

Switchgrass



EBI ENERGY FARM
ILLINOIS, USA
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Vegetation

Switchgrass (*Panicum virgatum*) is a perennial grass bioenergy crop.

Climate

Switchgrass is found in temperate climates.

Distribution

Switchgrass is native to North America, where it has recently started to be cultivated as a bioenergy crop.

Climate regulation value

The average greenhouse gas value for ecosystems of this type is 83 metric tons CO₂-equivalents per hectare over a 50 year time frame (t CO₂-eq ha⁻¹ 50 yrs⁻¹). This includes 37 t CO₂-eq ha⁻¹ 50 yrs⁻¹ from storage of organic matter that would result in greenhouse gas release if cleared and 46 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 286 metric tons CO₂-equivalents per hectare (t CO₂-eq ha⁻¹ 50 yrs⁻¹). This is a 245% 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 154 miles/248 km (counting greenhouse gasses only). Counting biophysical effects, clearing the vegetation would be equivalent to driving 532 miles/856 km.