

COST ACCOUNTING METHODS OF A PRIVATE NURSERY

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First of all I should say that what I'm about to discuss is based only on what has been done, is being done or is planned at Western Maine Forest Nursery. From casual knowledge I would say that there are private nurseries both more and less sophisticated in development of their accounting systems.

To give you just the briefest background, our nursery was founded on two acres in 1923 by my partner Bob Eastman's uncle, Cliff Eastman, while he was still attending the University of Maine. It grew over the years and during the intervening period Bob's dad and my dad went to work for Cliff. Cliff was killed near the end of World War II, and in 1946 our fathers purchased the nursery from Cliff's widow. Growth continued to be steady with no radical changes from year to year. A cost accounting system was set up in 1946 which was oriented toward the financial management and cost control of general cost items such as shown in Figure 1. Also at that time a significant portion, perhaps one-third of our gross and three quarters of our management effort, were oriented toward consumer mail order sales.

Advertising	Loss on Bad Debts	Purchases-Trees etc.
Automobiles	Nursery	Refrig. Building
Contributions	Office	Rentals
Directors Fees	Packing & Shipping	Repairs-Bldgs
Freight	Payroll-Field	Repairs-Machinery
Greenhouse	Payroll-Greenhouse	Subscriptions & Dues
Heat & Lights	Payroll-Office	Taxes-Other
Insurance-Fire, etc.	Payroll-Officers	Taxes-Payroll
Insurance-Hospital	Payroll-Pension	Telephone
Interest Payable	Postage Meter	Travel
Legal & Professional	Purchases-Seed	Water

Figure 1

Vice President and Treasurer, Western Maine Forest Nursery Co.,
Fryeburg, Maine.

BAKER, L. G. WEEK ENDING 6/13/79

CODE	A	S	BU	Th	F	Sa	Su	M	T	W	HOURS
HW-T			438	8	8	-	-	4	6	8	34
FE-T22NP74									2		2
AN								(4)			
TOTAL REGULAR TIME				88	-	-	-	48	8		36
DATE 6/13/79											
APPROVED											

Figure 2

Transplants	T	C
Seedlings	S	C
Greenhouse	GH	PR
Ground Prep.	GP	PA
Cover Crop	CC	SE
Fumigation	FU	PR
Fertilize	FE	PR
Seeding	SE	SU
Insect Contr.	IC	SU
Disease Contr.	DC	VA
Weed Contr. Chem	WC	VA
Weed Contr. Mech	WM	SI
Weed Contr. Hand	WH	SI
Shading	SH	AE
Irrigation	IR	AE
Thinning	TH	AN
Transpl. (Dig)	TD	AN
Transpl. (Sort)	TS	AN
Transpl. (Trim)	TT	M
Transpl.	TP	M
Inventory	IN	M
Harvest-Mach	HM	M
Harvest-Hand	HH	M
Hauling	HA	M
Sorting (Who)	SW	M
Sorting (Ret)	SR	M
Packing (Who)	PW	M
Packing (Ret)	PR	M

Figure 3

In addition, inflation was not a significant item and year to year sales, production and costs did not vary radically. In effect, while cost control was important to keep prices down and profits at some reasonable level, product costing was not considered to be something that required a major expenditure of effort.

In very recent years there have been a number of changes. First, we analyzed cost and pricing of our consumer sales activities and learned that in effect we were trading dollars for dollars. Second, there has been an increasing demand for lining-out stock and a desire on our part to at least keep our percent market share and increase it if possible. This of course means increased production with the requirements for better cost control and cash flow management.

Still another item is, of course, inflation with its tricky little device of making us think we've increased sales and profits when maybe we haven't because of the decline in value of the dollar.

In any event, from time to time, we analyzed product costs and while we had the information we needed, it was a major project to get it all together and convert it to useful numbers. Because of the changing demands mentioned above we decided it was time to develop a system into which information could be put as it was first generated.

We in effect have three different kinds of businesses: wholesale lining-out stock; consumer mail order; and premium sales. To simplify this discussion I will talk only about wholesale lining-out stock which makes up 85% of our business. Within that framework, I will at this time discuss only bareroot material. The concepts apply, with modification, to greenhouse production of containerized seedlings.

In our operation there are three distinct areas of cost of which we need to be aware: liner production; digging, storing and shipping; and marketing. How do we treat each? Let's take liner production. We grow all material from seed and we grow about 37 species. We think that the simplest way to handle costing is on a per-acre basis. For every nursery block we know acreage, total linear feet of bed and the number of linear feet of each age and specie. What we want to accomplish is to assign all costs to the different ages and species as accurately as possible. Direct labor and material are allocated most accurately. Labor can be kept by means of a time card (Figure 2) using a coding system (Figure 3). If the labor effort is general to the whole nursery block no detail of age or specie is required; however, if specific extra effort is required by age/specie, it will be recorded.

Material usage again is handled in the same way. For example, 100 gallons per acre of Vapam \$.49 per gallon on Block S-1 would be a general application whereas an extra dose of urea at 100 # per acre on 2-0 Colorado Blue Spruce in Block 1-2 would be a specific cost add-on to that age/specie.

All indirect costs or costs which are difficult to assign directly are handled on a distributed basis--in our case as follows:

Advertising	Expense divided by trees to Bell-- sales year only (may subsequently be modified to actual trees sold)
Automobiles & Trucks	Expense including depreciation proportioned to production on a per-acre basis
Freight	Production 20%; Digging, storage and shipping 70%; Marketing 10%
Heat & Lights Insurance (Fire) Building Taxes Building Depreciation	Distributed to Building Expense
Building Expense	Kept separate by building and distributed based on building usage to Production; Digging, storage and shipping; or Marketing.
Insurance (Hospital) FICA Unemployment Taxes Vacation Sick Pay	Allocated as per cent of Labor
Packing and Shipping Materials	Allocated to trees sold
Office Expense	Marketing 60%; Digging, storage and shipping 20%; Production 20%
Office Payroll	Same as Office Expense
Equipment Exp. Equipment Depr.	Distributed based on usage to Production; Digging, storage and shipping; Marketing
Taxes--Land	Distributed based on acreage
Land Valuation	Based on current lease cost

As I've mentioned before, all production costs are based on acreage and converted to per-tree costs when meaningful inventory figures are available. Ultimately all costs are added up and calculated on a per-tree-sold basis. The elements fit together as shown in Figure 4 and you can see the accumulation of various types of costs.

At Western Maine Forest Nursery we have recently put into operation an IBM 5110 Computer and are currently getting our mailing list, order entry and inventory management up on the system. Prior to the start of fall seeding we hope to have the approach I've discussed detailed and programmed so as to start costing as near the beginning of the production process as possible. We anticipate that some minor changes will be required as the formatting and programming take place and final details are worked out. Overall, though, we feel it will give us the data we need to improve the management of costs, pricing and profits.

