Improve access and availability of diversity
Use: Access of unique diversity

GRASSROOTS BREEDING

Step 1: Conduct diversity fair

Locating diversity

Step 2: Conduct market survey

Studying farmer/consumer preferred traits

Step 3: Carry out diversity block

Assessing genetic diversity

Step 4: Traits selection

conducting simple informal variety selection

Step 5

Support community based seed production and marketing

Step 6

Register new selection by community and make available
Availability: Leveraging partnership for supporting community action plans
Identification and recognition of custodian farmers
Who maintains diversity and how?:

Custodian farmers of Malihabad site

<table>
<thead>
<tr>
<th>Community</th>
<th>Name of the farmer</th>
<th>Number of varieties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kasmandi Kalan</td>
<td>Mr Nawab Hasan</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>Mr Parmeshwar Sharma</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Mr Amir</td>
<td>24</td>
</tr>
<tr>
<td>Gopramau</td>
<td>Mr Chhote Lal Kashyap</td>
<td>135</td>
</tr>
<tr>
<td></td>
<td>Mr Jamuna Prasad</td>
<td>70</td>
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<td></td>
<td>Mr Tulsi Ram</td>
<td>30</td>
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<tr>
<td>Sarsanda</td>
<td>Mr Rameshwar</td>
<td>45</td>
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<td></td>
<td>Mr Mohan Lal</td>
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<td>Mr Ram Asre</td>
<td>25</td>
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<td>Mohammad Nagar</td>
<td>Mr Ramesh Chandra</td>
<td>09</td>
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<tr>
<td>Taluqedari</td>
<td>Rafeeq</td>
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<tr>
<td>Total</td>
<td></td>
<td>461</td>
</tr>
</tbody>
</table>

(Source: Rajan et al 2012, TFT Project)
Custodian farmers

Characteristics

• Maintain rich diversity
• Self-driven by conservation ideology
• Knowledge holder
• Highly motivated and self-directed
• Recognition from community

Issue

• How can we consolidate their role as conserver, dynamic innovator and promoter of diversity?
• Can such custodian farmers be recognized as community genebank and publicly supported?
Adaptive practices that support diversity and livelihoods
Side grafting in areas without access to irrigation to increase richness of mango varieties on farm (Thailand)

Management practices that use scion diversity for adversity and improve farmer’s resilience

P Sripinta, C Noppornphan, M Yoovatana, S Somsri, B Sthapit, VR Rao, M Kaur, H Lamers
Use of scion from multiple varieties to manage risk from climate change

Adaptive management employed by Thai farmers
Benefits to farming community
Multiple strategies to ensure benefits to farming communities:

- Piloting good practices that reduce risk and increase productivity
- Improve access of info & materials
- Identify best materials and market
- Increase the demand for the material
- Policy recognition to custodian farmers

Who facilitate the process locally?

- Strengthening local institution
- Empowering farmers!!
Combination of side grafting technique and informal scion exchange system for mango diversity management in non-domesticated orchards.

Local food culture
Thailand

Flyers produced

Side grafting
Thailand

Promoting
Aroi-aroi
Malaysia

Promoting
Aroi-aroi
- A Relative of the Queen of the fruit

Aroi-aroi or Gomphocarpus physocarpus is a relative of the "Queen of Fruits" mangosteen (Garcinia mangostana). This indigenous fruit species is quite unheard of compared to its economically popular cousins. In the olden times, aroi-aroi fruits were grown specifically being part of the Malaysian diet and for their known curative properties. Sadly, they have become extinct because the growers were not able to rely on them for their fruits and modern alternatives. Under the UFC/UNEP project "Conservation and sustainable use of cultivated and wild tropical fruit diversity: Promoting sustainable livelihoods, food security and consumer protection," action was taken to re-introduce the importance of aroi-aroi as a nutrition source and in providing livelihoods to many rural communities in Malaysia. The project also promotes best practices and practical examples of the sustainable use and maintenance of the fruit and its market potential.

Get to know more of Aroi-Aroi
Aroi-aroi community grows along the west coast of the Malaysian state Sabah, as well as species in the lowland forests in the foothills of the Crocker Range and as semi-wild or cultivated fruit trees in home gardens and in the wild. This fruit grows in the wild and is found on the ground, and has a distinctive flavor and texture. The fruit is similar to the mangosteen in taste and texture, but with a slightly sweeter flavor. The fruit is also known for its high anti-inflammatory, anti-oxidant, and anti-bacterial properties.

Postharvest handling
Aroi-aroi fruits are marketed in dry form at farm gate price ranging from RM 20.00 to RM 40.00 per kilogram. The price is determined by the size and quality of the fruit. Due to its high nutritional value and unique taste, Aroi-aroi is highly sought after by consumers. The fruit is also known for its high anti-inflammatory, anti-oxidant, and anti-bacterial properties.

Marketing of Unique Local Food Culture: Moo Changpan

The context
Traditional foods are deeply rooted in Thai food culture. Chanthaburi Province is known for its fresh, organic, and sustainable food production. The province is a major producer of the famous "Moo Changpan," a type of pork curried with local herbs and spices. The dish is a local specialty and is highly regarded for its unique flavor and aroma. The dish is typically served with sticky rice and is a popular dish during special occasions.

Value addition of George Tomkins through community chain approach in Thailand

In 1994, the cooperative started producing several products, among which local food, like in local areas. Several years later, the group started producing the bottled product of Moo Changpan and has been popular in the local and national markets. The group managed to obtain certification for the product from the Food and Drug Administration to guarantee food safety and quality. The cooperative has continued to expand its product line and is now able to supply the needs of the local market and is looking to expand its product line.

Contribution to maintenance of G. cucumis to livelihood
G. cucumis usually grows wild along the margins of the forests in various parts of Thailand. Using the G. cucumis known in local food recipes, such as Moo Changpan, and has been proven to provide nutritional benefits. In addition, the medicinal properties of the fruits, galls, and bark of the tree are known for their contribution to maintaining the health of the elderly and women. In addition, the harvesting and processing of the G. cucumis have been found to be beneficial for women, especially in the local areas where the tree is found.
Key lessons

• The community empowerment is the driving force to maintain dynamic relations between plants, animals and environments- a participatory CBM approach is worth considering!

• Strengthening local institutions enhance farmer capacity to use (genetic diversity assessment, access, use and benefit) in choosing options

• The process should recognize by the government and supports local institutions and communities as legitimate and crucial actors in the on-farm conservation

• A successful CBM method shall contribute to strategic goal b (Target 7) and goal C (Target 13).
Thank you very much.

Acknowledgements: