

Effects of NRCS Conservation Practices - National

Conservation Crop Rotation

Growing crops in a planned sequence on the same field.

Code: 328
Units: ac.

AL-Aso Land
O-Other
W-Water
D-Developed
FS-Farmstead
PI-Protected
P-Pasture
R-Range
F-Forest
C-Crop

Typical Landuse:

<u>Soil Erosion</u>	<u>Effect</u>	<u>Rationale</u>
Soil Erosion - Sheet and Rill Erosion	4	Maintaining sufficient canopy and residue cover reduces soil detachment by water.
Soil Erosion - Wind Erosion	4	Maintaining sufficient canopy and residue cover reduces soil detachment by wind.
Soil Erosion - Ephemeral Gully Erosion	1	good cover reduces runoff
Soil Erosion - Classic Gully Erosion	0	Not Applicable
Soil Erosion - Streambank, Shoreline, Water Conveyance C	0	Not Applicable
<u>Soil Quality Degradation</u>		
Organic Matter Depletion	4	High residue crops can lead to increased root development and increased soil organic carbon.
Compaction	1	Deep rooted crops in the rotation may reduce compaction
Subsidence	0	If it affects drainage the practice can have an impact on subsidence.
Concentration of Salts or Other Chemicals	2	Salt tolerant crops with high transpiration rates can increase salt uptake and reduce salt content in the root zone.
<u>Excess Water</u>		
Excess Water - Seeps	1	Improved plant uptake reduces excessive seepage.
Excess Water - Runoff, Flooding, or Ponding	2	Rotations with grass and legumes and high residue crops will reduce erosion and runoff.
Excess Water - Seasonal High Water Table	1	Rotations with grass and legumes and high residue crops will reduce erosion and runoff.
Excess Water - Drifted Snow	0	Not Applicable
<u>Insufficient Water</u>		
Insufficient Water - Inefficient Use of Irrigation Water	2	Crop rotation balances available water with crop needs.
Insufficient Water - Inefficient Moisture Management	2	Crop rotation balances available water with crop needs.
<u>Water Quality Degradation</u>		
Pesticides in Surface Water	2	The action reduces the need for pesticide use by breaking pest lifecycles.
Pesticides in Groundwater	2	The action reduces the need for pesticide use by breaking pest lifecycles.
Nutrients in Surface water	2	Nitrogen demanding or deep rooted crops can remove excess nitrogen. Legume in rotation will provide slow release nitrogen and reduce need for additional nitrogen.
Nutrients in Groundwater	2	Nitrogen demanding or deep rooted crops can remove excess nitrogen. Legume in rotation will provide slow release nitrogen and reduce need for additional nitrogen.
Salts in Surface Water	1	The action can reduce erosion and runoff which reduces transport of salts. Some crops may accumulate salts.
Salts in Groundwater	2	Suitable crops can take up salts, the amount depending on crop rotation and rooting pattern,
Excess Pathogens and Chemicals from Manure, Bio-solic	1	Depending on crop rotation, less erosion and runoff reduces delivery of pathogens.
Excess Pathogens and Chemicals from Manure, Bio-solic	0	Not Applicable

Excessive Sediment in Surface Water	2	Depending on crop rotation and biomass produced, crop rotation reduces erosion and runoff which reduces transport of sediment.
Elevated Water Temperature	0	Not Applicable
Petroleum, Heavy Metals and Other Pollutants Transport	0	not applicable
Petroleum, Heavy Metals and Other Pollutants Transport	0	Not Applicable
<u>Air Quality Impacts</u>		
Emissions of Particulate Matter (PM) and PM Precursors	2	The proper selection of crops in the rotation can reduce the generation of fugitive dust.
Emissions of Ozone Precursors	0	Not Applicable
Emissions of Greenhouse Gases (GHGs)	1	Vegetation removes CO2 from the air and stores it in the form of carbon in the plants and soil.
Objectionable Odors	0	Not Applicable
<u>Degraded Plant Condition</u>		
Undesirable Plant Productivity and Health	4	Plants are selected and managed to maintain optimal productivity and health.
Inadequate Structure and Composition	4	Crop selection will be modified to include species better suited to soils and climate.
Excessive Plant Pest Pressure	2	Depending on crop rotation, crop rotation creates diversity that may reduce weed pressures, break weed life cycles, and provide competition that would slow the spread of noxious plants.
Wildfire Hazard, Excessive Biomass Accumulation	0	Not Applicable
<u>Fish and Wildlife - Inadequate Habitat</u>		
Inadequate Habitat - Food	2	Selected crops and suitable rotations may provide more food for wildlife.
Inadequate Habitat - Cover/Shelter	2	Selected crops and suitable rotations may provide more food and cover for wildlife.
Inadequate Habitat - Water	4	Not Applicable
Inadequate Habitat - Habitat Continuity (Space)	2	Increased cover will increase space for wildlife. May be used to connect other cover areas.
<u>Livestock Production Limitation</u>		
Inadequate Feed and Forage	2	Crop rotation may be designed to add forage crops.
Inadequate Shelter	0	Not Applicable
Inadequate Water	0	Not Applicable
<u>Inefficient Energy Use</u>		
Equipment and Facilities	0	Not Applicable
Farming/Ranching Practices and Field Operations	1	The use of legume crops to supply nitrogen

<u>CPPE Practice Effects:</u>	0 No Effect
5 Substantial Improvement	-1 Slight Worsening
4 Moderate to Substantial Improvement	-2 Slight to Moderate Worsening
3 Moderate Improvement	-3 Moderate Worsening
2 Slight to Moderate Improvement	-4 Moderate to Substantial Worsening
1 Slight Improvement	-5 Substantial Worsening