



CONSERVATION STEWARDSHIP PROGRAM

CONSERVATION ENHANCEMENT ACTIVITY

E328M

Diversify crop rotation with canola or sunflower 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

Diversify existing crop rotation by adding pollinator friendly canola or sunflower crops into the rotation. The crop rotation shall include a minimum of three different crops. 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 compliant with grower industry best management practice is allowed only during pre-bloom and bloom of canola or sunflower.

Criteria

- Crops will be grown in a planned sequence and shall include a minimum of three different crops.
- The crop rotation must include at least one year of canola or sunflower. Other pollinator friendly crops may be included. 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 and fungicides applied during crop pre-bloom and bloom period of the canola or sunflower crop must be mitigated through integrated pest management and must follow industry best management practices.
 - Apply pesticides only when economic thresholds are met.
 - Apply pesticides at night or within two hours of sunset as this is when bees are least active.
 - Follow best practices for minimizing drift:
 - Use a low-drift nozzle, calibrate spray equipment, and use medium-to-coarse droplet size if possible.
 - Install cones or shrouds on field sprayers to reduce off- field movement.
 - When spraying fields, consider spot spraying or only applying pesticides to infested areas.
 - Select crop pest products with a residual activity of less than 8 hours.
 - Improve foraging areas for bees and other pollinators. Where possible, include flowering plants in non-crop areas. Avoid pesticide drift onto non-crop areas that include floral resources. Leave areas that include these resources intact whenever possible.

References

National Sunflower Association of Canada. Sunflower Production Guide. <http://www.canadasunflower.com/production/sunflower-production-guide/>
U. S. Canola Association. 2019. Best management Practices (BMPS) for Pollinator Protection in Canola Fields. https://www.uscanola.com/wp-content/uploads/2019/07/ HBHC_Canola_030119.pdf



OREGON SUPPLEMENT TO CONSERVATION ENHANCEMENT ACTIVITY E328M

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References and Additional Criteria for Oregon

- **A pollinator friendly crop must be allowed to bloom prior to harvest or termination.** Consult with a Basin or State Agronomist, Wildlife Biologist, or Plant Materials Specialist if assistance is needed to identify a pollinator friendly crop.
- In addition to the documentation requirements specified in the National job sheet E327A, the following documentation requirements also apply in Oregon.
 - For Pollinator Habitat Enhancement, use the Pollinator Wildlife Habitat Evaluation Guide (WHEG) to determine pre- and post-enhancement condition at: <https://efotg.sc.egov.usda.gov/#/> : Oregon: Section 3: Oregon Conservation Planning Documents: Wildlife Habitat Inventory Documents: Pollinator WHEG.
 - For Beneficial Insect Habitat Enhancement, use Habitat Planning for Beneficial Insects, Guidelines for Conservation Biological Control - Developed by The Xerces Society: <https://xerces.org/publications/guidelines/habitat-planning-for-beneficial-insects>
 - Direct any additional questions regarding this evaluation guidance to your Basin or State Wildlife Biologist or the State Plant Materials Specialist.
 - Document in the practice specification how this enhancement will maintain or enhance the habitat for the pollinators and/or beneficial insects.

Plant Guidance

Plant species seeded or planted at the site should be suitable to the MLRA (ecoregion) and habitat location. Planners should consult ecological site information (if available) in determining plant selections. Origin of native plants or seeds used for this enhancement should originate from the same MLRA as the enhancement location.

Refer to the following documents to help select suitable plants to seed or plant. Other species not contained in these documents may be appropriate for use. For further recommendations in plant species selection for enhancements, please contact Kathy Pendergrass, State Plant Materials Specialist, at (503) 414-3266 or Kathy.Pendergrass@usda.gov :

Oregon Plant Materials Technical Note Note 13 - Plants for Pollinators in Oregon. It can be downloaded at: https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_041919.pdf

For eastern Oregon plant recommendations, also refer to the Washington Plant Materials Technical Note No. 244 - "Plants for Pollinators in the Inland northwest" which can be downloaded at: https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/wapmctn11733.pdf

For MLRAs 6, 7 and 8, refer to eFOTG: <https://efotg.sc.egov.usda.gov/#/>
Oregon: Section IV: Conservation Practices: Conservation Cover (AC) (327) - Pollinator Plants

This document may also be of use: Oregon Plant Materials Technical Note 42 - Enhancements for Native Bees in Western Oregon and Washington Cranberry Production, located at: https://www.nrcs.usda.gov/wps/portal/nrcs/detail/or/plantsanimals/?cid=nrcs142p2_045951

Contact Kathy Pendergrass to request a spreadsheet filtered for a specific Major Land Resource Area (MLRA) – (roughly equivalent to ecoregion) to assist in plant selections.

Seed and Plant Vendors - places to find plants

Oregon Plant Material Technical Note No. 9 – “Plant and Seed Vendors for Oregon, Washington, Idaho, and Northwest California”
https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_041918.pdf

Oregon Flora Project Website – Gardening Portal – Nurseries that supply native plants:
<https://oregonflora.org/garden/>

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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 pesticide applications to canola, sunflower or pollinator friendly crops, 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, pesticide 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. *Plan/contract the actual acres planted to canola or sunflower.*
- During implementation, evaluate any planned changes in crop rotation, pesticide 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 pesticide 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

Design Approvals & Acknowledgements:

Design Approval	Date	Job Approval Authority
Designed by:		
Approved by:		

Client's Acknowledgement Statement:

The client acknowledges:

- I have received a copy of the specification and understand the contents and requirements.
- It is my responsibility to obtain all necessary permits and/or rights and to comply with all ordinances and laws pertaining to the application of this practice.
- I will not begin installation of this practice until I have received appropriate approval to do so. I understand NRCS also has Federal and state laws to comply with that may take some time to address (e.g. cultural resources).

Client's	Date
Signature	

Certification Documentation:

	Field Evaluation: Post-treatment inventory, measurements, notes, as-built, and supporting documentation (document completion in conservation plan), as required.
	Map(s): Including field numbers, fields treated, and units treated (may document on conservation plan map), as required.
	Photos or other supporting documentation (e.g., seed tags, soil tests, receipts, invoices, spray records, fertilizer records, etc.)
Brief Description of Work Accomplished (types of equipment used, date of application, extents and quantities installed, etc.)	

Certification Statement:

The employee certifies the implementation of this conservation practice:

- Meets the purpose, general criteria, and any required additional criteria as documented in the conservation practice standard and/or enhancement sheet.
- Meets the specifications contained herein and is complete.
- Conforms to my existing Job Approval Authority controlling factors and levels.

Name	Date	Job Approval Authority

Field Level Certification – For multiple applications of this design.				
Land Unit/ Contract Item Number	Date	Unit(s)	Amount Installed	Certifier