

RED OAK

(*Quercus rubra* var 'Borealis')



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Of all the tree species present on rights-of-way in the United States, the oaks are the most prevalent. The total number of species is estimated at 300 or more, not including known hybrid forms which would increase the figure considerably.

Generally speaking, the oak species found in the United States can be divided into two groups or subgenera—red (*Erythrobalanus*) and white (*Leucobalanus*). The easiest way to tell the two groups apart is by the presence or absence of spines on the lobes of the leaves. The red oak group species almost always have bristle-tipped lobes. Leaf lobes of the white oak group are usually smooth and rounded. The species found in the red oak group are often the more difficult to control chemically. The red oak is a typical example of this group.

The leaves of red oak are alternate, simple, 5 to 9 inches long, 4 to 6 inches wide. They have 7 to 9 often-toothed lobes with sinuses extending halfway to the midrib. The mature leaves are firm, dull green, with yellowish to reddish midrib above, and are pale with a yellowish midrib below.

The flowers appear in May when the leaves are about half developed. These produce acorns $\frac{3}{4}$ to 1 inch across, with a broad, shallow cup covering only the base of the nut.

The features which distinguish red oak from its hairier relative, black oak (*Quercus velutina*), are the absence of pubescence on the buds, larger acorns with broad, shallow cups that cover only the base of the

Whether a plant species is desirable or undesirable often depends on the situation in which it occurs. This is true of all the trees to be discussed in this series of articles on identification. For example, maple (*Acer rubrum*) is a useful ornamental in landscape plantings because of its early red flowers, pleasing growth habit, and spectacular autumn foliage coloring. It is a nuisance on the right-of-way because of its resistance to chemical treatment. Similar comments could be made about the other species to be described. They have ornamental, and economic value, but not on a utility right-of-way which must be kept clear of tall vegetation. Strong resistance to treatment makes it especially important that a few "problem" species be clearly recognized when they are encountered in clearance work. Otherwise there may be needless disappointment, and waste of time and material through inappropriate treatment. J. H. Kirch.

fruit, and leaf uniformity. Black oak buds are covered with grey woolly hair. The fringed cups are nearly half as long as the rusty-haired acorns. Black oak leaves are somewhat glossier than those of red oak, and on the underside they have tufts of rusty hairs in the axils of the vein and midrib. Black oak leaf sinus depth and lobe tooting varies considerably from one adult tree to another. The bright orange inner bark is a consistent characteristic, however.

Scarlet (*Q. coccinea*) and pin oak (*Q. palustris*) resemble red oak, but their leaves are smaller and more deeply lobed. Their acorns are also smaller. Pale wool covers scarlet oak buds from middle to apex, but pin oak buds, like red oak ones, are smooth. Pin oaks often have many short, stiff lateral branches which give it the name and drooping dead branches below the crown.

Red oak and other members of this group usually require more than one chemical spray for complete control. The recommendation is an initial foliar treatment with 2 pounds each of 2,4-D and 2,4,5-T per 100 gallons of spray, followed by a summer or winter basal spray two years later, using 6 pounds of each chemical per 100 gallons of oil.

Ammonium sulfamate and picloram are used as a foliage spray at 50 to 75 pounds and 1 to 2 pounds per 100 gallons of water, respectively. Follow-up basal sprays of 2,4-D and 2,4,5-T are required for complete kill.