



# SALTMEADOW CORDGRASS

(*Spartina patens* (Ait.) Muhl.)

**S**altmeadow cordgrass, native to the Atlantic seaboard and gulf coast of the United States, ranges from Massachusetts to Texas. It has naturalized in several locations along the Pacific coast, including San Francisco Bay, California; Cox Island in the Siuslaw Estuary, Oregon; the mouth of the Dosewallips River, Washington; and north of Nanaimo on Vancouver Island, British Columbia. In Washington, oyster culture in the Dosewallips area may have introduced it. Saltmeadow cordgrass has also established in China and along the Mediterranean.

Along the Atlantic coast, saltmeadow cordgrass stabilizes banks of tidal streams against erosion. The Soil Conservation Service released 'Avalon,' a



*Saltmeadow cordgrass invades coastal estuaries. (Each stripe on stake is 4 inches.)*



*Saltmeadow cordgrass is a matforming perennial that spreads mainly by rhizomes.*

commercial variety of saltmeadow cordgrass, in 1986. Since no comparable native species grow along the coast of Washington and Oregon, saltmeadow cordgrass threatens to change the character of Pacific Northwest coastal estuaries. In addition to affecting native plant communities, saltmeadow cordgrass could seriously damage oyster, Dungeness crab, clam, salmon and other fishery industries.

Saltmeadow cordgrass is a class A noxious weed in Washington. It is not classified as a noxious weed in Oregon, Idaho or California.

## IDENTIFICATION

Saltmeadow cordgrass forms circular colonies as a short matted grass, usually less than a foot tall, with long slender rhizomes. The narrow leaf blades,  $\frac{1}{8}$  inch or less wide, are usually rolled. Two to several  $\frac{3}{4}$ -to 2-inch-long spikes grow at the top of the flower stems. The individual spikelets,  $\frac{1}{4}$  to  $\frac{1}{2}$  inch long, face one direction like tightly spaced teeth on a comb.

Smooth cordgrass (*Spartina alterniflora*), sporadic along the Pacific coast, is native to the Atlantic coast. It is a large robust grass, commonly growing 4 feet tall, having flat leaf blades  $\frac{3}{16}$ -



*Comblike spikes produce flowers and seeds.*

inch or more wide. Its seed heads usually produce at least six spikes. It tolerates more flooding than saltmeadow cordgrass and grows in intertidal areas from mean high water to about 6 feet below mean high water. Two other introduced cordgrasses, *Spartina townsendii* and *Spartina anglica*, are hybrids between the North American *Spartina alterniflora* and the English *Spartina maritima*. Both are large stout grasses, which grow up to 12 spikes in a panicle 5 to 15 inches long.

Two cordgrasses are native east of the Cascades. Alkali cordgrass (*Spartina gracilis*) grows in moist alkaline places in the Columbia Basin, usually associated with saltgrass and Baltic rush. Alkali cordgrass is slender like saltmeadow cordgrass, but has flat leaf blades, four to eight spikes, and a row of hairs on the keel of the glumes. Prairie cordgrass (*Spartina pectinata*), which will hybridize with saltmeadow cordgrass, grows along fresh water, including the Snake and Grande Ronde rivers. Prairie cordgrass is larger than saltmeadow cordgrass, generally taller than 3 feet, displaying flat leaf blades more than 3/16 inch wide, rolled only at the tip. Seed heads usually have 10 to 20 spikes and 1/4-inch-long awns.

## BIOLOGY AND ECOLOGY

A perennial, saltmeadow cordgrass reproduces by seeds and rhizomes. It forms extensive colonies that exclude other plants. It acts as an important soil binder in coastal and interior marshes in eastern North America. As one of the dominant perennial grasses of irregularly flooded salt marshes along the

Atlantic and Gulf coasts, it tolerates flooding to just below mean high tide. Saltmeadow cordgrass grows best at about the spring high tide line. It is widespread on moist sand flats, in depressions between dunes, and on sand dunes. It reproduces primarily by rhizomes. Viable seeds are not always produced. 'Avalon' saltmeadow cordgrass produces seed, but land managers use vegetative propagation for planting it in its native zone.

## CONTROL

Prevent new infestations of saltmeadow cordgrass. Contain existing populations until you can eradicate them. Learn to identify the introduced cordgrasses so that new infestations can be treated before they become too large to control.

Digging is extremely labor intensive and expensive because every piece of root and rhizome must be removed. Digging may be effective only in the early stages of isolated infestations, before plants are 3 years old. Control methods that disturb *Spartina* sod, such as rotovating, harrowing or dredging, increase the number of plants through propagation from rhizome fragments. Continuous flooding kills saltmeadow cordgrass, but dikes built to flood it would also kill associated plants. Crushing, burning, grazing and mowing may, under the right conditions, temporarily suppress cordgrass. Otherwise they only stimulate its growth. Land managers are attempting to kill the small population in Washington by covering it completely with black plastic. How long the cover must remain in place to eradicate the population is not known.

For chemical control recommendations, refer to the *Pacific Northwest Weed Control Handbook*, an annually revised extension publication available from the extension bulletin offices of Oregon State University, Washington State University and the University of Idaho.

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