

PINUS STROBUS, L.

White Pine. Weymouth Pine. Northern Pine.

Size.—150 ft. by 3 to 5 ft.

Growth.—Rapid and long sustained up to 300 years. Minnesota studies of 8764 trees showed growths of 10 inches in 87 years and 20 inches in 176 years. Life, 300 to 400 years.

Root System.—Heart.

Crown.—Moderately spreading.

Tolerance.—Excels all other pines. After 50 years the crown demands full light. Clears its branches slowly.

Wood.—Very light, soft, and easily worked; not strong; fairly durable; 24 pounds.

Reproduction.—Seed production moderately prolific; seed years every 5 to 7 years after the 30th. Flowers in June; cones mature and seeds fall during first part of September of the second season. 1 bushel of cones yields $\frac{1}{2}$ pound of seed; 1 cone averages 32 seeds; 1 pound averages 36,000 seeds. Seed light; large wing. Germination percent 65 to 85; remains viable up to 5 years. Seedling fairly frost hardy; liable to damping off.

Range.—Medium in extent. Eastern Canada, chiefly south of the height of land, the northern states and south along the Appalachians, reaching altitudes up to 2000 feet. It finds its optimum in the lake states and Ontario.

Soil.—Ranges from dry sands to moist river bottoms. More exacting as to soil moisture than any other of our pines.

Association.—Occurs singly in mixture with hardwoods; occasionally in pure stands or mixed with red pine on the sandier soils.

General.—In Canada ranks second after spruce, forming 21% of the total cut of 1912. With average mill value of \$20.98 it is the highest priced of our conifers. The estimated total stumpage in America is 100 billion feet board measure; in Ontario 12 billion feet; in Quebec 8 billion. Ontario supplies 82% of the Canadian cut of 0.9 billion feet.

In the United States, white and red pine together are estimated at 75 billion feet board measure, or 3% of the total stumpage. In the 1910 lumber cut it stood fourth with about 8% of the total.

PINUS MONTICOLA, Dougl.

Western White Pine.

Size.—In its optimum it averages from 100 to 130 feet in height and from 20 to 30 inches in diameter.

Growth.—It is in general a slow growing tree during youth, of rapid increase in height growth from 10th to 40th year, and in diameter