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IMPACT OF MUTATION BREEDING TO FOOD SECURITY IN VIETNAM

Vietnam began mutation breeding relatively later then other countries, but by the end of 2017 already created and released to production 67 new mutant varieties. Among them, 45 varieties of rice, 10 varieties of soybean, cassava, sugar cane, flowers and ornamental plants. The mutant varieties have been contributing significantly to ensuring food security and poverty alleviation in the country since 1970s, creating hundreds of millions of dollars in profits to mall-holder farmers every year. Rice mutant varieties, with productivity of 6 - 8 ton /ha versus 3.3 ton/ha average at that time in the country, helped to turn Vietnam from rice importer to rice exporter in 1980 -1990s. In 2015 the Joint FAO/ IAEA Division has recognized the contribution of mutation breeders in Vietnam by granting two awards: Achievement award for breeders from Agriculture Science for Southern of Vietnam and Centre for Nuclear Techniques and Outstanding Achievement Award for breeders from the Institute of Agricultural Genetics. The main advantage of mutation breeding is that, it does not require expensive equipment, nor staff with high qualification and high investments, but brings fast and stable results leading to great profit. Governments are very supportive to the development of biotechnology in agriculture. But there is a fact that not every country in capacity to develop biotech crops, due to extremely high requirements in investment and high qualification of staffs involved and very well managed organization of research system. On the other side, not all traits of agriculture crops are under capacity of biotech to change or improve, like plant structure, growth duration and many others. These traits can be manipulated easily via mutation with very low expenses. Not for all crops biotechnology tools are ready for use for improvement of desired traits, while mutation can be carried out effectively almost with all crops.

Country or International Organization

Vietnam

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