Forest operations Value proposition

Harvesting system

Philippe Meek

Hardwood Initiative Workshop, Québec, April 24th and 25th , 2012

Needs

- What is the break even point of marginal recovery ?
- What is the best way to meet harvesting and site disturbance guidelines ?
- How to improved information for prediction models?
- What are the advantages of tree-length harvesting with forwarder?
- How to improve the economics of biomass harvesting ?

Approach

- System comparaison
  - Tree length / CTL / TLfowarder
  - Impact on site disturbance/tree damages and cost

- Processing productivity study
  - Marginal cost of pulp extraction and sorting
  - Marginal cost of biomass extraction and sorting

- Productivity studies for commonly used systems to fill the gaps into the existing data banks

Benefits

- Identification of most viable approach for typical hardwood conditions
- Better selection of system to meet disturbance/damage guidelines ($$$/ha and social licence to operate)
- Show the advantages of the use of forwarders
- 2 $/m³ processing cost avoiding over-diligent extraction

Competition/Alternative

Inappropriate selection of system/method because of shortage of information

Results in fewer viable options reducing procurement opportunities

Forest operations Value proposition

Immature stand management

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Needs

- What are the cost and benefits to conduct improvement treatment (assuming CT) ?
- What criteria to use to assure viability of commercial thinning ?
- Why some stands issued from CC developed nicely ?
- Is sap wood ratio can be improved from pruning and/or PCT?

Approach

- Working with existing CT operation in evenaged stand.
  - Validate tree selection process
  - Conduct field evaluations under a wide range of stand density
  - Which stand can directed towards unevenaged management in a cost effective manner.

- Knowledge-gab analysis to define to “winning” conditions to establish regular stand of desired species adapted to local conditions.
- Opportunity analysis to conduct pruning
- Conduct stem analysis and pruning trials (10-20 years) ?

Benefits

- CT is viable when it recovers its fees on selected stands known to provided a cheaper procurement opportunity.
- Any additionnal lumber production is profitable (TBD).
- Opportunity analysis would indicate the value of conducting futher research on prunning

Competition

Not conducting viable CT nor improving sap ratio would result into AAC decreases or value losses.

Forest operations Value proposition

Degraded stand management

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Needs

- How to decrease beech regeneration problems
- How profitable are the intensive management processes (involving tree-marking)
- How to conduct stand improvement of degraded stands
  - Eligibility for the 123 method for selection and shelterwood cuts
  - Reducing osts
  - Optimised methods

Approach

- Compare studies of various regeneration cuts to stimulate alternative species (patch cuts of different size combined with chemical control to reduce beech ingress)
- Run comparative analysis of 3 methods (cost/revenu/stand development)
  - Tree marked cut
  - 123 method
  - Clear cut
- Field validation of various techniques

Benefits

- Less beech, more of desired species products
- Reduce cost and development of new opportunities for wood procurements
  - From current operations
  - For the future improved stands

Competition

Find market for diseased beech ;-)

If degraded stands are not treated, stand treatment would be delayed, affecting G&Y.