

Miscanthus



MISCANTHUS PLOT IN GRIGNON, FRANCE
BY .BGABRIELLE [PUBLIC DOMAIN], VIA WIKIMEDIA COMMONS

Vegetation

Miscanthus (*Miscanthus X giganteus*) is sterile hybrid perennial grass bioenergy crop.

Climate

Miscanthus is cultivated in moist temperate climates.

Distribution

Miscanthus X giganteus is a hybrid of species native to Asia. It is cultivated in Europe and the US as a bioenergy crop.

Climate regulation value

The average greenhouse gas value for ecosystems of this type is 155 metric tons CO₂-equivalents per hectare over a 50 year time frame (t CO₂-eq ha⁻¹ 50 yrs⁻¹). This includes 70 t CO₂-eq ha⁻¹ 50 yrs⁻¹ from storage of organic matter that would result in greenhouse gas release if cleared and 85 t CO₂-eq ha⁻¹ 50 yrs⁻¹ from ongoing greenhouse gas exchange between the ecosystem and the environment.

When biophysical effects are taken into account, the average climate regulation value for ecosystems of this type is 377 metric tons CO₂-equivalents per hectare (t CO₂-eq ha⁻¹ 50 yrs⁻¹). This is a 143% increase relative to the value based on greenhouse gas regulation alone.

Considering an average car, emitting 1.1 lb CO₂ per mile driven, clearing 100 square feet (9.3 m²) of this ecosystem type would, on average, be equivalent to driving 288 miles/464 km (counting greenhouse gasses only). Counting biophysical effects, clearing the vegetation would be equivalent to driving 700 miles/1127 km.