Caribbean Area
Natural Resources Conservation Service

2013 Annual Report

Productive Lands — Healthy Environment

Helping People Help the Land in Puerto Rico & the U.S. Virgin Islands
Quick Facts

- 12,822 acres of conservation planning completed
- 13,182 acres of cropland conservation applied to improve soil quality
- 24,464 acres of conservation applied to improve water quality
- 1,488 acres of irrigation improvements
- 17,974 acres of grazing land with conservation applied to protect/improve the resource
- 822 acres of conservation applied to protect fish & wildlife habitat
- Approximately 68% of financial assistance provided to beginning, limited-resource or socially-disadvantaged farmers
- Over $3.8 Million in financial assistance to Caribbean Area producers & landowners

Message From Our State Conservationist

Greetings Caribbean NRCS Employees and Partners!

What a year! I am glad we made it (through). There are so many great stories to tell that if we share them all with you, we will need more than a few pages. I am so proud to present you with the most remarkable accomplishments we had as a team in the Caribbean Area.

To our employees, many thanks for an excellent job, keep up the outstanding work! To our partners, thank you for helping us to accomplish our goals, without you we couldn't make it. To our customers, without you we couldn't achieve excellence, thank you for participating and helping us help the land.

Yours in Conservation,

Edwin Almodóvar, Director
Caribbean Area Natural Resources Conservation Service
Environmental Quality Incentives Program (EQIP)

EQIP is a voluntary conservation program to provide farmers with technical and financial assistance to install and implement conservation practices on eligible agricultural lands. Through EQIP, farmers in Puerto Rico and the U.S. Virgin Islands receive assistance for agricultural production and environmental quality as compatible goals.

In FY 2013, NRCS approved 375 contracts providing $3,902,214 in financial assistance to benefit 12,821 acres in the Caribbean Area, including contracts specific to 5 major initiatives: Coral Reefs, Coloso Valley Watershed, On-Farm Energy, Seasonal High Tunnel, USVI Projects & Cropland By-Product. Approximately 68% of these funds were provided to beginning, limited-resource or socially-disadvantaged farmers.

EQIP On-Farm Energy Initiative

NRCS & the Puerto Rico Milk Industry Development Fund are helping dairy producers transition to more energy efficient operations. The On-Farm Energy Initiative funds individual on-farm energy audits to save farmers both money and energy. This year, NRCS approved 2 Energy Audit contracts for $4,478 and signed 16 On-Farm Energy contracts for $257,600 to implement energy audit recommendations. Auditors will conduct on-farm energy audits for eligible participants to identify how farm operations can become more energy-efficient, and use audit results to develop cost-effective Agricultural Energy Management Plan (AgEMPs).

EQIP Coral Reef Initiative

The Guánica-Río Loco Watershed Project is located in the southwest corner of Puerto Rico and covers portions of Guánica, Yauco, Lajas and Cabo Rojo. Since 2009, NRCS has been helping producers in the watershed to voluntarily install conservation practices to reduce and trap sediment and nutrient runoff, improve wildlife habitat, and maintain agricultural productivity. The project is a multiagency effort to support the U.S. Coral Reef Task Force and reduce the impacts of land-based sources of pollution on coral reefs.

To date, NRCS has allocated over $2.9 million in EQIP funds and conservation technical assistance to conserve resources on over 2,762 acres of farmland in the Río Loco watershed. In the Upper Río Loco watershed, over $625,360 has been obligated to convert 1,149 acres of sun-grown coffee plantations to shade-grown coffee on 46 farms (right). To date, over 27,000 native trees have been planted and over $406,000 has been paid to farmers for reforestation and conservation practices. Practices installed include: 3 3-acre irrigation reservoirs; 2 3-acre sediment basins; 1,970 feet of open channels; 6,600 feet of irrigation pipeline; 2 water & sediment control basins; 437 acres of terraces; 12,053 feet of fencing; 4 livestock watering facilities; 162 acres of pasture and hayland planting; 105 acres of access control; 3 acres of critical area plantings; 446 acres of multi-story cropping; 34 acres of riparian forest buffer; 530 acres of brush management; 198 acres of heavy use area protection; 1,489 acres of nutrient management; and 933 acres of integrated pest management.
EQIP Coloso Valley Special Project

NRCS is partnering with Noroeste SWCD and the PR Department of Agriculture on a special project in the Coloso Valley in Aguada to help beginning & limited-resource farmers reduce soil erosion and improve irrigation efficiency, runoff management and water quality. Farmers in the area face challenging weather conditions: a seasonal crop water deficit from December to April, and ponding and high water tables during the rainy season. Planned conservation practices include irrigation reservoirs and pipelines, micro-irrigation systems, pumping plants, waste facility covers, residue & tillage management, access control, critical area planting, row arrangement and contour farming. In FY 2013, 3 contracts were obligated for a total of $303,281 to protect about 122 acres.

EQIP Seasonal High Tunnel

EQIP’s Seasonal High Tunnel Initiative offers financial and technical assistance to farmers to meet increased demand for specialty and organic products. The Seasonal High Tunnel practice is a polyethylene-covered structure called a Hoop House—similar to a greenhouse but with no electrical, heating, and/or mechanical ventilation system—that is used to cover high-value crops to extend the growing season in an environmentally safe manner. In FY 2013, NRCS approved 10 Seasonal High Tunnel contracts for local producers for a total of $77,431.

EQIP Cropland By-Product Management

The Cropland By-Product Management Initiative offers financial and technical assistance to help coffee producers improve the way they manage wastes (by-products) generated by coffee processor plants in order to avoid water, soil and air pollution—“Beneficiado Ecológico.” This year, NRCS approved 5 Cropland By-Product Management contracts for $193,875 to off-set the cost of purchasing and installing ecological machinery that uses less water to process coffee berries (left), improving coffee processing efficiency.

Conservation Innovation Grants (CIG)

CIG is a voluntary program to stimulate innovative conservation projects in conjunction with agricultural production. CIG allows NRCS to work with public and private entities to promote promising technologies to address resource concerns (soil, water, air, plants, animals, energy). In Fiscal Year 2013, The Caribbean Area NRCS awarded $60,000 to 2 projects in Puerto Rico to demonstrate and/or validate new technology for the Caribbean Area:

Project 1: Doctor Gladys Gonzalez, University of Puerto Rico-Mayagüez Agricultural Science Department, awarded a $30,000 CIG grant entitled “Women in Puerto Rican Agriculture: Preserving Farmland for Sustainable Development.”

Project 2: AgroTropical in Gurabo, was awarded $30,000 to evaluate cover crops and in-vitro tissue propagation culture for efficient plantain production systems and to improve soil health.
National Resources Inventory (NRI)

The NRI provides natural resource managers, policy makers and the public with scientifically valid, timely, and relevant information on the natural resources and environment of the Caribbean Area. This data provides the scientific basis for effective public policies, sound agricultural and natural resource legislation, sensible local and national conservation programs, and targeted USDA financial and technical assistance to address natural resource concerns.

The 2007 NRI is the latest in a series of national resource inventories conducted by USDA-NRCS throughout the United States, including the Supplemental Caribbean 2007 NRI Summary Report. It provides updated information on the status, condition, and trends of land, soil, water, and related resources on non-Federal lands across the Nation. Non-Federal lands include privately owned lands, tribal and trust lands, and lands controlled by State and local governments. The NRI provides a record of the Nation’s conservation accomplishments and future program needs. During FY 2013, Caribbean Area NRI staff completed the data collection and certification of 2011 and 2012 NRI segments.

Plant Materials Program (PMP)

This fiscal year, the NRCS-CB Plant Materials Program (PMP) published a new full-color field guide, “Guide to Common Weeds of Puerto Rico and the U.S. Virgin Islands.” The guide lists 184 species considered to be the most frequent and difficult to manage in the Caribbean Area. It includes photos and detailed descriptions to help clients identify shrubs, trees, vines and other invasive species. The guide is available online at: www.nrcs.usda.gov/wps/portal/nrcs/detail/national/plantsanimals/plants/feature/?cid=stelprdb1078250.

The PMP completed a field evaluation of native/naturalized flora for shelter and fodder for native bee populations in cropland in Puerto Rico and the USVI. This project was funded by a $40,000 grant from the National PMP to demonstrate and apply habitat for native pollinators on cropland in the Caribbean Area. PMP staff trained 36 farmers and UPR Extension Service and NRCS-CB personnel in composting using cow manure as the primary source of nutrients, in cooperation with Dr. Joaquin Chong from UPR-Mayagüez. The PMP also awarded $28,000 to Fundación de Conservación Puertorriqueña to evaluate the use of native grass, Uniola virgata, for soil erosion control, habitat improvement and water quality improvement. Field work will be conducted by the UPR-Mayagüez Biology Department.

PMP staff also spear-headed the construction of the first NRCS People’s Garden in the Caribbean Area, inaugurated on February 28, 2013, at the Tropical Agriculture Research Station (TARS) in Mayagüez, Puerto Rico. The Mayagüez People’s Garden is a collaborative effort between NRCS, TARS, UPR Mayagüez (Agricultural Experiment Station, Cooperative Extension Service, Sea Grant), the Oeste Soil & Water Conservation District (SWCD), Casa Belén, and Mayagüezanos Pro Salud y Ambiente. Project partners donated all materials and supplies to build this beautiful garden. Since its inauguration, the garden has produced 275 pounds of fresh, high quality produce regularly donated to Casa Belén Nursing Home.
Soil Survey Program

The NRCS Caribbean Area Soils Survey Division is part of the National Cooperative Soil Survey (NCSS) program, a nationwide partnership of federal, regional, state and local agencies and institutions. This partnership works together to cooperatively investigate, inventory, document, classify, and interpret soils and to disseminate, publish, and promote the use of soils data for the United States and its trust territories.

During FY 2013, the Mayagüez MLRA SSO completed the evaluation and update of five Soil Data Joint Re-correlation (SDJR) projects and submitted them to MO Region #3 in Raleigh, NC, for Soil Quality Assurance. This initiative emphasizes and accelerates the on-going Major Land Resources Area (MLRA) approach. The SDJR initiative will consolidate map units across soil survey areas. The five SDJR projects update soil information for a total of 274,839 acres for the following Caribbean Area map units: Humatas clay, 20 to 40 percent slopes; Humatas clay, 40 to 60 percent slopes; Consumo clay, 20 to 40 percent slopes; Consumo clay, 40 to 60 percent slopes; and Maricao clay, 20 to 60 percent slopes. Once the Soil Quality Assurance is completed, the updated information will be made public through the NRCS Web Soil Survey in January 2014.

Caribbean Area Soil Survey Division staff also participated in the second phase of the Rapid Carbon Assessment (RaCA) initiative. The RaCA initiative provides NRCS-CB with an excellent opportunity to inventory the effects of soil properties, agricultural management and land use on soil carbon stocks. The Caribbean RaCA project is studying 30 sites throughout Puerto Rico and the USVI. In FY13, soil samples were collected for 15 sites in the municipalities of Rincón, Lajas, Guánica, Juana Díaz, Las Marias, Aguadilla, Cabo Rojo, Arecibo, Jayuya, Ponce, Santa Isabel, St. Croix and St. John. These 15 sites collectively represent a diversity of soils from different MLRAs (including 270-Humid Mountain and Valleys, 271-Semi-arid Mountain and Valleys, 272-Humid Coastal Plains and 273-Semi-arid Coastal Plains) and under different land uses including cropland, pastureland, forestland and wetlands.

It is very important task for the Caribbean Area Soil Survey Division staff to help our users understand and properly use soil survey information. In fiscal year 2013, we interacted with over 4,363 users face-to-face through direct soil technical assistance and active participation in various outreach activities such as: on-site investigations, agricultural fairs, workshops, trainings, environmental impact statement evaluations, university and school students’ educational conferences and/or activities. MLRA soil scientists participated in the establishment of the Mayagüez People’s Garden, local radio programs and television documentaries, emphasizing the proper use of our soil natural resource. The NRCS Caribbean Area Soils website (www.nrcs.usda.gov/wps/portal/nrcs/main/pr/soils/) was also updated to promote the NRCS Soil Health initiative: “Unlock the Secrets in the Soil.” (This information is available to the public in both English and Spanish.) Soils information was also disseminated to over 1,000 members of the public through social media including Twitter, FaceBook and GovDelivery. The clientele reached through all these activities included: farmers, federal and local government agency employees, school and university professors and students, consultants, and the general public.

MLRA Leader, Manuel Matos, shows UPR students how soil formation factors contribute to different soil types while Intern, Keila Ortiz, and Resource Conservationist, Mario Rodriguez, observe.
Conservation Technical Assistance (CTA)

NRCS provides conservation technical assistance (CTA) to land users to help them make sound natural resource management decisions. Assistance includes resource assessment, practice design, resource monitoring, or follow-up of installed conservation practices. NRCS also holds outreach activities to increase participation of socially-disadvantaged farmers and ranchers in our programs and to provide information to underserved groups and individuals.

Outreach: In FY 2013, NRCS provided CTA to over 6,740 clients and media outreach to over 150,000 residents through over 1,230 activities and contacts including: training workshops, onsite investigations and evaluations, conservation plans, technical consultations, advisory committees, newspaper and newsletter articles, radio appearances, conference presentations, public meetings, informational mailings and email blasts, outreach publications, posters and exhibits, the NRCS Caribbean Area website and Facebook page, Twitter, and personal contacts.

Grants: In FY 2013, NRCS-CB completed 3 FY2011 Conservation Technical Assistance Program (CTAP) grants and executed 3 new Cooperative Agreements with Noroeste SWCD, Suroeste SWCD and Senior Service of America. CTAP’s goal is to increase NRCS technical capacity and to further enhance partnership opportunities in the Caribbean Area to accomplish the Agency’s conservation objectives and priorities. Project accomplishments included:

- NRCS & Suroeste SWCD helped 120 producers in the Guánica/Río Loco watershed to implement water conservation and runoff management practices to improve over 22,500 acres of land ($2.2 Million in financial assistance).
- NRCS partnered with the U.S. Fish & Wildlife Service (FWS) Caribbean Islands National Wildlife Refuge to collect/propagate about 10,000 specimens of 16 native tree and shrub species, planting over 27,000 trees in the Guánica/Río Loco watershed.
- NRCS & USFWS helped 56 farmers in the Guánica/Río Loco watershed to convert 685 acres from sun coffee to shade coffee in order to establish a wildlife corridor between Maricao, Yauco and Guillarte Forests.
- NRCS partnered with Atkins, Inc., to hold 4 technical Nutrient Management Workshops in Isabela, Gurabo, Corozal and Juana Díaz. The workshops introduced farmers to the nutrient management process and increased their understanding of crop nutrient needs and proper soil sampling techniques. The workshops also provided information to farmers about NRCS programs and how to register with FSA to participate in USDA programs. Over 120 farmers and clients participated.
- The St. Croix Environmental Association and contractor, Horsley Witten Group, Inc., completed a design project to reduce land-based sources of sediment entering St. Croix East End Marine Park waters. They produced engineering designs to stabilize a mass-wasted gut (intermittent stream) on pastureland in Southgate watershed, installed a demonstration rain garden, and completed a road drainage master plan for a 5-mile network of eroding dirt roads in Solitude watershed.
- Caribbean Environmental Films, Inc., produced a 30-minute documentary and two 30-second video clips highlighting NRCS conservation accomplishments in the Caribbean Area. The videos were produced in both English and Spanish, subtitled, and uploaded to YouTube. Fifty DVDs of the film were also produced and distributed to partners and clients.
Partnerships

During FY 2013, the NRCS Caribbean Area and the Suroeste and Noroeste Soil and Water Conservation Districts (SWCDs) conducted a series of 14 public meetings from January to June to start developing planning proposals for Lajas Valley, Guanajibo Valley and Coloso Valley irrigation water management, runoff management and best management practices. Over 250 clients and partners participated in the meetings, including personnel from the Puerto Rico Department of Agriculture (PRDA) and the Puerto Rico Land Authority.

NRCS continued our partnership with the Noroeste SWCD to implement a special project in the Coloso Valley to improve runoff management and irrigation systems. This effort includes technical assistance from NRCS and financial assistance from both NRCS and the PRDA. The NRCS—Noroeste SWCD partnership also continued to conduct outreach activities to promote Farm Bill Programs, including the reproduction of 2,000 CIG, GRP and EQIP brochures to be distributed by Field Offices and the State Office.

NRCS partnered with the Puerto Rico Tourism Company to participate in 12 workshops to provide information to land users about the programs available to develop agribusinesses. These workshops were also sponsored by the municipalities of Utuado, Las Marías, San Juan, Lajas, Juana Díaz, Maricao, San Sebastián, Río Grande and Humacao.

NRCS also partnered with NOAA, and F&WSS to provide technical assistance to Río Loco Watershed farmers to protect coral reefs in Yauco municipality by implementing conservation measures to enhance wildlife habitat and control soil erosion on uplands.

Emergency Watershed Protection (EWP)

The Emergency Watershed Protection (EWP) program helps communities implement emergency measures, including purchase of flood plain easements, to relieve imminent hazards to life and property created by a natural disaster. EWP can install practices to help areas recover from flood, drought, erosion, landslides and sedimentation on any watershed whenever fire, flood, storms or any other natural disaster has caused a sudden impairment of the watershed.

In the aftermath of Hurricane Irene on August 21, 2011, NRCS awarded EWP $1.8 million to 6 communities in Puerto Rico that suffered damage to watershed areas. To date, 3 projects were completed clearing 1300 feet of Candelero River in Humacao; clearing and shaping 4,000 meters of Quebrada Arenas Creek in Las Piedras; and installing gabion wall stream bank stabilization on 100 feet of California Creek in Maunabo. Three more stream bank stabilization projects are underway. The stabilization of 365 feet of Los Muertos Creek that will be completed by the end of November, 2013, and stabilization of 150 feet of La Ponderosa Creek Caguas; and 1,200 feet of Los Méndez Creek in Yabucoa. The stabilization of 1,200 feet of Los Méndez Creek in Yabucoa began in August, 2013, and will be completed in March, 2014.
Civil Rights Advisory Committee (CRAC)

NRCS Caribbean Area CRAC members represent field and state office employees from Puerto Rico and the US Virgin Islands, serving in an advisory role to the Director, to provide civil rights counsel and recommendations for all clients and employees.

There are eight Special Emphasis Programs (SEPs) that are part of the Civil Rights Advisory Committee and each has its own SEP Manager (or SEPM): African Americans; American Indians/Alaska Natives; Asian Americans/Pacific Islanders; Persons with Disabilities; Lesbian, Gay, Bisexual and Transgender (LGBT) Individuals; Hispanics; Veterans; and Women. Fiscal year 2013 CRAC member accomplishments include:

- 67.5% of FY13 Farm Bill Program participants were Beginner, Limited-Resource, or Socially-Disadvantaged Farmers.
- 15% of FY 13 Farm Bill Program participants were Women.
- Participation in the UPR Mayagüez Annual Job Fair, directly providing career, employment and internship information to 130 students.
- Celebration of February Black History Month conference at Ponce airport in collaboration with USDA-APHIS staff hosting 45 participants.
- Participation in UPR-Mayagüez “Cinco Días con Nuestra Tierra” Agriculture Fair with over 2,000 participants visiting the NRCS booth and in UPR-Mayagüez International Week hosted by CoHemis with over 100 university students attending.
- Presentation at “Feria Agro Ecológica de la Escuela Elemental Consuelo González” with 26 elementary students participating and with FSA at Maricao Coliseum with 25 farmers participating.
- Participation in 7 Veterans Job Fairs to provide outreach on USDA-NRCS programs and employment opportunities for over 1,000 attendees.
- Participation in 4 Job Training workshops to conduct classes on resume building, USAJOBS website, VA E-benefits and American Jobs Act review of benefits for 200 participants including over 150 veterans.
- Participated in Military Earth Day at Fort Buchanan, describing conservation and NRCS programs to over 250 elementary to high school students; in “Rediscover Boquilla Estuary Fair” with over 200 participants visiting the NRCS booth; and in “Festival Tierra Adentro” at UPR Utuado with over 300 participants.
- Hosted public meeting for 43 farmers from Guanajibo watershed to provide technical assistance.
- San Sebastián FO conducted outreach Field Tours and demonstrations for 30 university students on conservation planning techniques, conservation practices, and instruments & technologies.
- Utuado FO staff conducted outreach about NRCS Programs, conservation practices, educational programs and career opportunities for over 35 attendees at the first coffee farmers educational activity: “ Manejo Organico de Malezas en Cafetales.”
- St. Croix FO staff participated in 5 career fairs providing over 265 junior and senior high school students with information on careers in agriculture and natural sciences, and careers with NRCS and Juana Diaz FO staff delivered conservation and careers information to 4H students at Toa Vaca Lake.
- Caguas, Corozal and Juana Diaz FO staff partnered with FSA, RD, PRDA and the Forest Service in outreach workshops to address resource concern issues and present NRCS conservation program information to over 370 farmers and clients, including under-served farmers.
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