**ARCAL: Contributing to economic growth and food safety**

*The challenge…*

Isotopic and radiation techniques can increase agricultural production, improve food availability and quality, reduce production costs and minimize contamination of food crops.

Food irradiation is a valuable technique for dealing with food safety issues. It can destroy the microbes that carry disease, reduce the need for harmful chemicals used to control insect pests in fruits and vegetables, increase produce shelf life, and serve as a useful addition to conventional food processing technologies.

ARCAL projects help to ensure food safety through the harmonization of regional food monitoring systems for the safe import and export of foodstuffs.

*ARCAL projects in food safety and crop improvement…*

ARCAL projects assist countries in Latin American and the Caribbean to establish the necessary legal frameworks and infrastructure for harmonization of the technical and quality procedures to monitor radioactive contamination in imported foodstuffs, leading towards radiological certification of foodstuffs for export. Through such projects, Member States have been able to upgrade radioactive safety for imported and exported foods and to contribute to the value of food exports by certifying their radiological quality. Cooperation between ARCAL Member States and the IAEA in the area of nuclear techniques has increased consistently. Regional capabilities have been strengthened through expert missions.

ARCAL projects on induced mutation have also helped improve food crops in the region, increasing food production in drought affected areas through the development and dissemination of drought tolerant mutant lines of different food crops, traditionally cultivated in marginal and semi-arid areas.

*The impact…*

ARCAL projects on food safety and security have contributed to regional recognition of existing foodstuff monitoring systems by the governments of the participating countries. Customer protection has been also enhanced through the identification of accidentally contaminated food items.

Five laboratories in the region have become official members of the ALMERA network (Analytical Laboratories for the Measurement of Environmental Radioactivity). This means that countries can participate in radiological control of foodstuffs. The network also supports radiological emergency preparedness programmes. Eighteen ARCAL Member States can now apply a diagnosis and assessment system to evaluate the effects of pesticide contamination in food stuffs and the environment.

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