

Labor and Management for the Sap-Only Business Model

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Labor is a Key Input to Maple Enterprises

A large amount of labor time and diverse skillsets are needed to operate a maple business successfully. This holds true for all scales of maple activity considered for lifestyle, part-time small businesses, and larger commercial ventures.

Labor demands and workflow patterns are easily felt but sometimes difficult to predict or measure. Improved labor management planning and practices are very beneficial to owners, employees, and volunteers working to enhance business viability.

UVM Extension conducted a Maple Benchmark Program from 2013 – 2021 that monitored the labor requirements within active maple companies. Labor tracking documented the hours spent on year-round forest management, sap harvest, maple syrup processing, and business management. An economic analysis was conducted by calculating the opportunity cost of all volunteer or unpaid family labor that was contributed to the maple activity. Total labor cost (paid and unpaid combined) was the consistent top cost category over the multi-year study period.

Evaluating the cost of labor becomes challenging due to the mix of “paid” labor and the “non-cash” economic opportunity cost for unpaid labor. In cases where owner, families and volunteers do not require full compensation for their time the calculation of the opportunity cost is often perceived as an extra burden that hinders mathematical profitability or is not a relevant issue impacting the business.

In situations where unpaid labor is available and capable of meeting needs in terms of both time and quality of the work performed, it can be considered a benefit. However, managers should consider both short-term and long-term needs for business viability. The economic opportunity cost of unpaid owner labor is an important calculation to reconcile the reduction of time that would otherwise be available to earn cash income with other paid jobs or private enterprises. Unpaid labor is also a major consideration for the viability of any business that is preparing for an ownership transition. An aging owner that has less capacity to volunteer unpaid effort towards the

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maple enterprise requires either another individual or team with the capacity to contribute unpaid labor into the business or a shift of the business model in order to offer paid compensation.

Figure 1 provides a three-year average of total maple costs recorded for benchmark participants from 2019-2021. The combination of paid and value of unpaid labor totals 28% of total costs.

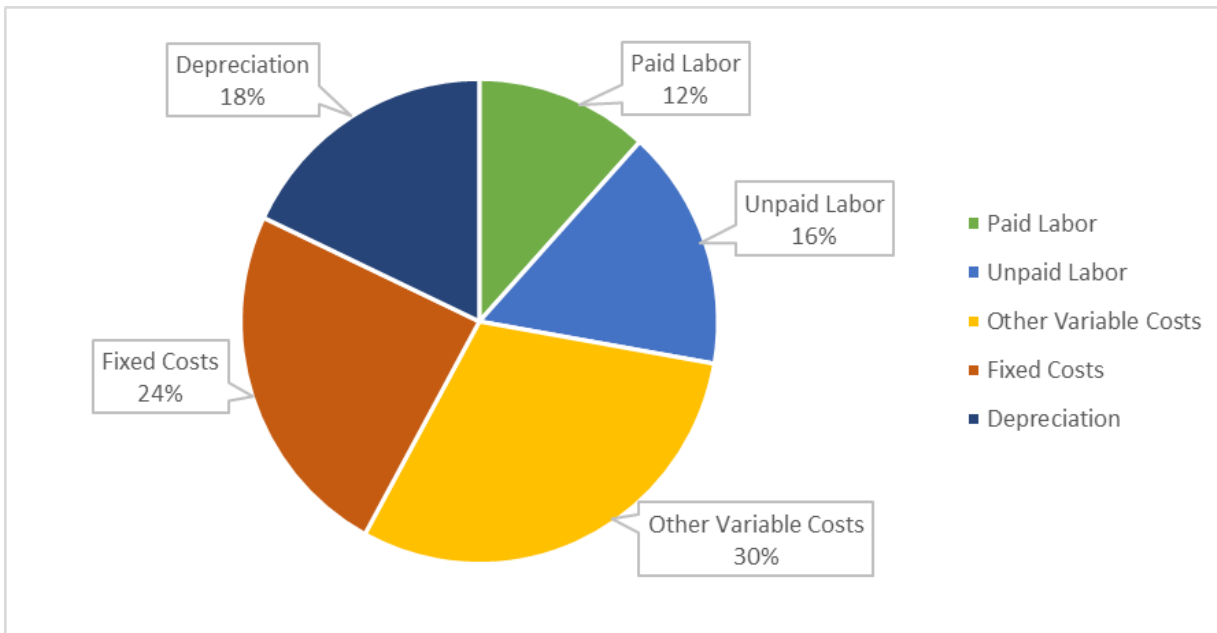


Figure 1: Percent of total costs for maple enterprises from 2019-2021

Labor Requirements for Sap-Only Enterprises

Limited research has been conducted to measure labor requirements for maple sap business operations. A sap-only business model does not require the portion of labor necessary to process sap into syrup and sell the syrup. While aspects of sap pumping and delivery could be significant, there is a general expectation that the sap only business model can require less overall labor compared with full cycle sap-to-syrup business model. The business models allows for a focus on improving the sugarbush asset, the operations of gathering sap, and developing an expertise in the woods. The sap-only enterprise is also expected to require less capital investment due to the absence of syrup processing equipment and buildings.

Labor tracking with active businesses during the UVM Maple Benchmark Program (2013-2021) isolated the hours of labor time spent on forest activity, sap collection and pipeline maintenance from other production activities to produce four sap business labor profiles in 2020. This information reflects established maple companies with several years of operating history at the present scale.

The total labor hours and the business tap count were combined to produce an annual hours-per-tap indicator. The labor input ranged from a low of 0.08 hours per tap to a high of 0.13 hours per tap for this small group of active businesses (Table 1). With limited research on this topic, these figures cannot be expected to represent the full range of labor needs. They do, however, provide an initial reference point until more studies can be completed. Table 2 below estimates a labor profile for a 5,000 tap sap business.

Table 1: Labor hours recorded for forest management, sap harvest and woods activities

	Tap Count	Annual Hours	Hours Per Tap
Profile #1	4,500	400	0.08
Profile #2	8,500	750	0.08
Profile #3	7,500	1,000	0.13
Profile #4	11,000	975	0.09

Table 2: Estimated labor profile and labor costs for a 5,000 tap sap business

	Tap Count	Hours Per Tap	Annual Hours	Value of Labor*
Scenario Sap Business	5,000	.10	500	\$12,500

* Paid labor estimated at \$25.00 per hour

The Sap Business Model

This section provides an overview of key activities to be managed and executed to establish and operate a maple sap business. Maple managers will make case-by-case decisions about using paid labor, unpaid owner labor or paid 3rd party providers to accomplish these objectives.

Description of Sap Business Start Up

Startup phase is the time spent planning, raising capital, investing and establishing an enterprise. The following list of activities and investments are important for the start-up of a sap-only enterprise.

- Business planning, forest assessments, and management plans
- Pre-installation forest management activities
- Permitting
- Road design and installation, landings, and other Improvements
- Utilities
- Machinery and equipment selection and installation
- Additional structures (pump buildings, storage sheds)

Description of Sap Business Operations

Operations are the day-to-day activities required to maintain and improve sap production and profitability. Maple sap flows on a limited number of days making it very important to be prepared. This includes redundancy in systems, spare capacity, and contingency plans that anticipate for disruption.

Major operational activities are listed below with the associated expense categories that track these activities on budgets and records.

- Business management (labor)
- Ongoing forestry management, forest pest scouting, crop tree release, carbon enhancements (contract labor, labor)
- Infrastructure maintenance; roads, water bars, stream crossings (contract labor, labor, materials)
- Tapping trees and cleaning up after the production Season (labor, supplies)
- Leak checking and tubing repairs (labor, supplies)
- Sap pumping and delivery (labor, fuel)
- Equipment maintenance (labor, contract labor, supplies, materials)

Services and Partners

Partners and networks are important resources then enable businesses to operate well. The list below documents key services and partners that maple managers commonly interact and coordinate with.

- Maple tubing installation professionals
- Equipment technicians
- Professional foresters
- Regulatory agencies
- Tax department
- Department of State or Commerce
- Department of Agriculture
- Department/Agency of Natural Resources or Environment
- Universities- Extension specialists
- Industry associations

An assessment of the internal personnel skills and experience is an important step in order to match the operational demands for the business with the appropriate workforce. In some cases, managers will collaborate with key partners to attain the knowledge needed for them to execute operational tasks within the business themselves. In other cases, the same managers will be using networks to identify advisers or to secure the direct services needed for the business to operate. Development of a staffing plan helps recognize the skills on hand and identify any gaps that could negatively impact business performance.

Labor is a major expense in operating a maple sap business that has significant impact on business performance. Planning for labor needs will benefit business at all scales and stages of development.

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