

# COOPERATION IN THE HANDLING AND MARKETING OF FRUIT.

By G. HAROLD POWELL,

*Pomologist and Acting Chief, Bureau of Plant Industry.*

## INTRODUCTION.

The handling and marketing of crops through cooperative associations is more highly developed in fruit growing than in any other agricultural industry in America. These organizations are formed to purchase the supplies used in the production and marketing of the crops, to standardize the harvesting, handling, grading, and packing of the fruit, to sell the fruit of the members as a unit under whatever system of marketing is adopted, to prevent disastrous competition by bringing about an equitable distribution throughout the country, and to handle the fruit business in other ways collectively rather than individually whenever it can be done more economically and effectively. There are several hundred of these associations among the fruit growers of the Western States and a number that are successful among the fruit growers in the central West and along the Atlantic coast.

## COOPERATION IN THE WEST.

Fruit growing is a highly specialized industry in the Western States. The growers there have often had extensive business experience before engaging in horticulture. The industry in the West is confined to the valleys and foothills or is more or less geographically localized in other ways. Land values are usually high in comparison with the price of land in the East, cultural practices are more expensive and intensive, the markets are thousands of miles distant, and the problems of production, transportation, distribution, marketing, and legislation are too complex for the average individual grower to meet and solve alone. Under these conditions cooperative effort is a business necessity, just as the consolidation of capital in other industries is necessary for its own preservation. The production, buying, distribution, and selling of crops must be accomplished by working together. Things must be done in a large way if the fruit grower is to deal on the same level with the combinations of

capital with which his product comes in contact at every step from the orchard to the consumer. The western fruit growers have therefore formed associations of various kinds to work out the problems that confront them.

At the foundation of the semiarid western horticulture lies the necessity for irrigation, and the irrigation systems, which are largely owned and controlled by the farmers, form a common tie which binds them closely together and makes cooperation in other things more easily accomplished than is the case in the humid fruit-growing sections of the East. They may cooperate to protect the orchards from insect pests and diseases or from frost, to pick the fruit, to prepare it for shipment, and to direct its distribution, storage, and marketing. They may own outfits for spraying and fumigating, packing houses that cost thousands of dollars, and storage plants of large capacity. They may develop a system of distribution and of market reporting which keeps them in daily touch with the markets in every part of the United States and Canada and with the general movement of fruit in transit. They may advertise their products extensively and through their organizations handle the legislative and other public-policy questions that vitally affect the industry.

#### COOPERATION IN THE EAST.

In the central and eastern parts of the country the growing of fruit is not usually specialized or localized. It is more likely to be an incidental feature of the general agriculture of a community. It is slowly developing into a specialized industry, especially in many sections of the East and South, though it is still largely in the hands of men whose only experience has been gained on the farm. In the eastern half of the United States, where irrigation is not required, the difficulties of production are more easily overcome, competition among fruit buyers is more or less keen, markets are comparatively close at hand, and the problems of transportation and of marketing are not as acute as they are with the western fruit grower.

The need of cooperation has not faced the eastern fruit grower as squarely as it has the grower in the West. Hence, the cooperative movement has been of slower development in the East, except in such industries as grape growing in western New York and the citrus-fruit industry in Florida, where the stability of the capital invested has been threatened as a result of a haphazard system of individual distribution or of local selling and marketing. Under these conditions there have been formed virile organizations of growers for the distribution and marketing of the products, and such organizations when properly directed have been successful.

## THE INDIVIDUALISM OF THE FARMER.

Cooperation among farmers is more difficult to effect than the consolidation of capital in other business enterprises. The farmer is the most individualistic of American citizens. It is not easy for him to transact his business with his neighbors. Independence in handling his affairs is a tradition that has been his for generations. He would rather conduct his business man to man, as his fathers have done before him, unless necessity compels him to do otherwise. The cooperative movements that have been organized among prosperous fruit growers have usually failed. The social, the political, or the altruistic motives have not been strong enough to hold a group of money-making farmers together. The only successful cooperative efforts until recently have been those which have been born of desperate necessity.

Cooperation must be effected when the fruit industry is at low ebb to have the virility to live in the face of the attacks to which all such efforts are at first subjected, but after the growers have learned the power of cooperation as a business opportunity, their organizations become permanent and exert a powerful influence in the development of a better social life and, through their participation in the progress and management of rural affairs, in the development of a better citizenship. No other agency is so powerful in bringing about better farming, better methods of handling the industry, a greater prosperity, and a better community than a group of farmers who are successfully organized to protect and develop their agricultural interests. The American farmer is beginning to realize that the powerful influence of consolidated capital has been the source of the tremendous industrial progress of the last generation. He is beginning to take a greater interest in the possibilities of cooperative action when applied to his own problems.

## FUNDAMENTAL PRINCIPLES OF COOPERATION.

There are many kinds of cooperative associations among the fruit growers of the United States. In a nonprofit association, which represents the ideal type of cooperation, the members usually have an equal voice in its management and share proportionately in its benefits and risks. Such an organization is a voluntary industrial democracy in which the fruit growers manage and control the distribution and marketing of their own products. Every member of the association is a bona fide producer and his fruit is handled exclusively by the association. All of the operations are carried on at cost, and after operating expenses, depreciation, and a reasonable interest on the capital invested in the equipment of the association are deducted, the profits are distributed to the members in

proportion to the amount of business each has transacted through the organization. The powers of the association are vested in a board of directors selected by the growers, who manage and control its affairs and business through officers or agents appointed by it and subject to its advice and direction.

#### THE ORGANIZATION OF A COOPERATIVE ASSOCIATION.

The first step in organizing a cooperative association is to incorporate it under the laws of a State. This usually has to be done under the laws that authorize the formation of stock or membership corporations, as few of the States have provided for the incorporation of nonprofit cooperative agricultural or horticultural associations.

The association needs to be incorporated on broad lines. The articles of incorporation should set forth the purpose for which the association is formed and should provide for every activity in which it may wish to engage. They should define the principal place of business, the life of the association, the number and power of the directors, the voting power and property rights of the members, the amount of the capital stock, and all other things of a general nature that are needed to be included in the incorporation of such a body.

A code of by-laws needs to be adopted for the government and management of a cooperative association. The by-laws should define the method of exercising the power of the corporation through the board of directors and the officers appointed by it, the conditions surrounding the admission of members, the dues or stock to be paid by each, and the conditions surrounding the same. They should provide broad powers for the manager, including the supervision of the harvesting, grading, packing, distribution, and sale of the fruit, or for such of these operations as the association may wish to perform. They should define the grades to be adopted by the association for each kind of fruit. They should contain a provision by which the grower gives the association the exclusive right to market the fruit, with the possible exception of the lowest grades, and to harvest, grade, and pack the same. This includes the selling of the fruit for the members either as individuals or through pools of fruit, a penalty to be collected by the association for every package sold outside of the association. These objects are attained by the signature of the farmer to the by-laws of the association, or the association may require a special contract to be executed with the cooperating member.

The methods of providing money for operating expenses, such as a fixed assessment against every package of fruit handled by the association, and the method of prorating the balance if the total amount of the package assessment amounts to more than the operating expenses, and other things usually included in such organizations should be set forth in the by-laws.

## TYPES OF COOPERATIVE ASSOCIATIONS.

The fruit growers' organizations vary in form from joint-stock companies composed of growers or dealers or of both, who distribute their own products or the products of others to the simple nonprofit form of cooperative association which purchases the supplies and distributes the products of its members at cost. The voting power of the members in the different associations varies from a single vote for each member to a vote proportional to the amount of stock owned by each or to the acreage held by each. His voting power may depend on the probable crop production or the actual production of the preceding year. The capital may be contributed in limited amount equally by each member in proportion to the acreage held by each or to the probable production of each member, or unequally without reference to either of these factors. It may be contributed by business men who are not fruit growers, but who desire to encourage the formation of associations; or the capital stock may be subscribed as an investment, and a high rate of interest paid on it before the profits are distributed to the growers. Some of the associations handle fruit on speculation or for nonmembers at a specified rate per package.

All of these types of so-called cooperative associations and many others are in operation with a greater or less degree of success. The most virile and effective from the standpoint of the producer are those which are strictly cooperative, nonprofit in type, each member contributing an equal amount of capital and having an equal voice in its management or a voting power and capital contribution in proportion to the acreage of bearing fruit held by each. The association handles the fruit of the members only, and the fruit is under the control of the association from the tree to the market. The objection urged against this form of organization is that the small grower has an equal voice with the large grower in fixing the policies of the associations. The objection to the voting power based on acreage is that the exceptional grower has no more influence than a poor grower of equal acreage. There is equally strong objection to the form of power based on production, as the pro rata of production may vary with the seasons. All of these objections are discussed in the following pages.

## CAUSES OF FAILURE IN COOPERATIVE ASSOCIATIONS.

Not all of the cooperative associations are successful. In fact, comparatively few of them have been distinctly successful, especially among the early associations formed before the citrus-fruit growers of California organized to distribute their products and to protect the capital invested in their industry. The citrus-fruit organizations, most of which are founded on the true cooperative, nonprofit

basis, have had a far-reaching influence on the cooperative movement in the United States.

The orange and lemon growers of California have the most powerful and successful organizations to be found in any agricultural industry in the United States, if not in the world, one organization acting as an agent in distributing \$15,000,000 worth of fruit a year for its 6,000 members, organized into more than a hundred associations on a nonprofit basis. This agency sends fruit to every part of the United States and Canada and to several foreign countries, maintaining its own exclusive representatives in all of the principal markets of America. Many of the cooperative associations organized in recent years have been formed on the principles that underlie the citrus-fruit associations, and these, when wisely managed, have shown great strength.

#### THE MANAGEMENT OF A COOPERATIVE ASSOCIATION.

Several factors have contributed to the downfall of fruit-growers' associations. Many of them have been formed by impractical, often unsuccessful enthusiasts with high motives, but with no business experience and little standing in their communities. Others have been formed ahead of their time when the industry was too successful for the members to be held together. Many of them have been managed by incompetent, low-salaried men, not infrequently by those who have been unsuccessful in business. The successful handling of a cooperative association requires a manager who is competent to assume the general direction of the affairs and business of the association. He must have a high order of business ability, sterling integrity, unusual tact and judgment in handling men, and unlimited energy. An association under any other kind of management is not a serious business undertaking.

It is more difficult to direct a cooperative association than a stock company or corporation. In the latter the manager is responsible to a board of directors, but the stockholders do not often take an active interest in the management of its affairs. In the cooperative association the manager is also subject to the advice and control of the board of directors, but the farmer who joins with his neighbors in an association is likely to take more than a passing interest in the management of the association. A manager who can not hold the interest and the confidence of the members, who can not make them feel that they have a voice in the management, and who fails to develop a progressive, constructive business policy will fail in handling a cooperative organization. Nor can such an organization succeed if the directors do not realize that it must have a strong, competent, aggressive, well-paid manager at its head. It is not too much to say that no single factor has operated against the success of the cooper-

ative associations as much as the incompetent managers selected by the directors of the associations to handle them. A board of directors can not manage a cooperative agricultural association. The outcome of the organization will be determined in large degree by the character and ability of the manager.

#### THE PAYMENT OF DIVIDENDS.

Another factor that has operated against the success of many so-called cooperative associations has been the payment of high dividends on the capital invested, the stock having been subscribed unequally by a comparatively few members. The organization in which the business is not transacted at cost can not hold the confidence and support of its members. The payment of one or two high dividends on the capital stock before the proceeds are distributed to the growers has caused the downfall of many associations that have been well organized in other respects. Another dangerous element has been the ambitious effort of new associations to buy and sell fruit and supplies outside of the membership. The speculative element must be rigidly excluded from cooperative associations. The harvesting, grading, packing, and handling of fruit not grown by members invariably leads to a lowering of the established standards of grading and packing and to injury to the reputation and financial standing of the association.

#### DISLOYALTY OF MEMBERS A CAUSE OF FAILURE.

Many cooperative efforts fail through the disloyalty of members when the association is subjected to the skillful, insidious fire of those who oppose it. The farmer is not used to having his business attacked, and those who are interested in disrupting the organization appeal directly to his pocketbook by attempting to show that the association does not realize as much for the fruit as the farmer could realize outside the association. They also persistently insinuate that the association is grossly mismanaged.

It is a favorite practice of the opponents of cooperative distribution and selling to offer association members a premium on their fruits. The apple grower is tempted by a premium of 25 to 50 cents a barrel over the probable return of the association; the peach grower by an advance of 10 to 20 cents a box or basket, and the pear or small-fruit grower by an equally attractive bonus. The man with a small crop and a still smaller capital often falls before this kind of temptation, and if it is held out long enough the association may be disrupted. These devices are coming to be well understood and the fruit grower who joins an association in good faith and sells out for a small premium is in danger of losing the respect and confidence of his neighbors.

## THE MEMBERSHIP CONTRACT.

It is a fundamental necessity that the members be held together by a contract or a provision in the by-laws which gives the association the exclusive right to pick, pack, haul, grade, mark, and sell the fruit of its members, or to perform as many of these operations as it may decide to perform, or to supervise or regulate these operations under rules made by the association. The contract should be drawn for a term of three to five years, giving the grower the privilege of withdrawing by notice at the end of any fruit year, thereby making his continued connection with the association voluntary. The contract should specify a penalty to be assessed against every package of fruit sold outside of the association, this penalty to equal not less than 25 per cent of the value of the fruit. Under any other plan an association can not build on a solid foundation. It can not foresee the probable volume of business to be transacted, nor can it provide the means to purchase the supplies for handling the crop or reach that degree of stability that is essential to the success of a business undertaking. The membership contract with the grower is the foundation stone on which the business of the association is reared and without which its existence and stability are problematical.

## COOPERATION IN THE PURCHASE OF SUPPLIES.

In every cooperative association there should be a division for the purchase, sale, or manufacture of supplies of every kind used in the production, packing, handling, shipping, and marketing of the crop. The association should be prepared to purchase fertilizers, materials, and equipment for spraying and fumigation; the facilities used in frost protection, pruning, or harvesting; orchard machinery; or any other equipment on which a saving can be made by cooperative purchase. It should be prepared to purchase the supplies for fruit handling and marketing, such as box shooks or packages, picking boxes, nails, wrapping paper, and all kinds of packing-house equipment.

The money needed to operate this purchasing division may be raised by assessment, by the individual notes of the directors of the association, or in other ways. The association should sell the supplies to the members at a fair market price, and at the end of the season should prorate the surplus to the members or invest it in the business, after deducting the operating charges, depreciation, and other necessary expenses, including interest on the assets and capital devoted to this supply division.



## COOPERATION IN THE HANDLING OF FRUIT.

The condition in which fruit reaches the consumer depends largely on the care with which it is handled. The most common rots of apples and pears, of small fruits, and of citrus fruits are directly related to the mechanical bruising of the fruit, most of the diseases not having the power of penetrating a healthy, uninjured skin. The association must therefore provide rigid rules for picking. It must either supervise the harvesting, grading, and packing of the fruit and provide for the most rigid inspection of every lot before it is accepted by the association for shipment, or else the harvesting, grading, and packing must be done by the association. In most of the associations where the fruit is not packed in central packing houses, it is picked and packed by the grower according to the rules of the association, and inspected by an employee of the association before it is accepted for shipment.

This system works fairly well with the small fruits and the deciduous summer fruits, which have to be handled quickly from the field to the consumer. It is not a satisfactory system to apply to the citrus fruits or to the apple or pear crops. With these the handling, grading, and packing must be standardized, and this can be done only when the association controls all of the handling operations or actually performs them. Many apple associations establish rules of grading and packing. The association grower picks and packs the fruit, and the association accepts or rejects it by inspecting the packages when delivered at the railroad station, the association warehouse, or some other point. But experience has shown that the grower can rarely be depended on to pick and pack the fruit in the best manner. It requires skilled labor, and fruit grading and packing is an art that is acquired by few individual fruit growers. An association, therefore, that operates on this principle seldom reaches the highest degree of success, and is likely to fail outright.

A better plan is to have the grower pick the fruit when directed to do so by the association. It is then graded and packed according to the rules of the association in the orchard or in the fruit house on the farm by trained men in the employ of the association. Under this plan the grading and packing of the fruit of the entire membership can be done with comparative uniformity. Even then the packages need to be inspected before they are accepted by the association. Every package rejected should be regraded and repacked or placed in a low grade. This system is in operation in several of the most successful cooperative apple-growers' associations in the United States.

Another plan is to grade and pack the fruit at a central packing house owned and controlled by the association. The growers pick the

fruit, haul it to the packing house, and there it is graded and packed by the association. This is the plan that was formerly in general operation in the orange and lemon growing districts and is followed to a limited extent at the present time. The objection to this plan is that no two growers handle the fruit with equal care, and the different lots of fruit therefore vary in physical condition and in susceptibility to decay. Under this system there is a wide variation in the percentage of decay that develops in the fruit of different members while in transit to market. If the fruit is pooled, the grower who handles his fruit carefully has to share the losses that develop in the fruit that has been carelessly handled.

The most satisfactory plan in the citrus-fruit industry (and this may be applied to some other fruits) is to have the association train gangs of laborers who shall pick the fruit of all of the members. The laborers should be paid by the day, as contract or piecework places a premium on rapid, careless work. In this way the picking can be standardized, the quantity of fruit that passes through the packing house can be controlled, and the grading and packing can be uniformly done.

This system has been generally adopted in the citrus-fruit industry as a result of the investigations of the Department of Agriculture into the causes of decay in oranges and lemons while in transit from California to the East. This investigation showed that the decay was the result of the improper handling of the fruit in preparing it for shipment, and that it could be controlled by placing the handling of the fruit entirely in the hands of the associations. The same laborers often fumigate the orchards of the members for scale insects and spray the trees wherever spraying is practiced.

#### THE CENTRAL PACKING HOUSE.

The tendency in the cooperative movement is toward a central packing house where the fruit of the members is brought together and is graded and packed for shipment. In the small-fruit industry this plan is hardly practicable. It is sometimes successfully operated in the deciduous-fruit and in the grape industries. There are about 200 of these association packing houses in the citrus industry in California, and the Florida citrus growers are rapidly organizing along these lines. A packing house is erected by the association, usually alongside the railroad, and is equipped with the necessary appliances for fruit handling and packing, the manager of the packing house being usually the general manager of the association. Precooling and cold-storage plants, box-nailing and labeling machinery, and other devices required in the industry are to be found in many of the association houses.

## THE POOLING OF FRUIT.

There is a growing practice in the cooperative associations to pool and sell the fruit as a common commodity under the brands of the association rather than to sell the fruit of each grower separately. The pool is an arrangement by which the similar grades of fruit of all of the growers are united and sold together. At the end of a pool, which may vary from a daily pool in the summer-fruit business to a monthly or semimonthly pool in the citrus-fruit business or a season pool in the apple industry, the grower receives his pro rata of the proceeds based on the number of pounds or packages of each grade that he has contributed. In theory the grower has the privilege of contributing to each pool his pro rata of the fruit of the association as a whole, the manager of the association usually apportioning to the growers their quota in accordance with their respective acreage. The pooling arrangement greatly simplifies the practical business methods of an association.

The successful working of the pooling system depends on having the handling, grading, and packing of the fruit under the direction or control of the association. It may but does not often succeed where these operations are in the hands of the grower. It depends, further, on having a large proportion of the fruit of the association of uniform grade. There is considerable variation in the average quality of different lots of fruit in the same grade, even under the most rigid system of grading. The fancy grade of one grower may average better than the fancy of another, though the fruit of both is entitled to be graded fancy under the established rules of the association.

No grower is willing to admit that he does not raise the best fruit in his community, and where it happens that his fruit falls below the average and he is paid for a larger proportion of the lower grades than his neighbor he may become dissatisfied, when he will either drift along and finally leave the association or will adopt better cultural methods. In some communities there is a friendly rivalry among the association members in securing the largest proportion of the higher grades of fruit. The grade of fruit grown under similar conditions of soil and location depends largely on the cultural skill of the grower, and the publicity that the association affords regarding the results of grading the fruit of different growers is a strong factor in stimulating better cultural methods in a community as a whole.

On the other hand, the pooling system may not encourage the unusually skillful grower to develop fruit of the highest average grade. If he stands alone as a skillful grower, he will not get the full

advantage of his extra-fine fruit in the pool, as the practical effect of the pool is to lower the average price of extra-fine fruit and to raise the price of fruit that can barely enter a grade. An association ought, therefore, to be composed of members located similarly as to soil and other physical conditions and having similar cultural skill and, preferably, similar acreage. Unless these fundamental conditions are carefully guarded, the pooling system may tend to lower the average grade of the fruit of a community because the grower, realizing that the identity of his fruit is lost in the pool, may grow careless in his cultural practices and trust to the better fruit of his more careful neighbors to raise the average net returns of the grades in which his fruit is pooled.

#### THE SIZE OF A COOPERATIVE ASSOCIATION.

In theory a large association can handle a business more economically than a small one. It is not usually practicable in the orange business, for example, to organize an association and build a packing house unless there are at least 150 cars of fruit to ship. The largest associations do not often ship more than 750 cars, and only a few of these large associations are highly successful, as they are likely to become unwieldy and difficult to hold together.

There is a wide difference in the character of the fruit grown on different soils at different altitudes or with other dissimilar physical conditions. The variation shows in the texture of the skin, in its color and clearness, in the flavor of the fruit, and in those qualities which give it style and attractiveness. There is no system of grading by which the fruit grown under different conditions can be made uniform and similar. An association should therefore include not only those growers who are similarly skillful, but also those whose fruit naturally shows similar characteristics.

In a community in which the fruit is somewhat variable it is a wiser policy to organize several associations, each with its brands of fruit, than to attempt to market all of the fruit under the same brand through one organization. These organizations may act independently in the purchase of supplies and in the marketing of the fruit, or they may federate and form an agency to act for them in the distribution and marketing of the fruit, in the purchase of supplies, and in promoting the cooperative movement in other ways. It is only under this method of organization that the cooperative association can reach its highest development as a business organization and have its greatest effect in the development of better methods of fruit growing and in rural development.

## THE ORGANIZATION OF THE CITRUS-FRUIT INDUSTRY OF CALIFORNIA.

The citrus-fruit industry in California, which has developed commercially since 1873, when the Washington Navel orange, originally grown in Brazil, was sent to Riverside by the United States Department of Agriculture, represents an investment of 150 to 175 million dollars. The annual shipments of oranges and lemons have reached the enormous total of 40,000 to 50,000 carloads, with a value in California estimated to vary from 20 to 30 million dollars. Between 125,000 and 150,000 acres have been planted to citrus fruits, and from 100,000 to 150,000 people depend on the industry for a livelihood.

The industry is localized largely in southern California, though it is extending rapidly in the interior valleys to the north. No other horticultural industry in the United States of equal extent is so compactly located. None presents more difficult problems or requires a more skillful distribution and marketing of the crop. Oranges and lemons are distributed from California practically every day in the year for distances of thousands of miles to all of the important cities and towns in the United States and Canada, and some are exported to other countries.

When the industry was small no complicated problems of distribution or marketing faced the grower. The fruit was sold for cash to buyers on the ground or to brokers who represented distant commission houses or other interests, or it may have been sent direct to a commission firm in some far-away city. As the industry grew larger and there were several thousand carloads of fruit to sell, the grower began to realize that the systems of selling the fruit already in operation were inadequate to bring to him the proportion of the returns which his capital was earning and to which he considered himself entitled. Under the system in operation there were frequent gluts in a few of the markets and apparently no effort among the buyers to equalize the distribution of the fruit geographically or throughout the year. The buyers were said sometimes to have fixed the maximum price which would be paid the grower and to apportion the citrus-fruit area into districts so as to reduce competition among themselves. The result was disastrous to the producer and became so serious in the early nineties as to threaten to wipe out the capital invested in the industry.

About this time the growers began to organize small associations for the purpose of preparing the fruit for shipment, and in order that it might be assembled in quantity and sold for cash or shipped as a unit. Mr. T. H. B. Chamblin, of Riverside, was the pioneer in organizing the citrus-fruit growers in southern California. The Pachappa Fruit Association was the first one formed, about 1888. A number of these growers' associations were soon formed, and in

1893 a plan was outlined by Mr. Chamblin, and finally adopted in principle, which federated a number of the associations and provided for the preparation of the fruit for market by the local associations, for the organization of district exchanges to be made up of the local associations, which were to receive orders for the fruit and apportion them among the associations, it being the intent at that time to ship only such fruit as was sold before picking, and the formation of an executive committee, made up of representatives from the district exchanges, to market the fruit.

Out of this federation grew the Southern California Fruit Exchange in 1895, and later, in 1905, the California Fruit-Growers Exchange, which now handles about 60 per cent of the citrus fruits grown in California. There are many other associations of growers not connected with the exchange which are organized on the same general principles, and these associations, together with the exchange and a few large growers who market their own fruit, handle about 85 per cent of the citrus-fruit crop.

In order that the principles which underlie the largest cooperative fruit-marketing organization in the United States may be understood, a brief outline of the exchange system follows:

The California Fruit-Growers Exchange represents about 6,000 growers who have organized themselves into 100 or more local associations. The association usually owns its own packing house, where the fruit of the members is assembled, pooled, and prepared for market under brands adopted for the different grades by the association. The association usually picks the fruit of the members.

The associations in the different regions combine into one or more district exchanges which represent the associations in the business operations common to each and which sell the fruit in cooperation with the California Fruit-Growers Exchange through the district or local agents of the latter or at auction, receiving the proceeds therefor through the California Fruit-Growers Exchange, an incorporated agency formed by a representative of each of the sixteen district exchanges, which acts as the selling agent for these district exchanges. The California Fruit-Growers Exchange takes the fruit of the district exchanges after it is packed and with their advice places it in the different markets, sells it through its own exclusive agents to the trade or by auction, and collects the proceeds and transmits them to the district exchanges, which in turn pay the growers through the local associations.

The central exchange, the district exchange, and the association all transact the business for the grower at actual cost. The central exchange through its agents is in daily touch with the markets of America, thereby enabling it to distribute its fruit intelligently. The local exchanges and the associations receive a daily bulletin from the central exchange which outlines the condition of all the

markets the preceding day, states the selling price of all exchange cars, and gives the growers such information as will help them to pack and distribute their fruit to the best advantage.

The limits of this article are too restricted to permit more than a brief outline of the battle that the citrus-fruit growers of California had to wage for fifteen years before the cooperative principle was on a firm foundation. At first, the growers were inexperienced in meeting the attacks of those who were opposed to cooperation among the producers. Powerful financial interests of various kinds were arrayed against them and were organized to oppose them. Vicious attacks were made on the integrity of the officers. The results obtained by the associations were belittled, the growers' association contract was assailed in the courts, and the methods of marketing the fruit were attacked. The most determined efforts were made to show that the growers' organizations were illegally formed. Finally the growers combined with the buyers at one time to market the entire crop, but this incongruous combination of producers and dealers was dissolved at the end of a year and a half.

The history of the citrus industry in California is largely a record of the progress in the cooperative handling and distribution of the crop by the producer and of his determination to receive an equitable share of the value of the labor expended in its production. The battle has been won; the cooperative principle is firmly fixed. It is the balance wheel that gives stability to the industry and to the relations that exist between it and the agencies with which it transacts business.

Fewer serious efforts are made now to break down the cooperative principle among the growers. New schemes of fruit marketing are proposed from time to time, the organizations are frequently attacked in the courts under one guise or another, and other insidious movements are started, all having in view the possible splitting open of the cooperative organizations and a return to the methods of marketing which would destroy the systematic distribution and marketing now in operation and reinstate the chaotic speculative methods that were formerly in vogue. The cooperative movement in the citrus industry is the result of a slow, painful evolution, and the grower does not appear to be deceived by these efforts, no matter how ingeniously and artfully they are conceived.

#### SELLING THE FRUIT BY COOPERATIVE ASSOCIATIONS.

The cooperative associations sell the fruit in a variety of ways, the method of sale depending on the character and condition of the industry and the practices that have grown up around it. A large proportion of the deciduous summer fruits is sold f. o. b. cars at

the point of production, subject to inspection on arrival in market, or for cash f. o. b. cars, or at auction. Some are consigned to commission merchants. From 25 to 30 per cent of the citrus fruits of California are sold at public auction in the eastern and central-western markets, and a large proportion of the western deciduous fruits is sold in this manner. Among the apple associations it is a common practice to send to the trade in advance of the harvest a catalogue of the probable number of boxes of the different varieties and sizes of the higher grades of fruit that the association has for sale, and finally to sell the fruit to the highest f. o. b. bidder. The lower grades are consigned to commission firms, are sold for cash, or are marketed in other ways.

Few of the organizations, except those that transact a large business—like the citrus-fruit growers of Florida and California, the peach shippers of Georgia, and the deciduous-fruit shippers of California—have attempted to regulate the distribution of their products throughout the country, nor have any serious attempts been made to carry the distribution beyond the wholesale dealer, the broker, or the auction companies. The cooperative method has brought about large economies in the purchase of supplies, in the cost of preparing the fruit for shipment, and in the charges for distribution and sale. It has improved the methods of fruit packing and grading enormously. It has sometimes doubled the net returns to the individual grower for his product. The difference in the price that the association receives for the fruit and that which the consumer pays is often 100 per cent or more higher than the original selling price, and this contracts consumption.

As long as the country is prosperous and the present method of distribution and sale does not cause a disastrous oversupply in the principal markets, the growers will be satisfied to continue the methods now in operation. But as the fruit business increases it will be necessary for the growers' associations to develop methods for increasing consumption. This will be accomplished by a more general distribution of their products, by the development of their associations into marketing organizations, by equalizing the distribution of the fruit over a longer period through a greater use of cold-storage warehouses, by stimulating a greater interest in fruit consumption through systematic advertising, and by placing the fruit in the consumer's hands at a cost nearer that which the producer himself receives. As the American fruit business increases, the grower may be expected to bring about as great an improvement in the methods of distributing and selling his products to the consumer as he has already accomplished in the handling, grading, packing, and preparation of the fruit for market.