

Willow Harvester Project

OBJECTIVE:

Explore biomass harvesting equipment suitable for PEI farms

DEMONSTRATION:

A JF 192 Willow harvester was evaluated in the fall of 2011

- Procured in 2010 by Agriculture and Agri Food Canada
- Manufactured as a forage harvester in Brazil, and modified into a willow harvester in Denmark by Ny Vraa Bioenergy
- Single row unit operates 2 to 5 km/hr; 0.5 ha/hr
- Operated by a 100 to 155 hp farm tractor with 3-point hitch; 540 rpm PTO
- Cost delivered to PEI from Denmark was \$35,000 (2010 dollars)
- Designed to harvest multi stem willows with a maximum stem diameter of 5 to 6 cm

RESULTS:

- Suitable size and price for PEI farms, especially for multi-farm ownership or custom work
- Best operating performance for stem size of around 3 cm (diameter measured 30 cm from the ground); processed stems up to 6 cms
- Wearing of coppice blades needs to be explored further
- Willow stump shattering did occur, but no negative implications yet after one year of plant re-growth
- Willow row spacing is important to reduce operator fatigue and increase operating efficiency
- Wood chip size/shape worked well in the one furnace trial in a PEI made chip burner
- No issue with the chip size/shape at the Energy From Waste Plant



Web sites:

- Final report at www.peiscia.ca
- Videos and information of producing and harvesting willows at www.nyvraa.dk and select the British Flag for english
- Also great information at www.esf.edu/willow

Support:



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