



NORTH JERSEY
RC&D
Resource Conservation & Development

Soil Health and Agricultural Conservation Efforts in Northern NJ

www.northjerseyrcd.org



North Jersey Resource, Conservation and Development is a 501(c)(3) nonprofit. Through partnerships, innovation and education, we are dedicated to meeting community needs through conservation.

North Jersey RC&D works throughout Sussex, Warren, Hunterdon, Morris, Somerset & Union counties.





Protecting the places you love

Current Methods of Planting



Conventional
Tillage



No-till
Planting



No-till Planting
with Cover Crops

Practices that Protect/Improve the Soil



No-till practices leave crop residues on the soil surface and protect soil structure. Crops are planted with minimal soil disturbance.

No-Till Planting

- Reduces Soil Erosion
 - Reduces Compaction
 - Reduces Fuel & Labor Costs
 - Increases Infiltration
 - More Drought Resilience
 - Increases Soil Carbon
 - Less Yield Variability
 - Higher Long-term Yields
- Requires Specialized Equipment
 - Nutrient Stratification
 - Cooler Spring Soils
 - Decreases Short-term Yield

No-till without cover crops is not a complete system. Farmers won't realize full soil health gains without cover crops.

Practices that Protect/Improve the Soil



Winter Cover Crops are planted to cover the soil and are not harvested

Cover Crops

- Reduce Erosion
 - Increase Organic Matter
 - Build Soil Structure
 - Enhance Drainage
 - Improve Soil Fertility
 - Promote Biodiversity
- Cost
 - Availability
 - Seeding Mix and Date
 - Application Method
 - Termination Method



Grasses

Annual Ryegrass
Millet, Sorghum



Cereal Grains

Barley, Oats, Triticale,
Cereal Rye & Wheat



Legumes

Vetch, Clovers, Sun
hemp, and peas



Brassicas and Forbs

Radish, Mustards, turnips,
Rape, and buckwheat

Innovative Practices

How can farmland be more resilient against weather extremes?

How can cover crops become more economically advantageous?

How can farmers accelerate soil carbon sequestration



Programs: Soil Health/Water Quality



Education

- No-till and Cover Crop Implementation
- Education Webinars/Field Days



Implementation

- Watershed Funding for Best Management Practice Implementation
- Aerial Seeding Initiative (NJRCDD-NRCS)
- Technical Assistance
- Fence Rental
- No-till Drill Rental



Research

Conservation Innovation Grants:

- Innovative Cover Crop Spring Management
- Cover Crop Application
- Short Season Crop

Cover Crop

No-Till Planting



Education - No-till and Cover Crop Implementation



- A Practical Guide to No-till and Cover Crops Manual
- Developed course for agricultural service providers
- Innovative learning opportunity: webinars, videos, discussion, creating a network of providers



FUNDED BY: Northeast Sustainable Agriculture Research and Education (SARE) Professional Development Grant

Education – Webinars/ Field Days



An Evening of Wine and Equine BYOW, edition (Bring your own Wine)

Pasture Renovation: May 18th-7:00 PM to 8:00 PM

- Update on COVID-19 Resources for Equine Farmers
- Pasture Renovation
- No-Till Drills and Renovation

Presenters include members of the RCE Animal Ag/Field and Forage Working Group

1. Dr. Carey Williams, Equine Extension Specialist/Professor of Rutgers University
2. Steve Komar, ANR Agent for Rutgers Cooperative Extension of Sussex County
3. Christian Bench, Agricultural Specialist, North Jersey RC&D

Register for this event: <https://go.rutgers.edu/7zoyuovl>

Pasture Management: May 19th-7:00 PM to 8:00 PM

- Weed Identification and Control
- Manure Management with Pastured Animals
- NRCS Programs for Pasture Management

Register for this event: <https://go.rutgers.edu/q5sxwytg>

Presenters include members of the RCE Animal Ag/Field and Forage Working Group

1. Bill Bamka, ANR Agent for Rutgers Cooperative Extension of Burlington County
2. Dr. Mike Westendorf, Animal Science Extension Specialist/Professor of Rutgers University
3. Kaitlin Farbotnik, New Jersey NRCS State Agronomist



NO-TILL TIPS & TRICKS

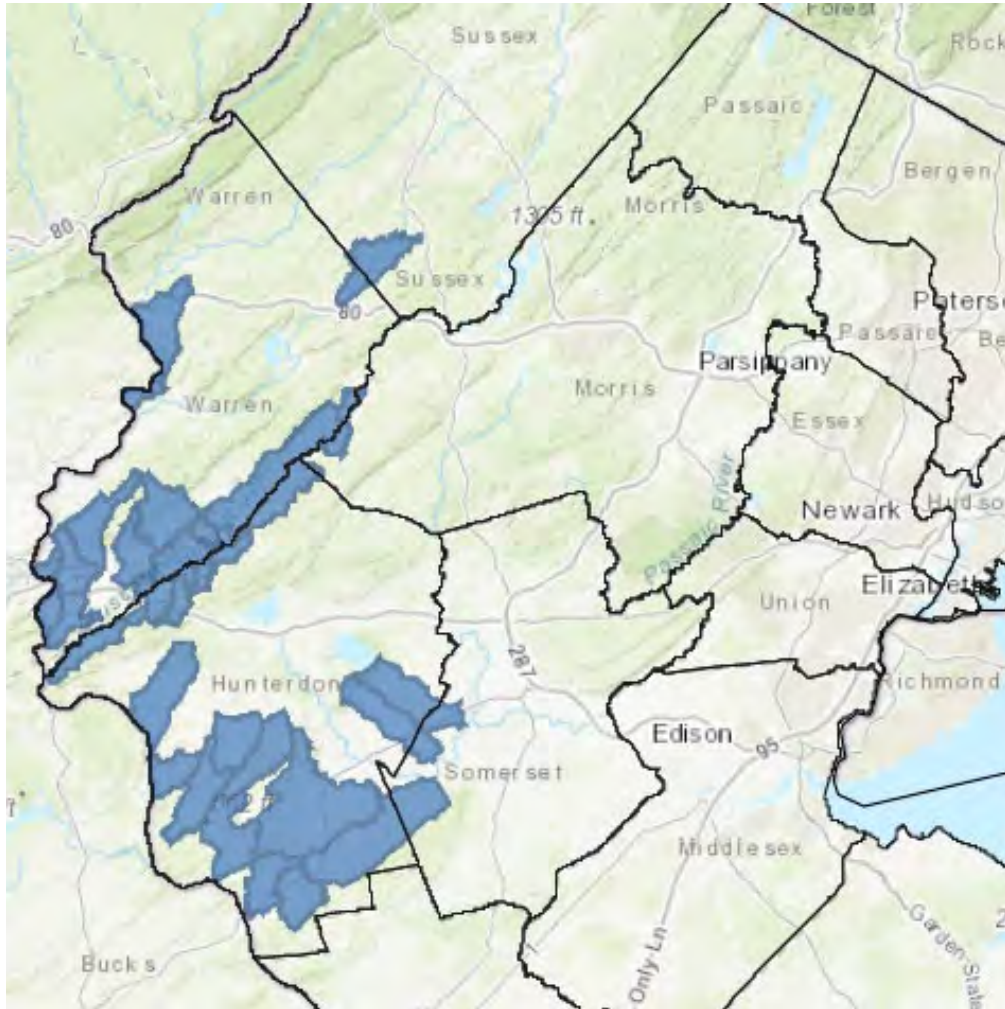
TOM MEYERS FARM
635 Sidney Rd.
Pittstown, New Jersey

MARCH 1, 2019
9:00am - 12:30pm

FREE EVENT
Light breakfast & coffee provided



BMP Implementation



- Priority Funding towards Ag BMP implementation for water quality purposes
 - Cover Crops
 - Manure Management
 - Milk-house Waste
 - Rotational Grazing
 - Grassed/Lined Waterways
 - Heavy Use Area Protection



FUNDED BY: National Fish and Wildlife Foundation, NJ Department of Environmental Protection

Aerial Seeding Cover Crop Initiative



- Aerially seed multi-species cover crop onto standing corn and soybeans
- Average 3,000 acres per year
- Producers sign up for NRCS-EQIP
- NJRCD has managed program since 2014



FUNDED BY: NRCS-EQIP, Farmer Payments, National Fish and Wildlife Foundation, William Penn Foundation

Equipment Rentals



- Try Before Buy – Temporary Fence Lending Program
- 2015 Great Plains 706NT Drill (7')
 - \$250.00 FLAT FEE + \$25.00/per Acre after the first 10 Acres

Have an interested producer? Contact Christian Bench, North Jersey RC&D at christian.bench@usda.gov

Soil Health Research



NRCS-NJ Conservation Innovation Grants (CIG)

- 1. Cover Crop Application Methods (2017)**
Compare fall and spring ground cover by cover crops applied using interseeding, aerial, high crop spreader, skip rows, etc.
- 1 Farm x 3 years
- 2. Short Season Crops to Facilitate Adoption of Multi-species Cover Crop (2019)**
Determine if short season crops enable producers to plant cover crop earlier, what is the impact on yield.
- 5 Farms x 3 years

Soil Health Research

**DO YOU USE
COVER CROP?**

TAKE PART IN AN INNOVATIVE
COVER CROP
ON-FARM RESEARCH TRIAL



Planting Green Roller Crimping Grazing Cover Crops

PROJECT INCENTIVES

2-YEAR ON-FARM TRIAL	\$560,000 IN INCENTIVES FOR FARMERS	UP TO \$20,000 FOR EQUIPMENT	\$1,000 ANNUAL STIPEND	\$35-\$300 FOR EVERY ACRE
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LEARN MORE AND APPLY

National Conservation Innovation Grants 2019 On-Farm Trials Soil Health Demonstration Award Recipient

- Spring Management Cover Crop
- 25 farms practicing innovative termination methods:
 - Planting Green,
 - Roller Crimping, or
 - Grazing Cover Crops
- Farmer Incentives
- Compare Environmental, Economic and Social Impacts

FUNDED BY: USDA-NRCS Conservation Innovation Grant On-Farm Trial Soil Health Demonstration



PLANTING GREEN

“Planting Green” refers to planting cash crops into living cover crops



ROLLER CRIMPER

Rolling-crimping is a means of mechanically terminating the cover crop by crushing and snapping of the plant when the cover crop is more mature.

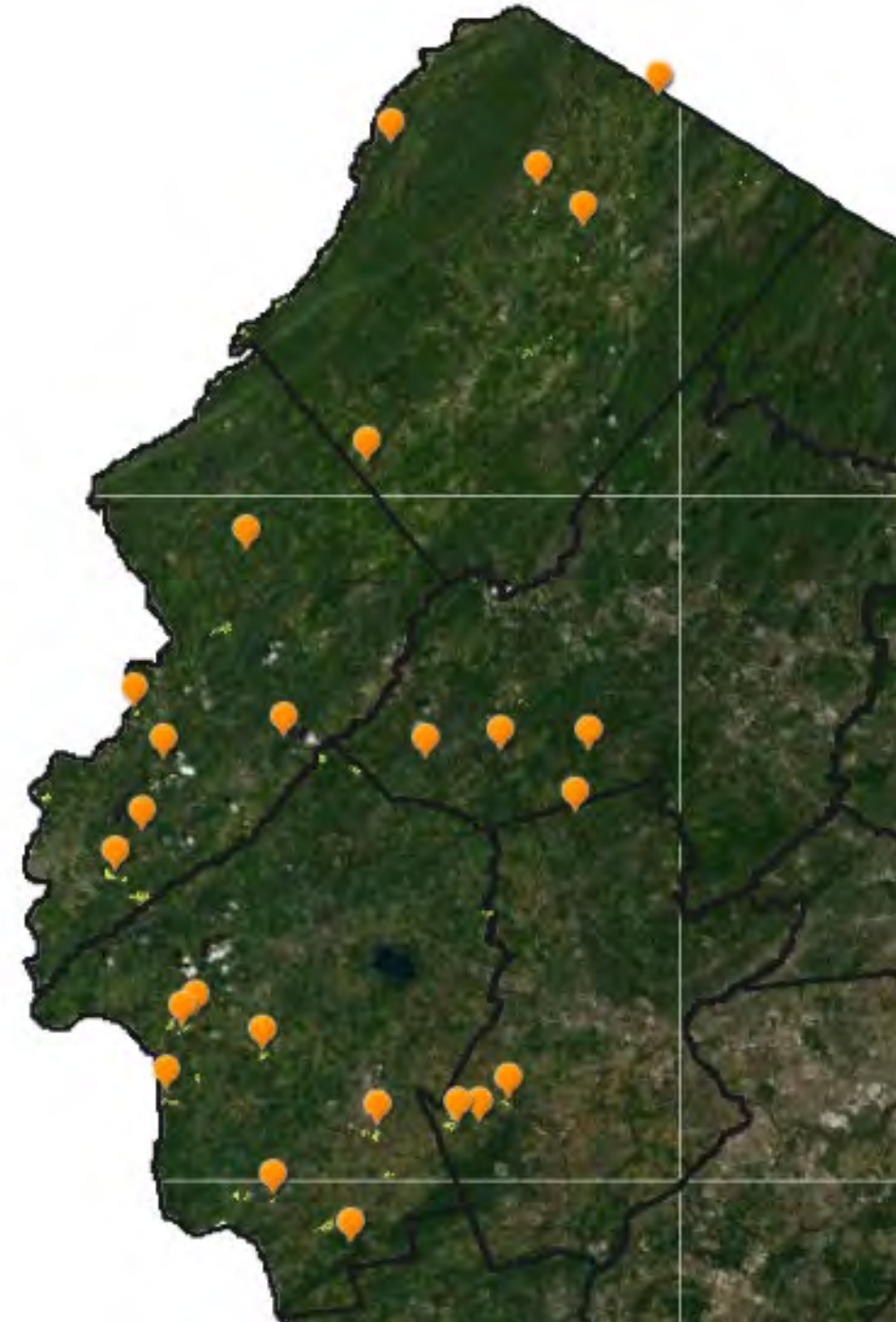


GRAZING COVER CROPS

Intensively grazing cover crop with livestock can provide high-quality feed for animals and fertilizer for fields while stunting cover crop development.

Diverse Farm Partners

- 25 Farms Enrolled in the Project
 - Farms in five counties
 - 5 Certified organic farms
 - Focus on both commodity and specialty crops
 - Includes some of Northern New Jersey's largest and most influential farms



A New Approach to Implementation

Farmer Driven Research Approach

- Conduct research on REAL working farms at multiple scales
- Emphasis on social and economic implications of practices

Encourage Ingenuity and Innovation

- Methodology encourages farmer-led innovation
- Measures and quantifies impacts to soil carbon pools

Address Barriers to Implementation

- Provide good technical assistance
- Compensate for yield loss/risk during practice transition
- Fund equipment necessary to implement the practices

RESULT: A cohort of farmers implementing cutting edge practices that will serve as a model for other farms.

Thank you.



www.northjerseyrcd.org

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