BIOMASS AND BIOENERGY FROM WINDBREAKS: - OPPORTUNITIES?

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Presentation

- Brief description of recent work on Living Snow Fences (LSF)
- Potential follow-up work on biomass from LSF that would provide a new management option
- Other options for biomass and bioenergy from windbreaks
- Opportunities and constraints
Guidance to MnDOT on improving LSF program:
- Focus groups and landowner/agency interviews
- Estimation of the costs and benefits of LSF
  - MnDOT (Avoided costs for sand, salt and snow removal)
  - Societal (Accidents, increased travel time and GHG’s)

Products
- LSF Payment tool for county managers and policymakers
- Recommendations for improvements in program

MnDOT could see net economic returns of over $1.3 million dollars per year if 40% of the sites would be contracted to LSF practices
Biomass and Bioenergy from LSF’s

- Issues with LSF’s
  - Take many years to become effective
  - Maintenance and renovation is costly

- Bioenergy option:
  - Fast growing willows planted for energy
  - Established in 2 years and harvested on a 3 year rotation
  - Could provide energy or income source to landowner
New York and MN plantings

First year of growth after coppicing

Mature and effective willow snowfence
Some things that have been mentioned in the last two days:

- Fuelwood
- Sawlogs (if managed properly)
- Carbon credits
- Mulch for new plantings
- Edible fruits and berries
Constraints and opportunities

- Constraints/Opportunities
  - Markets
  - Distance to markets
  - Equipment
  - Sufficient quantity to make harvest worthwhile

- Opportunities
  - Local community/school/farm energy systems
  - Grain drying/heating buildings
  - Pellet production
Thank you

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