



# NORTHERN HARDWOOD NOTES

## What Are Northern Hardwoods?

The term “northern hardwoods” was used in the early 1900’s to separate the hardwoods of the northern region from those growing in the South. With continued usage in the North the term now represents all dense hardwood species both in the Lake States and Northeast. Unfortunately, this has complicated describing and applying silvicultural practices for good northern hardwood management.

Northern hardwoods are very diverse in species composition and stand characteristics. The single characteristic common to all upland “northern hardwood” types is the successional trend toward and predominance of sugar maple.

In the Lake States the SAF recognizes seven (formerly five) major forest cover types as part of the northern hardwood group:

SAF Type 25-Sugar Maple-Beech-  
Yellow Birch

SAF Type 26-Sugar Maple-Basswood

SAF Type 27-Sugar Maple

SAF Type 60-Beech-Sugar Maple

SAF Type 24-Hemlock-  
Yellow Birch

SAF Type 23-Hemlock

SAF Type 108-Red Maple

Types 23 and 24 are usually included because sugar maple is often an important component and/or they occur in association with other predominantly sugar maple types. Type 108 is newly recognized and always intermingles with sugar maple throughout the region. Numerous sub-associations, such as white ash-basswood and sugar maple-basswood-white ash, do occur but are considered variants or transitional types. Type 60 rarely occurs in the Lake States.



A hemlock-yellow birch stand,  
SAF Type 24.

A mature sugar maple stand.  
SAF Type 27.



Another hardwood type, SAF 39-Black ash-American elm-red maple, should also be mentioned. Dutch elm disease (see Note 7.03) has reduced the elms in many stands of this lowland hardwood type, resulting in a stand composed mostly of black ash and red maple.

A lowland hardwood forest  
dominated by black ash, SAF  
Type 39.



Although many species may occur in northern hardwoods, the principal species nearly always include sugar maple, white ash, yellow birch, basswood, red maple, American elm, beech, and eastern hemlock. Occasionally aspen, paper birch, northern red oak, rock elm, ironwood, black cherry, and balsam fir are important. The northern hardwoods are thus a complex association of cover types and cannot be managed as a single entity like other recognized types.

There are also regional differences in the northern hardwoods relating to species composition, climate, and soil. To best understand and manage the Lake States "northern hardwoods" we should avoid using this all-inclusive term and recognize instead the particular forest cover type on the area in question. How we manage depends greatly on which of the cover types we have. They determine such things as:

1. Whether to use even-age or all-age practices.
2. The optimum residual stocking to work toward.
3. Whether site preparation will be needed to establish some species.
4. What site index to consider (it can vary 5 to 15 feet among species on the same soil).
5. What type of cutting to use to improve bole quality and increase the rate of growth.

These questions will be addressed in the notes to follow.

## Reference

Eyre, F. H. (editor). Forest cover types of the United States and Canada. Society of American Foresters; 1980. 148 p.

*Richard M. Godman*