



## “Ocean, Forest & Field – the Bioenergy Playground”

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### ***Miscanthus –the biomass grass crop of choice?***

Nova Scotia traditional energy sources are wood, coal and oil. Over the past decade there has been increasing concerns centered on the need to reduce greenhouse gas levels and the burning of fossil fuels. The need to address this issue, combined with rising fossil fuel prices, has created considerable interest in the development of low cost renewable fuels. Advances in conversion technologies have created new opportunities for using agricultural lands as a means of producing renewable fuels in larger quantities than relying on wood and agricultural residues alone. Dedicating agricultural crops for solid fuel use can reduce greenhouse gases by reducing the use of fossil fuels and by increasing carbon storage in the landscape. Giant Miscanthus (*Miscanthus x giganteus*) is a warm-season Asian grass showing potential as a biomass crop in Nova Scotia. At several Nova Scotia farm sites, research plantings of giant miscanthus variety *Nagara* have been established to compare miscanthus yields to reed canarygrass (*Phalaris arundinacea* L.) and switchgrass (*Panicum virgatum*). Giant miscanthus is sterile and is propagated by rhizome division. To grow giant miscanthus, plant rhizomes are planted approximately 4-inches deep and 3-feet apart within rows and 3-feet between rows. Stems of giant miscanthus are harvested late winter or early spring when the plant is dormant and moisture levels are low. The Maritime experience though limited has shown considerable variability between sites for crop establishment and winter survival. Challenges in crop establishment have delayed the collection of local yield data on this crop. Ontario data shows the high yield potential of miscanthus (15-25 t dm/ha) is dependent on location, stand age, variety and stand establishment success. It is the reported high yield potential and winter standability of miscanthus relative to other biomass grass crops with more proven adaptation and performance such as switchgrass (3.4 - 7.3 t dm/ ha) that keeps interest in this species high.