture

Susan Emhardt-Servidio, Senior Horticulturist & Rutgers Master Gardener Coordinator

Patricia Dixon, Horticultural Consultant

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The 2023 season saw a 10% increase over 2022 in calls and emails answered by Rutgers Cooperative Extension (RCE) staff and Rutgers Master Gardeners volunteers. Horticultural inquiries answered by phone and email numbered over 4,200. Walk-in clients decreased by 10% with just over 1,400 coming into the Agricultural Center. Inquiries about Spotted Lanternflies (SLF) and ticks were the most popular. We informed county residents with four press releases regarding updates of SLF activity and controls. Other horticultural inquiries included: soil testing, plant identification, weed management strategies, and vegetable garden issues. Our horticultural posts on social media reached over 300,000 people. The most popular post reaching over 191,000 people was in April discussing our free tick ID service.



Ticks brought into the Ag Center for identification increased slightly with 1,153 ticks identified. Lonestar ticks were the most common tick brought in for identification. In March, a breeding population of the Gulf Coast ticks was confirmed in Salem County, NJ. This tick is generally found in the southern states. In June, we identified and confirmed them here in Ocean County. At this time, no new tick-borne diseases have been confirmed in Ocean County due to this new invader. We also were surprised by a population of Brown Dog ticks found infesting a home in Ocean County. Brown Dog ticks can live and breed in homes. They are less likely to have disease if they are a breeding indoor population versus being picked up outdoors.

Our 'In the Know to Grow' program series continued this year with 5 virtual programs and 7 in-person programs.

The programs educated over 1,300 people with the most watched program being "Light Up Your Shade Garden with Colorful Plants" with over 580 views. Our past recorded virtual programs are available on the Rutgers NJAES YouTube channel and on our RCE of Ocean County website.

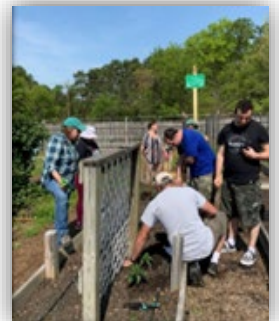


Our RCE outreach efforts around the county continued with participation in various events: Brick Green Fair, Night Out Against Crime in Point Pleasant and Lakewood, the Ocean County Fair and our third annual Butterfly Tent Event; which was a huge success. The event hosted 6 exhibitors, 6 activities, 8 information tables, and a Butterfly walkthrough tent. Over 760 people came to our event and were able to experience the butterfly tent. Our exhibitors this year included: Ocean County Mosquito Commission, Cattus Island

Naturalist, Ocean County Master Composters, Barnegat Bay Partnership/Jersey-Friendly Yards, ARC of Ocean County and the Ocean County 4-H. Thank you to all of the Rutgers Master Gardener volunteers and staff who worked hard to make this event so great!



The 2023 Rutgers Master Gardener (RMG) program supported 196 volunteers including 31 interns. The RMGs donated over 16,000 hours to the RMG program and Ocean County. Of those hours, 6,250 hours were in Outreach services through, 51 speaker bureau events, 12 Stafford library events, 59 community outreach events, 4 outreach gardens, numerous gleaning events, and in-office diagnostic services such as soil testing, helpline, and tick identification. The RMGs grew and donated almost 2,000 pounds of produce; 850 pounds of which were grown at the Cuisine on the Green Demonstration Garden with a grant awarded to MGOC, Inc. from the American Heart Association. The RMGs also gleaned and donated over 12,000 pounds of produce with NJ Agricultural Society. Donations of produce were made to over 20 Ocean County food pantries. RMG volunteers worked on the new ARC/Wrangle Brook/RMG collaboration where ARC of Ocean County participants were given garden space at the Wrangle Brook Community Garden in Toms River/Berkeley Townships to grow plants and vegetables. The RMGs are an integral part of the Rutgers Cooperative Extension, helping us to educate our County residents one garden at a time. A heart-felt thank you to Commissioner Joseph Vicari for his support of the RCE and the Rutgers Master Gardener program of Ocean County.



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# Fisheries, Aquaculture, and Marine Resources

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We had another productive year for our Marine Extension Program in 2023 as we continued delivering our education programs and conducting research projects. These efforts worked to meet stakeholder needs on issues related to fisheries, aquaculture, and marine resource management by distributing science-based information and generating new knowledge through applied research.

Our Introductory Fisheries Science for Stakeholders (IFISSH) course included 86 people who participated to learn more about New Jersey's marine fisheries via lectures from 18 different experts about topics focused on the science, management, and responsible stewardship of our marine fisheries. Our 2023 Coastal Stewardship course was offered in collaboration with ReClam the Bay and educated 104 students on how to be more responsible stewards of our coastal marine resources using shellfish biology, restoration, and aquaculture as the primary teaching tools. Our Marine Extension Program Seminar Series (MEPSS) continued to provide educational opportunities on topics such as Atlantic menhaden, sturgeon, renewable energies, and small things with big environmental impacts including microplastics and other pollutants. Many of the MEPSS seminars were hosted along with other Extension Agents as a collaboration with the Earth Day, Every Day program.

Other educational programming offered in 2023 included our annual collaboration with Ocean County 4-H and the International Game Fish Association (IGFA) on our annual "Reel Into Fishing" program as a three-day youth program to educate youth on marine biology, sustainable fisheries, and recreational fishing techniques. In addition, Dr. Zemeckis traveled around Ocean County and much of New Jersey when invited to speak to fishing clubs, environmental groups, and at retirement communities about topics related to offshore wind energy, fisheries science and management, and shellfish restoration and aquaculture.

Our field research testing a modified commercial sea scallop dredge for reducing bycatch concluded in 2023. Preliminary data analysis indicates that the modified dredge successfully reduced bycatch, which will improve the sustainability and efficiency of this fishery. We also completed our work to produce a resilience checklist that helps commercial fishing businesses to evaluate and improve their preparedness for coastal hazards and fisheries changes that are increasingly occurring because of climate change and other interacting factors.

Multiple other research projects continued in 2023. For example, our pre-construction monitoring of the previously planned Ørsted Ocean Wind 1 offshore windfarm was out seasonally through the fall to monitor finfish, shellfish, and oceanography. Ørsted has since cancelled that windfarm but our completed work improved our understanding of fisheries resources before windfarm development. Research continued on Brigantine Shoal to evaluate the impacts of sand mining for beach nourishment on fish habitat and ecology using bottom trawl, fish tagging, and an autonomous underwater vehicle. Ongoing research evaluated the feasibility for the production of multiple finfish and macroalgae species to diversify our state's marine aquaculture industry.

We at Rutgers Cooperative Extension continue to be here for and to serve our clientele in order to address the needs and issues of the businesses, communities, and individuals in Ocean County and throughout the Garden State. If you have any questions related to our marine resources or industries, including our marine Extension programs, then please call or email Dr. Douglas Zemeckis (County Agent II, Associate Professor): [zemeckis@njaes.rutgers.edu](mailto:zemeckis@njaes.rutgers.edu), 732-349-1152.







# 4-H Youth Development Program

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Ocean County 4-H uses a learn-by-doing approach to enable youth to develop the knowledge, attitudes, and skills they need to become competent, caring, and contributing citizens of the world. Ocean County 4-H staff coordinates clubs, camps, and outreach programming to meet the needs of today's youth. The 2022-2023 program year experienced a 27% increase in enrollment due to dedicated 4-H volunteers and 4-H staff offering consistent communication, fresh organizational tactics, and new programs.

## 4-H Program Highlights:

National studies consistently find that youth who participate in 4-H programs display greater confidence, a sense of responsibility, and better focus than those who do not. Youth met consistently with trained adult volunteers exploring topics in animal science, beekeeping, STEM, shooting sports, ecology, dog obedience, sewing, and more. To meet the needs of today's youth, clubs offer in-person meetings, virtual meetings, or a hybrid of both. County staff also offer programs that are welcome to any youth, whether they are current members or not, as a recruitment strategy.



*Ocean County 4-H member creating a 'Reebop' at Discover the World of Rabbits; a candy model organism teaching about genetic concepts.*

- **Discover the World of Rabbits:** An original program created by 4-H Program Assistant, Laura Ferrie, was offered in four sessions, December 8, January 6, March 3, and June 23. Professional ARBA judges and breeders taught this highly interactive program in subjects about introductory rabbit care, diseases, nutrition, genetics, showing, and showmanship. There were twenty-three experts involved in this program with twenty-five youth participants. This program received outstanding compliments and excellent ratings from all participants using the Rutgers 4-H Youth Evaluation Form.
- **Cloverbud Days:** Ocean County 4-H offered two Cloverbud-specific programs, called Cloverbud Day, for any youth in Ocean County in grades K-3. The goal of these programs is to provide specific hands-on educational experiences to the youngest of 4-H members while recruiting new members to join. The April 15 Spring Cloverbud Day was designed to teach youth about the importance of composting, caring for flowers, and caring for small animals. Three 4-H teen members served as Junior Counselors for the program, assisting the cloverbuds while getting to know them. A second Cloverbud Day was offered during the Ocean County Fair on July 15, where participants made plantable paper while learning about the importance of pollinator animals. From these programs, ten families have joined 4-H.
- **Ocean County Fair:** The Ocean County Fair was held July 12 – 15, 2023 at Robert Miller Airpark. Ocean County 4-H members were excited to have the opportunity to showcase the projects that they had been working on all year. Projects included paintings, sculptures, handmade clothes, recipes, STEM projects, rabbits, small animals, livestock, poultry, equine, and more. Educational opportunities for 4-H youth and public youth to participate were also offered, such as an archery fun shoot. Fun events were also included, like bobbing for carrots and a chicken dance. The fair proved to be quite successful bringing in 22,000 guests.
- **Honey Harvest:** Ocean County 4-H member, Katie Culbert, and 4-H staff successfully organized two Honey Harvest Days at the Rutgers University Bee Yard in Cream Ridge, on June 21 and August 16. Thirty youths from six NJ counties attended and received hands-on experience as a beekeeper, from caring for a hive to harvesting and bottling honey. Dr. Brian Schilling from Rutgers Cooperative Extension, Secretary Doug Fischer from the New Jersey Department of Agriculture, Nicole Medina from NJ Honey Queen, Assemblyman Alex Saulckie, Jeff Burd from New Jersey Beekeepers Association, and many other esteemed dignitaries joined for the program. Katie was also recognized by Ms. Olivia Glenn, Chief of Staff from the U.S. Environmental Protection Agency for her achievement in winning the President's Environmental Youth Award: Region 2. From Katie's success with the Ocean County 4-H Busy Bee's Club, her EPA award, and Honey Harvest Day, National 4-H featured Katie as a National Pollinator Ambassador. She was featured on all National 4-H media outlets on June 20. She also had the opportunity to be interviewed on NJ12 News and CBS NY to share about her 4-H projects.
- **Community Outreach:** 4-H staff maintained strong relationships with sixteen partners in the 2023 program year, which includes county parks, county libraries, schools, town municipalities, and other non-profit organizations. 30 staff-led outreach programs were presented to members of the public. These opportunities further connect RCE/4-H with the community as they learn something new from the topics taught. Topics included Wildlife Rehabilitation, Animal Behavior, Pollinators, and Terrariums.

## Ocean County 4-H by the numbers:

- |                     |                                   |  |
|---------------------|-----------------------------------|--|
| ▪ 17 Active clubs   | ▪ 45 Adult volunteer leaders      | ▪ 16 Community partnerships              |
| ▪ 194 Youth members | ▪ 900 Volunteer hours contributed | ▪ 60 Hours of staff outreach programming |



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# Ocean County Rutgers Cooperative Extension



**Water Basin**



**Tuckerton Seaport**



**4-H Garden Build**

Rutgers Cooperative Extension county offices are found in all 21 New Jersey counties and are the result of a partnership between Rutgers Cooperative Extension, Boards of County Commissioners, and the U.S. Department of Agriculture, working together to meet the needs of all New Jersey residents.

Programs are provided without regard to race, religion, color, national origin, ancestry, age, sex, sexual orientation, gender identity and expression, disability, atypical hereditary cellular or blood trait, marital status, civil union status, domestic partnership status, military service, veteran status and any other category protected by law. Rutgers Cooperative Extension encourages individuals with disabilities to participate in its programs and activities. If you need special accommodations, have questions about physical access, or require alternate means for program information, please contact your local Extension Office. Contact the State Extension Director's Office if you have any concerns related to discrimination, 848-932-3703.



**Thank you Former Commissioner Vicari  
for your dedicated and outstanding service  
the past 42 years.**

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**2024**  
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