

Partnering with Food Processors to Tackle Sourcing Challenges and Strengthen Farmers' Livelihoods

Learning Brief



*Farmer milking a cow for milk supply to Wimssy Dairy, AINFP Client Kenya.
Photo: Bobby Neptune*

▷ Overview

In the Learning Brief: Partnering with Food Processors to Tackle Sourcing Challenges and Strengthen Farmers' Livelihoods, the Alliance for Inclusive and Nutritious Food Processing (AINFP) shares results, lessons learned, and opportunities for practitioners to foster livelihood development of smallholder farmers (SHFs) through the transformation of the food processing sector. This brief provides insights into how strategic investments in smallholder sourcing models by SME food processors can both solve processors' raw material sourcing challenges and meaningfully benefit SHFs.

▷ Introduction

Agriculture plays a critical role in sub-Saharan Africa, employing approximately [52%](#) of the population. Nonetheless, agricultural productivity in the region lags behind other regions of the world. A World Bank [report](#) indicates that average yields for key staple crops, such as maize or rice, are only one-third of those in other developing regions. Farmers' productivity is hindered by several challenges, including limited access to productive resources, such as agricultural inputs; low adoption of climate-smart agricultural practices; and limited output market opportunities that are reliable, amongst others. While policymakers and development practitioners have primarily focused on activities directly impacting the productivity and incomes of smallholder farmers (SHFs), there have been [growing calls](#) for more holistic and integrated approaches that foster the inclusion of SHFs into food systems. [Several studies](#) have shown that increasing agricultural commercialization can support increased incomes, productivity, and resilience of farmers, particularly rural SHFs. In alignment with these findings, the Alliance for Inclusive and Nutritious Food Processing (AINFP) program supports food processors to strategically adjust and invest in their SHF sourcing models in ways that both solve processors' raw material sourcing challenges and boost SHFs' livelihoods.

The reflections and findings presented are derived from AINFP's engagement with over 240 SME food processors across Ethiopia, Kenya, Malawi, Tanzania, and Zambia since 2018

Purpose of this brief: This learning brief provides insights into the raw material sourcing practices of SME food processors, including the challenges they encounter and opportunities to optimize how they source from SHFs to benefit both themselves and their SHF suppliers. The reflections and findings presented are derived from AINFP's engagement with over 240 SME food processors across Ethiopia, Kenya, Malawi, Tanzania, and Zambia since 2018. Additionally, in-depth interviews were conducted with 3 food processors in 2023 to better understand their sourcing practices. In support of these perspectives, the brief includes findings from a survey conducted by 60 Decibels with 521 SHFs who supply to three AINFP-supported food processors, describing how their livelihoods have evolved since partnering with the processors

Catalyzing Change for Smallholder Farmers by Partnering with Food Processors: AINFP is a partnership program between [USAID](#), [TechnoServe](#), and [Partners in Food Solutions \(PFS\)](#) that aims to create a more competitive food-processing sector and, in turn, positively affect food systems. AINFP posits that

as food processors become more productive and competitive, their demand for raw materials, including higher-quality raw materials, will increase. This, in turn, will result in increased procurement from and investment in SHFs, creating greater income-generating opportunities and more reliable output markets

for farmers. Moreover, AINFP is purposefully designed with a focus on helping processors solve raw material sourcing challenges via strategic investments in and adjustments to their smallholder sourcing models that also improve SHFs' livelihoods.

▷ Understanding Food Processors' Sourcing Practices

Before highlighting how AINFP has supported SME food processors to strengthen their smallholder sourcing models, it is important to understand the common ways processors procure their raw materials and the main sourcing challenges they face. Food processors source their raw materials through a variety of channels, including from individual SHFs, farmer groups, and cooperatives, aggregators and traders, agents and brokers, specialized traders, open markets with wholesalers, commercial farms, and importers. Their sourcing decisions are influenced by a variety of factors, including the value chain they operate in, the company size, and the local context. The choice of sourcing strategy relies heavily on the specific commodity needed and local contextual factors. For example, wheat processors in Zambia primarily procure wheat from commercial farms due to inadequate quantity and quality of production from SHFs. In contrast, dairy processors primarily source raw milk directly from SHFs – individually or through groups and cooperatives – to minimize the number of intermediaries involved and ensure better quality control, as milk adulteration and spoilage are prevalent concerns.



Peanut preparation for processing at Delish & Nutri, AINFP client Kenya. Photo: Bobby Neptune

Additionally, this sourcing strategy is influenced by the fact that milk production is dominated by SHFs rather than commercial producers. In Tanzania, soya processors primarily buy from certified warehouses, as procurement of the crop is government-controlled. Additionally, the size of the processor influences its sourcing strategy. AINFP has observed that larger processors tend to prioritize efficient and reliable sources, such as contract farming or agents/brokers who can consistently supply large volumes of raw materials, leading to a reduced reliance on SHFs. Conversely, small and medium-sized food processors tend to directly source from SHFs.

When considering the advantages of sourcing from SHFs, SME food processors often highlight factors such as competitive prices, enhanced traceability, and, occasionally, higher product quality that they report they are able to influence through direct engagement with and investment in SHFs. Conversely, they also mention challenges in working with SHFs. Food

AINFP has observed that larger processors tend to prioritize efficient and reliable sources, such as contract farming or agents/brokers who can consistently supply large volumes of raw materials, leading to a reduced reliance on SHFs.

processors report difficulty dedicating the time and resources necessary to cultivate relationships with farmers, as it often requires hands-on attention and provision of inputs/services to ensure a reliable supply. Volumes can be unreliable if SHFs do not implement good agricultural practices (GAPs), experience poor harvests, or “side-sell” their produce to other buyers, even after receiving inputs and training from the processor. Moreover, food processors have expressed concerns about inconsistent quality. For example, wheat processors in Tanzania note that commercial wheat farms provide wheat with fewer impurities compared to SHFs. As emphasized in AINFP’s white paper, sourcing from farmer groups or cooperatives can alleviate many of the challenges encountered when directly engaging individual SHFs. This approach allows food processors to negotiate contracts with the farmer groups or cooperatives, outlining the specific requirements and pricing arrangements, thus providing more certainty to the food processors about their supply.

▶ Improving Sourcing Practices: AINFP’s Activities, Results, and Lessons Learned

AINFP has provided a range of support to food processors to address their raw material sourcing challenges in ways that also benefit SHFs. Since 2018, AINFP-supported food processors have sourced raw materials from over 349,000 SHFs, procuring more than 259,000 metric tons of raw materials with a cumulative value exceeding \$92 million. Furthermore, since 2021, AINFP clients have established new linkages with 34,000 SHFs, resulting in over \$20 million in sales for these SHFs. The following sections highlight the activities AINFP has implemented to elicit these results and what these results mean for SHFs.

▶ Supporting Food Processors to Adapt their Sourcing Strategies

Core to AINFP’s engagement with food processors are [private sector engagement](#) best practices, which entail supporting clients to identify key operational challenges and co-creating solutions to address them. Through customized technical assistance (CTA), AINFP provides 1:1 advisory to processors to first understand their raw material sourcing challenges—such as lack of reliability and poor product quality, amongst others—and then to identify the strategic adjustments and investments they can make in their sourcing models to solve these challenges. As part of this process, AINFP seeks to identify and recommend solutions that generate benefits not only for the processors but also for their SHF suppliers. An example of this win-win or “shared value” approach is AINFP’s support provided to a spice and nutritious flour processor in Arusha, Tanzania. The processor preferred to source directly from SHFs versus through traders, citing a lack of traceability, sand being mixed in with the product, and high cost as key reasons for moving away from traders. However, the processor was also experiencing challenges with SHF suppliers, reporting inadequate quality due to low adoption of quality seeds and GAPs. In response, AINFP advised the processor to invest in training SHFs and implementing an out-grower scheme to increase the use of quality seed and the adoption of GAPs. Under the out-grower scheme, the processor provides inputs, including seeds, to SHFs at the beginning of the season, which the SHFs repay at harvest when they sell their produce to the company.



Win-Win Activities Food Processors can Implement that Improve their Sourcing and Positively Impact SHFs

- Expand access to inputs by implementing outgrower schemes; facilitating linkages between input suppliers and SHFs or farmer groups/cooperatives; establishing one-stop shops.
- Provide training to SHFs on good agricultural practices and access to information (e.g., weather)
- Provide (for free or for a fee) agriculture or value-addition technology (e.g., shellers)
- Provide warehousing and other storage facilities to SHFs to store their production
- Offer production contracts, which provide volume, quality, and price specifications and assurances the food processor will buy the production
- Facilitate linkages between SHFs and value chain financiers

The processor recently reported that they are now getting the quality, volumes, and on-time delivery that they need from SHFs, with no side-selling issues. Meanwhile, SHFs who supply to the processor have benefitted from improved inputs and training, resulting in higher yields. Furthermore, they have access to a reliable buyer that offers better prices ("market price plus a little extra"), which has increased their incomes. The text box provides a non-exhaustive list of the farmer-level investments AINFP has supported food processors to implement to achieve win-win outcomes.

AINFP has supported several processors to develop inclusive business plans (IBPs)– roadmaps for initiating, expanding, or strengthening smallholder-based sourcing models in ways that drive benefits for both processors and SHFs. Since 2018, AINFP has developed IBPs with 5 processors. As highlighted in AINFP's [gender impact brief](#), AINFP supports processors to consider how they can be more inclusive of female SHFs, who are traditionally left out of more formal contracting compared to their male counterparts.

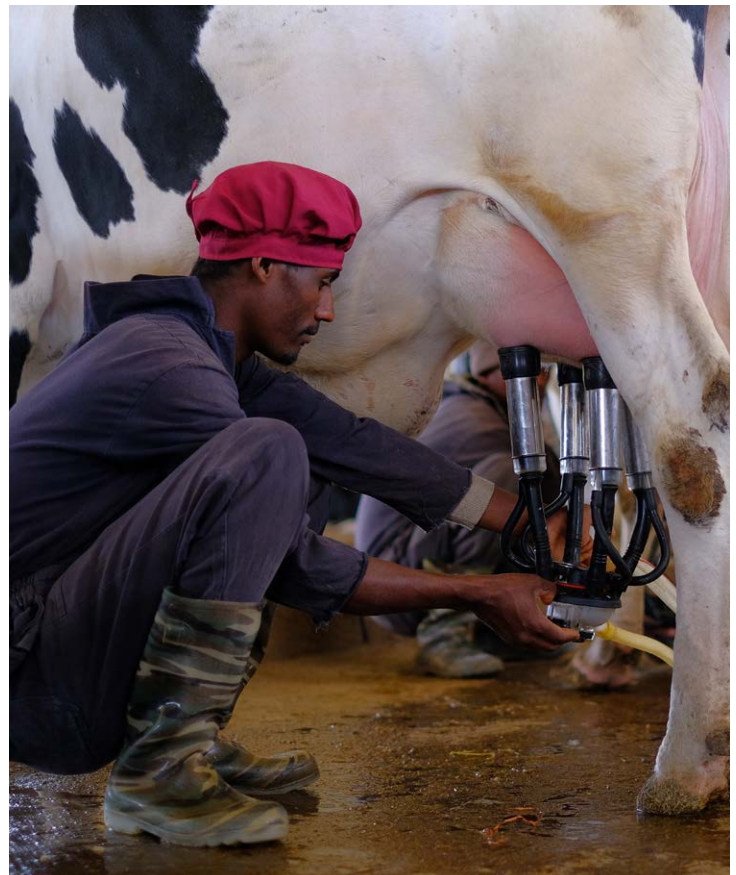
Case Study: Asili Dairy's Inclusive Business Plan

In 2022, AINFP supported Asili Dairy, a dairy processor in Arusha, Tanzania, to identify strategies to improve their sourcing practices. Asili Dairy reported that SHFs are often unable to supply adequate volumes of milk and that there are often quality issues with the milk, largely due to animal diseases and suboptimal feeding practices. These challenges made it challenging for Asili Dairy to source from SHFs consistently. Since 2022, Asili Dairy has implemented the following activities, amongst others, outlined in their inclusive business plan.

Activities	Results: Asili Dairy	Results: SHFs
<i>Establish contracts with SHFs that clearly articulate the roles and responsibilities of both Asili Dairy and the SHFs.</i>	Increased reliability of SHFs in selling to Asili Dairy and meeting the specifications Asili Dairy requires; results in less turned away milk.	More reliable output market that provide higher prices than other output markets in the local market.
<i>Establish milk collection centers closer to SHFs.</i>	Improves the quality of their raw material, as they are able to test the milk at the collection center and accept only milk that meets their specifications, as outlined in the contracts.	Reaches an additional 68 SHFs with a more accessible and reliable output market, that cuts out middlemen who offer lower prices. Provides an opportunity for additional technical assistance for how to improve their productivity, from an Asili Dairy collection center technician.

In some instances, there is a lack of connectivity between food processors and SHFs. AINFP facilitates business-to-business meetings that bring together processors, SHFs, and farmer representatives to help facilitate these connections. Since 2022, AINFP has facilitated backward market linkage B2B forums in Kenya, Tanzania, Ethiopia, and Zambia, bringing together 432 participants (35% women) from food processing companies, government agencies, consumer cooperative unions, farmer service centers, representatives from producer groups, and private sector associations.

The role of food processors to ensure meeting food safety standards through Smallholder Farmer engagement and support for quality raw materials supply: AINFP clients have engaged with smallholder farmers to ensure that the raw materials they are supplied with, meet the highest level of quality and food safety standards. This has been attained through training and provision of farm input to farmers where processors have established milk collection centers nearer to dairy farmers, provided training in best practices for good quality raw material supply leading to better quality and safe to consume raw milk and reduced wastage. In the grain and edible oil value chain, clients provide support to smallholder farmers through training in best practices for good quality and safe raw material supply and provision of farming inputs such as seed, fertilizer, stockfeed, vaccines & medications.



Automatic milking machine installation at Zagol Milk, Melkam Endale, AINFP Client Ethiopia. Photo: Bobby Neptune

► Understanding the Impact: Improved Sourcing Benefits for SHFs

As previously noted, AINFP posits by making strategic investments in and adjustments to their SHF sourcing models, food processors can both solve their raw material sourcing challenges and improve SHFs' livelihoods. Specifically, processors can help address key challenges SHFs face, including the adoption of GAPs, access to productive resources (e.g. quality seed), and reliable output markets. Ten AINFP-supported processors have implemented activities that address at least one of these challenges. But how have these interventions impacted SHFs? To better understand the SHF perspective, AINFP partnered with 60 Decibels to conduct phone surveys with SHFs who supply to three food processors in Kenya and Tanzania. Each of the three companies provided a database of SHFs who have engaged with them in the last 12 months, totaling 2,973 SHFs. From these, 60 Decibels conducted rapid phone surveys with a sample of 521 SHFs between August and September 2023. The following table provides a profile of each of the three processors and the IBP activities they have implemented.

Food Processor Profile	IBP Activities
<i>Kenyan groundnut processor</i>	<ul style="list-style-type: none"> • Offer production contracts to SHF groups organizations stipulating the services that the company will provide or facilitate for SHFs, including a) access to high-quality seed; b) agronomy training; c) weather forecasts via SMS; d) free threshing • Establish 2 hub sites for sourcing peanuts from SHFs, hosted by SHF groups, to serve as “one-stop shops” enabling SHFs to jointly access a reliable market, knowledge, quality inputs, and technology • Hire an in-house agronomist at the one-stop shop site to provide SHFs with training on production and post-harvest handling. • Connect contracted SHFs with value chain financiers, providing them with working capital loans for inputs. • Purchase a portable thresher for use by contracted SHFs. • Provide cooperatives with training in governance, financial management, and contract farming.
<i>Kenyan dairy processor</i>	<ul style="list-style-type: none"> • Develop a robust farmer retention program that provides stable pricing, timely payments, uses mobile money, and awards farmers for providing timely, quality milk. • Implement a recruitment drive for cooperatives/milk aggregators to establish formal agreements with the cooperatives. • Explore ways of setting up a cooperative. • Improve communication with SHFs using a mass SMS communication program.
<i>Tanzanian Processor of fortified maize flour and nutritious blended flours, sunflower cooking oil, and white rice.</i>	<ul style="list-style-type: none"> • Establish production contracts with cooperatives. • Support SHFs in establishing cooperatives. • Offer warehousing services to SHFs to improve product quality. • Provide milling services to cooperatives and SHFs in their catchment area. • Sell improved inputs to SHFs, including improved seed varieties, that SHFs have had difficulty accessing • Facilitate linkages between other value chain actors, including financial service providers, input providers, etc., and cooperatives to increase access to productive resources. • Provide training to cooperatives on good agricultural practices, good governance, business planning, etc.

► Overall results and SHF satisfaction

Overall, the SHFs interviewed by 60 Decibels expressed satisfaction with their sourcing arrangements and reported increased incomes. Sixty-seven percent of the 150 surveyed SHFs supplying the Kenyan groundnut processor reported an increase in earnings, with 45% experiencing a significant increase and 22% seeing a slight increase. Among the 275 surveyed SHFs supplying the Kenyan dairy processor, 86% reported increased production, with 21% experiencing a significant increase and 65% seeing a slight increase. Of the 96 surveyed SHFs supplying the Tanzanian maize, rice, and sunflower processor, 95% reported increased incomes, primarily attributed to an increase in prices (82%). The perceived benefits of supplying these processors varied. SHFs supplying to the Tanzanian maize, rice, and sunflower processor overwhelmingly felt positive about their more reliable output market, while SHFs supplying to the Kenyan groundnut processor cited benefits such as training and improved access to inputs.

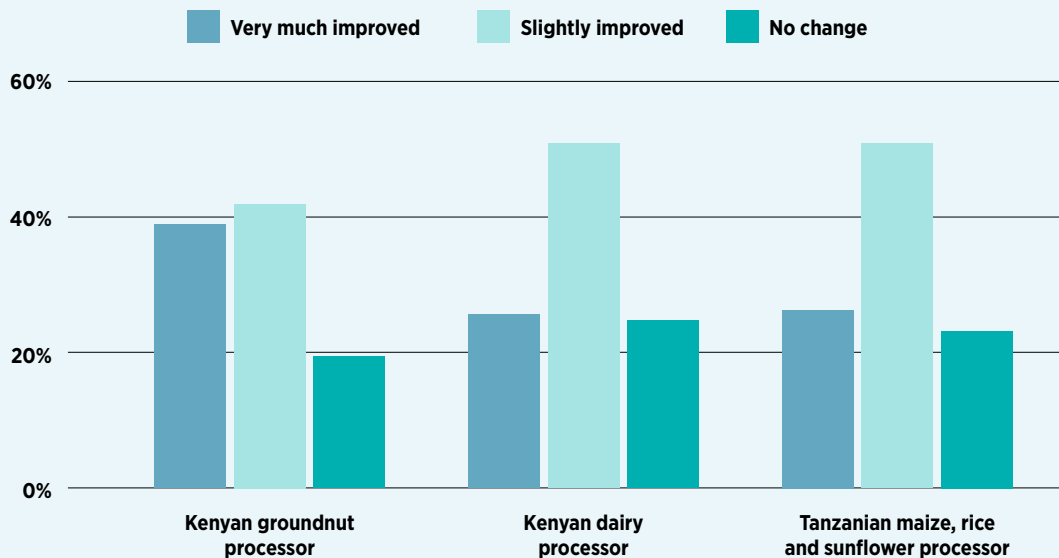


Among the 275 surveyed SHFs supplying the Kenyan dairy processor, 86% reported increased production, with 21% experiencing a significant increase and 65% seeing a slight increase.

“I am able to pay school fees now without too much strain. I can better cater to my family compared to when I was not selling to the [Kenyan groundnut] processor”

- SHF supplying to Kenyan groundnut processor

Has your farming or rearing practices improved since partnering with the target food processor?



► Driving increased adoption of good agricultural practices

A primary way food processors can facilitate win-win outcomes with SHFs is by supporting them to adopt GAPs. In doing so, SHFs can often increase their yields and the quality of their produce while helping food processors meet their raw material volume and quality requirements. The Kenyan groundnut processor, Kenyan dairy processor, and the Tanzanian maize, rice, and sunflower oil processor all embedded training and facilitated access to improved inputs into their sourcing strategies. Over 75% of the surveyed SHFs reported that their farming or rearing practices improved as a result of their engagement with these processors. The top improvements mentioned by SHFs were: 1) the use of high-quality animal

feeds or dairy meals; 2) improved fertilizer and pesticide use; and 3) improved seeds or fertilizer affordability. One female SHF supplying to the Kenyan dairy processor noted “The dairy meal that I get from this company has helped me feed my cow a balanced diet, resulting in better milk production”. These changes ultimately result in increased productivity, with 86% of SHFs supplying to the Kenyan dairy processor reporting an increase in productivity since engaging with the company. Similarly, 88% of SHFs supplying to Tanzanian maize, rice, and sunflower oil processors and 62% supplying to Kenyan groundnut processors reported improved productivity as a result of their engagement with the food processor.

► Increasing access to more profitable, reliable output

With these productivity increases, 82% of the surveyed SHFs reported increases in their incomes as well. Of those experiencing increased earnings, 89% attribute it to selling greater volumes of product, 35% to receiving higher prices for their products, and 10% to cost reduction. Eighty-two percent of respondents felt the price they receive from the processor is ‘very good’, ‘good’, and/or ‘fair’. Moreover, the surveyed SHFs widely recognized that they would experience reduced sales volumes and lower incomes without the existing relationships and sourcing arrangements. A significant 89% of the surveyed farmers acknowledged that their sales volumes would be lower without the processor. A male SHF who supplies the Tanzanian maize, rice, and sunflower oil processor emphasized.

“This company has provided me with a dependable market, leading to an improvement in my income. I no longer worry about securing a market for my harvest.”

82%

of the surveyed SHFs reported increases in their incomes as well



Innovative services: The Tanzanian maize, rice and sunflower oil processor offers storage facilities to SHFs, where SHFs are able to access the facilities in exchange for selling a portion of their production to the processor. This service has received overwhelmingly positive feedback from SHFs. The implementation of this service has yielded multiple advantageous outcomes, particularly in terms of enhancing the product quality for the processor and significantly mitigating losses incurred by SHFs linked to improper storage practices and theft.

► Persistent Challenges Experienced by SHFs

Alongside these improvements, SHFs also highlighted challenges and areas for improvement. While 74% of the surveyed SHFs reported no significant challenges in working with the processors, 26% did encounter obstacles. These challenges included delays in raw material collection, unstable and fluctuating prices, subpar customer service, inadequate input quality or pricing, and delays in accessing services from the food processor and their providers. The survey data shows

that the level of trust SHFs reported having in the processors is closely tied to whether they reported facing challenges. Notably, 96% of farmers without challenges consider their food processors to be 'very trustworthy' compared to only 69% of farmers who reported challenges. Implementing mechanisms for resolving challenges can foster greater trust among SHFs and enhance their willingness to sell to the processor.

► Wins experienced by the food processors

All three of the food processors have expressed their satisfaction in adapting their sourcing strategies and plan to continue to invest in improving their sourcing from SHFs. For example, the Kenya groundnut processor reflected on the impact of providing shelling technology at no cost to the SHFs who supply to them: "There's been good impact, especially from the sheller. Farmers used to dip peanuts in water and shell manually; with the sheller, they are no longer tampering." As a result, SHFs can commit greater quantities of groundnuts that meet the quality standards of the company.

As a result of the IBP activities that these three food processors have implemented, sourcing from SHFs has increased, as illustrated below:

- **Kenyan groundnut processor: In 2023, the company purchased 57 metric tons (MTs) from 1,131 SHFs versus 19.28 MTs from 345 SHFs in 2021.**
- **Kenyan dairy processor: In 2023, the company purchased 35,628 MTs from 8,200 local SHFs versus 19,212 MTs from 7,000 SHFs in 2021.**
- **Tanzanian maize, rice, and sunflower processors: Currently, the company sources approximately 70% of its raw material supply from SHFs versus an estimated 50% in 2020. In 2023, the company worked with 360 SHFs, compared with 222 in 2020.**

► AINFP Reflections and Recommendations:

As AINFP nears its conclusion in June 2024, the project seeks to communicate lessons learned and recommendations that can inform future programming in the food processing sector to drive SHFs' livelihoods. These reflections and recommendations are based on AINFP's experiences and the results from the rapid survey.

- **Supporting food processors to adapt their sourcing strategies can result in a win-win for both food processors and SHFs:** Experiences from AINFP highlight that processors are willing to adapt their sourcing strategies, including to source from SHFs if it can help solve their raw material challenges. However, food processors require technical assistance in evaluating their current sourcing practices to identify inefficiencies, where they are experiencing food loss and other challenges, as well as to develop activities to address challenges in sourcing from SHFs. Therefore, it is recommended that future programs continue to provide technical assistance to food processors to see the value-add, identify concrete adaptations, and de-risk adaptations, where relevant.
- **Understand food processors' current sourcing practices and develop IBPs:** Future programs should support food processors to develop IBPs. AINFP recommends this approach based on its findings that food processors who reflect on their current sourcing practices and challenges are more receptive to change and improvement. A roadmap, such as an IBP, provides tangible guidance and increases the likelihood of successful implementation by food processors. Additionally, it is recommended that future programs address SHF challenges, as identified in the rapid survey, including delays in raw material collection, unstable prices, subpar customer service, inadequate input quality or pricing, and delays in accessing services from the food processor and their providers.
- **Reduce the risk of pilot activities by facilitating access to funding for food processors:** Practitioners should be mindful that certain activities that present significant win-win impact potential – for processors and SHFs – might not immediately appear advantageous to food processors. To address this, it is helpful, and at times necessary, to provide cost-share grants or facilitate access to financial resources for food processors to reduce the risk of implementing new activities. AINFP supported three food processors to pilot inclusive sourcing practices by providing a grant and/or supporting the food processor to secure a grant. All of these processors report the intention to continue the activities and/or scale up.
- **Support the establishment of contracts:** Food processors and SHFs often rely on informal working relationships and lack formalized contracts. AINFP's experience demonstrates that this often leads to ambiguity in roles and unclear expectations, resulting in low satisfaction with the overall relationship. To address this, future programs should prioritize supporting the establishment of contracts to provide clarity and improve the SHF-food processor relationship.
- **Support SHFs and farmer groups/cooperatives in governance and group formation:** AINFP did not work directly with SHFs. Nonetheless, it was evident in some instances that food processors do not see a clear reason to or lack the required skills and resources to support SHFs to form cooperatives and/or operate them effectively. Future programs may need to complement support to food processors with activities that assist cooperatives in areas such as group formation, governance, and essential technical and business topics.

**Fish farmers supplying
fish to Lake Firms,
AINFP Client Zambia.**
Photo: AINFP



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