



CONSERVATION ENHANCEMENT ACTIVITY

E328H

CONSERVATION STEWARDSHIP PROGRAM

Conservation crop rotation to reduce the concentration of salts

Conservation Practice 328: Conservation Crop Rotation

APPLICABLE LAND USE: Crop (Annual & Mixed)

RESOURCE CONCERN: Soil

ENHANCEMENT LIFE SPAN: 1 Year

Enhancement Description

Implement a crop rotation to reduce the concentration of salts and other chemicals from saline seeps. The rotation should include at least 3 crops and/or cover crops grown in a sequence in the recharge areas of saline seeps that have rooting depths and water requirements adequate to fully utilize all available soil water. Do not use summer fallow. Use an approved water balance procedure to determine crop selection and sequence. Select crops with a tolerance to salinity levels that match the salinity of the discharge area. (See state lists)

Criteria

- Crops shall be grown in a planned sequence as outlined in plan. The crop rotation must include a minimum of three different crops. For purposes of these criteria a cover crop is considered a different crop.
- Where applicable, plan suitable crop substitutions when the planned crop cannot be planted due to weather, soil conditions, or other local situations.
- Select crops to be grown in the recharge area of saline seeps that have rooting depths and water requirements adequate to fully utilize all available soil water.



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- Do not use summer fallow.
- Use an approved water balance procedure to determine crop selection and sequence.
- If excess subsoil moisture exists below the rooting depth of crops commonly grown in the recharge area, establish deep-rooted perennial crops for the number of years needed to dry the soil profile.
- Select crops with a tolerance to salinity levels that match the salinity of the discharge area. **(See State list of salt tolerant crops with rooting depths and water requirements adequate to use all available soil water.)**

North Dakota Sideboards:

Cropping system soil loss must be at or below "T". When evaluating the existing rotation where a cover crop is used, the cover crop must be a full-season planting to meet the criteria of different crop. Cover crops must be full season (seeded by July 1 or exclusively winter annuals seeded by September 1 and be allowed to grow until June 15 the following year).

Planned rotation will have a Crop Intensity Index score of: 1.5 or greater for Western ND or 1.75 or greater for Central and Eastern ND.

When a cover crop is planned, the cover crop will consist of a mixture of at least 2 species, with a majority composed of the needed crop type to meet the required water use and must be a full-season planting; ie. in place of another crop in the rotation. Cover crops planted after harvest do not meet the rotation criteria.

The cover crop cannot be harvested, baled or grazed.

The intent is to manage the recharge/discharge differently to treat the resource concern(s).

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Documentation and Implementation Requirements

Participant will:

- ☐ Prior to implementation, complete the following table and use an approved water balance procedure to determine crop selection and sequence.

Planned Management Rotation (Do not use summer fallow):

Field	Planned Crops (in sequence)	Planting Date	Harvest or Termination Date	Crop Rooting Depth (inches)	Crop Water Requirements

- ☐ 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 table above to document the applied crop rotation for the contract period and provide to NRCS.

NRCS will:

- ☐ As needed, provide technical assistance using an approved water balance procedure in selecting crop rotations or substitute crops that would meet the criteria of the enhancement.
- ☐ Prior to implementation, verify that the crop rotation includes at least three different crops in rotation.
- ☐ Prior to implementation, verify the crop rotation has a water balance to verify crops selected and sequence is adequate.
- ☐ During implementation, evaluate planned changes to verify the planned system meets the enhancement criteria.
- ☐ After implementation, if the applied crop rotation is different than the planned crop rotation, verify the implemented rotation 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.

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Participant Name _____ Contract Number _____

Total Amount Applied _____ Fiscal Year Completed _____

NRCS Technical Adequacy Signature

Date