



NRCS and Partner Campaign to Improve Soil Health

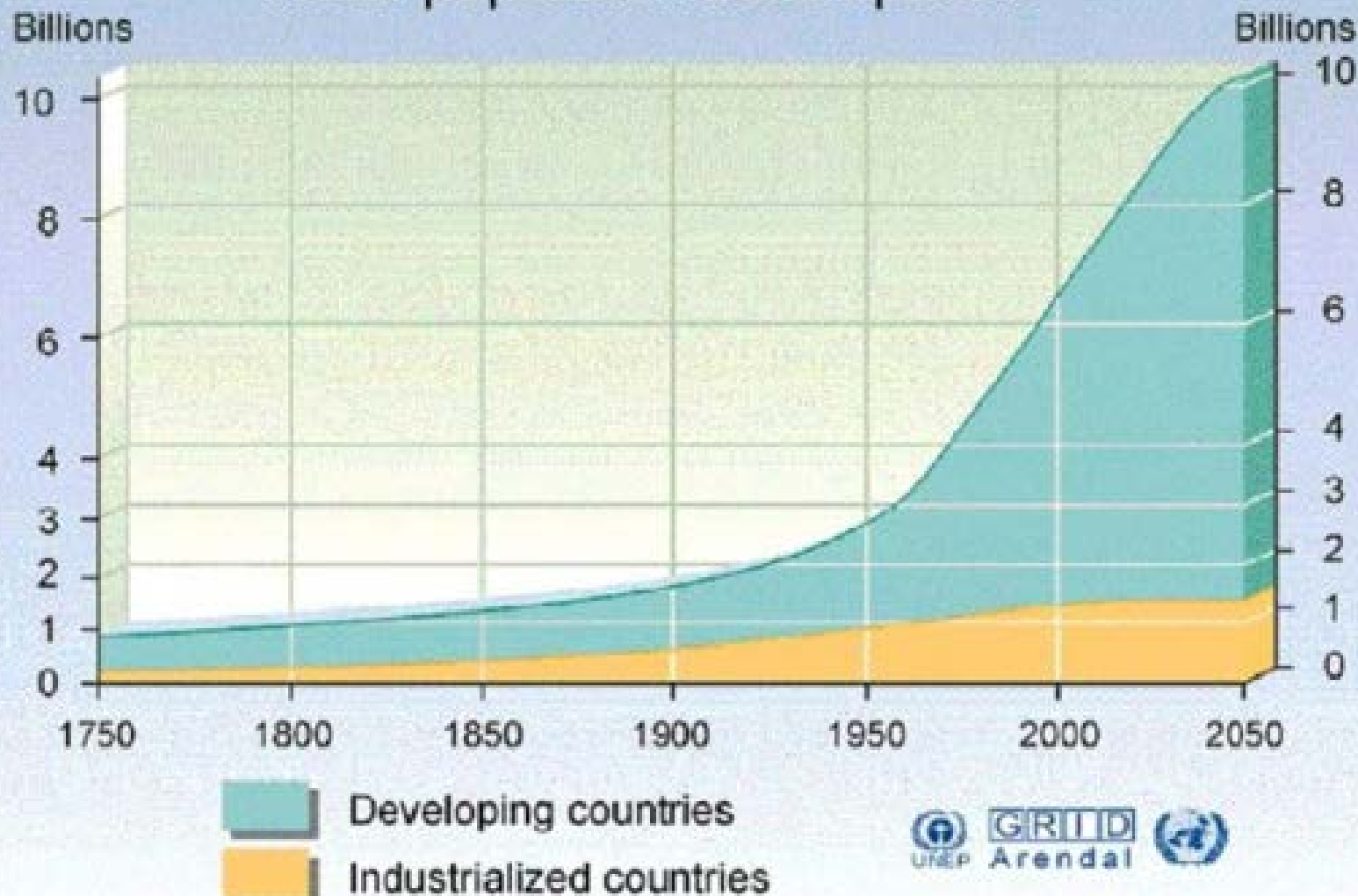
Wayne Honeycutt, Ph.D.
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Washington, DC



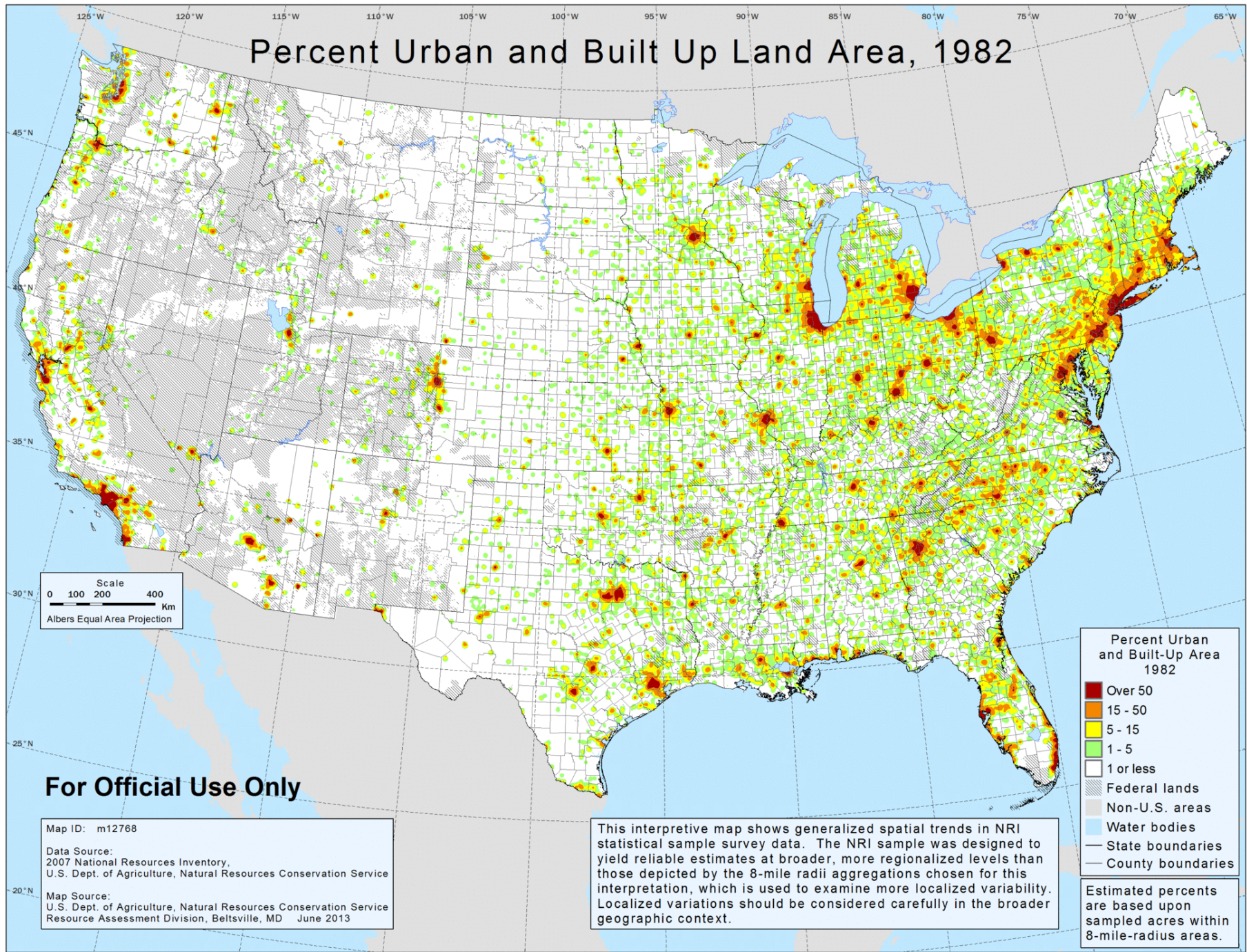
United States Department of Agriculture
Natural Resources Conservation Service

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World population development

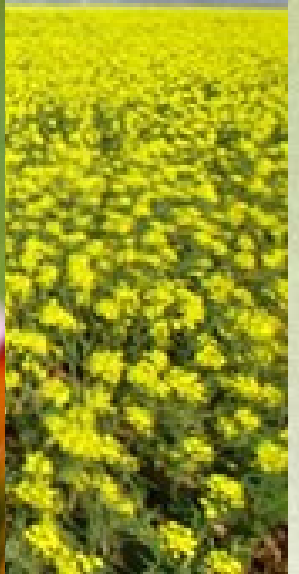


Percent Urban and Built Up Land Area, 1982



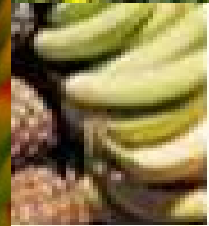
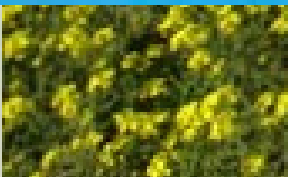
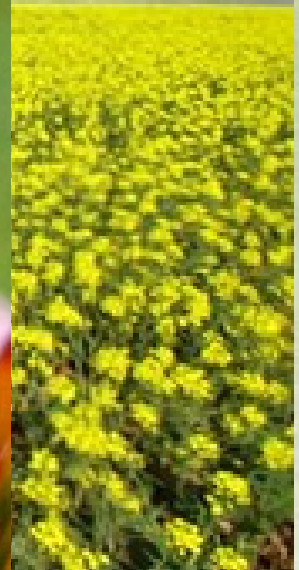


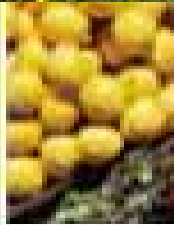
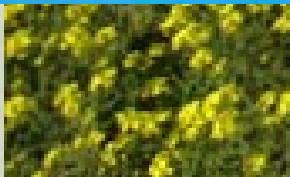






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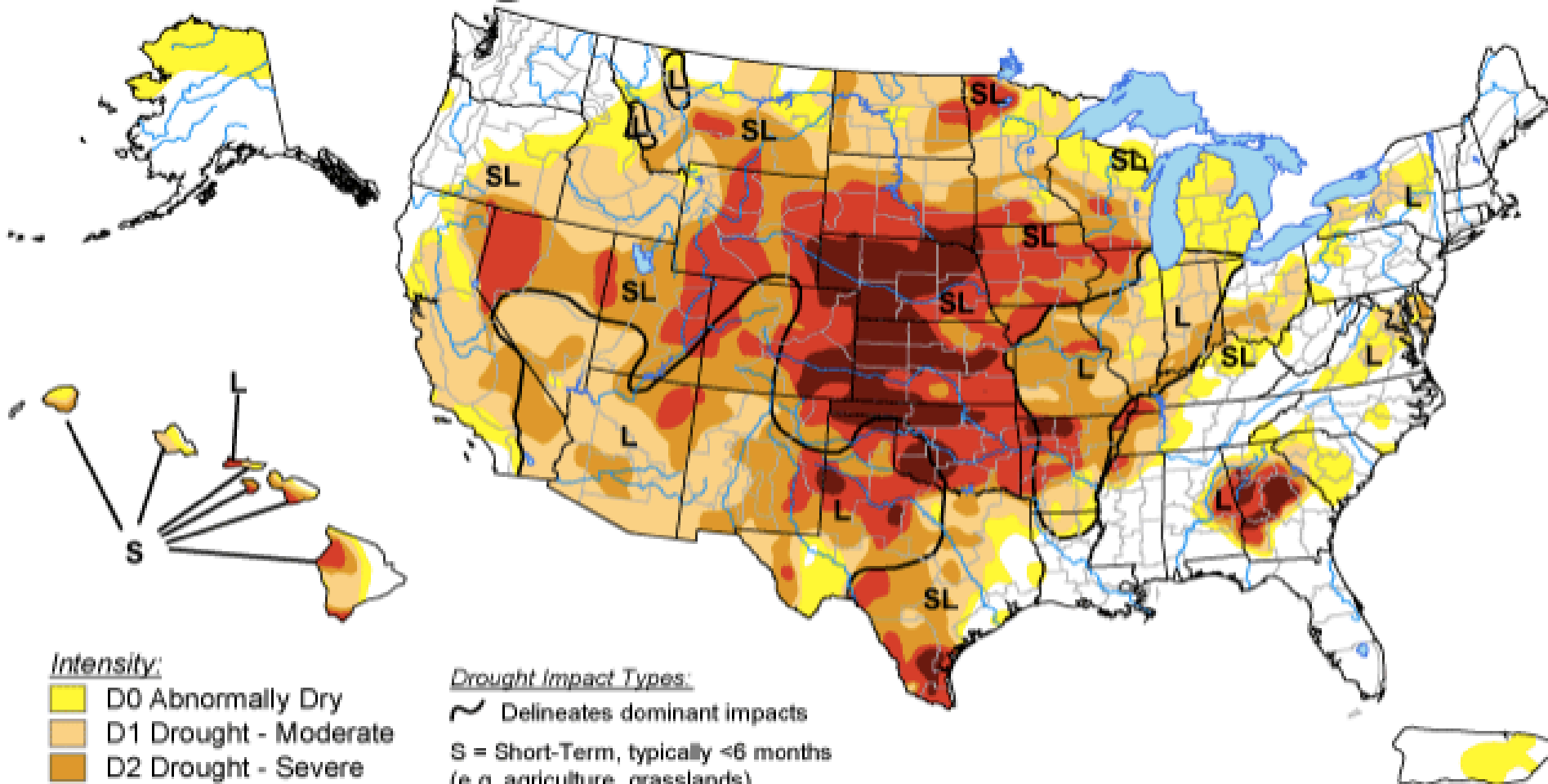




U.S. Drought Monitor

September 25, 2012

Valid 7 a.m. EDT



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

Drought Impact Types:

- Delineates dominant impacts
- S = Short-Term, typically <6 months
(e.g. agriculture, grasslands)
- L = Long-Term, typically >6 months
(e.g. hydrology, ecology)

The Drought Monitor focuses on broad-scale conditions.
Local conditions may vary. See accompanying text summary
for forecast statements.

<http://droughtmonitor.unl.edu/>



Released Thursday, September 27, 2012

Author: Anthony Artusa, NOAA/NWS/NCEP/CPC



**So, what's soil health
“got to do with it?”**

Everything!!!

Improving Soil Health Can:



- ✓ **Increase water infiltration**
- ✓ **Increase available water holding capacity**
- ✓ **Improve water quality**
- ✓ **Increase nutrient availability**
- ✓ **Detoxify chemicals**
- ✓ **Save energy**
- ✓ **Improve plant health**



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- ✓ **Improve water quality**
- ✓ **Increase nutrient availability**
- ✓ **Detoxify chemicals**
- ✓ **Save energy**
- ✓ **Improve plant health**

All while maintaining or increasing production!!!



NRCS & Partner Soil Health Campaign



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Action Plan:

- Ensure Scientific Basis
- Evaluate Economics
- Model Benefits
- Align CIG Priorities
- Leverage PMCs
- National Training
- Develop Partnerships
- Communications



Partnership Opportunities

Available Resources: NRCS Soil Health Website



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Stay Connected

Soils

Soil Health

Soil Health

Unlock the Secrets in the Soil

Soil is a living and life-giving substance, without which we would perish.

As world population and food production demands rise, keeping our soil healthy and productive is of paramount importance. So much so that we believe improving the health of our Nation's soil is one of the most important endeavors of our time.

By focusing more attention on soil health and by educating our customers and the public about the positive impact healthy soils can have on productivity and conservation, we can help our Nation's farmers and ranchers feed the world more profitably and sustainably – now and for generations to come.

The resources on this soil health section of our site are designed to help visitors understand the basics and benefits of soil health – and to learn about Soil Health Management Systems from farmers who are using these systems.

So whether you're a farmer, a researcher, a conservationist or an interested citizen, the information on this site will help you "Unlock the Secrets in the Soil."

NEW!

Visit our "Growing & Sharing" web page and discover many interesting infographics and newsletter articles, which can be used, copyright-free, to help other organizations communicate the basic and benefits of soil health to their audiences.

Profiles in Soil Health

Hear directly from some of the nation's leading farmers to find out how they're using soil health management systems to make their farms more profitable, productive and sustainable.

Click here to see more videos "Profiles in Soil Health."

Through the use of no-till and cover crops, Darryl Crowley says his land now absorbs more water, which helps his crops. And he has all but eliminated wind and water erosion. Now, when he sees dust blowing off of other farms, he doesn't just see the loss of topsoil – he sees the loss of someone's future. Watch videos.

Speaking for the Living Soils



Soil Health Key Points



What's critical about soil health now?

1. World population is projected to be 9.1 billion by 2050.
2. To sustain this level of growth, food production will need to rise by 70 percent.
3. Between 1982-2007, 14 million acres of prime farmland in the U.S. were lost to development.
4. The U.S. imports much of its commercial fertilizers.

Soil health matters because:

1. Healthy soils are high-performing, productive soils.
2. Healthy soils reduce production costs—and improve profits.
3. Healthy soils protect natural resources on and off the farm.
4. Franklin Roosevelt's statement, "The nation that destroys its soil destroys itself," is as true today as it was 75 years ago.
5. Healthy soils save time and money! You can spend less time on a tractor and less money on fertilizer and fuel and make the same or higher profits.

What are the benefits of healthy soil?

1. Healthy soil holds more water by binding it to organic matter, and slows less water to runoff and evaporation.
2. Organic matter builds an 8-page dictionary and plants and residue cover the soil. Organic matter holds 30-35 times its weight in water and recycles nutrients for plants to use.
3. One percent of organic matter in the top six inches of soil would hold approximately 27,000 gallons of water per acre!
4. Most farmers can achieve a farmland in soil organic matter.

unlock the secrets in the soil discover the cover

Biodiversity is the key to success of any agricultural system.

It helps to prevent disease and pest problems. Biodiversity and cover-crop management cover crops, and increases profitability. Diversity slows ground erosion. Diversity below ground, which helps create healthy productive soils.



Cover Crops

Cover crops can be an integral part of any cropping system. Cover crops can be managed to improve soil health, as they help to develop an ecosystem that sustains and nourishes plants, soil microbes and beneficial insects.

Cover crops are typically planted in late summer or fall around to winter and before spring planting of the following year's crops. Examples of cover crops include rye, vetch, soy, winter wheat, clover, and radish. Planting several cover crop species together in a mixture can increase their impact on soil health. Each cover crop provides its own set of benefits, so it's important to choose the right cover crop mixture to meet management goals.

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healthy, productive soils checklist for growers

Managing for soil health is one of the easiest and most effective ways for farmers to increase crop productivity and profitability while improving the environment.

Results are often realized immediately, and last well into the future. Using these four basic principles is the key to improving the health of your soil:

1. Keep the soil covered as much as possible.
2. Disturb the soil as little as possible.
3. Keep plants growing throughout the year to feed the soil.
4. Diversify as much as possible using crop rotation and cover crops.

Use the checklist on the back of this page to determine if you're using any or all of the four Soil Health Management System farming practices.

It's important to note that not all practices are applicable to all crops, operations will benefit from just any soil health practice while others require additional practices for maximum benefit. But these four principles form the basis of a Soil Health Management System that can help you optimize your inputs, protect against drought, and increase production.



www.nrcs.usda.gov

unlock the secrets in the soil basics & benefits

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Soil Health Management Systems Include:

What is it?	What does it do?	How does it help?
Conservation Crop Rotation	Rotational cropping using cover crops and no-till or reduced tillage practices. This practice helps build soil organic matter and improves soil structure.	Increases soil moisture, reduces erosion, and improves soil structure.
Crop Residue Management	Leaving crop residue on the field surface to protect the soil and improve soil structure. This practice helps build soil organic matter and improves soil structure.	Increases soil moisture, reduces erosion, and improves soil structure.
Reduced Tillage	Reducing the number of times a field is tilled, which helps build soil organic matter and improves soil structure. This practice helps build soil organic matter and improves soil structure.	Increases soil moisture, reduces erosion, and improves soil structure.
Cover Crops	Planting cover crops between cash crop cycles to protect the soil and improve soil structure. This practice helps build soil organic matter and improves soil structure.	Increases soil moisture, reduces erosion, and improves soil structure.
Strategic Planting	Planting cover crops in strategic locations to protect the soil and improve soil structure. This practice helps build soil organic matter and improves soil structure.	Increases soil moisture, reduces erosion, and improves soil structure.
Soil Health Management	Combining all the above practices to build soil organic matter and improve soil structure. This practice helps build soil organic matter and improves soil structure.	Increases soil moisture, reduces erosion, and improves soil structure.

unlock the secrets in the soil do not disturb

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unlock your farm's potential dig a little learn a lot

Soil is a living system, and healthy soil should think, smell, and feel alive. Healthy soil can increase production, increase profits, and protect other natural resources, such as air and water. Dig in to your soil to discover what your soil can tell you about its health and production potential.

Dig in and see

Healthy soil is dark in color, crumbly, and porous. It is home to worms and other organisms that airtight, clean, big, or cold. Healthy soil provides the right amount of air, water, and organic matter for crop growth. Soil that is functioning as its full potential is full of the roots of the healthy and strong plants it supports.

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Lista de suelos saludables y productivos para productores agrícolas



El manejar la salud del suelo es una de las maneras más fáciles y efectivas para que los productores agrícolas aumenten la productividad y rentabilidad de sus cultivos al mismo tiempo mejoren el medio ambiente.

Por lo general, los resultados se ven a largo plazo. El usar estos cuatro principios



Si el suelo saludable es su prioridad, reduzca las actividades de labranza.

La labranza continua destruye la materia orgánica y la estructura del suelo (junto con el hábitat natural) que los organismos del suelo necesitan. La labranza durante los meses cálidos, reduce la infiltración de agua en el

suelo, aumenta los escorrentías de agua y hace que el suelo sea menos productivo. La labranza interrumpe los ciclos naturales del suelo, dando la entrada de agua y nutrientes a las plantas.

Beneficios de labranza mínima o cero labranza

Reduce el crecimiento de las plantas que son manejadas con labranza y evita la erosión del suelo. La labranza mínima o cero labranza permite que las plantas crezcan sin ser perturbadas por la labranza, lo que ayuda a mantener la estructura del suelo y la infiltración de agua.

Reduce la erosión del suelo y protege a los cultivos, reduciendo la necesidad de fertilizantes. Durante todo el año, el suelo se mantiene saludable.



Un suelo saludable y altamente funcional está bien balanceado para proveer un ambiente que sostiene y alimenta las plantas, los microbios del suelo y los insectos beneficiosos.

El suelo es un sistema complejo que sostiene la vida. Un suelo saludable es un sistema que sostiene la vida y es altamente funcional.

Escuche

Un suelo saludable y funcional es un sistema que sostiene la vida y es altamente funcional. Un suelo que funciona a su máximo potencial sostiene plantas fuertes y saludables que crecen de manera profunda.

Septiembre 2012



Descubre los Secretos Básicos de un Suelo Saludable

Un suelo saludable y altamente funcional está bien balanceado para proveer un ambiente que sostiene y alimenta las plantas, los microbios del suelo y los insectos beneficiosos.

El manejar la salud de las plantas es para que los productores agrícolas puedan aumentar la productividad y rentabilidad de sus cultivos al mismo tiempo mejoren el medio ambiente.

Escuche

Un suelo saludable y funcional es un sistema que sostiene la vida y es altamente funcional. Un suelo que funciona a su máximo potencial sostiene plantas fuertes y saludables que crecen de manera profunda.

Septiembre 2012



Un Sistema de Manejo de Salud del Suelo Incluye:			
¿Qué es?	¿Qué hace?	¿Cómo ayuda?	
Rotación de cultivos El plantar diferentes cultivos en una misma parcela de tierra una temporada tras otra ayuda a mejorar la salud del suelo y a reducir la erosión.	Rotar los cultivos de una temporada a la siguiente ayuda a mejorar la salud del suelo y a reducir la erosión.	Rotar los cultivos de una temporada a la siguiente ayuda a mejorar la salud del suelo y a reducir la erosión.	
Cubiertas de cobertura Las cubiertas de cobertura son plantas que se siembran en el suelo entre cultivos principales para proteger el suelo de la erosión y mejorar la salud del suelo.	Las cubiertas de cobertura son plantas que se siembran en el suelo entre cultivos principales para proteger el suelo de la erosión y mejorar la salud del suelo.	Las cubiertas de cobertura son plantas que se siembran en el suelo entre cultivos principales para proteger el suelo de la erosión y mejorar la salud del suelo.	
No labranza La labranza es el uso de maquinaria para preparar el suelo antes de sembrar los cultivos. La labranza puede dañar la estructura del suelo y reducir la infiltración de agua.	La labranza es el uso de maquinaria para preparar el suelo antes de sembrar los cultivos. La labranza puede dañar la estructura del suelo y reducir la infiltración de agua.	La labranza es el uso de maquinaria para preparar el suelo antes de sembrar los cultivos. La labranza puede dañar la estructura del suelo y reducir la infiltración de agua.	
Labranza no invasiva La labranza no invasiva es el uso de maquinaria para preparar el suelo sin dañar la estructura del suelo. La labranza no invasiva puede mejorar la salud del suelo y reducir la erosión.	La labranza no invasiva es el uso de maquinaria para preparar el suelo sin dañar la estructura del suelo. La labranza no invasiva puede mejorar la salud del suelo y reducir la erosión.	La labranza no invasiva es el uso de maquinaria para preparar el suelo sin dañar la estructura del suelo. La labranza no invasiva puede mejorar la salud del suelo y reducir la erosión.	
Plantas a paja Las plantas a paja son plantas que se siembran en el suelo entre cultivos principales para proteger el suelo de la erosión y mejorar la salud del suelo.	Las plantas a paja son plantas que se siembran en el suelo entre cultivos principales para proteger el suelo de la erosión y mejorar la salud del suelo.	Las plantas a paja son plantas que se siembran en el suelo entre cultivos principales para proteger el suelo de la erosión y mejorar la salud del suelo.	
Manejo de nutrientes El manejo de nutrientes es el uso de fertilizantes para proporcionar nutrientes a las plantas. El manejo de nutrientes puede mejorar la salud del suelo y reducir la erosión.	El manejo de nutrientes es el uso de fertilizantes para proporcionar nutrientes a las plantas. El manejo de nutrientes puede mejorar la salud del suelo y reducir la erosión.	El manejo de nutrientes es el uso de fertilizantes para proporcionar nutrientes a las plantas. El manejo de nutrientes puede mejorar la salud del suelo y reducir la erosión.	
Manejo de plagas El manejo de plagas es el uso de pesticidas para controlar las plagas. El manejo de plagas puede mejorar la salud del suelo y reducir la erosión.	El manejo de plagas es el uso de pesticidas para controlar las plagas. El manejo de plagas puede mejorar la salud del suelo y reducir la erosión.	El manejo de plagas es el uso de pesticidas para controlar las plagas. El manejo de plagas puede mejorar la salud del suelo y reducir la erosión.	



Descubre el potencial de su granja

La biodiversidad incrementa el éxito de la mayoría de los sistemas agrícolas.

La biodiversidad ayuda a mejorar la salud del suelo y a reducir la erosión. La biodiversidad puede mejorar la salud del suelo y a reducir la erosión.



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La biodiversidad del suelo, reduce la erosión, y mejora la salud del suelo. La biodiversidad del suelo puede mejorar la salud del suelo y a reducir la erosión.

Cultivos de Cobertura

Los cultivos de cobertura pueden ser una parte integral de un sistema de cultivos. Los cultivos de cobertura pueden ser manejados para mejorar la salud del suelo y a reducir la erosión.

Por lo general, los cultivos de cobertura se plantan antes de sembrar los cultivos principales. Los cultivos de cobertura pueden ser manejados para mejorar la salud del suelo y a reducir la erosión.

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Producer Experiences





Conservation Webinars





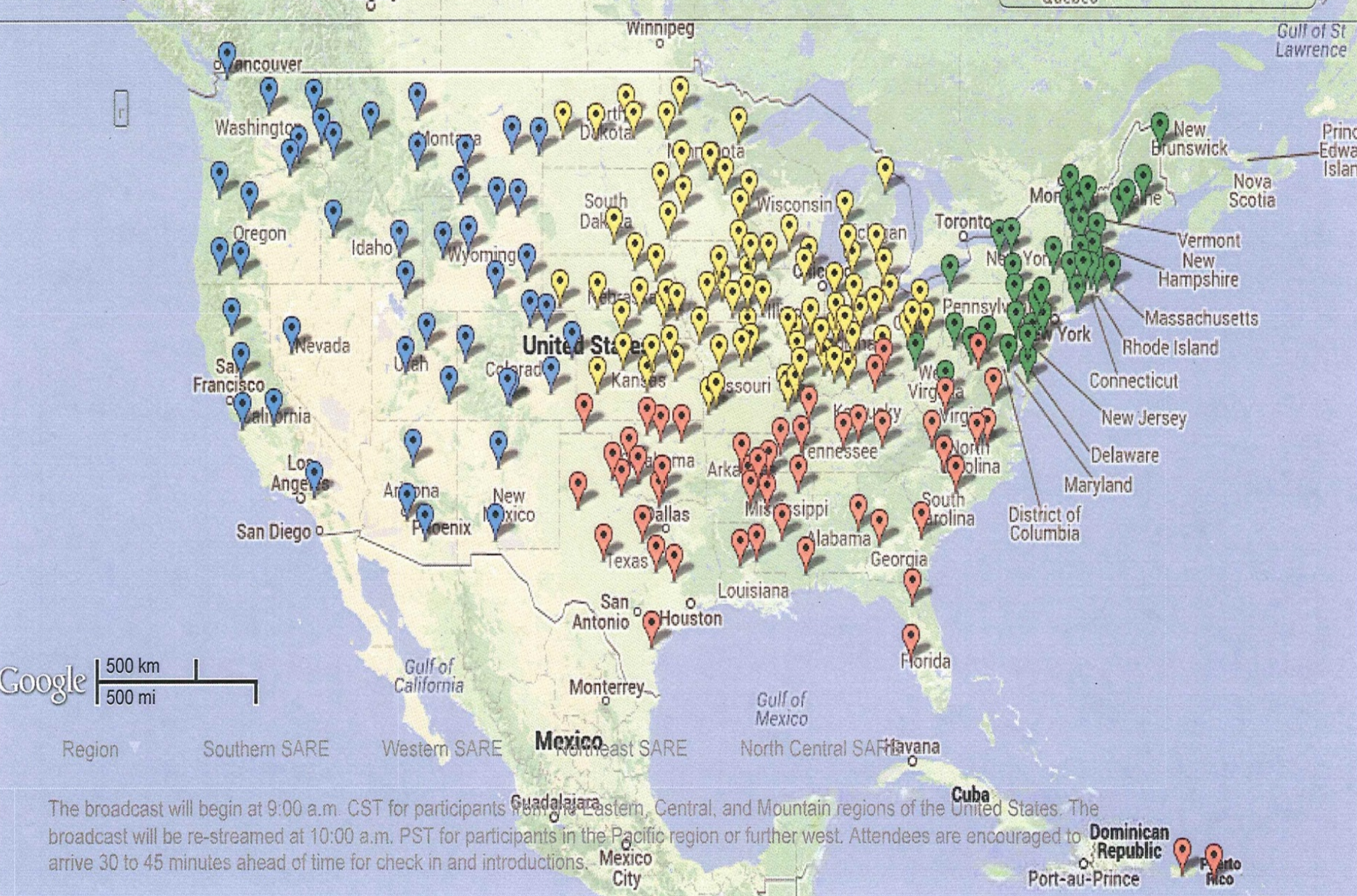
Conventional System



Soil Improving System



Cover Crops and Soil Health Forum Locations



The broadcast will begin at 9:00 a.m. CST for participants from the Eastern, Central, and Mountain regions of the United States. The broadcast will be re-streamed at 10:00 a.m. PST for participants in the Pacific region or further west. Attendees are encouraged to arrive 30 to 45 minutes ahead of time for check in and introductions.