Advanced **Hardwood Biofuels** Northwest

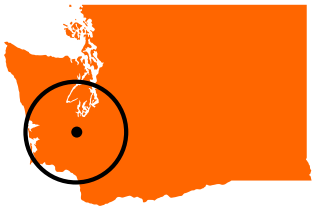
April 2016 Briefing Paper

Bio-Jet Fuel Production in the Pacific Northwest

Advanced Hardwood Biofuels Northwest (AHB) is a program funded by the USDA National Institute of Food and Agriculture. AHB integrates research, education, and extension to develop poplar-based biofuel and biochemical industries in the Pacific Northwest.

100 MILLION
GALLONS A YEAR IN FOUR STATES

Researchers at AHB are investigating the economic feasibility of four, 100 million gallon a year bio-jet fuel refineries in the Pacific Northwest. The proposed locations were selected based on models that considered poplar yields and grower adoption estimates, existing infrastructure, and logistical costs. The results include maps of bio-jet fuel supply systems, the required selling price by location, and proposed changes in land use. The estimated fuel cost reflects a resonable profit for the grower without subsidies.

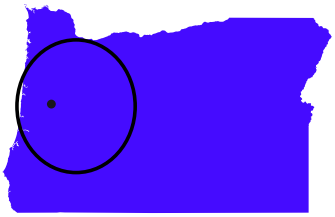


WASHINGTON

182k POPLAR ACRES

$4.05 PER GALLON

The model shows that southwestern Washington has a large amount of suitable grasslands that could produce sufficient yields of poplar biomass without irrigation.

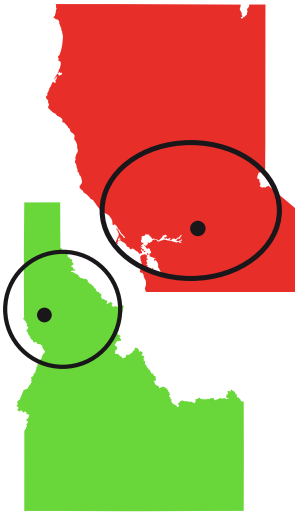


OREGON

208k POPLAR ACRES

$4.15 PER GALLON

In western Oregon, suitable lands for growing poplar are more dispersed and lower yields are expected from non-irrigated agriculture lands compared to Washington.



NORTHERN CALIFORNIA

116k POPLAR ACRES

$4.50 PER GALLON

In northern California, poplar yields from non-irrigated lands would be too low to support the industry, so poplar most compete with existing crops for irrigated farmland leading to higher costs despite higher yields.

IDAHO

209k POPLAR ACRES

$4.30 PER GALLON

A biorefinery in Idaho would also rely on irrigated agriculture lands for most of the poplar bioenergy crops. However, the model predicts lower biomass yields than California but with lower opportunity costs for the grower.

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USDA United States Department of Agriculture National Institute of Food and Agriculture

This project is supported by Agriculture and Food Research Initiative (AFRI) Competitive Grant no. 2011-68005-30407 from the USDA National Institute of Food and Agriculture (NIFA).

WASHINGTON STATE UNIVERSITY EXTENSION