BUILDING SUSTAINABLE SMALL-SCALE CASHEW NURSERIES

KEY RESULTS AND LESSONS FROM THE FEATS PROJECT
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ACRONYMS

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<tr>
<td>APTCNO</td>
<td>Association of Private Tree Crop Nursery Operators</td>
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<td>CRIG</td>
<td>Cocoa Research Institute of Ghana</td>
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<tr>
<td>EBAs</td>
<td>Environmental Baseline Assessments</td>
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<td>FEATS</td>
<td>Farmers Economic Advancement Through Seedlings</td>
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<tr>
<td>GAC</td>
<td>Global Affairs Canada</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
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<tr>
<td>GHS</td>
<td>Ghanaian New Cedi</td>
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<td>GSA</td>
<td>Ghana Standards Authority</td>
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<td>HPTS</td>
<td>High Performance Tree Seedlings</td>
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<td>MEDA</td>
<td>Mennonite Economic Development Associates</td>
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<td>MGAs</td>
<td>Matching Grant Agreements</td>
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<td>MOFA</td>
<td>Ministry of Food and Agriculture</td>
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<tr>
<td>PERD</td>
<td>Planting for Export and Rural Development</td>
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<tr>
<td>RCN</td>
<td>Raw Cashew Nuts</td>
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<tr>
<td>SCN</td>
<td>Small-scale Cashew Nurseries</td>
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<tr>
<td>SME</td>
<td>Small and Medium Enterprises</td>
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<td>SPDV</td>
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ABOUT THE FEATS LEARNING SERIES

The FEATS Learning Series are carrying on the Mennonite Economic Development Associates (MEDA) tradition of sharing lessons learned during project implementation. This new series covers MEDA’s learnings in the tree crop industry in Ghana during a seven-year period (2015-2022). Topics include:

1. Building Sustainable Small-scale Cashew Nurseries: Key Results and Lessons from the FEATS Project
2. Establishing the Model for SME Operations: Designing the Benchmarks for Growth
3. Scaling Up Farmers’ Capacity Building: The Use of Technology on the FEATS project
4. Use of Groundwater in Tree Crop Irrigation: A Case of Cocoa in Ghana
5. Building the Capacity of Women Entrepreneurs: The FEATS Women-led SME Story
6. Gender Messaging through Talking Books: The FEATS Project
7. Supporting Women Farmers’ Access to Finance: The FEATS Project

ACKNOWLEDGEMENTS

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Thanks also to all FEATS partners – both private and public sector partners – and MEDA’s generous private supporters.
EXECUTIVE SUMMARY

A cashew seedling value chain study conducted by the Farmers’ Economic Advancement Through Seedlings (FEATS) project in 2017 revealed major weaknesses in operations of small-scale cashew nurseries (SCNs) in cashew production areas of Bono, Bono East, Upper West, and Volta regions of Ghana. These weaknesses included low nursery management and technical knowledge, poor business management skills, inability to access financing for equipment, operational capital and rudimentary infrastructure facilities. This Learning Series paper highlights major capacity strengthening interventions implemented by the FEATS project to address the key SCN constraints, outlines results from these activities, and provides lessons learned to guide stakeholders in the cashew industry.

Key results of FEATS intervention activities were:

- Upgrades of 23 SCNs, including 16 which were women-led,¹ with modern nursery facilities
- Capacity strengthening of 23 SCN owners and workers, including mentoring services for 11 women-led SCNs in nursery management, business management, and gender inclusion and advocacy
- Establishment of 12 strategically located scion banks as sources of scions for producing elite cashew planting material for SCNs
- Development of Code of Practice for cashew planting material in collaboration with Ghana Standards Authority
- Creation of market linkages for supply of quality cashew seedlings to District Assemblies and farmer unions by SCNs
- Engagement with 556,500 farmers by SCNs through a radio-based marketing campaign
- Engagement in income diversification activities by SCNs
- Establishment of the Association of Private Tree Crop Nursery Operators (APTCNO) to advocate SCN interests.

FEATS interventions have allowed for important lessons to be learned, including that capacity assessments of SCNs are critical before providing technical assistance, and one-off training efforts are not always sufficient as mentoring maximizes the impact of short-term trainings provided. Additionally, the

¹ Woman-led SMEs: Businesses which have 50% or more women in ownership and/or in management roles.
demonstration effect of advertising seedlings can stimulate SCN owners to further engage and invest in marketing activities. Our experience has also shown that proper business records facilitate access to finance for SCNs, and nursery owners must diversify their income sources by leveraging their nursery facilities to generate revenue from other activities all year long. Finally, deliberate efforts to target women already engaged in SCN businesses and support these female SCN owners through effective capacity strengthening can help increase women’s participation in the tree crop sector.

This document complements the work done in another learning paper, entitled Building the Capacity of Women Entrepreneurs – The FEATS Women-led SME Story, which focuses more directly on the project interventions to build the capacity of women-led SMEs.

1. ABOUT THE FEATS PROJECT

The Farmers’ Economic Advancement Through Seedlings (FEATS) project was a seven-year (2015-2022) initiative funded by Global Affairs Canada (GAC) that aimed to improve the economic wellbeing of men and women farmers in export-linked tree crops industries of Ghana.

Ghana’s economy and workforce are heavily dependent on agricultural commodity exports, with the tree crops sector being one of the largest contributors to the country’s gross domestic product (GDP). It is estimated that between 44.1% to 51.5% of Ghana’s labour force is engaged in agriculture, with the sector accounting for 18.2% of GDP in 2020.

Despite the significant contributions of tree crops to the export earnings of Ghana, the tree crop sector is yet to realize its full potential and is hindered by: (i) low participation of women, (ii) low area under cultivation, (iii) inadequate access to quality planting material, (iv) underdeveloped value chains for rubber and cashew, (v) non-existence of shea plantation establishment, and (vi) low capacity of farmers to understand and effectively apply new knowledge to improve their farm operations.

The FEATS project was therefore designed to help address some of the above-named challenges facing tree crop farming to encourage increased productivity and incomes for farmers.

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1 Building the Capacity of Women Entrepreneurs – The FEATS Women-led SME Story
2 https://oxfordbusinessgroup.com/ghana-2020/agriculture
3 https://oxfordbusinessgroup.com/ghana-2020/agriculture
1. Increased Supply of Quality Tree Crop Seedlings

The project worked to improve both the technical and infrastructural capacities of small and medium enterprises (SMEs), mostly women-led, engaged in the business of producing tree crop seedlings to develop a sustainable market for quality seedlings to meet the needs of tree crop farmers across the country.

2. Increased Access to Quality Seedlings by Tree Crop Farmers

Through trainings and innovative incentive programs, the project educated farmers on the benefits of planting quality seedlings and how to profitably grow quality tree crops for enhanced productivity. Through its seedling purchase discount voucher (SPDV) program, the project worked to increase farmers’ adoption and planting of quality seedlings by facilitating their access and ability to purchase the needed quantity of quality seedlings for their farms.
3. Improved Business Environment

The project strengthened the policy/strategy capacities of the Ghana Government, its agencies and leading private firms that need to foster commercial markets for High Performance Tree Seedlings (HPTS) and quality seedlings.

Over its seven-year mandate, the FEATS project aimed to support 100,000 male and female farmers by working through 25 tree-crop sector farmer and industry associations to plant 21 million tree crop seedlings. Additionally, 35 small enterprises and their employees were supported with technical and innovative matching grant assistance to ensure the production of quality tree crop seedlings to meet farmers’ needs.

2. SITUATION OF CASHEW SMEs IN GHANA

At the project’s inception, the cashew nursery industry in Ghana was varied, unstructured, and unregulated. The cashew seedling nurseries lacked certification and codes of practice. The absence of a cashew seedling nursery industry association meant there was no opportunity to introduce minimal regulation, especially with respect to product pricing. According to the Ministry of Food and Agriculture (MOFA), lack of certification or codes of practice meant that SCNs had little incentive to improve seedling quality or quantity. The absence of industry associations to guide working standards led to poor quality products. Due to the seedling markets being unstructured and unregulated, SCNs were forced to reduce seedling prices, further affecting their incomes and profitability, and leading to low living standards for themselves and their families.

MOFA found that the lower technical skill sets of SCN operators led to the production of rootstock and seedlings of lower quality which then compromised the yield of cashew plantations established by farmers. Since cashew takes three years to gestate, farmers only discover their investment mistake when considerable time had elapsed. Also, many SCN operators had no formal training in business management and developed no activity plans. Many measured the success of their activities by production costs, seedling sales, or market access rather than analysis of their activity and financial records. With substandard records and documentation of operations, SCN owners were...

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5 Policy for Development of Perennial Crops Sector in Ghana, MOFA, 2017, Pg 11
6 Policy for Development of Perennial Crops Sector in Ghana, MOFA, 2017, Pg 11
unable to access bank loans to expand operations to meet market demand. A Cashew Seedling Value Chain study conducted by the FEATS project in 2017 confirmed the many weaknesses in SCN operations. These were low technical and business management skill sets, inadequate access to scions for grafting, perceived high seedling prices by farmers, and inability to access operational financing due to the inability to convince financial institutions of activity viability and high interest rates.

The cashew tree crop subsector has enormous potential. The current planted area for cashews in Ghana is 200,000 ha (494,210 acres) which produced 160,000 metric tons (Mt) of raw cashew nuts (RCN) in 2020. Ghana plans to increase its planted cashew area to 400,000 ha (988,421 acres), requiring 40 million cashew seedlings if it is to meet the RCN production target of 300,000 Mts by 2027. This presents a large opportunity for the increased production of quality cashew planting materials to meet the demand of farmers who wish to establish or expand cashew plantations in response to the stated national production targets.

3. FEATS SUPPORT TO SMALL-SCALE CASHEW NURSERIES

To help address the identified critical weaknesses of SCNs and increase the production of quality planting materials, the FEATS Project partnered with 23 SCNs, 16 of which were women-led, in the major cashew production areas of Bono, Bono East, Upper West, and the Volta regions. To create clear and common understanding of the partnership, the FEATS Project and the 23 SCNs signed Matching Grant Agreements (MGAs) which outlined key targets, implementation plan, responsibilities, cost-sharing budget, and reporting requirements. The SCNs committed to produce quality seedlings for distribution to farmers through cost-share arrangements in return for FEATS’ support of establishing or upgrading their nursery facilities. For example, the SCNs committed to contributing GHS 7,757,048 (CAD $1,877,656), which is an amount normally well beyond their financial capacity. However, by spreading their contributions over a three-year period, all SCN owners were able to fulfill their financial obligations under the MGAs, contributing up to 80% of the total costs of investments for upgrading facilities and other technical assistance efforts. The project’s major interventions are laid out in the following sections.

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3.1 SCN Facilities Upgrade

Figure 2 shows SCNs and the FEATS project’s most common contributions towards upgrading the nursery facilities.

<table>
<thead>
<tr>
<th>SCN Contributions</th>
<th>FEATS Project Contributions</th>
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<tbody>
<tr>
<td>Nursery land</td>
<td>Shade nets</td>
</tr>
<tr>
<td>Cashew seed</td>
<td>Metal poles and accessories</td>
</tr>
<tr>
<td>Scions</td>
<td>Chain link fencing (for security)</td>
</tr>
<tr>
<td>Soil</td>
<td>Mechanized boreholes and accessories</td>
</tr>
<tr>
<td>Poly bags</td>
<td>Water tank</td>
</tr>
<tr>
<td>Transportation</td>
<td>Plastic sheets</td>
</tr>
<tr>
<td>Labour costs</td>
<td>Technical assistance, training, mentoring</td>
</tr>
<tr>
<td>Other operational costs</td>
<td>Scion banks</td>
</tr>
</tbody>
</table>

Figure 2: SCN and FEATS project contributions

SCNs provided local materials and covered all production costs amounting to about GHS 2.46 million (CAD $513,500) by August 2021 while the FEATS project facilitated upgrades to the SCN facilities through access to modern infrastructure, including shade nets, metal poles for nursery structures, chain link fencing for security, mechanized boreholes and water tanks for seedling irrigation, business signage as advertisement, and the connection of required electricity. In collaboration with the Cocoa Research Institute of Ghana (CRIG), the project also facilitated the establishment of two-acre scion banks for each SME to enable more convenient access to scions for grafting quality seedlings for sale to farmers.

A scion bank is a special tree garden for raising high quality planting material for propagation of elite tree crop seedlings in the field by farmers.

Figure 3: Rudimentary nursery structures

Figure 4: Modern nursery structures

8 FEATS SCN Productivity Analysis, Aug 2021
The FEATS project support is described in greater detail in the following sections: (i) capacity strengthening, (ii) market linkages, (iii) marketing campaigns, (iv) formation of umbrella association, (v) development of Code of Practice, and (vi) diversification of income.

3.2 Capacity Strengthening

The capacities of SCN owners and workers were strengthened through trainings in four key areas, namely nursery management including softwood grafting techniques, business management, gender equality, and environmental sustainability. Each area of training was to achieve specific objectives. Nursery management, especially cashew softwood grafting, was fundamental to ensure the production of quality planting material and to achieve high yielding cashew plantations. Business management training was to ensure commercial sustainability of the enterprise. SCNs were trained on record keeping to promote the effective monitoring of operations and development. Gender equality training led to more effective use of available human resources to the small enterprises to ensure that biases did not hinder women from taking on nursery roles. The support provided to SCNs on environmental sustainability ensured that seedlings were produced with little damage to biodiversity, soils, water bodies, or atmosphere in their environment.

![Figure 5: FEATS Capacity Strengthening themes](image-url)
Consequently, about nine SCNs now use sawdust instead of top soil as a growing medium for raising seedlings. Environmental baseline screenings (EBS) were conducted on each SCN, and subsequently environmental sustainability assessments were conducted by FEATS on the SCNs to ensure compliance with established environmental criteria. The gaps identified during the sustainability assessments for each SCN became the focus of refresher trainings in environmental management for the SCNs by the project.

SCN owners Afia Manu Grace and her husband Prince Obeng Frimpong are the proud owners of POFAMG Nursery Enterprise. For Grace, the greatest value came from the training and mentoring support she received from the project, especially on nursery operations management, grafting, and business management. “Seedling grafting requires a special skillset, but the few women grafters available in and around Wenchi preferred to work for the large-scale Wenchi Agricultural Research Station. Through the nursery management training, I was able to build my own technical ability in seedling production. I and three of my women employees were also taken through grafting training, and between us and my husband, we are now able to graft to meet our nursery’s needs,” Grace said.9

3.3 Development of the Code of Practice for Production of Cashew Planting Materials

In collaboration with the Ghana Standards Authority (GSA), the project developed a Code of Practice to guide and standardize the operations of cashew SCNs. The GSA is the public sector agency in charge of standards development in Ghana and led the partnership of public and private sector agencies to develop the Code of Practice. Key elements of the Code of Practice include the framework for good nursery practices and definitions and guidance for the production of cashew planting material. An illustrated manual on the Code was developed to facilitate training of nursery operators and their workers to encourage compliance with improved practices. The project and GSA worked together to publish the Code of Practice to ensure that it served as a guideline for quality cashew planting material production by SCN operators.

3.4 Market Linkages

The SCNs did not actively cultivate access to markets for the supply of their products. As a result, the FEATS project facilitated market linkages for the SCNs by linking them to farmer associations in their communities or districts. SCN owners were encouraged to register as members of their district farmer associations to enable them to become familiar with farmer seedling requirements and to encourage associations to access their seedlings. The project engaged with District Assemblies in cashew producing areas to facilitate access to quality cashew seedlings for farmers from the SMEs under the government’s Planting for Export and Rural Development (PERD) program, implemented by the Ministry of Food and Agriculture. The FEATS project also promoted production planning for SCNs through assessment of potential markets prior to annual seedling production. This planning enabled them to set realistic seedlings production forecasts, accurate cost estimates, and viable seedling prices to ensure profits.

![Figure 7: Market Linkages between Cashew Nurseries and other Market Actors](image)

3.5 Marketing Campaign

The FEATS project initiated a six-month media broadcast campaign in collaboration with media firm Newmark West Africa and thirteen radio stations in major cashew production areas to broadcast messages on the importance of planting quality cashew seedlings. In total, 556,500 farmers were targeted and were encouraged to access seedlings from SCNs. The broadcasts included
radio jingles, Live Presenter Mentions, radio dramas, radio quizzes, as well as studio sessions moderated by experienced extension agents and SCN owners to provide information to farmers on quality cashew planting materials.

The success of the radio messages and advertisements, in turn, encouraged the SCNs to start their own advertising campaigns after the end of the FEATS media broadcast campaign. An assessment study to measure the impact of the media broadcast campaign using 500 respondents showed that a remarkable 87% of farmers confirmed that they were positively impacted by the media campaign messages on best farm and business practices to improve their operations. About 60% of SCNs now pay for weekly or monthly advert slots with local FM stations to inform farmers about the availability of seedlings. Additionally, many of the SCNs now realize the importance of their business signage in attracting customers to their nurseries. According to Mary Sokuo, the proud owner of Mary Sokuo Enterprises, “the radio marketing campaigns conducted for us by the FEATS project encouraged us to take marketing of our seedlings more seriously. I paid for weekly adverts on our local FM station to inform farmers about availability of my seedlings. My outlook on the quality of my seedlings and how they are sold has increased my sales remarkably. Now, I am using the increased profits to further my education and also to purchase land for building a house.”

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10 Radio Based Media Campaign – End of Project Implementation Report
3.6 Diversification of Income Sources

Since farmers mainly purchase and plant seedlings during the rainy season from May to August, nursery facilities generate most of their income during that period. To ensure that SCN owners have sustainable income streams throughout the year, FEATS has encouraged them to diversify their income sources by engaging in other activities which would provide them with additional income during the lean season. Now, they are engaged in beekeeping, mushroom farming, or use their borehole facilities to produce vegetables on a year-round basis and/or sell water to nearby customers. One of the female SCN owners started a small-scale trading business selling provisions to her neighbors. Some SCN owners were engaged in production of other tree crop seedlings besides cashew seeds. Business management trainings and mentoring in practical business skills received by the SCN owners enabled them to effectively manage these additional activities and ensure sustainable profits for their own livelihoods. Linda Boamah says that the encouragement received from her business management and mentoring training to increase her income generating capacity has born fruit for her. She says “I am now selling water from my borehole to my neighbors who had to walk some distance to obtain water from the community standpipe. This new venture has increased my cashflow.”

Figure 9: Mango and timber seedlings produced at nursery site

3.7 Formation of the Association of Private Tree Crop Nursery Operators (APTCNO)

The FEATS project facilitated the formation of an industry association for SCN operators to enable them to advocate for their own interests with private and public sector actors for the development of their industry. The Association of Private Tree Crop Nursery Operators, comprising 25 nursery owners producing cashew and other tree crop seedlings such as mango, coconut, and timber species, were assisted to develop a constitution and encouraged to register
with the Department of Cooperatives. 22 of the 25 members were FEATS-assisted SCNs, with 16 owned by women. The FEATS project closely monitored their election of executives which saw one of its female SCN owners chosen as Vice-Chairperson. The inauguration of the association in 2021 was attended by various public and private sector stakeholders in the cashew industry in Ghana.

Figure 10: Members of APTCNO at their inauguration

4. FEATS KEY RESULTS

Through the aforementioned interventions, FEATS has addressed some of the major weaknesses identified in the early stages of engagement with the SCNs, including: low technical and business management skillsets, inadequate access to scions for grafting, perceived high seedling prices by farmers, and an inability to access financing from institutions. This section captures the key results of the FEATS project interventions:

1) Twenty-three functioning SCNs established and were upgraded with modern facilities. These SCNs transformed from rudimentary structures to new facilities connected to efficient utilities. The SCNs increased their production from approximately 5,000 seedlings to about 50,000 seedlings per year, an increase of about 900%. Seedling germination rates increased from 87.2% in 2020 to 91.42% in 2021, while grafting success rates moved from 85.5% in 2020\(^1\) to 93.79% in 2021\(^2\).

2) Twelve strategically located scion banks were established with “the potential to provide sufficient quantities of quality scions to meet the high demand of improved cashew varieties for the establishment of new and rehabilitation of old plantations.”\(^3\)

\(^{11}\) FEATS SCN Productivity Analysis, Aug 2021  
\(^{12}\) FEATS Cashew SME Productivity Analysis, March 2022  
3) **Twenty-three SCN owners and workers were trained** with new skillsets in nursery management, business and financial management, and gender equality. The trainings in nursery management, business management, and financial literacy contributed to an increase in average profit margins of 127.8% in 2020 and 8.16% in 2021 for the 23 SCNs. According to Joyce Mensah, owner of Joyce Mensah Nursery, 2020 was a good year for seedling sales. “I was able to sell 100% of my seedlings and my profit margin was almost 180% in that year,” Joyce said.

![SCN Annual Revenue & Production Costs](image)

*Figure 11: SCN Annual Revenue & Production Costs*

4) **Eleven female cashew nursery owners were mentored** in business management, financial literacy, gender equality, and advocacy through a five-month mentoring program. Project reports show that most participants found the mentoring useful in several respects, including learning effective production, processing, and income diversification techniques, as well as being able to promote cooperation and harmony within the family.

5) **To date, 4,176,195 quality cashew seedlings were produced for sale to 24,240 cashew farmers.** These farmers used these seedlings to establish or expand their cashew plantations through the implementation of the FEATS Seedling Purchase Discount Voucher program which saw the provision of subsidies for 19,645 cashew farmers to access 3,376,553 seedlings.

6) **Twenty-three SCNs were linked to 72,000 farmers** in farmer unions trained as direct buyers of quality cashew seedlings.
7) An Association of Private Tree Crop Nursery Operators was established (APTCNO) through the FEATS facilitation to advocate for the interests of SCN owners.

8) A Code of Practice was developed for Cashew Planting Materials that serves as a reference for cashew nursery operators and farmers in Ghana.

5. LESSONS LEARNED

Major learnings from the FEATS project interventions are captured in this section.

1) Capacity assessment of SCNs was critical before providing technical assistance

Initial needs assessments conducted by the FEATS team for each SCN partner were critical for the team to design and tailor project interventions. The assessment helped identify areas of weaknesses and opportunities to strengthen the capacity of the SCNs. Results of the assessment and recommendations were discussed with the nursery operators prior to developing Matching Grant Agreements in which roles and responsibilities – including financial contribution of all parties – were clearly defined. This built trust and translated to genuine buy-in and commitment from the SCN owners to collaborate with the project from the onset. The main learning was that capacity assessment was an ongoing process and the needs of the SCNs evolve over time, as shown in monitoring visits and annual survey reports. It was important to remain flexible, to take a holistic approach, and to adjust technical assistance plans whenever possible to strengthen capacities and address the real needs.

2) Nursery infrastructure upgrade and procurement options must be strategically assessed to optimize outcomes and increase efficiency

The infrastructure upgrades for SCNs were necessary to ensure that the seedling production became more optimized and specialized for the best outcomes. For example, the provision of shade nets with 60% sunlight penetration and average dimensions of 60 ft by 40 ft ensured that cashew seedlings received the right amounts of sunlight, necessary for optimal growth. This allowed nursery owners to plan and implement their batch productions more accurately as only a set number of seedlings could be produced at a time under the shade nets as a batch. The batches supported the SCN owner to plan and keep count of seedlings produced over the planting period for farmers. The security fencing ensured that seedlings and investments were protected from grazing animals.
and theft while the mechanized boreholes facilitated access to water for year-round seedling production.

Even though the land size of each nursery site varies, the necessary cashew nursery equipment and accessories remain the same. The FEATS project centralized the procurement process to reduce costs of materials, quality control, and ensured standardization of the different facilities. Standardized equipment was purchased in bulk and benchmark procedures were established for easy replication by MEDA, or by other actors seeking to establish modern SCNs. As a result, the Ghana Standards Authority has adopted elements of the FEATS project and upgraded nursery facilities in the Code of Practice for the production of cashew planting material.

3) **SCNs must be provided with comprehensive training using varied approaches.**

Training for SCN owners and workers in the use of modern nursery facilities and in the management of profitable businesses were major objectives of the FEATS project. Early on, FEATS understood that training workshops, although effective to transfer quick basic knowledge, was not adequate to develop long-lasting skills nor to promote the adoption of good nursery management practices. Alongside the formal training sessions, female SCN owners benefitted from mentoring services led by experienced female entrepreneurs who provided hands-on support over five months to enhance their skills in business management and gender inclusiveness. Results from the mentoring program show that knowledge transfer, practice, and on-site support aids a more comprehensive transformation in behavior. Mentoring carried out by experienced mentors who live in close proximity and share the same language as mentees has shown to facilitate interactions, build trust between mentor and mentees, and lead to increased effectiveness of the intervention.

4) **SCNs must be trained to conduct comprehensive production planning at the beginning of each season**

Another FEATS recommendation is the need to promote production planning for SCNs through the assessment of potential markets prior to annual seedling production. From the data below, all SCNs (100%) are now conducting detailed estimates of input costs. The recommendation would be to include market demand intelligence in their production planning.

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14 See figure 2
86.7% of SCNs assigned costs to their production inputs and can develop cost profiles per batch or for each season’s production. Also, it is important for SCNs to maintain lists of input suppliers to facilitate repeat transactions which promote relations that often lead to the benefit of the business. As a result, 19 (82.6%) of the 23 SCNs compile input supplier lists. Similarly, the maintenance of service provider lists can cut down-time when such services are required quickly for maintenance and 21 (91.3%) of SCNs are already keeping such lists. In all cases, consistent engagements with the same input and service providers promote the development of crucial relations which often cut down the cost of doing business. “If it had not been for my activity and financial records keeping, I would not have been able to know whether I am making profit or not. I am applying my new business knowledge to my personal life and have grown in confidence. Now I relate confidently with other business suppliers when it comes to discussing their production supplies,” Joyce Mensah said.

5) SCNs must actively market their seedlings

A key lesson for SCNs was to learn how to market their seedlings. The seedling subsidies provided by FEATS made some SCNs complacent and dependent on incentives from the project and District Assemblies which cost-shared seedlings with farmers. SCNs must advertise their products more aggressively through appropriate channels to stay in business. Although they were reluctant or not
confident at the beginning, the success of media broadcasts initiated by the project stimulated many of the SCN owners to invest in their own marketing efforts which resulted in the expansion of their customer base and led to an increase in sales. The 2020 FEATS project annual survey revealed that 78% of the SCNs have developed marketing plans to promote their products through churches, radio adverts, farmer associations, community address systems, district assemblies, and/or word of mouth. That once again shows that SCN owners are more likely to adopt new practices based on the evidence of effectiveness rather than wishful thinking.

6) SCNs must utilize their business records to facilitate access to finance

It is a sound business practice for SCNs to access funding from financial institutions for equipment and working capital if they can generate enough profit from their business operations to repay loans on time. In the case of the FEATS-assisted SCNs, two were able to use their business records to assure the financial institution of their ability to repay their loans from the proceeds of seedling sales. The training and mentoring sessions in business management and financial literacy provided to all the SCNs should now build their confidence to approach banks on their own for operational financing. Their recordkeeping, production planning, and marketing plans should support them to be in good standing to engage directly with financial institutions like Agyaku Nursery and FOBCOM Seed Company.

7) Nursery owners must diversify their income sources by leveraging their nursery facilities to generate annual revenue

Due to the potential difficulty of seedling sales during the lean season and after most farmers establish new and/or rehabilitate old plantations, SCNs have had to diversify their income sources by embarking on other profitable ventures. The best option for most of them was using their modern nursery facilities to produce other tree crop seedlings for perceived markets in their communities, such as mango and forest timber species, or to engage in vegetable production. There are several off-farm business activities that can profitably engage female SCN owners in particular, such as beekeeping, mushroom farming, or snail rearing. FEATS experience in that regard is proven successful with 68% of the SCNs owners producing other crops while others are engaged in other income-generating activities (fish farming, selling water from their nursery boreholes, trading clothes, etc.).

In conclusion, the FEATS project implemented several strategic interventions to build the resilience and sustainability of its assisted SCN enterprises through initiatives, such as nursery facility upgrades, capacity building in nursery management, business management and gender awareness and facilitation of
market access for SCNs through the SPDV program. FEATS also facilitated the introduction of a Code of Practice for cashew planting materials and conduct of marketing campaigns to increase SCN seedling sales and built SCN capacity to diversify their income sources from cashew seedling sales. The results of the FEATS interventions are SCNs that are able to plan their annual seedling production, engage buyers through marketing campaigns, and ultimately increase their profitability based on new acquired skillsets. Finally, another noteworthy result was the increased participation of women in the tree crop sector by targeting women-led SCN businesses and strengthening their capacities.
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