Effects of NRCS Conservation Practices - National

Conservation Crop Rotation

Growing crops in a planned sequence on the same field.

Code: 328
Units: ac.

Typical Landuse:	C-Crop	F-Forest	R-Range	P-Pasture	Pr-Protected	FS-Farmstead	D-Developed	W-Water	O-Other	AL-Aso Land
	c									

Soil Erosion	*Effect*	*Rationale*
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
Soil Quality Degradation		
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.
Excess Water		
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
Insufficient Water		
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.
Water Quality Degradation		
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 Transporte	**0**	**not applicable**
Petroleum, Heavy Metals and Other Pollutants Transporte	**0**	**Not Applicable**
Air Quality Impacts		
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**
Degraded Plant Condition		
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**
Fish and Wildlife - Inadequate Habitat		
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.**
Livestock Production Limitation		
Inadequate Feed and Forage	**2**	**Crop rotation may be designed to add forage crops.**
Inadequate Shelter	**0**	**Not Applicable**
Inadequate Water	**0**	**Not Applicable**
Inefficient Energy Use		
Equipment and Facilities	**0**	**Not Applicable**
Farming/Ranching Practices and Field Operations	**1**	**The use of legume crops to supply nitrogen**

CPPE Practice Effects:	
5 Substantial Improvement	***0 No Effect***
4 Moderate to Substantial Improvement	***-1 Slight Worsening***
3 Moderate Improvement	***-2 Slight to Moderate Worsening***
2 Slight to Moderate Improvement	***-3 Moderate Worsening***
1 Slight Improvement	***-4 Moderate to Substantial Worsening***
	-5 Substantial Worsening