

Swordgrass (*Miscanthus floridulus*)



- Scientific name & Code:** *Miscanthus floridulus* (Labil.) Warb. Ex K. Schum. & Lauterb., MIFL3
- Synonyms** – n/a
- Family:** Poaceae (grass family)
- Common names:** English – Sword grass, Pacific island silvergrass, giant Miscanthus
Chamorro – n/a
- Origin:** Japan and some Pacific islands.
- Description:** Tall, erect, broad-leaved, perennial bunchgrass (with short, inconspicuous rhizomes), 1.5-4 m high. Culms are 8-16 mm thick at the base. Leaves smooth, 30-80 cm long and 15-40 mm wide, crowded at the base, green to yellow, to purplish with a white mid-rib. Flowers 30-50 cm long and 10-20 cm wide in large, showy, whitish panicles.
- Propagation:** Propagates by seed only. The spikelets have many fine hairs from the base that aid in wind dispersion. Seed production can be prolific, barring drought, but seed remains viable for only six months.
- Distribution:** Tropical and subtropical areas of the world. Introduced as a ornamental plant in more northern climates. Identified on Guam (and CNMI?).
- Habitat / Ecology:** Prefers a deep, loamy, fertile soil that does not dry out, but has a wide range of soil adaptation. Does not tolerate heavy clay soils. Establishes on degraded or deforested lands or steep, eroded areas. It is tolerant of wind and salt spray. May grow from sea level to over 1,500 m elevation.
- Environmental impact:** Forms dense thickets that out-competes other plants. Very effective in self-seeding. The lower leaf blades tend to fall off in late summer, adding fuel to wildfire hazard. Burning does not kill the plants, it quickly regenerates from underground parts. Plants produce chemicals (leaf leachates) that inhibit growth of other plants (allelopathic). Silica accumulates in the leaf margins making edges sharp and capable of cutting animals or humans. Palatable to cattle but little or no use by deer and other wildlife.
- Management:** Physical – Can be grazed heavily to remove plants and may be cut for roughage. Small infestations can be cut but the underground parts must be dug out and removed. Burning alone is **not recommended**, it will increase growth, vigor, and seed production. Repeated mowing (2 times) during active growth will eventually kill the plants, usually in two seasons.
- Chemical – Glyphosate is effective if applied to previously burned or cut plants that have regrown to 0.3 m. May need to be repeated annually until control is achieved.
- Biological – No known natural enemies. Heavy grazing with cattle, horses, sheep, or goats can help control the spread of the plant.

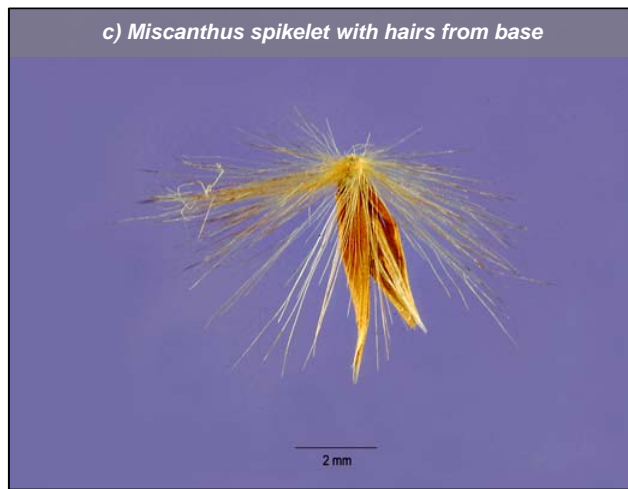
PIER Risk Assessment: High Risk, score: 13



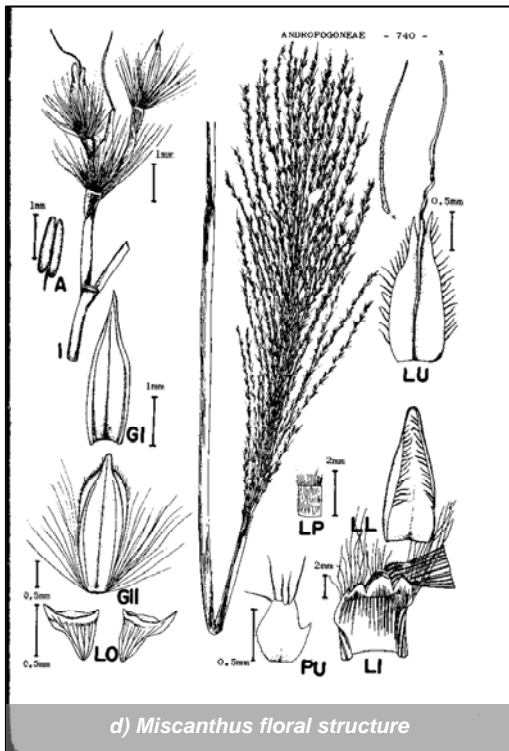
a) *Miscanthus* leaves showing white mid-rib



b) Mature height of *Miscanthus*



c) *Miscanthus* spikelet with hairs from base



d) *Miscanthus* floral structure



e) Grazed *Miscanthus* pasture in Japan

Header & photo e: University of Minnesota:

<http://horticulture.cfans.umn.edu/>

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Photo b: North Dakota State University Extension Service

Photo c: *Tau olonga*, Plants of Tonga

Photo d: CC Hsu, 1975 Taiwan Grasses

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