

Greenhouses bringing home profitable yields

For years, hyper-competitive markets and lack of awareness in adopting modern farm methods made agriculture barely sustainable for small farmers in and around the Kalimpong in West Bengal. But now, innovations like localised greenhouses, systematic farming methods like soil cooking and germination, and easier access to markets has ushered in an era of growth, productivity and profits.

Arun Chettri is a small entrepreneur from Kalimpong. A few years ago the only assets he possessed were a small piece of land (around 0.4 acre) and a pocket-sized house in Lower Bong Busty amidst the picturesque hills of Kalimpong. A high school pass out, he opted to drive a jeep, ferrying tourists in and around Darjeeling, a common livelihood option for many youngsters in the region who had lost hope in agriculture, the traditional occupation.

Today, things have changed. Arun's life is filled with the fragrance of flowers and the aroma of soil. No more is he troubled by the smell of fuel and muddy roads. He is busy running a small nursery that offers a wide range of seedlings, including tomatoes as well as new exotic flowers and ferns.



Scenic view of Lower Bong Busty village

but this time he seems to be rejoicing!

Yograj Pokhrel hails from Lower Bong Busty too. He had inherited three acres of land, along with all the farming methods and traditions that went along with it. Returns were not enough to sustain his family of four. Forced to search for alternate livelihood options, he leased the land to other farmers and went overseas in search of a job. The loneliness was hard to bear and he soon returned home to his old profession. He has returned to his fields,

What changed the lives of Arun and Yograj? It was certainly not a quick transformation, wrought overnight by an easy twist of fate. Like Arun and Yograj, many small farmers in Kalimpong are celebrating success on their farms - thanks to an innovative training programme offered under the Regional Horticulture Promotion Project (RHPP) at Dr. Graham's Homes supported by Japanese International Cooperation Agency (JICA) through Miyazaki International Volunteer Centre (MIVC), Japan.

Revitalising a traditional livelihood

Farming in the historically agrarian region of Kalimpong was barely sustainable, especially for small farmers, who had no access to professional training and were not aware about modern farming methods. With limited know how and resources at their disposal, quantity of produce remains low. They had no access to markets and were incognisant of marketing techniques and strategies that would enable them to eliminate intermediaries and take on the competition from producers of nearby districts like Siliguri and Sikkim.

The Regional Horticulture Promotion Project started with an aim to fill this gap and provide local small farmers with research based knowledge and techniques for higher productivity, new products, forward integration (for example, through food processing and flower arrangement), new markets, packing and shipping.

The formalised training sessions offered by the RHPP combine theory and practical sessions at Dr. Graham's Homes' Green House; it extends to the farms of the trainees through field visits and guidance in appropriate choice of crops and methods to employ. This system of going beyond the classroom has been especially fruitful for the trainees; it has also managed to inspire neighbouring farmers in their villages. The lessons learnt from the Green House and from one another's experience have turned out to be very useful.

The curriculum has evolved through intensive research conducted by Japanese and Indian agriculture scientists over a previous phase of the project where local and Japanese agro-horticultural products and techniques were tried and selected.

Trainees are carefully selected. Several field visits are held to determine the people who need the training the most. Farmers must be able to read and write in Nepali or English, and must show deep interest and commitment to agro-horticulture. A nominal registration fee of Rs.50 and monthly fee of Rs.100 is paid by the trainee while, lodging, food and transport are supported by the Centre. The curriculum covers a range of subjects including weather and environment, cultivation practices, soil and manuring, disease and pest control management, tissue culture, technical skills in shipping and marketing, storage and packing skills, food processing, farm management, agriculture based computer training.

For Arun, who barely had any land to cultivate, Green House proved to be a boon. Driven by ambition and entrepreneurship, and inspired by flourishing floriculture businesses in Kalimpong, he started a small enterprise on his own. But without the necessary know-how and skills, the going was not easy – results were not encouraging as the flowers he produced were of inferior quality and quantity. It was only when he joined the short term (1 month) training course at the Green House that his fortune turned. He constructed a localised greenhouse using bamboo and vinyl sheets and started a nursery with guidance from the trainers and peers. It proved and turned to be a great success.

Today the nursery is a preferred source of healthy seedlings for the local farmers - Arun follows a rigorous process of soil cooking and germination which he absorbed during the training, because of which the seedlings that germinate are disease free, leading to a good harvest and good profit for the farmer. Packing and shipping techniques ensure that his products remain fresh and attractive right up to the point of delivery. As a result, his flowers and seedlings have gained popularity in markets far and near, mostly by word of mouth.

At this moment Arun is undergoing basic and agriculture based computer training provided free of cost by the project to help him in his business.

Yograj who had once ventured overseas in search of job is now farming vegetables 365 days a year. He is producing good yields even during off-season periods – a strategy that enables him to compete in the premium market segments. All this is possible because the greenhouse that he has built offers protection, and temperature regulation that enables production right round the year.



Yograj Pokhrel at his greenhouse

To construct his greenhouse, Yograj used bamboo that was available with him. He bought vinyl sheets, nets and other material from the local market. It cost him around Rs.11,000/- to build a greenhouse of 20X30 sq.ft. He found the process of construction to be cheap, easy and efficient. Expensive fabricated aluminium structures are replaced by simple bamboo structures in this low cost greenhouse and the glass fencing is simply replaced by vinyl sheets and nets.

“The greenhouse has not only increased the productivity of my farm, but has also improved my health and the time I spend with my family. Since the greenhouse is sheltered, I could work inside the greenhouse at anytime, even during the day, which I couldn’t have done in the open farm due to heat of the sun. According to him, “This simple solution has changed our lives, making it simpler and easier... with less effort, we gain more profit!”

Innovations in technologies for rural transformation



Jitendra Rongong, President of Cooperative society learning computer

Yograj and other trainees have now registered for a computer course that will enable them with basic and advanced computer skills that will ensure greater efficiency in managing their farms. They are also provided training on farm management software that is planned to be installed in the recently formed cooperative society.

The modern, systematic techniques transferred during the training have impacted the quality of the trainees’ lives in more ways than one – with emphasis on localised, organic farming methods families are now able to ensure better health of their families and longevity of their farms.

Shyam Tamang was not a farmer to begin with; he is a retired teacher and one of the 89 inspired trainees. He had his own land since 1982, but as he was teaching he was not directly involved in cultivation - his brother was cultivating the land until last year. After the training, he ventured into his land in right earnest. His first tomato harvest was bountiful – one that he shared with his family and friends with pride and happiness. With firmly established belief in organic farming, he

is now planning to venture into the production and marketing of compost-based organic manure. This essay shows how the training has inspired even a non-farmer into modern organic farming.

The RHPP is not just a training programme; it is a capacity building and networking platform that enhances the economic, social and human capital in the community. Through knowledge sharing and networking, farmers have adopted new techniques, increased productivity and earning, yet exposure to markets and dealing with intermediaries remains a cause for concern.

A collective effort for common good

To resolve this, trainees with guidance from the RHPP team have come together to form a cooperative society that is to be launched soon. “The cooperative will ensure that the increased yields reach the right markets and that farmers get all the money, eliminating the intermediaries who had been getting the chunk of profit,” says Mr. Jitendra Rongong, a 64 year old farmer and President of the newly formed cooperative.

Mrs. Aruna leads her family and the farm as her husband has gone away to the city to work. She is now the Vice-President of the cooperative society. “Whatever we have earned or learnt, we would like to share with our fellow community members, so we hope that this cooperative society will be the platform for that,” says she.

“The cooperative society has just been formed; we have around 44 members as of now. Initially we would invite the trainees to be part of it, and then we plan to extend the membership to all the village folk. Right now it is in the formative stages; we believe that with our collective effort, it will gather strength.” says Dipendra Prakash, secretary of the society as he shares about future plans. He has recently been to Japan to study about cooperative management and is eager to put his learning to practice here.

Looking at the road ahead

The RHPP initiative has thrown up some valuable lessons for the agriculture sector. New organic techniques have influenced local farming. For many farmers, RHPP has not only introduced a changed approach and technology for increased productivity, but it has also encouraged variety to their crops. Most of these new crop varieties are of high value. With the help of the greenhouses constructed under the project, farmers can sow during the off-season as well. This ensures a greater annual yield and a year round source of income. This way the farmers are able to meet not just their basic sustenance needs but also sell their surplus produce in the market.

RHPP is training local farmers in various innovative horticultural practices. Techniques of flower arrangement and food processing are expanding livelihood options. Some trained farmers have opened nurseries where they sell saplings to other farmers in the area. Many women from the area have learnt the art of flower arrangement and use this skill to generate additional income. With larger incomes, the local population can afford to educate their children, brightening their possibilities for the future.

The success of trained villagers has inspired friends and relatives and encouraged them to adapt new agro-horticultural techniques. These techniques have spread across villages.

Today, with RHPP and the 'Trainees Realistic Shop', farmers do not have to go through intermediaries to sell their produce in the market. The training helps them to correctly price their produce and with the help of the store, they are able to place their produce in the market and reap the monetary benefits. The formation of the co-operative with focus on creation of marketing channels will further open vistas for greater profits.

RHPP will be in operation through 2012. Until then, local capacities for training and marketing will continue. RHPP and the greenhouse and community service projects have created a new beginning for the small farmers of Kalimpong placing them on the track to self-sufficiency.