



CONSERVATION ENHANCEMENT ACTIVITY

E328J

CONSERVATION STEWARDSHIP PROGRAM

Improved crop rotation to provide benefits to pollinators

Conservation Practice 328: Conservation Cropping System

APPLICABLE LAND USE: Crop (Annual & Mixed)

RESOURCE CONCERN: Animals

ENHANCEMENT LIFE SPAN: 1 year

Enhancement Description

Improve the existing crop rotation by adding pollinator friendly crops into the rotation. The crop rotation shall include a minimum of three different crops in a minimum five-year crop rotation. Each year, the pollinator friendly crop will be planted on a minimum of 5% of cropland acres contained within the agricultural operation. Use of insecticides is limited for the pollinator friendly crop.

Criteria

- Crops will be grown in a planned sequence over a five-year rotation. The crop rotation shall include a minimum of three different crops in a minimum five-year crop rotation.
- The crop rotation must include at least one pollinator friendly. For these criteria, a pollinator friendly cover crop is considered a different crop. A pollinator friendly crop is defined as a crop, planted for harvest or as a cover crop, which provides nectar for pollinators and other beneficial insects. Examples of pollinator friendly crops are canola, sunflowers, clovers, and borage. To meet the purpose and definition of a pollinator friendly crop, these “flowering” crops must be allowed to bloom prior to harvest or termination. **<REFER TO STATE SPECIFIC LIST OF POLLINATOR FRIENDLY CROPS>**

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- Each year the enhancement is planned, the pollinator friendly crop will be planted on a minimum of 5% of cropland acres contained within the agricultural operation. Plan/contract the actual acres planted to the pollinator friendly crop.
- Where applicable, plan suitable crop substitutions when the planned crop cannot be planted due to weather, soil conditions, or other local situations.
- Foliar systemic insecticides may not be applied to the pollinator friendly crop.
- Insecticides may not be applied during crop bloom period of the pollinator friendly crop.



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Documentation and Implementation Requirements

Participant will:

- Prior to implementation, provide NRCS with the current and planned crop rotation for all cropland acres on the operation. **<REFER TO STATE SPECIFIC LIST OF POLLINATOR FRIENDLY CROPS>**
- Prior to implementation, as needed, NRCS can provide technical assistance in selecting pollinator crops for the crop rotation or substitute species that would meet the criteria of the enhancement.
- Prior to implementation, provide maps for review by NRCS of the planned crop rotation, including areas which will include the pollinator friendly crops. Each year the enhancement is planned, at least 5% of the cropland acres on the operation must be planted to a pollinator friendly crop.

Current Management Rotation (complete table for each rotation)

Field	Current Crops (in sequence)	Planting Date	Harvest Date

Planned Management Rotation including Pollinator Friendly Crops (complete table for each rotation)

Field	Planned Crops (in sequence)	Planting Date	Harvest Date	Acres in rotation



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- During implementation, maintain records of any insecticide applications to the pollinator friendly crop, including timing, material/product, application rate, and crop stage.

Field	Crop	Insecticide Applied	Application Date	Application Rate	Crop Stage

- During implementation, notify NRCS of any planned changes in crop rotation, insecticide applications, or management to verify the planned system meets the enhancement criteria.
- After implementation, if changes were made, complete the tables above to document the applied crop rotation for the contract period and provide to NRCS for review.
- After implementation, provide insecticide application records to NRCS for review to verify implementation meets the enhancement criteria.

NRCS will:

- As needed, provide technical assistance in selecting pollinator crops for the crop rotation or substitute species that would meet the criteria of the enhancement.
- As needed, provide additional assistance to the participant as requested.
- Prior to implementation, verify the crop rotation meets the criteria of the enhancement. The rotation must include a minimum of three different crops in a five-year crop rotation and each year the enhancement is planned the pollinator friendly crop must be planted on a minimum of 5% of cropland acres contained within the operation. *Plan/contract the actual acres planted to the pollinator friendly crop.*
- During implementation, evaluate any planned changes in crop rotation, insecticide applications, or management to verify the new system meets the enhancement criteria.



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- After implementation, if there were any changes to planned rotation or management evaluate the applied crop rotation using information provided from the participant to verify the applied rotation meets the enhancement criteria.
- After implementation, review insecticide application records to verify implementation meets the enhancement criteria.

NRCS Documentation Review:

I have reviewed all required participant documentation and have determined the participant has implemented the enhancement and met all criteria and requirements.

Participant Name _____ Contract Number _____

Total Amount Applied _____ Fiscal Year Completed _____

NRCS Technical Adequacy Signature

Date



**CONSERVATION
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OREGON SUPPLEMENT**

**CONSERVATION
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Pollinator crops to use in this enhancement include herbaceous plants that generally have flowers with petals and require pollination by bees. Crops could include beans, peas, lentils, clovers, vetches, alfalfa or other legumes or could include seed crops that require pollination by bees including mustards, canola, and other seed crops. The enhancement crop could be a production crop of melons, tomatoes, potatoes, etc. - plants that require bee pollination. The enhancement crop rotation could be a cover crop that includes flowers that require bee pollination. In all cases the enhancement crop should be allowed to flower to supply pollinator support. Enhancement plant choice(s) should be suitable for the local climate and soil conditions and compatible with the overall crop rotation.

If in question about suitable enhancement crops, please contact the Basin or State Agronomist or Plant Material Specialist for additional pollinator crop plants.



Producer: [Producer Name]

Project or Contract #: Click or tap here to enter text.

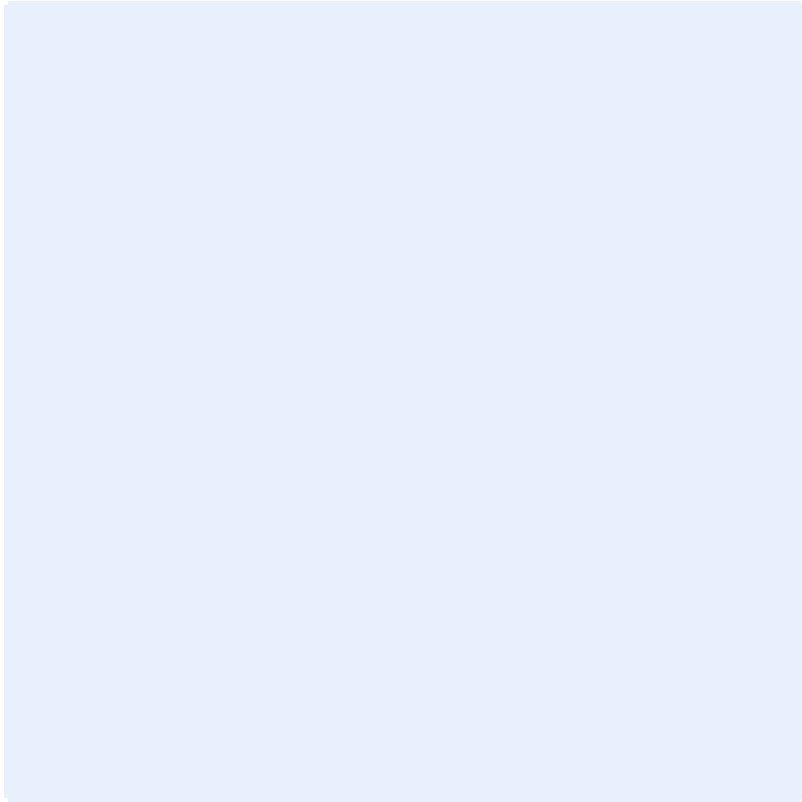
Location: [Golden]

County: [County]

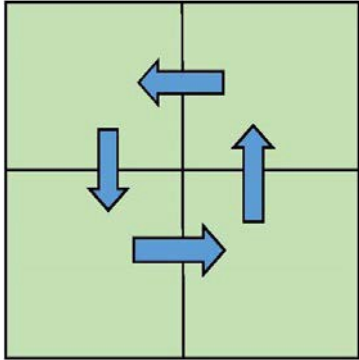
Farm Name: Click or tap here to enter text.

Farm/Tract Number: [Farm/Tract]

Practice Location Map (showing detailed aerial view of where practice is to be installed on farm/site, showing all major components, stationing, relative location to any landmarks, and survey benchmarks)



Conservation Crop Rotation



Description of work:

Click or tap here to enter text.

328 – Conservation Crop Rotation Implementation Requirements

Practice Purpose(s): (check all that apply)

- (1) Reduce erosion from wind and water.
- (2) Improve soil health.
- (3) Manage the balance of plant nutrients.
- (4) Supply nitrogen through biological nitrogen fixation to reduce energy use.
- (5) Manage saline seeps.
- (6) Manage plant pests (weeds, insects, and diseases).
- (7) Conserve water.
- (8) Provide feed for domestic livestock.
- (9) Provide annual crops for bioenergy feedstocks.
- (10) Provide food and cover for wildlife, including pollinator forage, cover, and nesting.

Complete Table Displaying the Crop Rotation Design, OR, attach a RUSLE2 or WEPS printout that shows rotation sequence by field.

Printouts attached.

Field(s)	Acres	Purpose(s) (#s from above)	Crops to be grown	Length each crop grown in the rotation	Crop sequence	Total length of rotation in years

If Tillage Is Used, Specify Time and Type of Primary Tillage for Each Crop, OR, attach a RUSLE2 or WEPS printout that shows rotation sequence by field.

Printouts attached.

Field(s)	Type of Primary Tillage	Time of Primary Tillage	Crop

328 – Conservation Crop Rotation Implementation Requirements

Field(s)	Type of Primary Tillage	Time of Primary Tillage	Crop

OPERATION AND MAINTENANCE

- Rotations shall provide for acceptable substitute crops in case of crop failure or shift in planting intentions for weather related or economic reasons. Acceptable substitutes are crops having similar properties that will accomplish the purpose of the original crop.

Planned Crop Substitutions

Field(s)	Planned crop	Substitute crop	Additional Criteria (e.g., may need a cover crop)

CONSERVATION CROP ROTATION SPECIFICATION SHEET

Client: [Producer Name] **Farm/Tract:** [Farm/Tract]
Location: [Golden] **County/SWCD:** [County]
Prepared By: Click or tap here to enter text. **Date:** Click to select date.

DESIGN APPROVAL:

Practice Code	Practice Name	Lead Discipline	Controlling Factor	Units	Job Class				
					1	2	3	4	5
328	Conservation Crop Rotation	ESD-Agron	1) Crop Type	Crop Type	Standard Row/ Forage Crops <input type="checkbox"/>	Specialty / Veg Crops <input type="checkbox"/>	Organic Specialty / Veg Crops <input type="checkbox"/>	All <input type="checkbox"/>	All <input type="checkbox"/>
			2) Precipitation	Inches	Irrigated <input type="checkbox"/>	>18 <input type="checkbox"/>	<=18 to >=12 <input type="checkbox"/>	<12 <input type="checkbox"/>	All <input type="checkbox"/>

For all controlling factors: Planner will place a check mark in the box for the JAA level needed for design

Design Approved By: Click or tap here to enter text. **Date:** Click to select date.

Job Title: Click or tap here to enter text.

CLIENTS ACKNOWLEDGEMENT STATEMENT:

The Client acknowledges that:

- a. They have received a copy of the specification and understand the contents and requirements.
- b. The following information must be provided to NRCS by the client before this practice can be certified as applied:
 - Crop rotation records by field, which include crop grown, and the period of time in the rotation.
 - Management of the crop residue or biomass for each crop in the rotation.
- c. It shall be the responsibility of the client to obtain all necessary permits and/or rights, and to comply with all ordinances and laws pertaining to the application of this practice.

Accepted by: /s/ _____ Date: _____

CERTIFICATION:

I have completed a review of the information provided by the client and certify this practice has been applied.

Certification by: _____ Date: _____

Job Title: _____

**328 – Conservation Crop Rotation
Implementation Requirements**

Implementation of Conservation Crop Rotation based on:

- Visual observation (attach photos and notes)
- Records provided by the Client (attach records)
- Attach Map showing location of applied acres

Rotation: As Planned Substitute Crop Planted

Extent: As Planned Other (describe below)

Complete Table Displaying the Applied Crop Rotation

Field(s)	Acres	Crop

- Rotation meeting the planned purpose(s)
- Changes needed (document in Planning Notes)

Additional Notes