United States Department of Agriculture

CONSERVATION ENHANCEMENT ACTIVITY

CONSERVATION STEWARDSHIP PROGRAM

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>**

- 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

CONSERVATION STEWARDSHIP PROGRAM

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

- ☐ 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.

- ☐ 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

North Dakota Sideboards:
Existing crop rotations that include canola or sunflower are eligible if they include the crop that has not been part of the producers rotation and the 5% of the new crop comes from a non-pollinator friendly crop. ie. If a producer has been growing 15% of their total acres to canola but is interested in trying sunflowers on some of their acres and would be willing to reduce acres of corn to come up with 5% of their acres for the planned sunflowers. They would be eligible to include the sunflowers acres only.

NRCS will review and document the latest four years of the producer's FSA crop history data to determine if the existing crop rotation includes canola or sunflower.

Full season cover can be used with a final seeding date of June 10th for predominantly a cool season mix, June 20th final seeding date for a predominantly warm season mix and if you have a 50/50 warm/cool mix then the final seeding date of June 10th.

Also, that a minimum of 50% of the mix would have to be a canola or sunflower The remainder of the mix it is encouraged to include species that attract beneficial insects based off of ND-CPA-340 Cover Crop Design Worksheet, table 1, however other species can also be included for other RC's such as weed suppression, etc.