

Chapter 1

Red and Silver Maples

Resource Availability, Utilization, and Costs

Henry Spelter

Economist, USDA Forest Products Laboratory

Red maple (*Acer rubrum*) is a medium-sized tree 15 to 20 meters (50 to 65 feet) high and 30 to 60 centimeters (12 to 24 inches) in diameter with a generally fairly clear trunk. This species and silver maple (*Acer saccharinum*) are often called "soft maples" to distinguish them from the higher density sugar and black maples that are commonly referred to as "hard maples". Other soft maples are boxelder (*Acer negundo*) and big leaf maple (*Acer macrophyllum*), but they are not commonly found as commercial items in the Northeast and Lake States. Red maple is characteristic of swampy sites, but it also thrives on drier locations. In the Northeast it is found commonly with white pine and northern hardwoods on moderately moist, sandy loam soils. As a consequence, this species is one of the most abundant and widespread trees of eastern North America. Its rapid growth leads to maturity within about 80 years.

Silver maple's range largely overlaps that of red maple. It is also a medium-sized tree, 15 to 25 meters (50 to 80 feet) high and 60 to 90 centimeters (15 to 35 inches) in diameter, but often with a short bole that divides near the ground into several upright branches. This tree is more restricted in its sites than red maple with a strong preference for those that are wet. Silver maple is a fast-growing tree and reaches maturity within about 125 years.

While soft maples are found extensively throughout the eastern United States, their highest concentration is along the Appalachian chain and its extensions into New England (Fig. 1.1). Volume densities in excess of 6 m³ per hectare (85 ft²/acre) are common in New England, New York, Pennsylvania

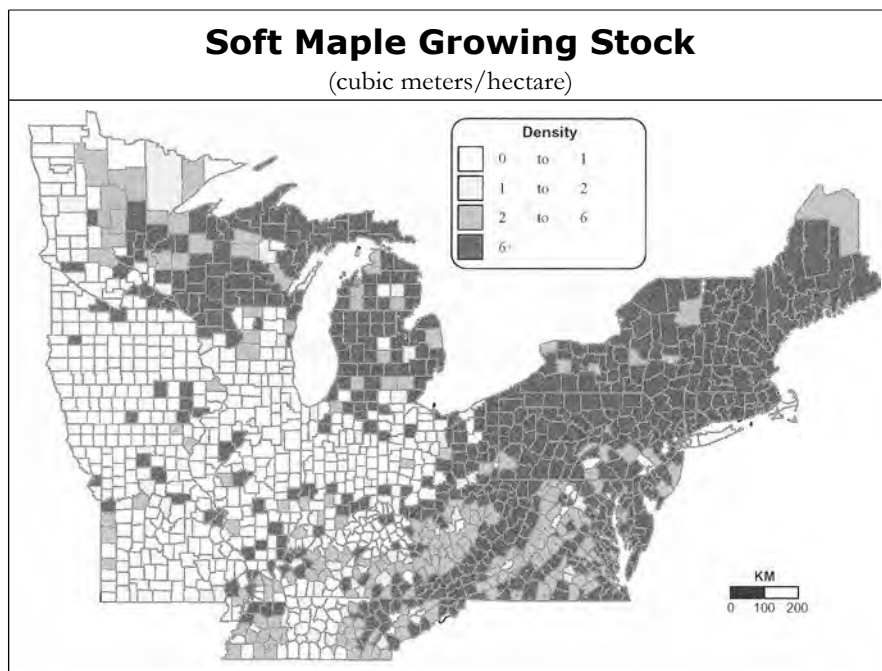


Figure 1.1. — Density of soft maple in Northeast region of the United States. (Map from Forest Inventory and Analysis website: www.ncrs.fs.fed.us/4801/fiadb/index.htm.)

and in the counties along the ridge of the Appalachian Mountains stretching down into the southeast. Substantial concentrations are also found in northern Michigan, Wisconsin, and Minnesota. In the Central Plains the incidence of soft maples is more scattered and limited to moister river bottoms and swamps. As a commercial opportunity, therefore, soft maples are largely confined to the Northeast, the upper Lake States, and the Appalachian Ridge.

The net volume of soft maple growing stock is estimated at $9.5 \text{ by } 10^8 \text{ m}^3$ ($333 \text{ by } 10^8 \text{ ft}^3$). Since all of the volume is located in the eastern United States, most of it is on private timberlands.

Soft maples are regarded as an underutilized species. In terms of annual lumber production, the volume has been less than a million m^3 per year and averaged 0.7 million m^3 over the period 1996-2001, or about 1.4 million m^3 of roundwood equivalent (Table 1.1). This is less than a fraction of 1 percent of the inventory. Total amounts removed are estimated at 6.7 million m^3 (240 million ft^3). This includes volumes for veneer, pulp, firewood, and miscella-

neous removals and represents 41 percent of the estimated annual growth of 16.5 million m³ (580 million ft³).

Red maples are intermediate in cost. In Michigan in recent years, they have been sold on the stump for about \$150/MBF. This is about half the value of red oaks, but two to three times the value of aspen sawlogs (Table 1.2).

Table 1.1. — Annual red maple lumber production.

Year	mmbf	million m ³
1996	223	0.52
1997	256	0.60
1998	282	0.67
1999	348	0.82
2000	354	0.84
2001	337	0.79
2002	340	0.80
2003	341	0.80

mmbf is million board feet

Table 1.2. — Sawtimber prices in Michigan.

Year	Aspen	Red maple	Red oak
- - (\$IMBF)			
1996	80	155	263
1997	60	161	213
1998	72	137	252
1999	69	159	318
2000	84	150	344
2001	59	158	368

0.0236 m³ = board feet (nominal) 2.36 m³

Undervalued Hardwoods

for Engineered Materials and Components

Robert J. Ross

Project Leader

USDA Forest Products Laboratory

Madison, WI

John R. Erickson

Director (retired)

USDA Forest Products Laboratory

Madison, WI



Forest Products Society
Madison, WI



Northern Initiatives
Marquette, MI

Financial support for the development of this publication was provided to Northern Initiatives through the USDA Forest Service Northeastern Area's Rural Development Through Forestry Program.

ISBN 1-892529-32-7

Publication No. 7234

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the written prior permission of the copyright owner.

Printed in the United States of America.

0510500

Ross, R.J. and J.R. Erickson. 2005. Undervalued Hardwoods for Engineered Materials and Components. Forest Products Society, Madison, WI. 132 pp.