

METHODS OF KEEPING COST RECORDS IN PROPAGATION

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When I first started thinking about this very important topic, I was almost certain that there would be very, very few references in past volumes of our Proceedings. My, how mistaken I was! At the Eighth Meeting of our beloved Society, Henry Weller (5) told us that being aware of the cost of production, and doing something about it, is just as important to the nurseryman as the “know-how” of propagation. Then in 1962 in Cincinnati, Ohio, George Oki (1) traveled from Sacramento, California to share with us the importance of daily, weekly, monthly and annual records. When you review this outstanding paper, you can see appended to the paper the various forms that George uses at his outstanding nursery. Apparently there were some members stimulated by this report because the following year, in my hometown of St. Louis, Missouri, there was a round table discussion entitled “Cost Control in Propagation” (3). The recorder of this discussion, Wayne Lovelace (a former co-worker of mine), tells of the interest in our topic of the afternoon and some data recording techniques. The next step in research finds us in Sacramento, California—this time the guest of George Oki as we tour his nursery and we learn more about his IBM equipment (4). It is apropos to quote Ed Kubo’s comments at this meeting when he said, “The only logical way to improve our efficiency and reduce our cost of production is to keep comprehensive records”. And this, my friends, is the key phrase...comprehensive records! Then finally, in 1966 at that beautiful meeting in Newport, Rhode Island, our good friend, Jim Wells (6), presented all of us with a formula of taking our direct labor cost and multiplying by four to arrive at a total plant unit cost. There are several nurserymen in this room today who have, and are, using those words to good advantage. So we have gone back through some of our own previous Proceedings and, indeed, we have had a considerable amount of discussion pertaining to costing in propagation.

Now, what about today, and are cost records really important? Does it really make any difference how much it costs us to root a *Taxus* cutting? You know, as incredible as it sounds, there are nurserymen—although I hasten to say none in this room—who price their plants from competitors’ catalogs! The thought has passed through my mind, from time to time, if some poor soul used four or five typographic catalog errors as a guidepost, he would be bankrupt at the end of the season! I have shown the ridiculous in hopes to reach the sublime—the exact per unit cost of each and every plant we produce! If anyone in this room today thinks that this is an impossibility, they are unequivocally incorrect! This will cost money, rather like the old saw that one must

spend money to save money. The expenditure, or the increase in overhead, will come about from the key in determining unit costs and that key is keeping accurate, careful records, and the realistic evaluation of those records.

When I mentioned to Bill Snyder that I was presenting a paper on this topic, he asked if I could take one specific plant and cost it out all the way. Bill, I wish I could, but at Spring Hill Nurseries we haven't reached the exact unit cost at this date. Our plans for the immediate future include, among other things, a card which is shown in Figure 1. This card shows the following: a Block Number and a specific plant (Product) within that unit block. *Materials*, which would include things such as spray and fertilizer used in that block. *Task Performed*, the labor used in the maintenance of that particular plant. *Equipment Used*, this, of course, would be tractor, mower, spray rig, etc. *Labor Uses*, this column will show the name of the employee, the hours worked and, of course, his hourly rate; and the final item on the card shows *Planting and Harvesting*, the number of plants planted, the number of plants dug, and the *Amount* column to correspond with this. With this card, we are hoping to update our existing program. At present, we have 23 job classifications which include the various office breakdowns. This information is affixed to the daily time card and, as our payroll goes to the computer for fulfillment, we are also able to get a dollar breakdown, by the computer, as to the amount of dollars spent in each numbered classification. Since we are primarily a retail mail order nursery, this information can give us, among other things, an exact cost-per-order, the function of that order, the variable direct-labor costs year to year. We can take this information and attribute back to catalog costs an exact dollar and cents figure. In other words, we know exactly the cost of shipping an order to the tenth of a cent.

The reason we are going to enlarge upon our existant system is that we wish more information than we are presently receiving. Whether we will get down to the point of knowing exactly what each perennial, for example, might cost us is problematical. But we do think that we can, through better record keeping, justify a decision as to whether we should grow a particular plant or purchase it on the market.

In discussing this paper with our Comptroller, Mr. Vincent Hinde, he made the comment that he feels there are quite a few nurserymen today who are "living on their depreciation". It is his belief that once we start the more detailed costing techniques, we can then, after perhaps a 5 year period, come up with a history of specific plants. We also will be able to justify the costs of problem plants, and this will allow management to decide whether the plant should be grown locally or whether we should abandon that particular plant and have it grown for us on contract.

The history of the nursery community shows that successful

nursery owners normally have somewhere in their organization an individual who has an intuitiveness which enables him to make a decision as to the growing or buying of a particular plant. It has been said that the cost of maintaining records and data will not justify the means. We have heard this philosophy uttered at various I.P.P.S. meetings, and there is some discussion pertaining to this virtually every year during the Question Box Session. My personal belief is that if we could come close to an exact cost in a particular block of plants, we will have the battle won. An interesting theory was presented which was labeled the "Barberpole" method of record keeping. This would merely be the setting of four posts in a block of any plant, and from the time the ground was prepared for planting through the final harvest, all functions within that particular block were noted on a card affixed to one of the poles. This is certainly not very sophisticated, but if everyone working within the confines of those four poles would jot down the information, you certainly would come up with an excellent per-unit cost factor. If someone would be interested in following this through, it might be one of many points to take home from this meeting because it certainly could be set up in an unsophisticated manner, but the information would be available.

I would mention again that the importance of the record cannot be underestimated. This is not a procedure that is going to be reconciled in a one year period, because I believe that a history is extremely important. Unfortunately, everything must have a starting point and if costing is important to you as an integral part of your profit picture, then you must start and there would be no better time to start than January 1. From that date on, every function performed by every employee of your nursery is recorded daily, weekly, monthly and, of course, annually. Records are meaningless unless they are evaluated. You can have volumes and volumes of paper but unless it is evaluated it means nothing.

In preparing this paper, I contacted several Society members and I would at this time like to acknowledge a letter and form received from Peter Orum of the D. Hill Nursery of Dundee, Illinois. Peter said that certainly costing can be obtained and he also added and I quote, "The big question is how to get the figures into the accounts and that is what is difficult". He also pointed out that one of his tasks this winter is to work out a usable system for getting the square foot price into his cost accounting. I believe that he has a very workable plan and one that would be of great benefit.

There isn't a formula that one can use (other than the formula that Jim Wells has reported, which I alluded to earlier). I think in many operations if a formula could be determined, this certainly would be ample. The value of the record and its evaluation is paramount. I wish that I could give each of you a formula that you could take home and apply very simply to your operation but it is an impossibility.

In summing up I think there are a few basic steps which one must take if he wishes to explore the costing techniques in his personal nursery operation:

1. From the date you decide on a program, you must record every employee's function throughout the day. It is not too difficult to derive fixed costs, such as the typical overhead expenditures of taxes, water heat, light, etc., but we must have a labor breakdown, knowing what our direct labor costs are. If we do no more than derive a direct labor cost and multiply by a factor, such as Jim Wells has done, we are at least on the right track.
2. If we then wish to explore further, we can take our direct labor, convert it to individual blocks of plants and, dependent upon the efficiency of your record keeping technique, follow through to an individual unit plant within that particular block.
3. It is not necessary in a modest nursery operation to have this information computerized. Naturally, the computer will save many man-hours of time, but if one is not presently using the computer for payroll, inventory control, or sales information, then the data can be assimilated by hand as part of an office technique. In some cases this could well mean one more office employee for the year who would be devoting perhaps 80 percent of his time to record evaluation.

We are in an era today, and it will increase rather than decrease over the next decade, where we must have available to us more information as to profit and loss. The day of looking at the bottom line of a financial statement and determining whether we made a profit or a loss is not sufficient. I urge all of you to do what you can in evaluating your individual nursery program to determine the direction in which you go. It is ridiculous for members of the nursery community to operate year in and year out on a 2, 3 or 4 percent net return on their investment. Life is too short for this type of venture.

Throughout this paper the name of George Oki has arisen several times, and I would like to quote him one last time in a statement which he made last year at our joint meeting in St. Paul, Minnesota (2). George said the following:

“Profit-mindedness is an absolute necessity for success and the good executive is constantly aware of the need to keep costs down and production and sales up. He thinks, decides, and acts to the end that the company will earn a fair profit—a fair return on the capital that has been invested in it so that the company can continue to operate, grow, and expand.”

This, ladies and gentlemen, is the end result of accurate records properly evaluated. As calloused as it may sound, we are all in

Block _____

Product _____

Date _____

	TYPE	MATERIALS	AMOUNT
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
5	_____	_____	_____

TASK PERFORMED

1 _____

2 _____

3 _____

	TYPE	EQUIPMENT USED	TIME
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____

	NAME	LABOR USES	HOURS
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
5	_____	_____	_____
6	_____	_____	_____
7	_____	_____	_____
8	_____	_____	_____
9	_____	_____	_____
10	_____	_____	_____

	PLANTING - HARVESTING	TYPE	AMOUNT
No Planted	_____	_____	_____
No Dug	_____	_____	_____

Foreman _____

Fig. 1. Card system used by Spring Hill Nurseries to keep records on cost of production.

business for one reason and that is to make a profit. We cannot do this without accurate, meaningful cost data. We can do it and every one of us in this room should do it.

LITERATURE CITED

1. Oki, George. 1962. Systems and mechanization in a container nursery. *Proc. Int. Plant Prop. Soc.* 12:95-106.
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4. Sherman, Lowell. 1964. IBM: Inventory and accounting. *Proc. Int. Plant Prop. Soc.* 14:330-332.
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MODERATOR FLEMER: Thank you very much, Ralph. I, for one, will be looking forward to next year's Proceedings which will carry copies of the forms you described for record keeping. There will be no time for questions at this time, though you can put them in the "Question Box" to be answered tonight.

No doubt, you have all received releases from the U.S.D.A. and the National Arboretum describing new plants being developed there. The National Arboretum is very actively concerned in a woody plant breeding program and the man largely responsible for many of the successes is Dr. Donald Egolf who is here this afternoon to describe and show us slides of many of these new cultivars.