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Advanced **Hardwood Biofuels** Northwest

AHB: Renewable Fuels for the Pacific Northwest

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Feedstock



Conversion



Sustainability



Education



Extension



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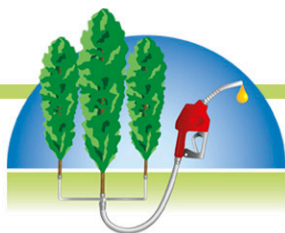
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AHB is researching a system for locally-grown fuels in the PNW.



**Purpose grown
hybrid poplars**

**Drop-in replacement
transportation fuels**



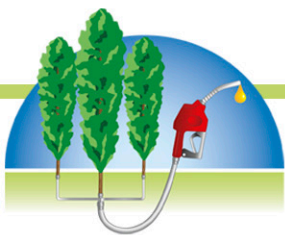
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AHB is one of seven USDA AFRI “CAP” projects around the U.S.



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AHB is organized into five teams.



Feedstock



Conversion



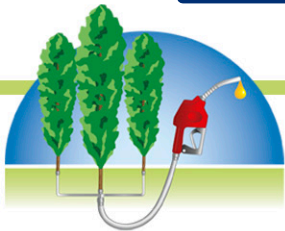
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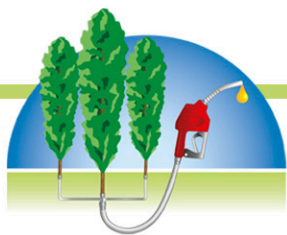
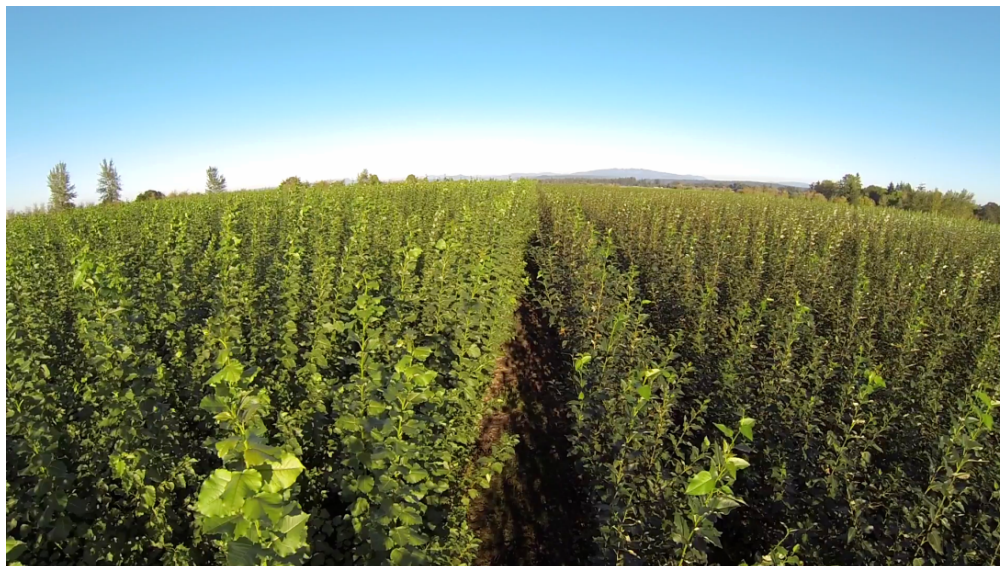
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Researching all aspects of feedstock development



- Growing and harvesting technologies
- Clone selection
- Quantifying yields
- Production costs and logistics



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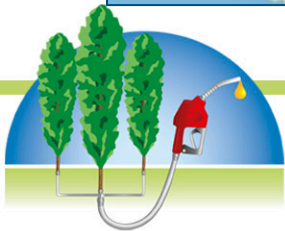
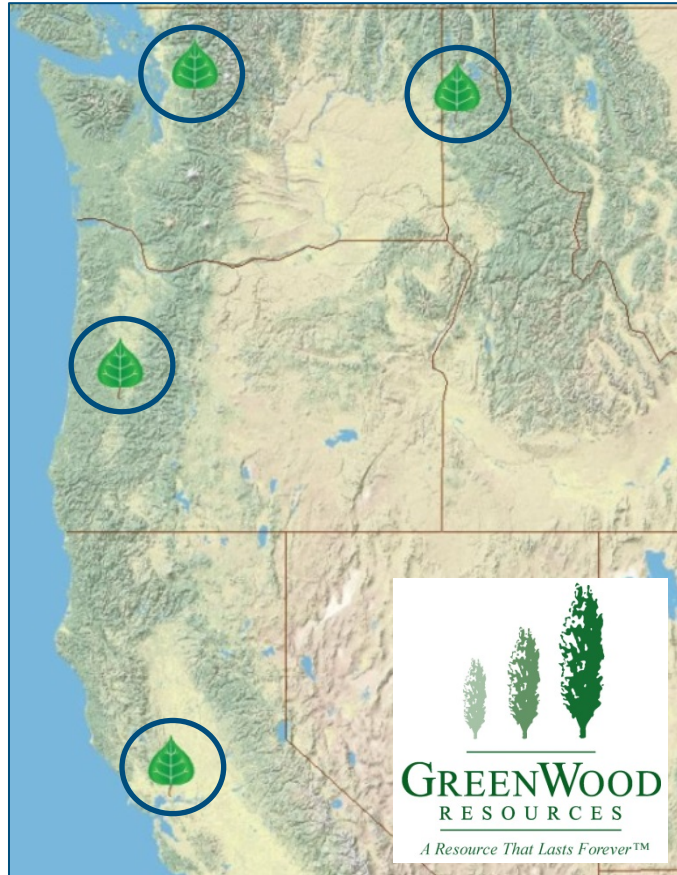


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Four demonstration sites have been established



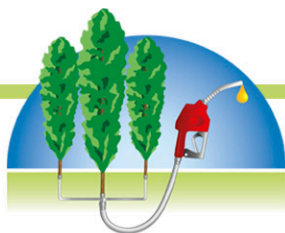
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Zeachem's demonstration plant is located in Boardman, OR.



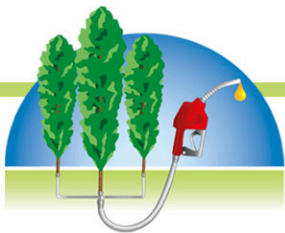
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Acetic acid and cellulosic ethanol have been produced so far.



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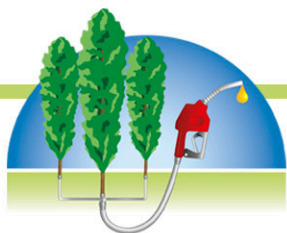
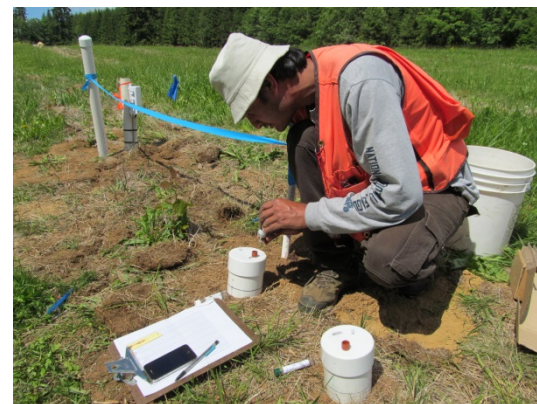
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Environmental, economical, and social sustainability?



- Life cycle analysis
- Soil, water, and wildlife.
- Biorefinery location and logistics
- Community perceptions and potential impacts



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Challenges ahead



Developing new markets presents a “chicken and egg” problem.



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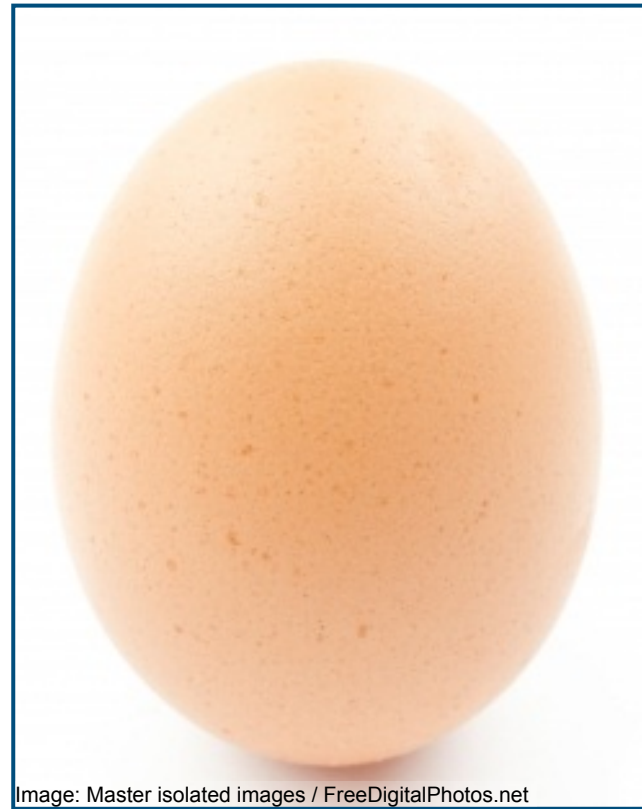
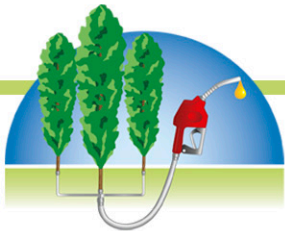


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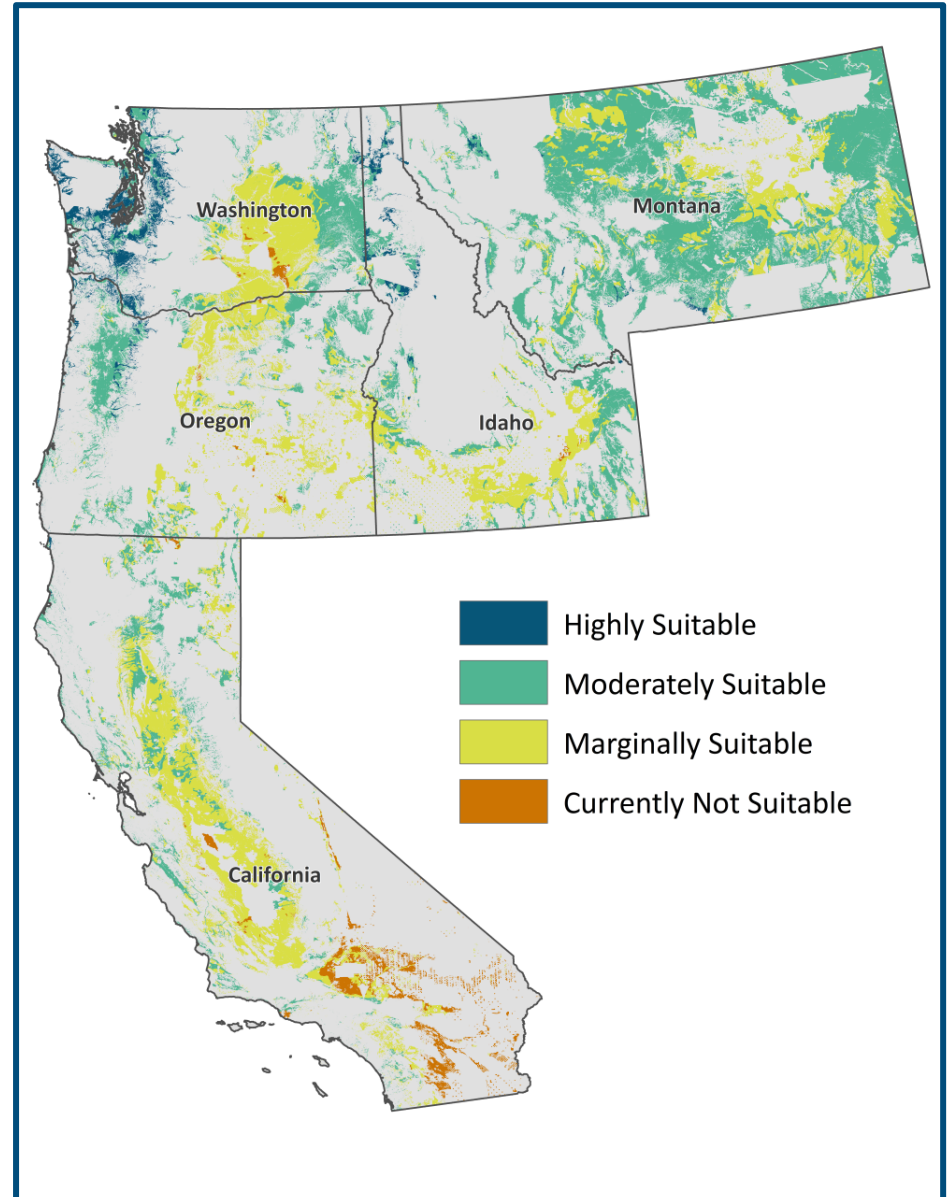
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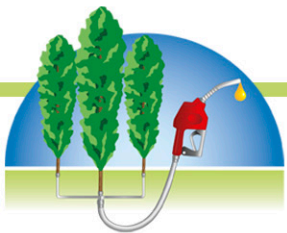
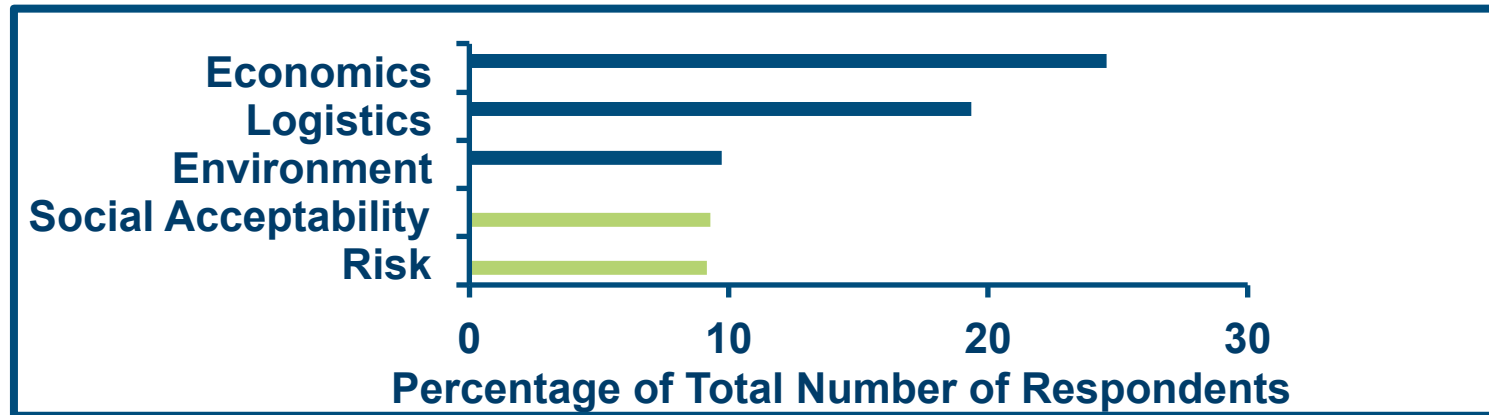
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**10,000 - 18,000
acres of land
would be
needed for a
biorefinery.**



Growers have concerns based on negative experiences with poplar.



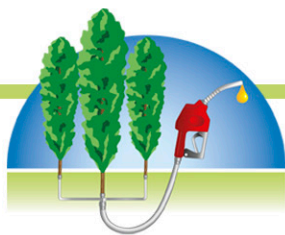
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It may be difficult to compete with fossil fuel prices.



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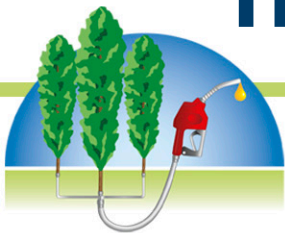
**High-value
bioproducts
present short-
term economic
opportunities.**



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