



# Planting and Establishing Forest Trees

Ralph Duddles and Stephen Fitzgerald

**M**anaging your backyard woodland may require planting tree seedlings from time to time. For example, seedlings typically are planted after a timber harvest if the harvest has reduced tree stocking below the minimum required by Oregon's Forest Practices Act (see Chapter 12).

Other reasons to plant seedlings are to:

- Add diversity to your woodland
- Fill in openings that never reforested on their own
- Replant areas after a wind storm or fire
- Improve habitat along streams, produce shade, or reduce erosion

Tree planting is a lot of work, so you want to do it right the first time. To be successful, you should follow certain steps. Attention to detail is important. This chapter provides an overview of the steps involved in planting tree seedlings on your woodland. More detailed information is in the sleeve at the end of the chapter.

## Steps to success in planting forest seedlings

Planting forest seedlings in your woodland is similar in many respects to planting ornamental trees (Chapter 6), except that forest seedlings are much smaller at planting and they don't receive as much care, irrigation, and fertilization after planting.

The first important step to planting forest seedlings is making sure they are genetically matched to your site and so are adapted to your local conditions. Purchase only seedlings grown from tree seed collected in your general area (called a *seed zone*) and elevation. Forest nurseries can help you identify your seed zone and select the right seedlings for it. (See *A List of Forest Seedling Nurseries* in the sleeve.)

Follow the planting directions in *Plant Your Seedlings Right* (sleeve). To improve seedling survival, plant seedlings in the shade of stumps and large logs. This is called *microsite planting* and is particularly important on hot, south-facing slopes.

---

After planting, seedlings may need additional protection from competing vegetation (shrubs and grasses) and from wildlife that might browse, clip, and kill seedlings.

Competing vegetation can kill young seedlings either by overtopping and shading them or by using up available moisture and nutrients in the soil. You can control vegetation by:

- Hand cutting and grubbing away the vegetation immediately surrounding the seedling
- Using plastic mulch mats to suppress the vegetation
- Using herbicides to kill the vegetation directly

Either clear or control vegetation in a 4-foot area around each seedling to improve your seedlings' chances of survival.

To protect seedlings from clipping and browsing, use plastic mesh tubing over seedlings that you've first secured to a stake, or spray liquid deer repellent directly on the seedling. *Successful Reforestation: An Overview* (sleeve) discusses all the steps in planting and establishing forest seedlings.

## Planting trees in riparian areas

Land and vegetation directly adjacent to a stream or other body of water is called a *riparian area* or *riparian zone*. Healthy riparian vegetation is important to reduce and trap sediment before it gets into the water, thus maintaining or improving water quality. Trees and shrubs along the water's edge also help cool stream water, which is better for

fish and other stream wildlife. If you have a stream, lake, or pond on your property, you might wish to do some riparian planting.

Fishery biologists and forest ecologists believe that having some conifers near streams is beneficial, particularly in western Oregon where hardwoods typically dominate the streamside vegetation. Needles that drop into the stream add to the food chain. Should the tree later fall into the stream, the log will provide cover and habitat for fish. And, conifer logs last longer in water than hardwood logs.

If your riparian area is dominated by hardwood trees or brush, you may want to add some conifers. Establishing riparian conifers often is more difficult than planting trees in upland areas because of lack of sunlight, intense competition from other plants, and animal damage. Planting trees in riparian zones in western Oregon requires good weed control, removing overstory hardwoods to ensure adequate light, and protecting seedlings from browsing or clipping. You may want to talk to a wildlife biologist or professional forester about your riparian planting before launching into it.

In central and eastern Oregon, riparian areas usually are dominated by conifers (pine, larch, and fir) with lesser amounts of hardwood shrubs and small trees. In the drier central and eastern forests, planting willows and alder can improve the diversity and health of the riparian zone. However, if cattle graze these areas, or if elk, deer, or beaver are present, the new plantings will require protection. Protect against cattle by fencing off the riparian area completely; protect against wildlife by putting wire cages around your hardwood plantings.

---

## Other resources

### ***In the sleeve***

*Plant Your Trees Right*, PNW 33. Frank Pitkin and Vernon Burlison. 1982. Moscow: University of Idaho Extension Forestry, College of Forestry and Wildlife Resources, 12 pp.

*List of Forest Seedling Nurseries*, Central Oregon Forest Resource Note. Stephen Fitzgerald. 2000. Redmond: Oregon State University Extension Service, Deschutes County, 4 pp.

*Successful Reforestation: An Overview*, EC 1498. Mary Atkinson and Stephen Fitzgerald. 1998. Corvallis: Oregon State University Extension Service, 8 pp.

### **Publications**

*The Care and Planting of Tree Seedlings on Your Woodland*, EC 1504. Mark Elefritz, Mary Atkinson, and Stephen Fitzgerald. 1998. Corvallis: Oregon State University Extension Service, 12 pp. \$2.00

*Selecting and Buying Quality Seedlings*, EC 1196. Chal Landgren and Ralph Duddles. 1999. Corvallis: Oregon State University Extension Service, 12 pp. \$2.00

*Site Preparation: An Introduction for the Woodland Owner*, EC 1188. Stephen Fitzgerald. 1998. Corvallis: Oregon State University Extension Service, 12 pp. \$2.50

*Life on the Edge: Restoring Riparian Function*, EM 8738. Derek Godwin. 2000. Corvallis: Oregon State University Extension Service, 8 pp. \$1.50. (See also the video, following.)

OSU Extension publications and videos are available from:

Publication Orders, Extension & Station Communications, Oregon State University, 422 Kerr Administration, Corvallis, OR 97331-2119. Fax 541-737-0817. E-mail: [puborders@orst.edu](mailto:puborders@orst.edu)

### **Videos**

*Successful Tree Planting*. Paul Oester. 1996. Oregon State University Extension Service, 21 minutes. Available on loan, at no charge, from most OSU Extension offices, including in Union County, 10507 N. McAlister Road, LaGrande, OR 97850; tel. 541-963-1010.

*Life on the Edge: Improving Riparian Function*, VTP 033. Derek Godwin. 1999. Corvallis: Oregon State University Extension Service, 12 minutes. \$19.95. Includes a 20-page study guide. Available from OSU Extension & Station Communications (address above).

### **Internet**

The OSU Extension & Station Communications site has excellent information on planting and caring for forest seedlings.

[eesc.orst.edu](http://eesc.orst.edu)

Click on "Publications and Videos," then on "Forestry and wood processing," and then on "Reforestation."

