



TOGETHER
for a sustainable future

OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.



TOGETHER
for a sustainable future

DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

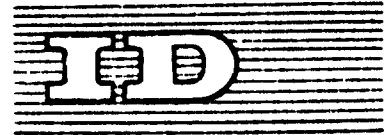
CONTACT

Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org



002915



United Nations Industrial Development Organization

Distr.
LIMITED

ID/WG.98/19
18 October 1971

ORIGINAL: ENGLISH

Expert group meeting on processing
selected tropical fruits and vegetables
for export to premium markets

Salvador, Bahia, Brazil, 25 - 29 October 1971

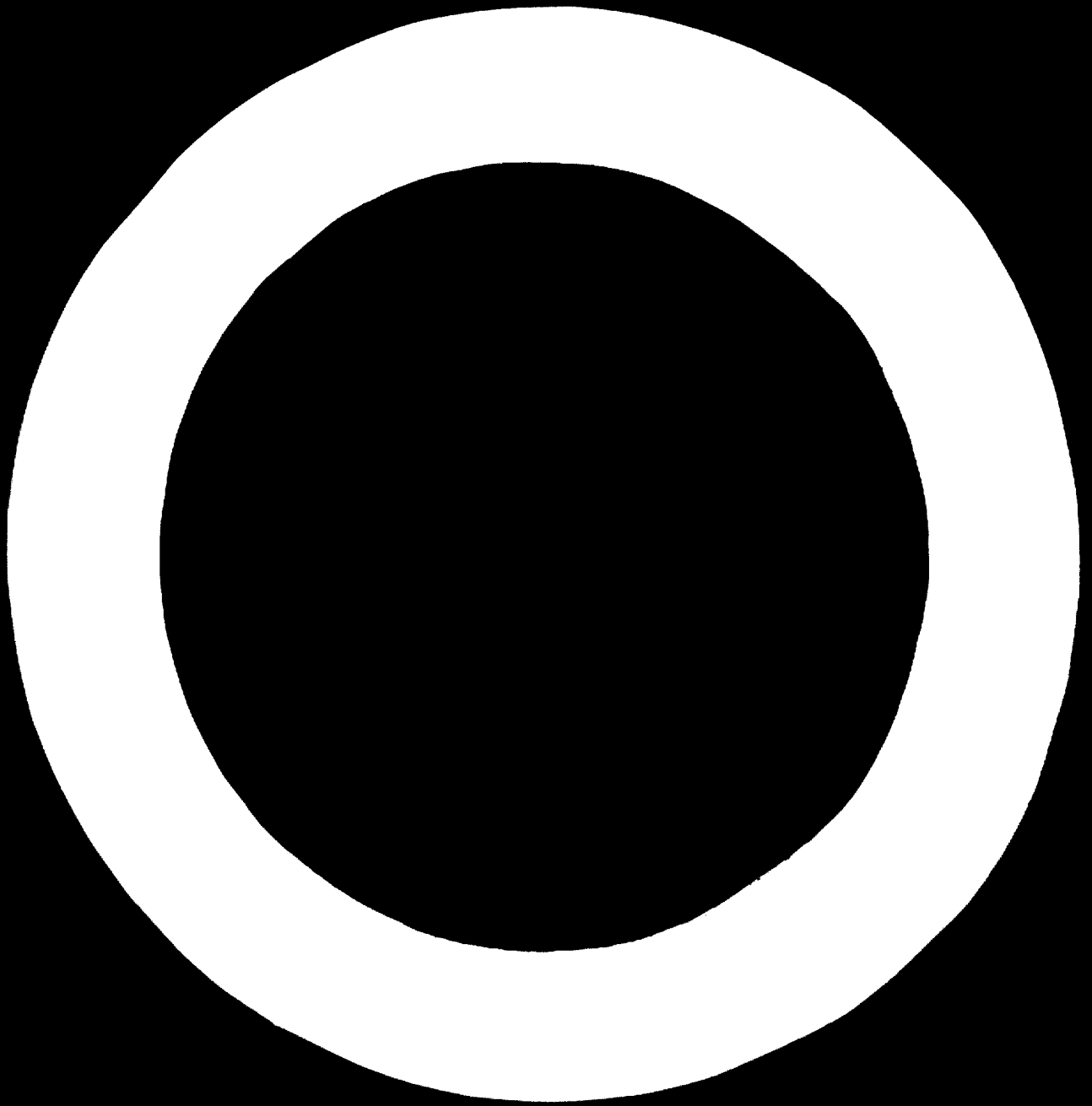
EXPORT MARKET OUTLETS FOR BRAZILIAN
CANNED FRUIT AND VEGETABLES ^{1/}

by

John G. Clarke
FAO Marketing Economist

^{1/} The views and opinions expressed in this paper are those of the author and do not necessarily reflect the views of the secretariat of UNIDO.
This document has been reproduced without formal editing.

We regret that some of the pages in the microfiche copy of this report may not be up to the proper legibility standards, even though the best possible copy was used for preparing the master fiche.



C O N T E N T S

	Page
I. INTRODUCTION	2
II. GROWTH IN CITRUS INDUSTRY	3
III. OFFICIAL INCENTIVES TO EXPORT	4
IV. RESPONSE TO EXPORT INCENTIVES	6

I. INTRODUCTION

Spanning a vast area of the tropics and sub-tropics, Brazil has a formidable potential for production of a wide variety of fruits and vegetables. In world terms it is already a significant producer of bananas, oranges and tomatoes, for example (in 1968, respective volumes of these three items were 5½ million tons, 3 million tons, and ¾ million tons, according to FAO data).

It must be regarded as something of an anomaly, therefore, that Brazil's share of world export market for fruit and vegetables, in either fresh or processed form, is insignificant. That is to say it is insignificant with the outstanding exception of one product, frozen orange concentrate, production of which is almost entirely originating in the state of São Paulo. This item has achieved a remarkable rate of expansion on Brazil's foreign markets in the last ten years. No orange concentrate was produced or exported before the year 1962, yet by 1966 Brazil was effectively the leading exporter of this high-value agro-industrial product^{1/}. (See Table I)

TABLE I - BRAZIL: Exports of orange juice concentrate by countries of destination, 1966-1970 (in metric tons)

Country	1966	1967	1968	1969	1970
1. West Germany	5,041	7,169	5,485	9,582	19,050
2. Canada	4,102	2,569	6,273	4,676	4,289
3. Netherlands	988	2,231	4,070	3,506	4,103
4. Israel	589	498	-	550	1,372
5. Sweden	247	281	603	834	1,041
6. United States	2,040	3,403	12,239	2,824	1,005
7. United Kingdom	369	770	594	479	582
8. Others	553	1,726	832	794	1,426
TOTAL	13,929	18,647	30,096	23,245	33,468

Source: CACEX, Bank of Brazil

Note: Essentially all orange concentrate exports emanate from the State of São Paulo.

^{1/} Although the United States showed slightly higher export figures for orange juice concentrate in 1966, it had imported 2,000 tons of concentrate from Brazil for re-export purposes.

It is instructive to contrast the dynamic export growth of this specific sector, orange concentrate processing, with the static situation pertaining to the remainder of the fruit and vegetable industry in Brazil. For the last seven years (1964-1970) Brazilian exports of concentrate have grown in value by an average of over 40 per cent each year, and in 1970 reached a new record value of \$ 15 million. Brazil's annual rate of growth in value for all agricultural exports (excluding coffee) in the period 1960-1968 was 8.2 per cent. However, no fruit or vegetable product, apart from orange concentrate, contributed to this healthy net growth rate. Fresh oranges declined in value and fresh bananas remained static in value of exports over this period. Cashew nut and oil did grow significantly in export value, but are not further considered for the purposes of this paper. Clearly, the orange concentrate sector of the food industry has amply justified the Brazilian Government's expectations of increasing foreign exchange earnings from the export of processed goods based on Brazil's rich resources of raw materials.

Nor does there appear to be a prospect of concentrate juice production reaching a peak in the near future. Indeed, the immediate indications are for an acceleration in the rate of expansion of present facilities together with plans for the construction of more plants.

II. GROWTH IN CITRUS INDUSTRY

Annual increases in fresh orange production in São Paulo State alone have been large in recent years, increasing ten-fold since 1950. Official State orange crop forecasts for the 1971 season are put at 46 million boxes. Authoritative estimates of 1972 production are for 52 million boxes (2,120,000 tons) and by 1975 at least 60 million boxes (2,450,000 tons) and possibly in excess of 70 million boxes (2,850,000 tons).

However, these large increases in fruit availability are likely to be more than matched by the juice concentrate industry where rapid expansion of existing plants is known to be underway. Whereas there were 75 juice extractors installed in plants in 1970, the number has risen to 126 extractors in 1971. Approximately six extractors are required to handle each one million boxes of fruit in a season, thus current capacity is adequate for more than 20 million boxes amounting to 45 per cent of the expected orange harvest for the State in 1971.

Besides this expansion at the existing seven processing plants, new installations are being constructed. One plant, completely owned by 160 citrus growers organized as a private company, began operations with six extractors at the beginning of the 1971 season. This plant has been designed for a further 18 extractors which are scheduled to be installed by 1973. A further four proposed concentrate installations within São Paulo State are in various stages of planning. If all these proposals are put into effect, the number of extractors operating in 1973 may well be in excess of 180 with a total capacity of 30 million boxes per $1\frac{1}{4}$ million tons of fruit. The dimension of the industry growth should be measured against the estimated industry intake of 2 million boxes in 1964 and 15 million boxes in 1970.

III. OFFICIAL INCENTIVES TO EXPORT

Numerous beneficial factors have contributed to the successful innovation and expansion of Brazil's concentrate juice industry. Among these factors, most important are:

- Plentiful and expanding supplies of suitable low-cost raw product, enabling the industry to compete effectively in world markets;
- a comprehensive, efficient, and self-sustaining industrial base laid down over the last 20 years, which has recently been able to flourish under more prudent management of financial and economic institutions;
- the generally beneficent and facilitating Government services provided for new industries, especially in agriculture, and more especially to those with an export market component;
- an adequate infrastructure of auxiliary services such as transport, power, and communications, which extend into rural areas.

It should be added with regard to the last point that the main citrus producing areas for the processing industries are fortunate enough to be located in the State of São Paulo where the country's level of economic development is most advanced and where more than 50 per cent of total industrial capacity is located. Oranges are grown throughout Brazil but to date no export plant has been established in any other State.

Considerable and increasing help has come from official financial institutions, particularly the Federal and State development banks. Funds

now available from various sources for export financing may be summarized as follows:

1. Short-term financing up to 180 days either through the Bank of Brazil for the manufacture of goods for export, or through commercial banks in the form of advances on any exportation exchange contract
2. Medium to long-term financing (180 days to 5 years) through the various official development banks and also through CACEX, the Export Department of the Bank of Brazil.

For example, the Development Bank of the State of São Paulo (BADESP) which was created in April 1970 provides loans for various purposes to selected industries. BADESP will provide 100 per cent of working capital requirements up to US\$ 120,000 at an annual interest of 8 per cent plus small handling and inspection charges. BADESP offers other types of loans in much larger amounts which can also be used for operating expenses under slightly different terms and at interest charges of from 7 to 12 per cent per annum according to the priority of the project. Priorities are established according to the following criteria:

1. Location of enterprise outside the Greater São Paulo municipal area.
2. Contribution to increasing exports.
3. Reorganization of existing enterprises, or introduction of new products on the market.
4. Increasing the technical level of the relevant industry.
5. Economic and social impact of the project.

Quite apart from the provision of loans and encouragement of capital formation the Brazilian Government also gives other attractive incentives to exporters. Most important of these are the fiscal incentives which may be summarized as follows:

1. A deduction from corporate taxable income may be taken, equivalent to the proportion which gross export sales of approved products bear to total sales.
2. Exported products are exempted from excise tax (IPI) and provision is also made for the recovery or compensation of excise tax paid on materials used in the manufacture of goods for export - for example the steel drums in which concentrate is packed.

3. Exemption from taxes and duty is given on materials and equipment imported for use in the production of export goods.
4. Exemption from sales tax (ICM) is granted on export goods - this tax is currently at 17 per cent.

Mention should also be made of other forms of Government assistance which have been instrumental in advancing the industry. These include the State Experimental Stations of which the one at Limeira, São Paulo, specializes in citrus research and which has been responsible for providing more than a million high quality scions to growers. Development work for processors is carried out in the Government's Institute of Food Technology (ITAL) in Campinas, ranging from plant layouts to determination of juice characteristics for processing. This Institute is also closely involved in several of the new projects for plant installations.

IV. RESPONSE TO EXPORT INCENTIVES

In view of these attractive inducements to find export markets, the lack of response of the fruit and vegetable processing industries warrants further examination. It should first be stated that the food processing industry in Brazil is sizable; while global figures by product category are difficult to collect, data for the largest firms in the food industry in 1969 revealed 8,650 establishments with an annual value of production close to US\$ 3 billion. In 1970 the largest fruit and vegetable processing company in Brazil reported a net profit (before taxes) of US\$ 2.7 million, giving a return on invested capital of 24 per cent. This company has virtually no export market programme.

Attitudes of Brazilian food processors to export marketing ventures were revealingly outlined in a detailed questionnaire sent to a representative sample of the larger food processors by ITAL in 1970. In reply to one question whether these firms exported and if not, why not, the most frequent answer was that export marketing was much more difficult and in any case was not as profitable as selling on the domestic market. Annual average net profits for ten large fruit and vegetable processors replying to the questionnaire were 8 per cent in recent years and this figure was significantly higher than for other food industries such as dairies, flour mills, or oil extractors. This profit level contrasts very favourably with figures for United States canned fruit and vegetable firms, where a profit factor of 1.5 per cent was stated to be the average for 61 canning firms according to a 1966 study (Reference 3.).

One of the largest Brazilian canners responded at length to the ITAL questionnaire where it probed industry attitudes to official incentives to export. This company stated that it was not sufficient to create fiscal incentives alone with the expectation that private enterprise should then be able to solve the technical and marketing problems involved in export sales. While the incentives were very substantial, it was maintained that they were not widely disseminated. Furthermore, the incentives did nothing to aid the industry, composed mainly of small and medium capacity plants, in the difficult and expensive task of locating adequate foreign markets and promoting the sales of Brazilian products in such markets. The company suggested that the Government also needed to provide finance and facilities for:

1. International market research;
2. Liaison with private industry to pinpoint and exploit foreign market opportunities;
3. Technical and marketing assistance in feasibility studies for export product development; or
4. Financial provision that would enable the industries themselves to contract the kind of activity shown in 1., 2., and 3.

A factor which is likely to affect the export market situation, indirectly but significantly, is the extremely high protective custom duties afforded the Brazilian fruit and vegetable processing industry through the country's tariff code. Most processed horticultural products face an import duty of not less than 185 per cent which rate in effect completely insulates the local product from any form of external competitive pressure on price. A few processed fruits, including peaches which are the main canned fruit in Brazil, may enter under a duty of 85 per cent, and roasted nuts including cashews range from 55 to 70 per cent.

It is not the point of this paper to argue the case for and against protective tariffs, which is a particularly relevant subject on the international scene. It is pertinent to point out, however, that the Brazilian fruit and vegetable canning industry would have extreme difficulty in maintaining its present pricing structure if it were exposed to the effects of international competition in this highly competitive product field. The accompanying Table II attempts to relate current retail prices for selected canned products in Brazil to the price range obtaining in two of the premium markets of the world, the United Kingdom and the

United States. The figures shown cannot claim to compare exactly similar products of precisely equivalent weights but they are sufficiently reliable to indicate the invariably higher cost of the Brazilian product over the general range of prices. Frequently, the Brazilian item closest to the item being sold in the United Kingdom or the United States market is twice the price. Such a price differential must go a long way to explaining the Brazilian canners' unwillingness to enter the export market, which would be both more difficult and less remunerative compared with the market on its doorstep.

TABLE II - PROCESSED FRUIT AND VEGETABLES: Representative retail prices of selected products in three countries, Brazil, United Kingdom, United States - 1971

Product (canned or bottled)	Size or weight (approx.)	Retail price range by country ^(a) in US dollars ^(b)		
		Brazil	United Kingdom	United States
Peaches	A2 $\frac{1}{2}$ -1 kg	.40-.80	.35 (South African)	.30-.40
Pineapple slices	A2 $\frac{1}{2}$ -1 kg	.55-1.10	.30-.45	.35-.40
Mango slices	A2 $\frac{1}{2}$ -1 kg	.57-.80	.45 (South African)	.35 (Indian)
Fruit salad	A2 $\frac{1}{2}$ -1 kg	.82-1.05	.40-.60	.50-.60
Frozen orange concentrate	250 gr.	.31	.25 (United States)	.20
Asparagus spears, white	1T-16 oz	.68-.85	.70 (United States)	.50-.55
Tomato paste	14 oz	.23-.29	.21-.29	.22-.24
Tomato ketchup	14 oz	.43-.46	.20-.30	.25-.40

Sources: Brazil: primary data from sample survey
 United Kingdom: "The Grocer" Buff Price Lists
 United States: "Canner-Packer" and other sources.

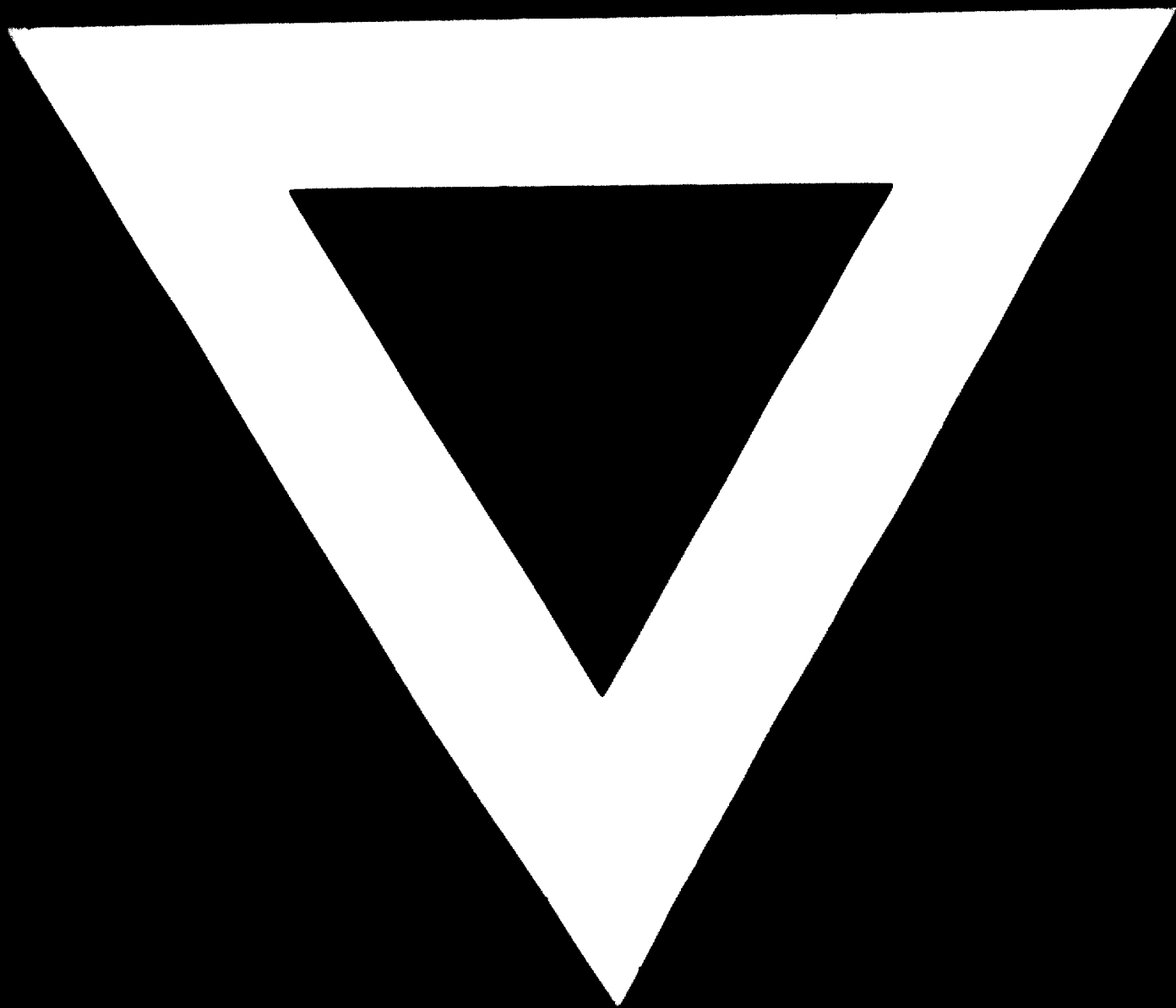
N.B.: (a) Special or promotional prices are excluded
 (b) Prices converted at the rate of:
 Brazil-Cr\$ 5.25 = US\$ 1.00
 United Kingdom: US\$ 2.5 = £ 1.00.

Further study would be required in order to determine the causes of the higher prices of the Brazilian products compared with others. The main problem areas likely to be encountered in the planning and implementation of food processing enterprises in developing countries have been adequately described elsewhere (References 1. and 2.).

If such research could lead to the stimulation of other Brazilian fruit and vegetable industries to emulate the performances of the frozen orange juice sector, the resultant effect on the country's foreign agricultural trade would be well worth the effort.

REFERENCES

1. Abbott, J.C., "The Economics of Food Industries in the Developing Countries", FAO Monthly Bulletin of Agricultural Economics and Statistics, Vol. 16, No. 3, March 1967.
2. Mittendorf, H.J., "Marketing Aspects in Planning Agricultural Processing Enterprises in Developing Countries", FAO Monthly Bulletin of Agricultural Economics and Statistics, Vol. 17, No. 4, April 1968.
3. National Commission on Food Marketing, Organization and Competition in the Fruit and Vegetable Industry. (United States Government Printing Office, Washington, 1966).



74.09.12