Over the years, farmers have developed a range of production and management practices to conserve and sustainably use tropical fruit species diversity in Asia and elsewhere. These good practices can either be farmers’ own innovations or developed by formal research agencies and further adapted by farming community in their own context. Because of perennial nature of the tropical fruit tree crops, research on these crops tends to be long term and costly. Good practice means different things for different people. For our purposes, we defined good practice as a system, method or process, that over time and space maintains, enhances and creates crop genetic diversity and ensures their availability to and from farmers and other actors for improved livelihoods on a sustainable basis.

Multiple varieties of mango maintenance in a single tree could be a good practice for scion maintenance for those nurseries and field genebank who have limited land resources and staff. The practice of grafting of multiple varieties (4-5) in a sapling could be an income generating opportunity to nurseries for marketing diversity and raising public awareness in urban home gardens. It could be also a novelty that can be practised to promote agro tourism and educational tool (i.e. to demonstrate varietal diversity without having to walk through entire orchard).

It is hard to believe that a farmer can have a hobby for grafting multiple varietal scions of interesting and unique mango diversity on to a single tree. I did not believe either until I saw the orchard of Haji Kaleem Ullaj Khan in Malihabad where he maintains several trees with many varieties as sources of scion for his mango nurseries (http://abdullahnursery.com/). A good and reliable source of scion is essential to run a successful and credible mango nursery. To have scion block in a large field is expensive in terms of maintenance of healthy mother trees and land required to maintain scion block of 100-300 matured mango trees.

Son of a magician grafter, Najmi showed me two the very rare mango trees. One is said to be a 100 years old tree named Al-Muqarrar which has more than 300 varieties of mango skilfully grafted by his father. The other younger tree has...
more 150 mango genotypes grafted on to it; each branch looking like a unique tree! Both trees are bearing fruits of different colour, shape and size at different times.

Born in 1945 Haji Kaleem Ullaj Khan does not have any academic horticultural degrees per se but he is well renowned in India for his skills and knowledge in multiple grafting on a single tree. He was awarded as Udhyam Pandit (Professor of Orchard) by ex-President of India. He has also presented a mango tree of 54 varieties to the President of India for the premises of the Mughal Garden of Rashtrapati Bhavan. He was acknowledged by many high profile visitors from abroad and also decorated by Padamashri award. His name is recorded in the Guinness Book of the World Records for this feat.

Abdullah Nursery, besides being famous in Malihabad and India for his innovation, also markets saplings of commercial nature to the distant places of Bhutan, Nepal and Bangladesh. Unlike government research station, he is using ground layering for his propagation for most commercial saplings whereas he used veneer or wedge grafting grafting for special cases. He has also grafted guava tree that flowers and fruits all year round which is another attraction of the nursery.

This traditional practice of nurserymen – an innovation borne out of local need-can be a good practice for nurseries to maintain scion at low cost. However, in spite of low cost maintaining scion material, it can be a high risk practice because several varieties depend on one mother tree’s survival. If someone practices this technique, it is important to duplicate the same for safety reasons or have the scion material tress separately. It can also be a good practice for innovative marketing of diversity in urban garden/home gardens. This will create new market for nursery growers and raise public interest in the diversity of mangoes. This activity has been conceptualized in the project of UNEP/GEF Conservation and Sustainable Use of Tropical fruit Tree Diversity in India.

(Compiled by Bhuwon Sthapit, Bioversity International).

Pictures:

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Further information

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