CROSS-COMMODITY LEARNING JOURNEY
EMPOWERING SMALLHOLDER FARMERS
IN HYDERABAD, INDIA
The India Learning Journey was a powerful experience. It highlighted the importance of peeling back the layers within supply chains and building solid relationships with the farmers by meeting them face-to-face. We witnessed the importance of empowering communities, smallholder farmers and stakeholders by working in collaboration and together with the farmers to achieve a systemic change.

Yael Fattal-Lariccia, Global Event Manager, SAI Platform
INTRODUCTION
Empowering Smallholders in India

This report has been prepared by the Sustainable Agriculture Initiative Platform (SAI Platform) and includes input from members, participants and hosts along this Learning Journey. Many SAI Platform members are currently sourcing from India and especially from smallholder farmers.

According to the latest research carried out by the Agriculture Census, up to 80% of Indian agriculture is sourced from local smallholder farmers. Given these figures, the objectives of this cross-commodity Learning Journey were to examine the role and challenges of smallholder farmers in India as well as to see first-hand the opportunities and initiatives that are working to empower Indian smallholders.

India is home to 90 million smallholders (World Bank, 2016) and demonstrates a clear example of how smallholder farmers can contribute to the global food supply chain. By examining the various trends of smallholders in India, this report brings to light some of the methods, cultivation patterns and good farming practices in use. It also investigates the role of technology for smallholders, their productivity performance and ability to link with markets and value chains. As we better understand the role of smallholders in the food supply chain, we see clear evidence that issues such as food security and the employment for future generations are major challenges currently being addressed.
FACING FACTS
Introducing India’s Smallholders

Smallholder and marginal holdings are vital for agricultural development, food security and boosting the Indian economy. Any change towards sustainable agriculture needs investment within these categories of farmers.

ABOUT LAND HOLDINGS
Source: Agriculture Census 2010-2011

85% of all farms in India are less than two hectares.

1.13 hectares the average size of land holdings in India in 2010-11. In 1970-71 it was 2.3 hectares.

ABOUT SMALLHOLDERS
Source: Agriculture Census 2010-2011
IFC, 2013

Almost 85% of India’s total population consists of smallholder farmers and their families.

Smallholders produce 41% of India’s grains production.

Smallholders comprise 80% of India’s farmers, but own only 45% of the total cultivated land.

Based on the size of land holdings, farmers in India are categorised into the following:

Marginal farmers – less than 1 ha

Smallholder farmers – up to 2 ha

Medium farmers – from 4 ha to 10 ha

Image: Map of Telangana State
SDGs & Smallholders

Most of the UN Sustainable Development Goals (SDGs) are relevant to smallholders in food production. Companies sourcing from and supporting smallholders in India as well as other parts of the world, play a significant role in contributing to the SDGs and delivering change.

In 2015, the United Nations approved the 2030 Agenda for Sustainable Development, setting in motion the SDGs.

The majority of the world’s agricultural production takes place on a small farm level. Currently 90% of the 570 million farms globally are smallholders (less than 2 hectares in size) and they are being cultivated by 1.5 billion of the world’s poor (FAO, 2015). In Asia and Sub-Saharan Africa, where the problem of hunger and poverty are most severe, 80% of the food supply comes from smallholders.

As a global organisation, SAI Platform is committed to covering all aspects of sustainable agriculture. Our Learning Journeys are built with a strong focus on the United Nations’ SDGs as we create shared opportunities for our members to visit initiatives and projects that are addressing today’s social, environmental and economic challenges.

By acknowledging the reality and understanding the role smallholders play in the value chain, we are addressing a crucial link towards a more socially inclusive and environmentally sustainable economic development.

SDG2 aims to end world hunger, malnutrition and promote sustainable agriculture. Specific targets are set to double agricultural productivity and the income of small-scale farmers, which are directly linked to small farm production.

Eight other goals specifically relate to ending poverty, gender discrimination, inequality, environmental degradation, tackling climate change as well as promoting healthy living standards to ensure smallholder development and growth.

Assuring the viability of small farms is a crucial factor to meeting the SDGs 2030 target.
Top 10 Challenges for India’s Smallholders

According to the World Bank’s International Finance Corporation (IFC), global food businesses are recognising that sourcing from smallholder farmers could provide a sustainable supply of key raw materials, such as coffee, cocoa, fresh produce and livestock products. However, it is important to recognise the unique challenges that smallholders face (IFC, 2013).

1. WATER ISSUES
Large farms have more access to canal water for irrigation purposes. Small to marginal farmers do not have irrigation facilities and mostly depend on ground water or rain.

2. LIMITED ACCESS TO SUBSIDIES AND FINANCE
There is insufficient access to affordable private finance arrangements from banks to support agri-food production. Meanwhile government safeguarding such as minimum support prices or implemented policies to maintain real prices are lacking. The impact of financial loans due to expensive input or harvest loss, is a real issue as exemplified in the Telangana district, where many farmers are committing suicide because of debt.

3. CHANGING TRADITIONAL FARMING METHODS
Farmers have given up on some of the beneficial aspects of traditional farming methods that were used to foster sustainable practices such as growing multiple crops or raising animals on farm as an organic fertilizer.

4. VAST RURAL DISTRESS
Many farmers, including second generation, would like to sell their piece of land rather than cultivate it due to high vulnerability to a range of risks, largely environmental which can have a devastating effect on their livelihoods and wellbeing.

5. CLIMATE CHANGE
Climate change is a major challenge for food security, agriculture and the livelihoods for millions of rural farmers. Farmers lack information on how to adapt to new climatic conditions due to changes in weather patterns.
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6 POST-HARVEST LOSSES & HANDLING
Once the crop is harvested the farmer is not always equipped with an adapted facility or the knowledge in how to store the harvested crop ensuring both its protection and delivery.

8 ASSOCIATED HEALTH RISK
Employee safety on the farm is still a challenge in India. The threat of poor health or incapacity due to incorrect application of agri-chemicals does not seem to be a motivating factor to ensure that the necessary precautions are taken.

7 LIMITED WORKFORCE IN THE VILLAGES
In many of the villages there is not enough labour available for agriculture (cultivation and harvesting). This is due to a new policy that encourages certain jobs over others, resulting in an agricultural labour force at a higher and sometimes unaffordable cost for the smallholders.

9 SKILLSET TO MEET MARKET REQUIREMENTS
For cash crops, farmers need information and training in order to reach quality requirements. This is especially important for export markets in Europe and USA etc., where certification standards such as GLOBALG.A.P. are required. Bayer have implemented a training scheme (BayGAP) to help farmers to develop their skills and manage quality requirements to achieve certification and access to new markets.

10 LIMITED ACCESS TO MARKET & POOR COLD CHAIN INFRASTRUCTURE
Farms are often located far from the source of agricultural input and/or buyers. Poor transport links and available resources add to this hinderance when purchasing input or gaining access to market.
Empowering Smallholders Through Sustainable Solutions

Over the course of this Learning Journey in India, SAI Platform presented a unique opportunity to better understand the livelihood challenges and sustainable agricultural practices of smallholder farmers in India.

The cross-commodity field visits brought members and partners together to meet the local farmer groups and communities. Witnessing the use of new technology and innovation for smallholders provided key insights into how they can be applied in multiple areas. This on the ground learning experience connected SAI Platform members and other stakeholders facing similar challenges while providing new insights and possible solutions.

One day and a half learning journey was sponsored by Bayer

The learning journey was hosted by Agri®, Reliance Foundation

The following member companies & partners benefited from this learning journey:

DANONE, Döhler, innocent, Nestlé, ADAS, CONTROL UNION, GLOBALG.A.P.
WHY PERMACULTURE?

Permaculture is based on three ethics: Earth Care, People Care and Fair Share.

By working with nature, permaculture empowers communities and works on existing social and environmental challenges. It is not linked to commercial business and is a great aspiration model for farmers who own 1-3 acres and can cultivate food for their own needs as well as cash crop.

Aranya Agriculture Alternatives (AAA)

A well-known local NGO in India promoting the use of permaculture farming practices to create ecological and sustainable livelihoods across the country.

Multiple sustainable farming approaches were explored at Aranya. These included an organic multi-cropping approach, biodiversity farming techniques, the use of layer strips to feed birds, animal manure for composting and biogas to produce electricity. The use of permaculture techniques at Aranya allowed smallholder farmers challenged with irrigation accessibility/availability or low yields to be self-reliant.

Highlights from the Learning Journey

The local and multi-national initiatives visited looked into the various means of empowering smallholders. The initiatives demonstrated how through better farming practices, connectivity between market and industry, innovative farming methods, the role of collaboration in the value chain and socially focussed projects are improving rural livelihoods.
A g S r i
A social enterprise focussed on providing solutions to improve the farm productivity and income, while reducing input costs.

AgSri promotes and produces sugarcane seedlings under the Sustainable Sugar Initiative (SSI) technique and promotes rice cultivation through Sustainable Rice Intensification (SRI) practices.

Visiting AgSri exemplified simple innovative options for farmers and companies to adopt to simple methods for improving the productivity while curtailing the usage of seed, water, fertilizers and pesticides.

Technology solutions management has specifically been adapted to smallholders’ farming methods. These solutions integrate environment protection on crop and water management irrigation and pest management as well as environmental and impact assessments.
Bayer Food Chain Partnership Initiatives

An innovative business model launched in 2005, where growers, traders, processors and retailers work together on integrated and sustainable crop solutions.

Today, Bayer Food Chain Partnership initiatives are associated with over ninety thousand farmers, covering more than 80,000 ha across various categories of field and horticultural crops.

The Rice Traceability Project

Supply chains in India are very complex and comprise of multiple stakeholders across the entire value chain making traceability from farm to factory gate challenging. The market of cereals is driven by price rather than quality parameters and contaminants.

However, over the last few years, the scenario has been changing. Consumers are requesting for more transparency and local and international regulations are acknowledging the importance of good farming practices and quality standards.

By proactively joining forces, Nestlé & Bayer are able to promote good agricultural practices with the farmers by:

• Collecting data and monitoring farm practices during crop cycle in specific regions (Regional Level Farm Mapping);

• Improving practices that strengthen traceability and food safety controls across the entire value chain basis risk assessment;

• Creating awareness among farmers on good agriculture practices, safe use and storage of agro-chemicals;

• Creating awareness through calculation of farm economics.
Implementation tools

The Rice Traceability Project uses what is known as Passport, a tool developed by Bayer CropScience (BCS) and already in use for record management and documentation at farm level.

Regular field visits are used as a key method to verify the traceability and quality of crops. BCS provides regular farm assistance to farmers from sowing to harvest with an agreed input and production process.

Benefits

This project ensures a consistent and sustainable market for farmers, shellers and millers through the implementation of good agriculture practices.

In the coming years, Bayer CropScience and Nestlé have committed to continue addressing aspects related to social and economic issues as well as further environmental factors.
The Sustainable Production of High Quality Vegetables Project

India is the world’s second-largest producer of vegetables and fruits with an annual production of 134 and 71 million metric tons respectively (National Horticultural Board, 2009-2010). Geographical and climatic diversity provide a unique opportunity to produce fruits and vegetables from temperate to tropical crops all year round. About 470 growers registered by Metro Cash & Carry across five different locations in India benefit from the cooperation with BCS through improved farm incomes and good agricultural practices.

Implementation tools - “5P” Program

Metro buys the vegetables from over 120 project farmers in the surrounding villages near Hyderabad. BCS support Metro in developing and implementing the innovative “5P” program for different vegetables (focus crops were tomatoes, cabbages, cauliflowers and cucumbers). Training courses for farmers are an integral part of the programme aimed at creating awareness of quality improvement, disease and pest management, as well as safe use and handling of crop protection products.

“5 P” program

Production: Crop production training and advice
Protection: Development and implementation of scientific plant protection program
Program monitoring: Professional production process monitoring
Passport: Tool for documentation and traceability
Post-harvest: Grading, sorting, packing and transportation

Benefits

Farmers are able to increase the yield by an average of 7%. Guidance throughout the crop cycle resulted in higher yield, better quality and a higher net income of 35% for the farmers. On average, farmers received a price increase of 4-5% by marketing through Metro.

In turn, Metro was able to buy good-quality vegetables and strengthen their relationships with the growers.
The Reliance Foundation (RF) is the philanthropic foundation promoted by Reliance Industries.

RF’s vision is to build an inclusive India by addressing multifaceted development challenges and contribute to the collective aspirations of people. The flagship rural transformation programme, Bharat India Jodo (BIJ), aims to establish a holistic, self-reliant and sustainable model of rural transformation. RF currently works in 23 villages covering 4,428 households and two watersheds. These villages were selected based on their ecological fragility, the potential to improve productivity through water conservation and a high presence of marginal farmers.

It was visible to see that the RF enabled the community to dream, lead and act collectively while exploring different options and working models. By interacting and influencing the key stakeholders, the community has secured safe drinking irrigation water supplies.

Water management methods

RF have adopted a systematic approach towards ensuring water security throughout these rainfed villages. It has adopted watersheds as an ideal unit for development. Proper checks are done at all sequential levels (streams) to conserve water and safely vent out the surplus.

FOOD FOR THOUGHT

More than 75% of the farming households have secured water for irrigation for at least 1.50 acre (0.6 ha).
Peer learning - when farm income is the only income in the family, farmers are not prepared to take risks. Model farms can provide an excellent way to convince farmers of the benefits of new farming and more sustainable practices.

Limited farm management expertise - typically smallholder farmers do not keep accurate accounting systems. Farmers often do not consider the cost of their time, or the cost of other family members' time when reviewing their business.

Farmers are champions to sustainable practices - the importance of co-coaching and seeing the farmers not as beneficiaries but as associates.

Empowering farmers to be drivers of change to sustainable practices - by facilitating exchange with each other and connecting them to other partners.

Permaculture - while other sustainable methods can be scaled up for commercial use, permaculture offers smallholders an aspirational farming model. It ensures self-reliance using local resources as well as earning a sufficient income and the ability to recharge the ground water.

Safety first - we need to find new ways to tackle employee safety on the farm and increase the use of personal protective equipment.

Climate change adaptation - from the vegetable producers visited, there was a general consensus that the effects of climate change had been apparent for the past 10-years. This has encouraged them to shift from grape to vegetable production in order to get three crops in a year rather than just one crop of grapes. Therefore, it is key that farmers have access to information on how to adapt to new climatic conditions.
New technology - dissemination of new ideas takes time, effort and commitment. However, new ways to improve efficiency of production and access to markets are available. In each of the projects visited, farmers were able to observe first-hand the benefits of adopting new methods and the importance of integrating the whole value chain.

Seeing the benefits first-hand goes a long way to changing the mindset and behaviour of farmers. The challenge is finding the resources to scale up these new technologies and to mobilising smallholder farmers across India.

Engaging from the root level – the village working under the Reliance Foundation was a great example of how an entire community can be uplifted through ownership making them accountable for the success of their livelihoods. The whole community were sensitised on the water situation, which led to accountability. Transparency was put into effect using simple techniques such as writing the water balance on one of the main buildings.

Build partnerships to overcome barriers in the ecosystem – transforming smallholder agriculture requires change across multiple levels in the ecosystem wherein farmers operate. Companies need to anticipate these ecosystem barriers and identify the most effective ways to overcome them. This often requires up-front investments to map the barriers in the local ecosystem and make the case with local actors to change the conditions.

Adapting to sustainable farming will not happen overnight - better to start step-by-step and make a lasting change.

It was very useful to learn about and see up close so many initiatives helping to empower smallholders in India. It helps us as a company as we do not need to design a new programme – we can rely on other existing initiatives, stakeholders and technologies already in place and build on these. That’s the whole idea about SAI Platform isn’t it?

Ben Summers, Sustainability Manager, innocent drinks
It was a hexathlon of initiatives, where we also got the opportunity to present two of our Food Chain Partnership Initiatives. There was so much variety in the chosen initiatives, everyone offered something new to learn & triggered the thought of integrating them and implementing in the field. The best thing in common is the lesson learnt from each one of the initiatives which can be integrated, implemented & scaled up to promote sustainable agriculture. 

Pankaj Kumar Sharma, Head of Food Chain, Bayer CropScience India

Market access - markets are not well developed and farmers do not have the means to seek them out. They may face long distances to reach collection centres invariably with poor roads and no cold chain to ensure quality of crops. They often do not know how to access new buyers and buyers’ requirements are not well articulated within the supply chain.

Certification/market requirements - for cash crops, farmers need information and training in order to reach quality requirements. This is especially important for export markets to Europe, USA etc., where certification standards such as GLOBALG.A.P. are required. Bayer’s training (BayGAP) is a way to help farmers begin to manage quality requirements and achieve the certification necessary to access new markets.

More collaboration in farming needed - smallholder farmers in India typically operate individually and have not benefited from the support of cooperative-type organisations. Farmer producer groups are now being promoted as a positive way forward to improve efficiency and productivity for smallholder farmers.

To be successful, farmer producer groups need to demonstrate good leadership, gain the confidence of farmers, have access to technical knowledge and use of effective methods to transfer this knowledge. Good examples of farmer producer groups are already being set up and with time, opportunities to scale up will hopefully foster a more professional approach to food supply chains.


Working with Smallholders, A Handbook for Firms Building Sustainable Supply Chains (2013), IFC.
We would like to thank our hosts Aranya Agricultural Alternatives (AAA), AgSri and The Reliance Foundation.

A big thank you also to our host farmers, as well as the SAI Platform members and partners who made this learning journey such an insightful experience.

Our thanks and appreciation also goes to our sponsors Bayer CropScience for sharing with us two of their inspiring Food Chain Partnership Initiatives.

And finally, a special thanks go to Dr Vinod Vemola who provided us with excellent knowledge to help understand smallholder’s challenges and opportunities in India, and to Vinay Kumar for all his support.