

FRIDAY AFTERNOON SESSION

December 5, 1969

The session convened at 1:15 p.m. in the Windsor Ballroom, Commodore Hotel, with Mr. Thomas S. Pinney Jr. as moderator.

MODERATOR PINNEY: Our first talk this afternoon involves greenhouse and nursery cost analysis. Knox Henry had hoped to be able to make the meetings but at the last minute found he could not be here. However, he has supplied us with a tape of his talk so he will present his talk via a tape recorder.

GREENHOUSE AND NURSERY COST ANALYSIS

KNOX M. HENRY

Frank O. Reeves & Son, Limited

Pine Grove, Ontario

Mr. President, fellow members, guests: I find it difficult to express my disappointment at not being able to be with you in person today. The presence at the meeting of many of my fellow Canadians will attest to the fact that Canada is not so cold that I am frozen and thus unable to move. We moved our entire business to a new location during the past ten months, yet up until last Friday I had expected to be with you. I hope the taping of my talk will prove acceptable to you.

Our firm began as a market garden operation owned by the late Mr. Frank Reeves. Starting on the recently vacated premises in 1923 the business evolved from a position of solely growing vegetables to include a floriculture crop of chrysanthemums, snapdragons, etc. After Ken Reeves returned from the European theatre after World War II, he worked for a couple of years with his uncle, the late Cecil Delworth. Doubtless the experience he gained during his time with 'Uncle Cec' had a definite effect upon the future course of his father's business, for after he returned home to rejoin his father the floriculture end of the market garden operation began to increase and eventually surpass the cauliflowers and potatoes.

Youth easily becomes enthusiastic and Ken's realization that the bedding plants he was growing were a surer cash crop than vegetables induced him to be the first grower in Canada to grow and market the new hybrid petunias. The derisive scorn from his fellow growers did not deter him and very soon he became a leader in the Canadian bedding plant industry. His introduction of the self-serve concept, where each customer picks out their own plants while pulling around a wagon to carry their purchases, coupled with a "supermarket" type of cashier system is now copied by many garden centers.

Being a leader sometimes has dubious distinctions for he also realized that in spite of the prosperity of the business,

which I must add still had a large greenhouse operation including chrysanthemums (potted and cut), poinsettias and geraniums, profits were rapidly decreasing.

In an effort to correct the downward trend the bookkeeping end of the business was completely revamped about 5 years ago about the time I joined the firm. The new system then instituted set up a more detailed purchase journal which would provide some indication of the extent of purchases for each crop and at the same time provide a monthly Profit & Loss statement.

The intention was admirable. Unfortunately this system had two main disadvantages; 1) it made no allowance for many overhead expenses, and 2) it was too slow for our size of business. Our Profit & Loss Reports were taking up to two months to prepare and the Purchase Journal represented about 15 hours of work per week.

About this time I was appointed manager of our Nursery and Garden Center and became involved in the office operation. The new system I am about to describe evolved over the past four years and while I am perhaps more familiar with it than anyone else in the firm, I am not the sole author of the procedures. I must acknowledge the contribution of our chartered accountant, our President, Ken Reeves, and others. My contribution has been one of continuity rather than all the ingenuity.

I learned of a new accounting system developed by the National Cash Register Company, known as their "Total System". This system naturally uses a cash register as the focal input for the system. All sales and bookkeeping transactions are entered on the cash register. The cash register, depending upon its design, produces either a punched paper tape or an N.O.F. tape. The latter is a tape of stylized type that can be optically scanned by a computer. Either system allows computer processing.

The punched paper tape has the advantage of being acceptable input for the greatest majority of computers so that one is not "married" solely to N.C.R.; the disadvantage is that it is more difficult for the average person to learn to read.

The optical tape which, incidently, we use, is to my knowledge only acceptable as input by one other computer manufacturer besides the N.C.R. Data Centers. This limits you, should you wish to have a firm other than N.C.R. process your data. The one real advantage is that the optical tape is quite easy to learn to read.

At the end of each month we forward our tapes to the local or nearest N.C.R. Data Center. They process the data and return the monthly reports to our office usually within 5 days of date of our mailing. The actual processing of the tapes takes about 30 to 45 minutes. Most of the delay is in our "speedy" post office department.

For a total cost of approximately \$60.00 per month we receive the following reports:

1. A Sales and Tax Report — showing our total cash sales and total charge sales.
2. A monthly Income Report or, as I refer to it, a Profit and Loss Statement — most important to any firm.
3. A monthly Balance Sheet.
4. A Cost Inventory Management Report.

This last report is most relevant to my discussion today for it, coupled with the Profit and Loss Report, forms the basis of our cost analysis system.

Every product we sell has its own individual code number. When a sale is made the 3-digit code number is entered on the cash register. Also when a purchase is made each purchase must be assigned a code number and then entered on the cash register. Likewise each expense is coded before it is entered on the cash register. Sales are entered on a daily basis as they are made. Purchases and expenses are usually entered twice a month.

I differentiate between purchases and expenses. Purchases are those items which are bought by us and resold directly or worked into a product which is later sold. Expenses are items which do not necessarily relate to any one particular crop, an example being electricity or insurance.

We have been able to develop a very simple and inexpensive cost analysis by, wherever possible, showing each item bought as a purchase to the individual crop. Many items which our government insists be shown as expenses are first "purchased" by the crop, then removed from the total monthly purchases, then entered as an expense. A classic example is wages. Each one is required to enter daily a breakdown of their hours. At the end of each pay week this information is translated into dollar value in the office. All the time sheets are entered on a summary sheet that has column headings for each crop. The columnar totals are entered into the cash register as a purchase for the crop concerned, then the total amount is shown as a negative purchase. Then the total wages are entered as an expense.

Each bookkeeping entry on the cash register involves a debit and a credit key. Thus each entry is self-balancing. We have one code number set up which — when the computer sees that particular number — it automatically registers a negative purchase. This allows us to avoid fictitiously inflating our expenses and purchases. Although the item of expense is entered twice, the first entry shows it as a purchase for the crop, but it is not included in the total merchandise purchases on the Profit and Loss Report. I hope I have made this clear.

The net result of the foregoing is that we are able to "purchase", so to speak, such expenses as: wages, fees, licenses, spoilage, advertising, travel, promotion, and uncollectable cheques.

The Inventory Report has several columns.

- Column 1 shows the code numbers.
- Column 2 shows the total dollar sales for the crop or code.
- Column 3 shows the total percentage that crop is to the total of our sales.
- Column 8 shows the total purchases accumulated by the crop up to the beginning of the particular month.
- Column 9 shows the purchases for the month.
- Column 11 shows the accumulation of purchases for the crop as of the end of the month.

This report, as well as the Profit and Loss Report and others, are received monthly by us from N.C.R.

To allocate our operating expenses each month, we use another different form with the following headings over columns across the top of the page: Column 1 is the code number for each expense item, followed by the name of the expense in Column 2. The column entitled "table" refers to a set of tables we have set up, breaking down by crop the expenses each month. I will come back to this later.

The total column is self-explanatory being the total of each expense. Next are a series of columns for each crop. Each crop column shows the percentage of each expense the crop must bear as well as the dollar value.

The columns are totalled after completion. May I add that the sheet does not show the breakdown for the Depreciation accounts, the Employer's share of Unemployment Insurance, or the Canada Pension Plan. These items plus one or two others are computed on a second operating expense sheet similar to the one just described.

After the totals have been calculated, it is a relatively simple operation to add the purchases and expenses for any one crop and equate these figures against the sales figures, thus producing a Profit and Loss figure for that crop.

In summary, may I make a few points: The foregoing system is costing us relatively little. On top of the approximately \$60.00 per month N.C.R. charges us for the Data Processing and the four reports they furnish, we expend a total of about 6 to 8 hours per month to complete the cost analysis.

The Data Processing enables us to accumulate and categorize a great deal of information very quickly, easily and inexpensively.

The cost analysis system is based on the theory that all overhead and operating expenses incurred in the business can be charged to all the crops, providing one is persistent enough to believe there must be a way.

This brings up a point I earlier promised to enlarge upon for you. The weakness in this system lies in the area of the percentage of the overhead expenses that should be charged to each crop. This demands very careful consideration by senior management. It has taken Ken Reeves and myself four years

to reach the point where we feel we are allocating these expenses correctly. The more diverse your business, the more difficult is the calculation. Briefly, think about the ramifications of vehicle expense. We have seven vehicles. How much of the expense relates to our nursery when any one of or all of three different vehicles may be utilized by that department at any one time? I won't go further on this — doubtless you see my point.

Those whose firms are using data processing will probably echo my comments when I say to those who are contemplating data processing in the future, allow yourselves at least a year to get the system 100% operational. In spite of the efforts of N.C.R., our chartered accountant, and with myself having had some previous data processing and accounting experience, our first six months was pretty rough.

The cost analysis system I have outlined can be used in a small business without data processing. It is also adaptable to other nurseries; one other nursery that has no greenhouse operation is using the system.

The system is not perfect, but I hope that by sharing our experiences with you, you may obtain ideas for your business. I would be most willing to go into more detail or answer any questions you may have if you contact me.

MODERATOR PINNEY: Our next speaker is Dr. John McGuire. His paper is entitled, "A Propagation Schedule for Container Plants".

A PROPAGATION SCHEDULE FOR CONTAINER PLANTS¹

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Container plant production has been increasing in the Northeast for the past ten years. It has not yet developed to the levels found in the South or Far West but the rate of increase indicates it may one day be a major form of plant production in the Northeast. Growers in this area have been faced with problems not encountered in the milder climates. Specifically, the relatively short summer season requires a very efficient production program. This, and overwintering problems, have been the major reasons for slower development of this method of plant production in New England.

Most growers have now overcome the problem of overwinter storage by use of Quonset poly-houses. These houses are constructed over the plants in the growing areas, eliminating or reducing labor costs for moving plants. To make use of the short growing season, growers have also met the challenge by developing an efficient growing program. This parallels the

¹Contribution No 1342, Rhode Island Agriculture Experiment Station