Caribbean Area (Puerto Rico and US Virgin Islands)

Soil Science Division

Helping People Understand Soils

Soil Survey Program:

Soil surveys provide critical information for land use decisions, both on the farm and in the city. Whether a developer is looking to build on or purchase land, or a farmer is considering alternative crops, soil survey data is a critical element in the equation that produces profits. This is essential to rural America and the need for producers and ranchers to maximize productivity without harming natural resources. To access soil survey information, visit www.websoilsurvey.nrcs.usda.gov.

Soil Technical Services:

A major responsibility of Technical Soil Services within NRCS is to assist users with understanding and properly using the soil survey and to provide users with predictions under defined situations.

- On-site investigations.
- Special projects, studies and inventories.
- Determination of hydric soils and highly erodible lands.
- Providing education and training.
- Promoting customer awareness of soils information.
- Assisting to other units of government.

Soil Climate Analysis Network (SCAN) Stations:

WHAT IS SCAN?

The Soil Climate Analysis Network (SCAN) is a comprehensive, nationwide soil moisture and climate information system designed to provide data to support national resource assessments and conservation activities. Administered by the United States Department of Agriculture Natural Resources Conservation Service (NRCS) through the National Water and Climate Center (NWCC), in cooperation with the NRCS National Soil Survey Center, the system focuses on agricultural areas of the U.S. monitoring soil temperature and soil moisture content at several depths, soil water level, air temperature, relative humidity, solar radiation, wind, precipitation, barometric pressure, and more.

To access the SCAN data, visit http://www.wcc.nrcs.usda.gov/scan/

Information Collected from a Standard SCAN Site

<table>
<thead>
<tr>
<th>Parameter Measured</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precipitation</td>
<td>Stored in a tipping bucket sensor.</td>
</tr>
<tr>
<td>Air Temperature</td>
<td>Collected by a shielded thermistor.</td>
</tr>
<tr>
<td>Relative Humidity</td>
<td>Collected by a thin film capacitance sensor.</td>
</tr>
<tr>
<td>Wind Speed and Direction</td>
<td>Collected by aplanar anemometer.</td>
</tr>
<tr>
<td>Solar Radiation</td>
<td>Collected by a pyranometer.</td>
</tr>
<tr>
<td>Water Radiation</td>
<td>Measured by a capacitive pressure sensor.</td>
</tr>
<tr>
<td>Heat Flux</td>
<td>Collected by a constant measuring device. Typical measurements are at 2&quot;, 4&quot;, 8&quot;, 16&quot;, and 40&quot; above soil surface.</td>
</tr>
<tr>
<td>Soil Temperature</td>
<td>Collected by a capacitive thermometer. Typical measurements are at 2&quot;, 4&quot;, 8&quot;, 16&quot;, and 40&quot; below soil surface.</td>
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</tbody>
</table>

All sensor measurements are reported hourly.

National Cooperative Soil Survey Program (NCSS):

The Caribbean Area Soil Science Division is part of the National Cooperative Soil Survey (NCSS) program. The NCSS is a nationwide partnership of federal, regional, state, and local agencies and institutions committed to delivering science-based soils information that helps people be good stewards of the Nation’s soil, water, and related natural resources.

Manuel Matos, MLRA leader, explains the Cueva series’ soil formation factors to a group of students and professors from North Dakota University as part of their activities on the Puerto Rico Soils Tour sponsored by the University of Puerto Rico – Mayaguez, Campus.

Carmen L. Santiago, State Soil Scientist, met with soil survey cooperators to discuss the Caribbean Area Soil Survey Programs goals and activities.

National Resources Inventory Program (NRI):

The National Resources Inventory (NRI) is an inventory of land cover and use, soil erosion, prime farmland, wetlands, and other natural resource characteristics on non-Federal rural land in the United States. The primary objective of the NRI is to provide natural resource managers, policy makers, and the public with scientifically valid, timely, and relevant information on natural resources. This information can provide 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 in addressing natural resource concerns.

To access the NRI data, visit http://www.pr.nrcs.usda.gov/technical/NRI/index.html

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