

Private-Sector Partnerships Foster Agricultural & Community Development in India

Partnerships between the public sector, private enterprise and communities allow the participants to share the risks, responsibilities and benefits of their joint investments. They offer an effective way to increase agricultural productivity and improve the nutrition and livelihoods of small-scale producers.



Photo credit: The Mosaic Company Foundation

BALANCED CROP NUTRITION BOOSTS INCOMES AND EDUCATION

Since 2008, the **Mosaic Villages Project**, a collaboration between **The Mosaic Company**, **The Mosaic Company Foundation** and implementing partner, the **S M Sehgal Foundation**, has helped Indian farmers move out of poverty and achieve greater food security. Mosaic's investment includes funding and the expertise of Mosaic agronomists who work alongside local partners to train farmers in balanced crop nutrition and agronomic best practices.

In the remote districts of Mewat and Alwar in Rajasthan, the **Krishi Jyoti Project**, or "enlightened agriculture," helps farmers improve productivity of three crops: pearl millet, wheat and mustard. The project focuses on five key aspects of agricultural production: soil health, seed and fertilizer, water management, agronomic training and market linkages. Village leaders selected farmers representing all castes and landholding sizes to participate in the program.

With balanced crop nutrition practices — using the right mix of macro- and micro-nutrients to meet the needs of the crops and soils — together with agronomic expertise and financial support, **farmers increased yields by as much as 35 percent over traditional farming practices.** In total, Krishi Jyoti has directly benefited more than 26,000 farmers across 60 villages and boosted cultivation across nearly 16,000 acres of land. **Average income per acre has also grown between 4,480 Rs (\$70 US) for wheat to 5,760 Rs (\$90 US) for mustard.**

Communities participating in the Krishi Jyoti Project are using the additional income to help create a better life for future generations. The S M Sehgal Foundation and Mosaic funded renovations for 20 schools in Alwar, Mewat and Sonipat — including adding sanitation facilities, safe drinking water systems and school kitchens.



Photo credit: Monsanto Company

HELPING INDIA'S FARMERS AND COMMUNITIES RISE

Since 2010, **Monsanto Company** has worked to develop the agronomic skills of small-scale farmers in India. The **FarmRise™ — Mobile Farm Care** program is a mobile digital platform used by farmers who plant maize, cotton and vegetable seeds. Currently there are more than four million farmers enrolled in this service in India.

The FarmRise™ platform enables farmers to communicate by phone or text with a trained expert in their local language for free. If the problem cannot be solved over the phone, a FarmRise™ advisor will visit the farmer within 24 hours. Farmers also receive texts with the latest price information from nearby markets and regular alerts on how to respond to changing weather conditions. Farmers do not need a costly smartphone to participate; basic cellphone technology is sufficient to take advantage of FarmRise™ services.

Monsanto India is committed to community development, as well as to agricultural development. Lack of **safe drinking water** is one of the major contributors to malnutrition in India, particularly for children. Contaminated water causes chronic diarrhea, which prevents the body from retaining nutrients. As a result, children experience stunted growth (too short for their age), which leads to life-long physical and cognitive impairments.

To help address this issue, Monsanto India's Vegetables Team has **helped 20 villages install water purification systems**. To access the water, community members pay a minimal amount using a pre-paid ATM-like card. The funds are used to maintain the purification system.



Photo credit: John Deere India

COMMUNITY TRANSFORMATION THROUGH MECHANIZATION

John Deere India is partnering with **Madurai Non-Formal Education Centre (MNEC)** to help small-scale rice farmers in the village of Thenkarai near Madurai in the state of Tamil Nadu transition to an integrated mechanized approach that saves time and labor while improving rice yields and incomes.

In 2015, the project coordinators conducted interviews with village members and other stakeholders, a process that revealed several barriers to mechanization: a large supply of free or cheap labor, the high cost of equipment, a lack of training and a resistance to change.

To overcome these barriers, six farmers were selected to manage a 10-acre demonstration plot using the new approach, including machine transplantation, soil testing, water management, nursery preparation and weed and pest control. At the demonstration farm, a dedicated program manager instructs and trains local farmers in mechanization and agronomy practices.

The farmers have seen reductions in input and labor costs, and they have optimized their water usage. With the proper use of mechanization, **yields have increased by 40 percent per acre**. Seed use has decreased by 30 percent and weeding time is reduced due to proper herbicide usage. One village leader said, "People from nearby villages keep asking us how we got **2.75 metric tons of rice per acre**. This is a proud thing for us."

John Deere India and MNEC also support the holistic development of the community. They have upgraded the school infrastructure and study materials. They also provide tuition support for local children. To help generate new livelihood opportunities, skills development courses are offered in tailoring, goat rearing, mushroom cultivation and cosmetology.