

**"SALTY" SYRUP FROM ROADSIDE SUGAR MAPLES IN DECLINE**

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where deicing salt is more heavily used are in even greater stress. Also sand, used in many areas, may be heavily mixed with salt.

We recommend that maple syrup producers who collect sap from road-side trees do not mix it with sap from a sugarbush to avoid overall syrup off-flavor. We also suggest that, when possible, sand without salt be used on rural roads to maintain our safety as well as tree health.

<sup>1</sup>Support for this part of the project has been provided by the Vt. Agr. Exp. Sta. Hatch funds (1984-1987); and, in part, by the NAMSC (1985), Florence and Bob Lamb (1985), Chittenden County (VT) Maple Sugarmakers (1985), Rut-land County (VT) Maple Sugarmakers (1985) and the Internat'l Soc. Arboriculture (1984). We gratefully acknowledge their support.

<sup>2</sup>Support for this part of the project has been provided, In part, by the VT Dept. Agr. (1985) and the Chittenden County (VT) Maple Sugarmakers (1986, 1987). We gratefully acknowledge their support.

## REFERENCES

1. Morselli, M.F., and M.L. Whalen. 1986. Quality of syrup produced from sap collected from declined maples. *Maple Syrup Dig.* 26(41):16-17.
  2. Whalen, M.L., and M.F. Morselli. 1987. Methodology for sodium and chloride analysis for maple sap and syrup. (Abstr. 248), pp. 40 In *Abstracts of the 101st Internat'l Ann. Mtg. AOAC.* Sept. 14-17, 1987, San Francisco.
  3. Whalen, M.L., W.G. King, and M.F. Morselli. 1986. Worksheet for evaluating maple tree decline. *Maple Research Methods No. 7*, Maple Research Laboratory, Dept. Botany, Univ. Vt., Burlington.
  4. Morselli, M.F., M.L. Whalen, and K.L. Baggett. 1985. Characteristics of maple syrup processed from bleach-treated sap. *J. Food Prot.* 48:204-206.
- Acknowledgements. We thank S. Cutting, W. Clark, G. Audette, H. Marckres and B. Martell for tasting the syrups, and L. McElvany and D. Ross for the chemical analyses and D. B. Howard for the statistical analysis.

Table 1. Sodium and chloride in syrup from aseptically collected sap of three different groups of sugar maples. Reported in parts per million (ppm).

Element	Healthy Sugarbush trees in trees	Roadside trees in decline	Sugarbush trees in decline
Sodium Analyze	9.0 (mean)	327.9	45.5
	1.0-44 (range)	35.0-750	1.3-230

Table 2. Sodium in sap aseptically collected from three different groups of maples, and in groundwater and soil around their roots. Reported in parts per million (ppm).

Population of sugar maples	Soil 1-3"/10-24"	Groundwater	Xylem sap
In decline roadside	63.1/50.2 (mean) 8/6 (number analyzed)	210 5	26.6 23
Healthy sugarbush	9.6 (mean) 5 (number analyzed)	1.8 10	0.05 15

Citation: M.F. Morselli, and M.L. Whalen. 1987. "Salty" syrup from roadside sugar maples in decline. *Maple Syrup Dig.* 27(4): 23-24.