NRCS is a great resource for understanding some baseline things, like soil types and characteristics of a particular growing environment right up through supporting cover cropping, high tunnels and a whole range of technical assistance and financial support.

— Jack Hedin, Certified Organic Farmer
Featherstone Farms, Rushford, MN

I look at what an agricultural producer is passionate about. Since a conservation plan is voluntary, it’s important to get their feedback and buy-in on a plan that can protect resources and help them with their agricultural production. It’s rewarding when agricultural producers are happy with changes they’ve been able to make with our practices.

— Jennifer Walser, NRCS District Conservationist
Sonoma County, CA

What is NRCS?

Since 1932, the United States Department of Agriculture’s (USDA) Natural Resources Conservation Service (NRCS) has provided assistance to agricultural producers to conserve the soil, water, air, plants, and animals on their land.

Through offices in nearly every county across the U.S., NRCS provides technical and financial assistance to help agricultural producers — including certified organic and transitioning producers — plan and implement voluntary, science-based conservation practices.

NRCS experts, such as district conservationists, soil conservationists, engineers, biologists, botanists, and others, work together to help producers find and apply conservation solutions while ensuring their working lands remain productive. Staff often live and work in the counties that they serve, and thereby understand local issues and challenges.

Organic agriculture and NRCS’ goals are well aligned. Many of the USDA Organic regulations can be achieved using NRCS conservation practices, which reflect these shared goals.
What is Organic?

Organic farming is one of the fastest growing segments of agriculture.

To be “certified organic,” producers must follow regulations outlined by the USDA National Organic Program (NOP). Managed by USDA’s Agricultural Marketing Service, the NOP develops, implements, and administers national organic production, handling, and labeling standards.

Organic agriculture is an ecologically based system that relies on preventative practices to deal with weeds, insects, and disease, using nontoxic methods for any problems that arise. Organic practices require the use of cultural, biological, and mechanical practices that support the cycling of on-farm resources, promote ecological balance, and preserve biodiversity.

Organic producers avoid synthetic fertilizers and do not use sewage, sludge, irradiation, or genetic engineering on their operations.

Healthy soil is the foundation of organic farming. Early leaders of the organic farming movement emphasized the success of farming depends on the health of all natural resources on the farm and in its surroundings. Organic producers strive to develop farming systems that mimic nature and use natural processes.

More and more farmers and ranchers will be transitioning to organic to meet growing consumer demand, which currently outpaces U.S. grower’s supply. NRCS looks forward to providing conservation assistance to today’s and tomorrow’s organic producers.

“Organic farming is the only option. I want to leave a legacy of improving my country by focusing on healthy communities.”

— Elizabeth

“Growing Organic: NRCS Assistance for Organic Farmers”

at www.nrcs.usda.gov/organic

“We are very rooted in doing a type of farming that respects biodiversity and the health of the planet. The more we learn about natural systems and how we can work with them and enhance them in order to produce food, the more excited we are. You just feel really good to be part of a larger system.”

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NRCS & Transition

To be considered organic and to use the USDA Organic seal, all operations with more than $5,000 in organic sales must be certified. Independent, third-party USDA-accredited organizations certify farms and ranches as organic. The application to become certified organic and use the USDA Organic seal includes:

1. Detailed description of the operation
2. History of substances applied over past three years
3. Organic products grown, raised or processed
4. Organic System Plan describing practices and substances used

It takes three years to transition land to an organic system that was previously farmed conventionally. Farmers may choose to keep both organic and nonorganic fields, but must create buffer zones between them.

NRCS Technical Service Providers (TSP) can help producers develop a Conservation Activity Plan for Organic Transition (CAP 158). CAP 158 consists of three sections: Resource Inventory, Erosion Control Inventory, and Summary Record of Planned NRCS Conservation Practices. The Resource Inventory section may serve as a portion of the Organic System Plan, which is required for certification.

Farmers and ranchers should begin by working with NRCS to develop a conservation plan for their operation. Then, a TSP can develop a CAP 158 for transition and producers can apply for financial assistance to implement conservation practices or enhancements.

Additionally, farmers may apply for up to 75 percent — up to a maximum of $750 per year — reimbursement of organic certification costs.

“I would say to farmers thinking about transitioning to organic that you really have to be open to experimentation. There’s no substitute for trying different methods on your farm under the exact conditions that exist where you’re farming and to experiment. Be willing to be flexible and to adopt new methods and try things differently every single season.” — Stephen Pedersen, Certified Organic Farmer, High Ground Organics, Watsonville, CA

“The most important thing is to have conservation plans that help transition to organic. They can address concerns while also moving a farm toward the regulations and requirements of organic certification.” — Randall Wordlaw, NRCS District Conservationist, Wedowee, AL
Healthy Soil

NRCS can help farmers and ranchers with a number of conservation practices that build healthy soil. Diverse crop rotations, cover crops, nutrient management, and conservation tillage are examples of practices that build the soil, reduce erosion, improve soil structure, and enhance nutrient cycling and water retention.

NRCS follows four soil health principles:

1. Use plant diversity to increase diversity in the soil.
2. Manage soils more by disturbing them less.
3. Keep plants growing throughout the year to feed the soil.
4. Keep the soil covered as much as possible.

By rotating crops across their fields from season to season, organic farmers add biodiversity and increase resilience in their operations while increasing their soil’s organic matter.

Instead of leaving land fallow after each harvest, organic farmers keep the ground covered with cover crops. Throughout the growing season, the cover crops act as a green manure, providing an additional source of nutrients that build soil organic matter and reduce the need to bring in additional inputs from off-farm sources.

If crops need additional nutrients, NRCS can help producers develop a nutrient management plan that incorporates organic plant, animal, and natural mineral-based fertilizers, most of which release nutrients gradually through the action of soil organisms.

Organic no-till systems, such as the roller-crimper, have also helped organic producers reduce the intensity of soil disturbance in annual crop rotations.

By using NRCS soil health principles and systems, farmers can increase carbon, increase water infiltration, and improve wildlife and pollinator habitat—at solar harvesting better profits and offer better yields.

“The soil is a biological engine. By growing cover crops and turning them back into the soil we’re giving fuel to that engine so the microbes can give our plants what they need to be successful. We also end up increasing the amount of carbon within the soil as well.”

— Joe Reynolds, Certified Organic Farmer
Gaia Gardens, Decatur, GA

“On organic farming systems, we offer assistance with nutrient management plans. These look at nutrient balance on the whole farm, including what is already available within the soil and what the plant needs to uptake. Then we look at what is being applied to see if there are any deficits or excess nutrients. NRCS has a staff of agronomists and nutrient management specialists and conservation planners that can help to provide the technical assistance needed to take the science one step further and understand what the data can tell us about working lands.”

— Jennifer Walser, NRCS District Conservationist
Sonoma County, CA

Watch “Healthy Soil: NRCS Assistance for Organic Farmers” at www.nrcs.usda.gov/organic
Cover Crop

An essential element of any organic farmers' cropping rotation system, cover crops include any organic material that the ground covers during a season, from annuals and perennials to weeds and dead plant material. Cover crops enhance soil health, provide a home for wildlife, and reduce the need for chemical fertilizers, pesticides, and fungicides.

Instead of relying on chemicals, organic farmers can work with NRCS to develop systems that use cover crops to build healthy soils.

Crop Residue

Vegetation intentionally left to decay in the fields begins a loving cycle that keeps soil covered and prevents erosion and pathogen problems. This is a vital component of sustainable agriculture. Certified organic farmers plant cover crops in late fall, allowing them to be ready for planting in the spring.

Soil Organic Matter

When cover crops are properly tilled down and blended with plant residue, they release nutrients like nitrogen in the soil. These nutrients increase the population of beneficial soil bacteria, which includes soil inhabiting capacity, plant health, and the natural growth process.

Cover Crop

The Organic Farmer

Crop Residue

The NRCS Sustained Agriculture Program

Organic Farmers

New York, NY
Weed & Pest Management

One of the greatest challenges organic farmers face is weed management. A single weed can produce more than 10 million seeds, and if they’re not dealt with in time, they can present farmers with challenges for years to come. Instead of using chemical herbicides, organic farmers can work with NRCS to implement a variety of conservation practices that suppress weeds while building soil health.

Cover crops are one of the most effective tools for suppressing weeds, and they work in three ways:

1. When alive, they outcompete weeds for water, nutrients, and sunlight.
2. As mulch, they minimize weed growth by physically preventing the germination of weed seeds, cutting off access to light and warmer temperatures.
3. When certain legumes, cereals or brassicas decompose, they produce natural herbicides that can suppress weed seed while sequestering carbon.

Rotating crops and timing planting dates to avoid weed generation windows are other effective weed suppression strategies.

NRCS can also help growers implement conservation tillage practices. Organic no-till uses tools like the roller crimper to kill cover crops, leaving their residue as a green mulch that feeds the soil and suppresses weeds. Farmers can use a variety of other mulches made from natural materials, paper or plastic. These are installed at the beginning of the growing season and trap soil moisture while preventing sunlight and weed growth.

Pest management on organic and transitioning farms requires a holistic approach. It relies primarily on preventing and avoiding pests with cultural and mechanical suppression. NRCS coordinates conservation plans with farmers’ Integrated Pest Management plans to protect natural resources and benefit the ecosystem.

For example, organic farmers can plant insectaries to attract beneficial insects, like ladybugs, that biologically control pests. They can use companion planting to draw pests away from crops. Introducing nesting sites like bat and owl boxes can also help manage pests. Cover crops naturally break the cycle of soil-borne diseases, and some soil-dwelling insects, while increasing the soil’s organic matter.

“We farm organically by dealing with erosion and insects and weed problems using non-synthetic measures. We also deal with intercropping and crop rotations. It’s a big organization that’s very difficult to farm organically than it is to farm using conventional methods.”

— Gene Thomas, Farmer
Sneaky Crow Farm, Roanoke, AL

“At NRCS we always want to reduce tillage. Tillage destroys the structure of your soil. It burns up your organic matter. But if you’re an organic producer, and you want to control weeds and don’t spray, that’s an issue.

How can we work on controlling weeds without tillage? Cover crops are perfect because now we’re building soil health... and we’re controlling weeds. We’re addressing your problem and we’re also meeting our goal!”

— Cullen McGovern, NRCS Soil Conservationist
Longmont, CO

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Longmont, CO

Watch “Weed Management: NRCS Assistance for Organic Farmers” at www.nrcs.usda.gov/organic
“Diversity is the rule of the game now. We’ve got diverse people, flowers, plants, animals, you name it. Biodiversity, in my case, would mean that we try to mimic Mother Nature.”
— Gene Thornton, Certified Organic Farmer
Sneaky Crow Farm, Roanoke, AL

“Farmers are dealing with nature all the time. If it’s always a combative stance and you’re just trying to fight off every pest or every rainstorm or every drought without using what nature has to offer, then you’re missing out on half of what you could be using to be a good farmer.”
— Jeanne Byrne, Certified Organic Farmer
High Ground Organics, Watsonville, CA

“The core is always going to be the conservation plan. We go out on the land and meet with the producer, identify any resource concerns, then find a program that helps accomplish the practices we see need to be done... everything from nutrient management to pest management, even putting in insectaries to help with the pollinators.”
— Glenn L. Riehle, NRCS Resource Conservationist
Paso, WA

Habitat
NRCS can help organic farmers work with nature instead of against it, building and conserving vital habitat for pollinators, beneficial insects, and wildlife.

Conservation plantings such as field borders, hedgerows, and riparian buffers can help protect water and soil resources and provide wildlife and pollinator habitat. These may also harbor natural enemies of pests and intercept pesticide and GMO pollen drift from neighboring non-organic farms.

Wildlife corridors and wildlife-friendly fences maintain connectivity for wide-ranging wildlife, such as deer and predators, and keep them away from crops. Structures like owl and bat boxes create places for beneficial wildlife that reduce pests.

NRCS can also provide assistance with biodiversity practices that include stream habitat restoration, tree and shrub establishment, wetland wildlife habitat management, prairie reestablishment, riparian and native prairie for wetland and wetland habitat, riparian and aquatic wildlife habitat, and prescribed grazing management.

NRCS not only helps to create wildlife habitat on a farm-by-farm basis, but the agency also targets at-risk species on a landscape scale. NRCS works with partners and landowners to conserve targeted species in specific areas, realizing that many farmers and ranchers working together can make a difference.
Irrigation

NRCS can help organic farmers with irrigation water management strategies tailored to their farms’ specific needs. Conservation practices can also protect water quality in the surrounding ecosystem.

Water quantity. Irrigation management plans combine conservation principles with efficiency, balancing the farm’s water needs with those of nature. Tools like drip irrigation, which provides water precisely where and when it’s needed, can achieve greater precision with flow meters and soil moisture sensors. Farmers can also conserve water by increasing their soil’s water holding capacity and using conservation tillage to keep the ground covered, reducing water loss through transpiration and evaporation.

A one percent increase in soil organic matter can help the soil retain an additional 20,000 gallons of water per acre that can be banked and become available when plants need it. Most NRCS agricultural engineers can use satellite-tracking tools to conduct precise topographic surveys, then design complete site-specific irrigation systems, from wells to pumps to pipes to hookups out in the field, saving water by improving irrigation efficiency. In combinations, these practices add up and make a huge difference.

Water quality. Well-managed organic systems rely on slow-release forms of nutrients, which reduce the risk of nutrient runoff and leaching. These practices help maintain water quality, while enhanced soil structure, water infiltration, and better nutrient retention also protect water quality. NRCS-developed nutrient management plans, cover crops, and buffers keep soil and nutrients in place and filter runoff water.

“We’ve used the NRCS program for intermediate water management, so we’re actually tracking the soil moisture that’s available to plants multiple times per week. Now, we’re only watering when it’s necessary. It’s important, not only for soil quality, but to benefit water quality and water conservation through efficient irrigation, and these benefits also come across in the quality of the produce grown here.”

— Ryan Power, Certified Organic Farmer, New Family Farm, Sebastopol, CA

Watch “Irrigation and Water Management: NRCS Assistance for Organic Farmers” at www.nrcs.usda.gov/organic
IRRIGATION WATER MANAGEMENT PLAN

"The wheel line has totally changed my life. Before we had it, I was working long hours moving hundreds of gallons by hand, barely keeping up.

CHRIS PRANTZ
Cash & Carry Farming, Gras...(1)

The wheel line is the perfect solution for irrigation in our field. It's efficient and allows us to manage water effectively, ensuring plants are watered evenly and efficiently.

RESC Construction Pacif...ne with the precision of a...ne. We work with farmers to develop plans that meet their specific needs.

SOIL MOISTURE SENSOR
A device that measures soil moisture at various depths. It helps farmers optimize water use and reduce the risk of overwatering.

EELA LEHR
Clayton Farming, W...
High Tunnels

Across the U.S., farmers are discovering the benefits of high tunnels. NRCS can help producers integrate high tunnels into their operations.

While they may look like greenhouses, high tunnels are actually quite different. Greenhouses are usually constructed of glass and metal, with plants grown in pots above the ground. High tunnels are polyethylene, plastic or fabric covered hoop structures that can be assembled for a fraction of the cost, with plants grown in raised beds or grown directly in the ground.

Because the growing conditions are controlled, plant health is optimized. High tunnels protect plants from severe weather and allow farmers to extend their growing seasons—generally earlier into the spring, later into the fall—and sometimes, year-round. And because high tunnels prevent direct rainfall from reaching plants, farmers can use precise tools like drip irrigation to efficiently deliver water and nutrients to plants. High tunnels also offer farmers a greater ability to control pests and can even protect plants from pollens and pesticide drift.

A number of soil health practices can be used in high tunnels, including cover crops and crop rotations, which also prevent erosion, suppress weeds, increase soil water content, and break pest cycles.

Perhaps the best thing about high tunnels is that they help farmers provide their communities with healthy local food for much of the year—food that requires less energy and transportation inputs and provides communities with greater food security.

“We have really cold, wet springs with a lot of rain. High tunnels allow people to get into the ground and start producing crops earlier. They can also help people extend the growing season later as we go into the rains in the fall.”

— Danny New, Certified Organic Farmer
Full Mat Farm, Ridgefield, WA

“We got assistance from the NRCS to put in the high tunnel and it’s completely changed the way we farm tomatoes. We are able to get 103 tomato plants in there and before, we would do maybe 40 to 50 plants. So it’s double production for us. We’re also able to grow things during the winter, which we’ve never been able to do before.”

— Stacey Givens, Urban Farmer
Side Yard Farm, Portland, OR

Watch “Growing All Seasons: NRCS Assistance with High Tunnels” at www.nrcs.usda.gov/organic
Livestock & Pasture Management

Organic livestock producers provide living areas that encourage the health and natural behavior of their animals. They use only certified organic feed, provide year-round access to the outdoors and access to pasture for ruminants and don’t use antibiotics or growth hormones.

NRCS can help organic livestock producers with practices such as pasture and grazing management, diverse pasture plantings, fencing, and walkways, watering facilities, and shelters for animals.

Pastures, regardless of organic status, can become overgrazed, which can harm animal health and damage natural resources. USDA organic standards require producers to maintain pasture in a state of good health through management strategies that promote good forage quality and quantity, weed control, infiltration of precipitation, and erosion control.

One key practice is rotational grazing. This approach separates open fields into a series of closed paddocks that regularly directs animals to fresh pasture. The size of these paddocks is determined by the number of animals, time of year, grazing duration, and quality of available forage. Proper fencing and adequate water supplies are features of these intensively managed grazing systems.

Fences can control erosion or impede animal access to sensitive areas like ponds, streams, wellheads or protected habitat, while gated paddocks can be opened and closed to provide cattle access to fresh pasture. Diverse pasture plantings can provide livestock with well-balanced, nutritious forage that keeps them healthy. Using season-specific plantings is also good for the entire ecosystem.

“With a comprehensive nutrient management plan, livestock producers can use a system of practices to manage livestock waste on the farm. In particular, soil health practices in the plan include Rotational Grazing, testing soils and placing nutrients as fertilizer as to minimize effects to sensitive areas such as adjoining streams, habitats, and buffers.”
— Joseph L. Wedler, NRCS District Conservationist Rockland County, NY

“The reason we have cows is because of all the nutrients they create. In the right context they are such a great animal for rebuilding the soil. But we didn’t want the manure just dumping into the water or all in one place, so our NRCS comprehensive nutrient management plan helped tell us where to store manure properly so it could become an asset rather than a pollutant.”
— Marty Lain, Certified Organic Farmer Keziaal Bicentennial Farm, Westtown, NY

Five Steps to NRCS Assistance

Here’s what to expect:

1. PLANNING: NRCS technical assistance is free and voluntary. The first step is to visit your local field office and work with a conservationist on a conservation plan that meets the goals of your operation. Ask your conservationist if financial assistance is available to implement any of the practices outlined in your conservation plan.

2. APPLICATION: Once you file out the right forms for the application process, Applications for most programs are accepted on a continuous basis, but they’re considered for funding in different ranking periods. Ask your local NRCS conservationist about the deadline for the ranking period to ensure you turn in your application in time. You can also apply for financial assistance and manage applications, contracts, and conservation plans online through the NRCS’ Conservation Client Gateway.

3. ELIGIBILITY: To determine eligibility, you’ll need a Social Security number or an employer ID. You’ll also need property deeds or lease agreements to show you have control of the property. If you don’t have a farm and tract number, you can get one from USDA’s Farm Service Agency (www.fsa.usda.gov). Typically, the local FSA office is located in the same building as the local NRCS office.

4. RANKING: The NRCS will take a look at the applications and rank them according to local resource concerns, the amount of conservation benefits the work will provide and the needs of applicants.

5. IMPLEMENTATION: If you’re selected, your next step is to sign the contract. You’ll then be provided standards and specifications for completing the practice or practices, and have a specified amount of time to implement. Once the work is implemented and inspected, you’ll be paid the rate of compensation for the work if it meets the NRCS standards and specifications.

For more information on how NRCS can help you, visit your local NRCS field office, or: www.nrcs.usda.gov/organic

For more information on the USDA National Organic Program, visit: www.ods.usda.gov/org/pdf/
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