



2009 Maple Syrup Business Planning Guide Vacuum Tubing System with Reverse Osmosis¹

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400 gallons syrup @ .400 gals per tap yield (1000 taps vacuum tubing system)

Receipts @ ½ \$45.00 retail ½ \$33.00 (3.00/lb bulk) \$15,600.00

<u>Expense</u>	<u>Cost/Gal.</u>	<u>Per Gal./Syrup</u>	<u>Per/Season</u>	<u>Your Cost</u>
Variable Cost				
² Fuel Cost	\$2.35/gal	\$2.35	\$940.00	
Fuel (diesel/gasoline)	\$2.50/gal	\$0.25	\$100.00	
Utilities		\$0.50	\$200.00	
³ Canning Supplies		\$3.10	\$1,241.00	
Repairs (includes tubing repair)		\$1.25	\$500.00	
Labor* (80 hrs. operate tubing system)	\$11.00/hr	\$2.20	\$880.00	
Marketing		\$0.37	\$150.00	
⁴ Interest		\$1.65	\$660.00	
Miscellaneous		\$0.25	\$100.00	
⁵ Reverse Osmosis (RO) operation & maintenance		\$2.12	\$850.00	
Total Variable Cost		\$14.04	\$5,621.00	
Fixed Costs				
⁶ Equipment Expense		\$16.12	\$4,840.00	
⁷ Operator Labor (Sugarhouse Mgt.)	\$15.00/hr	\$3.00	\$1,215.00	
Taxes				
⁸ Insurance (Product Liability)		\$0.50	\$200.00	
Land or tap rental				
Total Fixed Cost		\$19.62	\$6,255.00	
Total Expenses		\$33.66	\$11,876.00	
⁹Return above Total Cost			\$3,724.00	

10 Return above Variable Costs **\$9,979.00**

11 Return to Labor & Management **\$4,939.00**

*Neil K. Huyler; cost of Maple Sap Production for various size operations, USDA Res. Pap. NE-712

¹600 GPH RO concentrating 2% sap to 8% using the "Rule of 86", 11 gal. concentrate = 1 gal. of syrup.

²Two Fuel sources: Wood, 1 cord, will process approx. 84 Gallons of Syrup from 8% concentrate. The cost to produce 1 gallon of syrup with wood is \$2.35 per gallon when a full cord of wood sells for \$200.00 per cord (Ohio Cord selling in Fall 2009)

Fuel Oil costing \$2.35 in a 4x12 Evap. Rated at 140 GPH (8% sap) will burn 13gal. Oil/hr. (draw off =13.0)
The cost to produce 1 gallon of syrup is \$2.35 per gallon.

³Canning Supplies: 50% of the crop canned in equal volume amounts of gallon, half-gallon, quarts and pints.
Using 2009 case lot prices for plastic containers.

⁴ \$0.15/# based on Cornell University Maple Enterprise Business Summary

5 Reverse Osmosis Maintance Cost - Annual Maintenance Cost (Including supplies)	\$250.00
Annual Membrane Cleaning	\$250.00
Membrane Replacement Cost (over 10yrs)	\$150.00
Total	\$650.00

6 <u>Equipment</u>	<u>Total Cost</u>	<u>Life Expectancy</u>	<u>Seasonal</u>
Tubing (\$10.00/Tap \$2.00/Tap 5yrs)	\$10,000.00	10 yrs	\$1,000.00
Vacuum System (Pump Extractor)	\$6,000.00	10 yrs	\$600.00
Storage Tanks	\$4,500.00	20 yrs	\$225.00
Evaporator 4x12 (oil fired)	\$14,500.00	20 yrs	\$725.00
Building (20 yr.)	\$10,000.00	20 yrs	\$500.00
Filter press	\$2,000.00	20 yrs	\$100.00
Miscellaneous	\$1,400.00	10 yrs	\$140.00
RO 600GPH	\$14,500.00	10 yrs	\$1,450.00
Total	\$62,900.00		\$4,740.00

7 Operator Labor with RO (Sugarhouse Mgt. \$15.00/hour)*

Processing	31 hrs*	\$465.00
Setup & Cleanup	20 hrs**	\$300.00
Canning	20 hrs**	\$300.00
RO Maintenance	10 hrs**	\$150.00
Total Labor	70 hrs	\$1,215.00

* Based on production from a 4x12 Evaporator @ 140 gallons per hour + RO

** Based on the results of an independent poll of local maple producers.

8 Product liability insurance, on maple products sold, is a separate policy from the standard farm-owners policy. If the maple operation is run as a separate business (LLC, Corp, Partnership) a separate policy on the maple enterprise (including product liability) is recommended along with the standard farm-owners policy.

9 Receipts minus Total Cost

10 Receipts minus Variable Cost

11 Return to labor and management is the revenue less total expenses except operator labor and management. It is a measure of the returns to the operator's labor and management.

Resources:

North American Maple Syrup 2nd edition OSU Extension/NAMSC Chapter 11 Economics of Maple Syrup Production, Mr. Dave Chapeskie Ontario Ministry of Agriculture & Dr. Melvin R. Koelling Prof. Emert. Michigan State University

Maple Syrup Costs, What Does it Really Cost to Produce That gallon of Maple Syrup, Glenn Rogers Regional Farm Business Management Specialist, University of Vermont