# NRCS PROGRAMS

## NATURAL RESOURCES CONSERVATION SERVICE


JAMIE L. JONES
Soil Conservationist – Piatt County
Area 5 Organic Specialist


JoDaviess
Stephenson
Winnebago
Boone
McHenry
Lake
Carroll
Ogle
DeKalb
Kane
Cook
Whiteside
Lee
DuPage
Kendall
Will
4
Henry
Bureau
LaSalle
3
Grundy
Rock Island
Mercer
Kankakee
Putnam
Knox
Stark
Marshall
Livingston
Henderson
Warren
Peoria
Iroquois
Woodford
Fulton
McLean
Hancock
McDonough
Ford
Tazewell
Champaign
Vermilion
Schuyler
Mason
Logan
DeWitt
Adams
Menard
Cass
Macon
Brown
Sangamon
Piatt
Douglas
Edgar
Morgan
Pike
2
Moultrie
Coles
Scott
Shelby
Greene
Macoupin
Christian
5
Clark
Cumberland
Calhoun
Montgomery
Fayette
Effingham
Jasper
Crawford
Jersey
Madison
Bond
Clay
Marion
Lawrence
Clinton
Richland
St. Clair
Wayne
Edwards
Wabash
Jefferson
Monroe
Washington
1
Hamilton
White
Randolph
Perry
Franklin
Jackson
Williamson
Saline
Gallatin
Union
Johnson
Pope
Hardin
Alexander
Pulaski
Massac

# OUR SERVICE…

*"HELPING PEOPLE HELP THE LAND"*

# EQIP

## ENVIRONMENTAL QUALITY INCENTIVES PROGRAM

# EQIP

- Voluntary program
- “Fix it” program; helps landowners to solve existing resource concerns
- Payment based on flat rate per unit

# WHO CAN APPLY

- Eligible applicants include individuals, legal entities, Indian Tribes, or joint operations engaged in agricultural production. Organic producers who grow agricultural commodities on eligible land and **have natural resource concerns.**

# WHO CAN APPLY (CONT…)

Eligible producers interested in entering into a financial assistance agreement with NRCS for EQIP assistance may file an application at any time. Applicants must :

- Control or own eligible land
- Comply with adjusted gross income limitation (AGI) provisions
- Be in compliance with the highly erodible land and wetland conservation requirements
- Develop an NRCS EQIP plan of operations

*(Additional restrictions and program requirements may apply.)*

# HOW TO APPLY

- Applications accepted on CONTINUOUS BASIS
- **Each state may establish deadlines for application periods**
- Producers must submit a complete program application and other documentation to support eligibility to be considered for financial assistance through EQIP.

# EQIP
## PRACTICE HIGHLIGHTS

# EQIP – Seasonal High Tunnel Initiative

***Goal:*** to assist producers to extend the growing season for high value crops in an environmentally safe manner

*Eight-species cover crop cocktail mix in a high tunnel. Lake County, Montana.*

# EQIP – Seasonal High Tunnel Initiative

- The Initiative may assist producers in addressing a resource concern by:
  - improving plant quality
  - improving soil quality
  - reducing nutrient and pesticide transportation
  - improving air quality through reduced transportation inputs
  - reducing energy use by providing consumers with a local source of fresh produce

2014 Info!

## EQIP Conservation Practices for Seasonal High Tunnel Initiative

| Conservation Practice | Practice Lifespan (years)[1] | Unit | Practice Code | Payment Cap | Payment Limits |
|---|---|---|---|---|---|
| **Core Practices** | | | | | |
| Seasonal High Tunnel System for Crops | 4 | Sq ft | 798 | 2,178 sq ft | |
| **Supporting Practices** | | | | | |
| Critical Area Planting | 10 | Ac. | 342 | | |
| Diversion | 10 | Ft. | 362 | | |
| Grassed Waterway | 10 | Ac. | 412 | | |
| Irrigation System, Microirrigation | 15 | Ac. | 441 | | |
| Irrigation Water Management | 1 | Ac. | 449 | | One-time payment |
| Mulching | 1 | Ac. | 484 | | |
| Roof Runoff Structure (Rock Trench Drain scenario only) | 15 | No. | 558 | | |
| Subsurface Drain | 20 | Ft. | 606 | | |

2015 Info!

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|---|---|---|---|---|---|
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# A Few Quick Rules…

- All supporting practices needed to prevent ponding and runoff issues in and around the structure must also be included in the contract

# A Few Quick Points

Payment cap of $8,500

Illinois NRCS offers:

$3.85/sq ft traditional producers

$4.62/sq ft HU producers

2,208 sq ft traditional producers

1,839 sq ft HU producers

HU = "Historically Underserved" Participants **See HU Fact Sheet for more info**

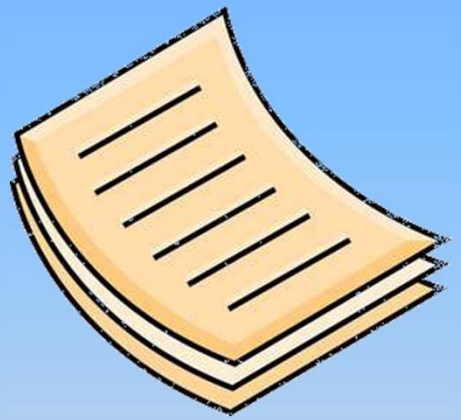
# EQIP – Seasonal High Tunnel

- Must be at least 6 feet in height
- Heating?
- Ventilation?
- May be required to provide annual monitoring data to NRCS for 3 years
- **Not always required,
  but I highly
  recommend it!

*Photo courtesy of [www.tn.nrcs.usda.gov](http://www.tn.nrcs.usda.gov)*

# Provide Annual Monitoring Data…

- Actual cost of SHT system (1st year only)
- 2 years of crop history data from before SHT was installed (1st year report):
  - Growing season dates
  - Crop yield
  - Nutrient (fertilizer) application rates
  - Pesticide application rates



- List of annual maintenance requirements and costs
- Number of days growing season was extended using SHT
- Crop yield
- Nutrient application rates (type, amount, timing)
- Pesticide application rates (type, amount, timing)

NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD

# SEASONAL HIGH TUNNEL SYSTEM FOR CROPS

(ft²)

CODE 798

## DEFINITION

A seasonal polyethylene covered structure that is used to cover crops to extend the growing season in an environmentally safe manner.

## PURPOSES

- Improve plant quality
- Improve soil quality
- Reduced nutrient and pesticide transport
- Improve air quality through reduced transportation inputs
- Reduce energy use through local consumption

## CONDITIONS WHERE PRACTICE APPLIES

This practice applies to cropland where extension of growing season is needed due to climate conditions and crops can be grown in the natural soil profile. Permanently raised beds may be installed to improve soil condition, fertility, and agri-ability access, but does not apply to crops not grown in the natural soil profile (i.e. tables/benches, portable pots, etc.).

The practice does not include greenhouses or low tunnel systems that may cover single crop rows.

## CRITERIA

### General Criteria Applicable to All Purposes

Plan supportive conservation practices to address all environmental concerns associated with the use of tunnel systems.

The seasonal tunnel structure must be planned, designed, and constructed in accordance with manufacturer's recommendation. The tunnel frame must be constructed of metal, wood, or durable plastic; and be at least 6 feet in height.

Seasonal tunnel structures shall be selected and applied over the crop area. The material shall be of a significant thickness to withstand the temperature modification for the period required. As a minimum, a 6-mil greenhouse-grade, UV resistant polyethylene cover will be used.

In climate conditions where snow loads may damage the structure, the tunnel cover shall be removed or rolled up at the end of the growing season unless the structure is designed to withstand expected snow loads.

Runoff shall be directed away from the tunnel structure to avoid ponding. Runoff may be captured and used for irrigation purposes. The minimum design capacity for runoff structures shall be a 10-year storm frequency, 5-minute rainfall precipitation event. Runoff may empty into surface or underground outlets, or onto the ground surface when properly protected. Surface and underground outlets shall be sized to ensure adequate capacity. Provide for clean-out as appropriate. When runoff from tunnel covers empties onto the ground surface, a detention basin, storage reservoir, or stable outlet shall be provided.

Surface or ground outlets such as rock pads, rock filled trenches with subsurface drains, concrete and other erosion-resistant pads, or preformed channels may be used.

Seeding and vegetation shall be established on all disturbed earth surfaces.

### Additional Criteria to Reduce Nutrient and Pesticide Transport

The irrigation water applied under the covered area shall not exceed the available water capacity of the soil to avoid runoff and leaching below the root zone.

### Additional Criteria to Improve Soil Quality

The area inside the seasonal structure shall



NRCS, Illinois
November 2010

have soil loss within the soil tolerance level (T) using currently approved agency wind and water erosion technology.

### Additional Criteria to Improve Air Quality and Reduce Energy Consumption

The crops produced for sale and consumption shall be within commuting distances of farmers markets, fruit/produce distribution centers, or other community facilities.

## CONSIDERATIONS

Locate the tunnel cover convenient for ingress/egress of plant materials.

Remove or manipulate side covers to control internal temperatures.

Rotate the location of the tunnel to allow rain, wind, sun, and cold temperatures to cleanse the soil from disease build up. Rotation allows growing cover crops on the site during the covered period.

the appropriate measures to address:

crop rotation
rrigation water management
trient management
f management
ff from the structure
source of good quality water
nel.

CIFICATIONS

ons shall be prepared in
teria of this standard.
and specifications shall

e tunnel cover;
d vegetative cover

tails of the
ppurtenances
ystem.

the tunnel
ion
ctices.

move or roll up
to inclement weather

llinois
November 2010

- Site preparation.

## OPERATION AND MAINTENANCE

An operation and maintenance (O&M) plan must be prepared and reviewed with the landowner or operator responsible for the application of the practice. The O&M plan shall provide specific instruction for proper operation and maintenance of each component of this practice and shall detail the level of repairs needed to maintain the effectiveness and useful life of the practice.

Covered area will be periodically inspected, and shall be reinstalled or repaired as needed to accomplish the intended purpose.

Removal of cover materials shall be consistent with the intended purpose and site conditions.

Operation of equipment near and on the site shall not compromise the intended purpose of the cover.

## REFERENCES

Community Garden Guide Season Extension - High Tunnel, NRCS http://plant-materials.nrcs.usda.gov/mipmc

Community Garden Guide Season Extension – Hoophouses, NRCS, http://plant-materials.nrcs.usda.gov/mipmc/communitygardens.html

University of Minnesota, http://hightunnels.cfans.umn.edu/resources.htm" Part I: Introduction to High Tunnels". Spaw, M. and William, K. http://www.hightunnels.org/foreducators.htm

High Tunnel Production Manual". Penn State University College of Agriculture, Department of Horticulture. White, L. and Orzolek, M. 2003 http://www.nasga.org/publications/pubs_hightunnel.htm

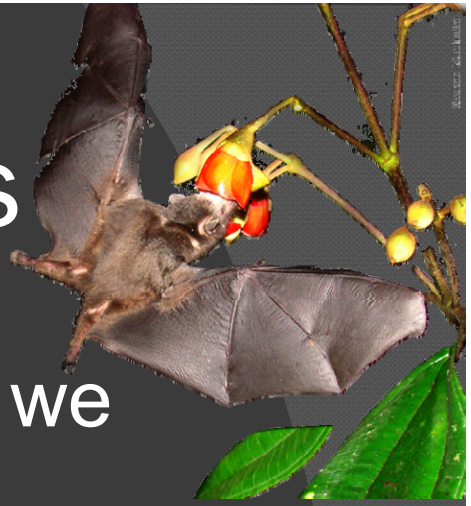
"High Tunnels". Ted Blomgren of Cornell Cooperative Extension and Tracy Frisch of the Regional Farm and Food Project. http://www.uvm.edu/sustainableagriculture/hightunnels.html

# EQIP – Pollinator Practices

- Field Border
  - A strip of permanent vegetation established at the edge or around the perimeter of a field… for pollinator habitat.

- Organic Pollinator Habitat
  - …on organically managed land…

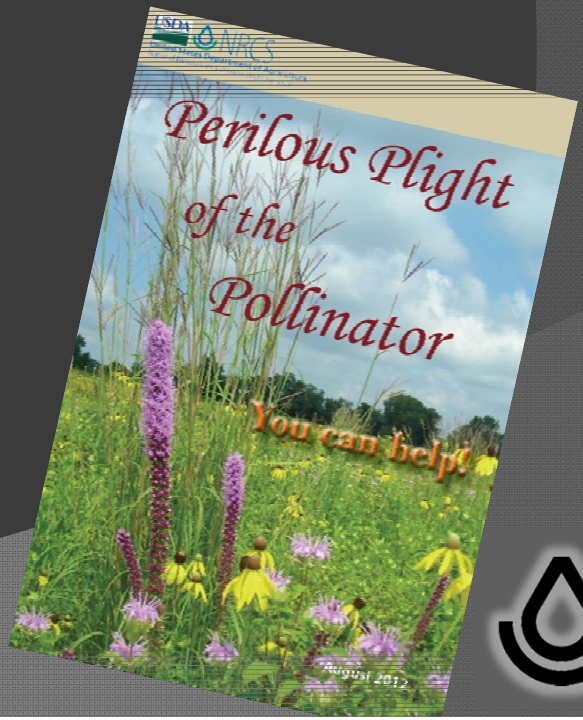
# EQIP – Pollinator Practices



- Conservation Cover (anything here we can bump up to pollinator mix)
  - Pollinator Habitat
    - Establishment of permanent vegetation… established on any land needing permanent vegetative cover… as habitat for pollinators.
  - Organic Pollinator Habitat
    - …on organically managed land…

# Technical Assistance & Tools

- Pollinator “mixes”
  - We select native species seeding mixes that consist of at least 3 species blooming at a time during early, mid, and late flowering seasons to benefit various pollinators



| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | **Calculations To Determine if a Seed Mix Meets 327-Conservation Cover Standard** | | | | | | |
| 2 | | | | | | | |
| 3 | | | **Seed Mix** | **327 Requirements Seeds/ft$^2$** | | | |
| 4 | | | | | | | |
| 5 | | | **Totals** | **Erosion** | **Wildlife** | **Pollinator** Non-erosive | **Pollinator** Erosive |
| 6 | **Total Grasses** | | **0.0** | **20** | **10-20** | **5** | **20** |
| 7 | **Total Forbs & Legumes** | | **0.0** | | **5** | **15-25** | **15-25** |
| 8 | **Total Legumes** | | **0.0** | **2** | **1** | | |
| 9 | **Total Grasses, Forbs/Legumes** | | **0.0** | **30-40** | **15-25** | **20-40** | **35-45** |
| 10 | **Total Cost per Acre** | | **$0.00** | | | | |
| 11 | | | | | | | |
| 12 | **Native Plant Species** | | | | | | |
| 13 | | | | | | | |
| 14 | | | | **Input Amount** | | | |
| 15 | | | | | | | |
| 16 | **Grasses:** | | | **in Mix** | **Seeds Per** | **Total** | **Cost** |
| 17 | **Common Name** | **Scientific Name** | **Seeds/lb.** | **(PLS lb/ac)** | **Sq.Ft.** | **Cost ($)** | **$/PLS Lb.** |
| 18 | Big bluestem | Andropogon gerardi | 130000 | | 0.0 | $0.00 | |
| 19 | Blue grama | Bouteloua gracilis | 710000 | | 0.0 | $0.00 | |
| 20 | Bull sedge | Carex lanuginosa | 6486000 | | 0.0 | $0.00 | |
| 21 | Canada wildrye (cool season) | Elymus canadensis | 115000 | | 0.0 | $0.00 | |
| 22 | Dark green bulrush | Scirpus atrovirens | 7360000 | | 0.0 | $0.00 | |
| 23 | Eastern gamagrass | Tripsacum dactyloides | 7500 | | 0.0 | $0.00 | |
| 24 | Fox sedge | Carex vulpinoidea | 1297000 | | 0.0 | $0.00 | |
| 25 | Hard-stemmed bulrush | Schoenoplectus acutus | 206400 | | 0.0 | $0.00 | |
| 26 | Hop sedge | Carex lupulina | 528000 | | 0.0 | $0.00 | |
| 27 | Indiangrass | Sorghastrum nutans | 170000 | | 0.0 | $0.00 | |
| 28 | June grass (cool season) | Koeleria cristata | 1465000 | | 0.0 | $0.00 | |
| 29 | Little Bluestem | Schizachyrium scoparium | 225000 | | 0.0 | $0.00 | |

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August 2012

# Perilous Plight of the Pollinators

## High Value Pollinator Plants

## Moist Sites

This fact sheet contains information about highly valued pollinator plants to consider when designing your landscapes and gardens. The plants include native flowers, shrubs, trees, grasses and herbs. An effective pollinator planting has at least three species blooming at one time, i.e.: 3-early, 3-mid and 3-late, during the growing season. This would include flowers, shrubs and trees. Bunch grasses are listed since they provide nesting habitat for bumble bees.

*Native IL Prairie Flowers*

| Common Name | Scientific Name | Light Needs | Bloom |
|---|---|---|---|
| Purple Hyssop | Agastache scrophulariifolia | SH | mid |
| Butterflyweed | Asclepias tuberosa | SH | mid |
| White Wild Indigo | Baptisia leucantha | FS | mid |
| Cream Wild Indigo | Baptisia leucophaea | SH | early |
| Wild Senna | Cassia hebecarpa | SH | mid |
| Turtlehead | Chelone glabra | FS | late |
| White Prairie Clover | Dalea Candidum | SH | mid |
| Purple Prairie Clover | Dalea purpureum | SH | early-mid |
| Showy Tick Trefoil | Desmodium canadense | SH | mid-late |
| Pale Purple Coneflower | Echinacea pallida | FS | mid |
| Rattlesnake Master | Eryngium yuccifolium | FS | mid-late |
| Common Boneset | Eupatorium perfoliatum | SH | late |
| Bottle gentian | Gentiana andrewsii | FS | mid |
| Wild Geranium | Geranium maculatum | SH | very early |
| Showy Sunflower* | Helianthus laetiflorus | FS | late |
| Tall Sunflower* | Helianthus giganteus | FS | late |

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# Cover Crop & Pollinators

June 2012

Cover crops can have beneficial effects for pollinators. The chart below list the Insectary and Pollinator Friendly Cover Crops for Illinois. The full description can be found in the Biology Technical Note 23 in the Illinois NRCS Field Office Tech Guide.

Insectary and Pollinator Friendly Cover Crops for Illinois

*(Insectary plantings attract beneficial insects for biological control of crop pests when planted adjacent to crop fields)*

| Common Name | Bloom Period | Flower Color | *Height Mature (feet) | Light Needs | *Drought Tolerance |
|---|---|---|---|---|---|
| Borage | early | blue | 1.5 | sun | low |
| Canola | early | yellow | 1 | sun | low |
| Buckwheat | mid to late | white | 1.5 | sun | moderate |
| White Lupine | early to mid | blue or white | 3 | sun | low |
| Alfalfa | mid | purple | 1.5 | sun | moderate |
| Sweet clover | mid to late | yellow | 5 | sun | moderate |
| Phacelia | early | purple | 3 | sun to shade | moderate |
| Dakin radish | early to mid | white | 2 | sun | moderate |
| Alsike clover | early to mid | yellow | 2 | sun | low |
| Crimson clover | early | red | 1 | sun to part shade | low |
| White clover | mid | white | | sun to part shade | low |
| Purple vetch | early to mid | purple | 1.5 | sun to part shade | low |
| Fava bean | early to mid | white | 4 | sun | low |
| Hairy vetch | early | blue | 1 | sun to part shade | low |

Biology Technical Note 23 provides information on how to plan for, protect, and create habitat for pollinators in agricultural settings. Pollinators are an integral part of our environment and our agricultural systems; they are important in 35% of global crop production. Animal pollinators include bees, butterflies, moths, wasps, flies, beetles, ants, bats and hummingbirds. This technical note focuses on native bees, the most important pollinators in temperate North America, but also addresses the habitat needs of butterflies and, to a lesser degree, other beneficial insects.

To find the NRCS Field Office Technical Guide, go to www.il.nrcs.usda.gov/technical/ and select eFOTG on the right column.

NRCS Natural Resources Conservation Service

# POLLINATOR BIOLOGY AND HABITAT

*Illinois Biology Technical Note No. 23* *September 2008*

## Introduction

This technical note provides information on how to plan for, protect, and create habitat for pollinators in agricultural settings. Pollinators are an integral part of our environment and our agricultural systems; they are important in 35% of global crop production. Animal pollinators include bees, butterflies, moths, wasps, flies, beetles, ants, bats and hummingbirds. This technical note focuses on native bees, the most important pollinators in temperate North America, but also addresses the habitat needs of butterflies and, to a lesser degree, other beneficial insects.

Worldwide, there are an estimated 20,000 species of bees, with approximately 4,000 species native to the United States. The non-native European honey bee (*Apis mellifera*) is the most important crop pollinator in the United States. However, the number of honey bee colonies is in decline because of disease and


Bumblebee on goldenrod

pollinators, native plant habitat will attract beneficial insects that predate on crop pests and lessen the need for pesticides on your farm.

# EQIP – Cover Crops

- Must address a resource concern
- Implement a management practice on land where the management practice has not been previously implemented by the applicant
- Payment can be earned up to 3 years

# EQIP – Cover Crops

- Chemical or Mechanical Kill Species
- Winter Kill Species
- 2 Species or More Mix
- 3 Species or More Mix
- Organic Cover Crops

**Illinois**
**Environmental Quality Incentives Program (EQIP)**

NRCS Natural Resources Conservation Service

## General EQIP
## Screening & Ranking Criteria

December 11, 2013

### Screening Worksheet

A Screening Worksheet must be completed for each eligible EQIP application.

Instructions:

This screening worksheet must be completed for each eligible EQIP applicant applying for the General EQIP funding pool. Using the list of priority conservation practices, assign a priority status to the application and document the status in ProTracts. The priority status will determine if the application will be ranked.

**Applicant Information:**

| | | | |
|---|---|---|---|
| Applicant Name: | | County: | |
| Application No: | | Field Office: | |
| Evaluator Name: | | Date: | |

**Priority Conservation Practices in the Application:**

- ☐ Conservation Cover (327)
- ☐ Cover Crop (340)
- ☐ Field Border (386)
- ☐ Filter Strip (393)
- ☐ Grade Stabilization Structure (410)
- ☐ Grassed Waterway (412)
- ☐ Nutrient Management (590)
- ☐ Residue and Tillage Management - No-Till/Strip-Till (329)
- ☐ Terraces (600)
- ☐ Water and Sediment Control Basin (638)

**Priority Determination for ProTracts – Select One:**

| | |
|---|---|
| **High Priority Category:** The application includes at least 3 priority conservation practices. | **High Priority** Status in ProTracts |
| **Medium Priority Category:** Medium Priority Applications will not be ranked (**See note below). The application includes 2 priority conservation practices. | **Medium Priority** Status in ProTracts |
| **Low Priority Category:** Low Priority Applications will not be ranked. All other applications. | **Low Priority** Status in ProTracts |

**Note: Medium priority applications must only be ranked when announced by the State Office.

# EQIP – Organic Initiative (OI)

- Must complete "Self-Certification Worksheet" (first page of ranking criteria)
- Producers self-certify, by selecting 1 of 3 scenarios
  - Certified Organic
  - Exempt from Certification
  - Transitioning to Organic

# EQIP – Certified Organic

- Will provide NRCS with copy of current USDA NOP (National Organic Plan) organic certificate or proof of good standing from USDA accredited certifying agent
- Required to maintain organic certification for life of contract
- If certification is not maintained, contract may be subject to termination

# EQIP – Exempt from Certification

(Organic Producers selling less than $5,000 organic products annually)

- Will develop and implement an OSP that meets standards established in the NOP Act for the life of contract
- Will provide required documentation as specified in CPM-440
- Agrees to notify NRCS should exemption from certification status change during life of contract

# EQIP – Transitioning to Organic

- Will develop and implement an organic system plan to standards established in the NOP Act
- If requirement is not met during period while transitioning to organic production, contract may be subject to termination

# EQIP – ADDITIONAL FUNDING CATAGORIES

- Comprehensive Nutrient Management Plan
- Confined Livestock Operation
- Grazing Land Operation
- Wildlife
- Drainage Water Management
- Forest Management Plan
- Forest Management Implementation

# APPLICATION CUT-OFF DATES FOR EQIP IN ILLINOIS ARE:

| | Application Cutoff | Funding Cutoff | Obligat…ne |
|---|---|---|---|
| 1st Batching Period | November 21, 2014 | January 9, 2015 | Febr… |
| 2nd Batching Period | January 16, 2015 | March 6, 2015 | April … |

Don't let this stop you from applying!
You may apply at ANY TIME!!!

For those who may already have made good conservation decisions and are looking to do something more…

# CSP

# CONSERVATION STEWARDSHIP PROGRAM

# CSP

- Voluntary conservation program that encourages producers to address resource concerns in a comprehensive manner by undertaking additional conservation activities on their operation; and improving, maintaining, and managing existing conservation activities.
- Participants will receive an annual land use payment for operation-level environmental benefits they produce.

# TRANSLATION:

- CSP rewards producers for being good stewards of the land with an annual payment, which is based on how the land is operated (i.e., crop rotation, conservation practices, tillage type, pest management, etc.).

# TRANSLATION (CONTINUED)…

- Additional payment is received by improving the current management system by implementing additional conservation practices (i.e., using drift reduce nozzles, tissue testing crops, adding cover crops, using Variable Rate Technology, etc.).

# CSP – Cover Crops

- Already implementing Cover Crops?
  - Points awarded go towards your “score,” which will determine your rate per acre
- Would like to try Cover Crops?
  - You may select Cover Crop Enhancement(s) to Implement

# CSP – Cover Crops

- Several enhancements available through CSP include:
  - SQL02 - Continuous cover crops
  - SQL04 - Use of cover crop mixes
  - SQL05 - Use of deep rooted crops to breakup soil compaction
  - WQL10 - Plant a cover crop that will scavenge residual nitrogen

# Soil Quality Enhancement Activity – SQL02 – Continuous cover crops

**Enhancement Description**
Growing continuous *seasonal* cover crops of grasses, legumes or forbs following **all annual crops** during all the non-crop production periods of the rotation. Continuous cover cropping is applicable to conventional, specialty and organic crop production systems.

**Landuse Applicability**
Cropland

**Benefits**
Growing seasonal cover crops during all non-crop periods between annual crops reduces wind and water erosion. Cover crops also restore and maintain soil productivity and soil quality over a wide range of climates and crop species. They do so by increasing organic matter, improving soil fertility, breaking pest cycles and providing habitat for soil macro-fauna, such as earthworms.

**Conditions Where Enhancement Applies**
This enhancement applies to all acres of annually planted cropland. These acres can be organic, transitioning to organic, or non-organic.

**Criteria**
Implementation of this enhancement requires continuous cover crops during the non-crop production period of the rotation. For the purposes of this enhancement, the cover crop shall not be grazed. Further, the cover crops must meet 2 or more of the following criteria:

1. High bio-mass cover crops for erosion control and increased soil organic matter improvement.
   - Plant a cover crop with a growth potential to produce a minimum of 3,000 lbs/acre (dry weight) above ground bio-mass when terminated by harvest, frost, mowing, tillage, crimping, and/or herbicides in preparation for the following crop.
   - Growth potential lists for selected cover crops are available in "Managing Cover Crops Profitably, 3rd Edition" (Sarrantonia, 1998).

2. Legume cover crops for biological nitrogen fixation.
   - Plant a leguminous cover crop between two primary crops in the rotation. This enhancement does not apply to legumes that are normally part of the crop rotation. It shall be seeded at a rate recommended by the NRCS Field Office Technical Guide. Estimate nitrogen credits from the leguminous crop and base any additional N applications according to the guidelines of the Land Grant University.





3. Non-leguminous cover crops to capture and recycle residual nitrogen.
   - Plant a cover crop with a growth rate and rooting depth sufficient to scavenge excess nitrogen from the root zone of the previous crop. Seed the cover crop at the rate recommended by the NRCS Field Office Technical Guide.
   - Consider reducing the nitrogen recommendation for the following crop by an estimated amount based on the site conditions both before and during the cover crop's growing period, the cover crop species, and the termination phase of the cover crop.

*ote: This enhancement does not apply to the same acres on which a leguminous ver crop is applied.*

ops for weed suppression.
a cover crop with the chemical and physical characteristics necessary to ss or compete with the identified target weed species. Leave cover crop s on the soil surface to maximize the allelopathic (chemical) and mulching l) effects. Select cover crops and seeding rates as recommended in the ield Office Technical Guide or from the Land Grant University as te.

provement with cover crops.
rop species with the characteristics to attract beneficial insects such as d/or predator insects, serve as trap crops for damaging insects, and/or l bio-fumigation for soil dwelling pests. Select cover crops to meet the ve as recommended in the NRCS Field Office Technical Guide or rant University as appropriate.

l adopted when two or more of the criteria are met on land use

ding rotation length in years, crops and cover crops planted,

perations for each crop and cover crop including harvest, planting/seeding.

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# Soil Quality Enhancement Activity – SQL04 – Use of cover crop mixes

**Enhancement Description**
This enhancement is for the use of cover crop mixes that contain two (2) or more different species of cover crops or cultivars of a single species.

**Land Use Applicability**
Cropland

**Benefits**
The use of a cover crop mixture that contains two (2) or more species is often more effective than a planting of single species cover crop. Cover crop mixtures adapt to variation in soils, increase biomass production, provide broader spectrum of weed control, have better winter survival and ground cover and attract a range of beneficial insects. Nutrients can be trapped or produced depending on existing soil conditions and plants used. Mixes can be a grass/legume, multiple cultivars of a single species, or a mix containing plants with different growth patterns, e.g. fast and slow, tall and short

**Conditions Where Enhancement Applies**
This enhancement applies to all crop land use acres.

**Criteria**
1. Cover crop mixes must contain a minimum of two (2) different plant species or cultivars of a single species with different maturity dates.
2. Cover crop species will be selected from state specific lists. The list of approved cover crops is available at the local NRCS Field Office.
3. Crops planted following cover crop must be no-tilled.
4. Nutrient applications for crops following cover crop should consider nitrogen fixation from leguminous cover crops.

**Adoption Requirements**
This enhancement is considered adopted when two different plant species or cultivars of a single species are being grown on the land use acre.

**Documentation Requirements**
1. Written documentation for each year describing, in detail, the following items:
   a. Cover crop species used and dated planted,
   b. Date and amount of fertilizer applied,
   c. Method to kill cover crop and date completed, and
   d. Crop planted after cover crop and method used.
2. A map showing fields where the enhancement is applied.
3. Photographs of a representative number of fields showing cover crop mix.

# Soil Quality Enhancement Activity – SQL05 – Use of deep rooted crops to break up soil compaction

**Enhancement Description**
This enhancement is for the use of deep rooted crops to break up compacted soils and improve soil quality. Deep rooted crops can be perennial plants like alfalfa or annual plants like forage radish.

**Land Use Applicability**
Cropland

**Benefits**
Soils can have naturally occurring compacted layers (hard pans) or those that have been created through tillage or other farming activities. Deep rooted crops with large taproots can alleviate the effects of soil compaction by penetrating the compacted layer, creating pore space that allows air, water and crop roots to penetrate deeper in the soil profile. Eliminating soil compaction through the use of deep rooted crops increases infiltration, reduces surface runoff, improves soil tilth and overall soil quality. It also eliminates the need for sub-soiling with a plow, thus saving fuel, reducing erosion and enhancing water quality.

**Conditions Where Enhancement Applies**
This enhancement applies to all crop land use acres.

**Criteria**
1. The selected crop must be one that has been identified as having the capability of alleviating soil compaction. State specific lists are available at your local NRCS Field Office.
2. If perennial plants are used and once established, they must be maintained annually by proper fertilization and mowing/harvesting.
3. Annual crops should be seeded early enough in the fall to allow for adequate growth to occur prior to winter. Follow specifications provide by your local NRCS Field Office.
4. No deep tillage is allowed to remove compacted layer.

**Adoption Requirements**
This enhancement is considered adopted when the selected deep rooted cover crop has been grown in a given rotation on the land use acre.



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**Documentation Requirements**
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1. Written documentation for each year describing the following items:
   a. Deep rooted crop(s) used and dated planted.
   b. Cash crop planted and method used.
2. A map showing fields where the enhancement is applied.
3. Photographs of a representative number of fields showing deep rooted crops.

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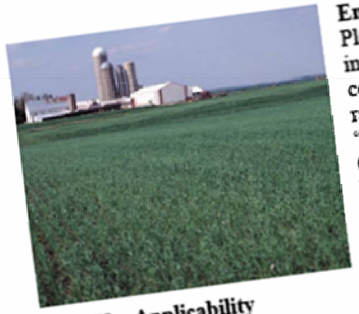
# Water Quality Enhancement Activity – WQL10 - Plant a cover crop that will scavenge residual nitrogen



**Enhancement Description**
Plant a cover crop that will scavenge nitrogen remaining in the soil after the harvest of a previous crop. Suitable cover crops include those with at least a "Very Good" rating for scavenging nitrogen as documented in "***Managing Cover Crops Profitably, 3rd Edition***" (Sarrantonio, 1998), Chart 2 Performance & Roles, pg 67. Examples include cereal rye, barley, forage radish and sorghum sudan.

**Land Use Applicability**
Cropland

**Benefits**
Planting an annual cover crop to scavenge residual nutrients from cropland after the harvest of a previous crop effectively utilizes residual nutrient resources to supply following crops with nutrients required to efficiently produce food, forage, fiber, and cover while minimizing environmental degradation.

**Conditions Where Enhancement Applies**
This enhancement applies to only annually planted crop land use acres.

**Criteria**
Implementation of this enhancement requires:

1. The cover crop selected shall have the growth rate and rooting depth required to effectively scavenge residual nitrogen from the root zone of the previous crop. Suitable cover crops include those with at least a "Very Good" rating for scavenging nitrogen as documented in ***Managing Cover Crops Profitably, 3rd Edition, Chart 2 Performance & Roles, pg 67***. Examples include cereal rye, barley, forage radish and sorghum sudan.
2. Timing of planting and seeding rates for cover crops shall follow the recommendations as available in the local NRCS Field Office.
3. The participant must have a current soil test (no more than 3 years old).
4. Nitrogen application rates for the crop following the cover crop must be reduced by the "Land Grant University (LGU) recommendations to account for the recycling of N by the cover crop.



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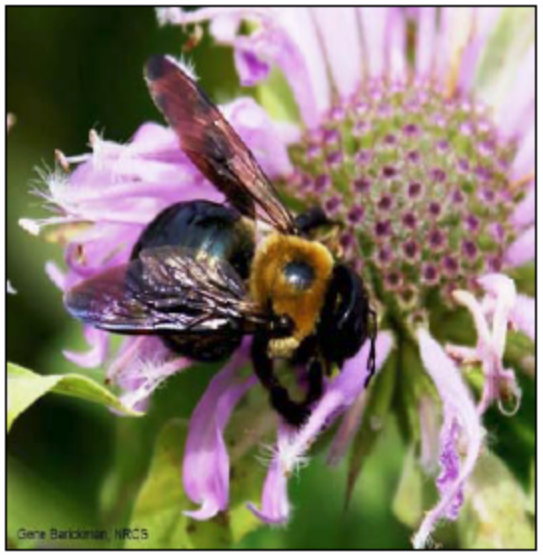
**loption Requirements**
s enhancement is considered adopted when all of the above criteria have been implemented
he land use acre.

**mentation Requirements**
ementation for each treatment area (field) and year of this enhancement describing these

map showing where the activities are applied,
over crop species planted,
ver crop planting date,
ver crop seeding rate (bu/ac),
ual crop planted,
gen application rates/amounts for the annual crop:
If N application rates increased, technical justification shall be provided for the increase,
If N application rates were decreased in excess of the default residual value recommended by the LGU, technical justification shall be provided for the crease, and
acres.

# CSP – Pollinator Practices

**Plant Enhancement Activity – PLT15 – Establish pollinator and/or beneficial insect habitat**




**Enhancement Description**
Seed nectar and pollen producing plants in non-cropped areas such as field borders, vegetative barriers, contour buffer strips, waterways, shelterbelts, windbreaks, conservation cover, and riparian forest and herbaceous buffers.

**Land Use Applicability**
Cropland, Pastureland, Rangeland, Forestland

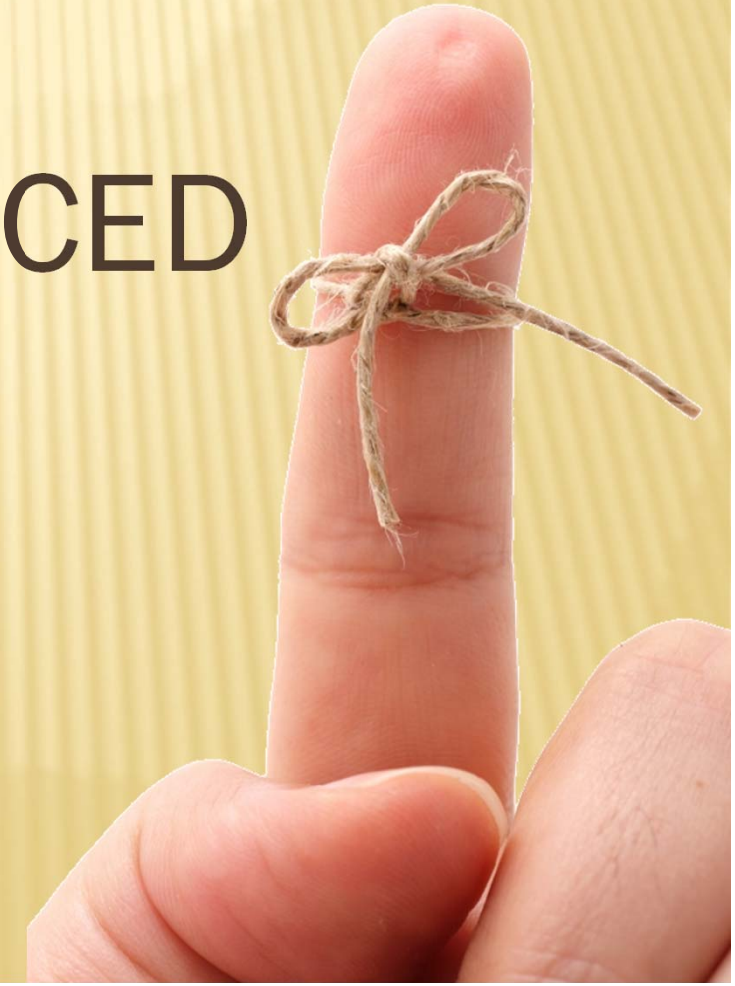
**Benefits**
Increased habitat for pollinators will improve fruit set, size and quality, productivity per acre, biodiversity, beneficial insect populations, and the food base for many wildlife species. The increased plant diversity of pollinator habitat will enhance wildlife habitat and may increase populations of other beneficial insects, reducing the need for pesticides.

**Conditions Where Enhancement Applies**
This enhancement applies to all crop, pasture, range or forest land use acres.

Habitat areas must be at least 0.5 acres for each 40 acres of the selected land use. Where the selected land use is less than 40 acres, the required amount of habitat will be reduced according to the ratio of 0.5 acres to 40 acres. Where the selected land use is greater than 40 acres, the 0.5 acre habitat areas must be interspersed in the larger land use area. For example, for an 80 acre parcel, the required 1 acre of habitat should not be located in one corner of the 80 acre field.

# APPLICATION CUT-OFF DATE FOR CSP IN ILLINOIS:

- TO BE ANNOUNCED



# QUESTIONS??

# ASSISTANCE FROM OTHER AGENCIES

- CRP – FSA
  - Conservation Reserve Program
- CPP – SWCD
  - Conservation Practices Program
- Local Watershed Projects – Ask your SWCD!

# CPP

- Cover Crops
  - 60% cost share for seed and planting costs
  - Maximum payment of $40 per acre
  - Maximum payment of $1600 per producer (40 acres at $66.66 per acre), per year, for 3 years
  - 3 year eligibility for payments as long as funding is available

# CPP

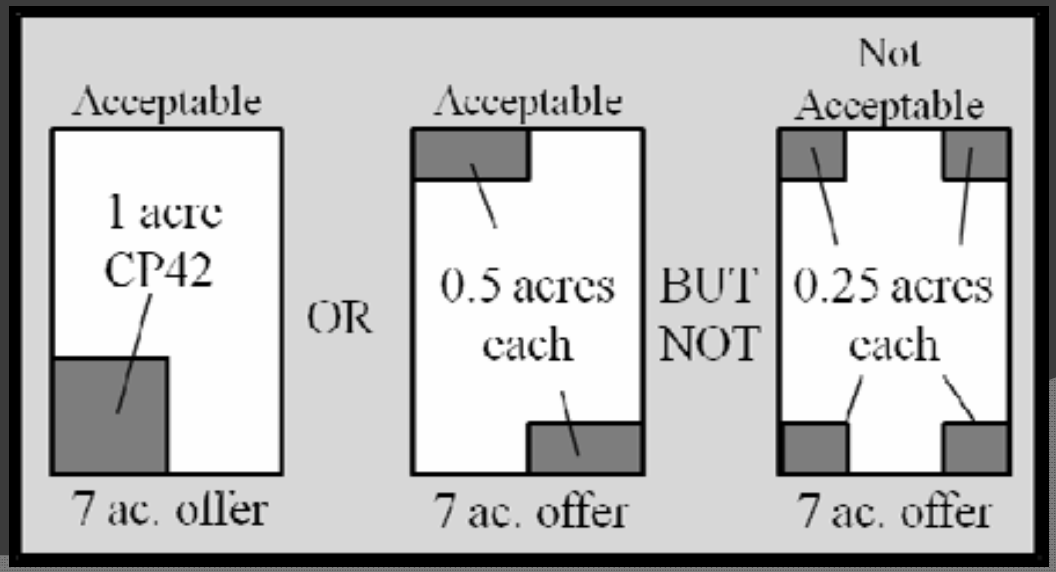
- Pasture or Hayland Planting
  - Take land out of production and put into hay or alfalfa
  - SWCD will pay 1 time amount
  - 60-70 cost share
  - Not to exceed $180/ac
  - Keep practice in place for 10 years

# CRP *(Pending Farm Bill!!)*

- Administered by the FSA
- NRCS provides technical assistance
- Installation cost assistance
- Rental Rate, based on soil type
- Cannot be harvested or grazed

# CRP - CP42 (Pollinator Habitat)

- Continuous Sign-up
- At least ½ acre
- Block plantings preferred over strips
  - If planted in strips, strips = >20’ wide



# CRP - CP42 (Pollinator Habitat)

- At least 75% of the vegetative mix must be pollinator-friendly flowers, which means grasses cannot exceed 25%
- Pays 50% of establishment cost
- Pays yearly rental rate per acre

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# Illinois Success Story

## Cover Crops, Cover Crops and more Cover Crops

**By: Ciji Taylor and Jody Christiansen, NRCS Public Affairs Specialist**
**Date: November 2010**

Radishes, oats, and annual rye grass have one thing in common – producers use them as cover crops to improve their most valuable asset: soil. But do you know anyone using them? Livingston County, Illinois sees many producers giving cover crops a try. And they like what they see. With assistance from the Natural Resources Conservation Service (NRCS) and the Livingston Soil and Water Conservation District (SWCD), cover crops are sprouting up all over the county.

**Cover Crops Can Help**
Cover crops provide multiple benefits such as:
- reducing erosion from wind and water
- increasing soil organic matter content,
- improving air and water movement through the soil,
- reducing soil compaction,
- capturing and recycling nutrients in the soil profile,
- managing soil moisture to promote biological nitrogen fixation, and
- reducing energy use.

*Annual Ryegrass roots can reach depths of 40 inches and address compaction issues.*

By reducing nutrient loss from agricultural runoff, the County can improve water quality. These benefits go even further when you consider the County's streams feed into the Illinois and Mississippi River Basins, which affect millions of people, communities and water sources.

**Real farms. Real benefits.**
Producers in this area realize the impact their farm has on their communities and beyond. That is why they experiment with new practices and find new ways to make their farm more sustainable and build healthier soil and water. "Producers are beginning to see value in cover crops," said **Eric McTaggart**, NRCS District Conservationist. "Once they determine what specific issues or needs their operation faces—what they want the cover crop to do--then we help them select the ideal cover crop species or mix that addresses those needs."

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Dig A Little, Learn A Lot


## Soil Health

# Unlock the Secrets in the Soil


Soil is a living and life-giving substance, without which we would perish.

As world population and food production demands rise, keeping our soil healthy and productive is of paramount importance. So much so that we believe improving the health of our Nation's soil is one of the most important endeavors of our time.

By focusing more attention on soil health and by educating our customers and the public about the positive impact healthy soils can have on productivity and conservation, we can help our Nation's farmers and ranchers feed the world more profitably and sustainably – now and for generations to come.

The resources on this soil health section of our site are designed to help visitors understand the basics and benefits of soil health – and to learn about Soil Health Management Systems from farmers who are using those systems.

So whether you're a farmer, a researcher, a conservationist or an interested citizen, the information on this site will help you "Unlock the Secrets in the Soil."

## Unlock Your Farm's Potential

Click (below) to download and print your 11x17 soil health poster. Para Espanol, aqui.

# Conservation Compliance and the 2014 Farm Bill – Something New for Specialty Crop Growers

# Agricultural Act of 2014

Re-linked federally subsidized Crop Insurance with Conservation Compliance.

# Conservation Compliance

- Conservation compliance prohibits or restricts certain activities that involve an “agricultural commodity”

# Agricultural Commodity

- An agricultural commodity is any crop planted and produced by annually tilling the soil.
- Examples would include tomatoes, potatoes, onions, carrots, corn, soybeans, cotton, wheat, rice, barley, canola.
- A conservation compliance crop list has been provided at www.nrcs.usda.gov/compliance

# Not Agricultural Commodities

- Citrus crops
- Orchard crops
- Sugar Bush (maple syrup)
- Vineyards
- Blueberries
- Pastureland

# Certification of Compliance

- The AD-1026 is the form for producers to certify compliance
- To be eligible for the crop insurance premium subsidy for the next reinsurance year (beginning July 1, 2015), producers must have an AD-1026 on file certifying their HELC/WC compliance by

**June 1, 2015**

# Additional Time for Producers new to Conservation Compliance

For eligibility for premium subsidy only:

- Producers who have never been subject to conservation compliance before have:
  - 2 reinsurance years to initiate a mitigation plan following a final Converted Wetland determination.
  - 5 reinsurance years to develop and implement a conservation plan for HEL

# QUESTIONS?

*To learn more, please visit*

*www.il.usda.nrcs.gov*

*www.nrcs.usda.gov*

*Or contact your local NRCS Office!*

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