



MAKING MAPLE SYRUP IN MANITOBA

Observations from Manitoba Natural Resources' maple syrup trials

By Frank McKinney, Woodlot Extension Officer

Making maple syrup from Manitoba maple trees is not new, First Nations people are believed to have made it as long ago as the late 1700s.

Today the greatest source of Manitoba maple trees in the province is on private lands and First Nations lands. The trees grow naturally in Manitoba, generally along streams and creek beds. Manitoba maple is common on farmlands as it has been planted extensively for shelterbelts and field windbreaks.

Despite many years of production in the province, there is very little technical information on the commercial viability of Manitoba maple syrup. To determine the commercial potential of Manitoba maple syrup a two year study was conducted in agro-Manitoba by Manitoba Natural Resources.

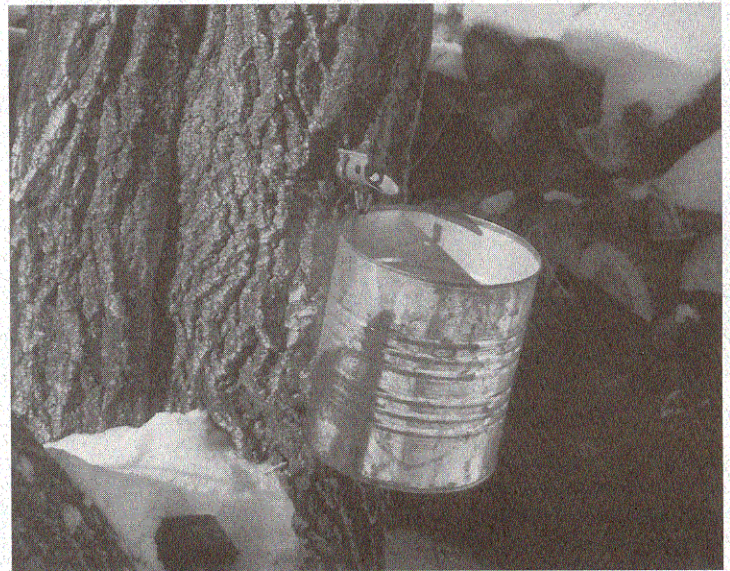
With the kind permission of the Trappist Fathers a study site was established on their property near the town of Holland in 1992. Sixty trees were randomly selected from three distinct topographical areas: a low lying site along a creek bed (total stand area 35.8 hectares), an upland site surrounded by farm fields (1.7 hectares), and a site that is a field shelterbelt (3.0 hectares).

The following year, an additional study area was chosen for data collection at Libau. Two sites were selected, again with slightly different topographical features. One site was a (managed) woodlot site, the other contained wild growing trees around a farmstead. Fifty trees and 10 trees were randomly selected from the first and second sites respectively.

During the first year of collection only six days of data were obtained at Holland. The second year nine days of data were collected at Holland and 18 days of data were collected at Libau.

During all collection days, daily sap volume flows and brix readings were taken. Noticeable variances in readings were recorded due to precipitation entering the uncovered buckets, which later resulted in higher concentrations of sugar due to evaporation. Readings were taken directly from the spile on days of sap flow only.

While the sampling days may be insufficient to make a definitive statement about the viability of Manitoba maple as a commercial product, the results are supportive. At the Holland site, brix readings ranged from a low of .42 to 3.90 (2.0+ is considered commercially viable). It was noted that the



same trees recorded brix readings of less than 2.0 both years. Readings at the Libau site ranged from 1.0 to 4.5. While only ten of the total 120 trees (8.3%) sampled were recorded at less than 2.0 brix this does indicate some stand manipulation may be required. The averaged reading at the Holland site was 2.47. If the nine trees that averaged less than 2.0 were dropped, the average increases to 2.68 brix. At the Libau site, only one tree averaged less than 2.0 and is therefore considered insignificant.

Sap volumes taken at both sites provided a strong indication of viability, but the number of readings were again insufficient to provide definitive information. Daily sap volumes varied from a low of .16 litres to a high of 8.54 litres over the six day period. Trees in Holland that had poor flow in year one, also were poor the second year. No second year data is available for the Libau site.

The data from this preliminary study suggest that Manitoba maple trees will produce enough sap of sufficient sugar content to be commercially viable for small scale operations. However, management trials and preplanning are critical as extraction may not be as easy as in the managed stands in eastern Canada.

