



## NRCS Soil Health Update

April, 2017

*Sharing soil health marketing communications information and resources from USDA's Natural Resources Conservation Service, other partners and the media.*

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### ***Science Friday – Another way to grow crops — by laying down the plow***

At a time when many modern farmers face problems like soil erosion, nutrient loss and drought, the black dirt on Doug Palen's family farm is a field apart: Its health and texture just keep improving. "Its organic matter continues to rise, and it just continues to perform even better than it did," Palen says. Palen's soil secret? He doesn't till the fields on his Glen Elder, Kansas, farm. Instead, when he plants each season, he seeds directly into the stubble of old, harvested crops. [Read more.](#)

### ***Science Daily – Magic cover crop carpet?***

Organic farmers have to make hard choices between protecting soil from erosion and controlling weeds. For example, large-scale organic farming relies heavily on tillage. Tilling breaks up the soil to kill weeds and prepare for planting. But intense tillage can compact soil, cause erosion, and deplete nutrients. As a result, some organic farmers are turning to cover crops for weed control. [Read more.](#)

### ***Farm Forum – Soil Health Partnership to expand to 100 farm sites for 2017***

This year, 35 more farms will join a revolutionary research effort that hopes to show U.S. farmers how sustainability through soil health can also lead to increased profitability. The Soil Health Partnership announced the planned expansion to 100 farms at the 2017 Commodity Classic. This is the largest farmer-led soil health research project of its kind, said Nick Goeser, SHP director. [Read more.](#)



### NRCS Soil Health webinar series

**Soil health for non-operator landowners** – Tuesday, April 11, at 2:00 p.m. Eastern, 60 minutes

Presented by Jennifer Filipiak, Natural Resource Conservationist, American Farmland Trust, this webinar will focus on educating non-operator land owners on the benefits of improving soil health to increase land value, and that it takes a solid working relationship between the landowner and farmer (often requiring changes in leasing structures) to obtain changes in soil health.

[Click here](#) to learn more about the webinar and to sign in. **Note:** No advance registration is required and space is not limited, but participants should sign in 15 minutes early. This webinar offers CEUs and will be recorded for future viewing. It is presented by the [USDA NRCS Soil Health Division](#). Contact [Holli Kuykendall, Ph.D.](#), National Technology Specialist, for more information.



WASHINGTON STATE  
UNIVERSITY



### Washington State University – A symphony of soil signals in wheat science

Scientists at Washington State University recently unveiled a new high-tech tool that may reveal secrets in the soil for healthier wheat. The new, \$700,000 liquid chromatography-mass spectrometry (LC-MS) system, will give David Weller's team a powerful tool to see what happens at the root level. "This new mass spectrometer helps us understand the chemical symphony going on in the roots," Weller said. "It's been a black box up until now." [Read more](#).

### Corn & Soybean Digest – Benefit the soil: Tennessee farm family focused on restoring depleted soils

When Matt Griggs was first introduced to conservation-minded farming, it nearly broke his heart. In the mid-1990s, his father, Bobby, broke the news that the farm was transitioning from full conventional tillage to no-till methods. "I was a teenager, and loved driving tractors," Matt says. "I literally cried. I asked Dad, 'What are we going to do all summer long?'" Those tears have long since dried. [Read more](#). Related from **Corn & Soybean Digest** – Wisconsin producer provides lessons from his career commitment to conservation. [Read more](#).



### USDA-NRCS Soil Health Profile – Record yields from the bottom up using no-till, cover crops

A southeast Iowa farm family harvested record average yields in 2016 after managing cropland soils with no-till and cover crops. They attribute the yield bump to a bottoms up approach, by improving returns on typically poor-performing fields. The Prevos are going on three straight years of whole farm record average soybean yields. Kevin says corn yields aren't far behind, "We beat our corn yield average record this year by 20 bushels per acre over our 2014 highs, and we did it on traditionally poorer producing soils." [Read more](#).



#### ***High Plains Journal – Four ways to farm for soil health***

The Soil Health movement has gained tremendous momentum in the past few years, with practitioners championing no-till and cover crop usage as a path to improved yields, reduced weed pressure and improved “resilience” of farm fields to withstand extreme weather conditions. A fast-paced Soil Health session at Commodity Classic featured soil health tips from several soil health veterans, with several observations from years of practice. The first tip: Think ahead. [Read more.](#)

#### ***USDA-NRCS Blog – Soil health at any scale: Building soil health in a high tunnel***

Woodstock Orchards in Windham County, Conn. is a diversified, 100-acre orchard and vegetable farm. In 2012, the farm's owner, Doug Young, attended a soil health workshop where he watched, along with his farming colleagues, a rainfall simulation demonstration. Doug looked on with particular interest at one of the soil samples used in the demonstration—it was from his conventionally tilled vegetable fields. [Read more](#) in this blog by NRCS District Conservationist Raymond Covino.



#### ***Ohio State University – New healthy soil program launched***

Ohio State University Extension has begun a new signature program called Healthy Soil Healthy Environment to help increase soil health and awareness of new research. Program outreach will include a new [soilhealth.osu.edu](#) website, as well as workshops and field days where research results will be presented. [Read more.](#)



#### **Webinar REPLAY**

##### **Soil health economics: A farmer's perspective**

In this webinar replay, Rodney Roulon presents both economic and soil health data from his on-farm studies as he as implemented his system. He discusses how increasing soil organic matter by over 1.5 percent has resulted in a yield increase of 12.8 bushels of corn per acre. In addition, Rodney shows the net economic benefit derived from soil health is more than \$69 per acre. [View](#) the webinar.



#### ***University of Vermont Extension – Cover crops: From research to reality***

Kirsten Workman writes, According to the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) data, “Vermont farmers planted a record-setting 25,727 acres of cover crops on more than 2,000 fields in 2016 on approximately 25% of all annual cropland in Vermont. That's a 58% increase in the acres of protective winter cover crops planted in 2015.” By my count, it is a 250% increase from 2014. While these research and demonstration projects are by no means the sole reason for this impressive rate of adoption, I do believe they are an important piece of the puzzle. [Read more.](#)



### ***NPR's 'The Salt' – Why more farmers are making the switch to grass-fed meat and dairy***

Though he didn't come from a farming family, from a young age Tim Joseph was fascinated by the idea of living off the land. Reading magazines like The Stockman Grass Farmer and Graze, he "got hooked on the idea of grass-fed agriculture — that all energy and wealth comes from the sun," he explains, "and the shorter the distance between the sun and the end product," the higher the profit to the farmer. [Read more](#).



### ***Morning Ag Clips – 'Cover crop caravan'***

Practical Farmers of Iowa has planned a series of spring field days focused on cover crop issues in grazing and row crop systems. Farmers and community members are invited to see cover crops in action on a farm, and learn about cover crop basics as well as practices used to maximize the financial return from cover crops. All field days in the series run from noon to 3 p.m., and are free and open to everyone. Each field day starts with a complimentary lunch. RSVPs are requested for the meal. [Read more](#).



### ***Successful Farming – Cover crops renovate grassland***

Cover crops are rejuvenating lackluster hayfields on Darrell Oswald's cow-calf operation near Wing, North Dakota. The alfalfa in the fields had gradually died out, leaving monocultures of domestic perennial grasses. With decreasing plant diversity, the grasses and soils lost vigor, and production dropped... "By no-till planting cover crops, I'm giving these fields the benefit of plant diversity," he says. [Read more](#).



### ***Capital Press – Cover crops improve soil health***

When you talk to Don Wirth of Saddle Butte Seeds near Shedd, Ore., it doesn't take long to hear the frustration he has with the 90 percent of the growers who underestimate the value of cover crops. Talking to the countless number of folks he meets during the 30-plus trade shows and field days he attends a year, Wirth spends most of his time trying to get the message across how cover crops can end up being more profitable than the "cash" crop itself. Just returned from a conference in the Midwest, he spoke of his frustration. [Read more](#).



## SOUTHWEST FarmPress.

## AGWEEK



## Nebraska Farmer

### ***Hay & Forage Grower – Planting green to keep soil life active***

Even a short time without living roots in the soil can impact your farm ecosystem. If you practice no-till religiously, this is one of your founding principles. You may have heard of beneficial fungal organisms like mychorrhizae that form symbiotic relationships with plant roots. In the end, the fungal hyphae greatly expand their hosts' ability to reach water and nutrients. To thrive and get the nutrients they need, though, they require access to living roots almost continuously. [Read more.](#)

### ***Southwest Farm Press – ‘Educated management’ is key to success with cover crops***

A cover crop used in conjunction with a conservation tillage system may help conserve soil and improve soil health, fertility, water quality, weed/disease/pest control, biodiversity and wildlife habitat. But it requires "educated management decisions," says Paul DeLaune, Texas AgriLife Research agronomist at Vernon, Texas. [Read more.](#)

### ***AgWeek – Study to look at impacts of diversified crop rotation***

Throughout the 2017 and 2018 growing seasons, a team of researchers from South Dakota State University will be assessing the impacts of diversified crop rotation cropping systems compared to traditional corn-soybean rotation. The study will also review the impact cover crops have on soil health and crop yields. The study, [Crop Diversification on Soil Health and Farm Profitability in South Dakota](#), is funded by Natural Resources Conservation Service Conservation Innovation Grant in 2016. [Read more.](#)

### ***The Progressive Farmer – Pasture Regeneration: Hooves not harrows***

As the saying goes, there are two types of cattle producers: One grows beef, the other grows grass. Allen Williams manages cattle across 1,000 acres of pasture. But he grows soil. Based near Starkville, Mississippi, this sixth-generation farmer has shifted paradigms. An acre of pristine, green fescue isn't nearly as exciting to the longtime commercial cattleman as an acre of mixed forbs and forages that might best be described by someone who didn't know better as a field of weeds. He calls it "regenerative agriculture." [Read more.](#)

### ***Nebraska Farmer – Factors holding back conservation***

It goes without saying that we live in a society of quick fixes. We tend to take the path of least resistance, but as Keith Glewen, Nebraska Extension educator in southeast Nebraska notes, "Soil and water are two resources you can't replace or improve with a snap of the finger." [Read more.](#)



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## PORK Network

## The Des Moines Register

### ***Iowa Farmer Today – Farmers find soil management beneficial for soil health, profits***

Wayne Fredericks, Ray Gaesser and Kelly Tobin all know a little bit about good soil. The three farmers talked about their experiences during a recent meeting on soil health. The key points all three stressed are that soil health is important, and it can be profitable. Gaesser, a south central Iowa farmer and former soybean association president, says his defining moment came in 2010, when he watched it rain 4.1 inches in less than an hour on his farm. "We had no-till. We had terraces," Gaesser says. "We saw all those practices wash away." [Read more.](#)

### ***AgFax – No-till and cover crops cut expenses: 12 lessons learned***

After 16 years of conventional farming, Vinje transitioned to no-till and cover crops in 2013 on most of his 1,700 acres in Gardner, North Dakota, to cut expenses and improve the odds of surviving wet springs. He watched poorly drained "gumbo clays" evolve into healthy, crumbly soils that support equipment when it's wet and store enough moisture to carry a crop through a dry late summer and fall. [Read more.](#)

### ***Lancaster Farming – Farmer extols use of cover crops***

Jimmy Crosby has only been farming full time for five years, but he's learned and seen enough to become a big fan of cover crops when fields are out of production. "After five years of trying different crop rotations, seed mixes, planting dates and scenarios, I really value cover crops," Crosby said at the recent Virginia No-Till Alliance Winter Conference at the Rockingham County Fairgrounds. "We're finding here that they are what they've been advertised as." [Read more.](#)

### ***Pork Network – New report shows Iowa cover crop acres grow despite tightening crop budgets***

According to the newly released Iowa Learning Farms 2016 Field Day Evaluation Report, the number of Iowa cover crop acres grew by approximately 32 percent to 623,700 acres. While the positive growth with shrinking profit margins is encouraging, the rate of growth is 3 percent slower than the growth measured the year before, and still well below the goal of 12.5 million acres called for in Iowa's Nutrient Reduction Strategy. [Read more.](#)

### ***Des Moines Register – Study: Who's using cover crops in Iowa? Hardly anyone***

Cover crops, a weapon to prevent soil, nitrogen and phosphorus from leaving farm fields, grew on 2.6 percent of Iowa's nearly 23 million acres of corn and soybeans last spring, a report released Wednesday says. By comparison, Indiana farmers had cover crops on 7.1 percent of their 11 million corn and soybean acres, and Illinois growers on 2.3 percent of nearly 21 million acres, says the Environmental Working Group and Practical Farmers of Iowa in their report looking at the three states. [Read more.](#) **Related: Half of Iowa farmers interested in cover crops.** [Read more.](#)

# AMERICAN Agriculturist.



## **American Agriculturist – Northeast cover crop use continues to rise**

Penton Agriculture's farmer poll at New York Farm Show confirmed that Northeast farmers continue to boost their use of cover crops. The poll, conducted by *American Agriculturist*, compared 2017 results with those from 2016. Some 219 farmers from Connecticut, Maryland, Massachusetts, New Jersey, New York, Pennsylvania and Vermont took part in the survey. [Read more.](#)

## **Corn & Soybean Digest – Interseeded cover crops work**

Low commodity prices aren't stopping Iowa farmer Loran Steinlage from interseeding cover crops in his cornfields. In fact, he would argue the practice is helping keep his financial head above water... "The first field that I interseeded about nine years ago is 15 bushels ahead of every other field I farm," says Steinlage. "It is incremental gains on every field that keeps driving me. I have cover crops on every field, not to save the world in some touchy feely way, but because they pay their way." [Read more.](#)

## **The Progressive Farmer – Underground movement – Soil tune-up**

There's some irony in the fact that legendary Blues singer Muddy Waters spent his youth at Stovall Farms. Even the proximity of the murky Mississippi River can't cloud the commitment this Clarksdale, Mississippi, plantation has made to conservation and clean water... If McKinley Morganfield (aka Muddy Waters) were still driving tractors at Stovall Farms, he'd undoubtedly croon that conservation has the mojo working. [Read more.](#) Related from *The Progressive Farmer* – Profitable benchmarks [Read more.](#)

## **AgriNews – Green Days: Warm weather brings out cover crops' true colors**

Warm 70-degree weather and a lack of snow cover showed Chad Bell's cover-cropped fields to their best advantage, even in the foggy morning that preceded a summerlike February day. But for Bell, who has become a spokesman for the art and science of cover crops in the state, the real benefits of the ryegrass can't be seen from the road. [Read more.](#)

*Additional soil health marketing communications materials from the soil health communications team are in development, so stay tuned for further updates. As always, please feel free to contact me at any time if you need additional information or would like to offer contributions to the Update. Thanks for all you do on behalf of conservation and American agriculture.*

\*The views and opinions expressed in the aforementioned articles or videos are those of the individuals featured therein and do not necessarily represent the official policy or position of any agency of the U.S. Government.