Introducing the NRCS Soil Health Division

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USDA-NRCS

United States Department of Agriculture is an equal opportunity provider and employer.
Our Challenges
Feeding the population on a shrinking available land base

World Population: 1950-2050

Source: U.S. Census Bureau, International Data Base, June 2011 Update.
For Official Use Only

Map ID: m12768
Data Source:
2007 National Resources Inventory,
U.S. Dept. of Agriculture, Natural Resources Conservation Service

Map Source:
U.S. Dept. of Agriculture, Natural Resources Conservation Service
Resource Assessment Division, Beltsville, MD June 2013

This interpretive map shows generalized spatial trends in NRI statistical sample survey data. The NRI sample was designed to yield reliable estimates at broader, more regionalized levels than those depicted by the 8-mile radii aggregations chosen for this interpretation, which is used to examine more localized variability. Localized variations should be considered carefully in the broader geographic context.

Percent Urban and Built-Up Land Area, 1982

Legend:
- Over 50
- 15 - 50
- 5 - 15
- 1 - 5
- 1 or less
- Federal lands
- Non-U.S. areas
- Water bodies
- State boundaries
- County boundaries

Estimated percents are based upon sampled acres within 8-mile-radius areas.
Increasing Temperature

Data from thermometers (red) and from tree rings, corals, ice cores and historical records (blue).

Adapted from Hayhoe 2011
Water Challenges – will we have enough?
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

http://droughtmonitor.unl.edu/
National Water Quality Challenges

- Biological conditions of nation’s rivers and streams
  - Poor - 55.3%
  - Fair – 23.3%
  - Good – 20.7%
  - Unknown – 0.8%
- Greatest stressors:
  - Phosphorous
  - Nitrogen
  - Riparian cover and disturbance
  - Streambed sediment
  - Enterococci

Biological condition of the nation's rivers and streams, based on the Macroinvertebrate Multimetric Index. From National Rivers and Streams Assessment (2008–2009) (EPA, 2013.)
Our Win-Win Opportunities

Feed ourselves, improve profits, AND improve the environment!
Return on our Nation’s Soil Health Investment
Changing the Face of Agriculture and How We Feed our Nation

BENEFITS
• Nutrient cycling
• Pest suppression
• Carbon sequestration and energy savings
• Water infiltration
• Less runoff, erosion, flooding
• Water storage and availability
• Resilience
• Biodiversity, groundwater, clean water and air ...
• Long-term economic viability
• Sustained reliable productivity – to feed 9 billion

Photos: NRCS and Dorn Cox, 2012
Soil Health Campaign

- Raised awareness
- Expanded demand for system adapted information
- Raising many good questions
Adapting Soil Health Management Principles to soils, regions, and cropping systems requires broad collaboration!

- Minimize soil disturbance.
- Maximize diversity (plants, animals, amendments, inoculants...).
- Keep the soil covered.
- Maximize living roots.

Beware that soil health changes slowly over time. Don’t expect immediate results...
Staffing up the USDA-NRCS Soil Health Division

Division Director
Dr. Bianca Moebius-Clune

National Communications & Partnership Liaison

National Soil Health Team Leader
Mr. David Lamm

National Soil Health Specialist
Dr. Diane Stott

Regional Team Leaders (4)
Mr. Barry Fisher – Central
Dr. Brandon Smith – Northeast
Others currently being hired

Regional Soil Health Specialists (12)
currently being hired
Staffing up to represent varied production systems, leverage efforts, address critical issues

Ag Production Systems
Soils
Climate

Addressing the Nation’s most critical issues through Soil Health

Plant Materials Centers
Critical Conservation Areas
ARS & Land Grant Research Partners

Climate Change Adaptation and Mitigation

Click on a region to learn more about the USDA Climate Hub in your area.
National Soil Health Division Team:
Primary coverage areas, but national scope, responsibility, and collaboration
NRCS supports farmers technically and financially

Assistance for:
- Conservation Planning
- Cover crops
- Min tillage/residue mgmt
- Fertility/manure mgmt
- Pest mgmt
- Crop rotations
- High tunnels
- Prescribed grazing
- Fencing
- Irrigation…
Goals of the new NRCS Soil Health Division

- **Leverage Partners**
  Within NRCS and externally (NACD, SARE, TNC, EDF, Soil Renaissance, ARS, NIFA, Hatch, Universities, Nonprofits ...)
- **Ensure Scientific Basis**
- **Evaluate Economics**
- **Quantify Benefits**

1. Observation, Adaptation
2. Observation, Adaptation
3. Soil Health Assessment
4. Soil Health Management Planning
5. Soil Health Management Systems Implementation
6. Soil Health advanced training

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Thank you!