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BUSINESS ESSENTIALS FOR COOPERATIVE FRUIT AND VEGETABLE CANNERIES.

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PRODUCERS in many sections of the United States have dreamed of wealth secured from a cooperative cannery which would make use of their surplus products unmarketable in the fresh state, and they have thrown away thousands of dollars in the organization and operation of plants which never should have been started. The canning of fruit and vegetables on a large scale is a manufacturing business that requires special skill and experience, and into which many elements enter that are not present in other types of cooperative enterprise in agriculture. Many canneries have been promoted for the purpose of selling machinery, creating salaried positions, or booming real estate, and still others for the purpose of unloading upon the farmers an enterprise which has been a failure as a private business. In most cases, cooperation in the canning of agricultural products on a commercial scale in the United States has been a failure. That cooperative canneries really handle a very small portion of the total business is shown by the fact that of approximately \$158,000,000 worth of canned and dried fruits and vegetables marketed in 1914, they sold only \$3,500,000 worth.

Nevertheless, a few successful cooperative fruit and vegetable canneries stand above the large number of failures as evidence that this business, if properly founded and conducted, can be made a success, and that it has a legitimate place in an efficient scheme of marketing perishable products. Practically all of the cooperative canneries in the United States are found in the Pacific Northwest and California, the annual business of these organizations ranging from as low as \$50,000 to as high as \$1,500,000 for a single cannery.¹

¹ In cooperation with the Oregon Agricultural College, the Office of Markets and Rural Organization made a survey of the canning industry of the Pacific Northwest. In addition, the office investigated cooperative canning plants in California and other sections of the United States. From these studies the business essentials for success and the reasons for failure in the cooperative canning industry in the United States were ascertained.

NOT A BY-PRODUCTS BUSINESS.

It should be borne in mind that the canning business is by no means a by-product enterprise and that an institution built up primarily for the handling of culls and lower-grade fruit and vegetable products is not likely to be successful. Experience demonstrates that higher grades bring the better prices and are more profitable, and that large quantities of the first grades are essential in moving lower grades. Many canneries have failed because they were organized wholly to utilize that portion of the fruit crop that could not be sold on the market in its fresh state on account of its deteriorated condition or low grade. The use of such fruit results in an inferior quality of canned goods which is not readily salable and may be liable to seizure under the Federal and various State pure-food laws.

IMPORTANCE OF A SUITABLE LOCATION.

The places at which canneries can succeed are relatively few. Therefore, one of the first steps in considering the advisability of organizing a canning business should be a complete survey of the field to ascertain whether the conditions warrant the inauguration of the enterprise. A sufficient quantity of a suitable number of products is essential, for to be successful financially a cannery should be operated as continuously throughout the year as possible, thus avoiding loss in having idle machinery and in "steaming up" for a small pack. There are exceptions, however, as in the case of specialty canneries, where a single product, like beans, peas, corn, tomatoes, or certain other fruits and vegetables, is handled extensively. In such cases a large volume of business is done and the canneries are kept running at full capacity during the season in which the product is harvested. In the case of some fruit canneries, from one to two weeks may elapse between products, during which time high-salaried help and machinery are idle.

The most successful cooperative canneries now in operation put up or pack a wide variety of products over a long period, some starting with strawberries in May and continuing until December with late vegetables. By utilizing the various products as they mature, the operating period may be extended to about six and one-half months. While

some products handled will barely pay the expense of canning and a fair return to the producer, it is economical to use them to keep the plant in operation throughout the season.

The cannery should be located as near as possible to the production center of the commodities which are to be used. This is essential, as in most cases the product must be delivered to the cannery with little delay after it is harvested. Canned goods, especially small fruits and vegetables, should be of superior quality, since inferior grades usually are a drug on the market. In addition to growing fruits and vegetables of superior quality, the quantity must be sufficient to allow such a volume of business that the overhead expenses will represent a small unit cost per case. Some canneries are successful when only 300,000 pounds of raw material are handled annually, but a cannery which puts up a variety of fruit and vegetable products usually can not receive a price that will allow a fair return to the grower if the output is less than this.

Since labor is an important item and in some instances is difficult to secure, it should have serious consideration at the outset. Canneries generally should be located near some center of population where it is possible to secure at a reasonable price the necessary pickers and cannery help to supplement those drawn from the community itself.

In many farmers' cooperative canneries the skilled help used in the manufacturing departments is made up of the sons and daughters of the farmer owners. Such a practice assists in the accumulation of "spending money" for the members of the farmer's family and gives to the cannery reliable and skilled help year after year. In some of the cannery sections berry-picking time is looked upon as vacation time, and many families in the Pacific Northwest and California look forward to it with delight. Families from the near-by cities, especially the women and children, move into the berry fields and spend from two to six weeks working as pickers. They derive a fair compensation and have an excellent outing. One cannery employs as many as 15,000 pickers in a season, and in these berry fields excellent accommodations and camping facilities are provided. The various forms of amusements, such as "merry-go-rounds" and "cane racks," which are located near the

center of the fields, turn the evenings into a continual festival.

The sanitary conditions surrounding the cannery should be the best; the plant should be located so that there are good drainage and circulation of air, and no contaminating surroundings, such as slaughterhouses, garbage plants, and dumps. A plentiful supply of good water is necessary, and in order to be sure of the quality a chemical analysis should be made.

The roads should be good enough to provide transportation for products from the fields to the cannery with as little difficulty and jarring as possible. Spring wagons should be used for carrying highly perishable products, and the hauling should be done in the early morning or late evening in order to avoid the heat of the day.

Proximity to markets is frequently an important factor in deciding the location of a cannery, as freight charges play a large part in determining the final net price received by the cannery for its products. Wherever possible, a location should be chosen which affords ready access to local shipping facilities, bearing in mind always, however, the question of rates to marketing centers.

FINANCING CANNERY OPERATIONS.

Managers of several cooperative canneries give as their greatest handicap the lack of sufficient capital. Since the canning business is a manufacturing enterprise, it requires a much larger capital than the average cooperative undertaking. A few organizations have started with as little as \$5,000 or \$6,000 paid-in capital, when only few products were handled and business was being done on a small scale. To be successful, the association should have sufficient paid-in capital to make the plant and equipment practically free of debt at the time the first canning season opens.

Considerable money is necessary to meet operating expenses before the final returns from canned goods are received, which is often as long as 18 months, or more in some cases, after the raw material has been delivered. This delay necessitates a liberal fund for making advances to the grower at the time of the delivery of the raw material. Such advances range from 35 to 65 per cent of the estimated

value of the produce. If the plant is free from debt, usually sufficient money can be secured from banks to finance the early season's operations, while during the latter part of the season additional money can be secured on warehouse receipts on the canned goods. Some of the larger canneries have as much as \$200,000 worth of canned goods in their warehouses at one time, necessitating a proportionately large surplus fund and good credit to finance the business during the canning season. As an instance of good credit, a western farmers' cannery recently purchased a trainload of sugar for the year's operation, securing from one bank a loan of \$85,000 to finance the deal. Such operations show clearly that farmers' organizations can secure credit and can be run on a strictly business basis if properly managed and supported.

Too often a member of a cooperative association feels that the organization is a thing apart from himself. Where possible, it is desirable that he be connected with the institution financially, either by membership fee or through the purchase of stock. The issuance of memberships under \$25 should be discouraged. The member who has sufficient produce to make him interested in the cannery should be willing to invest at least \$100 in a membership or take stock in the organization to this amount. If financially interested in the business, he can ill afford to allow the undertaking to fail.

PURCHASING THE PLANT AND EQUIPMENT.

In several instances farmers' organizations have purchased at a bargain the canning plant and equipment of private enterprises which have failed, and they have made a success of the business. On the other hand, a number of plants not suitable for farmers' canneries have been sold to cooperative companies, and time, money, and energy have been wasted in their operation. On this account the advice of some one well qualified to pass on the worth and suitability of the buildings and equipments should be secured when the purchase of an equipped plant is being considered.

When constructing a new plant provision should be made for adding to it from time to time. By using the unit plan of construction, additions can be made without necessitating an entire overhauling of the old unit, or the impairing of the

operating efficiency. The cannery business has reached a stage which makes possible definite standards for plant efficiency.

Before constructing a cannery, plans should be secured from experienced engineers or cannery men. The floor plans and the machinery required will vary according to products handled. The mistake often is made of building a large plant and equipping it with unnecessary machinery. The best machines on the market should be purchased, but only as they are needed. Improvement is being made yearly in canning processes and machinery, and therefore advice from expert cannery men and processors should be secured before equipping the plant. The statements made by those desiring to sell machines or by others personally interested in promoting the enterprise should not be relied upon exclusively.

THE MANAGER.

Of all cooperative agricultural enterprises few require conservative, sound, keen business judgment to a greater extent than a cooperative cannery. Without a manager of the right kind, failure is almost inevitable. In many of the successful canneries the manager will be found to be some leader who is willing to make certain sacrifices, and to contribute his energy and ability to the organization at a comparatively small salary. The success of cooperative organizations often is due to the efforts of one individual, or a few individuals, who, being public spirited and having the interests of the community sufficiently at heart, contribute their efforts and make sacrifices, if necessary, for the purpose of advancing and improving the enterprise.

Dependence should not be placed wholly on local talent, however, in securing a manager. It probably will be necessary to pay an experienced man a salary which may seem high. If the association is not willing to pay for experience, the farmers frequently must gain this experience for themselves by several years of deficits, and frequently at a proportionately higher cost than that required in obtaining expert services. The danger in the learning-by-experience plan is that in the majority of cases, before the necessary knowledge is gained, the cannery has become but an unpleasant memory.

The manager should be familiar with manufacturing processes and organization and should have a knowledge of the methods of cost accounting as applied to a manufacturing business. He also should be an efficient salesman, as the sales end of the business is of great importance. Each year competition becomes keener, and ability in salesmanship becomes as necessary to success as quality of product. If the size of the organization warrants, it may be advisable to have a separate sales manager, who is familiar with the problems of the trade and is able economically and efficiently to market the output of the factory. The general manager also should be capable of handling men, and be one in whom the farmers will have confidence. As in any other cooperative enterprise, if there is not complete unity and confidence in the management a farmers' cannery lacks the necessary stability and cohesion for success.

In the small cannery, the general manager should be the processor also, while in the larger canneries the general manager should have a processor as his assistant. The mistake often is made of depending at first on local, inexperienced talent for processing. The processor should have had practical experience in the particular line of canning business in which he is to be engaged. Superficially considered, a good salary for a processor may seem an excessive expenditure, but the spoiling of the pack of one or two days because it is improperly put up would probably cover the cost of the best processor obtainable. Processing is an exacting business and not every one knows how properly to prepare the raw material for the can, or how to handle it after it is in the can, so that it will reach the consumer's table in proper condition.

SUPPORT REQUIRED OF THE GROWERS.

The nature of the farmer's business makes him an individualist, and the same difficulties are encountered in the operation of the cooperative cannery as in other lines of cooperative enterprise. The cooperative cannery must be conducted along sound business lines; sentiment and "gentlemen's agreements" have bankrupted many farmers' organizations. An equitable yet binding contract should be made between the grower and his organization. A regular supply

of the right varieties and kinds of produce is necessary in order that a sufficient volume of business be had to operate the cannery. Therefore, the contract, if possible, should run for a period of years, and should specify the products and the varieties to be grown. In some of the successful canneries a few big growers have formed the nucleus of the enterprise, furnishing sufficient capital and produce to insure the necessary volume of business each year, regardless of the support given by the community generally.

Wherever the business is large enough to justify the expense, a field man should be secured to work among the farmer members, helping them to solve their difficulties, hearing their grievances, and explaining the principles and advantages of the association. Such work should include instruction as to varieties to be planted, care of the growing crops, and harvesting methods. Personal contact between the management and the grower members will help to keep the members loyal, since they will be in close touch with the business and, therefore, will take a keener interest in its affairs.

NEED OF A LIBERAL BUDGET.

Estimates for each year's expenditures should be made up in budget form as accurately and in as much detail as possible. The estimate of the amount of produce to be received and the possible returns from these goods in the canned state should be very conservative. Many failures have resulted because expenditures were made on an estimate which was far in excess of the actual business transacted.

For the first year's operation, the costs of putting up the different packs, the overhead expenses, etc., should be secured from similar canneries operating under like circumstances and should be used as a basis in making estimates. The season's run never can be foretold definitely, and it is not easy to retrench after the season has been well begun. The actual overhead expenses should be cut to the lowest possible point consistent with successful conduct. The overhead and direct expenses should be estimated in the budget and apportioned on a unit basis. During the operating season the budget should be checked up frequently and such changes made as are shown to be necessary.

Early in the season price quotations must be prepared, based on the unit-cost estimate. The latter, therefore, should be as accurate as possible. A large part of the output of most of the canneries is contracted for early in the season and sometimes long before any of the produce is delivered to the cannery. The basis of these contracts varies with different commodities and sections of the country. Peas, for example, may be paid for on the vine, by the pound or by the ton, either shelled or in the pod. Quotations at the cannery for different varieties of produce, therefore, are not comparable one section with another unless similar bases of payment are used. This explains in large measure the seemingly wide diversity in prices paid for like products in different localities.

METHODS OF KEEPING ACCOUNTS.

The cannery must maintain a modern system of cost records, so that all items of expense shall be charged properly to each case of finished goods. A separate account should be kept for each commodity packed in the different-sized cans, showing the various grades, and in the case of sirup goods the various degrees.

Accurate, itemized, direct-labor costs for work done on a piece basis should be kept. Most of the farmers' canneries pay for the preparing, stemming, and washing of raw material at so much per crate or box, and the filling of cans at so much per dozen. Much help is used which must be paid by the hour, such as machine operators, engineers, truckers, etc. Time records should be kept of this work and the cost of each activity properly apportioned to the day's pack.

The superintendent should make out daily reports showing the number of cans packed, quantities of fruits or vegetables used in the pack, material used, direct labor chargeable to the pack, and other operations. In the office a cost ledger and stock record can be used to assemble the different items and the cost of the finished goods, together with the number of cases carried to a finished-goods account for each commodity.

In addition to such a tabulated statement of the cost and quantity of each grade of commodity packed in the different-

sized cans, a complete record of sales and sales costs should be kept up to date. There is thus available at all times a perpetual inventory of "spot stock" (canned goods) on hand, the cost of making and selling each kind of finished product, and the prices realized for each grade or class. Such information is imperative to the proper operation of a cannery.¹

SIDE LINES.

Some canneries which handle large quantities of berries conduct a fresh-fruit shipping department in connection with their other business. When the fresh-goods market is profitable all berries of shipping quality are sold fresh. The sound fruit is sent to distant markets, ripe fruit to near-by markets, and fruit ready for immediate use goes into the cannery. At times when markets are not favorable all the fruit is canned and held until it can be sold at fair prices. Where the berries in the locality are of a superior quality, such an arrangement forms an ideal combination. One cooperative cannery association has shipped as many as 21 refrigerator cars of fresh red raspberries in one express train, at the same time operating two large canneries.

Several of the cooperative canneries in the Pacific Northwest also operate evaporators in which prunes, loganberries, apples, and a few raspberries are evaporated. Other canneries have vinegar plants, some of which have failed because of lack of knowledge or because of carelessness on the part of the managers. The use of green, dirty, or rotten stock, instead of carefully selected, high-quality, sound fruit is not uncommon, and in such cases good vinegar can not be manufactured. Many cider-vinegar plants have failed because of their inability to compete in the markets with grain-distilled vinegar. However, there is generally a good market in the surrounding territory for small quantities of a good grade of cider vinegar. Such enterprises as these, however, have started on a small scale and have been developed gradually, each advance being based on past experience.

¹ The Office of Markets and Rural Organization of the U. S. Department of Agriculture has a uniform system of accounts for fruit and vegetable canneries which is available on request from canneries or persons contemplating the organization of a cannery.

MEETING MARKET DEMANDS.

It is necessary for the manager to keep in close touch with market demands, marketing conditions, trade preferences, and improvements in the canning business in order that he may be able to market the products of the cannery to the best possible advantage. There are various preferences in the different canned-goods markets, which should be studied carefully before the markets are entered. The trade demands that certain products be put up in certain degrees of sirup, cans of various sizes, etc., and the successful cannery must conform to these demands.

The cost of produce, cans, packing, and freight is as great on a water-packed product as on the best sirup grade, the only additional cost of the latter being that of the sugar which enters into the process. Since goods of the higher grades usually bring far better average returns to the producer than those of the lower grades, farmers' canneries always should strive to increase their production of the best grades.

A few of the canneries successfully put up jellies, preserves, and high-grade products in glass. Others prepare berries for soda-fountain use by what is known as the cold-process method, and make sirups and other necessary fruit supplies for the fountain trade. Such business, if properly handled by an expert processor who can prepare the products in the best form possible, is a paying feature. In many cases fruit juices are placed in cans during the canning season and made up into jellies and jams, soda-fountain sirups, and similar products during the winter. This practice provides almost continuous employment for some of the skilled labor.

During the packing rigid inspection should be maintained in order that a product of uniform grade may be put up, and samples should be taken of each day's pack. Each shipment should be sampled before being sent out, and the sample tested in order to avoid any loss from inferior or spoiled goods which could not be detected from the outside, but which could be ascertained by opening the container. At all times the ultimate consumer should be kept in mind, as no cannery business can endure which does not please the final purchaser of its products.

The cannery must be in a position to furnish the trade regularly with the same products year after year. It is not possible to keep proper connections and retain the business which it has taken some time to build up if but a short supply is available one year and a comparatively large pack is put up the next. The best business that a cannery can cater to is that which will purchase certain quantities and kinds of different products year after year.

A large portion of the pack must be sold for future delivery, and, as jobbers insist that the goods be forthcoming, it is evident that great care must be exercised in estimating the pack in order to prevent an oversale. It is not unlikely that a number of cars will be sold as early as April for September or October delivery. Sales of mixed cars may be made, which it will take from June to November to get together if the order contains early products, such as strawberries, and fall products, such as squash or pears. Such sales necessitate large warehouse facilities.

FINDING A MARKET.

It is usual to market the products of the cannery through the regular organized and recognized trade channels for canned goods. The home trade or near-by trade should be canvassed thoroughly, as this business is much more profitable and satisfactory than that handled in more distant markets. Several canneries have attempted a special feature in marketing by putting up a miscellaneous assortment of canned goods to be sold directly to the consumer, but this has not met with any degree of success. In one State a large number of the cooperative canneries have formed an association and appointed a joint agent, who is a canned-goods broker, to handle their output. There is great need for greater cooperation among farmers' canneries in the standardization of packs, as well as in the formation of a uniform sales policy or central sales agency as far as the law permits.

The buyer or broker should be furnished with plenty of samples of everything packed and kept well acquainted with the varieties, grades, and quality of all products. Samples which are used for this purpose should be put up in the best possible form and should represent accurately the quality

of the goods manufactured, both for the purpose of making sales and for the protection of the cannery in matters of rejections and adjustments.

Printed price catalogues should be prepared by the manager of the cannery and furnished to all jobbers, brokers, and others who are in the market for canned goods. All of the various factors entering into the determination of quotations should be considered very carefully—the actual cost of production, prevailing wholesale prices, condition of the market, probable output in other localities, and such other local factors as may be of influence. As conditions change throughout the season, quotations should be revised accordingly. The retail prices at which the goods probably will be sold also should be kept in mind in making quotations and fixing upon the grades which will be pushed. Specialization on the higher grades and higher-priced products will probably result in a greater return and larger profit to the cannery, since it is the general experience that high grades bring the best net returns to the producer.

By taking advantage of the experiences of others through many failures and by following closely the methods of successful organizations, farmers should succeed in the business of cooperative canning and find a ready market for their products.

