

# Giant *Miscanthus* Eradication

## Giant *Miscanthus* (*Miscanthus* × *giganteus*)

Giant *Miscanthus* is a warm-season perennial grass with promising benefits as a commercial bioenergy crop in the United States. Giant *Miscanthus*, a sterile hybrid, originates from Southeast Asia from two common ornamental grasses, *M. sacchariflorus* and *M. sinensis*. Its inability to produce viable seed is both an advantage and a disadvantage. Although no seed reduces the possibility of invasiveness, the establishment of large stands is expensive and labor intensive based on the traditional rhizome planting method.

## Rhizome Complex

Giant *Miscanthus* has a large rhizome complex, mostly concentrated in the upper 10 cm of the soil profile. Rhizomes are large belowground storage organs used by perennial plants to store essential nutrients during the dormant periods of the growth cycle. Unfortunately, rhizomes make eradication difficult.

## Eradication

Typically, conversion of giant *Miscanthus* to another crop can be done within a single growing season, but complete eradication of giant *Miscanthus* may take two to three years due to the resilience of the perennial rhizome complex<sup>1</sup>. Eradication can be done in late fall or early spring.

Eradication steps:

1. Mow down all standing biomass.
2. Till to a depth of at least 10 cm (rhizome depth).
3. Treat with glyphosate, high doses and two applications.
4. Plant with a Roundup®-ready crop.
5. Follow a typical weed control for that crop.

<sup>1</sup>Anderson *et al.* (2011). *Agron. J.* 103: 1383-1388.



Figure 1. Rhizome segment. *Photo credit: Ceres, Inc.*



Figure 2. Rhizome complex. *Photo credit: Heaton Lab.*

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