



IAEA

International Atomic Energy Agency

Atoms for Peace

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Enhancing the quality and yield of rice in Vietnam

The challenge...

Rice provides 80% of the carbohydrate and 40% of the protein intake of the average Vietnamese person. Seventy per cent of all households in Vietnam earn their livelihood from agricultural production. Improving rice varieties is therefore essential in increasing national food production and in contributing to the enlargement of rice cultivation areas. High yielding varieties will support national food security and increase rice exports.

In south Vietnam, particularly in the Mekong Delta, where 2.5 million hectares of rice are grown, grain quality and tolerance to soil stresses are the priority objectives in rice improvement. Some 60% of the paddy fields are affected by salinity and soil acidity. Much of the rice grown in this area is produced for export.



New varieties of rice are planted and cultivated at agricultural stations.

The project...

The IAEA provided support through expert missions and training in various molecular and nuclear techniques to enhance mutation breeding programmes in Vietnam for higher quality rice. One such training course was the IAEA National Training Course 'Techniques and Strategies for Rice Quality and Nutrition Improvement', which was held in Ho Chi Minh City in 2006. This provided 26 researchers from 21 organizations with two days of lectures and three days of practical laboratory training.

Equipment was also provided to evaluate rice quality and salinity and for the molecular characterization of induced mutants.

The impact...

- A dozen mutant varieties have been developed and the mutant rice variety VND95-20 has been widely grown for the past five years. In addition to its high yield potential, it has premium grain quality and a very good tolerance to salinity.
- Farmers from the Mekong Delta to the highlands have benefitted from higher yields and better prices thanks to the high quality of the varieties.
- In highland areas, deforestation is decreasing, since farmers can now produce enough food on their land.



Canals are lifelines for village rice fields in Thanh Gia, Bac Ninh Province, near Hanoi.