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**PROCEEDINGS OF THE  
CARIBBEAN FOOD CROPS  
SOCIETY**



**SIXTH ANNUAL MEETING  
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## THE IMPORTANCE OF PROPER TRANSPORTATION IN MARKETING OF FRESH PRODUCE

John Grace\*

Barbados Vegetable Growers' Limited was formed in 1964 to expand the sales of produce other than Sugar. Yams have formed the bulk of our handling but many other crops have been sold on the local market, the West Indies and Overseas. From time to time crops handled have included Eddoes, Sweet Potatoes, Pumpkins, Avocados, Mangoes, Breadfruit, Sweet Peppers, Beans, Christophene, Seasoning.

Following up on reports of mixed reception and generally bad out-turns and consequent claims on early shipments, it became necessary to go into all aspects of what happened to the produce from the time it was reaped until the consumer used the products. (Quote Boy and Egg Story) The expansion of Markets and Supermarkets means that the housewife, who after all usually buys the food for the household, has a wide variety from which to select and will, on most occasions, buy the produce which looks best.

Generally shape, size and colour are subject to grading standards, however presentation and the final appearance can be quite different. Handling, packaging, transport and conditions all have a bearing on the picture which strikes the housewife when she goes to select and purchase fruits and vegetables. In addition, we must make sure that the taste is as good as the appearance to ensure a satisfied consumer who will repeat her purchase often.

With this background, we set about to determine the effects of Transportation (including handling, storage, packaging) had on getting good produce to the consumer in better condition, particularly where the produce was known to have a comparatively short shelf life.

### SWEET POTATOES

The work of Iton in St. Vincent highlights some of the main factors. However, the need for further work to determine if these were primary, secondary or contributory factors seemed evident.

Starting therefore to determine the physical difference of 15 varieties, it was found that for shape, skin texture and colour only 4 qualified for further determination; the Cookstand, 049, T25 and 6104. Of these it was found that the varieties did not behave identically in the various soil types in Barbados and a further qualification was necessary taking into consideration mainly the tilth, compaction and drainage of the soil.

The further determination took into consideration bag packing against cartons or crates which were self supporting. The effects of fungicides on bruised and undamaged produce was also studied. The effect of temperature and humidity has been published in U.S.D.A. handbook and was accepted.

The findings established that the Cookstand grown in loose soil could and would

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with careful handling and packed in crates stand up for a period of six weeks. When treated with Decco the shelf life was extended for another two weeks. In the case of bruised or squeezed potatoes, these spots showed breakdown and rot within two weeks when not treated and four weeks when treated. Cookstand grown in heavy soils are not suitable as they are mis-shapen.

So far the shipment in ordinary ventilated conditions have proved acceptable and by overcoming losses in bad handling, packaging and transportation, the extra yield has covered the costs involved, given the grower twice as good a price and better satisfied the consumer who is therefore likely to want to consume even greater quantities.

#### BREADFRUIT

In Barbados there are two distinct varieties determined by the colour. What is responsible for the difference we do not know, but each behaves quite differently in handling, storage and transportation. Accordingly we only accept one variety.

After selecting a Breadfruit on the tree, the utmost care and attention must be paid to all stages through which it must go before reaching the consumer. Its first journey after it is picked must come to a gentle end either by being caught or into a bag. It must never be bounced or allowed to fall on the ground.

Experiments with treatments and dips to prolong the traditionally short life of a Breadfruit have not been conclusive and are being continued. The use of sealed polythene bags has also lengthened the storage life but detracts from appearance at the time of sale due to the presence of moisture on the inside.

So far export shipments have been restricted to air freight and this is likely to continue. In view of the high expense of this item every care and attention to providing breadfruit of the right variety, carefully handled and packed is an absolute must; as a small claim from the receiver could easily outweigh even the original cost of the fruit.

The physical transportation illustrated in the two instances vary in so far as one is by air and the other by sea to export markets. The mode decided upon is governed by the life of the product. (It would be expensive to fly sweet potatoes but it would be a total loss to sea freight breadfruit) however, if the product is not right no matter how good is the packaging and handling, it will not reach the consumer in good condition. (Quote experience breadfruit, mangoes, beans, avocados also ground provisions ex Dominica) thus resulting in a heavy loss which will reflect in the growers price.

Now buyers *always* purchase produce on sound arrival conditions and prices usually conform to market conditions. In Barbados we import from the adjoining islands a large quantity of fresh citrus fruit. The wastage is an astronomical percentage. Why? the packages are too large, the schooners are too slow and irregular, the fruit is not selected. Who suffers? the growers, as the anticipated losses must be covered; and the consumer, who has to pay a price for inferior quality to offset these losses.

It is incumbent therefore on growers to be certain of the quality and variety of their produce, for the exporter to use the most appropriate packaging; for both to handle their produce most carefully (Quote U.S.A.: Sweet potatoes pickers use

gloves) and that the appropriate conveyance be dependable for schedule and storage conditions, thus transporting the produce to the market in such a way as to encourage regular and repeat sales.

The need for greater research and guidance on these matters is clearly evident from the various market reports obtained from time to time. It is hoped Governments will regard these so that growers' efforts to improve quality and yields will be rewarded with the best possible price as a result the importance of efficient and economical transportation being regarded as a pre-requisite in the marketing of Fresh Product.