

Introducing irradiation techniques into Uruguay

The challenge...

If a country is to compete in the international market, its products must meet certain health and plant protection standards. The food industry demands low microbial loads and the absence of fumigants or other chemicals. Food irradiation can be used to meet these standards, and is often required by the regulatory authorities of the main buying markets.

Without irradiation technology, Uruguay's opportunities to compete on the international market were significantly reduced, slowing the country's industrial growth. Irradiation activities had to be carried out in neighbouring countries, which presented cost and logistical problems.

The project...

In order to access new markets, Uruguay needed to introduce irradiation technology. With the support of an IAEA technical cooperation project, a cobalt-60 (Co-60) gamma ray machine was procured for the Technological Laboratory of Uruguay (LATU), where the first experimental gamma irradiation facility in the country was to be established.

The necessary training on Co-60 irradiation facility management was provided in Canada. This included training on radiation processing, particularly in the field of food irradiation. A fellowship was also awarded through the project, which provided on-the-job training on the technical aspects of radiation processing and facility operating systems.

Expert advice was provided on radiation protection and the safe operation of the facility.

The impact...

As a result of the project, the gamma irradiation facility opened in February 2010. Today, the facility is fully operational, supporting industrial sectors that include food production, medical products and pharmaceuticals, cosmetics, and herbal and complementary medicines. Recent activities at the facility include the ongoing development of ready-to-eat irradiated meals for immuno-compromised patients, and investigations into the possibility of exporting irradiated citrus fruit to the United States.

Uruguay has also established an appropriate regulatory framework for this industrial activity. Work is being carried out to determine potential demand for irradiation services and applications. A National Irradiation Committee has been established to evaluate irradiation as an option to address quality problems in production processes. A communication plan to inform technicians, entrepreneurs and consumers of the advantages of irradiation processing is currently being executed, and a private sector company is embarking on the construction of a multipurpose industrial irradiator.



The new experimental irradiation unit in the Technological Laboratory of Uruguay (LATU).