



Ecological values, management, and marketing Symposium highlights red alder

by Jennifer Turner, Ecosystem Productivity Extensionist

A recent two-day conference entitled "International Symposium on Red Alder: A State of Knowledge," held at the University of Washington in Seattle, provided a well-rounded series of presentations relating to the ecological values, management strategies, and market opportunities associated with red alder.

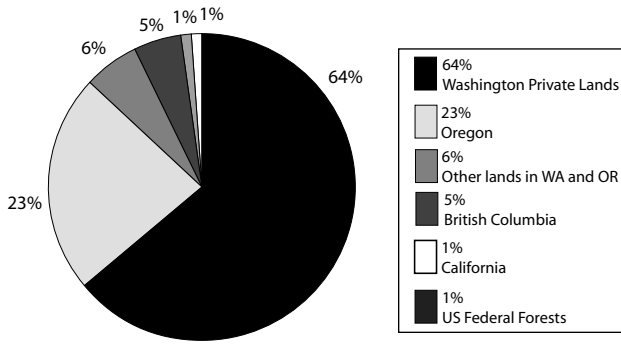


Figure 1 Annual harvest of red alder. Source: US Forest Service Inventory and Analysis, B.C. Ministry of Forests, 1995-2000.

Red alder has been an important commercial species in the Pacific Northwest for many years. Although it was widely considered to be an undesirable species in the first two decades of the twentieth century, there has been a gradual but steady change in this perception as we have learned more about the biology and market potential of this hardwood species.

The economic value of alder became apparent in the 1980s, when the value of alder logs increased such that their return on investment was equal to, or at times higher than, Douglas-fir logs. Current major lumber and log markets for red alder are located in Asia, predominantly in China and Hong Kong.

As can be seen in Figure 1, most of the red alder harvest is occurring on private lands in Washington and Oregon. Red alder harvest in British Columbia accounts for approximately 5% of the total harvest in the Pacific Northwest, yet estimates from inventories conducted between 1995 and 2000 indicate the volume of red alder growing in British Columbia is only slightly below that found in Washington, and significantly higher than that found in Oregon.

A good review of important biological facts regarding red alder biology was also provided at the symposium, including the following:

- range within the Pacific Northwest, from coastal southeast Alaska to southern California
- nitrogen fixation ability
- role as a pioneer species
- establishment on disturbed sites
- rapid early growth rate
- preference for moist, well drained soils
- common co-existence with Douglas-fir

Some other noteworthy ecological characteristics of this species presented at the conference included its potential sensitivity to abiotic factors such as sunscald, frost, drought, wet soils, ice/snow damage; and to biotic factors such as defoliators, Nectaria cankers, alder bark beetles, deer, elk, meadow mice, voles, and beaver. The food and cover value of red alder to wildlife species such as black-tailed deer and beaver was also highlighted. Red alder's immunity to root rot was stressed, as was the importance of the red alder component of many riparian ecosystems, due in part to valuable direct (leaf litter) and indirect (invertebrates that feed on red alder foliage) contributions of nutrient inputs into the stream.

Some of the other main points concerning red alder ecology and management that were presented at the symposium were:

- There is a highly significant relationship between red alder canopy closure and the intensity of spruce weevil damage: a target threshold of 88% red alder canopy closure should best balance the positive effects of the red alder canopy in reducing weevil attack with the negative effects of whiplash damage to sitka spruce leaders.
- Douglas-fir plantations, following establishment and harvest of a pure red alder plantation, have been shown to increase volume yields by as much as 500 ft³/acre (35 m³/ha).
- The total area of red alder patches seems to be more important to patch-dependent small mammals and amphibians than does patch configuration.

More information

Presenter discussions and Power Point presentations are available on-line at www.ruraltech.org/video/2005/alder_symposium/. A DVD-ROM can also be purchased through the Rural Technology Initiative for \$10.00. Email rta@u.washington.edu for more information.

In addition, a red alder stand establishment decision aid has been drafted in a collaborative effort by FORREX and the B.C. Ministry of Forests and Range. This extension note will be published in FORREX's *BC Journal of Ecosystems and Management*. Funding for the development and publication of this decision aid was provided by the Forest Investment Account, Forest Science Program.

Symposium funders

- B.C. Ministry of Forests
- CarlWood Lumber
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