Agriculture

Many developing countries in the region face enormous constraints in ensuring food security and safety. Efforts have been made to address these problems by enhancing Member States' capabilities and capacities to use nuclear technology in agriculture for improving crop land management and livestock productivity.

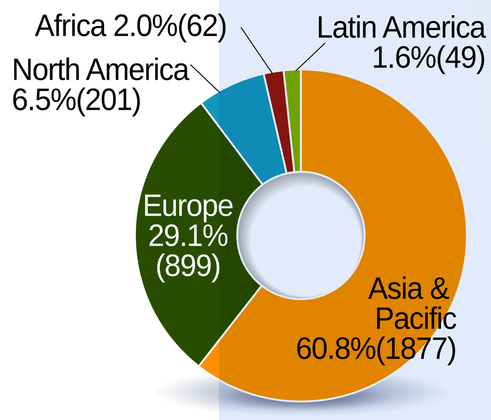
Trombay Groundnut Series Mutant Varieties in India

Smart Crops for Sustainable Agriculture

The RCA Member States acquired sustainable mutation breeding programmes for important crops by applying transferred technologies and skills through regional trainings, field trips and data management systems.

- India and Sri Lanka developed high-yielding and early-maturing groundnut.
- India, China and Indonesia developed drought-tolerant wheat and sorghum and Pakistan commercialized virus-resistant mungbean.

1$ input, 800 $ benefit
- Rice mutant varieties in Vietnam -



Worldwide Mutant Varieties

Induced mutations in the RCA Member States reflect 60% of mutant varieties around the world.

Enhanced Food Safety and Security

Through the RCA projects, RCA Member States developed guidelines on sanitary and phytosanitary irradiation treatment for economically important fruits including lychees, mango and rambutan and etc. It also contributed to increasing the international trade in the region.

- Australia exported 1,205 tones of irradiated mango and lychees to New Zealand.
- India, Thailand and Vietnam have a total export of 2,840 tons of fruits to the U.S. in 2010.

Improved Livestock Productivity while Conserving the Environment

- The isotope based reproductive Artificial Insemination also achieved genetic improvement and productivity of livestock in the region.

- The RCA project developed new 47 feeds, (UMMB) Urea Molasses Multi-nutrient Blocks, which enables better nutrition and health of livestock while reducing green house gas emission.
- It resulted in a 25% increase in milk yields, 70% weight gain of animals, 70% reduced methane emissions in Member States.

(UMMB) Urea Molasses Multi-nutrient Blocks