

HYBRID POPLAR IN THE PACIFIC NORTHWEST: *HOW IT GOT STARTED AND WHERE IT IS HEADED*

VANCOUVER, WASHINGTON

Brian Stanton

October 15, 2015





Poplar on a Global Stage (FAO 2012)



**Poplar veneer,
Hunan China**

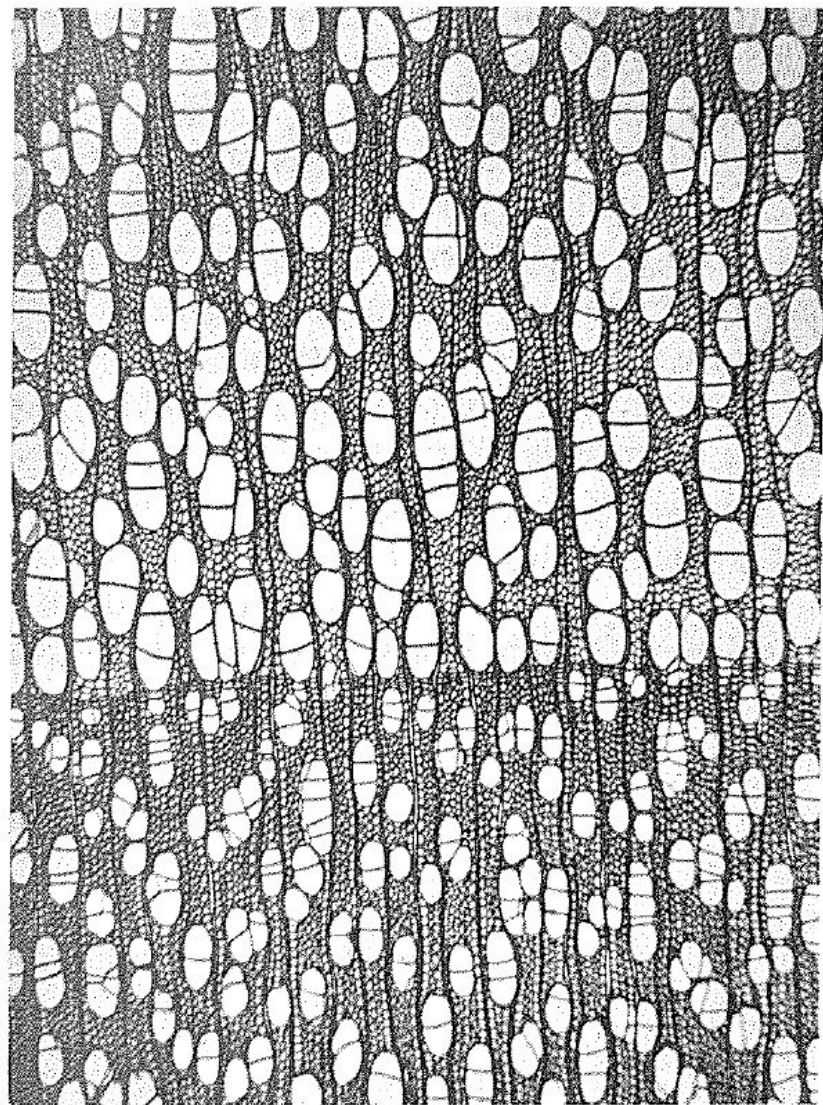
Continent	Hectares
Asia	7,845,700
Europe	654,469
North America	89,128
South America	45,500
Total	8,634,797

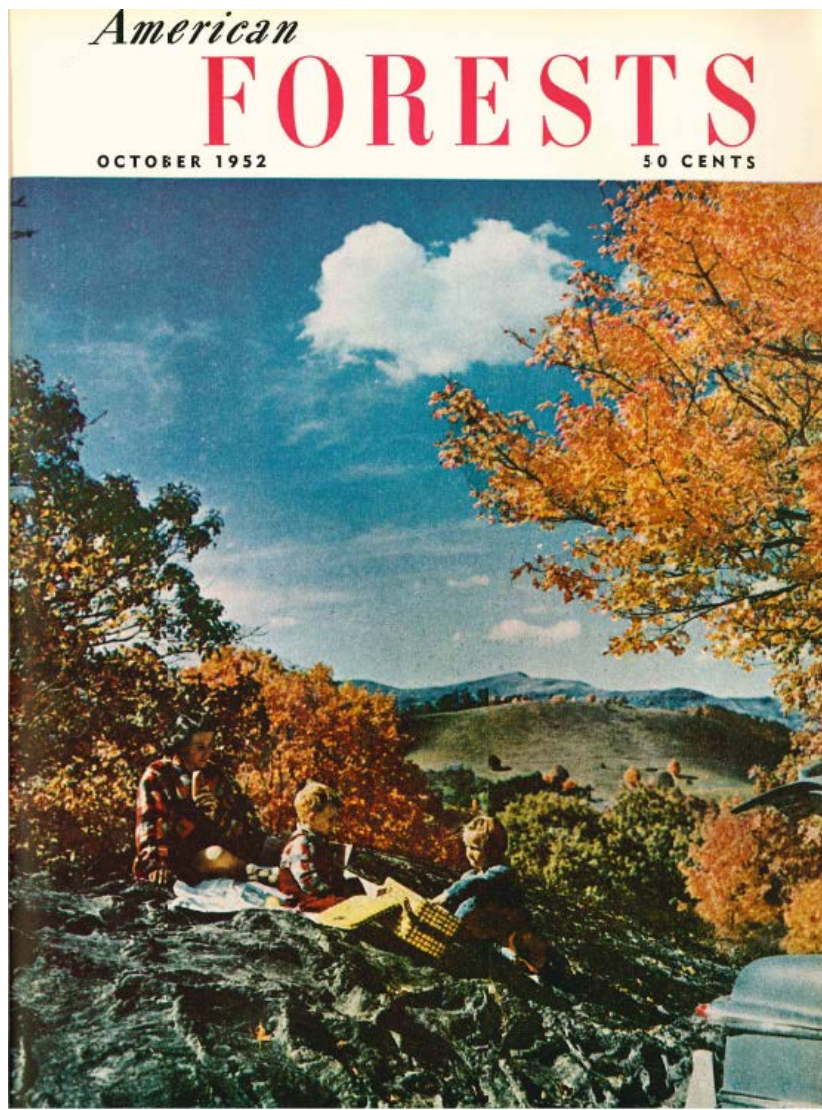
Markets	Cubic Meters
Plywood/ Veneer	44,081,000
Pulp	16,626,000
Sawn Wood	2,307,000
Engineered Products	2,190,000
Fuelwood	1,734,000
Total	66,938,000



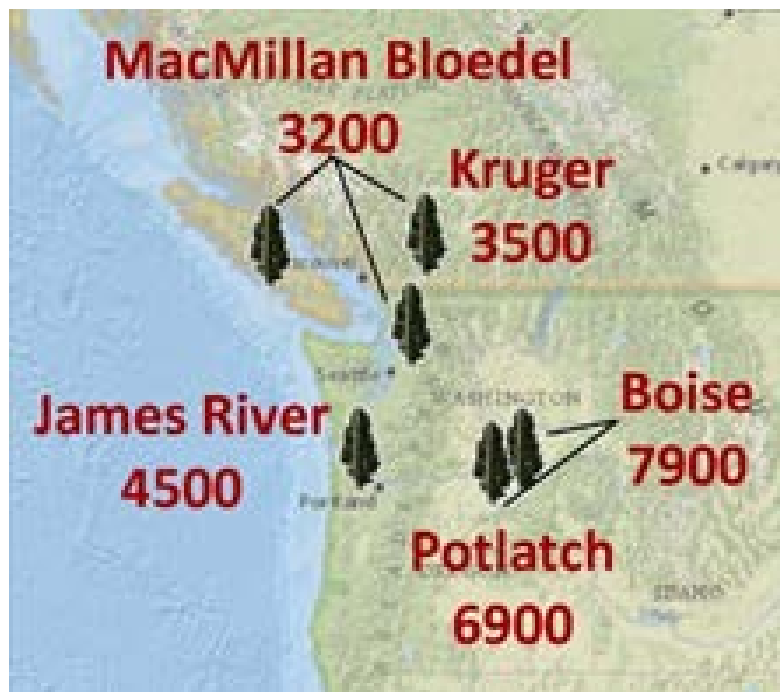
Poplar as a Resource

- **Forestry**: High yields on short rotations.
- **Wood structure**: Diffuse porous structure, short collapsible fibers, low specific gravity, high moisture content.
- **Appearance**: Straight grain, uniform texture, white to light yellow sapwood.
- **Chemistry**: High polysaccharide, low lignin constitution.





Priaulx, A. W. 1952. Oregon's planted cottonwoods. *American Forests*



Hectares of hybrid poplar plantations established by Pacific Northwest pulp and paper industry 1980-1995



1997 - Boise Cascade Wallula, Washington Pulp and Paper Mill and OP-367 Poplar Plantation



***P. ×generosa* '11-11' on the
lower Columbia River
floodplain**



***P. ×canadensis* 'OP-367' in
the mid Columbia River
basin**



Changing Conditions

- Macmillan Bloedel spins-off plantations in 1998.
- James River corporate sale leads to divestiture of the Clatskanie tree farm in 2000.
- Boise Cascade sells to private investment firm in 2003.
- Potlatch Corporation converts to a REIT in 2007.
- Kruger Products sells off Fraser Valley lands in 2013.



Hybrid Poplar Management



P. ×generosa
'20-88-183'



**Pulpwood: 1,536 TPHa &
8 Year Rotations**

**Saw logs: 741 TPHa &
15 Year Rotations**



Hybrid Poplar Markets



Sawn Lumber



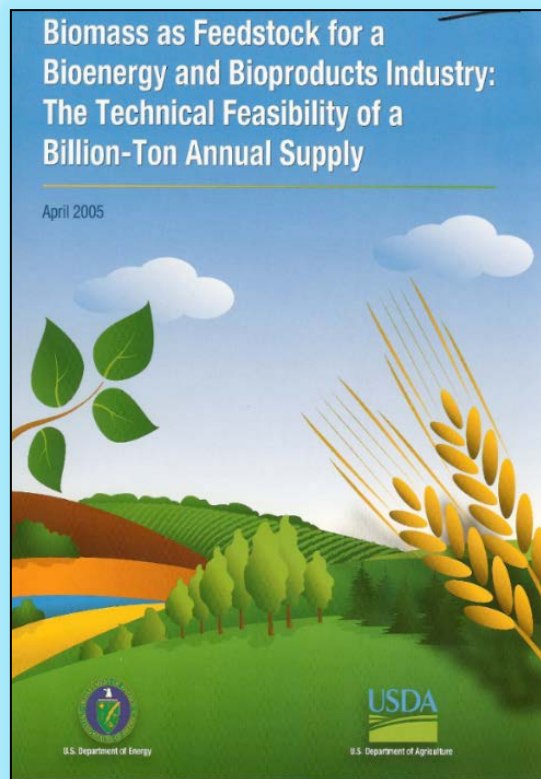
Veneer Sheets



Pulp Chips



Poplar and Renewable Energy: The Billion Ton Study



One billion tons of biomass to annually replace 30% of current petroleum consumption.

343 million dry metric tons of biomass from perennial energy crops of which hybrid poplar is a leading crop candidate.



Poplar Bioenergy: Biomass Production System



**3,588 TPHa & 3 year
cutting cycles**



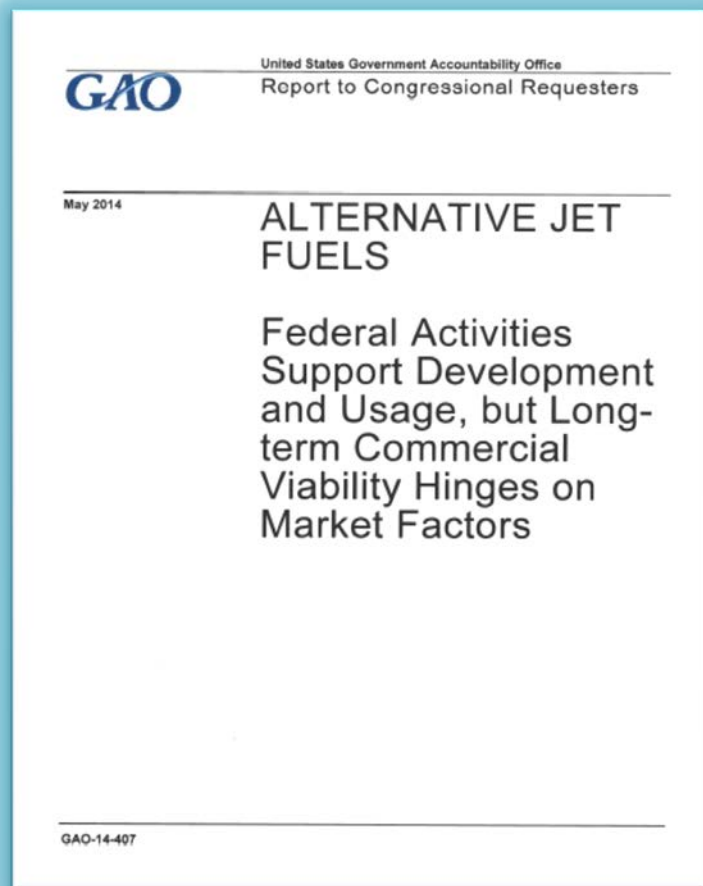
Single-pass harvester



**Coppice
regeneration**



Advanced **Hardwood Biofuels** Northwest





Poplar and Future Markets

