Solidaridad

Technical Assistance as a key strategy to support small-scale farmers globally

Bridging the gap between practice and knowledge

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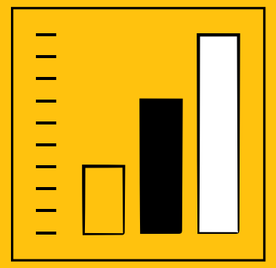
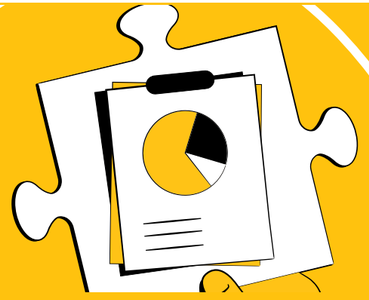




Prologue

I am happy to share the first publication of this learning product on Technical Assistance developed by the PMEL global team. This is hopefully the first of many other publications that this team will produce. With its key strategic position, the PMEL team oversees project implementation giving the team the enormous advantage of understanding how things are done, interpreting results and generating insights to share within and across our teams. It is precisely this oversight that allows the PMEL team to connect the dots and generate valuable learnings for the network.

At Solidaridad we are proud to be a **network organization that builds on local knowledge while offering key solutions that transcend local contexts. Technical assistance is one of those solutions**, Solidaridad's 'secret sauce'. In reading this publication, we reaffirm that our work is key to supporting producers' shift towards more viable and resilient businesses. However, our impact will only last and sustain over time if our programmes are designed, from the very beginning, with an inclusive lens and a clear sustainability strategy and well-defined exit plan. Without a solid business case and a strategy for the future, the efforts we invest can easily dissipate. **I invite you to read this publication, learn from these cases and adopt these lessons in your work!**

Andre de Freitas
Executive Director

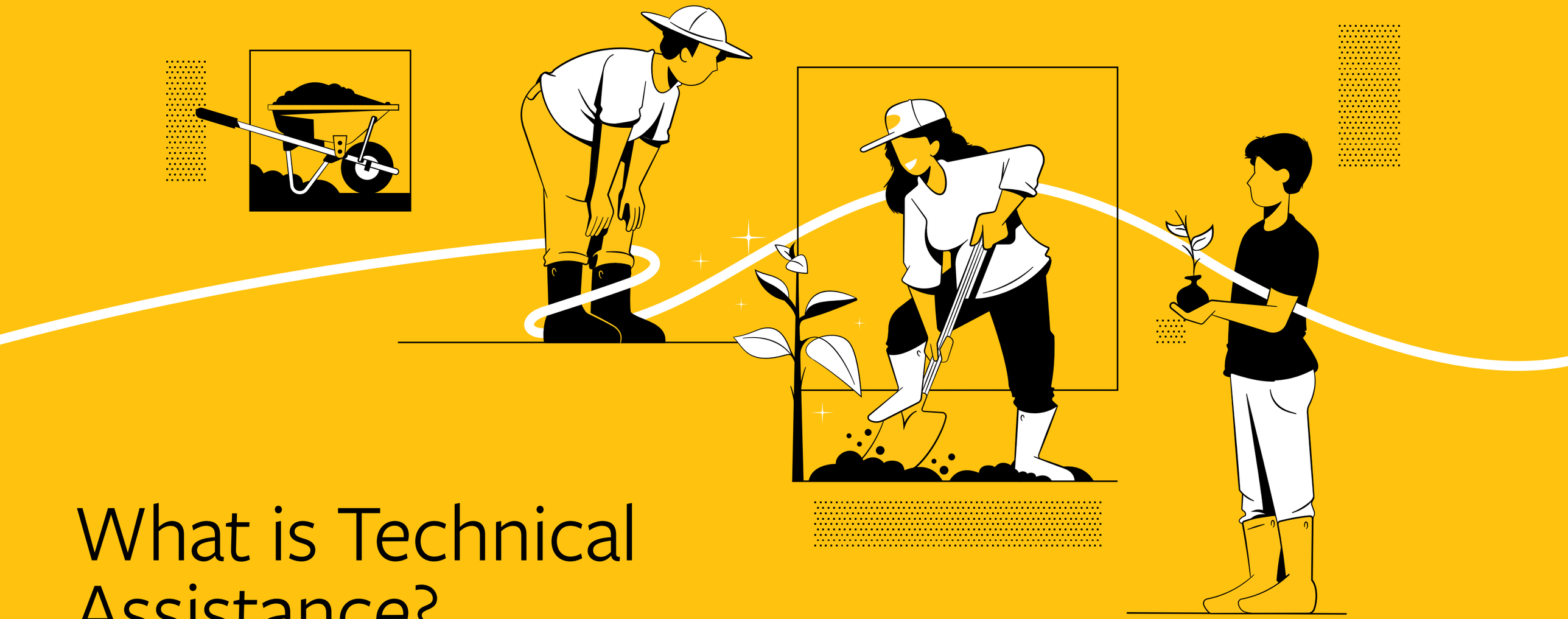
Introduction

Technical assistance (TA) is a fundamental service that Solidaridad provides and supports. The way we deploy this service is the "secret sauce" for our performance. The purpose of this publication is to present an overview of how TA is deployed in Solidaridad, understanding the complexity of TA in all its forms within our network to improve current and inform future programmes. While Solidaridad has deployed TA for various target groups, this document focuses on the small-scale producers' experiences with TA.

There is no unified definition of TA and given the different contexts where it has been implemented, finding one definition that covers all dimensions of our work has been challenging. However, after analyzing the cases in detail, it is possible to identify common elements among the various approaches by country even if they are named differently. By analyzing different examples we are able to identify strategies and key components to inform project design and keep building our expertise towards a more effective TA that can be sustained beyond project life span. This aspect is fundamental for the effectiveness of the intervention. Projects should understand the existent and potential market of technical assistance and strengthen the ecosystem so this service can be sustained by the market. This is challenging as this market is usually underdeveloped, even if there is a clear need.

Four cases of TA have been analyzed across different continents, countries and commodities to systematize the types of TA that Solidaridad has deployed for small-scale producers. These include: TA for palm oil producers in Colombia, cocoa producers in Ghana, soy producers in India and Mozambique, and Fruits and Vegetables in Kenya and Ethiopia. The cases selected were based on target group (including small-scale producers), available evidence, reliability of data, meaningful results and geographical coverage. The analysis of the cases includes a qualitative component, which consists of interviews with project managers, as well as a quantitative data review from project reports and evaluations. The data used is based on a representative sample defined by the PMEL team and project staff.

Based on these cases, the next sections provide an overview of the strategies, components, findings and learnings of TA.



What is Technical Assistance?

TA is a specialized support service designed to help farmers improve their crop management and animal husbandry practices as well as their farm economic, social and environmental performance and market access.

While primarily delivered by agricultural experts, basic TA can also be provided by experienced farmers who have completed advanced training programmes. TA ultimately serves as a **bridge between agricultural expertise and practical implementation**, helping farming families build more sustainable and profitable operations adapted to the context. This tends to be challenging in traditional rural cultures who can be adverse to change. In this sense, managing the farmer´s motivation and the emotions that change may entail are a crucial part of this process.

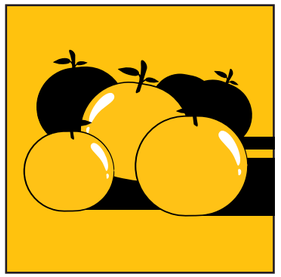
Adapting to User Needs

A crucial element of effective TA is its adaptation to the target audience's learning needs and capabilities. This is particularly important in farming communities, where farmers often include older adults, youth, participants with limited literacy skills or women who may have time constraints due to other commitments.

Goals and Objectives

The fundamental aim of TA is to improve:

DECENT WORK ON FARMS



FARM PRODUCTIVITY

ECONOMIC PERFORMANCE OF THE FARM

ENVIRONMENTAL SUSTAINABILITY

FAMILY INVOLVEMENT IN FARM MANAGEMENT

BUSINESS MINDSET

Measuring success

The effectiveness of TA is primarily measured by its practical results on the farm. Success is achieved when farmers see sufficient improvement in their operations to justify continued investment in these services, either through increased earnings, reduced costs, improved environmental performance, improved working conditions for workers, or other benefits in their performance.

TA beyond the farm

TA can be a way to reach rural producers, families and communities in ways that extend beyond the farm operation. For example, developing other businesses on- or off-farm, improving food security, improving children´s health, gender equality, among others. These additional elements can be included depending on the context, the intervention design and the budget.

Why is Technical Assistance important for Solidaridad?

TA is critical to Solidaridad's theory of change, playing a pivotal role in the result area of supporting business ecosystems.

In many regions where Solidaridad operates, farmers lack access to essential technical knowledge. Local organizations or companies are often unprepared to provide adequate support or lack the information or mechanisms necessary to reach small-scale producers. Government resources, when available, are typically insufficient to meet the needs of the vast number of farmers, resulting in irregular or generic technical support that fails to address their specific realities.

In this void, agribusiness providers sometimes step in as technical advisors, but their approach may prioritize commercial objectives over farmer sustainability.

Solidaridad recognizes that challenges such as low yields, reduced productivity, and poor farm viability are deeply connected to the lack of agricultural expertise and access to critical services and inputs. Understanding this need, Solidaridad designs, tests and implements tailored TA programmes to meet the broad and unique needs of farmers, women, and youth, ensuring long-term impact and resilience in agricultural systems. These programmes are provided together with stakeholders like cooperatives, government agencies, buyers or others according to the context. The expectation is that, after receiving our support, local service providers will be able to provide a quality service that addresses the needs of farmers in market or membership terms. This means that they will be able to cover these service lines through the payments directly from producers or under their membership costs. In addition, the expectation would be that other stakeholders (e.g. governments and companies) could adopt a more holistic approach of TA that extends beyond the farm to improvements in the families and the community. Solidaridad expects that farmers will value the results of TA and will be willing to continue looking for it, either in a paid scheme or demanding it as part of the services of an organization they are part of.

Solidaridad designs, tests and implements tailored TA programmes to meet the broad and unique needs of farmers.

Technical Assistance Strategies: Structuring Effective Interventions

The TA intervention strategy serves as an engagement framework for reaching producers with tailored TA.

Its implementation and design are shaped by several factors, such as the type of stakeholders operating in the region, the organizational maturity of the productive sector and Solidaridad's specific role and responsibilities within the project. An analysis of the cases of TA highlights **four primary strategies** that can be employed individually or in combination to address project needs:

Direct engagement

Solidaridad offers essential agronomic support and training directly to farmers when the need is identified. However, in some cases, the lack of existing social structures can make outreach challenging. To address this, Solidaridad develops a tailored engagement strategy. This includes reaching farmers individually, hosting training sessions, and leveraging communication campaigns to build awareness and trust. While this approach is resource-intensive, it often becomes the only viable option for effectively engaging with producers in such contexts.

IN BRAZIL

The **Fruto Resiliente project** in Brazil, which began in November 2019, focuses on **supporting the adoption of sustainable practices among orange growers in the Brazilian Citrus Belt**, which encompasses the states of São Paulo and Minas Gerais. The project was developed in partnership with orange juice processing companies, ensuring alignment with industry goals and standards. However, the pre-competitive nature of the project, coupled with the absence of producer associations or cooperatives in the region, resulted in significant challenges for engagement. A direct engagement strategy was employed to address this. This included hosting training sessions, building a database of smallholder producers, conducting visits to orange farms, and relying on referrals from the producers themselves. A communications campaign was also pivotal in encouraging producer participation. Additionally, the project collaborated with a national research center specializing in citrus, bridging the gap between research and field application of best practices. As a result of these efforts, six extension workers implemented the deployment strategy in the field, leading to 4,700 visits and engagement with 480 producers.

Strengthening of local production organizations

This strategy focuses on making use of the organizational capacity and effectiveness of production groups, like cooperatives and associations. Here, Solidaridad validates needs and strategies with these groups and reaches farmers through these networks and spaces. For example, meetings can be conducted in cooperative facilities and discussions of the interventions can be held during assemblies. In turn, Solidaridad works to strengthen these organizations by providing training in governance, leadership, and resource management. This strategy encourages collective action, fosters strong organizations with a clear business case for the markets they operate in, improves decision-making processes, and helps groups advocate for their interests more effectively.

Strengthening government extensionist

This strategy focuses on training government extension workers and equipping them with the appropriate technologies so that they can work directly with farmers as well as private service providers. It is common where the government staff are crucial in promotion of the technology but they need capacity building for sustainability beyond the project.

Private sector technical collaboration

Solidaridad partners with agribusinesses or companies that have dedicated technical staff within the agricultural supply chain. Our support involves identifying the needs of an underrepresented group (e.g. smallholders) or key topics (e.g. adaptation to climate change) so that the company can include it in its reach. The company staff receives training in soft or technical skills according to the necessity agreed among the key actors. These professionals provide training and guidance to the suppliers on best practices, innovative techniques, and resource management is tailored to the crops or commodities relevant to the company. This collaboration not only enhances the impact of agricultural training but also strengthens ties between farmers and the private sector, promoting shared value and sustainable practices, and eventual alignment with sourcing criteria.

IN PERU

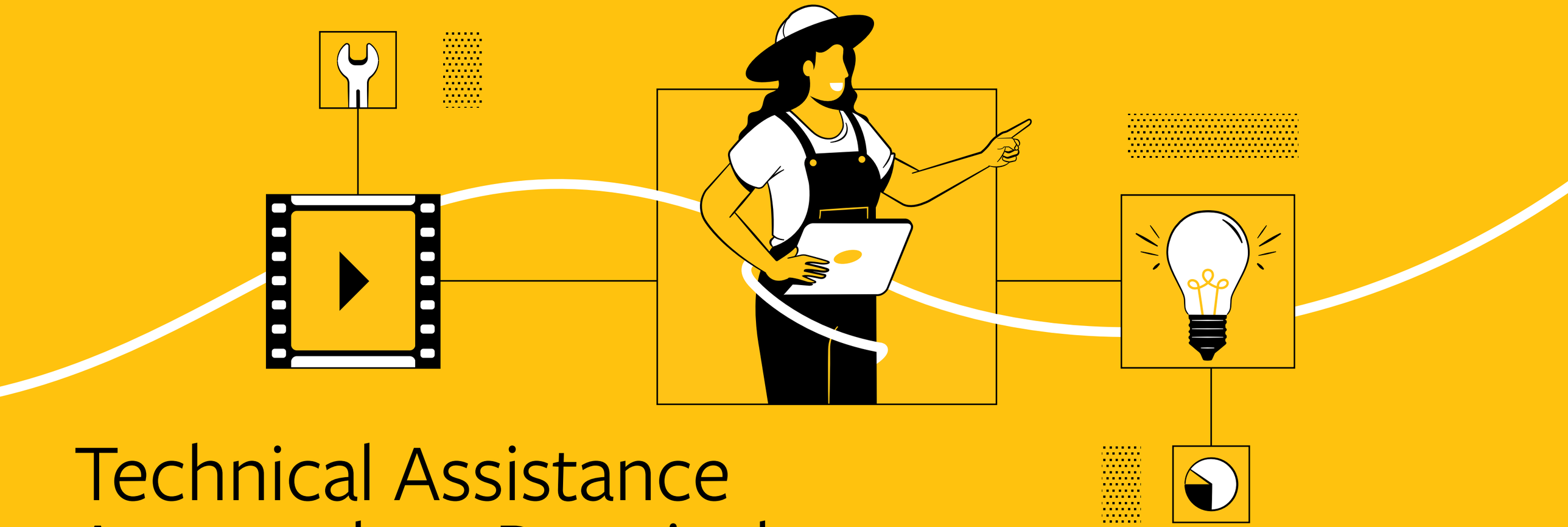
In partnership with coffee buyer OFI, **Solidaridad successfully integrated a climate-smart coffee model into the company's sourcing strategy "AtSource level" in Peru**. By aligning the knowledge of the company's technical staff with Solidaridad's methodologies, the organizations created a unified approach to sustainable coffee production. The collaboration enabled OFI's technical team to promote consistent content and verification standards. When producers reach the highest AtSource level (Infinity), they receive a premium price, ensuring the sustainability of the model beyond the initial project funding.

Community interventions

Solidaridad engages with a governance unit like a village, municipality or town where a crop is produced to enable communities to lead on development initiatives. The strategy includes analyzing the challenges and potential interventions with the existing leadership structures and implementing them using this scheme. This strategy can consider broader objectives beyond production that factor in the interests and needs of other groups, such as women or children. In turn, Solidaridad strengthens the existing structures by improving their organizational and productive capacities.

IN INDIA

In India, **Solidaridad uses a community approach with soy farmers.** Initial engagement is with local and traditional authorities, the organization then explores sustainability project possibilities that extend beyond production. The strategy addresses community needs, and considers broader perspectives, such as women's potential in soy product transformation and nutritional opportunities for children. Local leaders become active project champions, invested in designing interventions that align with community schedules and interests. In parallel, Solidaridad expands its reach in an effective way.



Technical Assistance Approaches: Practical Techniques for Impact

TA approaches refers to the specific actions that have been implemented as part of the TA strategy across projects.

While the core elements are often similar across initiatives, each project may utilize distinct terminology to define them based on its context and priorities. By analyzing Solidaridad's cases globally, **twelve key elements have been identified as central to TA efforts.** These components can guide project implementation while allowing for flexibility to adapt to the unique needs and conditions of each context.

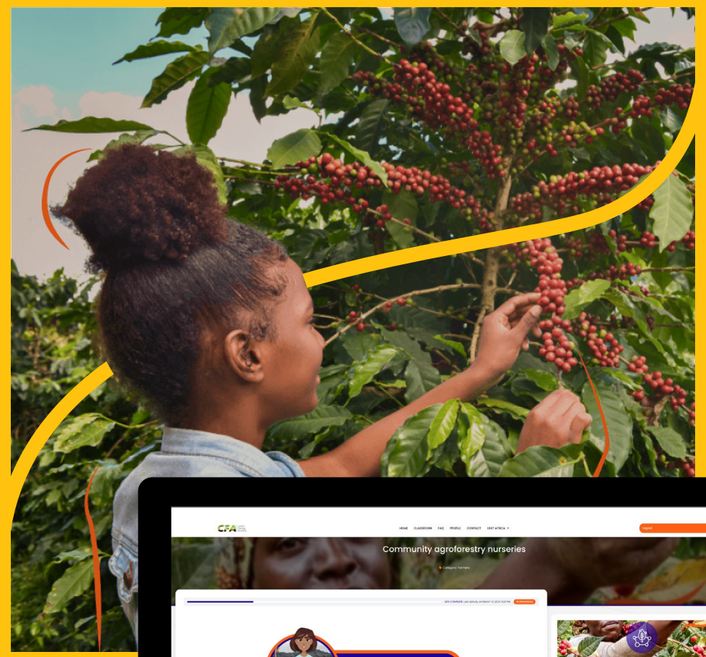
- Training sessions
- Video-viewing clubs
- Individual TA
- Demonstrative units or demo plots
- Local radio
- Lead farmers
- Enterprise groups
- Performance incentive
- Market access support
- Provision of key data for farming
- Bulk messaging on unstructured supplementary service data (USSD)
- Specialized support

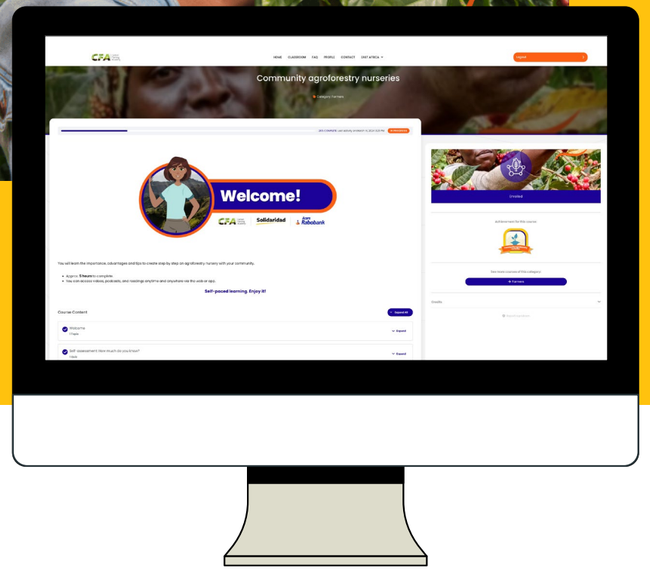
Training sessions

Farmers are grouped in their communities for agronomic training. These sessions provide a structured curriculum covering key agricultural techniques over multiple years. Training can be done in person, in groups or use online learning platforms like Agrolearning.

IN INDIA

In India, the **digital training platform Krishi Choupal** (online meeting and training platform) has **helped connect farmers with expert information on crop management**, reflect on key practices, and learn from other farmers on a weekly basis. This training can be attended physically or virtually.





IN UGANDA

In Uganda, **multiple strategies have been developed to effectively communicate agricultural knowledge to producers**. The primary challenge has been delivering concise, powerful messages across diverse local language communities. To address this, the team leverages a network of knowledge leaders and a **digital platform called Carbon Farming Academy** to disseminate information. The tool provides online courses on complex concepts, like carbon farming and climate change in a tailored, accessible manner. These resources are available through multiple channels, including a website and a dedicated mobile app. Recently, a newly developed WhatsApp chatbot allows users to complete courses, watch instructional videos, and verify their understanding through interactive assessments based on gamification methodologies.

Video-viewing clubs

To reinforce training, video-viewing clubs are established to offer additional learning opportunities. These sessions, accessible to all farmers and organized in the evening to accommodate schedules, are led by trained facilitators who promote active discussion.

IN GHANA

In cocoa-producing communities in Ghana, **recorded video sessions were organized on a monthly basis** and designed to coincide with the timing of major agronomic activities. The 30-minute-long video clips were projected on walls in the evening (usually from 7-8pm) and followed with a 30 to 45-minute plenary discussion that was moderated by a project officer. A video-viewing club session typically hosts approximately 30-50 participants.

Individual TA

Field officers provide personalized coaching directly on farmers' plots, addressing specific agronomic challenges. This hands-on support helps monitor and encourage the adoption of best practices, ensuring that trainings are practical and applicable.

IN GHANA

In Ghana our **2.5 year (2021-2023) project with Mondelez International engaged 10,619 farmers via 11 programme officers supervised by a manager.** Each farmer group was visited twice a month for a minimum of 3 hours per visit. Engagements began in the morning from 7-10am (cool hours of the day). The officers integrated farm-focused and community-focused approaches to address low yields caused by poor adoption of good agronomic practices (GAPs) and community challenges, such as weak leadership and limited economic opportunities.

Demonstrative units or demo plots

Demonstration farms are set up as practical learning sites. Farmers can observe and practice techniques, such as pruning, fertilization, and pest control, fostering confidence and motivation to implement the methods on their own farms. These units can be on a plot owned by a third party, like an association or Solidaridad, or on a producer's farm, who agrees to share their plot as an example to others.

IN EAST AFRICA

East Africa has **adopted demonstration sites as a means for TA.** Various models such as mixed cropping, agroforestry, biochar, vermicomposting, minimum tillage, drip irrigation are showcased on the sites, which are hosted by farmers in locations that are easily accessed by fellow farmers. Experience has shown that farmers attending the demo sites for learning are more likely to implement and adopt what they see. In Kenya, there are 60 demonstration sites for drip irrigation that have been visited by more than 15,000 farmers.

IN INDIA

In India, **Madhya Pradesh farm level demonstrations were established by lead farmers with the support of Solidaridad.** Assistance included providing seed material and expert guidance. Model farms encouraged farmers to adopt these practices, with lead farmers and Solidaridad experts leading the initiative. The Nico Roozen Centre of Excellence on Regenerative Agriculture in Madhya Pradesh organizes live demonstrations alongside various training and capacity-building programmes for farmers and stakeholders, focusing on regenerative agriculture practices. 3,000 vermi-beds were demonstrated, which has led to a massive increase in the adoption of the composting method helping farmers to improve soil health and increase soil moisture conservation.

Local radio

Local radio programmes are an essential tool for reaching a wide range of beneficiaries especially in remote villages. The ability of radio to affordably reach across a wide geographic area in a number of local languages is highly effective. In Kenya radio has served as a trusted platform for sharing critical agricultural information, including weather updates, market prices, and innovative farming techniques. The talk show format features expert interviews, farmer testimonials, and call-in segments, where listeners can send questions, foster community engagement. By tailoring content to local contexts and addressing real-time challenges, radio programmes effectively disseminate knowledge, influence adoption of positive farming practices, and promote inclusive participation in agricultural initiatives.

IN PERU

Radioprogramas de los Héroes Cafetaleros are a series of engaging radio programs airing in Peru coffee growing area of San Martin and Cajamarca. Featuring characters like Mr. Maximum Beans, Mr. Coffee Calamity and Engineer Rosie Beans, the episodes promote deforestation-free, high-quality, and profitable coffee cultivation while addressing sustainable practices, associativity, and farm management. By combining storytelling with practical agricultural advice, these programs effectively reach coffee-growing families in remote areas, reinforcing circular production methods and community values. This initiative showcases the power of radio as a low-cost, wide-reaching tool to drive sustainable farming practices among rural communities.

Lead farmers

Lead farmers are influential community members who adopt sustainable practices, share knowledge, and serve as an extension between technical support providers and local farmers, promoting effective knowledge transfer and agricultural development. These farmers receive technical support to strengthen their capacity, and through a Training of Trainers (ToT) approach, they are equipped to train a larger number of farmers within their communities.

IN TANZANIA

In Tanzania, a **farmer-to-farmer extension approach has been implemented to expand outreach to more farmers**. Lead farmers are selected by the cooperative board based on pre-established criteria jointly developed by the cooperatives and the project team. The selection process also includes job advertisements. These lead farmers receive extra knowledge and skills through monthly refresher training sessions and are equipped with essential tools, such as sprayers, protective gear, inputs, and other equipment to facilitate training activities. They train other farmers through demonstration plots set up at strategic, easily accessible locations and through farmer field schools. On average, each lead farmer trains approximately 40 farmers per month, with training topics aligned to the crop calendar. Government extension officers and project officers provide support and monitoring to ensure that the quality of the training content meets expectations.
When feasible, the project provides lead farmers with a monthly stipend of 50,000 TZS to cover transport and communication expenses.

Enterprise groups

Enterprise groups can create and support new off-farm income-generating activities, with an additional focus on empowering women. Customized training, coaching, and essential resources are provided to enhance the success and sustainability of initiatives, such as soap-making, beekeeping, and crafts.

IN INDIA

In India, **women-based farmer producer organizations were strengthened**, and entrepreneurship among women has been promoted. Women started crushing soy beans to produce soy derivative foods, and a women's resource center was initiated as part of the TA support.

Performance incentive

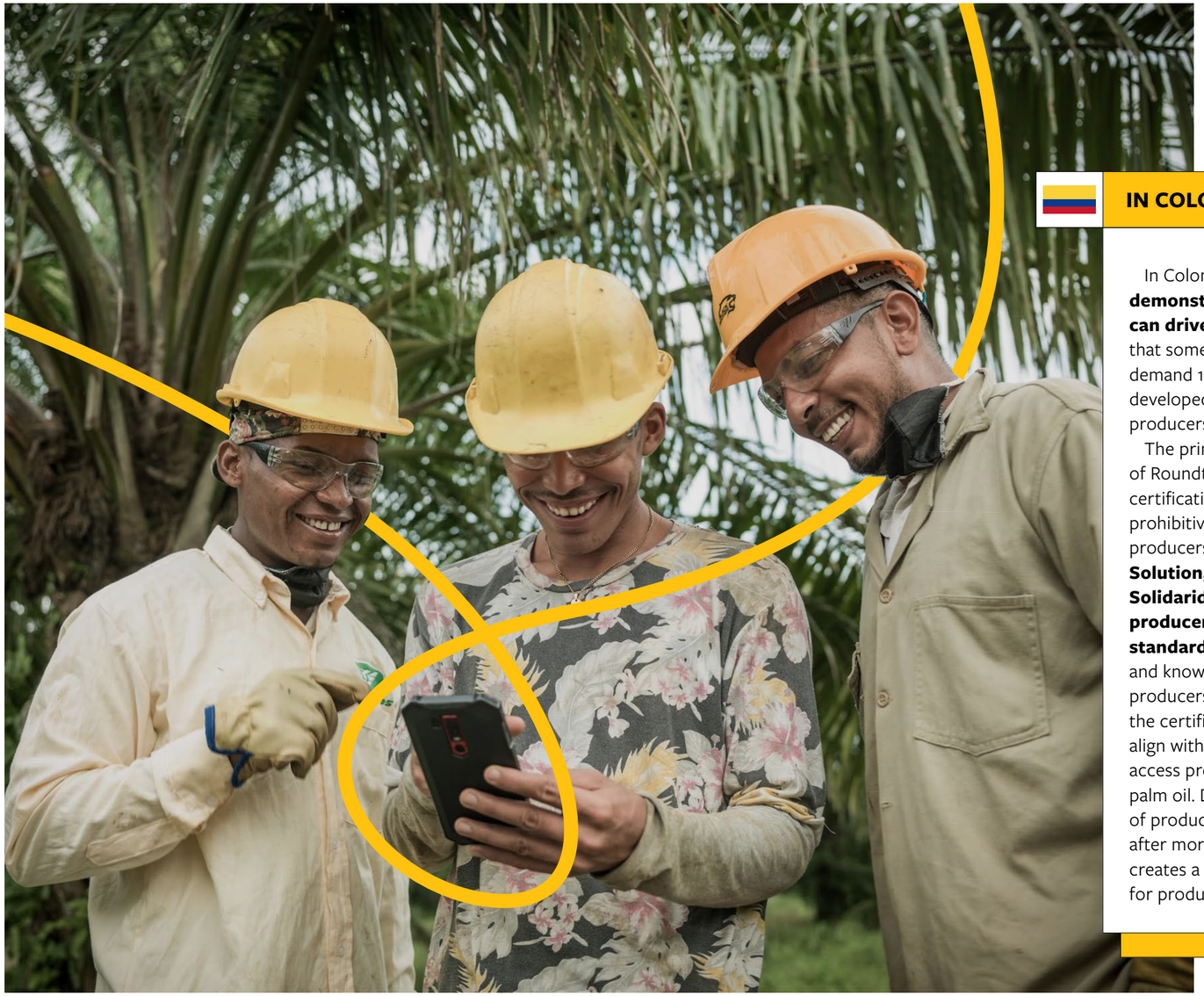
Incentives are designed to motivate farmers by recognizing and rewarding those who improve their performance and adopt good agricultural practices. The system includes establishing a points and reward system for farmers applying desirable practices in the field and actively participating in training. High-achieving farmers can earn awards or incentives, such as input subsidies, financial bonuses, or public recognition, which encourages continuous improvement and fosters a culture of excellence within farming communities while facilitating the access to elements they need to keep engaging in sustainable farming.

IN MOZAMBIQUE

In Mozambique, farmers enrolled in the **Zwardy incentive system earn points and rewards for adopting good agricultural practices**, which strengthens and motivates them while encouraging other members to follow their lead. For example, a farmer with 50 points can earn a soil analysis of their field, for 250 points or more, the farmer could earn rain boots, or certified seed for soybeans, maize, or other crops of equivalent value. Farmers are able to choose among these items according to their preference.

Market access support

Solidaridad supports farmers in obtaining certifications or complying with regulations relevant for market access. This element involves guiding producers through the process, helping them meet the necessary requirements for sustainability, quality, or ethical practices and connecting them to actors who provide the certification or recognize it in their sourcing process.



IN COLOMBIA

In Colombia, **Solidaridad's Palm Project demonstrated how market access support can drive sustainability**. Recognizing that some markets, like the Netherlands, demand 100% certified palm oil, Solidaridad developed a strategic approach to help small producers meet the rigorous requirements.

The primary challenge was the complexity of Roundtable on Sustainable Palm Oil (RSPO) certification. Traditionally, certification was prohibitively expensive and difficult for small producers. **Digital Solutions, such as Extension Solution, an innovative tool developed by Solidaridad, allow local TA providers to verify producers' compliance with certification standards**, dramatically reducing consulting costs and knowledge barriers. Eventually, more advanced producers can receive specialized support to get the certification. This support helps producers align with market demands, enabling them to access premium pricing for certified sustainable palm oil. Despite initial difficulties, the first groups of producers have been certified in the last year, after more than 5 years of work. The approach creates a continuous improvement pathway for producers and buying companies alike.

Provision of key data for farming

Access to reliable agronomic information, including costs, meteorological and market information, and providing it to farmers in a timely and accessible way, is a critical intervention for improvement. Recommendations for how to properly interpret and utilize the information helps them obtain better results in their production.

Bulk messaging on unstructured supplementary service data (USSD)

The use of bulk messaging allows trainers to extend their reach with farmers. USSD is a Global System for Mobile Communications (GSM) protocol that is used to send text messages. Solidaridad uses the USSD technology to send out agricultural information, including good agricultural practices, climate smart practices, and new technology tips. This information can support a large number of beneficiaries as they adopt the technologies that have been shared.

IN INDIA

In India, a **Smart Agri hub center** has been set up that monitors the 150 weather stations located in the farmers' fields. More than 169,000 soybean farmers have been reached with these weather stations. Data is gathered from all the weather stations, then analyzed at a central hub. After that, advice is sent to registered farmers through audio and text messages on WhatsApp and SMS. The center is also connected to agricultural institutions in India. The AI based IoT devices such as Automated Weather Stations are giving accurate weather information which is further used to develop crop specific advisory to the farmers. **Through these advisories, the farmers can make timely and informed decisions**, it also contributes towards the efficient use of resources like water and agri inputs, scheduling of farm operation as per weather conditions. Also,there is a call center where registered farmers can call during working hours to receive expert agronomic support. Farmers pay Rs. 500/year to get support.

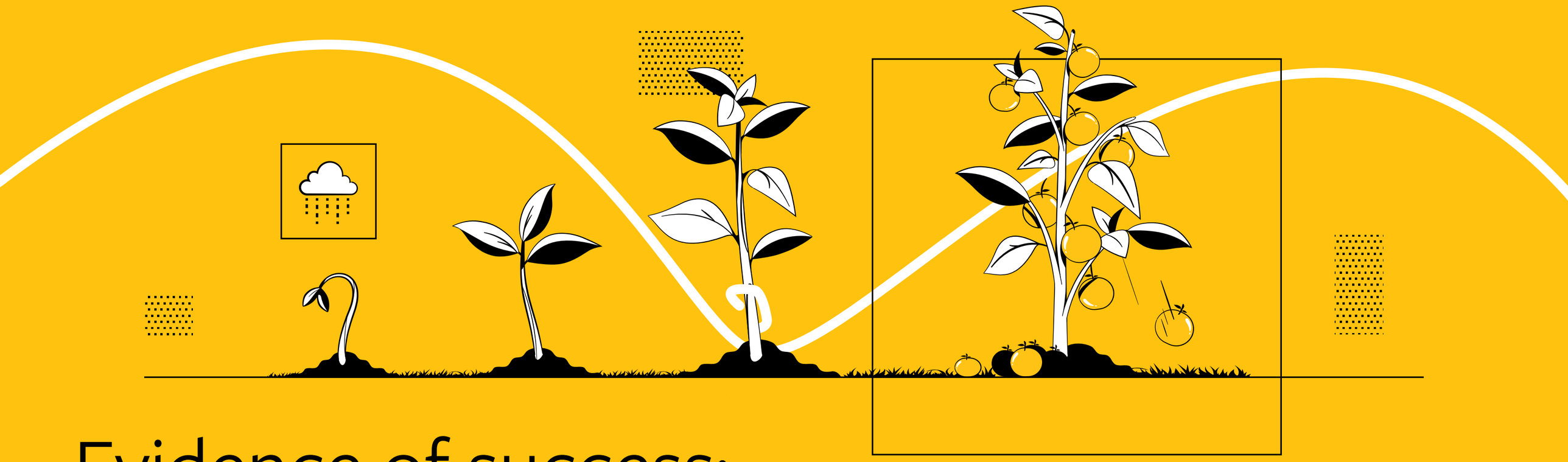
Specialized support

Specialized support provides targeted, in-depth assistance to producers in navigating complex administrative or legal challenges. This component goes beyond standard training by offering comprehensive guidance that includes detailed needs assessments, targeted training, direct administrative support, guidance on legislative requirements, documentation preparation, and general process orientation.

IN COLOMBIA

In the **Colombian Palm Oil Project**, Solidaridad provided specialized support by addressing worker formalization – a critical challenge in rural employment. Recognizing that permanent urban employment models don't suit agricultural contexts, the organization connected producers with a specialized service provider.

This specialized support went beyond simple consultation. **The service provider conducted comprehensive needs assessments, delivered training to key actors on the farm (usually women), and offered direct administrative and legal guidance through formalization processes.** The result was a win-win: workers gained access to legal protections and rights, while producers established more secure, respectful employment relationships that mitigated potential legal and safety risks.



Evidence of success: Results of effective Technical Assistance

Success is achieved when farmers see sufficient improvement in their operations to justify continued investment in these services.

Below we see **several changes** related to improved yield, lower pest and diseases, improved mean annual income, increased market access, as well as mindset changes towards long-term planning.

Economic benefits

PRODUCTIVITY AND YIELD IMPROVEMENTS

In **Ghana**, the adoption of agronomic practices increased cocoa yields by **over 25%** between 2019-2023.

In **Colombia**, palm oil producers in the Maria La Baja region saw a **16.7% increase** in yields, rising from **12 to 14 tonnes per hectare**. Another group saw an increase from **15.3 to 18.6 tonnes per hectare** in the same period.

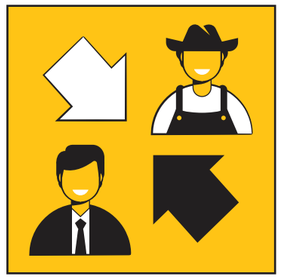
In **Mozambique**, soy productivity improved from **400-600 kg/ ha to 1,200-1,500 kg/ha**.

In **Kenya**, pulses and maize productivity **rose by 30%.**

INCREASED MEAN ANNUAL INCOME

In **Ghana**, the average cocoa income per hectare **increased by 50%**, **from GHS4,302.51** in 2019 to **GHS6,471.96** in 2023.

In **Mozambique**, soy prices increased significantly, from **10–16 MTN to 32.5 MTN per kg** driven by improved market access. In addition, women developed new businesses around soy that gave them additional income.



IMPROVED MARKET CONNECTION

In **India**, TA improved product quality, leading to better market prices.

In **Mozambique**, TA facilitated direct selling of soy to buyers, improving market connections and ensuring better contracts.

In **Colombia**, TA enabled palm oil producers to access international markets by complying with certification standards like RSPO and preparing for EUDR requirements. Production of Colombian certified palm oil **grew from 5%** in 2014 **to 28%** in 2022, increasing exports to the European market.

Social and community outcomes

IMPROVED WORKING CONDITIONS

In **Colombia**, formalization of working relationships for palm oil workers led to better working conditions, including access to social benefits. As of now, **805 workers have been formalized.**

REDUCED FOOD INSECURITY

In **Ghana**, cocoa farmers saw a **4.5% reduction** in food insecurity and a **50.8% reduction** in hunger by 2023.

In **Kenya**, **20% less** hunger was reported among 10,000 small-scale farming households.

In **Mozambique**, higher soy consumption led to reduced child malnutrition.

Enhanced farm management and strategic planning

Through technical assistance, **producers have strengthened their management skills**, adopting a more entrepreneurial approach focused on sustainability and long-term planning. **Improved resource allocation**, including the efficient and timely use of fertilizers and inputs, has led to cost reductions and increased reinvestment in their farms. Additionally, **structured planning practices**, such as soil analysis and targeted fertilizer application, have enhanced productivity, financial stability, and overall farm resilience.

Inclusive participation

Technical assistance initiatives have promoted **greater inclusion of women and youth in agricultural activities**, encouraging their active participation in farm management. By **integrating family members into decision-making** and daily operations, farming has evolved into a shared responsibility that maximizes the collective expertise and contributions of all household members. This approach not only strengthens family livelihoods but also enhances the long-term sustainability of farming enterprises.

How does it come together? Lessons from the ground

In the table that follows you can find an overview of the cases that illustrate the ways that intervention strategies and components are combined, highlighting their connection to the achieved results.

Each **case** chose the intervention strategy, its components, and whether or not to use digital tools based on the available resources and identified needs.

Region	Country	Commodity	Main objective	TA strategy	TA approach	Digital tools	Results
West Africa	**Ghana**	Cocoa	Helping farmers improve yields and earn higher incomes.	◆ Direct engagement ◆ Strengthening of local collective organizations	◆ Training sessions ◆ Video-viewing clubs ◆ Individual TA ◆ Demonstrative units ◆ Community management teams ◆ Lead farmers ◆ Enterprise groups	N/A	**Improved yield:** Farmers adopted an average of 10 out of 14 good agronomic practices through training, farmer field schools and demonstration plots. Cocoa yields increased by over 25% (2019–2023). **Increased mean annual income:** Annual income per ha increased from GHS 4,302.51 (2019) to GHS 6,471.96 (2023). **Reduced food insecurity:** Household food insecurity decreased by 4.5%, and hunger incidence dropped by 50.8%.
Latin America	**Colombia**	Palm oil	Support farmers and their families to have the vision and capacity to grow their farms, while promoting competitiveness, economic gains, agricultural efficiency, labor formalization, and environmental protection.	◆ Private sector technical collaboration ◆ Strengthening of local collective organizations ◆ Direct engagement	◆ Training sessions ◆ Demonstrative units ◆ Market access support ◆ Provision of key data for farming ◆ Specialized support	◆ Agrolearning (training platform) ◆ Extension Solution (management of field intervention)	**Improved yield:** Palm oil yield increased by 16.7%, from 12 to 14 tons/ha/year in María La Baja; another group saw an increase from 15.3 to 18.6 tons/ha (20% between 2019 and 2023). **Improved Market connection:** Certified palm oil grew from 5% (2014) to 28% (2022), boosting exports to Europe and earning certification premiums of $3–$4 per ton. **Improved working conditions:** 805 workers formalized, improving working conditions and access to social benefits. Better farm management: Producers embraced sustainable practices, describing their transition into family businesses contributing to social, environmental, and economic progress.
Asia	**India**	Soy	Farmers adopt sustainable and regenerative agriculture practices.	◆ Community interventions	◆ Demonstrative units ◆ Lead farmers ◆ Enterprise groups ◆ Provision of key data for farming	◆ Bharatkhand Krishi Bazaar (marketplace for inputs) ◆ Smart Agri hub (weather forecast) ◆ Krishi Choupal (training platform) ◆ Call center (agronomic support)	**Reduced pest and diseases :** Timely weather and pest alerts enabled better decision-making. 81,000 soy farmers improved income through reduced harvest losses; 40,000 ha brought under sustainable management. **Improved Market connection:** Farmers trained on soy quality improvements for better pricing.

Region	Country	Commodity	Main objective	TA strategy	TA approach	Digital tools	Results
South Africa	**Mozambique**	Soy	Provide sustainable TA to small soybean farmers to support increased yields and adopt sustainable practices.	◆ Direct engagement	◆ Lead farmers ◆ Training sessions ◆ Performance incentive ◆ Market access support ◆ Provision of key data for farming	◆ Business solutions app (Data collection) ◆ Wadi input monitoring (Data collection)	**Improved yield:** Soy yields increased from 259–518 kg/ha to 1,200 kg/ha (+131.5%). **Increased mean annual income:** Prices rose from 10–15 MTN/kg to 32.5 MTN (0.5 EUR)/kg for grains and 70 MTN (1.0 EUR)/kg for seeds. **Improved Market connection:** Improved access to competitive pricing and stronger supply chains. Reduced food insecurity: Malnutrition reduced as women processed and popularized soy products, leading to healthier children and new small businesses.
East Africa	**Kenya** **Ethiopia**	F&V, cereals and pulses	Provide sustainable TA to F&V farmers to improve food security, increase yields and adopt sustainable and climate smart practices.	◆ Direct engagement ◆ Strengthening of gov extension services	◆ Lead farmers- ToT ◆ Training sessions ◆ Linkage to service providers ◆ Bulk messaging ◆ Radio discussions	◆ Bulk messaging with USSD ◆ Radio	**Adoption of good practices:** 70% of the farmers have adopted good farm practices including use of quality seeds, water management, pest and disease management and post harvest management **Improved yield:** increase in productivity of pulses and maize by 30%. **Reduced food insecurity:** Scale of hunger reduced by at least 20% for more than 10,000 households.

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Key factors for impact

While other actors also provide TA, some features distinguish Solidaridad's TA, making it relevant and adding value to the sectors we serve.

While we identified the **elements that make Solidaridad's TA relevant**, not all of these are always present in the TA provided. Nonetheless, an overview of these are described below.

Openness to unconventional methods

We employ unconventional methods, such as interactive activities, digital tools, incentive systems and video-based learning to enhance engagement and achieve better outcomes in our projects. We continuously explore what works best, even if it means taking calculated risks and learning from failures.

Adaptive management

By keeping conversations open on implementation, we can identify what is working well and what can be improved. We adapt practices to make the most out of the service. In this way, we adjust based on farmer feedback, tailoring the curriculum and methodologies to fit their needs.

Holistic farm vision

We see the farm as a business and part of a family's livelihood. This perspective enables us to provide multidisciplinary support that benefits all family members and optimizes farm operations.

Community integration

Hiring local experts and fostering direct relationships within communities is key to our success. This approach builds trust, acknowledges cultural contexts, and establishes local capacity for sustained impact.

Business approach

We view TA as a service that must deliver measurable benefits, proportional to the investment. This business-oriented mindset is vital for fostering efficiency and long-term sustainability in the sector.

Bridging knowledge and practice

The team's in-depth knowledge of the supply chain—from production to market dynamics—ensures that TA services are aligned with industry requirements, enhancing their relevance and impact. Their strong communication skills foster trust with farmers, facilitating knowledge exchange and the adoption of best practices. Additionally, these professionals exhibit empathy and cultural awareness, allowing them to adapt their approach to the unique realities of the communities they support.

Leveraging technology and information

We experiment with various technologies for data collection, learning, and information sharing. By combining insights into TA dynamics, we deliver context-tailored solutions that maximize potential.

Long-term commitment

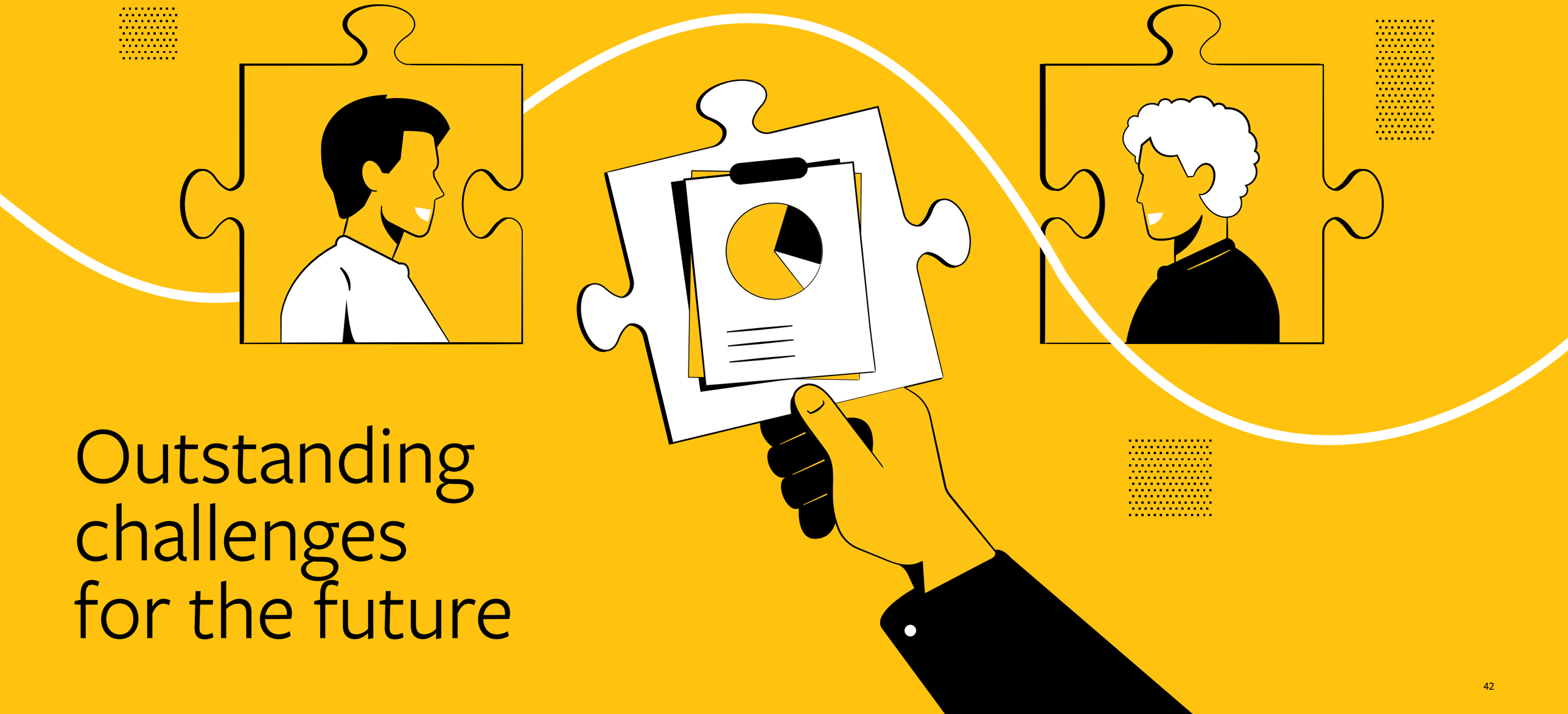
While having clear exit strategies is essential, we understand long-term processes. This allows us to adapt practices, build on experience, and see meaningful change in communities. Even when shifting regions or groups, we retain our expertise in similar commodities and ecosystems, ensuring continuity and knowledge transfer.

Strong partnerships

Collaborating with prominent companies and sector associations attracts producers by demonstrating the value of achieving market standards. These partnerships amplify our impact and foster mutual growth. This also includes strengthening existing teams of TA , which helps us improve quality and reach while amplifying our impact in structures that will remain in the area.

IN COLOMBIA

Coffee companies in Colombia are increasingly adopting the Technical Assistance (TA) model proposed by Solidaridad, largely due to the Café Bosque y Clima agreement. This initiative fosters collaboration within the sector to support climate change adaptation and reduce deforestation. Under a collective impact approach, companies establish a clear agenda with specific objectives: **conserving forests and enhancing the coffee sector's resilience.** Recognizing the value of Solidaridad's innovative tools and methodologies, major exporters are joining the agreement to implement the TA model and share their experiences. Within this framework, companies commit to aligning their initiatives with the TA methodologies, which are funded by the coffee sector itself. Solidaridad is scaling this approach, with 32 allied companies already engaged and an expected reach of 51,000 producers nationwide.



Outstanding challenges for the future

Based on Solidaridad's experience, challenges to maintaining the effectiveness and sustainability of TA among small-scale farmers can recur, even across different countries.

Accessibility

A major limitation to TA is accessibility in remote areas, where poor infrastructure and lack of resources, national security risks, hinder consistent service delivery. This factor also makes service provision more expensive and difficult, but in tandem more relevant. **Partnerships with governments and private actors are key to addressing infrastructure challenges**. These partnerships should begin with a detailed assessment of the system's viability. If there is insufficient supply and demand to sustain a market-driven TA service, such initiatives should be reconsidered or restructured to align with local realities.

Need for customized solutions

Agricultural needs vary by region, climate, and crop type, making tailored advice both costly and time-consuming. **Developing trust between producers and field staff is also key for success and takes time**. This can be difficult for programmes with limited resources.

Digital solutions

Regarding digital solutions, these can enhance sustainability, but they also require a clear business case, sufficient access to technology, and digital literacy from partners. **When digital tools are part of the process, the intervention should consider the terms of the transfer of the digital solution regarding abilities, processes and costs**. Piloting TA tools or methodologies with smaller groups is encouraged to refine approaches before scaling.

Availability of evidence

Solidaridad has not always invested sufficient resources to measure the impact of TA. As Solidaridad deploys TA through different channels (through lead farmers, cooperatives, etc), quantifying and assessing impact is not always straightforward. We are still growing into the mindset that **having solid data is a key component of implementation and sustainability**. To measure TA impacts effectively, it is fundamental to incorporate feedback loops, even if they are qualitative or limited in scale. The recommendation is to develop clear objectives and indicators to assess TA and align impact measurement with these goals. Solidaridad can also leverage standard network indicators, such as improved productivity or income levels among farmers, to assess the effectiveness of interventions.

Exit strategy

Solidaridad must prioritize exit strategies that ensure the continuity of services within existing local structures, allowing for a seamless transfer of responsibilities to local actors. From the onset of the intervention, **we need to design systems that build local capacity, with a focus on creating sustainable, long-term solutions**. The goal is to avoid situations where services funded by donors disappear once the funding ends, which often happens when there is insufficient integration with local service provision systems.

To achieve sustainability, we must actively engage the management of cooperatives and private sector partners from the start. Their commitment is crucial for the success of the intervention and the long-term viability of the services provided. This commitment includes a clear focus on strengthening their capacities, enabling them to independently manage and sustain the services post-exit. Additionally, understanding the demands and limitations from the farmers' side is key to ensuring that these services meet local needs. By building a robust business case and fostering ownership among local actors, we can create a framework where services continue even after the donor funding period ends, create new sources of revenue or foster closer commercial ties between producers and buyers.

Sustainability is also reinforced by the promotion of knowledge-sharing and self-reliance within local farmer organizations, which can play an instrumental role in ensuring that the benefits of technical assistance continue to be realized long after the intervention has formally ended.

Favorable policies and regulations

Policy support is crucial for long-term sustainability. It is important to **build a clear business case for the costs and benefits of TA so it can be integrated into national agricultural strategies, along with partnerships with the private sector**. Public-private partnerships can support enabling policies. Fostering such collaborations should be encouraged as part of the broader strategy.

Intervention cycles

Consistent and sufficiently long intervention cycles are critical to achieving meaningful impact. High-quality technical assistance provided during short-term projects (less than a year) often fails to generate the desired outcomes because the processes required to drive change typically take time (three years at minimum). To address this, it is essential to design complementary project cycles and establish stable programs that align with both short-term needs and donor priorities.

TA won't solve everything

While technical assistance (TA) is a valuable tool for empowering small-scale farmers and improving agricultural practices, it is not a comprehensive solution for all the challenges they face. For example, training farmers on pest and disease management is critical, but knowledge alone cannot overcome barriers such as limited access to high-quality inputs, poor infrastructure for transporting goods, or the absence of robust early warning systems for outbreaks. Similarly, while **TA often emphasizes capacity-building and knowledge transfer** because it is cost-effective and scalable, **it must be paired with investments in other areas like access to credit, resilient infrastructure, and enabling policies**. Relying solely on training risks oversimplifying the complex realities of farming systems, where success depends on a broader set of conditions. This highlights the need for a balanced approach that integrates TA with systemic improvements to address the root causes of challenges and ensure long-term sustainability.

Effective methodologies

Not all methodologies are equally effective in driving change. It can happen that the outcomes of practice adoption following technical assistance fall short of expectations. **Growing insights from behavioral science can provide great insights on how to design and implement incentives and learning methods to foster sustainable transformations**. This includes understanding how producers learn, how they process complex situations, and how they produce or resist change. Understanding farmers' heuristics, cognitive dissonance and the role of networks can inform communication strategies and intervention designs. These behavioral insights can guide future TA strategies to overcome barriers like cost, data security, and risk perception.

Conclusion: Adapting Technical Assistance for Long-Term Success

Solidaridad deploys different strategies to provide TA.

Whether through direct engagement and implementation, or through cooperatives or private actors, all of them have one common element: improving the economic performance of the farm, its environmental sustainability, and social conditions for farming families. **In all cases, what has distinguished Solidaridad from other organizations providing TA, is the adaptation and contextualization of the content to farmers' needs, realities and possibilities**. By working closely with farmers and service providers on the ground, Solidaridad is able to constantly refine and adapt the content and methodologies of TA. Innovative methodologies such as video viewing clubs, the use of digital tools and learning platforms, have proven to be effective in reaching farmers.

Solidaridad needs to continue documenting and collecting evidence to demonstrate the impact of TA. It also needs to perform behavioral research that can improve the effectiveness of the process based on understanding how individuals and communities make decisions. **Having a clear exit strategy from the start will reduce the chances that the efforts implemented by Solidaridad will be abandoned as soon as funding ends**. With this aim in mind, understanding and developing both the supply and demand of technical assistance in a local context is fundamental for sustainability.

Cases references

Cases references

If you want to delve deeper, here are some cases related to Solidaridad's Technical Assistance experiences around the world in different values chains.

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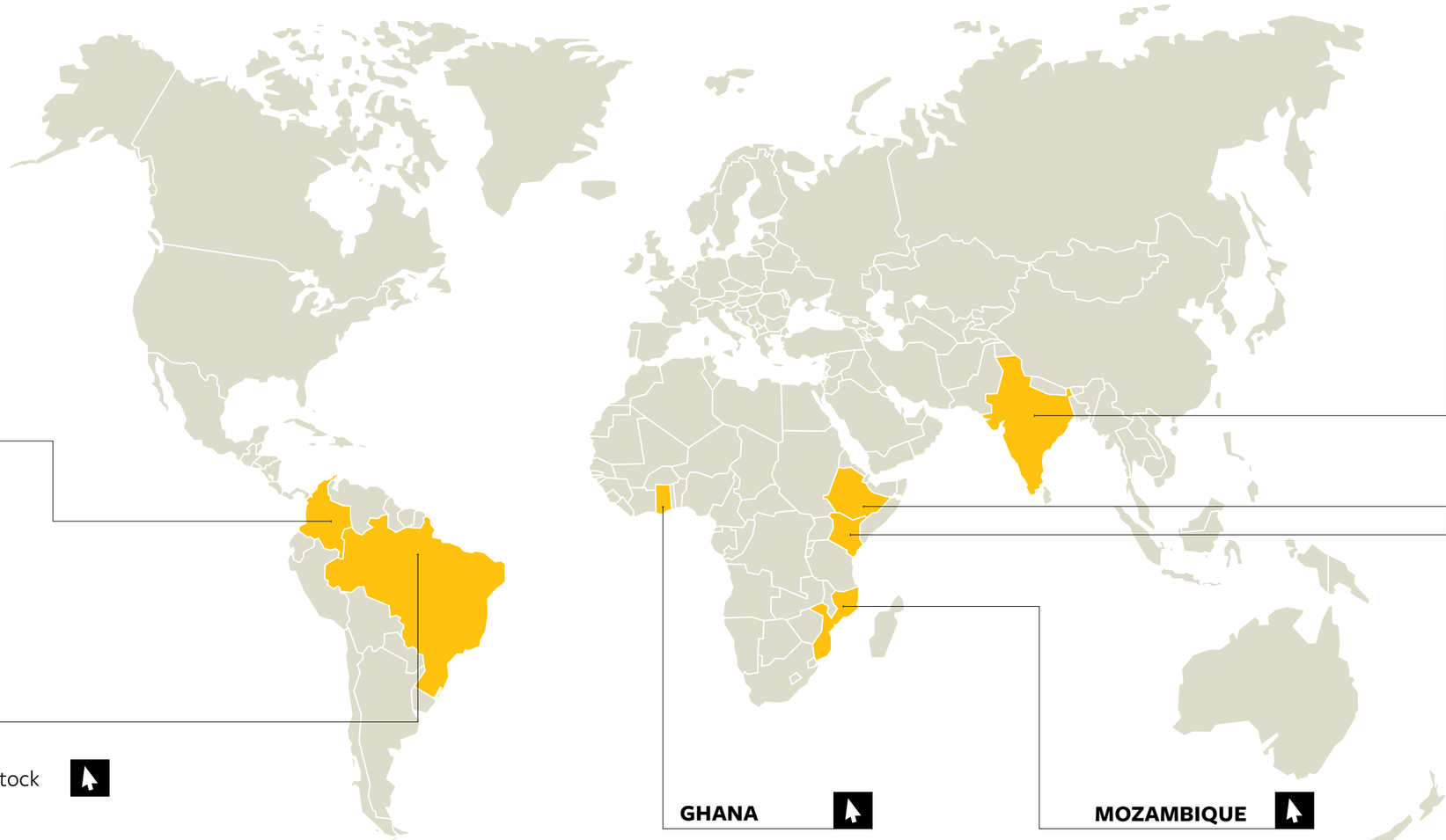

COLOMBIA

Palm oil

BRAZIL

Cocoa

Livestock

Sugarcane

INDIA

Soy

KENYA
ETHIOPIA

F&V, cereals and pulses

GHANA

Cocoa

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