CONSERVATION ENHANCEMENT ACTIVITY

E595H

CONSERVATION STEWARDSHIP PROGRAM

Improved crop management to control wheat stem sawfly

Conservation Practice 595: Pest Management

APPLICABLE LAND USE: Crop (Annual and Mixed)

RESOURCE CONCERN: Plant

ENHANCEMENT LIFE SPAN: 1 Year

Enhancement Description

Utilize crop management practices which both reduce wheat stem sawfly (WSS) and increase beneficial parasitoid wasp populations. This enhancement applies only to locations with an active WSS population.

Criteria

- Plant solid-stem wheat varieties for all wheat in the rotation. Solid-stem varieties kill about 40% of WSS larvae arising from eggs deposited within its stems.

- Do not plant wheat, barley, or triticale in succession with itself or one another.

- Do not include wheat, barley, or triticale in cover crop or forage plantings.

- Include oats (*Avena sativa*) at least once in each crop rotation cycle. Oats act as a natural attractant and trap crop for WSS, killing 100% of larvae arising from eggs laid within its stems. Time the planting of the oats to provide sufficient vegetation during WSS flight and egg-laying activity, typically a 6-week time window time from late May to early July. Use one of the following methods to include oats in the crop rotation:
    - Oat grain crop
    - Oat trap crop planted around the perimeter of a wheat or barley crop. The oat trap crop should be a minimum width of one seeder

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pass around the field perimeter, or approximately 5% of the total field acreage. Plant the trap crop within 2-3 days of the wheat or barley crop and use the same crop season type for the trap crop as the attractant crop. For example, plant spring oats with spring wheat and winter oats with winter wheat. In northern latitudes with no winter-hardy oat varieties, spring oats can be planted as a trap crop with winter wheat if the spring oat is planted as early in the spring as possible.

- o Cover crop or forage crop with a minimum 15% oats as a portion of the total seed mix.

- Increase beneficial habitat for parasitoid wasps, natural enemies that kill WSS larvae, with the following management practices:
  - o Harvest wheat and barley at no less than one-third of the total crop height. For example, if the mature wheat crop is 30 inches tall, use a harvest height of 10 inches or more.
  - o Leave a minimum of 75% of the total wheat and barley residue on the soil surface.
  - o Do not use inversion tillage within the rotation.
  - o Do not burn, bale, or graze wheat or barley residue.
  - o Avoid the use of pyrethroids, carbamates, or organophosphate insecticides.

Documentation and Implementation Requirements:

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Participant will:

☐ Prior to implementation, provide NRCS with the planned crop rotation and tillage operation(s) used for each crop.

Field	Acres	Planned Crops (in sequence)	Length of Crop Rotation (years)

Field	Crop	Field Operation	Timing of Field Operation (month/year)

☐ During implementation, notify NRCS of any planned changes in crops, crop rotation, or field operations to verify the planned system meets the enhancement criteria.

☐ After implementation, if changes to the rotation were made, complete the tables above to document the applied Conservation Crop Rotation for the contract period and provide to NRCS.

NRCS will:

☐ As needed, provide technical assistance to meet the criteria of the enhancement.

☐ During implementation, evaluate any planned changes in the mulching plan to ensure enhancement criteria are met.

☐ If changes were made after implementation, use information provided from the participant to verify the applied system meets the enhancement criteria.
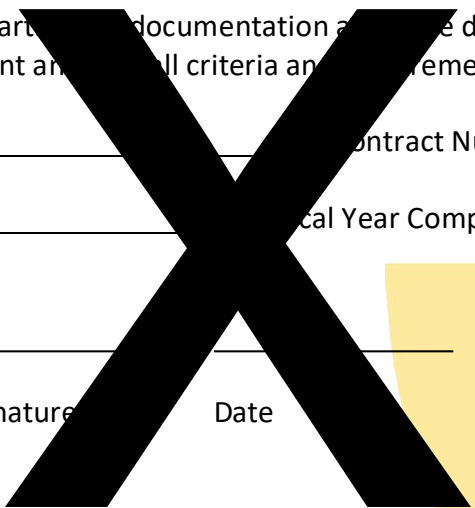
NRCS Documentation Review:

I have reviewed all required part~~icipant~~ documentation a~~nd have~~ determined the participant has implemented the enhancement an~~d met a~~ll criteria an~~d requi~~rements.

Participant Name _____ ~~Co~~ntract Number _____

Total Amount Applied _____ ~~Fis~~cal 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 Signature	Date

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