NATURAL RESOURCES CONSERVATION SERVICE
MONTANA CONSERVATION PRACTICE SPECIFICATION

RESIDUE MANAGEMENT, SEASONAL (ACRE)

CODE 344

DEFINITION: Managing the amount, orientation, and distribution of crop and other plant residues on the soil surface during a specified period of the year.

PURPOSE: Seasonal residue management is an essential practice for all cropland where agricultural crops are grown to reduce wind and water erosion, to reduce soil erosion from wind and associated airborne particulate matter, manage snow to increase plant available moisture, to harvest and utilize renewable bioenergy feedstocks and to provide food and escape cover for wildlife.

CONSERVATION MANAGEMENT SYSTEM

This practice applies to all cropland including cropland where biomass is removed for biofuel feedstocks.

Seasonal residue management includes managing residues of annual crops from harvest until the residue is: buried by tillage for seedbed preparation, removed by grazing, or mechanically removed.

It also includes the management of residues from biennial or perennial seed crops from the time of seed harvest until re-growth begins the next season. As part of a conservation management system, it is important to consider crop rotation, nutrient and pest management, agricultural waste utilization, and other supportive conservation practices when designing a seasonal residue management system.

Harvest equipment must be equipped with spreaders that uniformly distribute residues over at least 80% of the working width of the header.

Burning of residues is not allowed.

A no till conservation system can provide additional cover and/or feed for wildlife, reduce soil erosion, increase water (snow) retention and improve soil health.

The seasonal management of residue must be based on the amount of straw produced by the crop. When small amounts of residue are available after harvest, straw should not be grazed, baled, or burned unless adequate amounts are present to protect against erosion. Alternatives to mechanical weed control may need to be practiced to maximize residue retention.

Leaving standing stubble as tall as possible over winter will prevent erosion and trap snow for additional soil moisture.

When planting into a clean tilled seedbed, completing the tillage and planting in a single operation or by performing primary tillage no more than three days before planting can minimize exposure to erosion and can conserve moisture for germination.

Limit tillage operations during the residue management period to undercutting tools such as blades or wide sweeps that minimize residue flattening or burial.

Tilling at slower speeds retains more crop residue on the soil surface.

Adequate residue will provide food and habitat to beneficial soil flora and fauna, which positively impacts: soil aggregate stability, moisture retention, infiltration, fertility, and breakdown of inorganic compounds. Consider adding diversity to the rotation (add cool or warm season broadleaves to a cool season grass rotation) to

improve the carbon to nitrogen ratio and allow earthworms, fungi, and other soil organisms to break down crop residues and improve soil quality.

WILDLIFE

Seasonal residue management can enhance wildlife objectives depending on the crop species and management practiced. Consider using species that can provide food and escape cover for target wildlife species. Establishing food plots or leaving one or two rows of un-harvested crop standing at intervals across the field can enhance the value of residue for wildlife habitat. Food plots or un-harvested crop rows have the greatest value when they are adjacent to other cover types, such as grassy, brushy or wooded areas.

The Montana NRCS Wildlife Habitat Appraisal Guides will generally be used to evaluate wildlife habitat. Use Field Office Technical Guide (FOTG), Section IV, Practice Standard, Upland Wildlife Habitat Management (Code 645) for planning assistance and guidelines to provide food and cover for wildlife.