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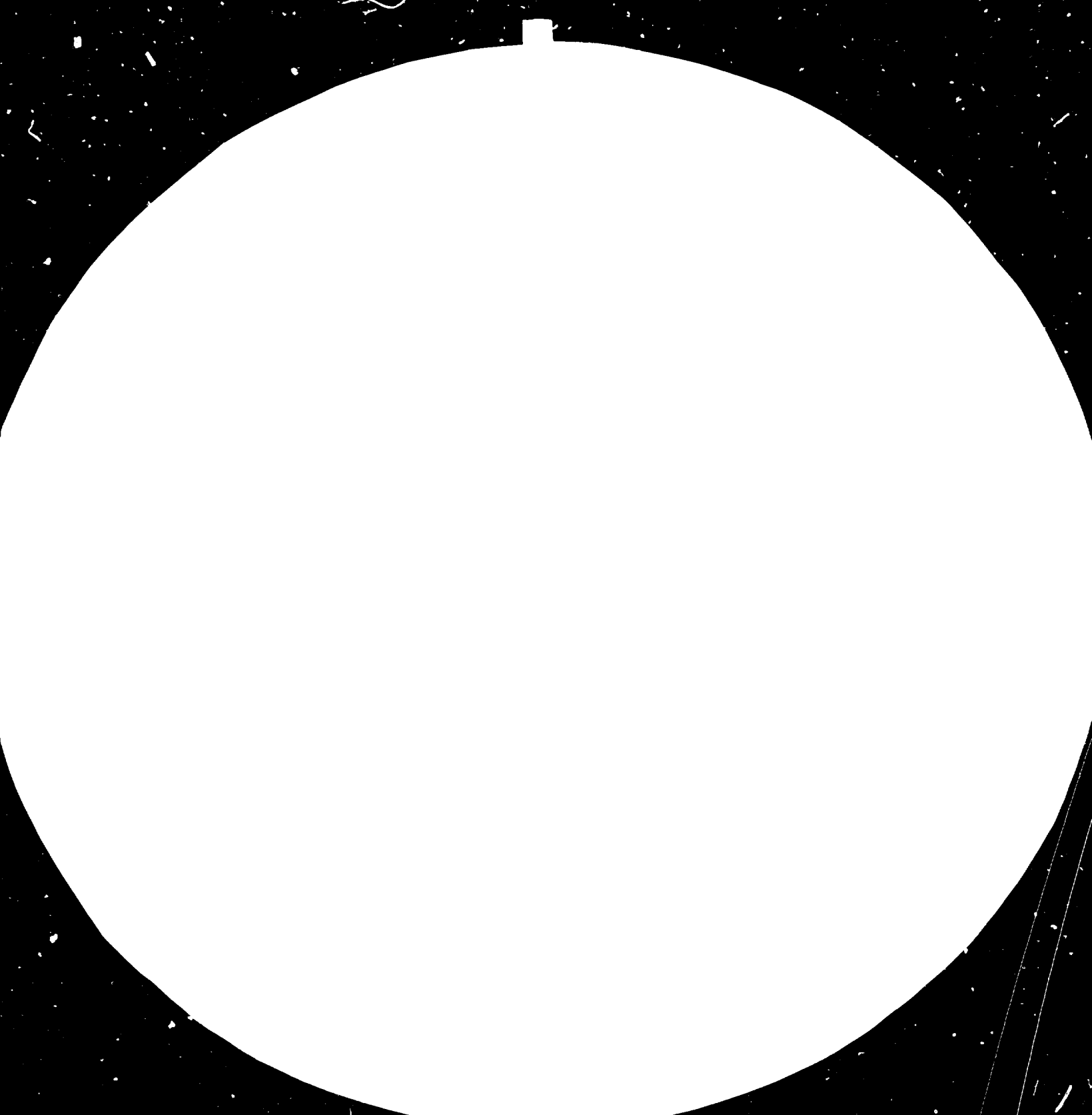

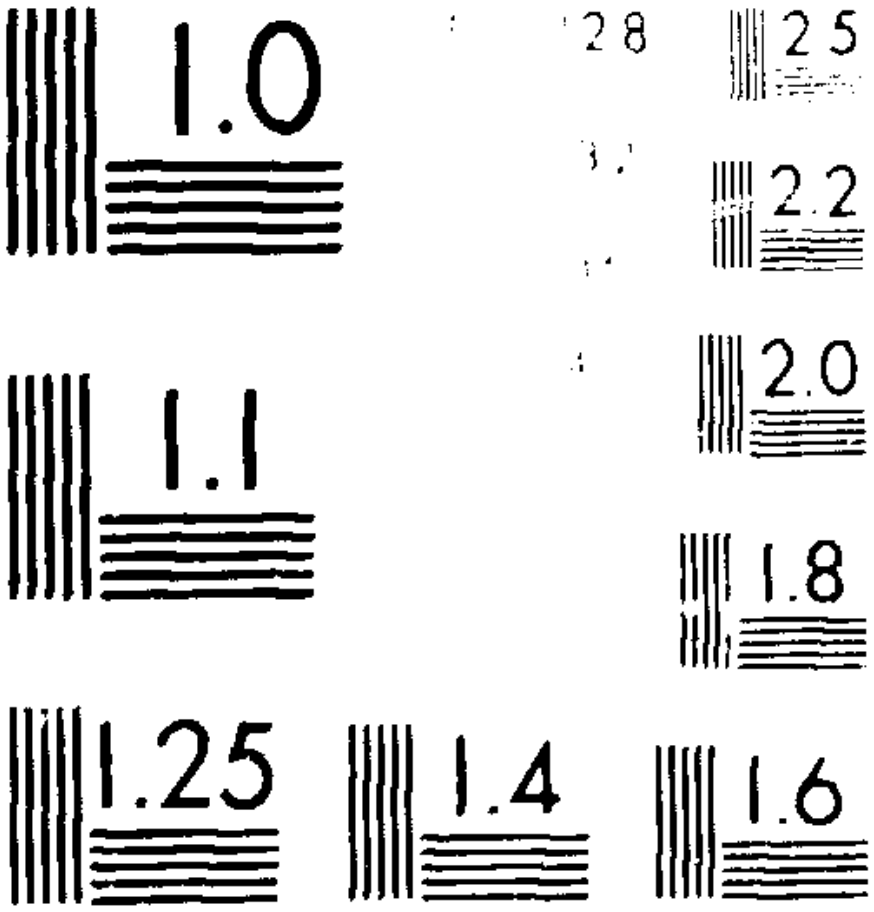
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The Role of FAO in the Development of Food and Agricultural Products * Processing Industries

By

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1971

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The importance of food and agricultural products processing is recognized in FAO's Constitution and it is stipulated that the feasibility for the establishment of processing industries depends primarily on the availability of raw materials. The development of food and agricultural products processing industries can substantially contribute to raising the share of developing countries from the present 7-9% to 25% by the year 2000 in world industrial output.

The FAO policy on assisting developing countries consists of an integrated approach to production, conservation, processing, distribution and marketing of crops, livestock, fish and forest products. This approach necessitates giving attention to industries producing agricultural inputs as well as the industries which use agricultural produce as raw materials. Special attention is paid to rural development and particularly to the small farmers.

Growth of food and agricultural products processing is, however, handicapped by several constraints. Much of the crops and livestock output of developing countries comes from traditional agriculture designed to meet local consumption requirements. Supplies for processing industries can rarely

be based on such a production pattern. Substantial quantities of consistent quality must be available for economic processing, packaging, storage and marketing under controlled physiological conditions, and for further treatment and byproduct utilization. New varieties of crops must often be introduced which are not only high-yielding and suitable for storage over longer periods, but will give a good quality finished product after processing. Continuing availability of suitable raw materials is also essential for matching the reputation for quality of long established products manufactured in the industrial countries.

Particularly in the field of food supply and distribution has it become necessary for marketing to be thought of in terms of constituting the vital link between producers and consumers with the interposition of an industrial process.

In the execution of FAO's programme on food and agricultural industries, emphasis is placed on training and improving the use of appropriate technology for conservation and processing and on increasing the utilization of agro-industrial residues in conjunction with the production of raw materials to ensure a regular income to the small farmer. National Research and Development Institutions have a major role to play in the assessment, selection, adaptation and transfer of appropriate technologies to develop food and agro-industries. National Institutes are also used to build up manpower and develop the appropriate technologies. The competence of developing countries in food and non-food storage and processing is strengthened by co-operation among

them. Establishment of a system of inter-country co-operation for this purpose will help these countries to optimize their resources, minimize duplication and make better use of the institutional infrastructure.

Various sources of funding are allocated for the implementation of the agro-industrial development programme such as UNDP, bilateral assistance and the FAO operated Regular Programme Budget. In addition, two important sources of funding from within the Organization have come into existence which both, at least in part, contribute to agro-industrial development. The Technical Co-operation Programme (TCP) aims at providing technical assistance on short notice for the developing countries with special emphasis on training and assistance to the small farmer. The Action Programme for the Prevention of Post-harvest Food Losses (PFL) is funded by contributions of FAO Member Countries and directs its efforts towards better use of available resources by reducing and preventing losses in the food chain from harvest to consumption.

Technical assistance for agro-industrial development by way of dissemination of information, publications, meetings, training, identification missions, pre-investment studies, project formulation and implementation is provided by FAO staff located at Headquarters and FAO Regional Offices.

A summary of the main FAO activities during the last few years is presented below:

1. Raw Material Development

In the agricultural sector, a number of research and

development programmes and studies are being undertaken with a view to developing plant material and crop husbandry practices, to facilitate mechanization of crop production and harvesting, to reduce idle period of processing factories by extending the crop harvesting season, to produce a more homogeneous and better quality product and where possible to utilize the entire plant. These technical improvements aim at higher crop productivity levels and consequently lower production costs, thereby increasing the competitiveness of the crops and their chances for profitable industrial use.

2. Institution Building and the Creation of a Suitable Infrastructure for Agro-Industrial Development

Besides the procurement of the raw material, a number of conditions within the country have to be fulfilled to create a favourable climate for agro-industrial development. Within this context, FAO's activities centre on institutional building, establishment of networks, research, technology transfer, training and marketing of agricultural products.

Small farmer surveys in the various agro-ecological zones of member countries have been initiated. These surveys are designed to sample a group of farms of various sizes. Each group is stratified in terms of level of technology employed to produce agricultural commodities; cropping practices used; and according to various other ciriteria which would provide additional insight into the production processes or constraints faced by farmers in specific agro-ecological-socio-economic settings.

Training assistance is provided at all levels and is implemented through (a) the FAO Fellowship Proframme, (b) establishment of strengthening specialized training institutes, (c) ad hoc training programmes (workshops) and (d) on-the-job training programmes.

Institution building or strengthening has been a major activity in FAO. During the last few years, several TCDC meetings (Technical Consultation among Developing Countries) and travelling workshops were organized. Prior to these meetings, participants from various countries were assigned to prepare a status report on Food and Agro-Industries in their countries, according to pre-arranged guidelines. As a result, regional networks of national institutions are being established for assessment, selection, transfer and development of technologies and for training of manpower required for the development of food and agricultural products conservation and processing industries, as well as for the prevention of post-harvest losses of food products.

3. Processing Industries

FAO has been assisting its member nations in the identification, formulation and implementation of pre-investment projects and in the formulation of direct investment projects. The sectors covered include the conservation and processing of commodities of plant origins, of animal products, fisheries and non-food products.

Since rice is one of the most important grains for developing countries, FAO attaches great importance to the

rice industry and carries out a wide programme to help develop, in an integrated fashion, all sectorial activities that are part of this industry: drying, storage, handling, grading, processing and distribution of rice.

The basic objective of the programme is to save as much of the grain that has been harvested and improve the quality of the end product. The programme concentrates on field activities and mainly implies the implementation of practical projects. The most typical projects may involve:

- The establishment and/or strengthening of institutions;
- The assessment of post-harvest losses;
- The rehabilitation of existing industry;
- The introduction of improved technologies either at rural or industrial level;
- The technical backstopping of investment projects.

All field projects include a training component and some of these totally concentrate on training activities.

4. Composite Flours Programme

The growing popularity of wheat products, especially bread in many developing countries, has caused a large increase in the demand of imported wheat.

The need to reduce wheat imports and to upgrade the processing of local cereals and tubers in developing countries led the Director-General of FAO to the conclusion that a special effort should be made to define a programme for FAO. This will provide a framework for coordinated action in selected priority countries where local millet, sorghum, cassava or maize is cultivated in sufficient quantities to

provide regular supply to industries.

This programme should be adopted in the near future by FAO and should be of direct interest to many developing countries, particularly in Africa.

5. Natural Fibres

The natural fibres sector constitutes a major agro-based, cash-generating activity that complements food produce in the rural development process.

FAO involvement covers practically the whole spectrum of crop fibres, as well as animal fibres. The type and nature of FAO involvement could be either global, or sectorial where it is adapted to the nature of each fibre and to the degree of technological advancement attained in the recipient country.

The projects that FAO assists cover primary processing, primary produce storage, fibre testing and cottage type end produce processing. They comprise one or more components, chiefly expatriate export assistance, training of national technical staff and supply of equipment.

The primary processing of hides and skins and related animal byproducts represents a major labour intensive manufacturing sub-sector of the livestock based agro-industry. Since its inception, FAO has offered a package programme of assistance covering production, processing, handling, storage, marketing and realized that the value of hides and skins to many developing countries was such that with some very basic low-cost improvements in flaying, grading and marketing, the

countries could greatly increase their revenue from what often were neglected byproducts of livestock raising.

6. Energy Related to Agriculture and Agro-Industries Development

In view of the increasing energy costs, efforts have to be intensifed to harness energy resources to meet the requirements of developing countries, especially for the rural population. Their existing resources will have to be improved and new ones developed.

Technology will have to be developed to utilize solar energy on a small-scale. Utilization of wind power requires the use of modern knowledge of aerodynamics, sc that electricity and motive power can be produced efficiently with varying velocities of wind.

There is also need to design more efficient equipment and develop better technology for efficient use of cow-dung, sewage and recycling of agricultural wastes and industrial products for production of bio gas, which can be used for cottage and small-scale processing industries in rural areas to manufacture products for local consumption. Human labour and animal draft are, however, the largest energy resource available in most developing countries and must be used properly.

FAO is involved in three major areas of activities where food industries can reduce their dependency on fossil fuels:

a) Energy conservation;

b) More emphasis on low-energy technologies;

c) Substitution of fossil energy with biomass derived fuel from the use of agricultural and agro-industrial residues.