



QUARTERLY PROGRESS REPORT

GREEN INNOVATION CENTRE FOR THE AGRICULTURE AND FOOD SECTOR – INDIA

January – March 2022

Tabular Summary

Title	Global Programme Green Innovation Centres for the Agriculture and FoodSector - India
Implementation period	01.11.2014 - 31.03.2023
Value chains	Potato, Tomato, Apple
Target group	<ul style="list-style-type: none"> • Smallholder farms, especially young people and women • Managers and employees in the upstream and downstream companies of the value chains (VC), especially young people and women
Success Indicators	<ul style="list-style-type: none"> • Income and productivity increase: in smallholder farms by an average of 30%. • Employment growth in enterprises working along the value chains • Education and training: for smallholder farmers • Improving services along supported value chains

1 Brief Description of the project

The aim of the Green Innovation Centre is to promote the dissemination of innovations that contribute to improving the income of smallholder farms, employment in the agricultural and food sector and the regional supply of food in selected Indian states.

The country package focuses on the micro and meso levels. At the micro level, the focus is on training and extension, the availability of inputs and services, and strengthening business relationships along the value chains. Private agricultural extension workers are at the centre of this approach. The competencies of farmers and farmers' organisations with regard to a sustainable increase in productivity are strengthened in particular through the application of *Good Agricultural Practices* (GAP). This is done on the one hand through training, field days and demonstration fields, and on the other hand through formalised further education and training courses. Producer groups and enterprises in the upstream and downstream sectors are supported in increasing their business capacity and in identifying and exploiting their market potential. At the meso level, the project strengthens the capacities of people in the service sector as well as in advisory, education and training institutions to disseminate innovations. The networking of actors in the states (macro level) and the political dialogue with the Ministry of Agriculture at state and central level are intended to contribute to improving the framework conditions for a modern agricultural and food economy.

The focus in the potato value chain is on professionalising the upstream areas (e.g. improved seeds), production (e.g. mechanisation) and marketing of table potatoes (e.g. networking with supermarket chains, direct marketing). The central starting point for the development of the agriculture value chain tomato is the upstream area of production of high-quality seedlings, e.g. through model seedling farms, and the marketing of seedlings. In the Apple value chain, the focus is on a transformation

towards modern apple orchards as well as on production (e.g. nutrient and disease management, pruning of apple trees).

With the introduction of the new partnership category "Global Partners" under the BMZ 2030 reform concept, India will in future be counted among the global partners and will accordingly play a strategic role in solving global future issues and protecting global assets. The country package will therefore be increasingly integrated in the framework of a new module: Strengthening Global Partnerships, the country package will therefore increasingly work in the thematic areas of agroecology and South-South cooperation. For the Potato and Tomato value chain, the 2021 project progress analysis must examine whether and how a conclusion of the measures can be planned for the end of 2022. A corresponding concept for the realignment of the country package has been submitted to the BMZ and is part of the 2021 amendment offer.

2 Major achievements and activities (as per states)

2.1 Karnataka

2.1.1 Potato

- Stakeholders study tour was organised to Punjab and Haryana to observe the seed production system on 27th Feb to 3rd March 2022. Scientists from University of Horticultural Sciences, Bagalkot, GIC project staff, CIP and farmers were included in this study tour. The team has visited seed growers, companies, Potato Technology Centre, CPRI sub-station, CoE on Vegetables, machinery manufacture enterprise and learnt many aspects of seed production.



- Loop Mediated Isothermal Amplification (LAMP) is set up at Horticulture Research Station, Hassan. An international expert from CIP, Kenya trained the staff and university scientists on diagnosis of bacterial and virus infection in the potato plants.

- Harvesting of Rabi season has started and so far about 5000 bags (250 tonnes) of potato seeds are stored in cold storage which will be used for production of G1 seeds in the Kharif 22 season.

2.1.2 Tomato

- Low-cost boom sprayer for tomato is designed by staff of Kadur FPC and demonstrated at farmer's field. So far about 50 sprayers are sold to farmers.

2.2 Maharashtra

2.2.1 Potato

- A proposal jointly developed by GIC and DoH on the Decentralised Seed Production through Apical Root Cutting (ARC) Technology in Potato was submitted to Director, Agri Processing & Planning. The proposal has a plan to cover 15000 farmers in the pilot project in next two years under the RKVY Scheme.
- Single row fully automatic Potato transplanter trials were successfully conducted by MPKV at Satara district of Maharashtra. The certification is an essential step leading to empanelment of the planter for availing subsidy under the government schemes.
- Training on Output marketing by FPO were attended by Project staff at Lucknow conducted by the implementing partner APMAS to understand different Output marketing models for FPO and this will help in taking output marketing activities at FPO level in Maharashtra.



Single row fully automatic potato transplanter

2.2.2 Tomato

- Training on PoP nursery and PoP tomato were given to DoA officials in Sangamner and Akole Taluka, Ahmednagar district on 10th February 2022.
- Field training and visit were conducted in collaboration with DoA, Sangamner and Akole Taluka of Ahmednagar district for Cucumber mosaic virus (CMV) management. Scientist from Mahatma Phule Krishi Vidyapeeth (MPKV), Rahuri were also present during the field visit and training program on 02nd February 2022.

- Tomato Transplanter prototype developed and field trials were conducted at Satara and Narayangaon, Pune District. Based on farmers feedback and trials modifications will be done in prototype for further trials at field and at MPKV, Rahuri.



Tomato transplanter



Tomato transplanter field visit



Field training and visit programme of DoA officials at Akole and Sangamner, Ahmednagar district of Maharashtra



Training program for DoA officials and Nursery owners on Nursery management PoP and Tomato PoP

2.3 Andhra Pradesh: Tomato

- Production of bio inputs is being done by trained farmers. Interacted with such individual farmers and efforts are being made to streamline the production and marketing of the bio inputs through FPCs.

2.4 Himachal Pradesh: Apple

- In Himachal Pradesh, climate resilient and profitable activities are being promoted with technical expertise, new technologies and extensive private sector engagement.
- On-field Capacity building trainings of about farmers and pruners across Jubbal area of Shimla district on canopy management: Training and pruning techniques in traditional and HDP/MDP plantations. 101 farmer participated in this program.



Training and Pruning in Apple Orchards



- Under Food Processing Enterprise development initiative, 6 product development training sessions were organised by GIZ Food Technology consultants for more than 40 trainees of 7 SHGs (6 women and 1 mix group) in this quarter, including 4 SHGs from Kullu district (Kullu, Manali & Bhuntar tehsils) and 3 SHGs from Shimla district (Chirgaon & Rohru tehsils). Processed products like apple pulp, apple jam, apple chutney, apple sauce, plum appetizer and mix vegetable pickles were prepared during these sessions.



Product development training sessions at Kullu district in February 2022





Figure: Product development training sessions at Shimla district in March 2022

- FPO Development:** Conducted one online workshop in collaboration with AHA (Andreas Hermes Akademie: training institution of the Deutscher Bauernverband (German Farmers' Association, dbv) for Strengthening and organization development of farmers' organization: Chuhara Valley Apple Society in Rohru, Shimla. The workshop was conducted for training, capacity building and leadership development for the key personnel and board members of FPO.

3 Update on cross-cutting topics

- **Renewable Energy**

Solar powered Cold storage installation process initiated in the three locations (Pune districts) of Maharashtra and two locations (Hassan & Chikmanglur districts) in Karnataka state. The sites are identified, and applications submitted to the local electricity department for augmenting grid so as to install net metering. As of now foundation construction process is initiated.



Sriram Nagar site for cold storage installation

Apple Value Chain: The transportation of stored apples in the solar powered cold storage is transported to Azadpur, Delhi Market from Shiladesh, Himachal Pradesh. The direct marketing is supporting the farmer to realise 10% better price from the local market.

- **Gender**

Chitrika: In this quarter, the Women Entrepreneurship Programme (WEP) at Maharashtra (Maval and Gondia) and Andhra Pradesh (Srikakulam and Chittoor) witnessed the completion of 22 days of facilitation workshops across all clusters with 130 women participants. The participants have stepped into practicum phase and are placed in enterprises as interns at different roles; accountant, store manager, salesperson, and involved in production

To bring a sense of confidence in these participants a small exhibition was conducted at central office where these products made a sale of Rs. 16,500 approx. Many people have reordered items. The products which were in most demand was - Protein bars from Tirupati and Banana chips from Srikakulam.



Facilitation workshop at Maval (Maharashtra)



Different products made by the trainee entrepreneurs



Maval - Interview of candidates for internship; Distribution of smart phones to women participants



Training on recipe standardisation; Banana chips making practicum



Women in technical training - Agarbatti making; Participants in retail chain unit

International Women's Day event 2022: The Green Innovation Centre-India organised this event at village Kadus in Maharashtra. It was done in association with the Farmer Producer Companies (FPCs) supported under GIC programme & the implementing partner AFC. Representatives of each organisation put forward their ideas underscoring the importance of women empowerment, gender equality and role of women in farming community. More than 250 farmers from *Bhama Bhima FPC*, *Satgaon FPC*, *Krushinavakalpana FPC* and *Versatile Agrofirst FPC* along with their Board of Directors (BODs) attended this event organised on 9th March.



International Women's Day event organised at Kadus village, Maharashtra

Cooperation with other funding Agencies

GIZ is offering its technical expertise to the Asian Development Bank (ADB) funded MAGNET (Maharashtra Agribusiness Network Project) worth USD 100 million. The project is in line with the state government's Vision 2030 by providing holistic agribusiness and value chain support in horticulture. The project will enhance (i) the capacities of agribusiness institutions and farmer producer organizations (FPOs), (ii) access to finance of FPOs and value chain operators (VCOs), and (iii) horticulture value chain infrastructure.

4 Project Progress Details

In value chain clusters

	PROJECT LOCATIONS					
State	Karnataka		Maharashtra		Andhra Pradesh	Himachal Pradesh
Districts	Chikmangalur district	Hassan District	Pune and Ahmednagar District	Aurangabad, District	Chittoor District	Kullu and Shimla District
Crop	Tomato	Potato	Tomato	Potato	Tomato	Apple
Number of project villages	49	86	65	42	307	190
Approx. area covered under the project	567ha	1,003ha	2,000ha	2,053ha	5,806ha	8,400ha
No of farmer groups and farmers reached	52 Men groups: 36 Women groups: 19 Mixed group: 3	71 Men groups: 49 Women groups: 15 Mixed groups: 7	83 Men groups: 69; Women groups:14	74 Men groups: 34 Women groups: 12 Mixed groups: 7	441	170 Men groups: 152; Women groups:18
Outreach to farmers not organized in farmer groups	1812	937	6,014	5,541	2,400	3,000
Total number of farmers	2310	8975	6300	3519	7420	11138
No. of Farmer Producer Companies (FPCs)	2 FPC registered	2 FPC registered	4 FPCs formed	2 FPCs formed	12 FPCs (Mandal Level), 26 cooperatives (Panchayat level), 1 district level federation company registered	Support of 2 Farmer Associations in Kullu and Chuhara Valley