

COMPARING SOME KEY ATTRIBUTES OF SUGAR MAPLE (*Acer Saccharum* Marsh) and BLACK MAPLE (*Acer Nigrum* Michx)

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Sugar maple and black maple are often found growing in association in southern, south central and eastern Ontario. Black maple occurs over a much more restricted natural geographic range and is usually far less abundant than sugar maple. Black maple is absent or extremely scarce in central and northern Ontario. Many

landowners and even some foresters do not recognize the rather subtle distinctions between these two species. Many maple producers are uncertain whether or not black maple is growing in association with sugar maple in their sugar bushes. This is not surprising, since the two species are closely related and intermediate forms are common.

The purpose of this article is to shed some light on important and often observed differences between the two species and to discuss the comparative sweetness of their sap.

TREE IDENTIFICATION

The Leaves: The leaves of sugar maple normally have 5 very distinct taper pointed lobes and have a smooth under-surface without hairs



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along the veins. The leaves turn yellow to brilliant orange and bright red in autumn.

The leaves of black maple usually have 3 distinct lobes with dense, brownish velvety hairs on the under-surface. The leaves of black maple turn yellow to brownish yellow in autumn, seldom red like sugar maple.

The Bark: The mature bark of sugar maple has vertical ridges curled along one side and is gray or dark gray in colour.

The mature bark of black maple has firm irregular ridges and can be quite scaly. It tends to be somewhat darker in colour than the bark of sugar maple, dark gray bordering on black.

Site Association: Field observations indicate that black maple tends to be associated with somewhat moister sites within a woodland area compared to sugar maple. It is a good idea to consider this when you are attempting to determine if both species reside in your woodlot.

Natural Hybridization: Since sugar maple and black maple are closely related species, they hybridize freely in nature. The hybrid form tends to exhibit characteristics of both species.

SAP SWEETNESS

Both sugar maple and black maple are prized for the excellent sap quality which they yield.

Many maple producers believe that the sap of black maple is sweeter than the sap of sugar maple but is this really the case? There does not appear to be any scientific evidence to substantiate this claim.

Sap obtained from sugar bushes in eastern Ontario usually has a sap sweetness in the range of 2 to 3%.

Very occasionally an average sap sweetness up to 4% is achieved, but it is thought that this higher level relates primarily to the history of stand management.

Over the past several years, sweet tree testing of both sugar maple and black maple has been carried out in eastern Ontario. Vigorous trees with well-developed crowns of both species often exhibited readings in the range of from 3 to 6 percent. More intensive testing in the future would be needed to fully validate these findings.

SAP VOLUME YIELD

It is unknown whether or not there is a difference in sap volume production for the two species.

POPULAR TREE IDENTIFICATION REFERENCE

Similarities and differences between sugar maple and black maple are well described in the popular book entitled "Trees of Canada" by John Laird Farrar. The book sells for about \$45.00 and makes an excellent addition to the family reference library.

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