

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

CROSS WIND RIDGES

(Ac.)

CODE 589A

DEFINITION

Ridges formed by tillage, planting or other operations and aligned across the prevailing wind erosion direction.

PURPOSE

Reduce soil erosion from wind.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies to cropland.

It is best adapted on soils that are stable enough to sustain effective ridges and cloddiness, such as clayey, silty, and sandy loam soils.

It is not well adapted on unstable soils such as sands, loamy sands, and certain organic soils.

CRITERIA

Ridge height, spacing, and direction.

Acceptable combinations of ridge height, spacing, and direction are those having ridge roughness K values equal to 0.8 or less during those periods when wind erosion is expected to occur. Ridge roughness is discussed in the National Agronomy Manual Subpart 502.32 and K values are displayed in Exhibit 502-4 or 502-5.

CONSIDERATIONS

Transport of wind-borne sediment and sediment-borne contaminants offsite can be reduced by this practice when used in a resource management system.

Surface roughening is most effective when the tillage operation will bring clods to the soil surface durable enough to resist wind erosion.

Field investigations or local knowledge should indicate that sufficient roughness and cloddiness will result on the soils in each field.

**CULTURAL RESOURCES
CONSIDERATIONS**

NRCS policy is to avoid any effect to cultural resources and protect them in their original location. Determine if installation of this practice or associated practices in the plan could have an effect on cultural resources. The National Historic Preservation Act may require consultation with the California State Historic Preservation Officer.

<http://www.nrcs.usda.gov/technical/cultural.html> is the primary website for cultural resources information. The California Environmental Handbook and the California Environmental Assessment Worksheet also provide guidance on how the NRCS must account for cultural resources. The e-Field Office Technical Guide, Section II contains general information, with Web sites for additional information.

Document any specific considerations for cultural resources in the design docket and the Practice Requirements worksheet.

**ENDANGERED SPECIES
CONSIDERATIONS**

If during the Environmental Assessment NRCS determines that installation of this practice, along with any others proposed, will have an effect on any federal or state listed Rare, Threatened or Endangered species or their habitat, NRCS will advise the client of the requirements of the Endangered Species Act and recommend alternative conservation

treatments that avoid the adverse effects. Further assistance will be provided only if the client selects one of the alternative conservation treatments for installation; or with concurrence of the client, NRCS initiates consultations concerning the listed species with the U.S. Fish and Wildlife Service, National Marine Fisheries Service and/or California Department of Fish and Game.

PLANS AND SPECIFICATIONS

Specifications for establishment and maintenance of this practice shall be prepared for each field or treatment unit according to the Criteria, Considerations, and Operation & Maintenance described in this standard.

Specifications shall be recorded using approved specification sheets, job sheets, narrative statements in the conservation plan or other acceptable documentation.

OPERATION AND MAINTENANCE

Ridges shall be established or re-established by equipment such as chisel plows, drills with hoe openers, or other implements that form effective ridges.

After establishment, ridges shall be maintained through those periods when wind erosion is expected to occur, or until growing crops provide enough cover to protect the soil from wind erosion.

If ridges deteriorate and become ineffective due to weathering, erosion, or change in expected prevailing wind erosion direction, they shall be re-established unless doing so would damage a growing crop.