



USDA-NRCS AND AGROFORESTRY

A NATIONAL OVERVIEW AND A MISSOURI PERSPECTIVE

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SOUTHWEST AGROFORESTRY ACTION NETWORK WORKSHOP

FARMINGTON NM, 6/04/2019

Soil Conservation Act

April 27, 1935





NATURAL RESOURCES CONSERVATION SERVICE

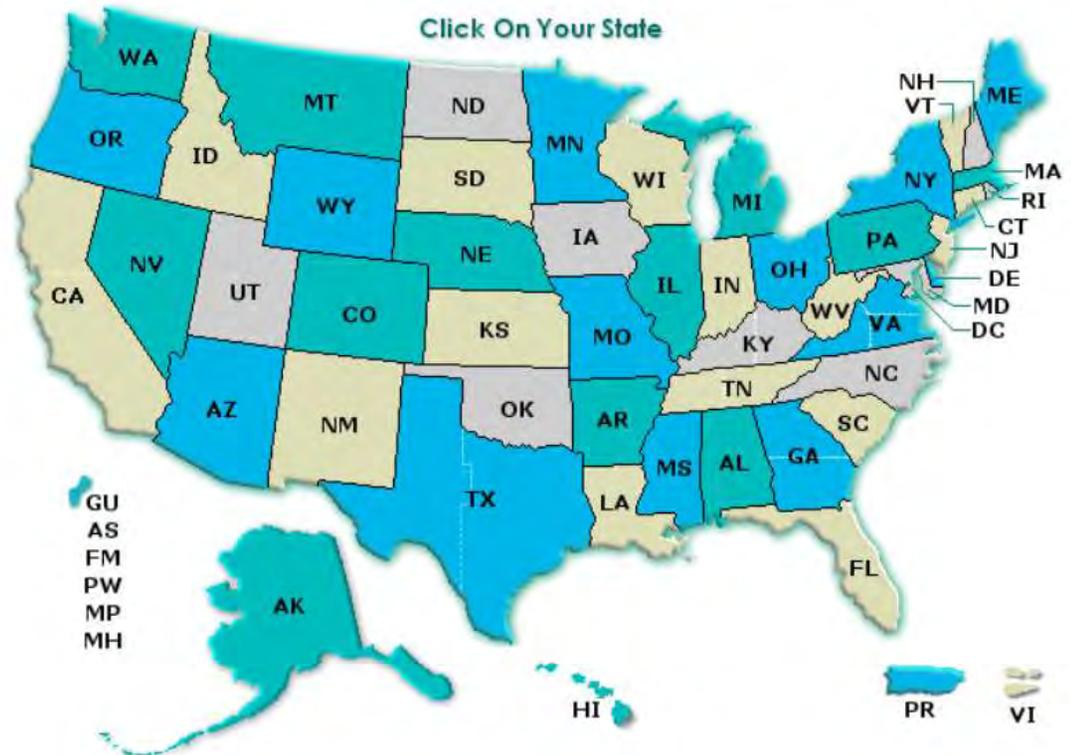
HELPING PEOPLE, HELP THE LAND

USDA United States Department of Agriculture
Service Center Locator

Text Version By State By City USDA USDA eForms FSA NRCS RD

USDA Service Centers are designed to be a single location where customers can access the services provided by the Farm Service Agency, Natural Resources Conservation Service, and the Rural Development agencies. This web site will provide address of a USDA Service Center and other Agency offices serving your area along with information on how to contact it

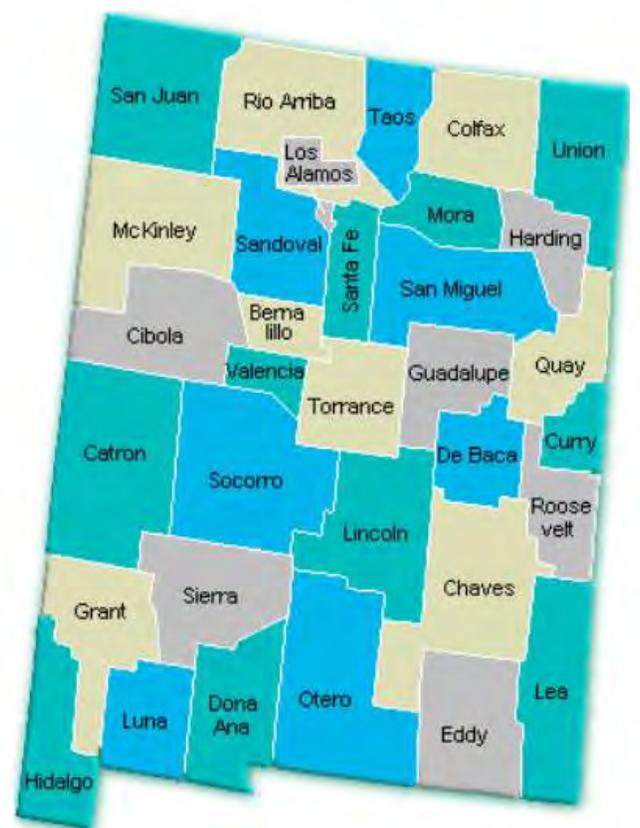
Natural Resources Conservation Service



Natural Resources Conservation Service

New Mexico Counties

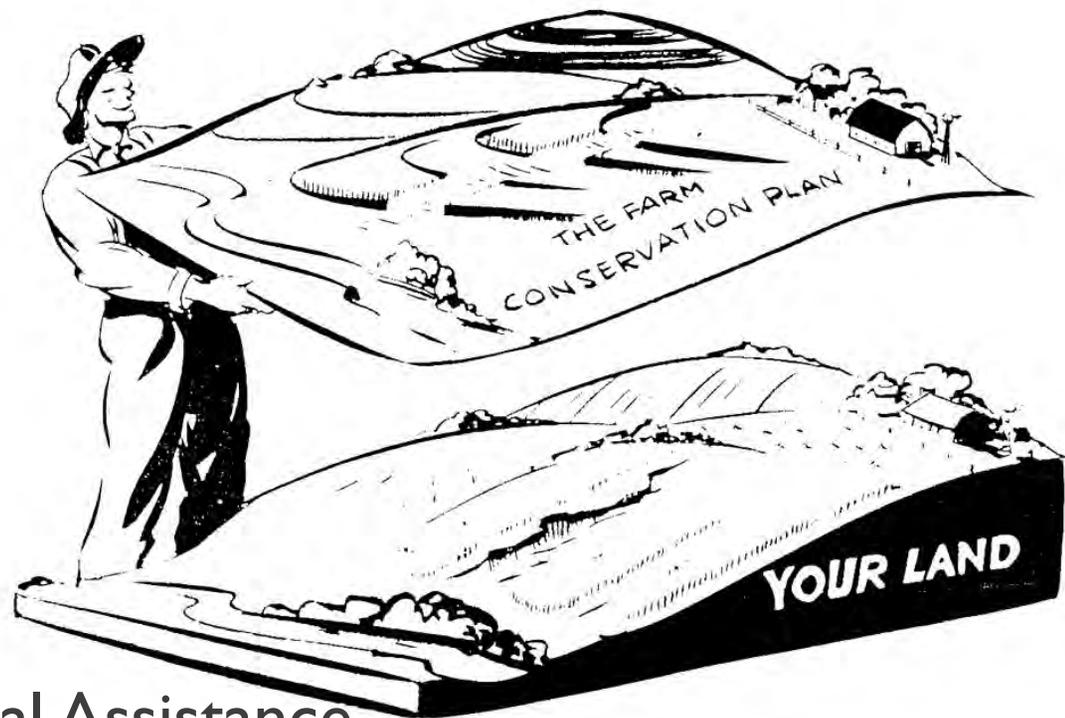
Click on the map to select a county



This service is provided by the USDA-Office Information Profile System.

CONSERVATION PLAN

- Voluntary
- Site-specific
- Comprehensive
- Action Oriented
- Resource Concern Focus
- Supports Technical and Financial Assistance



RESOURCE CONCERNS

- Soil
 - *Erosion*
 - *Quality*
- Water
 - *Quantity*
 - *Quality*
- Air
 - *Quality*
- Plants
 - *Condition*
- Animals (Livestock & Wildlife)
 - *Food*
 - *Cover/Shelter*
- Energy

CONSERVATION PRACTICES

- Address Resource Concerns
- Defined in Conservation Practice Standards (eFOTG)
 - 160+ National Standards
 - Includes the **Big Five** Agroforestry Practices
- Provide guidance for applying conservation technology on the land
- Set the minimum acceptable level for application of the technology

DEFINITION

Trees or shrubs are planted in sets of single or multiple rows with agronomic, horticultural crops or forages produced in the alleys between the sets of woody plants that produce additional products.

PURPOSE

- Enhance microclimatic conditions to improve crop or forage quality and quantity.
- Reduce surface water runoff and erosion.
- Improve soil health by increasing utilization and cycling of nutrients.
- Alter subsurface water quantity or water table depths.
- Enhance wildlife and beneficial insect habitat.
- Increase crop diversity.
- Decrease offsite movement of nutrients or chemicals.
- Increase carbon storage in plant biomass and soils.
- Develop renewable energy systems.
- Improve air quality.

CONDITIONS WHERE PRACTICE APPLIES

On all cropland and hayland where trees, shrubs, crops, and forages can be grown in combination.

NRCS PROGRAMS *(THE BIG ONES)*

Environmental Quality Incentives Program

EQIP

- Helps producers in a manner that promotes agricultural production and environmental quality as compatible goals
- Competitive
- Focused on addressing Resource Concerns (“fixing problems”)
- Provides financial assistance (cost share) to assist with installation of conservation practices
- Variable contract length

Conservation Stewardship Program

CStP

- Intended to reward those that are already “doing the right thing”; encourages them to reach the next level
- Competitive
- Must enroll all acres (per land use)
- Provides fixed “base” payment
- Provides payment for installation of enhancements or practices
- Five-year contract length

EQIP WINDBREAK

- Practices
 - Site Prep (490)
 - Tree and Shrub Establishment (612)
 - Mulching (484)
 - Micro-irrigation System (441)
- Financial Assistance = % of Average Cost
- Contract Length = 1-3 yrs



CSP WINDBREAK *ENHANCEMENT*

- Enhancement E612133XI: *Adding food-producing trees and shrubs to existing agroforestry plantings.*
- Enhancement Payments typically meet or exceed the average cost
- Base Payment = $(\$350 \times \text{Resource Concerns Addressed}) + (\$7.50 \times \text{Farmstead Acres}) = \geq \$1,500/\text{year}$
- 5 year contract = $\geq \$7,500$



**Missouri's EQIP Subaccount
for Agroforestry
and Perennial Woody Crops**

MISSOURI EQIP AGROFORESTRY SUB-ACCOUNT

- Dedicated Funding for Agroforestry Practices and Establishment of Perennial Woody Crops
- How did we get there?
 - University of Missouri Center for Agroforestry
 - Ground-swell of local interest
 - Perennial Woody Crops
 - Did not compete well in EQIP with other cropland applications
 - 2014 Farm Bill
 - Key NRCS staff support

MISSOURI EQIP AGROFORESTRY SUB-ACCOUNT

- FY17: 11 contracts @ \$42,000
- FY18: 18 contracts @ \$71,000
- FY19: 21 *applications*, est \$117,000

	Number of Planned Agroforestry Practices	
	FY17	FY18
Primary Practices		
Alley Cropping Establishment	2	3
Windbreak/Shelterbelt Establishment	3	2
Silvopasture Establishment	1	4
Riparian Forest Buffer Establishment	0	1
Tree & Shrub Establishment	5	8
Total	11	18
Supporting Practices		
Access Control	1	1
Fence	2	2
Herbaceous Weed Control	2	1
Mulching	10	11
Tree & Shrub Site Preparation	9	13
Total	24	28









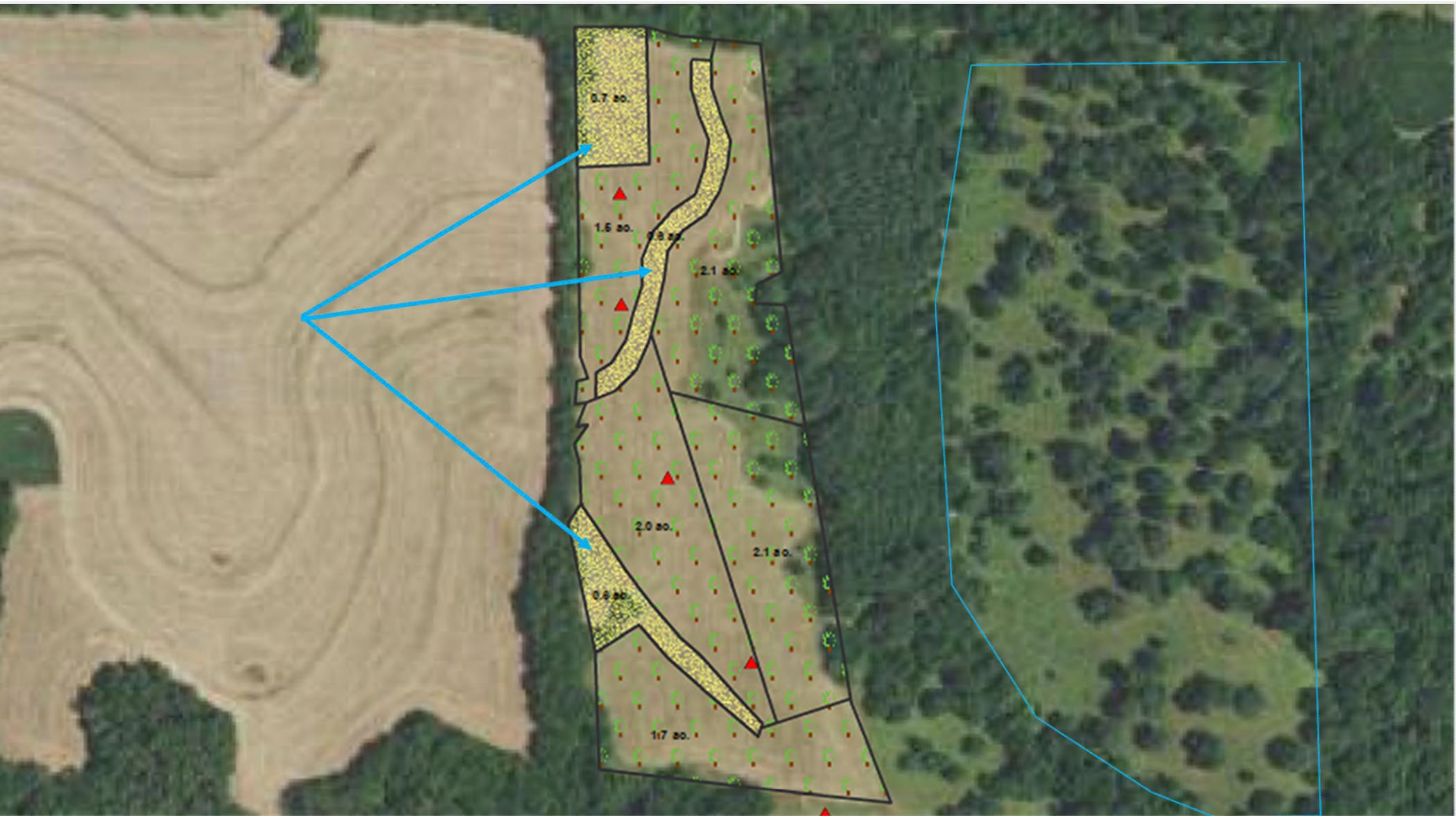














CHALLENGES & OPPORTUNITIES



RESOURCE CONCERNS

What problem is being fixed?

Land Use Intensity...

Additional benefits?

Conservation-based vs production-based systems

CONSERVATION-BASED



- **Windbreaks/Shelterbelts**
 - *Soil Erosion & Soil Health*
 - *Air Quality*
 - *Plant Condition*
 - *Livestock Condition*
 - *Wildlife & Pollinators*
 - *Energy*
- ***Upland Woody Buffers***
 - *Soil Erosion & Soil Health*
 - *Water Quality*
 - *Air Quality*
 - *Wildlife & Pollinators*
- **Riparian Forest Buffers**
 - *Water Quality & Quantity*
 - *Wildlife & Pollinators*
- **Adding a production component is usually OK**

PRODUCTION-BASED



- Alley cropping, silvopasture, multistory-cropping
- Woody crops (block plantings for production)
- What Resource Concern is being treated?
 - Plant condition
 - Livestock condition
 - Soil condition
 - Wildlife & pollinators
 - Air quality

SOIL HEALTH

What are the soil health benefits of woody plants in agricultural systems?

Key “growth area” for agroforestry adoption

Research needed...



USDA-NRCS SOIL HEALTH INFOGRAPHIC SERIES #006

unlock the
SECRETS
OF THE
SOIL

what it does



healthy soil is key to feeding
9 billion 
by **2050**

Source: The United Nations

USDA United States
Department of
Agriculture

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