Discussion of the Wood Pellet Market
Michigan Society of American Foresters
Fall Meeting

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Michigan Wood Fuels, Holland MI
October 11th, 2018
Steps in Pellet Production

• Hammermill wet chips
• Drying to 10-12%
• Hammermill dry material
• Run through pellet mill
• Cool
• Packaging
Wood Chip Feedstock
Packaging to Finished Product
What Wood Fiber Do Pellet Mills Use?

- Pellets are made from softwood and hardwood
- Export pellets are typically softwood
- Retail heating pellets are both
  - Most either soft or hardwood. Few mix
  - Michigan market almost all hardwood
- US average price for fiber about $30/ton
Pellet Fuels Institute Certification

PFI Densified Fuel Grade: Premium
Mill Registration # 16017
Grade Requirements:

<table>
<thead>
<tr>
<th>Property</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulk Density</td>
<td>40–48 lbs/ft³</td>
</tr>
<tr>
<td>Diameter</td>
<td>.230–.285 in/5.84–7.25 mm</td>
</tr>
<tr>
<td>Durability</td>
<td>≥96.5</td>
</tr>
<tr>
<td>Fines</td>
<td>≤0.50%</td>
</tr>
<tr>
<td>Ash Content (as received)</td>
<td>≤1%</td>
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<tr>
<td>Length</td>
<td>≤1% &gt;1.5 in.</td>
</tr>
<tr>
<td>Moisture</td>
<td>≤8.0%</td>
</tr>
<tr>
<td>Chlorides</td>
<td>≤300 ppm</td>
</tr>
</tbody>
</table>

Manufacturers Guaranteed Analysis:

- Type of Material: Hardwood
- Additives: Vegetable Based Oil <0.5%
- Minimum Higher Heating Value (as received): 7800

For more information, please visit the PFI website at www.pelletheat.org.
Wood Fiber Criteria for MWF

- **Clean:** must be free of bark & dirt
- **Sizing:** chips (3” minus) or dust
- **Species:**
  - Prefer Oak, Maple, Cherry
  - Don’t like: Walnut, Ash, Poplar
- **MC:** prefer 38-45%
Manufacturing facilities with capacity and status, June 2018

Capacity by region (tons per year)

- East: 0
- South: 10,000,000
- West: 0

Production (tons)

- Heating pellets: 0
- Utility pellets: 500,000

Sales (tons)

- Domestic: 0
- Export: 500,000

Status indicator:
- Currently operating
- Under construction/planned
- Temporarily not in operation
• 2017 Sales = 898,880 Tons in East/Midwest
• MI Pellet Market is about 110-140,000 TPY
• Sales are highly seasonal. Strongest June - Jan
• Sales heavily driven by weather & alternative fuel prices, especially oil/propane (substitution effect)
• Current average wholesale price for pellets fob mill is ~$164/ton in the East/Midwest
  – Has varied from ~$155 - $180/ton. Low volatility compared to fossil fuels
Questions?