



Gildale Farms





- Small scale pelleting operation located in St. Marys, ON established in 2006
- Service SW Ontario markets
 - Fuel Pellets
 - Residential
 - Greenhouse and Commercial
 - Animal Bedding
- Production Capacity 10,000 MT/yr (5x12hr)
- Grow and market 100 acres of perennial grasses



Evolution of Pellet Business

- Initially focused on processing crop residues
 - Abundant supply
 - Strong support in ag community (use and harvest)
- Limitations
 - performance of fuel
 - existing pellet stove technology
 - collection cost and nutrient replacement value of raw biomass



MATCH CUSTOMER
PREFERENCE AND
HEATING EQUIPMENT
TO FUEL PRODUCT



**Premium
Grade
Wood Pellet**

< 1 % ASH

\$\$\$\$ / BTU
or GJ

**Standard
Grade Wood
Pellet**

2 % ASH

\$ / BTU or GJ



Online Ordering



Delivery



Unloading



Storage



Tote Bags



Pallets



Use





Residential Delivery



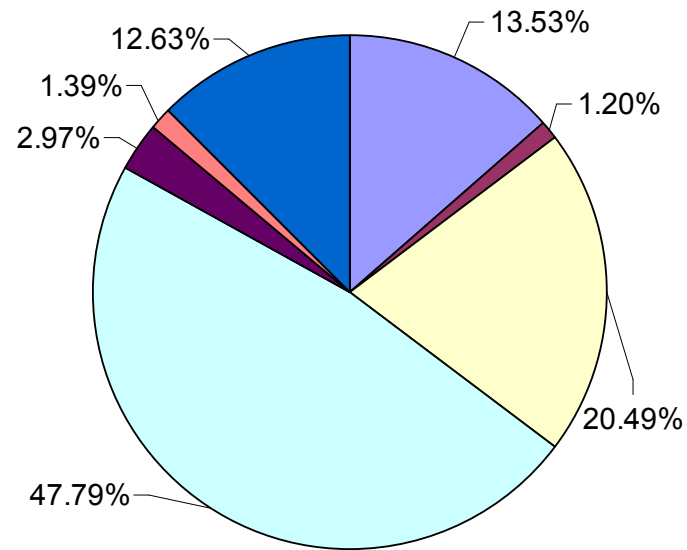
Bulk Pneumatic Delivery







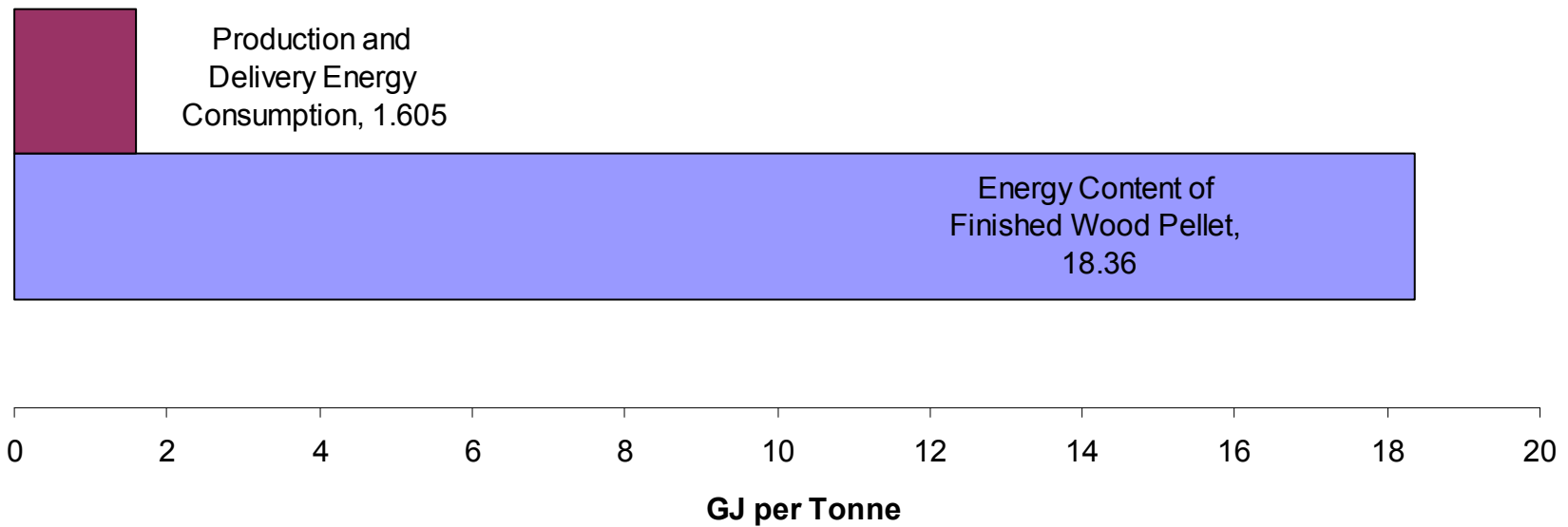
Wood Pellet Production Energy Inputs



- Raw Material Inbound Transportation
- Raw Material Handling and Storage
- Raw Material Grinding
- Pelleting
- Conveyors, Augers, Elevators
- Process Heat Removal (Cooler)
- Finished Pellet Delivery



Life Cycle – Return on Energy – **11.4x**





Miscanthus 10 ton/ac



Chopped miscanthus





Switchgrass - 4 ton/ac





Successes



- Utilize energy from residue streams to displace non renewable fossil fuels
- Carbon neutral heating solution
- Cost competitive and cost stable heating solution for customers even at recessed oil prices
- Local energy economy
- Distribution network in place to deliver bagged or bulk pellets in SW Ontario



Challenges

- Volume business, relatively low margin per ton
- Space heat is seasonal business, opportunities for process heat and CHP have been slow to develop
- Past lack of government support and initiatives for wood and biomass heating compared to other countries
- Fully automated bulk pellet storage and handling systems are expensive for low volume consumers

Thank you

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