

Horticulture Research in Nepal: Achievement and Future Strategy

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Abstract

Nepal has spent about six decades on horticulture researches in different vegetables, fruits and nuts, flowers and spices. The major public/private institutions involved in horticulture researches are Nepal Agricultural Research Council (NARC), Agriculture and Forestry University (AFU), Tribhuvan University (TU), Kathmandu University (KU), NGOs like LI-BIRD, FORWARD and CEPREAD. Some of the private nurseries like Everything Organic Nursery, Kavre and Technology Demonstration Centre of ICIMOD, Lalitpur were also involved introduction of exotic germplasms. Horticulture researches started after 1950s and has gained momentum after the formation of commodity programme in 1972. Major researches in the past were focused on indigenous and exotic genotype collection and evaluation, variety development, soil nutrient management, propagation methods, soil moisture management, postharvest handling, disease and insect pest management, protected horticulture and biodiversity conservation. A few researches were also carried out in application of plant growth regulators and value addition. Some good ground works have already been done in major vegetables, few fruit and nut species, spices and condiments, flowers and aromatic plants. Recently, 4 kiwifruit, 6 litchi, 3 mango and banana, 1 mandarin orange and 3 acid lime, 5 large cardamom, 2 tomato hybrids and 2 cucumber hybrids were notified in NSB. Two exotic lime varieties were also identified export market. Three spur type apples, 1 mandarin orange, 2 potato for chip industry, 2 garlic, 1 BLM and 1 brinjal, 3 gladiolus varieties have also been proposed for notification. Red color variety of onion, two exotic acid lime varieties for export market have also been identified. Researches has also been carried out in tea, coffee, ginger, turmeric, rosemary and stevia. Use of cold chamber with CoolBot device, modified atmosphere packaging (MAP) system, orange harvesting picker (twist and turn), value addition in Bael, - 4 - banana, kiwifruit and coffee were also done. There is negligible works in fruit breeding. To strengthen the fruit researches in Nepal, ADB supported 'NAFHA' project has been started focusing on exotic germplasm introduction and evaluation to increase productivity. To strengthen horticulture researches in the nation, NARC needs to be restructured in federal system of government and should play a leading role with strong collaboration with AFU, TU, ICIMOD NGOs and private sector. Establishment of commodity research programs under National Horticulture Research Institute (NHRI) at NARC could be a milestone. Establishment of technology registration system, increase in research budget in horticulture, utilization of horticulture biodiversity and recruitment of human resources should be initiated as early as possible by GoN.

Keywords: Fruits, Vegetables, Germplasm Evaluation, Exotic Varieties, Postharvest