

2-1920

Accounting for Food Preserving Companies

Raymond E. Barth

Follow this and additional works at: <https://egrove.olemiss.edu/jofa>



Part of the [Accounting Commons](#)

Recommended Citation

Barth, Raymond E. (1920) "Accounting for Food Preserving Companies," *Journal of Accountancy*. Vol. 29: Iss. 2, Article 2.

Available at: <https://egrove.olemiss.edu/jofa/vol29/iss2/2>

This Article is brought to you for free and open access by the Archival Digital Accounting Collection at eGrove. It has been accepted for inclusion in Journal of Accountancy by an authorized editor of eGrove. For more information, please contact egrove@olemiss.edu.

Accounting for Food Preserving Companies*

BY RAYMOND E. BARTH

The manufacture of food products which are in the nature of delicacies rather than staples has assumed the proportion of one of the large industries in this country and concerns in this business have become well known throughout the world through well conducted sales campaigns and advertising. Every effort is made to protect the quality of the products by the companies themselves, through the employment of skilled chemists, and by the government, through the enactment of pure food laws. Yet little or nothing has been developed in the way of standardization of accounts and costs.

Such businesses are competitive in nature not only with other concerns in the same field but also with the public itself. The products manufactured consist of such foods as fruit preserves and jellies, condiments, such as ketchup, chili sauce, salad dressing, pickles, etc. These products are also preserved quite extensively by house-wives; and in order to sell their product advantageously, the manufacturers must produce and sell at a price which the public will pay for such articles. There are standard products, known mainly through their trade names, which are ever in demand. In meeting this demand, there seems to be no disposition on the part of the smaller manufacturers to employ accounting methods which will give them necessary data for sales campaigns. The plan with them seems to be rather to fix their selling prices to meet those of competitor companies.

In this treatise are discussed only those accounting features which appertain particularly to this class of industry, without covering in complete detail all the accounting requirements of these businesses. These peculiarities are commented upon in the succeeding paragraphs under the following main headings;

1. Raw materials.
2. Finished product.

*A thesis presented at the November, 1919, examinations of the American Institute of Accountants.

The Journal of Accountancy

3. Distribution of overhead.
4. Inventory control and cost of sales.
5. Financial records.

RAW MATERIALS

Purchases of materials are made from different sources, depending upon the size of the company. Many of the larger companies have farms on which they produce a large part of their raw materials. Others buy the raw product direct from the farmer under a system described later. Other smaller companies purchase raw material in various semi-finished forms. It is usually necessary for the larger companies to resort to all three of these methods to obtain raw materials. It is to the company which obtains materials from all sources that the following comments apply.

A company which has farms of its own, from which it obtains a large part of its raw product, must necessarily keep farm accounts in order to know the cost of materials grown and to ascertain the advantages or disadvantages of operating the farms as compared with other means of obtaining materials. These farm accounts are simple in nature and record the actual costs of all farming operations necessary to the production of the raw material. Accounts are kept for each farm; and where more than one raw product is grown on any single farm, it is necessary to sub-divide the costs of operation among the several classes of material produced on the basis of acreage. Cost of the resultant production is computed at the proportionate rate per unit of measure that the production units bear to the entire cost. At this point, comparative costs may be obtained between the raw materials grown on the several farms and raw materials purchased from outside farmers.

Contracts for materials purchased from farmers are ordinarily made during the winter and spring months. Through field agents in the different territories in which the necessary products are grown, the company contracts with the farmers for the output of a certain number of acres at a fixed rate per unit of measure of product. Products from farms are ordinarily received by the company at salting stations where the raw product undergoes the necessary preliminary treatment to preserve the quality until it

Accounting for Food Preserving Companies

is needed for further processes. This preliminary treatment usually involves storage in tanks with preservatives, such as salt brine, or possibly cutting, drying or some such operation. In the case of some materials it is necessary to boil the vegetables to a pulp and sterilize in cans until needed at a later date. The expenses at the salting house consist of the costs of the product purchased from the farmer, together with the necessary labor and expenses involved in preparing for storage and shipping to the factory. All expenses directly applicable to the individual products are charged direct to the materials produced, and expenses not directly applicable, such as superintendence and office expense, are usually apportioned on the basis of acreage purchased from the farmer. The total cost of each class of semi-finished material when through the salting house is divided over the total output of that product to obtain a unit cost at this stage. Comparison may then be made with raw materials purchased on the outside in a semi-finished stage.

Purchases of raw material in a semi-finished stage are ordinarily made from brokers or manufacturers handling materials at this stage of completion. The prices paid for this class of material are usually current market quotations which prevail among all buyers at the time.

Materials and supplies used in manufacturing the raw materials into finished goods are purchased in the usual manner.

FINISHED PRODUCT

The handling of costs of finished product is comparatively simple. The raw material at its purchase price or its known cost is charged into the operation developing the finished product. The labor and direct expense, including manufacturing, bottling, canning or storing, labeling and packing, are all direct costs to the finished product and the overhead is applied in accordance with the plan discussed under "distribution of overhead." These costs are applied to the finished product in units of dozens except when barrels, pails or kegs are used as the unit. The total dozens produced in each run are divided into the total cost of each batch produced in order to obtain comparative costs for each run of production. However, for the purpose of monthly costs, the average cost of all production for the month is used.

The Journal of Accountancy

Certain classes of the product, however, require special consideration. Pickles, for example, in their raw state are purchased as cucumbers at certain rates per bushel, varying with the average size of the cucumbers, the smaller cucumbers costing considerably more than those of the larger size. These pickles are taken to the salting stations and made into salt stock by the use of salt brine until ready for further process.

As it is needed at the manufacturing plant, this salt stock is shipped in tank cars to the manufacturing plant, where it is unloaded into barrels and sorted into the various sizes of pickles, the size name indicating the number of pickles per barrel. After each day's sorting, there are reported to the cost department the number of barrels of salt stock used and the number of barrels of each size of pickles obtained during the day's sorting. At the end of each month these daily figures are summarized to show the total number of barrels of large and small salt stock used and the number of barrels of each standard size of pickles obtained in the sorting.

In order to apply the cost of salt stock in the original grades of large and small to the finished products with a greater variety of sizes and apportion this cost equitably on the relative values of each size it is necessary to use a scale which will record the differences in value of the sizes. This scale consists of arithmetical differentials based on the graded differences in market quotations for the various sizes of salt stock. When the numbers of barrels of assorted sizes have been obtained at the end of each month, this scale is used by multiplying the differential for each size of pickles by the number of barrels produced of that size and obtaining a product representing the total cost above the base cost. This product is subtracted from the total actual cost ascertained from the cost of salt stock used during the month plus labor and overhead and the base rate per barrel is obtained by dividing the remainder by the total number of barrels. To the base thus obtained are added the scale differentials in order to obtain an actual cost scale for the month.

The base-rate fluctuates from month to month, depending on whether the salt stock averages above or below normal sizes for the grade of salt stock used, and the variation in the bases computed for the output of certain farms, purchases or salting house

Accounting for Food Preserving Companies

products is a useful guide to comparative values of salt product from the viewpoint of grade.

DISTRIBUTION OF OVERHEAD

Food production is a seasonable business, i. e., during certain months of the year production is limited only by the capacity of the plant and crop production, while during other seasons of the year the entire efforts of the business are centered upon selling campaigns. It will be seen that a condition like this will have a vital effect on the method of distributing overhead expense, taking into consideration the fact that a very large percentage of the overhead expense is fixed and does not fluctuate with production. Furthermore, elements such as the use of machinery in certain departments as compared with manual labor in other departments have a vital effect.

In order to establish a satisfactory basis for distribution, it is necessary that complete analyses of operations be obtainable for past years. These operations must be analyzed into factors such as productive labor by months and by departments; value of production of sales by months and by departments; distribution of expense so far as applicable to departments by months; and all other conditions which affect the operations of the plant. After obtaining such analyses for prior years, the next object is to establish a rate of overhead on direct labor or on production centers which during the whole of an operating period will take care of the actual accrued overhead for the year. These percentages at first will be somewhat arbitrary, but may be adjusted from time to time as conditions warrant. In such a method of distribution of overhead, there are certain months in the year in which the production is heavy which will bear a larger overhead than actually accrues in those months, but this condition will be offset during the less productive months by smaller distribution of overhead than actually accrues. If the percentages for each department have been worked out in a careful manner, there should be no great discrepancy between the actual overhead accrued during the year and the overhead distributed during the operating period. If there is a large discrepancy it will be due either to inaccuracy in the percentages used or to some unusual condition arising which was not covered in the percentage. In

one case the percentage of difference during the year was less than one-half of 1% of the total overhead for which provision had not been made.

INVENTORY CONTROL AND COST OF SALES

It is advisable, indeed essential, that a proper control of the inventory be obtained, but the very nature of the product makes it unusually difficult, owing to the fact that there are so many classes of product and so many small units. It would otherwise be impossible to place responsibility for shortages on any one person on account of the size of the stock and the number of people handling it and shipping it.

A satisfactory scheme is to have the loose stock piled in symmetrical piles, a certain number of units to a layer and a bin card or stock card used for recording the amounts placed in stock or taken out. The stock cards are controlled by a stock book. Reports of finished product are checked against the stock book, which in turn is checked against each stock card daily; and reports of withdrawals from stock are checked against the shipping orders and also against the stock cards daily. In turn, the withdrawals from stock are checked against actual sales by daily analyses of sales by quantity only. If loose stock is packed in boxes or cases, a separate stock record is kept for the cases and the piles of cases are checked daily in the same manner as are the loose piles. In this way it is possible to keep accurate control of the stock at all times both as a check against production reports and as a check upon cost of sales.

At the end of each month, the total production in units and money for the month is entered on a summary card. The units of sales are summarized and entered on this card. The unit cost of sales for the month is obtained by averaging the inventory at the end of the preceding month with the production for the month, the cost obtained being applied to shipments and the cost of sales thus ascertained. This cost is summarized by departments and a cost statement is prepared for the general accounting department showing the necessary data to be entered on the general records and also for the purpose of preparing financial operating statements.

FINANCIAL RECORDS

Financial records differ only slightly from those of other manufacturing companies, with the exception that there must be some means of keeping in touch with the expenditures for raw materials at the different salting stations. Funds are usually provided for the men in charge of the stations for the payment for materials on delivery. They in turn furnish weekly reports to the company showing the expenditures and the purpose of such expenditures and these statements become part of the financial records and are handled in somewhat the same manner as are disbursements from petty cash funds.

Owing to the seasonable nature of the business, there are certain periods of the year when usually large sums of money are required, and, in order to obtain the necessary credit or financial assistance, it is imperative that the company be able to render a satisfactory form of balance-sheet based on actual figures. The preparation of such a statement would be impossible with any degree of accuracy unless some form of perpetual inventory were in use, because an actual inventory in a business of this character requires suspension of operations for an unusually long period.

ADEQUATE ACCOUNTING A REAL NECESSITY

The sales department in a business of this kind is usually larger proportionately than in other industries. The department must be organized and directed in regular selling campaigns along the most advantageous and profitable lines. While the disposition of the smaller manufacturer in this business is usually to fix selling prices to meet or undersell his larger competitor without even a fair estimate of his own cost to manufacture, few classes of business can be pointed out in which this practice is more dangerous. A manufacturer's large competitor usually grows his own crops and in cases of over-supply reduces his selling prices so as to move the product finished from such over-supply before the period of spoilage begins. The manufacturer who has only the competitors' prices to guide him has often been known to regard himself as successful on account of a large business in sales, when as a matter of fact he has been buying semi-finished product or raw materials in the market and finishing them at a cost greater than the well-organized competitor's selling prices.