

## **Lake-effect snowpack decreases the wintertime mortality of *Miscanthus × giganteus* in Michigan**

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**Abstract:** *Miscanthus × giganteus* is a tall hybrid perennial grass that has been proposed to supplant corn (*Zea mays*) as a principal biofuel crop in the US due to its immense size and biomass productivity. However, extreme cold winter temperatures in 2009 killed first-year miscanthus rhizomes in experimental plots in Illinois and Wisconsin. During this same period miscanthus plots that were covered by lake-effect snowpack in Michigan experienced little or no mortality. Observational data from the cold winters of 2008-09 and 2013-14 are analyzed at experimental miscanthus plot locations in Michigan, Illinois, and Wisconsin to ascertain the role that snowfall played in surface insulation. Regional climatology is discussed as it pertains to favorable regimes for future miscanthus propagation in the US.