Thirty years experience in potato irradiation at Shihiro radiation facility in Japan

Irradiated potatoes in storage at the Shihiro radiation facility in Hokkaido, Japan

In many countries, commercial food irradiation started in the second half of the 1980’s, and the amount of foods treated by ionizing radiation is continually increasing. Prior to this trend, a potato irradiation plant was built at Hokkaido in northern Japan in 1973. This plant is well known as the first successful food irradiation plant for commercialization in the world.

The township of Shihiro is located in the Tokachi field in Hokkaido. This area is blessed with optimum climatic conditions for the cultivation of high quality potatoes and is proud of the largest quantity of potato production in Japan. Every year potatoes are harvested in September, and are shipped over an eight-month period until April of the following year.

In the Shihoron township, five agricultural cooperative societies in four towns of this area have built a common facility equipped with a warehouse of more than 100,000 ton storage capacity for the collection, storage, and shipment of potatoes. The Shihoron Isotope Irradiation Center was built beside this institution and began operations in 1974. In recent years, the potatoes sold at retail stores amounted to 40,000 tonnes. Among these, about 8000 tonnes of potatoes are annually irradiated and shipped to retailers from the end of March to April. The present activity of the Co-60 source is ca. 150,000 Ci.

Thus, sprout inhibition by gamma-irradiation has been successfully continued and this clean, environmentally friendly process contributes to the year round domestic potato supply and to the agricultural production in this area.