



Seeding advancement of women in smallholder farming: insights from the Market Access portfolio

MARCH 2021

In this report, the Walmart Foundation offers insights into advancing economic prosperity of women smallholder farmers drawn from the experiences of grantees in our Market Access portfolio working in Central America, Mexico and India from 2017 through 2020. During this time frame, the Walmart Foundation awarded grants of more than \$37 million to 13 grantees. The grants are expected to reach more than 175,000 smallholder farmers, 35% of whom are women.

The Market Access portfolio, part of our People in Supply Chains program, builds on longstanding efforts of the Walmart Foundation to strengthen smallholder farmers, especially women. Between 2011 and 2016, the Walmart Foundation supported over one million smallholder farmers, 600,000 of them women, through efforts focused on training. The Market Access portfolio discussed in this report launched in 2017 and represents a broadening of our approach. It seeks to increase the effectiveness of Farmer Producer Organizations (FPOs) in improving the base conditions for smallholder prosperity, including farm production, aggregation, market linkages and formalization, with a special focus on addressing historical gender inequities to advance women as well as men.

By drawing out insights from grantee work in progress, the Walmart Foundation seeks to answer several questions, including: Which women-specific issues have grantees tried to address? How have grantees designed programming for women into their work? What have grantees learned and what new questions have emerged? And what are the implications for other stakeholders working to support smallholder farmers and for our Market Access portfolio at the Walmart Foundation?

The report is organized as follows:

- Farmer Producer Organizations (FPOs) and women: state of play
- Four accelerators of women's prosperity in FPOs (including grantee case studies)
- Key questions to enhance effectiveness of smallholder market access

We hope the insights presented here are of use to practitioners in the field to focus efforts on promising interventions as well as to sharpen questions for further learning and discovery.



About Philanthropy at Walmart

Walmart Inc. provides affordable food and household products to hundreds of millions of people each week in over a dozen countries, employs more than 2.2 million associates and does business with thousands of suppliers who, in turn, employ millions of people.

Walmart.org comprises the philanthropic efforts of Walmart Inc. and the Walmart Foundation.

Our philanthropic strategies aim to accelerate progress on societal issues and contribute to lasting, systemic transformation in ways that complement and expand the societal impact of Walmart Inc. business initiatives.

Our priorities include advancing racial and gender equity; increasing economic opportunity for workers in retail and product supply chains; enhancing social and environmental sustainability of product supply chains; and strengthening the resilience of communities (including through hunger relief and disaster response). Our philanthropic efforts are organized into discrete portfolios such as Market Access for Smallholders and Entrepreneurs, Racial Equity, Retail Opportunity, Nature and Healthier Food for All, to name a few.

Each portfolio has a strategy grounded in a theory of change and core learning questions developed with others including the people we seek to empower and support (e.g., smallholder farmers); grantees, who have deep experience, capabilities and insights to contribute; and other experts. We activate our theories of change through strategic grants, convening, advocacy, development of communities of practice, in-kind donations, evaluation and learning from grantees and others. We encourage collaboration among grantees as well as other public and private sector stakeholders; we continuously refresh our portfolio strategies based on their experiences and insights.

To learn more, visit www.walmart.org or connect on Twitter @Walmartorg.

Farmer Producer Organizations and women: state of play

“I feel that more women should come forward and take this initiative.”

“Now I have someone who buys my coffee every year. I can invest again in my farm.”

“I am ready to pass on the gift.”

-Women participants in Market Access programs funded by the Walmart Foundation

As noted by the Tata Cornell Institute for Agriculture and Nutrition, “nearly 90% of the 570 million farms around the world are less than 2 hectares (about 5 acres) in size. Most are in low- and middle- income countries where a substantial amount of the population is dependent on the agriculture sector. Due to their size, small farms have an inherent disadvantage in accessing product markets, credit, management inputs, and technology.”¹ FPOs offer the potential to overcome such disadvantages faced by smallholder farmers. Well-functioning and inclusive FPOs can:

- **Link farmers to formal markets** (e.g., public, private, domestic and international buyers), which can offer differentiated end markets and pricing to farmers.
- **Unlock benefits from public and related support programs** for their smallholder members (e.g., accessing credit and infrastructure supports).
- **Offer services to farmers at a reduced cost** (e.g., aggregate purchases of inputs and facilitate inputs distribution, and other kinds of value addition, all of which support efficiency and product differentiation).
- **Help farmers launch new crop programs** and participate more fully in markets and across the farm production seasons.
- **Increase levels of professionalization**, including helping to roll out sustainability practices in the field and to collect and share information that helps farmers increase yields while preserving natural resources.

The Market Access portfolio aims to increase the effectiveness of FPOs and unleash their potential to advance gender equity. Our grantees help FPOs boost their capacity and reach, invest in sustainable practices and access finance and infrastructure to add value to crop production. The Market Access portfolio places a special emphasis on identifying and addressing unique barriers faced by women, striving to promote women farmers’ access to and benefit from FPOs and the related services and market linkages that these FPOs can provide for smallholder farmers. Insights from grantee reports to date include:

- **Women are not yet fully participating in smallholder programs.** From January 2017 to January 2020, on average, women accounted for 35% of participation in Market Access grant programs where grantees have designed women-specific interventions to overcome a barrier or gap. Participation varies from 15% to 100%, depending on crop focus and geography.
- **Women have made strides in gaining leadership roles in FPOs, but they need clearer pathways to grow.** Interventions need to consider unbalanced male/female power structures in FPOs. For example, women overall are starting from lower positions, they have reduced opportunity for growth and acceleration, and they may require customized approaches.

¹ Tata Cornell Institute for Agriculture and Nutrition. <https://tci.cornell.edu/projects/fpo-led-small-farm-market-access-models/>

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- **Women face additional roadblocks in trying to access financing.** Access to finance for female smallholders is limited. Where suitable finance products are available, they are often not designed to suit women's needs (for example, appropriate level of financing or adequate support).
 - **Crop choices can increase women's rates of agricultural participation and empowerment.** In addition to providing ecological benefits, focusing on crops that represent a highly nutritious food for people and/or livestock was motivating and increased inclusion of women in agricultural systems.
 - **Grantees appear to have capacity to expand to multiple countries.** A selection of grantees in the portfolio started with programs targeting women in one country and later expanded to multiple countries with additional grants from the Walmart Foundation. Subsequent grants expanded grantees' gender equity footprints as they developed more nuanced strategies and clearer measurement goals at greater scale.
 - **Making the transition from measuring inclusion to economic empowerment will require additional effort.** Insights into economic empowerment and livelihoods come over time from programs with strong gender equity indicators and measurement plans. Monitoring and evaluation, however, has traditionally focused on generic inclusion measures such as the number of women trained or number of women members in FPOs rather than measures of decision-making and income by sex.

Four accelerators of women's economic prosperity in FPOs

The experience of Market Access grantees to date suggests four powerful accelerators of economic prosperity for women smallholders engaged in FPOs. For a summary table mapping these four areas, please see [Appendix I](#).



Increasing women's membership and leadership in FPOs

Women have traditionally had low levels of membership and leadership within FPOs. On average, women are less likely than men to sign on as cooperative members because of time constraints, family responsibilities, lower mobility than men and cultural norms,² which preclude them from participating in FPO meetings and trainings. The lack of female leaders results in less access to information for women in general and less ability to influence decisions that affect their livelihoods.

FPOs are often formed around higher value cash crops, such as coffee, cashews or more specialized produce, which tend to be dominated by men.³ When women do become members, they hold fewer leadership roles than men. Accordingly, grantee interventions have aimed to increase women's representation, voice and decision making within FPOs, with the goal of promoting better access to markets, technology and finance for women.

Select grantees have addressed the questions below :

Are women able to join FPOs? If not, why not?

What are grantees doing to create on-ramps for women? What is most successful?

How can FPOs better link women to markets?

What conditions help enable the formation of more women-only FPOs?

Women are less likely than men to sign on as cooperative members because of time constraints, family care responsibilities, lower mobility than men and cultural norms.

The Walmart Foundation grantees take three approaches to increasing the participation of women in FPOs. The first is to increase participation in existing mixed (male and female) FPOs. The second is to support the formation of women-only FPOs as a subset of the blended FPOs. Finally, they seed and test FPO models that are fully governed, managed and controlled by women. Grantees included the following interventions:

² Root Capital, Applying a Gender Lens to Agriculture: Farmers, Leaders and Hidden Influencers in the Rural Economy, 2018. https://rootcapital.org/wp-content/uploads/2018/01/Root_Capital_Gender_Lens_Issue_Brief_v2.pdf

³ World Bank; Food and Agriculture Organization; International Fund for Agricultural Development. 2009. Gender in Agriculture Sourcebook. Agriculture and Rural Development. <https://openknowledge.worldbank.org/bitstream/handle/10986/6603/461620PUB0Box3101OFFICIAL0USE0ONLY1.pdf?sequence=1&isAllowed=y>

- **Using needs analysis to inform action:** Grantees used gender-equity analysis to assess women's needs and opportunities for participation in FPOs and developed interventions to address identified barriers.
- **Offering targeted training to promote women's leadership as part of broader FPO strengthening:** Grantees promoted women's inclusion in decision-making at the cooperative level and participation in staff and boards of producer organizations. They also developed the capacity of FPOs to address specific gaps, for example in leadership opportunities for women.
- **Promoting women's income growth:** Programs aimed to maximize each farmer's time in market and their income diversification by adjusting the mix and rotation of crops.
- **Encouraging women's self-diagnostics:** Programs developed opportunities to empower women within their businesses and broader value chains. For example, tools that guided businesses through a process to analyze where women are within agribusiness operations highlighted gender gaps in women's and men's participation as employees and suppliers, and reinforced the policies, practices and systems that should be in place for a business to support gender inclusion.

TOPLINE OBSERVATIONS

Grantees that focused on strengthening the role of women in FPOs reported gains in female membership and women leaders. These grantees were intentional about forming women-only groups where they did not exist or where participation in co-ed groups was low. Grantees report that achieving meaningful engagement of women in FPOs requires a multi-year effort, including hosting membership drives, structuring meeting times to accommodate women's schedules, incorporating crops women focus on, and training the FPOs directly on gender to address prevailing gender norms and women's sizeable household priorities, including cooking and caring for family members. Training was often focused on bringing more women in as shareholders, increasing women's representation on FPO boards, building women's capacity to engage in value chain activities and training women in agronomy and FPO governance.

As a result of these activities, women gained better agronomic practices by accessing FPOs' transparent grading, weighing practices and price offerings, and they improved household nutrition via kitchen gardens. FPO membership gave them benefits of scale by allowing them to aggregate their produce with that of other members. They also gained access to institutional buyers who offered better prices for FPO produce. This helped increase incremental household income for women farmers as well as quicker payments. This was in contrast to the unpredictable and unreliable payment schedules offered by middlemen. However, in some instances, women's participation in the front-end activities of the FPOs, such as logistics and marketing, and active participation in FPO leadership and decision-making was minimal.

Grantees found that each FPO has distinct needs that must be addressed. The extent of women's participation varied, depending on socio-cultural settings. For example, participation rates are much lower in Mexico (MX) and Central America (CAM),⁴ at 15% to 30%, in large part due to land title issues and cultural barriers, as compared to India, which has participation rates of 20% to 100%. Some grantees, such as TechnoServe India, aim to achieve a female participation rate of 50% or more. To facilitate this, the project team has been working to integrate women into the governance structure of Farmer Producer Companies (FPCs)⁵ by bringing them on as board members, trustees and shareholders. Even as FPC leaders, women tend to be excluded from most financial decisions, which are considered the purview of men.

Projects with follow-on investments in MX and a newer set of investments in CAM have been able to accelerate support for the inclusion and empowerment of women. For example, Heifer International found that groups can be started around formalizing crops or livestock already in women's control, such as eggs. Finally, evidence shows that grantees were able to leverage FPOs, not just as tools for building market readiness but also as instruments of change by providing members with greater access to productive services and resources, such as information on gender, nutrition and finance.

⁴ For Walmart and Walmart Foundation CAM includes Costa Rica, Guatemala, Honduras, Nicaragua and El Salvador.

⁵ A Farmer Producer Company is unique to the India context and is a hybrid between cooperative societies and private limited companies. They are owned and governed by shareholder farmers (or artisans) and administered by professional managers.

CASE STUDY



While women make up almost 60% of the agricultural labor force in tribal areas of Andhra Pradesh, their average participation in program FPOs is around 10%, limiting their access to FPO resources and income opportunities.⁶

Tanager, an ACDI/VOCA affiliate, is an international nonprofit that brings people together in the field and across supply chains to create economic and social opportunities that change lives. Tanager has a longstanding presence in India with a diverse set of agriculture programs supported by a regional team of more than 180 associates.

In 2017, the Walmart Foundation made a grant to Tanager for its Andhra Pradesh Market Readiness Project (APFMRP). Tanager worked to promote women's participation in FPOs; empower both men and women to participate in meetings, activities and decision-making; and invest in institutional capacity building for long-term, gender-sensitive change. In this project, Tanager learned that increasing women's access to income-generating activities gave them more power to participate in decision-making; women gained confidence through the programming; and women spent their earnings on household expenditures first followed by investing in agricultural activities.

At the beginning of the of the project, Tanager conducted a brief gender assessment of FPOs in the grant program to understand women's needs and opportunities for participating in FPOs. Based on the findings, the project designed activities with a gender perspective and developed interventions to address the particular challenges that women farmers faced. Phase I of the project reached over 17,900 farmers (6,024 women) and helped nine FPOs in Andhra Pradesh sell over 10,500

metric tons of coffee, peanuts, maize and vegetables at above-market-average prices.

Tanager also established collection centers to help alleviate key barriers to market access for women, including long distances to market. These collection centers are equipped with digital scales to increase the transparency of sales. The project helped FPOs optimize the use of the collection centers, improve governance, and support their members in increasing the quantity and quality of their produce to sell into new markets. Gender sensitization trainings were provided to all the members of the FPOs, helping to facilitate change in the attitude of the members towards women's participation.

Women's increased access to income-generating activities gave them more power to participate in decision-making.

Tanager noted that training women in the member households on gender issues and entitlements increased women's participation in the project. Farmers' profits increased due to selling into better markets and from increased productivity and better postharvest practices introduced by the FPO.

Tanager noted that some women farmers felt more empowered to participate in leadership roles in their FPOs. Irapa Rajamma is one such leader. Irapa is a 39-year-old smallholder farmer from Kommugudem village in Andhra Pradesh. After Irapa participated in

⁶ Tanager reported data.

APFMRP-supported gender training, she became excited at the prospect of becoming a leader in her local FPO. She approached the Tanager team and submitted her nomination to the governmental organization that oversees the formation of FPOs in the region. In 2019, Irapa became the first woman on the board of directors of the maize cluster in Buttaigudem Mandal. Since she became a member of the board, two more women have joined her. Not only have these women felt more empowered to take on leadership roles, but they have helped the FPOs to become more gender equitable.

In this project Tanager provided key lessons learned about the intersection between FPOs, their boards of directors (BODs) and the need to have a strong pipeline of women trained for these roles. The BODs of the FPOs are mandated to replace one-third of their directors each year with new members. BOD members are often replaced by FPO members who have not participated in the same trainings, and the change can be disruptive to the forward progress the FPO was making. For example, women's participation in BODs was up to 32 members in year one, but with board turnover, it decreased to 19. In the future, Tanager recommends including a larger group of female FPO members in BOD trainings. This will decrease the need

for repeated BOD trainings, engage a wider group of female FPO members and increase accountability of the BODs, as more members will be aware of BOD roles and responsibilities.

With a subsequent grant from the Walmart Foundation, Tanager is adding new program indicators to further assess

whether and how much women are benefitting from participation in FPOs. Measures include the percentage of women who report increased earnings as a result of FPO-led activities and the percentage of women who report greater participation in household decision-making. Tanager is also assessing whether new skills in farm production systems are leading to better outcomes by looking at the number of women farmers reporting a decrease in postharvest losses for their respective crops. For crop and marketing programs, Tanager is measuring the percentage increase in production per acre of land in the focus crops of women farmers as a result of FPO project interventions.

Tanager was also able to show how the project affected women's collective action. For example, after a training, women from the Addateegala FPO in the cashew cluster approached the Tanager APFMRP project staff about millet cultivation—a crop that is integral to festivals within tribal cultures but in recent times had not been available. APFMRP staff connected them with the appropriate project office for permission to cultivate millet on 'Podu Land' (public forest land). These women began cultivating foxtail millet, which has helped preserve a part of the tribal culture and has reintroduced millet into the village food supply.

Some women made a significant shift to higher value crops. One example is Navya, a 27-year-old farmer in Ananthapur, Andhra Pradesh. In 2018, Navya attended a meeting at the APFMRP-supported peanut cluster. Tanager experts were encouraging farmers to grow okra, since it has a high value in the open market compared to staple crops. With technical support from Tanager, Navya began growing and selling okra. She noticed right away the persistent demand and high market value for okra compared with the vegetables she had been farming. She reported improved profits: "With the help of my husband and technical support by the Tanager team, from my ½ acre of land where I grow okra, I now earn nearly Rs. 8,000 in 10 cuttings."



Irapa Rajamma was the first woman on the Board of Directors for her FPO in Buttaigudem Mandal in the Indian state of Andhra Pradesh. Since joining the organization, two other women have followed her footsteps



Developing women's skills and capacity in farm production systems

Women farmers face a variety of barriers in accessing training and inputs. On average, women have less access to formal education, appropriate technologies and equipment for important activities such as irrigation and postharvest storage. They also have less access to essential inputs, such as seeds, as compared to men. Training in production practices often excludes women by not considering constraints, such as timing and focus of training and the trainings, are less apt to include women trainers or farm extension service providers who might better understand the barriers women face. Evidence suggests that the shortage of women trainers decreases the number of women farmers who participate.⁷

The Food and Agriculture Organization (FAO) estimates that lowering these barriers and ensuring that women have equal access to resources could increase women's yields by 20-30%, raising total agricultural production in developing countries by as much four percent. This increase could reduce the number of undernourished people globally by 12% to 17%, or 100 to 150 million people.⁸

Explicitly considering women's needs helps them access inputs. For example, women typically have lower levels of land ownership, and therefore less access to collateral and input financing.⁹ As noted by the International Center for Research on Women, "incorporating a gender lens in input provision and use increases the likelihood of consistently high yields by ensuring women and men have equal access to information, opportunities and productive inputs such as seeds, fertilizer, agro-chemicals, training, farm finance and equipment."¹⁰

The programming in this pillar has centered around increasing women's sustainable crop production. The majority of projects reviewed as part of this assessment addressed the questions below:

What are effective pathways to increase women's access to inputs? What are the primary barriers impeding their access?

How can women more equitably access agricultural extension services, information, training and tools?

How can training include a more targeted focus on women's needs? What would programs need to generate insights related to the specific barriers women face?

What are mechanisms to increase the number of women farm extension agents and trainers? What role does gender-sensitivity training of trainers and the inclusion of more women trainers play in advancing women's access to training?

How can the design and implementation of programs that include strategies such as crop rotation, equipment and machinery, and value addition to crops better recognize women's labor? How can these programs help unlock new market opportunities for women?

⁷ Bello-Bravo, Julia et al., "Gender and Farmer Field Schools in Agricultural Production Systems in West Africa," in The International Journal of Science in Society, 2011.

⁸ FAO, The State of Food and Agriculture Report, 2010-2011. <http://www.fao.org/3/i2050e/i2050e00.htm>

⁹ <https://www.icrw.org/gender-smart-investing-resource-hub/agriculture/>

¹⁰ (Ibid)

To address these questions, grantees promoted women's access to information, training and tools through the following actions:

- **Investing in sustainable practices** like sustainable irrigation, appropriate use of agrochemicals as well as traceability and certifications that drive output, increase quality, maintain resources and support market differentiation.
- **Integrating women as leaders and community resources and voices of gender sensitization**, for example, by training both men and women farmers to help promote understanding of how gender issues affect households and communities, and encouraging farmers to think about men's and women's roles in their communities.
- **Improving postharvest handling and processing facilities** by integrating technology such as measurement and grading and increasing women's access to mechanization to improve efficiency and reduce time spent in the field.
- **Training FPOs and farmers** to manage infrastructure and to deliver services, such as bulk buying of inputs and distribution, ensuring that women have equal access to production training and increasing their access to precision agriculture tools and information.
- **Developing digital extension content and delivery** and providing training for women on use of the delivery tools and platforms.

“Incorporating a gender lens in input provision and use increases the likelihood of consistently high yields by ensuring women and men have equal access.”

International Center for Research on Women

TOPLINE OBSERVATIONS

Many grantees developed women's skills as farmers, training facilitators and community extension agents. Despite the substantial involvement of women in farming, it was not uncommon for government and agricultural departments to direct extension and training services primarily towards men. Grantee reporting highlighted the challenges facing women, including having less farming knowledge than men and participating less in production decision-making, especially in the case of higher value crops, all of which limits productivity.

Grantee experience highlighted the importance of training women in postharvest management techniques, including in areas such as grain quality, pests and causes of damage, efficient drying and shelling, moisture content measurement methods, and correct use of hermetic technologies. Women began to use hermetic bags and metal silos to preserve their crops, which allowed them to delay the sale of goods in order to receive a higher price after harvest season, in some cases achieving a 66% increase in revenue. Hermetic technologies allowed women to move beyond polypropylene bags, which incurred post-harvest losses of around 50%.

Some grantees used community-led approaches to identify and address women's training needs, provide greater opportunity for women and men to voice their unique needs and perspectives and to enable FPOs to develop tailored gender strategies. Participating FPOs tested a range of gender self-assessments and received advisory services. Tracking the number of women trained and the adoption rates of practices has been transparent. Many FPOs used gender inclusion strategies to address such issues as women's lack of access to information by organizing training at times when women are more able to attend.

Finally, grantee experience highlighted that teaching women to operate digital scales brought about greater transparency and autonomy. Not only were trained women viewed as technically capable of managing the equipment, they were better able to track and manage transparent sales, position themselves in value chain activities and take ownership of their labor through transparent payment.

CASE STUDY



The Aspen Network of Development Entrepreneurs (ANDE), a program of the Aspen Institute, partnered with Value for Women (V4W), a specialized advisory firm that works with businesses, investors and others to advance gender inclusion, to develop tools to support agriculture-based small and growing businesses (SGBs) in Mexico. The goal was to integrate gender inclusion into practices across their business models and to influence gender inclusion practices over the long term for businesses and investors.

In this project, ANDE provided a re-grant to V4W to understand where women are in the agribusiness value chain in Mexico and develop an assessment tool for SGBs to analyze gender inclusion data, and it was tested with over 34 SGBs. The tool¹¹ also included recommendations on action steps for organizations working with SGBs on inclusion and social impact projects. These organizations developed responses to business challenges in three areas: human capital management, productivity management and marketing analysis. V4W offered technical assistance to five SGBs, monitored the results and generated case studies that illustrated the process and results.

ANDE and V4W hosted events to present the tools and to share them with a broader set of SGB actors. Through these events, ANDE and V4W reached more than fifty organizations, including corporations, corporate foundations, investors, DFIs, capacity developers, NGOs, development agencies and government agencies.

This initiative led to the development of a broader platform for SGB gender inclusive tools that aim to support SGBs through assessment and action. The tools are currently being used by over a dozen investors and accelerators working with over 100 SGBs globally.



Panel with FPOs at the closing event of the gender inclusion within agriculture-based small and growing businesses (SGBs) in Mexico program.

¹¹ <https://giabiz.v4w.org/#about-section>

CASE STUDY



In 2018, the Walmart Foundation supported TechnoServe India, an international development nonprofit, with a grant supporting the sustainable livelihoods of smallholder farmers in the states of Andhra Pradesh and Uttar Pradesh.

The project supported farmers like Rubi Devi and her husband, who have grown mint, potatoes and rice on their two-acre smallholding in Barabanki in Uttar Pradesh for many years. Despite their intense efforts, their productivity was often lower than expected, and the price they could get from middlemen for the mentha oil they extract from their mint crop was barely sufficient to support their family and cover the high cost of mentha cultivation.

“We knew the prices were low, but couldn’t negotiate as we had no access to market price information, and the middlemen were our only avenue to market our mentha oil,” says Rubi.

In 2019, Rubi Devi became a shareholder of her FPO, Navsandhan Kisan Producer Company Limited. She and her fellow FPO members now receive regular information on market prices through meetings and even via their mobile phones. This knowledge has made a great difference in their lives.

“Being associated with my FPO and the TechnoServe program has helped me become more independent,” Rubi says. “By selling through the FPO, I receive a better price for every kilogram of mentha oil, and my oil is weighed using an accurate electronic scale to prevent unexpected losses. I even now understand the process of mentha oil testing, so I can determine the quality of the oil myself, without relying on anyone else.”

With better access to information and a better understanding of mentha testing and marketing, Rubi now has greater confidence in her own abilities. She is better able to participate in decisions regarding the sale of her produce. “I am able to speak confidently about parameters like quality and procurement,” she says.

The TechnoServe team also observed that men tended to dominate all procurement activities. In FPOs, procurement involves going house-to-house to collect produce from individual farmers, weighing it, checking for quality, and if all is satisfactory, aggregating it to the common pool. The prevailing societal assumption was that because the work involved regular interactions with program farmers, not to mention the use of technical equipment like digital weighing scales, women were not suited for the job. But in its two years of operation, the program has taught women how to measure quality and use digital scales, bolstering their capacity to engage in value chain activities and take ownership of their labor.



Women's inclusive crop and marketing programs

Women commonly have low crop diversification, which leads to seasonal income. This can be challenging for women trying to balance multiple spending demands at home and on their farms, where they have lower decision-making authority. Low crop diversification also can lead to low yields, limited crops for self-consumption or trade, and poor diets. Additionally, women farmers are often underrepresented in informal and formal markets,¹² which limits their income-earning potential. They also tend to be excluded from transportation of goods to market and are more likely to be confined to local markets. Traditionally, men take control of production and marketing as a crop or product becomes more lucrative, resulting in poor access to networks for women.¹³ Projects in the Market Access portfolio asked the following questions:

What are ways to introduce crops that support women's direct control of production and income?

What are the barriers and opportunities grantees face in encouraging equitable participation for women in farming decisions? What interventions have been used to address these issues?

What are effective ways to help women farmers access new market channels?

How can improved marketing centers support women farmers' access to inputs, aggregation services and collective selling?

To address these questions, grantees employed a range of crop diversification and marketing approaches, including:

- **Forming and training women-only producer groups** where participants learn how to increase their competitiveness, mitigate risks, reduce costs and deliver a product meeting the quality standards required by the buyer, all of which promote gender equity on the farm and in households.
- **Offering specialized attention from enterprise facilitators and business advisory services**, encouraging the startup of both commercially viable ventures and kitchen gardening, which supports the build out of supplemental farm income for women.
- **Establishing marketing centers** to support farmers' access to inputs and access to aggregation services such as collective selling, as well as links to formal buyers and more formal routes to market with shorter transaction chains.
- **Training of technical skills**, such as postharvest management and soft skills, such as the ability to assess opportunities and negotiate prices, improving women's leadership of farm enterprises and increasing their social capital.
- **Expanding range of crop choices** to include high-value crops, cash crops and higher nutrition food crops such as okra, sunflower and mungbean.

¹² IFC, Investing in Women in Agribusiness Value Chains, 2016. https://www.ifc.org/wps/wcm/connect/02c5b53e-420f-4bf4-82bb-6f488ff75810/Women+in+Agri+VC_Report_FINAL.pdf?MOD=AJPERES&CVID=m0JfSby

¹³ (Ibid)

TOPLINE OBSERVATIONS

Going beyond a single cash crop helps develop women's farm management skills and expands opportunities for diversified production. Moving to higher-nutrition food crops raises incomes and leads to greater inclusion in agricultural systems for women. Some projects found that exercising greater choice in crops and other agricultural items can increase participation rates of women in farming, with market vegetables, legumes and small livestock in particular opening up more opportunity for women. In the face of social pressure to continue monocropping, evidence showed that female farmers persevered and diversified their crop mix.

In designing interventions, grantees considered starting points for women's engagement in supply chains, for example small livestock, which women traditionally manage at the household level, or niche products such as the introduction of vegetables that can be produced closer to the home. Interventions then accounted for where there were opportunities to expand production management and control and devised methods to unlock these opportunities. Sample interventions provided insights on successful strategies, such as forming women-only producer groups and investing in capacity building programs to develop skills in postharvest technologies. Grantees also highlight remaining barriers, such as lack of property rights and access to finance, that need to be addressed to advance opportunities for women.

To address barriers to inclusive markets participation, a more participatory approach focused on women's needs, such as CIMMYT's innovation model, is promising. This model provides more equitable access to technical support, both agronomic and commercial, so farmers can gain the knowledge and tools to apply good agricultural practices themselves.

CASE STUDY



CIMMYT works throughout the developing world to improve livelihoods and to foster more productive and sustainable maize and wheat farming. Its portfolio targets critical challenges, including food insecurity and malnutrition, climate change and environmental degradation. From 2018 through 2020, with Walmart Foundation support, CIMMYT strengthened its work in southern Mexico to advance women's empowerment through crop diversification. CIMMYT worked with FPOs to provide women with technical services for these crops. It found that women participated more fully in trainings dealing with postharvest interventions than in trainings related to finance. Most of the women in the program did not own land titles, which was noted by CIMMYT as a deterrent in looking for financing. This barrier prevents women from scaling crop diversification that could increase their farm's sustainability and help unlock markets. The project showed the need for new approaches to building access to finance for women.



The Walmart Foundation provided a grant to support CIMMYT's work to diversify crop production and empower women. Here, project participant Itandehuatl García and Paola Ramón García sow sunflower, lentil and quinoa seeds intercropped with maguey following sustainable intensification practices in Guelatao de Juárez, Oaxaca.

CASE STUDY



Heifer International is a leading global development nonprofit that supports local farmers and food producers to strengthen local economies and build secure livelihoods. In Mexico, Heifer International works to strengthen women's empowerment, environmental conservation and inclusive development across an array of products including beef, poultry, beekeeping, coffee, maize and agave.

In 2017, the Walmart Foundation made a grant to Heifer International to build resilient produce markets for eggs, beef and honey for smallholder producers in Mexico's central and southern regions. The overall goal of the project was to help rural entrepreneurs increase and diversify their incomes through meeting urban demand for varied food products in environmentally sustainable ways.

The team was intentional about expanding the number of women-only producer groups. They worked alongside local communities to establish four women-only poultry producer groups by building solidarity among the women and demonstrating the value

of the women-only groups. Unlike the beef and honey value chains, women were well represented in poultry and egg production. As a result, the project was able to demonstrate impacts not only to income and business skills but also to nutrition through increased

egg availability and consumption. Youth and women enterprises, providing additional services, were initiated in the beef and honey value chains. In addition to market access, Heifer International also helped women deepen their enterprise management skills, including through savings and investments to grow their operations.

This project formed the foundation of a follow-on grant that is currently in operation in Central America (Honduras, Mexico, Nicaragua), supporting women in developing complementary businesses such as agroforestry systems including plantains, passion fruit, and cacao, as well as small livestock and honey. The project is also showing strong progress supporting women's advancement in leadership positions in cooperatives. Midterm evaluations in 2020 show that women's participation rates are 34% in Honduras, 30% in Mexico, and 43% in Nicaragua. On average, 36% of the organizations integrate women and youth in their productive and commercial decisions.

Heifer International's coffee project is also linking women-led FPOs and women producers with local consumers who are often willing to pay higher prices than traditional export channels. Heifer International worked with a group of women called Mujeres Voladoras in Mexico to sell directly to three local coffee shops and two restaurants, with expansion to two more underway. This has increased the price they get for their coffee by between \$68 and \$152 per quintal, or 100 kilograms, raising their margin between 66% to 259%. On average, family net annual income has increased by \$546 since 2017 from this new sales

High value opportunities for women include eggs in Mexico; cacao and honey in Honduras; and cacao and passion fruit in Nicaragua.



Georgina Vazquez Perez, 32, gathers eggs from her laying hens. She checks for eggs every few hours to make sure they don't get broken.

channel. Heifer International will now expand this work in Mexico and introduce it in Honduras and Nicaragua. Additional lessons from the project show that non-coffee interventions benefited the most vulnerable members of the household, such as women and youth, by generating more sales and income during lean periods. Moving forward, high-value opportunities for women include cacao and honey in Honduras; eggs in Mexico; and cacao and passion fruit in Nicaragua.

HEIFER INTERNATIONAL TESTIMONIAL

Luisa Iraís is a coffee producer in El Colorado, Nicaragua. For the past year, she has been working to diversify her income by producing honey, which she sells through the Goddesses Central Cooperative. Her beekeeping group was formed by four women and they work with 20 beehives. In January 2020, she harvested three hives for a total of 20 liters of honey which she sold for \$3.81 per liter, generating \$76.20 in revenue, with an annual production cost of \$10.99. She also learned new agroecological practices, which she applies to her coffee farm. These practices helped raise her coffee's cupping score from 82 to 83.65 which will allow her to get a better price when she sells. "Now I'm ready to pass on the gift," Luisa expressed. "I'm selecting another producer to share 1,000 pots for the seedbed establishment and 1 pound of coffee as seeds for planting." Diversification provides Luisa with additional income, enabling her to become more independent and strengthen her independence and leadership in the organization, which is focused on enhancing the work of women farmers and food producers.



Improved access to finance

Female smallholders typically have limited access to financial and non-financial services and products, such as loans, insurance and equity, which, according to the International Finance Corporation (IFC), “impacts the ability to obtain inputs, leverage appropriate technology, maintain operating capital and access storage.”¹⁴ In large part, this is due to a lack of formal land tenure and title among women, which limits the collateral needed for financial access. As they do not own plot certificates, deeds, machinery or equipment invoices, the ability to borrow funds from development banks or private financial institutions is minimal.

These limitations impeded women’s financial resilience and ability to raise their incomes. As Root Capital notes, an increase in income for women is often associated with higher investments in “the nutrition and educational needs of children, women’s increased self-esteem and stronger decision-making voice in the home and community.”¹⁵ Women need longer-term credit to build assets, savings for consumption smoothing and insurance to reduce the risk from livestock and from other loans.¹⁶ Similarly, women greatly benefit from access to digital tools that improve their access to market information, efficiency and outputs of the postharvest process, but rural women often are less connected because of mobile phone ownership and usage barriers, which limits their productivity.¹⁷

Grantees aimed to create financial and digital access for FPOs and female farmers, build confidence to invest and save and, encourage adoption of finance products, and ultimately, engage with more formal financial service providers. Many of the Walmart Foundation’s grantees addressed the questions below:

How can access to finance increase women’s entrepreneurship, farm assets and income generation and control? How can it be used to take on more marketable crops, to access quality inputs and to grow farm operations and better market access?

What are the most pressing barriers to financial inclusion, including credit, savings and insurance for female smallholders?

What are promising strategies for accelerating women’s access to digital tools, including smart phones, apps and software programs for extension services and for marketing?

¹⁴ IFC, Investing in Women Along Agribusiness Value Chains, 2016. https://www.ifc.org/wps/wcm/connect/02c5b53e-420f-4bf4-82bb-6f488ff75810/Women+in+Agri+VC_Report_FINAL.pdf?MOD=AJPERES&CVID=m0JfSbv

¹⁵ Root Capital, Applying a Gender Lens to Agriculture: Farmers, Leaders and Hidden Influencers in the Rural Economy, 2014. https://rootcapital.org/wp-content/uploads/2018/01/Root_Capital_Gender_Lens_Issue_Brief_v2.pdf

¹⁶ World Bank; Food and Agriculture Organization; International Fund for Agricultural Development. 2009. Gender in Agriculture Sourcebook. Agriculture and Rural Development. <https://openknowledge.worldbank.org/bitstream/handle/10986/6603/461620PUB0Box3101OFFICIAL0USE0ONLY1.pdf?sequence=1&isAllowed=y>

¹⁷ IFC, Investing in Women Along Agribusiness Value Chains, 2016. https://www.ifc.org/wps/wcm/connect/02c5b53e-420f-4bf4-82bb-6f488ff75810/Women+in+Agri+VC_Report_FINAL.pdf?MOD=AJPERES&CVID=m0JfSbv



To address these questions, grantees tested several interventions aimed at unlocking a variety of financial products and digital tools, including:

- **Facilitating partnerships with private and public sector actors** to provide support and services for FPOs.
- **Supporting development of financial products** tailored to FPOs and smallholder farmers, e.g., savings accounts, self-help groups' access to formal credit sources, and insurance.
- **Promoting the use of digital tools** to increase market transparency and connectivity.
- **Promoting and designing sustainable finance models** for inclusive credit dispersion and risk mitigation.

TOPLINE OBSERVATIONS

Grantee insights highlighted the challenges women face in gaining access to formal financial institutions; in some areas, fewer than 10% of farmers with access to finance are women. Despite FPO efforts, there has been limited success in unlocking credit for women, and it has been even more challenging to move beyond credit to insurance and savings.

Even when women have information about financial products, the number of women accessing formal financial products remains low. Due to the barriers women face, they often choose microfinance arrangements, which are usually inadequate to fund agricultural activities, due to high rates and small loan amounts. This increases the probability of falling into the past-due portfolio for both male and female farmers, although women compose the majority of microfinance clients.

Grantee experience uncovered a dearth of financial products that serve women's precise needs. One problem is that lenders do not recognize the hurdles women face in proving they have the assets to use as collateral. There are also few financing models that address women's low rate of mobile ownership or usage, limited participation in family financial management, inability to collect the required paperwork to complete credit applications and lack of collateral. In addition, these financial product designers must take into account that women receiving technical assistance may have a lower risk of default due to improved output and increased efficiency, despite their lack of collateral.

CASE STUDY



Through a Walmart Foundation grant initiated in 2018 (described above), CIMMYT promoted a series of interventions for financial inclusion of smallholders. The project originally aimed to reach 500 farmers (or five percent of total program participants) with access to different financial products (credit, agricultural insurance and savings). They selected the particular financial products based on farmer's feedback of their finance needs and financial product suitability. After 30 months, a total of 1,425 farmers, including 260 women, received critical information regarding credit options, savings and agricultural insurance opportunities in Campeche, Chiapas and Oaxaca. From these, 500 farmers effectively obtained either credit for productive inputs, agricultural insurance to mitigate production risks or savings accounts to increase community resilience.

The results show that women lagged behind men in accessing credit (331 men, six women), agricultural insurance (110 men, three women) and savings (171 men, 29 women). CIMMYT noted that women farmers usually do not have the kind of collateral required by traditional financial institutions. For example, few women own plot certificates, deeds, or machinery or equipment. For those reasons, women farmers are more likely to choose microfinancing to obtain credit, requiring them to pay significantly higher interest rates.

To expand the resources available to women, CIMMYT focused on collaborating mainly with financial intermediaries whose resources come from the development banking sector. CIMMYT believes that more work must be done to influence financial intermediaries to design financial products and services to better serve the needs of smallholder farmers. These

After 30 months, a total of 1,425 farmers (260 women) accessed critical information regarding credit options, savings and agricultural insurance opportunities in Campeche, Chiapas and Oaxaca.

products and services must recognize that women farmers face structural biases that preclude them from owning assets, but that despite this lack of collateral, they present a lower risk of default. Access to finance would also benefit from promotion of collective action and strategies to increase financial literacy, particularly for women. Access to credit would help women progress economically and would empower them within their communities.

CASE STUDY



The Walmart Foundation has given two grants to Root Capital. In the first, Root Capital provided 22 unique agribusinesses and their smallholder members in Mexico with advisory services on sustainable production and business enterprise management. These 22 agribusinesses supported 9,558 smallholder farmers and employees, of which 2,052 were women. Root Capital disbursed \$10.2 million in loans to 14 enterprises, enabling them to pay out \$18.6 million to over 7,000 smallholder members.

To deepen women's empowerment and Root Capital's access to data and insights on women farmers, Root Capital later launched its Gender Equity Advisory Services. In partnership with Value for Women (V4W), Root aims to help agricultural enterprises (primarily cooperatives that source from smallholder farmers) to identify opportunities to empower women within their businesses and broader value chains. Root Capital and V4W plan to expand these services from Mexico into Central America. A gender inclusion diagnostic will help enterprises identify barriers to empowerment and opportunities for women in their operations. Subsequent interventions could include gender intelligence and sensitivity trainings, design of gender inclusive tools and approaches according to the enterprise's specific needs, and technical assistance for the adoption of these practices. V4W and Root Capital will pair the gender diagnostic and toolkit with technical services to help advance measurable progress on recommended interventions.

Root Capital expects to reach 80 agriculture enterprises serving 45,000 smallholder families. This "aggregator" approach allows for testing of gender and data tools at scale. By designing and piloting its new

Gender Equity Advisory Services, Root Capital aims to improve gender inclusion and women's empowerment within client enterprises.



Grants to Root Capital have provided opportunities for more than 2,000 women working in the agricultural sector in Mexico.

CASE STUDY



With its 2018 investment from the Walmart Foundation (described above), TechnoServe India included a needs assessment of the FPOs it works with to understand their credit needs. It then set a goal of helping these FPOs to raise at least 50 million Indian Rupees (US \$683,000) of capital collectively through financial institutions. As most FPOs in Andhra Pradesh do not have a basic profile of their members, they launched a shareholder survey to capture basic information. As of September 2020, TechnoServe reported working with 26 FPOs across Andhra Pradesh and Uttar Pradesh including 27,315 smallholder farmer members, including 12,567 women, meeting its two-year mobilization target after 20 months of implementation.

With TechnoServe support, 15 FPOs have raised funds from institutional sources, greatly increasing their access to capital. By strengthening FPO governance and internal systems, TechnoServe has helped FPOs build credibility with financial institutions, which has helped them access finance for business expansion. In parallel, TechnoServe has established strategic relationships with financial institutions that cater to FPOs at different stages of development. For example, nascent FPOs require only short-term working capital, while more established FPOs moving into value-adding activities require long-term infrastructure finance.

Sujatha, a shareholder of Manakuneeda Agro Farmers Producer Company Limited from Vizianagaram, Andhra Pradesh, expressed how she overcame the challenge of selling her produce at a fair price after she started trading through the FPO. She said that previously, due to the monopoly of a few traders, she lacked basic market information needed to negotiate or to ensure her produce was weighed accurately and fairly. Now, through the FPO, she has been able to realize 8-10% increased price and receives digital payments within 1-2 days, compared to two or more weeks previously.



Increasing access to technology has helped connect women smallholder farmers to financial systems, sped up payment schedules and, as pictured above, allowed women to participate in virtual meetings.

Key questions to enhance effectiveness of smallholder farmer Market Access programming

As the Walmart Foundation and our grantees have developed a more nuanced understanding of gender equity challenges and emerging solutions, we at the Walmart Foundation see tremendous potential to increase the prosperity of women smallholder farmers. Our plans for strengthening our Market Access strategy include:

Deepening investment in the four accelerators discussed in this report

- **FPOs:** By comparing different FPO structures, the Walmart Foundation aims to determine which are best suited to promoting women's economic prosperity and the extent to which women's increased participation in FPOs leads to: 1) greater influence in household decision making, 2) improved yields and increased profits for FPOs, and 3) women's participation in market-facing roles on behalf of FPOs.
- **Skills:** The Walmart Foundation hopes to learn more about: 1) the skills women need to most meaningfully participate in FPOs and improve sustainable agriculture practices, and 2) the effectiveness of capacity development interventions that consider women's labor time and effort allocation in design and in implementation.
- **Inclusive crops and marketing:** The Walmart Foundation plans to test models that strengthen the success of women farmers by determining: 1) field crops that best complement traditional cash crops for women, 2) other production activities that help support women's inclusion and empowerment, such as livestock systems, value addition and food gardens, 3) ways for marketing centers to increase female farmers' access to improved inputs and aggregation and collective selling services in local and terminal markets, and 4) buyer-facing interventions, for example, equipping procurement staff with strategies to work with women farmers and developing the business case for investing in women farmers.
- **Access to Finance:** The Walmart Foundation strives to: 1) improve women smallholders' access to financial products and services, 2) increase women's understanding of their financial needs and financial management, and 3) increase women's access to digital financial services and digital tools to help them receive real-time information on issues like current market prices, weather forecasts and pest outbreaks.

Collect data in order to accelerate economic prosperity for female farmers.

The Walmart Foundation aims to improve our efforts to measure empowerment indicators for women in collective farming structures, such as women's control over decision making, assets and income. We are currently supporting the International Food Policy Research Institute (IFPRI) to develop a project-level Women's Empowerment in Agriculture Index (pro-WEAI) to measure women's empowerment in collectives (e.g., FPOs). To better identify gaps, address deficiencies and monitor project outcomes related to women's empowerment, the Walmart Foundation is also collecting more data from grantees, by sex, on market access, sales and technology adoption.

Support development of additional insights and tools to benefit the field.

The Walmart Foundation is currently supporting the Tata-Cornell Institute for Agriculture and Nutrition at Cornell University (TCI) to assess challenges facing small farm aggregation models in India and Mexico. The project will develop lessons, tools and approaches to strengthen small farm aggregators, while also forming a community of practice of funders, implementors and policy stakeholders. Over time, the Walmart Foundation hopes to learn from TCI about the global experience of aggregation models, efforts to link women's empowerment and nutritional status, tools measuring women's empowerment, and the effects of male migration on women's participation in agriculture. The Walmart Foundation also intends to share its learnings from grantees as its Market Access portfolio continues to evolve.

Adapt in the face of COVID-19 to serve female farmers' needs.

In light of the COVID-19 spread and impact, the Walmart Foundation is working with grantees to deepen our understanding of the short- and longer-term impacts on FPOs and farmers, and how they differ for women. For example, the rapid transition to digital tools for communications, training, market access and finance and payments may have a negative impact on women, who lag in digital literacy.

While empowering women smallholder farmers is a long-term proposition, requiring breakthroughs in mindsets about traditional gender roles as well as the supports described in this report, we are encouraged by the progress to date of our grantees, including signs of increasing crop productivity and economic wellbeing. As we at the Walmart Foundation evolve our philanthropic investments, we will continue to search for ways to improve the livelihood of smallholder farmers, rural communities and the environment by focusing on partnerships and market-oriented, sustainable and inclusive interventions. We are excited and grateful to continue to work with others to strengthen market inclusion and benefits for women smallholders and smallholder families more broadly.

Appendix I

The table below offers a summary of the key issues considered in each intervention area, illustrative grantee interventions in each area and case studies covered in this brief:

Key focus areas	Key issue areas	Grantee interventions	Highlighted case studies
Women's membership and leadership in FPOs	Women joining FPOs On-ramps for women FPOs better linking women to markets Formation of more women-only FPOs	Performing needs analysis to inform action Offering targeted training to promote women's leadership as part of broader FPO strengthening Promoting women's income growth Encouraging women's self-diagnostics	Tanager
Women's skills and capacity development in farm production systems	Women's equitable access to inputs Women's equitable access to extension services information, training and tools Women's unique needs and barriers in training content Women-targeted interventions in production efficiency	Investing in sustainable practices Improving postharvest handling and processing facilities Training FPOs and farmers	Aspen Institute/ ANDE TechnoServe India
Women's inclusive crop and marketing programs	Crops supporting women's direct control of production and earned income Equitable participation for women in household cropping Accessing new market channels Marketing centers	Forming and training women-only producer groups Offering specialized attention from enterprise facilitators and business advisory services Establishing marketing centers	Heifer International CIMMYT
Women's access to finance	Link between access to finance and women's economic and social capital Finance increasing women's entrepreneurship, farm assets and income generation and control Unlocking financial products (credit, savings, insurance) Accelerating women's digital tools	Increasing women's access to formal bank accounts Facilitating partnerships with private and public sector actors Supporting smallholder finance product development Promoting the use of digital tools to increase transparency Promoting and designing sustainable finance models	CIMMYT Root Capital TechnoServe India