

Orphan Subtropical Fruits

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Mr. Chairman, Friends and Neighbors:

Are you looking around for some kind of fruit which is not already embarrassed by surplus production, which you can produce commercially at a profit on high priced land? We already have with us many delicious subtropical fruits growing and fruiting well in the yards and gardens of Southern California. We have guavas, loquat, cherimoya, feijoa, sapote, puckerless persimmon, macadamia nut, Natal plum, and tuna cactus, to mention only a few. None of these are burdened with surplus production. In fact, it is very difficult to find them in the markets. If you enjoy them and wish a dependable supply, you must grow them in your own back yard. Then why should not the citrus grower who is wrinkling his brow over prorates, plant out 20 acres of guavas, 30 acres of loquats, or 50 acres of cherimoyas? The answer is "Because the product of such an acreage could not be sold." Why not? For the simple reason that all of these fruits, however attractive and delicious, are horticultural orphans, foundlings left on our doorstep by botanists, government plant explorers, and plant introducing nurserymen. No one of them has had the benefit of a promotional association to introduce it to the American public and break through the hide-bound conservatism of fruit retailers.

Consumer Education Necessary

Retail florists are not resistant to novelties. They welcome them. No education is necessary to enable people to admire and purchase a new and beautiful flower. But just place a box of some new and strange fruit on a retail stand, and at once the customers begin to ask all kinds of questions. Now, the fruit retail salesman is supposed to operate the scales and make change. Conversation on his part is usually frowned upon by his employer. The fruit dealer does not propose to hire clerks to educate the public. No Sir! If any producer wishes him to handle a new fruit, let him first advertise it so well that customers will come to the stand, ask for that fruit, pay for it quickly, and move on to make room for other customers. In some chains self help has now been extended to the fruit and vegetable departments. Of course there are a few stores catering to the highest class of trade which will, chiefly for the sake of novelty, feature subtropical varieties which ordinary stores will not stock. Such stores as Diehl's in Santa Barbara; the May Company in Los Angeles; the Model in Pasadena; and Hamiltons in San Diego often have small displays of cherimoyas, loquats, or sapotes, as well as some tropical fruits, such as mangoes and papayas. But the prices at such places are usually so high

as to preclude their purchase by any except rich people. The total volume moved is negligible. It takes the chain stores to move volume, and their buyers are hard boiled when it comes to novelties. They will not handle anything which their customers are not already asking for. They would like to reduce rather than increase the number of items stocked. No one grower alone can afford to advertise and introduce a new fruit to the trade. It requires too much money and time, and even if a grower did thus develop a demand, other growers would be quick to take advantage of it and skim all the cream from his market.

Avocado No Longer an Orphan

Twenty-seven years ago the avocado was just another orphan fruit. At that time a number of altruistic individuals banded together in the California Avocado Association. The first seven years they contributed time and money to promote the avocado industry for everybody. Then Calavo was organized and soon opened and operated a retail avocado store on South Hill St., Los Angeles, for the purpose of finding out consumer reaction to the avocado, and to learn how to teach dealers the business of making money selling avocados. When retailers objected to the bother of handling this new fruit, the Association furnished free printed information to hand out with the purchases. Later this was improved by Calavo and printed on paper bags, literally millions of which have been freely given to retailers. This is to mention only one of many ways in which the avocado was promoted by the Association. Only by banding together can a job of this sort be done. It was a long uphill fight in the case of the avocado, but it has been accomplished by the growers themselves on a cooperative basis. This is very different from the huge investment in stocks of private corporations, as was the case in the development of the banana and pineapple industries.

Cooperative Promotion

Attempts have been made to promote cooperatively at least three of our other well known subtropical fruits; vis., the Japanese persimmon, the pomegranate, and the passion fruit. In each of these cases, according to my information, the main object of the cooperators was to establish grades and brands, and save money by combining packing and shipping operations. In my opinion, the chief reason these three cooperative efforts are suffering regression is because their leaders did not take a broad enough view of their industries as a whole. It is simply a question of making the public want the product on the one hand, and overcoming dealer resistance on the other. Two of these fruits already enjoyed large scale commercial production in foreign lands; the persimmon in the Orient, and the passion fruit in Australia. But even with this initial advantage, which the avocado did not have, the passion fruit association is dead and the persimmon organization is in a comatose state.

The Cherimoya

But what about some of the others? Take the case of the cherimoya, an easily grown fruit which is handsome, intriguing, delicious, and is liked by almost everyone. Some

people are inordinately fond of them. It ripens at a season when there is little competition with fresh grapes, figs, peaches, etc. Certain varieties keep and ship well. But a lot of water will have to flow under the bridge before many carloads of standard commercial graded and packed cherimoyas are rolling to market.

The first step is to find a group of people who are altruistically enthusiastic about cherimoya culture. They form an association or society for the general promotion of the cherimoya industry. They put some money into it and work out a definite plan of development. There will be many cultural problems with respect to varieties, propagation, pollination, cultivation, pruning, etc. Insect pests and diseases of which we now know nothing will inevitably arise as plagues to delay progress. There will be packing-house problems of grading and shipping; problems of cold storage and handling. There will be a modest start at advertising for not yet do the babies in the East wake up in the night and cry for their cherimoyas!

The proposed association is now ready to ask the University for some assistance along many lines of research, and it will likely be forthcoming quicker and more voluminously than would be the case if any one grower acted alone. There may be by-products; canned cherimoya juice, cherimoya cider, and all kinds of by-products from the seeds. Pests and diseases will have to be studied; maturity standards and picking schedules worked out. By the time the members are producing a fair tonnage of fruit, a cooperative packing and marketing association should be formed. The selling of the pack will consist of two principal lines of work; educational advertising to make the public want cherimoyas, and dealer service work to prove to the retailers that they can make money selling cherimoyas.

Meanwhile certain growers, "rugged individualists," will decline to join with the association in promoting the industry, but will market their fruit in increasing amounts as the demand grows. This phenomenon has happened many times with other things, such, for example as fountain pens and electric razors.

Incidentally, before we leave the cherimoya; in 1930 Elwood Trask of Carlsbad found a new seedling cherimoya at Chula Vista which he and I propagated and introduced as the "Ryerson," being named for Dean Knowles A. Ryerson of the University of California at Davis. This is a small sized, smooth, fairly roundish fruit which has a skin tough enough to stand a lot of packing and handling. It is a good bearer and matures rather late. It is being offered by a commercial nurseryman for the first time this year. I would recommend the Ryerson for consideration by the Variety Committee of some future California Cherimoya Association.

The Japanese Persimmon

Take the case of the Japanese persimmon, a fruit which grows easily and fruits so bountifully that in tonnage per acre it is surpassed only by the prune. The experience of the Persimmon Growers' Association is that consumption of fresh persimmons, particularly in the East, is quite limited and does not tend to increase without consumer advertising. Competition of other more widely known fresh fruits is too severe. The persimmon industry has been at a standstill for some time and some orchards have

been pulled out. Some time ago an effort was made to commercialize dried whole persimmons. Fifty 25 pound boxes of this product were shipped to a wholesaler in New York. Inasmuch as New York consumers are not in the habit of eating dried persimmons, had not been asking for them at the stores, no dealer would buy them. They stood in the warehouse for over a year, finally became wormy, and the entire lot was shipped out and dumped in the ocean.

Dried Persimmons

Now in my opinion the dried persimmon is the Aristocrat of all dried fruits. I have dried them many times for my own use and greatly enjoy them as do also our friends. In my opinion there is a good opportunity for a large and profitable dried persimmon industry in Southern California. Instead of being limited to ten weeks like the fresh fruit, it can be used the year around. But such an industry will not come of itself any more than a mountain trout will jump out of the brook, flop its way to the camp fire, clean itself, and nestle down in your frying pan! Verily "The Lord helps those who help themselves". According to our scheme of organized society, we live by serving our fellow man. Science and labor saving methods and machinery have made it easy for the old wants to be fully satisfied with a smaller amount of effort; thus having some left-over or unused effort which is now commonly referred to as "unemployment" The remedy, as I see it, is to devise new wants of various and sundry kinds to take up the slack and thus provide more adequate opportunities for the services of our fellow men. No product can be classified as a form of wealth until it is wanted. The public must be made to want these new products whether they are loquats, nylon stockings, or dried persimmons, before we can hope through the medium of money to exchange dried persimmons for nightshirts, kilowatts, or gasoline.

Method of Interesting Dealers

In my judgment, what the persimmon industry needs is a committee filled with enthusiasm for the product. First a method of drying the fruit cheaply and efficiently must be worked out. The final product must be strictly high class. Then comes the problem of gaining the interest of the dealers. I think this should be started in a very small way, the lessons of experience taken full advantage of. Concentrate first on a certain group of health stores in Los Angeles County. Work out attractive recipes for the use of chopped dried persimmons in cookery, salads, etc. Print and distribute small but suggestive leaflets. Feature dried persimmons for special purposes such as home packed school lunches. Persuade some high class restaurants to feature dried persimmon pie and advertise it as I saw pecan pie advertised and featured in a swank eating place in Houston, Texas. Ask the association membership to help by purchase and sending of gift packages of dried persimmons containing advertising matter to their friends both here and in the East. Do this not only at Christmas but at other times of the year. Capitalize on seedlessness as compared with dates, figs, and prunes. Make a special effort with stores catering to Japanese and Chinese trade as these races have known and used dried persimmons for centuries. Contact the agencies which make a specialty of fancy gift packages of mixed nuts, dried fruits, and candies for Christmas

trade. Copyright a suitable trademark to make it less easy for competitors to filch association built business. The merchandising committee should follow every possible sales clue in order to progress along lines of least resistance.

The growing of a relatively unknown fruit in commercial quantities is one thing. The turning of that product into an amount of money greater than the cost of production is quite a different thing, calling for a type of mental activity foreign to such things as cultivating, irrigating, and pruning, and commanding a higher rate of compensation. But the two are intimately associated, and unless the grower retains the direction and control of the disposition of his product, ruthless competition between disinterested processors and dealers reduces quality; and consumption is soon discouraged to the vanishing point. A good example of that is found in the California Ripe Olive industry. Some of us know what a struggle the Cooperative Oroville Olive Growers have had in marketing their high quality Wyandotte and Table Mountain brands in competition with the flood of poor, cheap, woody stuff turned out by the commercial pickling plants.

Grower Must Retain Control of Distribution

When the grower relinquishes control of the handling and sale of a new product he is headed down hill. Some of you remember C. P. Taft of Orange. He originated better varieties of loquats than any in the world, and received an award of the Meyer medal in recognition of this outstanding work. Mr. Taft planted out a large commercial acreage of these fine loquats and when they came into bearing, I took my students there to see and study loquat culture at its best. But Mr. Taft did not care to be bothered with the merchandising of these fine loquats. He sold the crop on the trees to a firm of Italian fruit dealers in Los Angeles. In their greed and haste to market the fruit earlier each year they harvested them greener and greener and sourer and sourer, until consumers quit buying them, the upswing of demand leveled off, finally sank to about zero. Then this entire fine orchard was pulled up and the land is now occupied by Valencia oranges which are contributing to the present orange surplus.

Mr. P. O. Popenoe once told me of his experience with itinerant avocado buyers. Back in 1920 or thereabouts he sold his bearing grove of mixed varieties in Altadena for subdivision. The subdividers sold the crop on the trees to a fruit buyer. When he came to pick, Mr. Popenoe went into the grove with the intention of being helpful and to point out which varieties were mature at that time. The men paid no attention to him and proceeded to pick everything clean. Mr. Popenoe was horrified and remonstrated, but to no purpose. The picking boss considerably explained to him that many kinds were green in color when mature and that the general public did not know the difference. The buyer felt sure that he could get them all sold for more than he paid for them, and be somewhere else when the kicks began to come in. That was before the day when this Association, with an eye to the good of the whole avocado industry initiated the 8% minimum oil maturity law which has meant so much to us.

Lemon Guava

Some years ago our good friend Dr. Webber, on a visit to Hawaii secured a fine lot of

lemon guava plants which were planted at the Citrus Experiment Station. These plants grew, thrived, came into bearing, and bent low with prodigious crops of fine fruit which dropped on the ground and went to waste. After this had continued several years, a fruit buyer heard about them through a Mexican laborer at the Station. He bought the crop on the trees and sold them in the Mexican quarter of Los Angeles where Mexican consumers have brought from their native land an appreciation of and fondness for lemon guavas. The following year this same dealer bought the crop and I was told that the cash income from the area in guavas considerably exceeded the income from a similar area in oranges. Here is a budding industry, but we can hardly expect the Citrus Experiment Station to act as a wet nurse to this little orphan fruit, the lemon guava. I suspect that unavoidably the attitude will have to be: "Here they are boys, put your money down, and first come first served." Now if this instance runs true to form I would expect some other Mexicans to wake up to this little piece of business and promptly "horn" in on it. In their haste to get into an earlier market they will pick them greener and greener; and sourer and sourer, and handle more and more carelessly until the consumer in Mexicantown will quit buying them; the game will be through, and another little orphan fruit business will turn up its toes. To my mind this simply means that the employer (in this case the consumer) becoming dissatisfied with the character of the service performed by the distributor, fired him. The distributor can turn to other work much easier than the grower can pull out his guava trees and grow something else. Thus we see the vital necessity of the grower inaugurating and controlling the avenues of distribution.

Besides the cherimoya, Japanese persimmon, loquat, and lemon guava, there are a number of other fruits with good possibilities of commercialization.

Red Strawberry Guava

An easily grown delicious fruit suited to eating out of hand and for jelly making. Certain problems of propagation, thinning and pruning for large sized fruits, and cheap machine harvesting could, in my opinion, be easily worked out. No doubt the chief utilization of the guava would be for jelly, for which it is unsurpassed among fruits. As far as I know, there are as yet no improved named varieties, seedling plants being all so far available from nurserymen.

The Feijoa

The feijoa is more fortunate with respect to varieties, the Coolidge being a satisfactory commercial sort. The fruit is attractive and good for fruit salads and cocktails. It makes a fair jelly and jam, but the natural color is not attractive. As a whole it has less possibilities than the red strawberry guava, but the plant has the advantage of being much more hardy to frost and easier to propagate.

The Sapote

The sapote is a widely grown yard and garden fruit which is easy to grow and fruits well.

The flavor of the fruit does not have a universal appeal. There is a peculiar bitter tang which is disliked by many, and the lack of acidity tends to cloy the appetite. However, some persons are very fond of sapotes. The fresh fruit is very soft when ripe, and I think there would be difficulties connected with its commercial distribution. I have never heard of any product, such as jelly or jam, being made from sapotes.

The Passion Fruit

This is a good fruit which can and has been easily grown in commercial quantities in California as well as Australia. An association was formed at Vista which for a time operated a packing-house and juice plant. Some advertising was done, but promotion on an industry basis was not sufficient to enable the growers to overcome the set back caused by the 1937 freeze. I believe that the association has now ceased to function, but a few growers are still shipping some fresh fruit independently. Prices are too low to be profitable. In my opinion, the first thing for any passion fruit cooperative to do would be to send a trained observer to Australia to study their industry in a broad way, including production, distribution, and consumption habits. There must be some good reason why the passion fruit has achieved a commercial success in Australia.

Puckerless Persimmon

Here is an entirely new form of an old fruit, a large beautiful orange red persimmon which can be picked from the tree, peeled and eaten crisp like an apple. Two good varieties are available from nurserymen. They grow easily and bear well. This new and intriguing fruit is fairly itching to be promoted by some enthusiastic group of persons. My imagination runs riot when I try to think of the free advertising in the news columns a shrewd publicity man would easily get on some such thing as the puckerlessness of this non-puckering and unique fruit.

Natal Plum

Here is a fine little fruit, well suited to home grounds which I doubt is worthy of much promotional work. It is ideal to eat out of hand, use for color effect in fruit cocktails and salads, and makes a fair jelly. It has to compete with the strawberry guava which is not thorny, can be harvested much more cheaply, and yields many times the volume of product.

Macadamia Nut

This tree grows and bears well as isolated specimens in California. I understand that an effort is being made to commercialize this culture in Hawaii. Good varieties have been originated, propagation methods worked out, a shelling machine has been invented, and small quantities of shelled macadamia are already on the Los Angeles market. I hope the Hawaiian growers have organized an association to make the American public macadamia conscious. Otherwise these trial shipments may be lost in a sea of other

edible nuts of various kinds, domestic and foreign, which threatens to overwhelm us.

Tuna Cactus

This fruit grows well and bears prodigiously under favorable conditions in California. Good varieties have been introduced by the Government, and some very delightful and handsome spineless varieties were distributed by Luther Burbank. The fruit is unknown to the American public, but Mexicans and Italians especially and people native to the borders of the Mediterranean Sea are accustomed to consume this fruit and will buy it in some quantity. There are three commercial plantings in California, one at San Jose, one in San Fernando, and one near Lakeside. The fruit of the second is sold in the Los Angeles Mexican quarter at very low prices. I understand that about eight cars of packed tunas from the San Diego County planting are shipped to New York each year for those peoples who furnish this demand. It is a question if the American public could be brought to accept present varieties. Much breeding work would have to be done to fully eliminate spicules as well as spines, and to improve the flavor before a promotional effort would be warranted.

The Pomegranate

Here is a fruit as old as civilization which is highly ornamental, delicious, and nutritious. It has long been grown in California where the yield is heavy and the quality excellent. Some years ago an association was formed in Tulare County to pack and market the fruit. For a time 100 or more carloads were shipped East. However the fruit was used mainly for decorative purposes. Eastern consumers were never taught how to eat the fruit. Here it was a question of badly needed education not being furnished by the growers. Some years ago the University published a bulletin on pomegranate culture in which the proper method of opening the fruit, so that the beautiful red arils may be eaten without the bitter membrane, was described and illustrated. So far as I know the association made no educational use of this information. The University also worked out practical methods of preparing pomegranate juice free from tannin which was an exceptionally fine product. From what I can learn, the pomegranate industry having filled the demand for ornamental uses, is now marking time waiting for some outside promoter to promote. It would be far better for the growers to get together and do their own promoting. In my judgment there is a big opportunity in the pomegranate ready to be seized by some live group with vision, realism, and enthusiasm.

The Carob

This horticultural orphan scalawag has been in disrepute for some time; having been adopted by sundry foster parents from time to time, and as often left stranded by the wayside. It is not surprising that chambers of commerce are inclined to be suspicious when the carob is mentioned. But really, the carob in California is more a subject for pity than scorn. It has never had a chance to show what it can do. The tree grows well and fruits heavily, and is a very common ornamental and shade tree throughout the subtropical Southwest.

The pods of the fine budded varieties have been a staple food for man and beast (although chiefly for beasts) for many centuries in the Mediterranean countries. For a long period of years I have paid particular attention to carob culture and I am convinced that there is a place for a fair sized carob industry in the arid Southwest even considered basically as a cattle food with barley at \$30 a ton. Nothing would give me more pleasure than to see the carob given at least one fair chance at commercial production under the propulsion of a legitimate promotional association. Shades of Cajalco! I stand here and stubbornly insist that there is nothing fundamentally wrong with the carob. Some day it will be given an opportunity to demonstrate its usefulness as a food tree in America.

Mr. John S. Armstrong

In closing this discourse on subtropical fruits in California I consider it altogether appropriate to offer a word of tribute in appreciation of the fifty years of work by a great horticulturist, John S. Armstrong, President of Armstrong Nursery Company at Ontario. He is a charter member of this our avocado association and has constantly supported it both morally and financially. Through his beautifully illustrated catalogs, and constant search after new and better varieties of subtropical fruits, and through his wide distribution of these plants in the gardens of thousands of homes, he has made it possible for us to learn the environmental complex best suited to each kind. I am very happy to take this opportunity to tender my respect and felicitations to Mr. John S. Armstrong.