

# NRCS Resources to Mitigate the impact Drought

Christine Clarke – Massachusetts NRCS





# Key points

- ✓ Most applicable Farm Bill programs are Environmental Quality Incentives Program (EQIP) and Agriculture Management Assistance Program (AMA)
- ✓ Both programs are available regardless of drought condition. Sign up occurs several times per year.
- ✓ Applications are ranked quarterly
- ✓ Programs are managed to address resource concerns such as soil quality and water quantity.

# Key points

- ✓ FSA determines client eligibility and NRCS defines resource needs
- ✓ NRCS Field office staff work directly with farmer to develop conservation plan and practice schedule

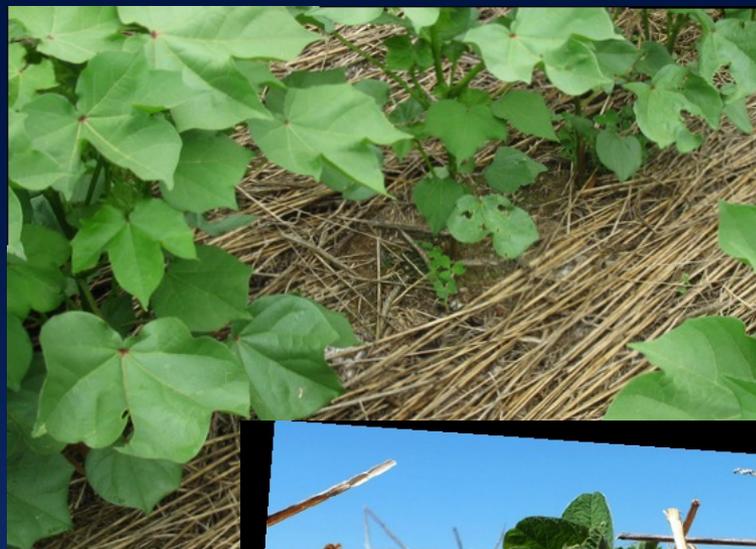


- ✓ EQIP and AMA provide financial and technical assistance to agricultural producers through contracts. These contracts provide financial assistance in planning and implementing conservation practices that address natural resource concerns to improve soil, water, animals, plants, air. (SWAPA).

Examples of applicable practices –cover crop, mulch tillage, conservation crop rotation, nutrient management, irrigation, water management, wells, water management, fencing, high tunnels

# Soil Health

- ✓ Keep the soil covered as much as possible
- ✓ Disturb the soil as little as possible
- ✓ Keep plants growing throughout the year to feed the soil
- ✓ Diversify as much as possible using crop rotation and cover crops



## Hadley, MA - August 23, 2016 – fine sandy loam

Conventional Tillage, cover crop tilled in



No-till, cover crop left on surface



# DID YOU KNOW?

**unlock the SECRETS OF SOIL**

**FOR EACH 1% INCREASE IN *organic matter* U.S. CROPLAND COULD STORE THE AMOUNT OF *water* THAT FLOWS OVER NIAGARA FALLS IN 150 DAYS**

Like a "water savings account," healthy soils capture and store more water for plants to use when they need it.

Earthworms, arthropods, and decaying roots create "macro-pores" into which water can flow to then be stored in the soil. Bacteria, fungi, and other soil life build and stabilize smaller "micro-pores" that further increase the soil's capacity to hold water.

Calculation based on approximate averages for diverse soils as follows:  
 U.S. Cropland = 440 million acres  
 440 million acres water holding capacity per acre with each 1 percent organic matter increase = 25,000 gallons  
 440 million acres x 25,000 gallons = 11 billion gallons  
 Average water over Niagara Falls per day = 65 billion gallons  
 11 billion gallons per acre x 40 acres = 440 million x 24 hours  
 The result: 10 trillion gallons / 65 billion gallons = 150

Natural Resources Conservation Service  
[www.nrcs.usda.gov](http://www.nrcs.usda.gov)



# Opportunities

- ✓ Climate smart agriculture education to mitigate changing environment
- ✓ Collaborate with Soil and Water Conservation Districts
- ✓ Watershed planning for water management – too much and too little



Thank You

[www.ma.usda.gov](http://www.ma.usda.gov)