



Southeast Exotic Pest Plant Council Invasive Plant Manual

Common Name: Chinese Silver grass, zebra grass, eulalia grass, Eulalia, Chinese fairy grass

Scientific Name: *Miscanthus sinensis* Anderss.

Miscanthus sinensis is a member of the Poaceae or Grass Family. It continues to be a popular ornamental in many areas of the United States as well as being used as a barrier plant along roadsides and agricultural fields. There are many ornamental varieties of this plant, including one that is used in Europe and Asia as a biofuel and for paper pulp. *Miscanthus* gets its name from the Greek word *mischos* meaning stalk and *anthos* meaning flowers, referring to the stalked spikelets. *Miscanthus* is being considered as a wildland fire hazard due to its large amount of dried biomass in the fall and winter. Burning plants can have flame lengths of thirty feet and have a high potential for spotting into receptive fuels.

Height: The many arching leaves reach 1 to 1.5 meters.

Leaves: Basal leaves arise from a large central clump. Individual leaves are sparsely pubescent on both sides, taper to a point, and are 1 to 2 meters long and 1 to 2 centimeters wide. The margins are sharp and slightly serrated.

Flowers: The culms (flowering stalk) are up to 1.8 meters long. Flowers are terminal panicles 10 to 35 centimeters long. Initially they are pale pink to reddish in color gradually turning tan in fall and last through winter. Flowers emerge from September to November.

Fruit/Seeds: Seeds are rough with a twisted bristle tip and from 3 to 4 millimeters long.

Life History

Miscanthus spreads primarily by underground roots or rhizomes. Mature plants have extensive perennial root systems. New growth emerges in mid-spring and rapidly replaces the previous year's dried erect leaves. The flower spike emerges in late August to early September and matures in early November. The seed viability of *Miscanthus* is varied according to variety. Although it is speculated this plant will spread by seed, its main form of reproduction is vegetative.

Origin and Distribution

Miscanthus is native to Asia. It was brought into the United States primarily for ornamental purposes. It has been introduced or spread throughout the eastern United



Photo by James H. Miller



Photo by James H. Miller

States, Colorado, and California.



Photo by James H. Miller

Similar Species

There are no native species of miscanthus in the eastern United States. Big blue stem (*Andropogon gerardii*) is a possible look alike due to its large size. One distinguishing feature is that big blue stem has a three-pronged flower spike that resembles a turkey's foot. Sugarcane plume grass (*Saccharum giganteum*) resembles miscanthus due to its large plume and arching leaves. Plume grass can be differentiated by its longer flower stalks (up to four meters) and shorter leaves (to five decimeters). Early growth of new plants could be confused with some native grasses. There are many varieties of *Miscanthus sinensis* as well as other large ornamental bunch grasses in the nursery trade. All of the horticultural varieties grow in similar habitats.

Habitat

Miscanthus will grow on a variety of sites but prefers moist well-drained soil to reach its maximum growth potential. It is intolerant of shade although it will persist in sparsely forested areas and small openings. In many natural areas, this grass is prevalent on abandoned home sites where it was used as an ornamental. It has been documented invading shores of reservoirs, roadsides, and in forests and old fields following fires. The plant is extremely flammable and upon catching fire, burning fragments cause difficulty in fire control. Miscanthus will grow in relatively cold (Zone 5) as well as warm climates (Zone 9).

Management Recommendations

Mechanical Control

Hand Pulling: Hand pulling Miscanthus is largely ineffective due to the large root system and its ability to re-grow from root fragments. Individual plants or small patches can be effectively grubbed as long as all of the roots are removed. After removal, monitoring is necessary to ensure complete control.

Herbicidal Control

Spot Treatments: For herbicidal controls to be effective the plants must be actively growing. Glyphosate has been shown to be effective in controlling miscanthus. A 2% solution of glyphosate thoroughly mixed with water is effective in the fall or late spring. Treatments should cover the leaves of the plants to the point of runoff. Since glyphosate is a non-selective herbicide, it will affect any native plant it comes into contact with. The addition of a non-ionic surfactant at a concentration of 0.5% improves the effectiveness of foliar treatments. Read the herbicide label thoroughly prior to use.

Broadcast: Broadcast treatments are appropriate for large infestations such as fields or along roadsides. Apply glyphosate at a rate of 1.0-1.5 quarts per acre. Use a non-ionic surfactant according to manufacturer's instructions to improve effectiveness.

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[[Home](#)] [[Contents](#)]



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