



About this Resource

This resource is an introduction to soil health management practices to help land stewards conserve natural resources in line with current state and federal funding programs. For questions, contact bweise@ccrcd.org.

CDFA Healthy Soils Program

The [CA Healthy Soils Program](#) promotes the development of healthy soils through funding for implementation and demonstration of healthy soils practices on farm. Email cdfa.hsp_tech@cdfa.ca.gov for more info.

NRCS EQIP Program

The [Environmental Quality Incentives Program \(EQIP\)](#) is an NRCS program that provides technical and financial assistance to farmers to help with natural resource concerns like water quality, soil health, drought, and more. For more information, contact the local NRCS office at (925) 672-4577 Ext. 4144.



What is Conservation Tilling?

Conservation tillage (CT) is an umbrella term for a method of land preparation that utilizes crop residue as mulch, leaving at least 30% of soil covered with previous crop residue at the time of planting. Types include no-tillage, strip-tillage, ridge-tillage, and mulch-tillage.



Benefits of Conservation Tilling

- Reduces fuel, labor, and equipment costs
- Builds organic matter in topsoil
- Decreases nitrate leaching potential
- Reduces erosion and dust emissions
- Minimizes soil disturbance to protect qualities that support soil health and crop fertility.
- Enables more diverse and intensive crop rotations in areas with limited rainfall.
- Improved soil friability (soil with texture ideal for plant growth)
- Removes the need for fall shredding or tillage
- Maximizes wildlife habitat, food resources during the winter



Conservation Tilling Materials

Implementing conservation tillage can take a considerable amount of planning and experimentation to create a management system that works for your farm. Materials can include:

- No-till drill, which can be available locally for rent (no-till)
- In-row chisels (mulch-till, strip-till)
- Field cultivators (mulch-till)
- Disks, sweeps, or blades (mulch-till, ridge-till)
- Rototiller (strip-till)



Additional Resources

UCANR Conservation Tillage Practices Publication
<http://bitly.ws/3XumpXB>

UC SAREP Conservation Tillage Overview
<http://bitly.ws/3WTEtds>

Complementary Practices
 Cover Cropping
 Mulching

Continued...

- GPS for precise re-establishment of beds and furrows
- Herbicides for weed management
- Fertilizer to compensate for potential lower crop nitrogen and phosphorus levels



In Practice

Minimum Tillage:

- Uses in CA: Tomatoes, cotton, corn silage, small grains, hay
- Uses equipment that combines tillage tools onto a single frame like the Optimizer, the Eliminator, Incorpramaster

Mulch-Tillage:

- Uses in CA: corn silage, tomatoes, dry edible beans, corn for grain, small grains, hay
- Uses conventional broadcast tillage implements like disks, chisel plows, rod weeders, or cultivators, with limited passes across a field to maintain at least 30% of surface residue

Strip-Tillage/Ridge Tillage:

- Uses in CA: Tomatoes, cotton, melon, corn silage
- Crops are seeded and grown on ridges or shallow beds formed during the prior growing season.
- The seed row is tilled prior to planting to allow residue removal, soil aeration and warming.

No-Tillage/Direct Seeding:

- Soil left undisturbed from harvest to planting (with the exception of fertilizer injection)
- Soil disturbance occurs at planting by seeders or drills

Contact CCRCD

Ben Weise, Ag Conservation
 Program Manager,
bweise@ccrcd.org

Derek Emmons, Ag
 Conservation Coordinator,
demmons@ccrcd.org

Marianna Zavala, Ag
 Conservation Coordinator,
mzavala@ccrcd.org

For current funding opportunities and more info, head to CCRCD's Ag Web Page!

