U.S. Farm Programs and the Impacts on National and International Soil Security

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How does FSA fit into USDA?

[Diagram showing the organizational structure of the USDA with FSA highlighted]

- **Secretary**
  - Deputy Secretary
    - Chief Economist
    - Director, National Appeals Division
    - Director of Communications
    - Inspector General
    - General Counsel
    - Office of the Chief Financial Officer
    - Office of Budget and Program Analysis
    - Assistant Secretary for Congressional Relations
    - Assistant Secretary for Administration
    - Assistant Secretary for Civil Rights
    - Chief Information Officer

**Under Secretary for Natural Resources and Environment**
- Forest Service
- Natural Resources Conservation Service

**Under Secretary for Farm and Foreign Agricultural Services**
- Farm Service Agency
- Foreign Agricultural Service
- Risk Management Agency

**Under Secretary for Rural Development**
- Rural Utilities Service
- Rural Housing Service
- Rural Business Cooperative Service

**Under Secretary for Food, Nutrition, and Consumer Services**
- Food and Nutrition Service
- Center for Nutrition Policy and Promotion

**Under Secretary for Food Safety**
- Food Safety and Inspection Service

**Under Secretary for Research, Education, and Economics**
- Agricultural Research Service
- National Institute of Food and Agriculture
- Economic Research Service
- National Agricultural Statistics Service

**Under Secretary for Marketing and Regulatory Programs**
- Agricultural Marketing Service
- Animal and Plant Health Inspection Service
- Grain Inspection Packers and Stockyards Administration
Overview

• The United States Department of Agriculture (USDA) administers numerous programs that contribute toward Global Soil Security, many of which are under the umbrella of the Farm Service Agency (FSA).

• This presentation explores those programs and the ways in which the programs contribute toward National and International Soil Security.

• The two primary roles where FSA programs contribute include
  – helping keep land in agriculture and
  – conserving environmentally sensitive land.
Background

- According to the 2012 Agricultural Census, about 915 million acres of land were on 2.1 million farms in the United States; these numbers have decreased by about 72 million acres and 130,000 farms over the last 30 years.

- Without the safety net provided through U.S. farm programs, this number would likely have decreased at a much more rapid rate but the impacts of farming on the soil would have been much greater.
Farm Programs

- Most farms and ranches in the U.S. receive payments through at least one of the disaster assistance, safety net and/or conservation programs administered through FSA
Disaster Assistance Programs

Farm Service Agency

Global Soil Security Symposium
May 19-21, 2015

Farm Safety Net Programs

Agricultural Risk Coverage (ARC)

Price Loss Coverage (PLC)

Marketing Assistance Loans (MALs) & Loan Deficiency Payments (LDPs)

Farm Loans and Farm Storage Facility Loans (FSFL)

Dairy Product Donation Program (DPDP)

Margin Protection Program for Dairy Operations (MPP-Dairy)

Margin Protection Program for Dairy Operations (MPP-Dairy)
Disaster Assistance Programs

- Livestock Forage Program (LFP) and Livestock Indemnity Program (LIP)
- Emergency Assistance for Livestock, Honey Bees, and Farm-raised Fish (ELAP)
- Emergency Conservation Program (ECP) and Emergency Forest Restoration Program (EFRP)
- Emergency Loans
- Tree Assistance Program (TAP)
- Noninsured Crop Disaster Assistance Program (NAP)
Conservation and Energy Programs

Source Water Protection Program (SWPP)

Conservation Reserve Program (CRP)

Transition Incentives Program (TIP)

Biomass Crop Assistance Program (BCAP)
OVERARCHING POLICY THAT IMPACTS SOIL CONSERVATION
Conservation Compliance: Overview

• Highly Erodible Land (HEL)
• Wetland Conservation (WC)
Conservation Compliance: Who must comply?

• Producers, and any affiliated individuals or entities who participate in most programs administered by
  – the Farm Service Agency (FSA),
  – the Natural Resources Conservation Service (NRCS), and
  – the Risk Management Agency (RMA) are required to comply with these provisions.
Conservation Compliance: What is required?

- Producers must complete/sign Compliance Certificate (AD-1026), certifying they will **not:**
  - Plant or produce an agricultural commodity on highly erodible land without following an NRCS approved conservation plan or system;
  - Plant or produce an agricultural commodity on a converted wetland; or
  - Convert a wetland which makes the production of an agricultural commodity possible.

- In addition, producers planning to conduct activities that may affect their HEL or WC compliance, for example
  - removing fence rows,
  - conducting drainage activities, or
  - combining fields,
  must notify FSA by filing form AD-1026.

FSA will notify NRCS, and NRCS will then provide highly erodible land or wetland technical evaluations and issue determinations if needed.
Conservation Compliance: What are the impacts of non-compliance?

- Non-compliance may affect the following types of USDA program benefits:
  - FSA loans and disaster assistance payments
  - NRCS and FSA conservation program benefits
  - Federal crop insurance premium subsidies
PROGRAMS THAT IMPACT SOIL CONSERVATION EVEN MORE DIRECTLY
Emergency Conservation Program (ECP)

- Emergency funding and technical assistance for farmers and ranchers to rehabilitate farmland damaged by natural disasters
- Also provides funding to carry out emergency water conservation measures in periods of severe drought
- Participants receive cost-share assistance of up to 75 percent of the cost to implement approved emergency conservation practices
  - Limited Resource up to 90%
Emergency Forest Restoration Program (EFRP)

- Provides payments to eligible owners of nonindustrial private forest (NIPF) land in order to carry out emergency measures to restore land damaged by a natural disaster.
- Tree cover must have been on the land immediately before the natural disaster.
- Cost share may not exceed 75 percent of the cost of the emergency measures.
- Funding availability is subject to appropriations.
Conservation Reserve Program: What is CRP?

• Celebrating its 30th anniversary, the Conservation Reserve Program (CRP) is by far FSA’s flagship program related to soil conservation with over 24 million acres enrolled nationwide.

• In exchange for a yearly rental payment and cost-share assistance, farmers enrolled in the program voluntarily agree to remove environmentally sensitive land from agricultural production and plant species that will improve environmental health and quality.

• Contracts for land enrolled in CRP are 10-15 years in length.
Conservation Reserve Program: What is CRP?

- Types of Enrollment

<table>
<thead>
<tr>
<th>General Signup</th>
<th>Continuous CRP</th>
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<tr>
<td>enrollment through periodic competitive signups</td>
<td>environmentally desirable land devoted to certain conservation practices may be enrolled at any time</td>
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Conservation Reserve Program: What is the goal of CRP?

• The long-term goal of the program is to re-establish valuable land cover to help improve water quality, prevent soil erosion, and reduce loss of wildlife habitat.
Conservation Reserve Program: Continuous Signup

- Conservation Reserve Enhancement Program (CREP)
- Farmable Wetlands Program (FWP)
- State Acres for Wildlife Enhancement (SAFE)
- Highly Erodible Lands Initiative (HELI)
Conservation Reserve Program: Grasslands Enrollment

- New provision under the 2014 Farm Bill
- Up to 2 million acres
Conservation Reserve Program: Continuous Signup (Continued)

- Targeted Practices
  - Wetland Restoration
  - Duck Nesting Habitat
  - Habitat Buffers for Upland Birds
  - Pollinator Habitat
  - Longleaf Pine
Evolution of CRP Over Time

- 1985: First CRP enrollments created
- 1986: Continuous CRP created
- 1990: EBI created
- 1996: First CREP agreement
- 1997: Mid-Contract Management
- 2002: habitat buffers for upland birds
- 2005: SAFE
- 2007: Pollinator habitat
- 2011: Habitat
- 2012: Million acres
- 2014: Restart of CRP
- 2015: 30th Anniversary of CRP and Extensions
Conservation covers established through CRP are approximately 90% grass mixes and 10% trees

- Grass plantings have been trending toward native grass
- Tree plantings have been trending toward hardwood riparian buffers and longleaf pine restoration
- CRP enrollment is becoming more targeted over time
CRP Benefits:
Soil and Water Quality

• CRP protects soil productivity by establishing conservation covers on fragile cropland to reduce sheet, rill and wind erosion.

• CRP reduces the nitrogen, phosphorus, and sediment leaving a field in runoff and percolate.
CRP Benefits:
Soil Erosion

• By targeting fragile cropland and placing these lands into protective conservation covers, CRP reduces soil erosion annually by over 275 million tons from pre-CRP levels and enhances soil productivity.

• Since 1986, CRP has reduced soil erosion more than 8 billion tons.
CRP Benefits: Nutrients

- CRP reduces the nitrogen and phosphorus leaving a field in runoff and percolate, 95 and 86 percent less, respectively, compared to land that is cropped.
- Grass filter strips and riparian buffers intercept sediment, nutrients, and other contaminants before they enter waterways.
- Using models developed by the Food and Agricultural Policy Research Institute (FAPRI), CRP reduced nutrient losses in FY 2013, by an estimated 565 million pounds of nitrogen and 113 million pounds of phosphorus, compared to land that is cropped.
- Wetlands restored and constructed by CRP improve water quality by converting nitrate-nitrogen into benign atmospheric nitrogen. Iowa’s 94 CREP constructed wetland projects are designed to intercept and treat water from underground agricultural drainage systems. In FY 2013, these projects removed 1.1 million pounds nitrate from agricultural drainage water.
CRP Benefits: Flood Protection

- Upstream CRP lands reduce downstream flood damage.
- Peak flows are reduced by slowing, storing, and infiltrating storm water runoff.
- For example, U.S. Army Corps of Engineers found that urban areas realized significant monetary flood damage reduction benefits due to existing CRP land in the Indian Creek basin of Iowa.
CRP Benefits: Groundwater Protection

- USGS examined the relationship between CRP enrollment and Ogallala aquifer water level change.
- The analysis reveals that the benefits of CRP are greatest in those critical areas with the greatest water-level decline.
- Targeting land in these areas for increased CRP enrollment or re-enrollment is likely to be beneficial to the aquifer.
CRP Benefits: Impacts on CO$_2$

- CRP sequesters more carbon, 38 million metric tons carbon dioxide equivalent (CO$_2$), on private lands than any other federally administered program.

- The total reduction in greenhouse gases from CRP is equivalent to removing 8.7 million cars from the road for a year.
CRP Benefits: Wildlife - Ducks

• Since 1985, CRP has restored >2 million acres of wetlands

• Studies have shown that each year CRP provides habitat producing an estimated 2 million additional ducks in the Prairie Pothole Region
CRP Benefits: Wildlife - Grouse

- The CRP has been recognized as an important tool for aiding sage grouse (SAGR) and lesser prairie chicken (LEPC) populations.
- The Western Association of fish and Wildlife Agencies developed a range-wide conservation plan for the LEPC, reporting that “The CRP is a voluntary program that supports the most robust populations of LEPC across their range.”
- With respect to SAGR, the Washington Department of Natural Resources (WDNR) found that CRP enrollment was associated with halting a decline (25 percent between 1970 - 1988) in SAGR populations.
- The WDNR study found that a region with low CRP enrollment had continued SAGR population decline.
CRP Benefits: Wildlife – Northern Bobwhite Quail

• Mississippi State University researchers found that quail populations were positively related to CRP upland buffer enrollment, estimating an increase of 730 thousand quail.

• Overall breeding season bobwhite densities were 70-75% greater on CRP buffers than control fields.
CRP Benefits: Wildlife – Grassland Birds

• The CRP has repeatedly been identified as an important conservation program for grassland birds by the North American Bird Conservation Initiative.

• Serious declines in grassland bird populations have been documented by the USFWS. The 2013 ‘State of the Birds’ report states: “Conservation Reserve Program is restoring grassland habitat for breeding birds.
  – Henslow’s Sparrow populations, which have declined more than 95% since the mid-1960s, have rebounded in some areas through CRP.
  – In Illinois, the regional Henslow’s Sparrow population has significantly increased; spring bird counts for the species are now about 25 times greater than 30 years ago, prior to CRP.”

• Researchers from the United States Fish and Wildlife Service, U.S. Geological Survey, and the University of Montana found that CRP had a large impact on grassland bird populations in the Northern Plains, including two birds designated as species of continental importance by Partners in Flight.
CRP Benefits:
Wildlife – Pheasants

• **Ring-Necked Pheasants** – Western EcoSystems Technology, Inc. found that, in prime pheasant habitat, a 4 percent increase in CRP herbaceous vegetation was associated with a 22 percent increase in pheasant counts.
Direct Economic Benefits of CRP

- Improved wildlife habitat through CRP has resulted in a direct increase of over $1.4 billion dollars per year in economic activity in rural areas through hunting and other recreational uses.

- It is also estimated that 57% of CRP enrollees allow recreational access to at least some portion of their CRP land.
A few final thoughts to keep in mind when trying to impact policy

• Often soils are the subtext
• Policy decisions are usually made with some degree of uncertainty
• Policies that impact soils are a blend of regulatory and voluntary
  – Different agencies use these approaches to varying extents
  – Pros and cons to both approaches
• Simple statements with simple pictures and maps are generally much more useful in communication than long reports with complicated equations
• Understanding $ impacts of strategies is extremely important
• Strategies that benefit underserved and beginning farmers are palatable
Thank You!

Please send any additional questions to:

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CRP Silver Lining Video