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PRACTICAL UTILIZATION OF FOOD IRRADIATION IN DEVELOPING COUNTRIES

Report by the Director General

Introduction

1. Pursuant to resolution GC(XXXVII)/RES/616 adopted by the General Conference on 1 October 1993, the Director General is herewith reporting to the General Conference on action taken in implementing proposals for the practical utilization of food irradiation in developing countries.

2. The Director General brought the resolution to the attention of his FAO and WHO counterparts and of the Acting Executive Director of ITC (International Trade Centre UNCTAD/GATT). Also, the resolution and document GC(XXXVII)/1068 were brought to the attention of the International Consultative Group on Food Irradiation (ICGFI) - an advisory body to FAO, WHO and the Agency and their Member States - at its 10th Annual Meeting, held in November 1993. The ICGFI appealed to the Secretariats of FAO and WHO to co-operate fully with the Agency's Secretariat in implementing the Plan of Action referred to in operative paragraph 1 of the resolution. Subsequently, FAO, WHO and ITC have pledged full co-operation with the Agency in assisting developing countries with the practical utilization of food irradiation.

3. The mandate of the ICGFI, which expired in May 1994, has been extended for a further five years (i.e. until May 1999). In future, the ICGFI will place emphasis on helping national authorities to establish the technical basis for harmonizing regulations for the control of food irradiation and of trade in irradiated food and on assisting in the removal of non-tariff barriers to international trade in irradiated food. Further efforts will be made to strengthen co-operation with the food industry and with consumer organizations. With the extension of the ICGFI's mandate, governments which are not yet members of the ICGFI will be invited to join.

International Trade in Irradiated Food

4. Consumer acceptance of irradiated food is increasing in several countries, including Bangladesh, China, France, South Africa, Thailand and the United States, where several irradiated food products are being marketed at the retail level. In September 1993, the members of the International Organization of Consumer Unions (IOCU) had an opportunity to acquire a better understanding of the safety and effectiveness of food irradiation through a seminar co-sponsored by IOCU and the ICGFI. At the seminar it was concluded that irradiation has a role to play as a method of ensuring the hygienic quality of food products (especially those of animal origin), that it can be a substitute for fumigation and that it can facilitate trade in certain food products.

5. It is expected that the Agreement on the Application of Sanitary and Phytosanitary Measures (the SPS Agreement), which was adopted during the Uruguay Round of GATT Multilateral Trade Negotiations and which will enter into force in 1995, will help to promote international trade in irradiated food. Under the SPS Agreement, no government which is a signatory of GATT or a member of the World Trade Organization can deny the entry into its territory of food (including irradiated food) processed according to an international standard (such as the international standard for irradiated food already developed through the Codex Alimentarius Commission) unless it can prove that the food could endanger the health of its citizens, plants or animals. A Model Regulation on Irradiated Food for Asia and the Pacific, based on the principles of the Codex General Standard for Irradiated Foods and the SPS Agreement, has been developed through a workshop held in Australia in December 1993 and attended by senior food control officials from the region. If adopted, the Model Regulation should facilitate wide trade in irradiated food within and out of the region.

6. A four-year pilot project for promoting international trade in irradiated spices from developing countries is being prepared for joint implementation by FAO, WHO, ITC and the Agency; if the necessary funds are forthcoming, the project will start in 1995. The project will address problems related to: (i) quality maintenance and safety in spice-producing/exporting countries; (ii) marketing/information support in spice-importing/consuming countries; and (iii) feasibility studies on irradiation as a means of decontaminating spices. If the project is successful and additional funding becomes available, it could be extended to include - for example - the use of irradiation to ensure the hygienic quality of food of animal origin and to overcome quarantine barriers to trade in fresh fruit and vegetables.

Technical Assistance to Developing Countries

7. The Deputy Director General for Research and Isotopes invited technical co-operation project requests for 1995-96 from a number of countries where the prospects are good for introducing the practical utilization of food irradiation on the basis of the prerequisites described in document GC(XXXVII)/1068. As a result, requests have been received from Brazil, Chile, Ecuador, Egypt, Indonesia, the Islamic Republic of Iran, Jordan, Mexico, Morocco, Nigeria, the Philippines, Saudi Arabia, the Syrian Arab Republic, Thailand and Uganda. The types of assistance requested are shown in the Annex.

8. In December 1993, the Board of Governors approved a request from China for assistance (expert services, equipment, and training) with the establishment of a semi-commercial-scale irradiation facility (under construction) for preserving rice and other foodstuffs - a Model Project forming part of the Agency's 1994-95 technical co-operation programme (see project CPR/5/009 on page C.26 of GOV/2696/Add.1).[1]

9. Following an Agency-assisted feasibility study in Mexico (see Annex 2 to GC(XXXVII)/1068), two industrial companies have decided to build commercial-scale food irradiators. The two irradiators (one cobalt-60 and one electron/X-ray facility) will be used in processing food for the domestic market and for export. Construction is expected to start this year.

10 In several developing countries (such as Bangladesh, China, Indonesia, the Republic of Korea, Mexico and Thailand), the transfer of food irradiation technology to local industry has made significant advances. These countries, with the Agency's assistance, have promulgated regulations on food irradiation, built demonstration/commercial irradiators and conducted successful market trials with irradiated food. Also with the Agency's assistance, demonstration irradiators have been or are being constructed in Ghana, Peru and the Syrian Arab Republic. In Bangladesh, a semi-commercial irradiator provided by the Agency went into service early this year and is treating - virtually 24 hours a day - food products such as onions, potatoes and dried fish (and also some medical products) for the domestic market. A great deal of irradiated dried fish is being used by the United Nations High Commissioner for Refugees in emergency relief operations.

11. Eleven technical co-operation projects (country and regional) with emphasis on the practical application of food irradiation are currently under way. In addition, six co-ordinated research programmes are being implemented.[2] Since the General Conference's 1993 session, the Agency has published material on: cost-benefit aspects of food irradiation; controlling the infectivity of food-borne parasites by irradiation; and the irradiation of poultry meat and its products.

Regular Programme Activities for 1995-96

12. In 1995-96, emphasis will be placed on the development of practical and sustainable capabilities for food irradiation as a means of reducing food losses (especially in African countries), as a public health intervention measure to control certain food-borne diseases in

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[1] China - one of the four countries selected for the introduction of commercial-scale food irradiation programmes following the adoption of General Conference resolution GC(XXXVI)/RES/588 in 1992 - had conducted its own economic feasibility study, as a result of which the Chinese Government allocated about $1.1 million for construction of the facility, due to be completed by the end of this year.

[2] The subjects covered are process control, the quarantine treatment of fresh produce, methods of detecting irradiated food, the control of certain food-borne diseases, and the combined use of irradiation and other food-processing techniques.

Latin America and the Caribbean (in co-operation with the Pan American Health Organization) and as a quarantine treatment of fresh horticultural produce. There will also be emphasis on the standardization of absorbed doses in irradiated commodities. In addition, the Agency's Secretariat will continue to assist the ICGFI in implementing the work programmes agreed upon at its Annual Meetings.

Action Plan for Food Irradiation Activities with TC Assistance during 1995-96

13. In line with the "Steps to be followed in initiating food irradiation activities with TC assistance" described in document GC(XXXVII)/1068, the following Action Plan - endorsed by the Board of Governors in June 1994 - will be implemented in 1995-96 in addition to ongoing technical co-operation projects:

14. Pre-Project Missions: A number of two-week pre-project missions will be carried out to determine the types of assistance required in the near to medium term by countries which have requested assistance under the Agency's 1995-96 technical co-operation programme.

15. Economic Feasibility Studies: Economic feasibility studies similar to the ones conducted in Mexico and Morocco in 1993 are planned for Brazil, Ecuador, Egypt, Indonesia, the Islamic Republic of Iran and the Syrian Arab Republic, all of which have suitable infrastructures and some of which have engaged in commercial food irradiation on a limited scale. During the three-week study missions, the role of irradiation in reducing food losses, controlling food-borne disease and facilitating wider food trade will be assessed.

16. Resource Requirements: The implementation of the Action Plan may require staff resources additional to those presently budgeted for in the Food Preservation Section of the Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture. Should this prove to be the case, resources would be sought through extrabudgetary contributions.

ANNEX

PRACTICAL UTILIZATION OF FOOD IRRADIATION IN DEVELOPING COUNTRIES

The countries which submitted requests for Agency technical assistance following the adoption of resolution GC(XXXVII)/RES/616

Country	Types of assistance		
	Experts	Training	Equipment
Brazil	+	+	+
Chile	+	+	+
Ecuador	+	+	+
Egypt	+	+	+
Indonesia	+	+	+
Iran, Islamic Republic of	+	+	+
Jordan	+	+	+
Mexico	+	+	-
Morocco	+	+	+
Nigeria	+	+	+
Philippines	+	-	-
Saudi Arabia	+	+	-
Syrian Arab Republic	+	+	+
Thailand	+	+	-
Uganda	+	-	-