



GENDER-SMART BUSINESS SOLUTIONS

STRENGTHENING WOMEN FARMERS IN DCM SHRIRAM'S SUGARCANE VALUE CHAIN



Creating Markets, Creating Opportunities

CASE STUDY: STRENGTHENING WOMEN FARMERS IN DCM SHRIRAM'S SUGARCANE VALUE CHAIN

Project Overview

Globally, India is the second largest sugarcane producer, contributing to about 10 percent of its agricultural GDP.¹ Female employment in agriculture in 2018 stands at 55.38 percent.² According to the 2011 census, the agriculture sector employs nearly 98 million women, with about 63 percent of them serving as agricultural laborers.³ Yet, their contribution remains undervalued – especially in sectors such as sugarcane farming, which are perceived to be male-dominated.

DCM Shriram Limited, a client of International Finance Corporation (IFC), is one of India's largest business conglomerates, with a strong focus on agribusiness in rural India. Much of its sugarcane produce comes from Hardoi, Uttar Pradesh, one of the poorest, most patriarchal, and most disadvantaged districts in the country, with 66 percent of its population living below the poverty line.⁴ Hardoi has an agriculture-based economy, with sugarcane as the main cash crop.

Smallholder farmers who work on sugarcane production in Hardoi with the sugar division of DCM Shriram, tend to have low farm yields, compared to sugarcane farmers in other parts of the country.⁵ Low farm yields translate into a low supply of sugarcane

and reduced plant capacity utilization for DCM Shriram. Some of the reasons for low farm yields include poor technical know-how of the sugarcane smallholder farmers and use of technology in agriculture with unsustainable input-usage, leading to an increase in the cost of cultivation without a corresponding yield increase. Sugarcane is a conservative crop, historically male dominated, and with few women visible in the formal value chain.

Project Objectives

- I. To increase agricultural yield
- II. To conserve water and soil health

Challenges

Although women actively participate in the sugarcane value chain, their work and contribution are often invisible. Women's work is labor-intensive and frequently concentrated at the very start of the value-chain, such as in weeding or planting. Sugarcane farming is often perceived to be a male-dominated activity--so training and programs that allow farmers to increase their yield and income are often not targeted at women. Male farmers typically have assets registered in their name, resulting in the exclusion of women farmers or farmers' wives from accessing credit, markets, or becoming members of farmers networks. While poverty and migration of men are leading to more women managing their farms independently, women also have limited economic access both within their community and outside because of restrictive social norms and care responsibilities toward the well-being of elders, children, livestock, and other assets.

Gender-Smart Solutions

Under the *Meetha-Sona-Unnati* program, DCM Shriram and IFC, in collaboration with Solidaridad Network Asia and Coca-Cola India, developed an approach to build the capacity of farmers, to increase

agricultural yield and conserve water and soil health. While the early assumption was that there were no women working in the sugarcane farms of Hardoi, IFC trainings on low farm yields, along with quantitative and qualitative assessments done in 2018 revealed and highlighted women's roles in activities such as weeding, planting, and harvesting of sugarcane. DCM Shriram and IFC developed specific solutions to increase the visibility of the work done by women farmers and their impact on improving farm yields:

- As a first step, DCM Shriram and IFC identified key operations where women laborers and farmers are the dominant workforce on ground. The project applied the *Women's Empowerment Agriculture Index*,⁶ an innovative measurement tool to diagnose areas of disempowerment of women in agriculture and design development programs to address those areas. This assessment marked a significant shift from earlier gender-blind analysis and enabled the project team to create targeted trainings for women farmers on improving their skills and knowledge.
- Based on the findings of the baseline on women's roles and crop yield barriers, the project team hired a female trainer to hold training sessions for women on mechanization, entrepreneurship, and financial literacy. To address low participation, wider outreach and convenience, especially for women farmers, the team brought in a mobile van to deliver the trainings closer to farmers' homes.
- This effort was further complemented by focus group discussions with women in the villages, to strengthen their role and participation in the sugarcane value chain. When concerns came up about men feeling left out of some of these discussions, the team offered additional trainings to encourage men and women to attend the program together.

¹ Solomon, S. 2016. Sugarcane Production and Development of Sugar Industry in India. *Sugar Tech.*, 18(6): 588-602.

² ILOSTAT database, September 2018

³ <https://www.downtoearth.org.in/news/agriculture/defeminisation-of-indian-agriculture-59834>

⁴ [https://www.devalt.org/images/L2_ProjectPdfs/\(21\)AdpativePlanningHardoi.pdf?Tid=156](https://www.devalt.org/images/L2_ProjectPdfs/(21)AdpativePlanningHardoi.pdf?Tid=156)

⁵ As per GOI estimates and individual third-party baseline assessment (2015) through Solidaridad Network Asia, DCM Shriram farmers across the company's four sugar mills had reported an average yield of ~45 metric tons/hectare versus 58 metric-tons/hectare for state farmers versus 65 metric tons/hectare for Indian farmers versus 100 metric tons/hectare for Tamil Nadu state with more favorable climatic conditions.

⁶ <http://weai.ifpri.info/>

Outcomes

The programmatic interventions have helped DCM Shriram to create a lasting *shared value* with farmers across its value-chain in the following ways:

- Trainings for more than 1,000 women in the classroom and mobile vans in Good Agri Water Management Practices (GAWMP) have led to an increased yield (of 25 percent) in the DCM Shriram production catchments. The yield increase translates into increased income for the farmers, often doubling their existing income. The trainings have encouraged women to take on larger and less labor-intensive roles in the agricultural value chain (such as, learning how to operate farm machinery).
- Entrenched gender roles in conservative Hardoi district were challenged through this project – men and women attending trainings together demonstrated how they could work together despite the gender-segregated culture. Some of the women farmers, such as Pushpa Devi showcased below, became role models of leadership in their community, encouraging more women to take on entrepreneurial roles and move up the value chain to work on activities leading to higher yields.
- DCM Shriram and IFC along with other key partners are now exploring how to enable more than 10,000 women farmers in the sugarcane growing region to participate in dairy farming, as an additional income generating activity. Dairy farming is a complementary activity to sugarcane farming, and this intervention will lead to a higher income, and greater livelihood and business impacts.

Demonstrating the Business Case

Pushpa Devi is a farmer and a resident of village Saidapur in the DCM Shriram catchment area in Rupapur, Uttar Pradesh. At a very young age, on the death of her father, she took on the responsibility to run the

family farm. The farm that Pushpa Devi and her husband, Man Singh, work on is owned by her brothers, through inheritance on their father's death, who are absentee landlords. Pushpa Devi has experimented with different crops, and farming processes and adopted farming machinery to improve her farm's yield and income. Today, at age 65, she runs the family farm with her sons, leases additional farmland, and is actively involved in the purchase and sale of the crops and the overall upkeep of her farms.

The program enabled Pushpa Devi to adopt modern technology in sugarcane production, including the use of high yielding varieties and trench planting. Gradually, she took up soil health improvement activities such as green manuring and use of bio-fertilizers. Pushpa Devi is a recognized role model in her district and was honored by the state government of Uttar Pradesh for being a progressive farmer.

BUSINESS ACHIEVEMENTS

- Increase in sugarcane yield from 40 tons per hectare to 110 tons per hectare in two years.
- Increase in the area under sugarcane cultivation from 2.20 hectares to 4.05 hectares.
- Improvement in soil health and yield reported.
- A significant attempt at farm mechanization with purchase of farm equipment. E.g. 48 HP tractor, trench opener, deep plough, ridge cultivator and harrow.
- Advancement in irrigation resources as Pushpa Devi moved from diesel pump to electric tube-well (7.5 HP).

What the farmer says

Since my association with the expert trainers from IFC, I have now learned some new techniques of growing sugarcane that include:

- Not burning of leaves and other crop residue of sugarcane in my farm land. As a result, the water requirement post crop-planting in my farm has decreased.
- Using additional inputs alongside DAP fertilizers such as urea, potash, sulpho-zinc and other micro-nutrients.
- Using manure compost instead of cow dung fertilizer.
- Using organic fertilizers available at a discounted price at the sugar mill.

The resulting yield increase from using the above techniques has helped enhance my income and enabled me to add a new tractor to my farmland.

Pushpa Devi, Rupapur, Uttar Pradesh, INDIA

PUTTING THE BUSINESS CASE INTO ACTION WITH IFC

Recognizing that equality of economic opportunity between women and men drives productivity, profitability, and performance, IFC helps clients realize gender-smart solutions to their business challenges. We work with clients to better manage talent in their workforces and supply chains and to design products that tap the earning potential of the women's market. Our motivating force is the knowledge that when companies and people—no matter their gender—can reach their full potential, families, communities, and economies can achieve sustainable growth and prosperity.

What the Client says

At DCM Shriram, we acknowledge the contribution of women growers and laborers in our sugarcane value chain and have developed training modules specific to their needs. In partnership with IFC, we have recruited female extension experts to relate better with womenfolk and to ensure greater mobilization and effectiveness of training. This initiative has enhanced the participation of women in farming activities and led to an increase in yield and household income.

Roshan Lal Tamak

Executive Director (Sugar), DCM Shriram Ltd.

What IFC says

IFC's priority to integrate gender-smart solutions across our engagements aligns within our partnership with DCM Shriram through *Meetha-Sona-Unnati*, a sustainable program to boost sugarcane production. This integration is critical to improve the performance of agricultural value chains and to increase climate resilience. This is due to the importance of women as farmers, laborers, and entrepreneurs, and especially, as decision-makers or influencers in farming households.

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