NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE SPECIFICATION

RESIDUE MANAGEMENT, SEASONAL

(Ac.)
CODE 344

PURPOSE OF SPECIFICATION

This Specification provides guidance for the installation of the practice Residue Management, Seasonal. Guidance may include information about applying different methods listed in the Conservation Practice Standard, details of site preparation and protection, instructions for use of materials described in the Standard, and other information not directly addressed in the Standard.

Specifications for the installation, operation and maintenance of the practice shall be prepared for each treatment unit in accordance with the requirements in the Conservation Practice Standard and the guidance in this Specification. The site specifications shall be recorded in the Conservation Practice Jobsheet and given to the client.

GENERAL

Use approved methods to estimate residue levels. Percent ground cover is dependent on both the amounts of crop residue and its distribution. Residues spread evenly across the rows produce the highest percentages of ground cover. The Hawaii Agronomy Technical Note No. 5 Percent Cover Graphic, may be used to estimate percent cover (available online at: ftp://ftp-fc.sc.egov.usda.gov/HI/pub/technotes/agronomy/).

REDUCE SHEET AND RILL EROSION AND EROSION FROM WIND

The amount and orientation of residue needed to reduce erosion within the soil loss tolerance (T) or any other planned soil loss objective shall be determined using current approved erosion prediction technology.

The current approved erosion prediction technology to be used for sheet and rill erosion by water is the Revised Universal Soil Loss Equation (RUSLE). The RUSLE calculations will account for the effects of other practices in the conservation management system in a field. If the RUSLE program does not include the crop rotation being evaluated, contact the Pacific Islands Area State Agronomist. Use the RUSLE Sheet and Rill Erosion worksheet to document the soil loss for the rotation.

For the purpose of reducing sheet and rill erosion, residue cover shall be maintained at no less than 30 percent during the appropriate times.

Contact the Pacific Islands Area State Agronomist for assistance to predict erosion by wind and to determine critical wind erosion periods. For the purpose of reducing soil erosion from wind, residue shall be maintained at no less than 1,000 pounds per acre of flat small grain residues equivalent on the surface during the appropriate time. This is approximately equal to 4,000 pounds of sugarcane residue and 3,000 pounds of pineapple residue. Flat small grain equivalent charts are available in the *National Agronomy Manual*, Part 502, pages 502-57 to 502-98, available online at: http://policy.nrcs.usda.gov/scripts/lpsiis.dll/M/M_190_NAM.pdf.

Residues subject to blowing or water flotation shall be anchored into the soil surface by disking or other mechanical operations. Residue shall be anchored with the least possible soil disturbance.

Utilize moisture and tillage on irrigated land in windy areas just prior to planting to minimize erosion.

WEED CONTROL

Weeds should be controlled with herbicides, sweeps, blades or by mowing to help maintain maximum residues on the soil surface with a minimum of surface disturbance.

Herbicide users should be cautioned as follows: If herbicides are handled or applied improperly or if unused portions are not disposed of safely, they may be injurious to humans, domestic animals, desirable plants, fish or other wildlife and they may contaminate nearby crops and other vegetation. Follow the directions and read all precautions on the container label.

Cooperators should be aware of and adhere to the provisions of state and federal laws and regulations concerning the use of agricultural chemicals.

Herbicides may be applied using various methods such as broadcast, spot spraying and wick applications. Use appropriate chemicals according to manufacturers recommendations for the target weeds and application methods.

The Pest Management (595) standard and specification must be used when working with the land user on a chemical weed control program.

FERTILITY

Undecomposed residues in the soil can tie up nitrogen. Unless the residue contains at least 1.5 percent nitrogen, such as a legume cover or green manure crop, the decomposing organisms will utilize soil nitrogen. Soil organisms will tie up about 25 to 30 pounds of nitrogen in decomposing a ton of carbon-rich crop residue. Up to 30 pounds of nitrogen per ton of air dry residue may be required when residues are incorporated into the soil. This is especially important if another crop will be planted immediately. The Nutrient Management (590) standard and specification must be used when working with the land user on a fertilizer program.

RESIDUE ENHANCEMENT PRACTICES

A cover and green manure crop may be planted when compatible with the management system being applied. Refer to practice standard 340 - Cover Crop. Incorporation will be during seedbed preparation.

Fertilize in accordance with the results of periodic soil tests. High yields will produce the most crop residue for a particular crop and crop variety.

Plant crops in narrow rows with a high plant population (closely spaced), but not above the optimum density.