

## INDIANA CONSERVATION CHOICES

# Climate-Smart Agriculture

Conservation practices help improve soil health, reduce soil erosion, improve water quality, combat climate change and provide other natural resource benefits.

## INDIANA NATURAL RESOURCES CONSERVATION SERVICE

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Are you interested in climate-smart solutions for your agricultural or forestry operation? USDA offers voluntary programs and services to help you build soil health, sequester carbon, reduce greenhouse gas emissions, enhance productivity and commodity marketability, and mitigate the impacts of climate change while building resilience to strengthen your operation.

Several NRCS conservation programs directly support climate-smart agriculture and forestry, including the Environmental Quality Incentives Program (EQIP), Conservation Stewardship Program (CSP), Easement Programs and Conservation Technical Assistance.

While NRCS offers a broad suite of voluntary conservation activities, the agency identifies a sub-set as critical to climate change mitigation. When applied appropriately, these activities may deliver quantifiable reductions in greenhouse gas emissions and/or increases in carbon sequestration. Many offer co-benefits and ancillary benefits that help operations build climate change resilience while addressing other natural resource concerns such as soil health, water quality, pollinator and wildlife habitat and air quality.

Producers interested in managing for soil health are encouraged to minimize soil disturbance while maximizing soil cover, biodiversity and the presence of living roots. Together, these principles reduce emissions to the atmosphere, increase carbon sequestration and have the co-benefit of reducing soil erosion, improving water infiltration, increasing nutrient cycling, decreasing money spent on inputs like fertilizer, building more resilient soils over time and serving as a climate solution.

Nutrient management also plays a major role in increasing the health of your farm and combating the harmful impacts of climate change. Nutrient management enables producers to manage the rate, source, placement and timing of plant nutrients and soil amendments while reducing environmental impact. While nitrogen fertilizer supports healthy plant growth, excess nitrogen may be converted into nitrous oxide, a potent greenhouse gas. NRCS's nutrient management conservation practice may provide climate-smart benefits from implementing the 4Rs of nitrogen management – Right Source, Right Rate, Right Time and Right Place.

Are you interested in conserving natural resources while combating climate change? Whether you are interested in preventing erosion, increasing your soil organic matter, improving your nutrient-use efficiency or increasing your farm's resilience against droughts and floods, farming your land using climate-smart agricultural practices will help you achieve your goals and interests.

This factsheet lists common conservation practices that improve help your farm and the environment. To learn more about soil health practices and how to get started, visit your local USDA NRCS office. We can help you make the right choices to protect and improve your land and other natural resources.



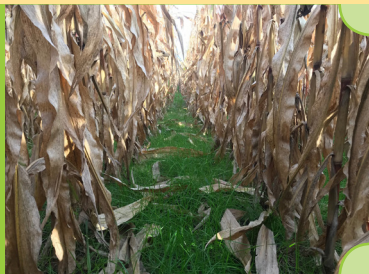


## Mitigation

## Description

## Practices

### Soil Health



Soil health practices reduce emissions to the atmosphere, increase carbon sequestration and have the co-benefit of reducing soil erosion, improving water infiltration, increasing nutrient cycling.

- » Conservation Cover
- » Conservation Crop Rotation
- » No-till/Reduced Till
- » Contour Buffer Strips
- » Cover Crops
- » Field Border/Filter Strips
- » Grassed Waterways
- » Herbaceous Wind Barriers

### Nutrient Management



Managing nutrients by controlling the amount, source, placement and timing to maximize plant growth while minimizing the impact on the environment and the soil.

- » Improves nutrient use efficiency.
- » Increases plant nutrient uptake.
- » Reduces nutrient loss pathways.
- » Values manure as a plant nutrient source
- » Reduces odor emissions.
- » Protects surface and groundwater.

### Livestock Waste Management



NRCS works with livestock producers to reduce methane emissions and support climate change mitigation related to livestock waste management.

- » Anaerobic Digester
- » Composting Facility
- » Roofs and Covers
- » Waste Separation Facility
- » Waster Storage Facility
- » Waste Storage Closure

### Grazing Land Management



Producers who implement conservation practices for managing grazing on pasture and range lands may improve livestock forage while sequestering carbon in perennial biomass and soils.

- » Annual Forages for Grazing Systems
- » Fence
- » Livestock Pipeline
- » Pasture and Hay Planting
- » Prescribed Grazing
- » Watering Facility

### Forestry and Wildlife Habitat



Producers who implement conservation practices for agroforestry, forestry and upland wildlife habitat may sequester carbon in perennial biomass and soils while establishing trees and perennial biomass.

- » Alley Cropping
- » Critical Area Planting
- » Hedgerow Planting
- » Tree and Shrub Establishment
- » Silvopasture
- » Riparian Herbaceous Cover
- » Upland Wildlife Habitat Management

### Energy Efficiency



Producers may work with NRCS to implement conservation practices that can reduce emissions through improved energy or fuel efficiency and use within their agricultural systems, infrastructure, or operations.

- » On-farm energy audit
- » Combustion System Improvement
- » Energy Efficient Agricultural Operation
- » Energy Efficient Building Envelope
- » Energy Efficient Lighting System

For more information visit: [www.nrcs.usda.gov/Indiana](http://www.nrcs.usda.gov/Indiana)