

## NATURAL RESOURCES CONSERVATION SERVICE

### CONSERVATION PRACTICE SPECIFICATION

#### FILTER STRIP (acre) CODE 393

#### SCOPE

This document establishes the technical details, workmanship, and quality and extent of materials required to install the practice in accordance with the Conservation Practice Standard. The information shall be considered when preparing site-specific specifications for the practice.

The NRCS Hawaii Jobsheet for this practice shall be used to document the site-specific specifications for installing, operating, and maintaining the practice on a specific field or treatment unit. Other documents (worksheets, maps, drawings, and narrative statements in the conservation plan) may be used in addition to the Jobsheet to document site specifications or to plan or design the practice.

#### SPECIES SELECTION

Refer to the *Hawaii Vegetative Guide*, June, 2004 for suitable plant species information. You may refer the information for the following practice, depending on the purpose for applying the field border: Cover Crop (340), Critical Area Planting (342), Riparian Forest Buffer (391), Upland Wildlife Habitat Management (645), and/or Vegetative Barrier (601). The Guide is available on the internet at:

[ftp://ftp-fc.sc.egov.usda.gov/HI/pub/technotes/vegetative/veg\\_7\\_hawaii\\_vegetative\\_guide\\_document.doc](ftp://ftp-fc.sc.egov.usda.gov/HI/pub/technotes/vegetative/veg_7_hawaii_vegetative_guide_document.doc)

Please be patient. The *Hawaii Vegetative Guide* takes about 5 minutes to load using a high speed internet connection.

Volunteer or established vegetation can be used as a field border if a purpose is met; the vegetation is maintained and otherwise meets standards and specifications.

#### ESTABLISHMENT

##### Seeding

**Seedbed Preparation.** Seedbed preparation shall consist of plowing or ripping, followed by disking where soil conditions permit. Prepare a firm seedbed. Use no-till seeding methods and equipment, where practicable. If planting large areas of sloping land and no-till is not possible, establish new plantings in increments or in strips alternating with undisturbed areas to minimize erosion. Soil disturbance should be kept to a minimum.

**Seeding Method.** Seeding may be accomplished by broadcasting, drilling, or hydroseeding.

Where seed is broadcast, dragging the area with a chain or light plank will help to ensure good soil-seed contact.

Depth of seeding depends on seed size, soil moisture and soil texture. A general recommendation is to plant 1/4-1/2 inch deep on medium - to fine textured soils and 1/2 -1 inch

deep on course - textured soils. Plant deeper when soil moisture is low and shallow when moisture is abundant. Large seeds are generally planted deeper than small seeds.

Hydroseeded plantings must not be allowed to dry out. Germination and seedling emergence may be low if the mulch/seed mixture is not kept moist. Provide irrigation, as needed, until the plants are well established.

## **Vegetative**

**Land Preparation and Planting Methods.** Where terrain permits the use of heavy equipment, land preparation will be the same as for seedbed preparation described above. Vegetative material should be evenly distributed on the prepared ground and disked in.

For a more positive placement of the vegetative material, seedbed preparation may be followed by plowing furrows at a maximum depth of 6 inches and a maximum spacing of 3 feet apart. Vegetative material is then placed in the furrows at a maximum spacing of 3 feet between sprigs. Cover the material with soil by disking or other suitable means, in the direction of the furrow; then compact lightly to ensure good plant-soil contact.

Dense plantings will produce a quicker stand of grass with fewer weeds. Unless planting material is limited, make the furrows about 3 feet apart or less and place the stolons, sprigs or rhizomes as close as practicable in the furrows.

A mechanical sprig planter may be used, soil conditions and terrain permitting.

Where terrain restricts the use of heavy equipment, the minimum site preparation shall consist of providing 6-inch deep holes at the maximum spacing of 3 feet by 3 feet. Fertilize according to soil test recommendations. Place the recommended amount of fertilizer in each hole and cover with approximately 1 inch of soil. Sprigs should be inserted at least 5 inches in the hole. The sprigs should have a minimum of two nodes. The hole should then be filled with soil and compacted to ensure good plant-soil contact. Leave at least a 1-inch depression in the hole to trap rainwater and other moisture.

Adequate moisture is critical for successful planting. Plant only after the rainy season has begun or provide irrigation until the plants are well established.

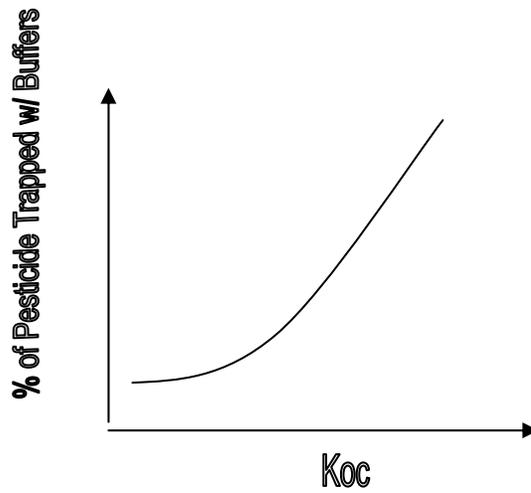
Where topography permits, seedbed or site preparation, seeding and vegetative planting shall be cross sloped or on the contour to minimize erosion hazard.

**Woody Plants.** Dibble tube or potted stock is preferred to bare-root stock. Plant seedlings as deep as they grew in the nursery with roots naturally positioned in an adequately sized planting hole. If the survival rate at the end of a year is less than 80 percent, the dead plants will be replaced as soon as possible.

## **Guidelines for Reducing Dissolved Contaminants in Runoff**

Pesticides can be carried off the field by runoff either in solution or adsorbed to the finer soil particles. The Koc value is a measure of adsorption to the organic matter or carbon content of the soil. WIN-PST contains a pesticide database with Koc values that can assist in planning and installing a filter strip used to reduce the amount of pesticide entering a water body.

Pesticides with Koc values greater than 1,000 indicate that it will be adsorbed to soil particles. Pesticides with Koc values less than 500 will probably be in the runoff solution. Generally, more pesticides will be trapped with a filter strip if it is adsorbed to the soil particle.



The same situation will apply for N in the runoff solution. Most of the N in solution will not be trapped unless the velocity is reduced to a very low value, and the flow through the strip is evenly spread (no concentrated flow).