

# W B Johnson Family of Companies



Futurewood Corp



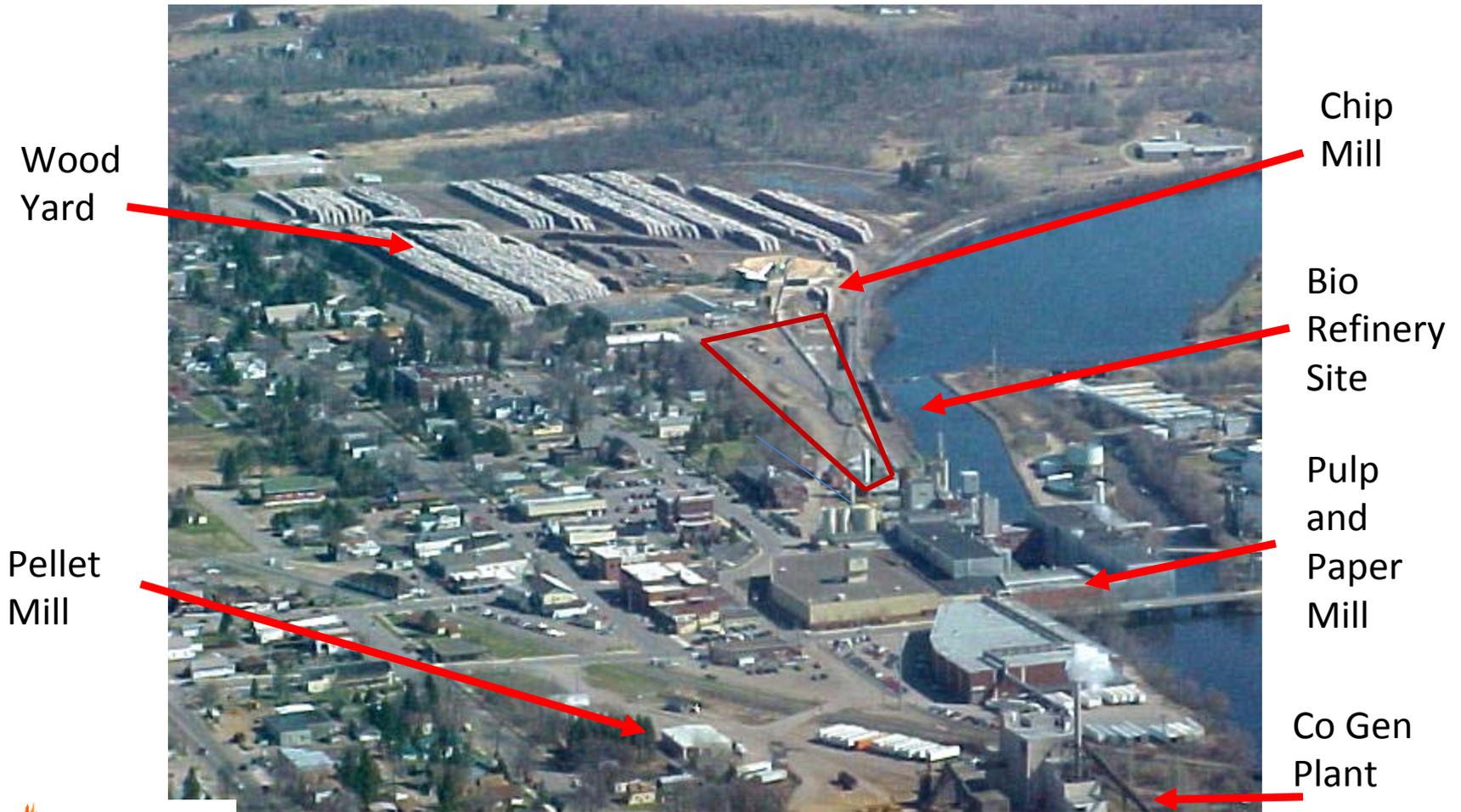
Johnson Timber  
Corporation



North Shore Forest  
Products, Inc.



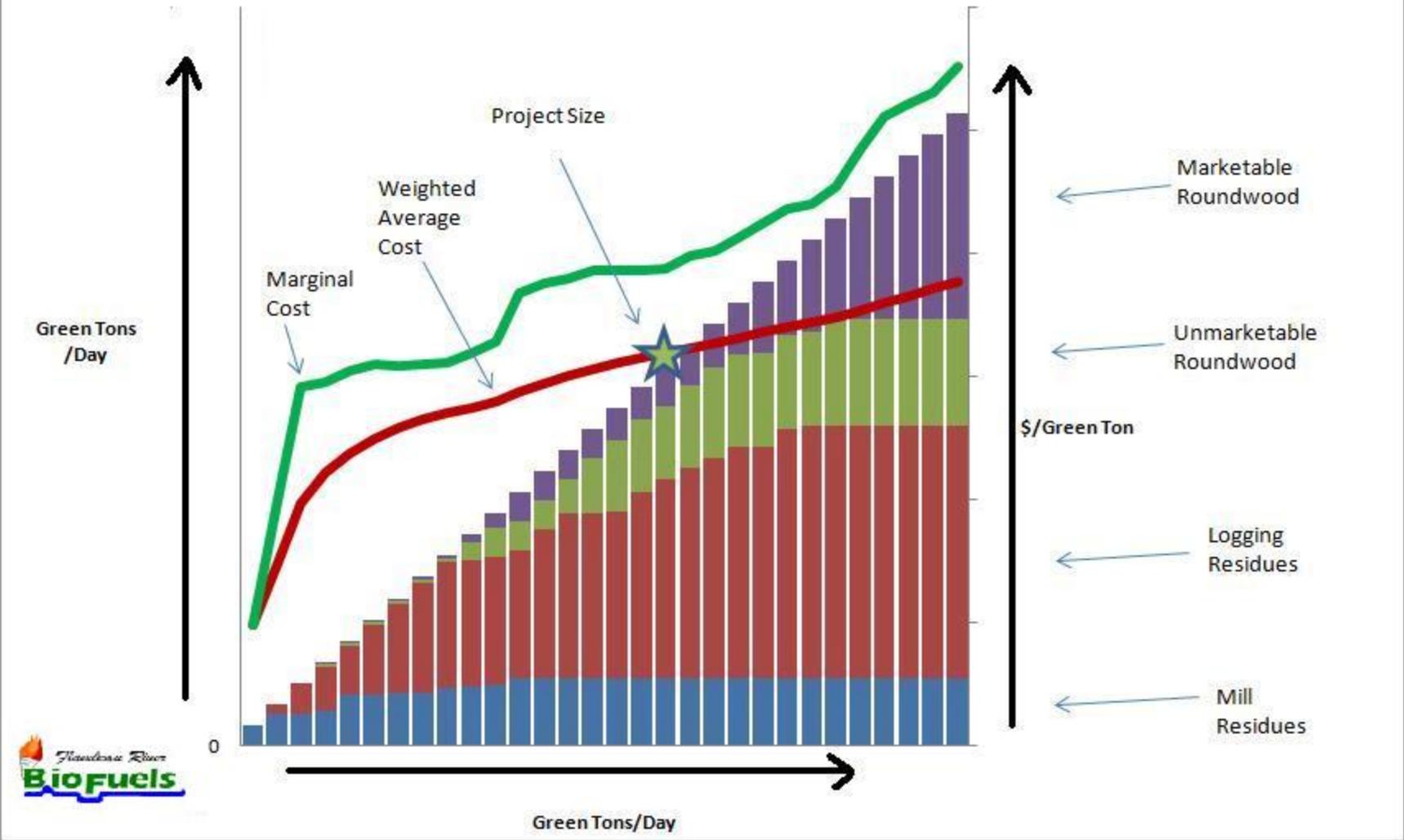
# Flambeau River BioFuels Plant Site – Adjacent to Flambeau River Papers



Business Proprietary



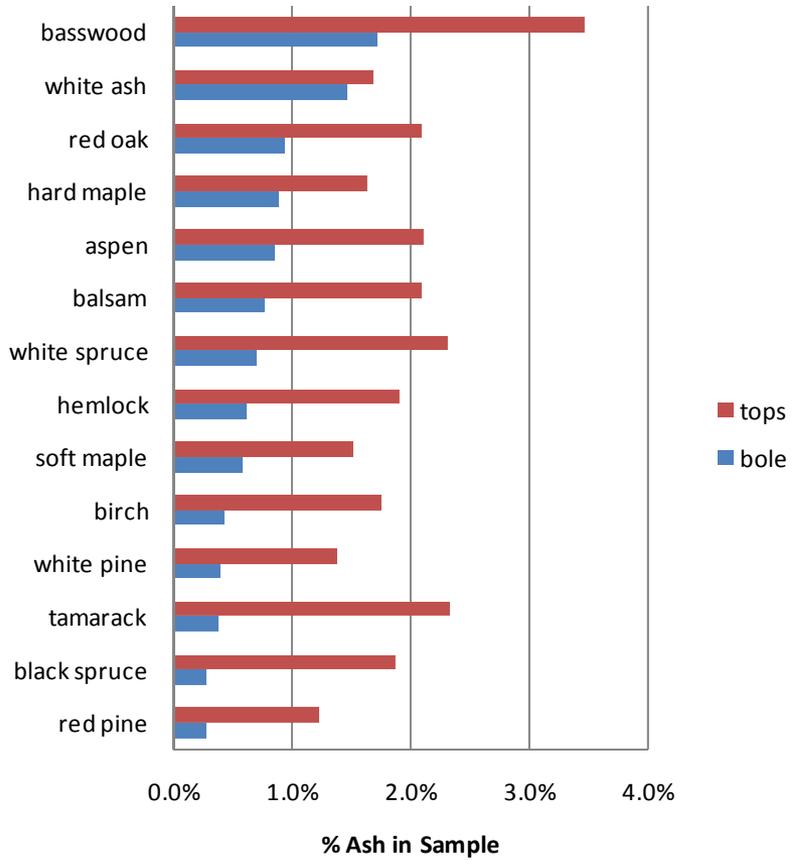
# Change in Sources of Raw Material and Costs as Plant Size Increases



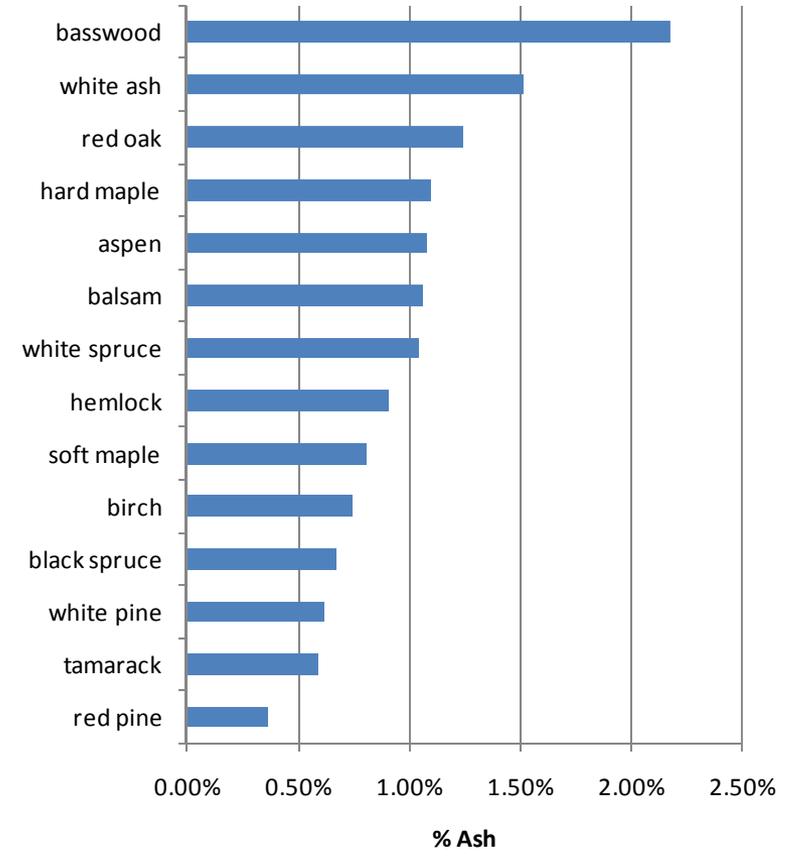
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### Percent Ash in Tops and the Main Stem (Bole)



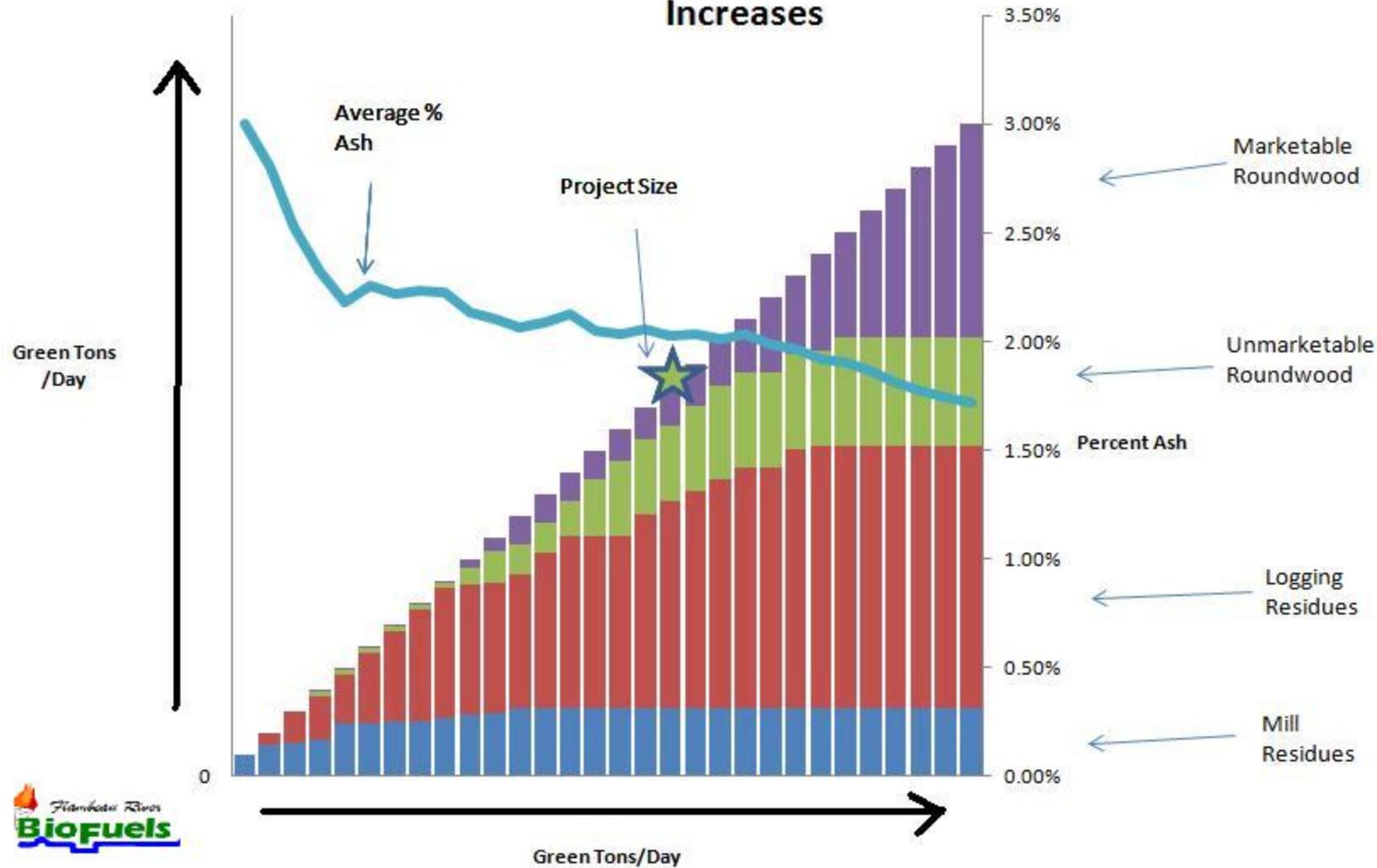
### Estimate of Ash % in the Whole Tree



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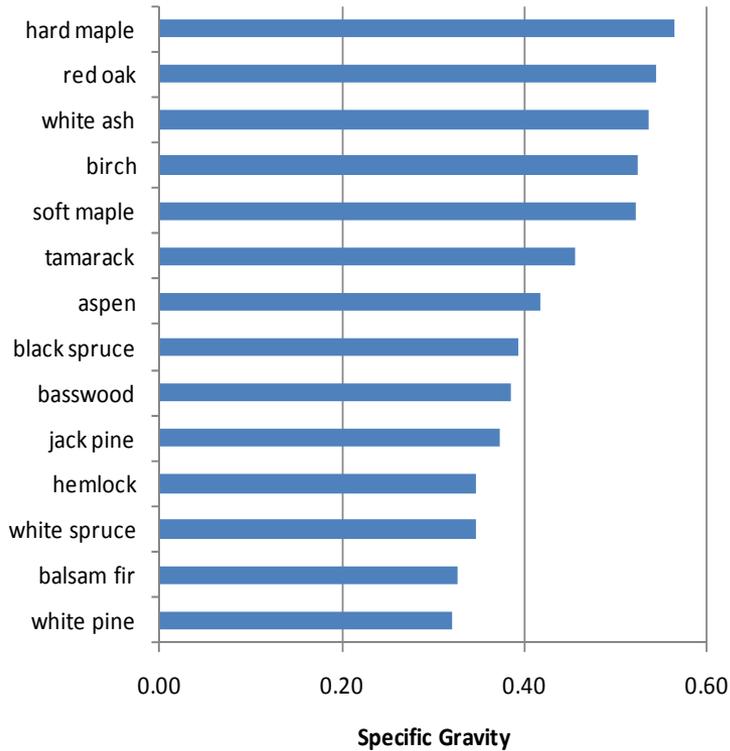
# Change in Sources of Raw Material and % Ash as Plant Size Increases



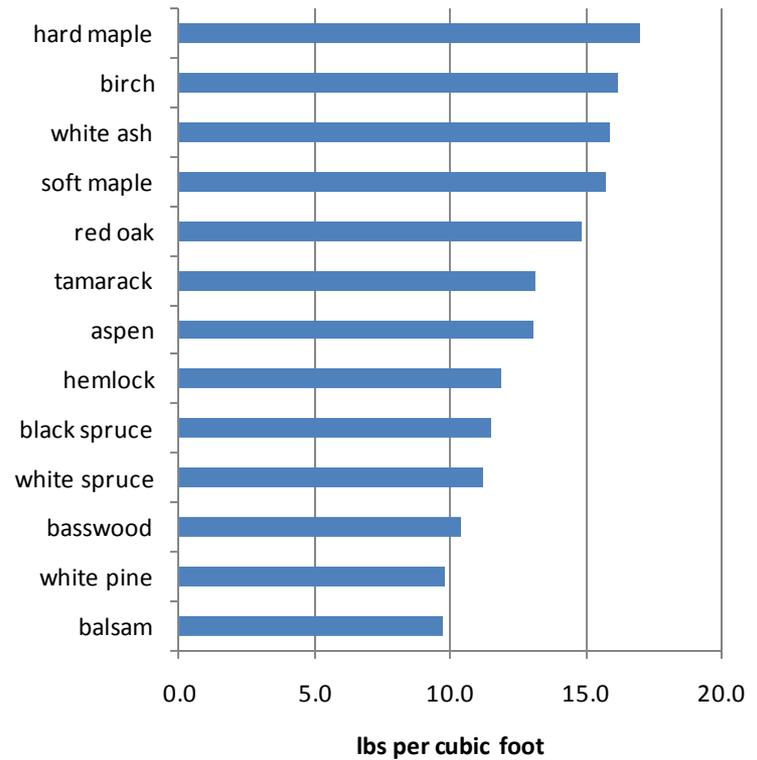
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### Specific Gravity in the Main Stem (bole) with Bark

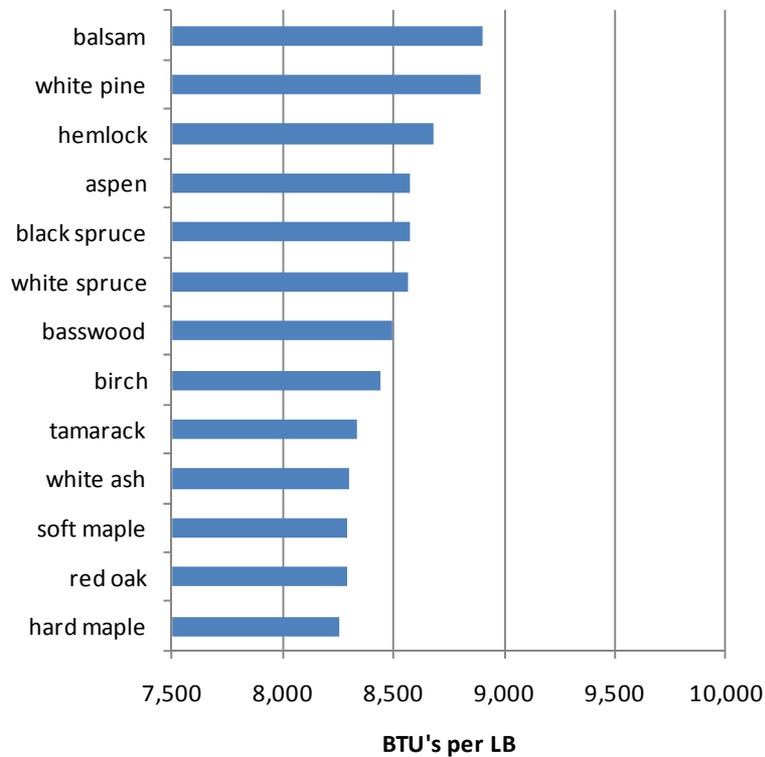


### Bulk Densities for Chips made from the Main Stem (Bole), with bark at 10% MC

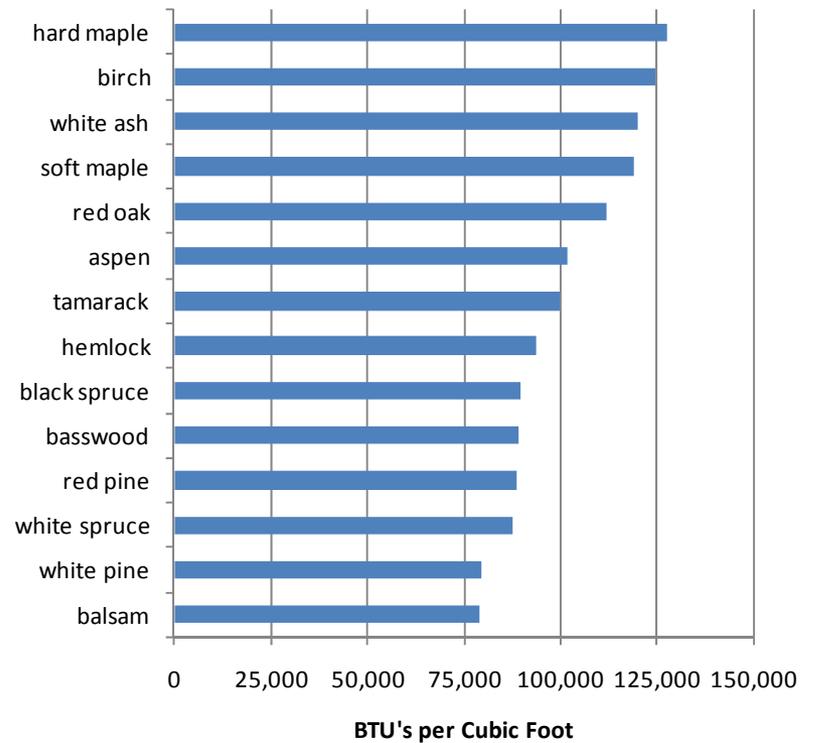




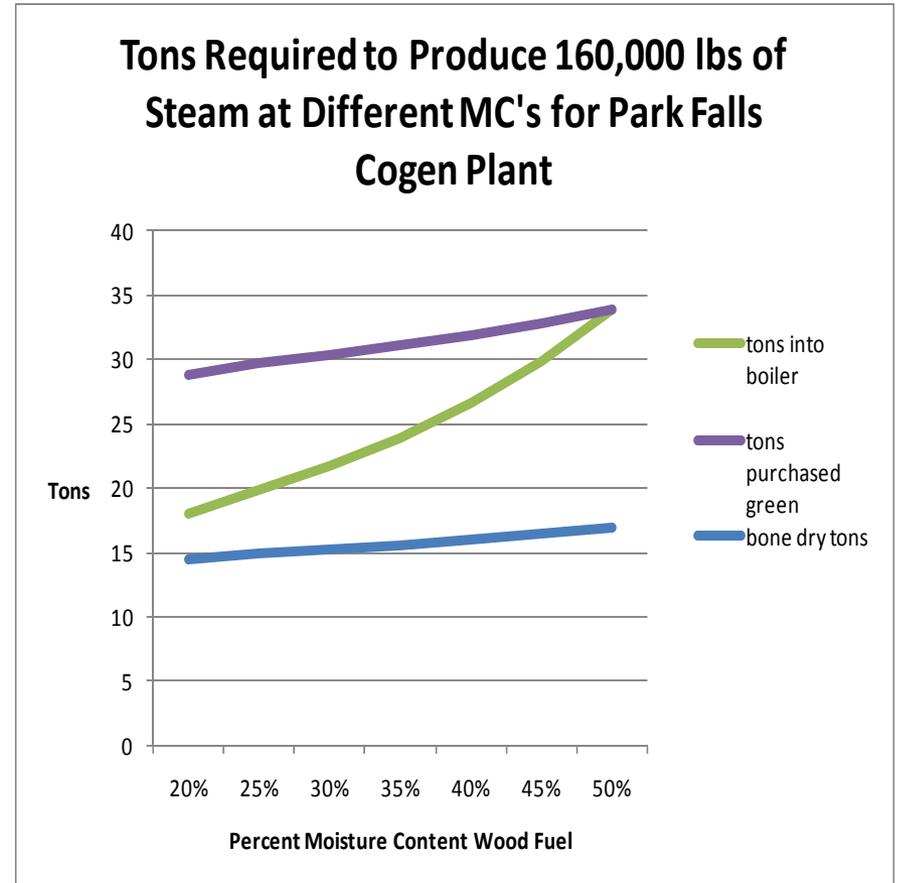
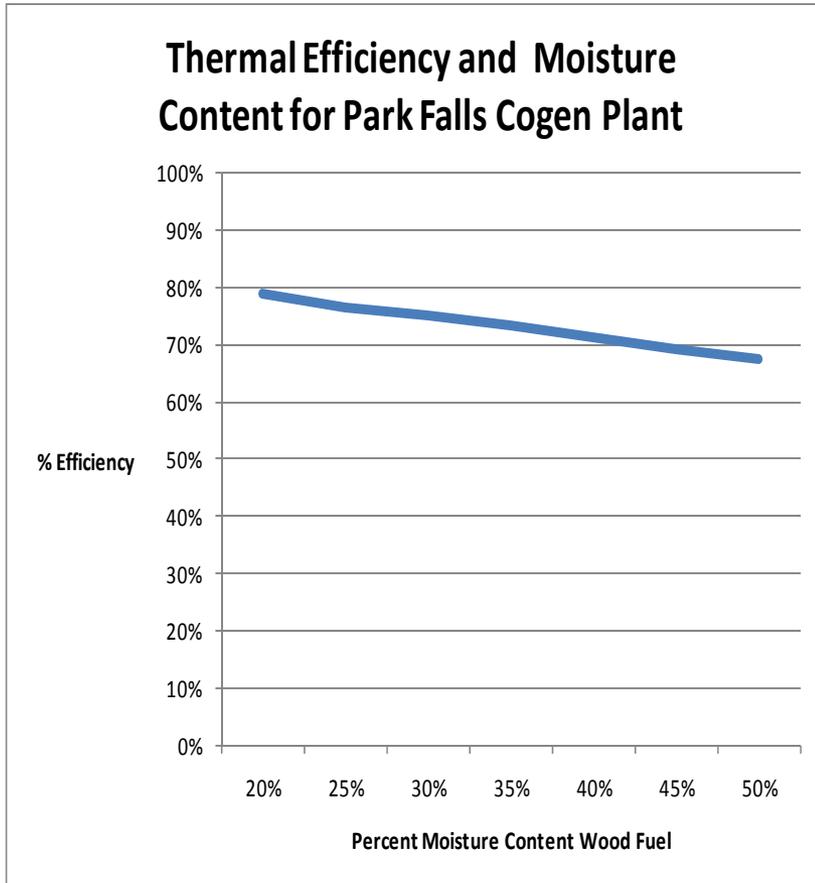
### BTU's per LB in the Main Stem (Bole) with Bark, Oven Dry



### BTU's per Cubic Foot in the Merchantable Stem (Boles), With Bark, Oven Dry



# Analysis of the Co-Gen Facility at the Flambeau River Paper Mill

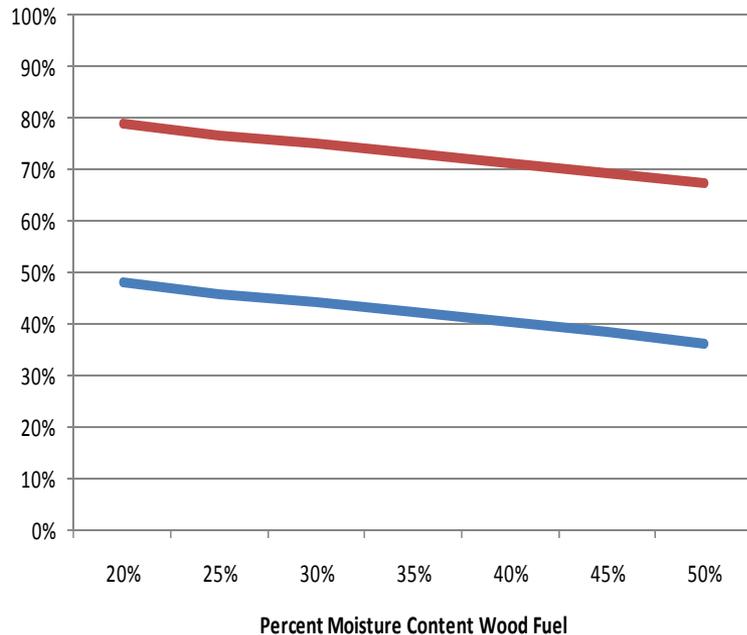


Note: units are tons per hour

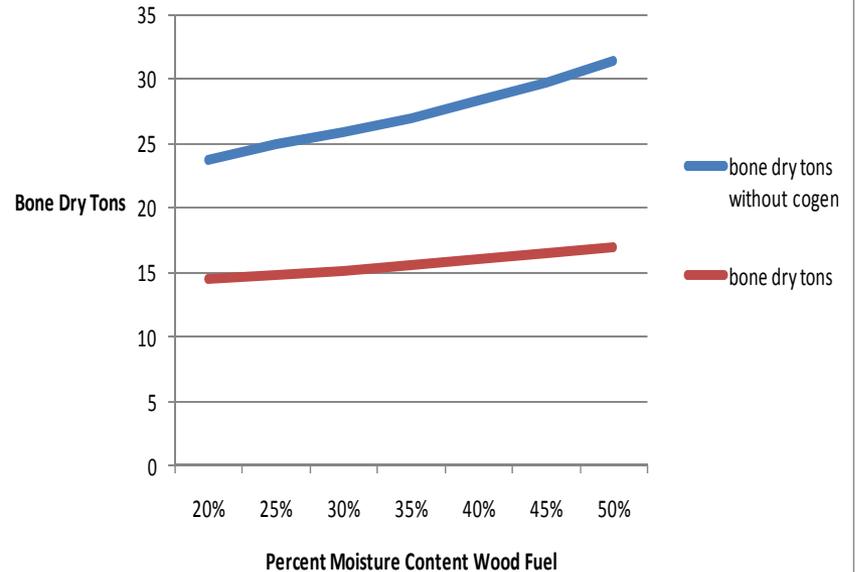
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# Resource Utilization for Co-Gen Facilities and Electric Utilities

**Thermal Efficiency and Moisture Content for Park Falls Cogen Plant Compared to a Utility**



**Bone Dry Tons Required to Produce 160,000 lbs of Steam at Different MC's for Park Falls Cogen Plant Compared to a Utility**





- **Flambeau River BioFuels**

Project Manager                      Bob Byrne

- **Sub Project    Fiber Supply Project Team                      and Contributors**

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Research Design                      Dr. Robert Govett

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Todd Pond, Brian Repenshek

Sample Preparation                      Bill Gilbert, Richard Ogren, Doug Hanus,  
Ross Langham, John Gephart

Data Collection                      Bill Gilbert, John Gephart, Doug Hanus

Physical Testing                      Doug Hanus, John Gephart

Analytical Testing                      Bill Gilbert, Kevin Anderson - Twin Ports Testing

Data Analysis                      Bill Gilbert, John Gephart

Literature Review                      Alex C Wiedenhoeft, Dr. Robert Govett,  
John Gephart

Literature Data Base                      John Gephart

Report                      Bill Gilbert, John Gephart

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