

Reducing Hazardous Fuels on Woodland Properties:

PRUNING

J. Holmberg and M. Bennett

Oregon State UNIVERSITY **OSU** College of Forestry

Introduction



Figure 1. Pruned Ponderosa pine.

Pruning is the removal of the lower branches of trees (*figure 1*). Increasing distance between the ground and lowest tree branches can reduce the likelihood of a surface fire using the branches as a ladder to move fire into tree crowns. A crown fire is more difficult to control and can spread much more rapidly than a surface fire under certain weather conditions.

Pruning is a particularly effective fuel reduction technique when combined with other forms of treatment such as thinning. Dead and live branches are removed with a hand-held pruning saw or loppers. A pole saw will comfortably allow removal of branches to a height of 10 feet (*figure 2*). Pruning can be done on sapling sized and larger trees. To

maintain tree vigor, pruning should remove no more than 50 percent of the live crown.

Pruning adds fuel to the forest floor. The branches can be chipped and scattered or piled and burned to reduce this added fuel (*figure 3*). Burn piles should be located in openings away from trees to avoid scorching the crowns.



Figure 2. Pruning Douglas-fir with a pole saw.



Figure 3. Pruned pine stand with piled branches.

Commercial pruning costs range from \$50 to \$250 per acre depending on pruning height and number of trees per acre to be pruned. Pruning is particularly cost-effective around structures.

Guidelines

- To remove ladder fuels, prune lower limbs up to 8'-10'
- Avoid pruning more than 50% of the live crown at any one time
- Use a sharp tool and make clean cuts
- Use proper pruning techniques – avoid flush cuts and “coat hangers”
- In conifers, avoid pruning in spring and early summer
- In hardwoods, prune during the dormant season
- Don't paint pruning wounds with dressing – it's not effective and may seal in decay organisms
- Dispose of pruning slash

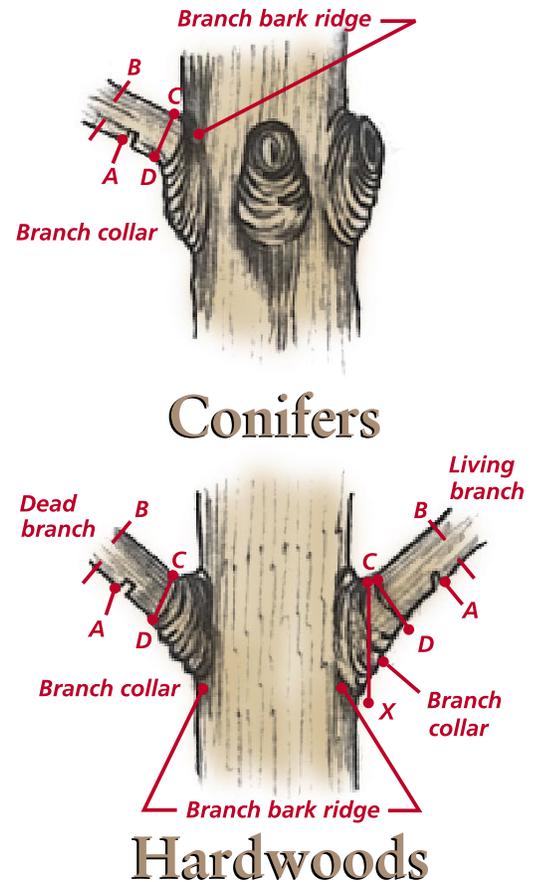


Figure 4. (Right) Pruning technique. (WSU Extension illustration) Prune flush with the branch collar. Avoid leaving stubs or pruning flush with the trunk, as these will prolong the healing process. Use a three-step process when pruning larger branches, to avoid tearing bark.

Table 1. Summary of Pruning Considerations

Objective/effectiveness	Remove ladder fuels/particularly effective around structures and in young stands where live branches are low.
Other treatment required?	Chipping or piling and burning of removed branches.
Near home?	Yes
Equipment needed	Loppers, pruning saw and/or pole saw
Suitable vegetation types	All
Topography limit	None
Riparian zone?	Suitable
Production potential	Depends upon pruning height and number of trees per acre.
Cost range	\$50 - \$250 per acre
Site disturbance	Minimal
Insects/disease	Best done October through February when pitch flow, which can attract insects, is minimal. Green branches should be piled and burned to reduce insect attraction.
Maintenance	Repeat every 3-5 years until branch height is above reach of pole saw.

The authors are, respectively, Joe Holmberg, College of Forestry, Oregon State University, Peavy Hall, Corvallis, OR 97333, and Max Bennett, Forestry Agent, Southern Oregon Research and Extension Center, 569 Hanley Road, Central Point, OR 97502