



**TOGETHER**  
*for a sustainable future*

## OCCASION

This publication has been made available to the public on the occasion of the 50<sup>th</sup> 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](mailto:publications@unido.org) for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at [www.unido.org](http://www.unido.org)

14816

Distr.  
LIMITED

UNIDO/PC.117  
30 May 1985

UNITED NATIONS  
INDUSTRIAL DEVELOPMENT ORGANIZATION

ENGLISH  
ORIGINAL: SPANISH

---

Round-Table Ministerial Meeting on  
Co-operation among Developing Countries  
in the Food-Processing Industries  
Novi Sad, Yugoslavia, 7-11 May 1985

NATIONAL PAPER .

CUBA\* . (Food processing industry).

Prepared by

Ramon Portela

Director of Development and Ministerial Adviser  
Ministry of Food Industries

3484

---

\* This document has been reproduced without formal editing.

I. Agriculture and food have been areas within the national economy to which the Cuban State has given high priority, bearing in mind that the basic aim of the socio-economic changes being made in the country is the continual raising of the standard of living and quality of life of the people.

In the food sphere major advances have been achieved in a quantitative and qualitative improvement in the diet of the Cuban population. However, this is still insufficient and the proposed targets call for a substantial increase, not only in the quantity, but in the structure, supply and quality of foods. Despite the efforts made so far and the encouraging results achieved, the country still has not attained self-sufficiency in food and is therefore continuing to work and carry out research to find alternative forms to provide the optimum solution.

In scientific and technical research devoted to agriculture and food, apart from committing substantial material and financial resources, Cuba employs more than 2,000 high level specialists grouped mainly in the following national institutions: the Cuban Academy of Science, the universities, and the Ministries of Agriculture and of Fisheries. Altogether these comprise more than 30 institutes for research and development in the field of agriculture and stockbreeding, food and fisheries.

The global development objectives have been directed towards achieving agriculture and stockbreeding suited to tropical conditions, and significant results have been obtained in these areas.

Hundreds of Cuban technicians and specialists have collaborated and continue to collaborate with many developing countries, communicating their experiences in the field of development of agriculture and stockbreeding, food and fishing. In addition, major bilateral co-operation programmes are in progress with countries and institutions to the mutual benefit of both parties. This co-operation, which is particularly profitable and useful to underdeveloped countries, must be substantially extended as a means of combating the underdevelopment of peoples.

A number of ideas on possibilities for co-operation in these areas are set out in the document which will be circulated to the participants in the meeting.

## II. JOINT ENTERPRISES

### JOINT ENTERPRISES AND OTHER CO-OPERATIVE MEASURES FOR THE PRODUCTION AND MARKETING OF FERTILIZERS, PESTICIDES, AGRICULTURAL MACHINERY AND EQUIPMENT, CROP IMPROVEMENT AND STOCKBREEDING

The adoption of forms of co-operation for the proposals set out above would be viable provided that equivalent trade channels were established in each particular sphere and in all spheres of co-operation taken as a whole.

The Republic of Cuba considers that it is appropriate to expand its collaboration in the field of production of fertilizers and pesticides, since this is a truly young industry and one at an early stage of development. With regard to the sale and marketing of these products, most of Cuba's needs are met by imports from various sources and consequently any co-operation that may be established will have to take account of these features.

With regard to the production and marketing of agricultural machinery and equipment, it should be pointed out that there are already co-operation programmes with some countries for the production of these items. With regard to the marketing of the items in question, the country has increased its production particularly in the form of a varied range of implements to meet the agro-technical requirements of various traditional tropical crops. This experience may provide a

basis for the possible sale of these items in other countries, particularly developing countries, and in this context alternative forms of co-operation could be set up.

With regard to crop improvement the country has registered highly significant progress, particularly in such crops as tobacco, rice, fodder, kenaf, grains (beans and maize), vegetables etc. In the area of improved fodder grasses and the production of improved seed, the co-operation programme has been both bilateral and multilateral. Nevertheless, this field of co-operation can and must be further expanded as part of the technical co-operation between developing countries (TCDC). The Republic of Cuba could make its progress available to other countries by means of alternative forms of co-operation.

Stockbreeding is unquestionably the area of the farming sector where the country has experienced a major advance, particularly in the improvement of cattle. This breeding programme began some 20 years ago and its encouraging results place Cuba among the leading developing countries in the field of stockbreeding, particularly in the development of high milk-producing cattle adapted to tropical conditions.

Many countries have received Cuban co-operation not only in the supply of animals of high genetic quality, but also in technical assistance in herd management, genetic improvement, veterinary services, breeding and so on. It can be said that Cuba is one of the most experienced tropical countries in the improvement of cattle productivity.

Cattle farming has thus undergone a major advance, but that achieved in poultry and pig farming has been no less significant. In these areas Cuba is collaborating on a bilateral basis with a significant number of developing countries.

#### OPTIMUM UTILIZATION OF FERTILIZERS AND OTHER INPUTS

The effort to make a more rational and optimum use of agricultural inputs, in particular fertilizers, pesticides and herbicides, has been an essential component of agricultural research programmes. Currently two national institutes are involved in research into appropriate standards and formulae for fertilizers to be applied in accordance with the soil-plant relationship. Similar work is being carried out by the Institute for Research on Plant Health with regard to the use of pesticides and herbicides. However, the dynamics of agro-chemical development make it necessary to maintain an accelerated pace in the application of modern techniques, whether from results obtained nationally or from those derived from technology transfer.

Other inputs involved in agricultural and livestock production are the subject of systematic study in order to reduce expenditure levels, increase efficiency and obtain the maximum cost-benefit result.

With regard to the rational use of productive inputs to agriculture, it would be possible to establish a line of co-operation with other underdeveloped countries, both by offering experience obtained in Cuba and receiving experience from other countries.

#### DEVELOPMENT AND ADAPTATION OF NEW TECHNOLOGIES

In Cuba the incorporation on a massive scale of scientific and technical advances into the agricultural and stockbreeding sector has been an on-going process and will continue to be so in the future.

There have been two lines of development in the application of new production technologies to agriculture and stockbreeding. Firstly, the country's own technology has been developed from research and studies carried out by Cuban scientists and technicians in institutions specializing in the relevant-fields. Secondly, there has been a transformation of technologies, basically achieved through a process of adapting the technological advances of other countries to the particular conditions in Cuba. Moreover in many cases combined solutions have been used where local development activities are linked with technology transfer.

In a wide variety of activities in agriculture and stockbreeding whole technologies have been developed which are undoubtedly of great interest to underdeveloped countries. Other activities, however, will need to be supplemented or expanded. Consequently, with regard to development, adaptation and transfer of technology, there is a broad range of possibilities for exchange between Cuba and other underdeveloped countries.

#### FOOD LOSS PREVENTION, HIGH-YIELD VARIETIES, PRODUCTION AND DISTRIBUTION OF IMPROVED SEEDS AND EXCHANGE OF NEW GERM PLASMS

Food loss prevention is one of the most serious problems faced by the agriculture of underdeveloped countries, and it is a paradox that very often a good part of the little that is produced is lost. With regard to this, it has not been possible to develop a full programme of prevention of food losses particularly those occurring after harvesting.

A national programme to reduce harvest losses by the control of rodents was implemented and the methods derived from this programme are being systematically applied. The programme was implemented with financial and technical assistance from FAO and the results achieved were highly positive.

Combating harvest losses due to various causes, whether before or after harvesting, is a constant aim and Cuba would welcome co-operation from other countries in order to continue expanding this programme.

High-yield varieties are being tested in the case of all or almost all crops and when good results are obtained they are immediately reproduced on a commercial scale through the national agricultural extension system. In most cases the use of high-yield varieties is due to local development or the introduction and adaptation of these varieties to the local conditions. Wide experience has been obtained in this and the perfecting of the system is continuing. The interchange between countries of improved genetic stock including cultivable high-yield plant varieties and genetically improved animal strains is a field with wide scope for co-operation between underdeveloped countries and one in which Cuba would be able to offer its experience and to receive that of other countries.

#### CONTROL OF PESTS AND DISEASES

The control of pests and diseases both in agriculture and in stockbreeding has been a priority concern of the Government during the last 25 years of agricultural and livestock development in the country, in order to provide the nation with a farming industry in sound health.

In the control of pests and diseases in agriculture there are national institutions carrying out necessary research into the causes of pests and diseases and methods of combating them. These researches are based on the study of the use of chemical products, the application of biological controls and genetic improvement, always with the aim of using the most rational and economic techniques. Thousands of middle and higher grade technicians have qualified as specialists in plant health and veterinary science. They have a broad experience in combating an extremely wide variety of pests and diseases in crops and in cattle, pigs and poultry.

In this field, Cuba can offer its experience to other underdeveloped countries.

## TRADE

### CO-OPERATION IN PRODUCTION, DISTRIBUTION AND MARKETING OF AGRICULTURAL INPUTS

Co-operation in the production, distribution and marketing of agricultural products between developing countries is faced with very complex problems arising out of the social and economic structure of agriculture in different regions and countries. The fundamental reasons why co-operation between developing countries has not developed as was hoped are largely associated with the existence of internal and external constraints, as listed below:

#### Internal

Fall in food and agricultural production.

#### External

Competition from subsidized exports by developed countries.

Tariff and other restrictions on imports from developing countries.

The need to define policies and actions designed to stimulate agricultural trade, regional co-operation and food security increases in correlation with the strengthening grip of transnational enterprises on world agricultural trade. This necessity is all the greater in view of the food and agricultural domination which certain countries have acquired and the use they are making of this domination as a political instrument.

Transnational enterprises control international trade in the majority of basic agricultural products for export: 70-75 per cent of bananas, rice and rubber; 85-90 per cent of cacao, cotton, jute and forest products.

The developed countries receive a small percentage of the final price to the consumer from the sale of their basic products: 20-40 per cent in the case of tea, cacao, bananas, jute and coffee.

These facts suggest that any proposal on agricultural trade and co-operation must bear this reality in mind and face it objectively.

In the regional context and in accordance with the recommendations set out in the Caracas Programme of Action, the Group of Latin American and Caribbean Sugar-Exporting Countries (GEPLACEA) has set up a mechanism for co-operation between its member countries in the exchange of sugar cane cultivation technology, sugar production and the use of derivatives and by-products of sugar cane, together with equipment and technology. As far as possible, the aim has been to work on plans for industrial interdependence and exchange of information relating to projects for expanding sugar mills.

Cuba has been working in practical terms in all the areas referred to above. In particular it has a bilateral agreement with Mexico whose object is the construction of similar sugar mills in both countries, in order to achieve standardized technology which will allow the trade in processing equipment for the sugar industry to enter other areas within those underdeveloped countries which are sugar producers.

In addition, through the Latin American Multinational Enterprise for Fertilizer Marketing (MULTIFERT), with which Cuba is associated, a group of

countries are pooling their efforts and capital in order to benefit from the possibility of joint negotiation which will enable them to obtain better prices and terms.

At 31 December 1983, the enterprise had marketed fertilizers to the value of US \$114 million, for which very favourable purchase prices had been obtained.

At bilateral level, Cuba has excellent examples to show of co-operation in the field of the trade in agricultural and food commodities.

#### Nicaragua

A sugar mill was constructed. Exports of agricultural products and equipment for development in this field cover a wide range, from sugar mill components, agricultural implements, irrigation equipment, fertilized eggs and so on.

#### Granada

During the period of revolutionary rule in Granada various co-operation activities were carried out in the following spheres:

- Collaboration in rehabilitation plans for cacao and banana plantations,
- Technical collaboration in the fruit conservation plant,
- Collaboration in the fish processing plant,
- Collaboration in the small sugar processing plant.

Other co-operation plans were not implemented because of the United States invasion of the island, although the following were at the planning stage:

- Collaboration in development of pig and poultry farming,
- Gifts of agricultural equipment.

#### Africa

Sugar has been exported to the Seychelles, Angola and Ghana, and sent as a gift to Ethiopia.

#### Asia

In this region Cuba has made donations of sugar to the People's Democratic Republic of Yemen and maintained co-operation links in this sphere with Viet Nam, Laos and the Democratic People's Republic of Korea.

Much remains to be done in order to achieve more extensive co-operation in this area:

- It would be necessary to work at improving commercial information and market research, in order to identify commercial opportunities and complementary areas,
- The provision, through SGPC, of a multilateral framework for the reduction of tariff and other barriers in respect of those commodities which are of the greatest interest for underdeveloped countries,
- The use of appropriate international forums, such as UNCTAD and FAO, for research and technical support in the strategy to be followed, and also maximum use of the resources of regional and subregional bodies.

## VI. RURAL DEVELOPMENT

### ESTABLISHMENT OF REGIONAL CENTRES FOR INTEGRATED RURAL DEVELOPMENT

Rural development is one of the broadest tasks faced by underdeveloped countries, and although there is a certain awareness of the benefits which this brings to the poorest and least privileged groups in underdeveloped countries, the implementation of measures, development strategies, programmes and so on is very varied in different countries despite similar natural and socio-economic development conditions.

That is why the creation of institutions such as regional centres to direct and assist countries in the field of rural development should be positively welcomed by all countries. If these institutions are to be able to play a significant role they will need maximum support from underdeveloped countries in contributing their experiences in the field. Cuba is ready to offer its wide experience in the field of rural development, based on practical results throughout the country, obtained during more than two decades of implementation of a radical land reform and a constant process of raising standards of living for people in rural areas.

### EXCHANGE OF EXPERIENCES IN THE PLANNING AND IMPLEMENTATION OF PROGRAMMES FOR AGRARIAN REFORM AND RURAL DEVELOPMENT

Cuba's experience in agrarian reform and rural development has taken the form of more than two decades of implementing a thoroughgoing and practical programme designed to introduce a fundamental land reform which has been able fully to ensure that farmers and those living in rural areas have access to resources of land and water, technical assistance, marketing of their produce and the general technological development of agriculture. To this end, in addition to adopting the political decision that such a process requires, Cuba committed extensive material and human resources together with organizational procedures resulting in a constantly rising standard of living and quality of life in rural areas. This process has been a continuous one, and at the present time our farmers are introducing improved production methods which allow a sustained increase in the productivity of the country worker's labour within the context of the economic and social development of the nation as a whole.

As stated in the previous paragraph, Cuba is accumulating broad practical experience in the field of implementing agrarian reform and rural development, and is ready to offer its experience in planning and implementing those programmes.

### ANALYSIS OF THE DEVELOPMENT AND PERSPECTIVES FOR THE FOOD INDUSTRY IN CUBA

At the moment of victory of the Cuban Revolution, the national food industry did not show any progress with respect to development except in the case of those firms operating with North American capital or subsidiaries of North American firms. In general, factories involved in food production were using outdated technologies and were mainly small-scale undertaking.

In 1952, capital investment in the food industry was only 3.2 per cent of the estimated total investment in the country, excluding sugar cane and its derivatives. In such circumstances the food industry failed to cover the food requirements of the population, with the result that Cuba imported nearly all food products for consumption by the population and nearly all raw materials for industry.

The development of Cuba's food industry begins with the triumph of the Revolution. In the decade from 1960 to 1970 the average annual growth in industrial production was 6.5 per cent. Better technologies were introduced into



industry, there was greater centralization of production, a start was made on the drafting and implementation of standards for raw materials and for the processing and quality of finished goods, and a quality control system and other measures of an internal and organizational nature were established, with the main investment being directed towards the dairy industry.

By 1970 food production represented 24.3 per cent of industrial production in the country and imports under this heading amounted to 20.4 per cent of the nation's total imports.

In the period 1970-1980 the output of the Cuban food industry showed an average annual increase of 3.9 per cent. In the final year of that decade the proportion of food imported into Cuba fell to 15.3 per cent of total imports.

Although the growth rate of food production in Cuba can be generally considered satisfactory, it is necessary to take into account its starting point as an underdeveloped country subject to imperialist domination until 1958. This means, that despite the progress achieved, we have not reached the levels of satisfaction of food requirements attained by other developing countries.

The growth of consumption per capita and of proteins in Cuba can be analysed as follows:

	<u>Period</u>			<u>Percentage increase</u> <u>Annual average</u>	
	<u>1961-65</u>	<u>1977</u>	<u>1980</u>	<u>77/61-65</u>	<u>80/77</u>
Calories (K-Cal)	2 304	2 635	2 866	1.1	2.8
Proteins (g)	56.2	67.2	74.2	1.5	3.5

The production of liquid milk in Cuba, which reached the figure of 672,400 tons in 1980, giving 91.9 kg per capita, represents 4.5 times the level of 1963. Cuba's current level of consumption of this product is met not only by domestic production but also by the import of dried milk and other milk products for consumption by the population.

The production of meat and meat products has been limited in Cuba by the need to apply a policy of maintaining the domestic livestock population. We are thus even now obliged to import a certain amount of frozen chicken in order to maintain the level of per capita distribution to the population. Despite this, based on an increase in pork production, and with the introduction and development of high-yield technology in the preparation of meat preserves, 1982 shows an increase of 56.4 per cent over 1963.

The production of cereal products in Cuba also shows substantial growth in the period 1962-1982. Wheat flour production increased 2.9 times and rice 2.7 times.

The production of fruit preserves grew between 1965 and 1982 by 80 per cent, that is to say, it almost doubled. Sixty per cent of the growth is represented by the processing of citrus fruits. In 1981, the volume of fresh tomatoes processed by industry was practically three times that of 1962, with a volume of 141,000 tons.

The volume of exports in the food industry in 1982 showed an increase of 2.5 times over that of 1970, mainly as a result of the sub-sectors of beverages and tobaccos.

The production of rums for export has grown elevenfold in the last 17 years. The output of tobacco products for export has been recovering and stabilizing from 1980 onwards, since when the output of such consumer items as beers and soft drinks has also registered an increase.

It must be pointed out that economic and technical assistance by the socialist countries has played a most important role in the development of the Cuban food industry. It has also been necessary to acquire installations from capitalist developed countries which has brought with it the restrictions inherent in the unequal trading terms with these countries and the difficulties caused to Cuba by the imperialist blockade to which various Governments of the United States have subjected the country throughout these years.

Nevertheless, the Government of Cuba has collaborated with developing countries in activities associated with the food industry, expressed in the late 'seventies and early eighties' in the form of technical assistance, consultancies and communication of scientific and technical documentation to various underdeveloped countries. This collaboration has taken place with African countries such as Angola, Mozambique, São Tomé and Príncipe, Libya and others, and in Asia with the People's Democratic Republic of Yemen, Viet Nam and Sri Lanka.

In accordance with the studies carried out on projections for development in the food industry, it is essential to focus attention on the solution of a complex of fundamental problems such as the following:

- The re-equipment of industry in order to replace inefficient obsolete technologies, which are technically very backward and whose maintenance gives rise to high expenditure of foreign exchange.
- The need to introduce technologies which, as well as being mechanized, permit the integrated and efficient exploitation of by-products and waste products of agricultural and livestock raw materials processed by industry.
- To increase the utilization factor of manufacturing facilities, where maximum efficiency of use is restricted by lack of raw materials originating to a large extent from developed capitalist countries.
- Improvement of the territorial distribution of production.

It is towards these and other objectives that our efforts to accelerate the development and raise the level of effectiveness of the food industry are being directed. It is in this context that we feel that collaboration with other developing countries could be useful.