PATHS OF CHANGE

Lessons learned with the Muda Cana Programme for strengthening sugarcane producer associations’ comprehensive technical assistance model
57p. : il. color ; 29,7x21cm.

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About Solidaridad

**Solidaridad** is an international civil society organization that has been active in Brazil for over a decade, working for the development of socially inclusive, environmentally responsible, economically profitable agricultural chains. Solidaridad seeks to advance the transition to inclusive, low-carbon production, contributing to food and climate security in Brazil and worldwide. The organization currently develops sustainability initiatives with its partners in the following chains: cocoa, coffee, sugarcane, yerba mate, orange, livestock, and soy.

Solidaridad has been operating globally for over half a century in more than 40 countries. We promote partnerships and innovative solutions with governments, organizations, cooperatives and companies to support rural producers to farm better and reduce the climate impacts of food production. Our mission is to ensure the transition to an inclusive, sustainable economy — one that maximizes the benefits for people and the planet.
# Table of Contents

1. **CURRENT SCENARIO:** not enough technical assistance  
   pg. 7

2. **TRANSFORMATIVE ACTIONS**  
   pg. 9
   - 2.1. The Muda Cana Programme  
     pg. 9
   - 2.2. Hypotheses tested along the path  
     pg. 12
   - 2.3. Effectiveness  
     pg. 16
   - 2.4. Support for associations  
     pg. 19
   - 2.5. Comprehensive technical assistance  
     pg. 23

3. **EXAMPLES IN PRACTICE**  
   pg. 27
   - 3.1. Socicana  
     pg. 28
   - 3.2. AFCOP  
     pg. 40

4. **LESSONS LEARNED**  
   pg. 52
Introduction

Technical assistance (TA) to producers in the sugarcane production chain in Brazil is carried out by many actors: associations, mills, cooperatives, public entities, self-employed professionals and, mainly, the staff of agricultural input companies.

Associations are considered the most suitable provider, as the guidelines they provide involve no conflicts of interest. In general, the TA offered by other providers mainly focuses on production-related agronomic issues that are more aligned with their own commercial interests. The TA provided by associations, more complex and complete, is what we call comprehensive TA and also seeks to meet needs that go beyond production, such as property management, producers’ relationships with mills, legal issues involving workers, and communication with producers.

These associations are very heterogeneous, as are their associated producers, and they offer different models of comprehensive TA. Besides working to meet the demands of their associates, these organizations have their own visions of how to effectively develop their services. That means there are two types of demands: those of producers and those of associations.

Producers’ demands depend on their level of professionalization (production size and organization): the most professionalized producers mostly need occasional services related to the production process, such as rapid delivery of laboratory test results. Smaller producers have more basic, structural needs, such as support in improving financial management or complying with socio-environmental legislation.

Comprehensive TA [...] also seeks to meet needs that go beyond production, such as property management, producers’ relationships with mills, legal issues involving workers, and communication with producers.
Farm management, a part of comprehensive TA, includes processes that help producers make decisions while managing their business.

Associations’ demands are a reflection of their profile as an organization and the profile of their associates. Associations with larger producers or a more well-developed structure, for example, seek customized digital tools providing greater agility in communication and information sharing between technical staff and producers. Associations whose producers are smaller, older, or come from more traditional growing regions have demands related to daily life in the field, involving intense, face-to-face interaction with producers, and their needs include improving the management of their teams.
Although the comprehensive TA offered by associations is adapted to local needs, producers may not always have access to these services. Due to limitations in staff or financial resources and difficulties in the association's management, TA may often be unable to meet producers’ expectations and demands.

According to the Brazilian Organization of Sugarcane Producers’ Associations (Organização de Associações de Produtores de Cana do Brasil – Orplana), its associations serve, on average, 42% of all associated producers, often with teams that are understaffed and not adequately qualified for their duties. And most associations still provide these services based on demand, i.e., producers need to request services. Therefore, those who are served are usually the ones most involved in associations.

The source of revenue is another critical issue. To be part of an association, producers pay a fee proportional to the amount of sugar cane sold, regardless of whether they use comprehensive TA services. In 2010, a change in legislation made it optional for producers to join an association. Before that change, joining an association was mandatory, and the services offered covered mainly social assistance (medical, hospital, pharmaceutical and social), which extended not only to the property owner, but also to their family and employees. This type of service was offered due to the mandatory application of part of the revenue from sugarcane, sugar, and alcohol production in social assistance programmes for workers involved in the production chain.

With the change in legislation, associations needed to reinvent themselves to retain the interest of producers and ensure their survival. Some of the actions taken by associations for this restructuring were: granting benefits through collective action, coordinating the supply chain, offering comprehensive TA services,
Beyond being instances of political representation, producer organizations such as Orplana should also encourage the improvement of the processes used in properties and professionalizing their activities.

Despite that, the change in law has led many producers to cancel their affiliation with an association, weakening these institutions and their services. As a result, and believing in the importance of their role, especially for small producers, associations started adopting loyalty strategies. Comprehensive TA is their primary strategy for this change.

Aware of this scenario and the need to support not only producers’ political representativeness, but also their associations, Orplana and Solidaridad joined efforts in an initiative to consolidate a comprehensive TA model to be disseminated in producer organizations. Thus was born the programme called Muda Cana (Portuguese for ‘Changing Sugarcane’).

Orplana and Solidaridad joined efforts in an initiative to consolidate a comprehensive TA model to be disseminated in producers’ organizations. Thus was born the Muda Cana Programme.
2. Transformative actions

2.1 The Muda Cana Programme

Muda Cana is a programme that works with Orplana’s member associations with the objective of strengthening them to offer sugarcane producers comprehensive TA directed to their needs. The expected long-term impact is to increase producers’ sustainability in this production chain. Based on these assumptions, the strategy of the Muda Cana Programme was consolidated, as shown in Figure 1:

A holistic look at rural producers’ demands with a focus on sustainability: this is how the Muda Cana Programme was born.
Figure 1
THE MUDA CANA PROGRAMME’S THEORY OF CHANGE

FIRST ACTIONS
- Assessment and action plan (associations’ benchmark)
- Financial capacity building for associations (cost benchmark)
- Collective learning workshops (learning workshops, AgTech)
- Direct support to initiatives (calls for proposals)
- Assessment and action plan for adopting sustainability practices
- Financial capacity building for producers
- Monitoring of producers
- Training of association technicians
- Communication channels (social networks, external media)
- Technical materials (booklets)

Provide services to support organizational management
- Provide comprehensive TA focused on sustainability practices with the support of digital tools
- Improve communication reach

Increase producers’ adoption of sustainability practices
- Improve associations’ comprehensive TA services

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SOURCE: Solidaridad, 2022
Due to Orplana’s reach in regional associations, partnering with them provides the favorable environment necessary to implement the programme’s strategy. Based on this “umbrella” approach, it is possible to engage associations, understand their local demands and contribute to the improvement of the comprehensive TA offered.

Within this strategy, the role of the Muda Cana Programme is to support the strengthening of associations, guiding them towards improving comprehensive TA and making it more cost-effective. For that purpose, Solidaridad acts by managing activities planned with Orplana, participating at all stages, from structuring the assessment to identify opportunities for improving services to providing support in making the necessary tools available. Solidaridad also provides human and financial resources to execute the activities planned and provides support to enhance communication between all links in the chain.

The role of the Muda Cana Programme is to support the strengthening of associations, guiding them towards improving comprehensive TA and making it more cost-effective.
2.2 Hypotheses tested along the path

The strategy of the Muda Cana Programme resulted from many adjustments, considering the needs and capacities of associations and producers. The programme started based on the idea that, with a solid digital tool, TA could have its cost reduced to a minimum or even become a mainly digital service.

The central hypothesis involved the idea that producers need the correct information, at the right time and in the proper format, to then apply certain actions. Based on an assessment of practices built on desirable standards, this hypothesis speaks to the design of applications for mobile devices, such as cell phones. These applications would generate an action plan with information and resources to be consulted in case the producer wanted to know more. With this material in hand, the producer would gradually implement actions on their property, advancing through the levels established in the system. Associations would act as bridges, spreading knowledge about the applications and reaching out to producers. During the programme, we tested the validity of our main hypotheses, described in the following pages.

### MAIN HYPOTHESIS

**Producers need relevant information to improve their practices**

**HYPOTHESIS**
Producers will change their practices if they receive correct, assertive information.

**VALIDATION**
Access to information is not enough to bring about a change in practice. Producers first need to trust the people and organizations transmitting this knowledge (e.g., technicians and associations they already know) to then trust the information they receive. An external organization or application may not have enough backing for producers to trust the change they are trying to bring about. Producers also need to understand why specific actions should be taken and how to solve particular problems.

**CONCLUSION**
Producers trust the assessment and the levels defined in the system, but only when these definitions are done based on their needs and with technical monitoring. They need guidance to understand and determine the solutions to the problems identified.

### Digital solutions based on continuous improvement make sense for producers

**HYPOTHESIS**
Producers could use an objective application that provides good assessments, concrete action points, and digital resources that help them understand the recommendations. With this tool, producers will implement the indicated actions gradually, following the levels defined in the system.

**VALIDATION**
This hypothesis was initially rejected since the producers downloaded the application in meetings at their associations, partially filled out the initial questionnaire, and then stopped using it. Changes were later made in the content and in the role taken by associations in the process, confirming that a working model based on continuous improvement using digital tools makes sense for producers.

**CONCLUSION**
Producers need incentives and guidance to continue to use the action plans provided and remain engaged in adopting the practices indicated in the application. Mobile apps designed based on this principle can be quite useful for producers.
Digital solutions based on continuous improvement can replace in-person visits

**HYPOTHESIS**
Using an objective application providing a good assessment, concrete action points and digital resources that help producers understand recommendations, in-person visits will no longer be necessary, allowing associations to reach a greater number of associates with low costs (including human resources and logistics costs).

**VALIDATION**
As mentioned in the previous hypothesis, producers did not continue to engage with the application after the meetings and were even less engaged in continuing to adopt the best practices indicated.

**CONCLUSION**
Digital solutions that aim to encourage producers to continuously improve complement in-person visits rather than replacing them. That is, these solutions must be used to increase the impact of in-person visits. They can also reduce costs since the work done with producers becomes more targeted and effective.

Producers are interested in content that help them obtain certifications

**HYPOTHESIS**
Producers want to align their practices to the parameters of one or more certifications. They will be evaluated based on certification standards, and if they reach high enough performance levels, they can become certified. The application will provide a more straightforward, lower-cost way to do this, and once a producer reaches the necessary performance level, they can pay only for the audit.

**VALIDATION**
Certifications are not an interest of the sugarcane production chain. Few high-performance producers seek to demonstrate this level and would be able to obtain a certification. And since certifications are not linked to incentives, producers are not interested in investing the work required to achieve the highly complex standards needed for certifications.

**CONCLUSION**
The contents must speak to the producers’ motivation and the projects’ objectives. When it became clear that farmers’ motivation was to meet the RenovaBio’s standards and improve key practices validated within the sugarcane sector, the use of the tool started making sense for them.

Associations are ready to provide better services

**HYPOTHESIS**
Existing associations can implement and scale up technical assistance with the necessary tools.

**VALIDATION**
Associations are incredibly diverse, and most still need to strengthen their structure and “polish a few things” to be able to provide better services.

**CONCLUSION**
Associations are the fundamental units for providing services to producers. However, if an association is not sufficiently structured, it will not be able to scale up its services or adopt tools of any kind. Therefore, the project’s first actions should focus on strengthening and preparing associations to provide services.

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1. RenovaBio is the Brazilian National Biofuels Policy, established by Law # 13576/2017, and has three main objectives: 1) to make an important contribution to fulfill the commitments made by Brazil in the Paris Agreement; 2) to promote adequate expansion of biofuels in the Brazilian energy matrix, with an emphasis on the regularity of fuel supply, and 3) to ensure predictability in the fuel market, inducing energy efficiency gains and the reduction of greenhouse gas emissions from the production, marketing and use of biofuels.
The role of associations is to disseminate digital tools

HYPOTHESIS
Associations can act as vehicles to bring digital tools to producers. If they make it easier for applications to reach producers, present these tools, and help producers fill out the necessary information, producers can then continue using the tools on their own.

VALIDATION
Associations initially played the role described under this hypothesis. However, the content in the digital tools provided was not validated and did not correspond to the producers' realities. The result was low adherence to the tools and minimal engagement.

CONCLUSION
The programme only began to make an impact when associations took on the role of key strategic partners to identify producers' needs and adapt their services accordingly. Sustainability is still an abstract issue for producers, so the association's intermediation is essential.
MAIN HYPOTHESIS

There is only one single, one-size-fits-all cost-effective TA model

**HYPOTHESIS**
It is possible to develop a single TA model for all associations based on the use of an application that monitors producers’ continuous improvement.

**VALIDATION**
The producers served by associations are widely diverse, each with their own needs and objectives. Moreover, TA does not only involve the pillar of agronomic practices, but rather all the services offered by associations, from legal issues to administrative aspects.

**CONCLUSION**
It is necessary to develop specific cost-effective TA models that suit the needs and realities of producers and their associations.

Associations are the entry point to TA

**HYPOTHESIS**
Associations are closer to producers and have the necessary resources and structure to provide TA.

**VALIDATION**
In the sugarcane sector, associations are better positioned to provide non-economic services than other actors.

**CONCLUSION**
Associations are the key point to reaching producers and promoting sustainability.
Defining an effectiveness metric for the Muda Cana Programme is not simple, as no single factor can be measured, such as increased productivity or income by producers. As the programme’s work focused on strengthening associations, effectiveness can be evaluated by three factors:
**STRENGTHENED STRUCTURE**
Associations must be able to operate following the best practices defined by a management index. The metric used for ‘strengthened structure’ is the improvement in ‘association benchmark’ scores, as detailed in section 2.4, and in associations’ financial viability (as in the example of the AFCOP association, in section 3.2).

**COMPREHENSIVE TA SERVICES**
The organization can provide TA services customized to producers’ needs and adaptable within a context of continuous changes. The main metrics used for ‘comprehensive TA services’ are: increased services provided, increased producers served, and the number of digital tools developed and used by associations (see section 2.5).

**CONTEXT-SENSITIVE RELEVANCE**
Service users and associations must validate the variables described above. This qualitative metric is captured by the feedback received from organizations and producers benefiting from the Muda Cana Programme.

This set of factors allows us to achieve the expected result of the Muda Cana Programme, which is to increase the sustainability of sugarcane producers in a successive, customized, concrete manner, since the programme’s actions are executed within a local and flexible structure and with continuous feedback from its users.

Figure 2 shows the relationships between the effectiveness factors used for the Muda Cana Programme:

**Figure 2**
DIAGRAM OF RELATIONS BETWEEN THE MUDA CANA PROGRAMME’S EFFECTIVENESS FACTORS

Source: Solidaridad, 2022
An organization can achieve effectiveness when it arrives at an operational design that can generate resources and processes so that the organization can adapt to new contextual conditions and properly maintain its cycle of activities. When a demand or opportunity is found that needs to be incorporated into an association's comprehensive TA, the association must be able to identify that demand or opportunity, design how it can be met or seized, and include it in the association's services, maintaining viability and operation either with its current resources or by changing its structure. This cycle can be repeated every time the context changes, which poses constant challenges for organizations.

The following subsections detail the support that the Muda Cana Programme provides to associations in implementing this adaptive structure for (1) strengthening associations and (2) the provision of comprehensive TA services.

Section 3 presents two cases of associations that succeeded in testing adaptation to context more than once, as well as the metrics and results obtained by identifying the needs of these organizations related to (1) structural support and (2) support to comprehensive, resilient TA.
2.4 Support for associations

How to strengthen associations relates to how they organize and act to provide services to producers. A poorly organized association will not be able to provide good TA. Therefore, one of the project’s work fronts is providing structural support to associations. That starts by mapping an organization’s processes and defining its main strategic objectives. This assessment is used as a basis to define action plans with priority objectives to identify areas and services. The progress of action plans is also monitored by the Muda Cana Programme, which mentors the association’s teams. The **five steps** of the structural support provided by the Muda Cana Programme are shown in Figure 3.

**Figure 3**

**STEPS OF THE STRUCTURAL SUPPORT PROVIDED BY THE MUDA CANA TEAM**

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding</td>
<td>Management assessment</td>
<td>Development of the action plan</td>
<td>Monitoring of implementations</td>
<td>Evaluation of results</td>
</tr>
</tbody>
</table>

- Visits to associations
- Interaction with managers
- Understanding processes
- Analysis of documents and tools.

- Prioritization of processes, according to strategic objectives
- Mapping of prioritized processes
- Development of templates for standardization and quality.

- Consolidation of improvements in a personalized action plan
- Presentation of the action plan.

- Periodic monitoring meetings
- Guidance and assistance for implementing changes.
- Periodic meetings to present and analyze the association’s status with the Muda Cana committee
- Definition of the next steps.

Source: Orplana, 2022
That work methodology was essential to understanding associations’ needs in the project’s early years. It made it possible to advance on relevant topics such as financial management and associated producer retention. This approach has been updated and automated in the course of the programme.

The increase in the number of associations that joined the Muda Cana Programme, combined with the knowledge acquired about the associations’ organizational structures, made it possible to create a management index based on benchmarks for common practices shared among the associations.

This index consists of four pillars defined based on an understanding of the associations’ business model and their work routine: associative culture, processes, strategic culture, and services to associates. Each association receives a grade between 0 and 5 for each pillar. See the management index in Figure 4.

**Figure 4**

**MUDA CANA PROGRAMME’S MANAGEMENT INDEX AND ASSOCIATION BENCHMARKING**

The Muda Cana Benchmarking Matrix shows associations’ scores in each topic, allowing performance analysis and action planning.

Source: Orplana, 2021
The index scores are calculated as the **average scores in the topics that make up each pillar**. The benchmarking includes 24 topics, including financial management, market knowledge, sustainability, and relationships with mills. Four priority topics were defined for the index based on their direct relationship to the project’s objectives defined alongside the donor fund: technology, sustainability, defined service portfolio, and measurement of customer satisfaction.

The grades for each topic are re-evaluated periodically during TA visits or meetings of the Muda Cana Programme team with the associations. See the complete list of topics in Table 1.

### Table 1
**COMPLETE LIST OF TOPICS INCLUDED IN EACH PILLAR AND THEIR PRIORITY LEVELS**

<table>
<thead>
<tr>
<th>PILLAR</th>
<th>TOPIC</th>
<th>PRIORITY LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Associative culture</strong></td>
<td>Engagement with Orplana</td>
<td>Secondary</td>
</tr>
<tr>
<td></td>
<td>Propagation of associative values</td>
<td>Secondary</td>
</tr>
<tr>
<td></td>
<td>Collective actions between producers</td>
<td>Secondary</td>
</tr>
<tr>
<td></td>
<td>Collective actions with other entities</td>
<td>Secondary</td>
</tr>
<tr>
<td><strong>Processes</strong></td>
<td>Technology</td>
<td>Primary</td>
</tr>
<tr>
<td></td>
<td>Sustainability</td>
<td>Primary</td>
</tr>
<tr>
<td></td>
<td>Financial management</td>
<td>Secondary</td>
</tr>
<tr>
<td></td>
<td>Infrastructure and equipment management</td>
<td>Secondary</td>
</tr>
<tr>
<td></td>
<td>Knowledge management</td>
<td>Secondary</td>
</tr>
<tr>
<td></td>
<td>Definition of processes</td>
<td>Secondary</td>
</tr>
<tr>
<td></td>
<td>Communication</td>
<td>Secondary</td>
</tr>
<tr>
<td></td>
<td>People management</td>
<td>Secondary</td>
</tr>
<tr>
<td></td>
<td>Certification</td>
<td>Secondary</td>
</tr>
<tr>
<td><strong>Strategic culture</strong></td>
<td>Decision-making</td>
<td>Secondary</td>
</tr>
<tr>
<td></td>
<td>Focus on improvement</td>
<td>Secondary</td>
</tr>
<tr>
<td></td>
<td>Strategic planning</td>
<td>Secondary</td>
</tr>
<tr>
<td></td>
<td>Use of performance indicators</td>
<td>Secondary</td>
</tr>
<tr>
<td><strong>Services to associates</strong></td>
<td>Defined service portfolio</td>
<td>Primary</td>
</tr>
<tr>
<td></td>
<td>Measuring customer satisfaction</td>
<td>Primary</td>
</tr>
<tr>
<td></td>
<td>Prospecting, retaining and re-engaging associates</td>
<td>Secondary</td>
</tr>
<tr>
<td></td>
<td>Market knowledge</td>
<td>Secondary</td>
</tr>
<tr>
<td></td>
<td>Relationship with mills</td>
<td>Secondary</td>
</tr>
<tr>
<td></td>
<td>Co-management of associates’ business</td>
<td>Secondary</td>
</tr>
<tr>
<td></td>
<td>CRM</td>
<td>Secondary</td>
</tr>
</tbody>
</table>
Through this benchmarking analysis, the Muda Cana team identified associations’ primary needs and found that, in many cases, they had the same problems. That made it possible to direct collective actions that could be shared between associations, creating discussion groups on specific topics according to the interests of each association. From the associations’ point of view, this type of visualization was essential to understand where they needed to direct their efforts for improvement through action plans with annual goals. These goals were defined in a joint agreement with the associations and monitored by the Muda Cana team.
2.5 Comprehensive technical assistance

With solid organizational foundations, associations can provide better TA. Comprehensive TA focuses on meeting producers' demands based on identifying their needs, involving agronomic aspects, issues related to their relationships with mills, communication, use of technology, property management, socio-environmental adequacy, legal advice, and support in adherence to public policies such as RenovaBio.

With this variety of demands, the first step is to survey the situation in each association, then propose customized TA services for each scenario. Different sources of information are used to carry out this assessment:

- **Satisfaction survey and testimonials from producers**
- **Information from associations’ service teams**
- **Demands from mills**

Each association understands the needs of producers, and the Muda Cana team supports the development of strategies and tools to meet these demands better. Additionally, the Muda Cana Programme offers training to associations’ teams through collective learning workshops or technical training sessions so that they can provide better services to meet the needs identified, as well as training in innovative topics, which in some cases were not yet on the radar of all associations.
One comprehensive TA service that has gained relevance for producers is **support for the adoption of sustainability practices**, e.g., for meeting requirements related to environmental, labor, and production adequacy, which range from legal criteria to continuous improvement in production. Meeting such requirements is frequently demanded by sugarcane and/or sugar and ethanol buyers, which pressures producers to meet the requirements of a “sustainable chain”, often without offering any assistance or setting clear definitions on additional payment in recognition of these changes.

Some pioneering associations have been betting on the adoption of sustainability practices as a way to diversify their activities, expanding their value proposition. The Muda Cana Programme made the Extension Solution (ES) application available to allow associations to monitor producers’ continuous improvement to meet this demand. This tool, developed by Solidaridad, is also used in an ongoing improvement programme for sugarcane mills.
The Muda Cana Programme has used the ES application since 2019. In 2021, the app’s content was revised to address the topics involved in RenovaBio to prepare producers for market demands. Six associations interested in implementing sustainability services in their comprehensive TA use this content.

Capacity-building activities to use the app were provided with the help of a consulting company to monitor a sample of producers through their continuous improvement process. Following these steps, the programme understood that the tools would have to be as diverse as associations’ and producers’ needs, and it developed calls for proposals focused on acceleration so that associations could propose projects to create tools and services they considered essential for the proper development of comprehensive TA. The two calls for proposal launched so far supported nine initiatives from seven associations.

Developed by Solidaridad, the ES application allows technicians to monitor producers’ continuous improvement towards more sustainable practices.
A successful case was the development of a system called Qualicana (a play on the Portuguese words for “sugarcane quality”). This tool aims to optimize the process of monitoring and controlling documents necessary for property management, which are a prerequisite for associates to obtain the Bonsucro certification. The system was developed in five months by the team of the Bariri Sugarcane Suppliers Association (Associação dos Fornecedores de Cana de Bariri – Assobari) and a third-party company. The association started using 100% of the system’s functionalities successfully at the beginning of 2021 and saw an estimated reduction of eight days per month in the workload of its administrative team. This workload reduction was a result of automating data entry on producers’ monthly harvests and on the evaluation of this service. As a counterpart in supporting the project, the third-party company committed to making Qualicana available below market value for other associations involved in the Muda Cana Programme interested in the tool.
3. Examples in practice

To show the work of the Muda Cana Programme over these years in greater detail, we selected two associations of sugarcane producers with different profiles and demands. The Guariba Sugarcane Suppliers Association (Associação dos Fornecedores de Cana-de-Açúcar de Guariba – Socicana) is a large, well-structured, financially stable association. With over 1,000 associated producers, it operates in a traditional sugarcane-growing region, and its board of directors is influential in the political sector. 

The Association of Cane Suppliers of the West Region of São Paulo (Associação dos Fornecedores do Oeste Paulista – AFCOP) is a small association with almost 40 members, limited political influence in its region, and economic challenges. It is surrounded by other associations in an area where sugarcane cultivation is secondary and competes with traditional extensive livestock farming.

These two cases will be detailed in the following sections, which describe the general aspects of each association, their actions, and the contributions of the Muda Cana Programme to improve cost-effectiveness in each of them.

Socio-environmental adjustments on farms, including the maintenance of native vegetation areas, are practices encouraged by the associations.
3.1 Socicana

Socicana is one of the most traditional, renowned, and active associations in the Brazilian sugarcane sector and was established even before Orplana. It is also one of the largest member associations of the organization. However, it includes a moderate number of associates in its region since the state of São Paulo has many associations with areas of coverage that often overlap.

The association operates within a radius of 100 kilometers, encompassing 81 municipalities, 12 industrial units, and 1,157,000 hectares, 6.22 percent of which are owned by the association’s members. See the complete distribution of the association’s producers by their sugarcane production in Figure 5 (Kalaki et al., 2020).

Figure 5
STRATIFICATION OF SOCICANA ASSOCIATES – 20/21 HARVEST

% OF PRODUCERS

<table>
<thead>
<tr>
<th>Sugarcane production</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1,000 metric tons</td>
<td>29.68%</td>
</tr>
<tr>
<td>From 1,000 to 6,000 metric tons</td>
<td>47.65%</td>
</tr>
<tr>
<td>From 6,000 to 12,000 metric tons</td>
<td>9.64%</td>
</tr>
<tr>
<td>From 12,000 to 25,000 metric tons</td>
<td>7.23%</td>
</tr>
<tr>
<td>From 25,000 to 50,000 metric tons</td>
<td>2.3%</td>
</tr>
<tr>
<td>From 50,000 to 100,000 metric tons</td>
<td>3.07%</td>
</tr>
<tr>
<td>More than 100,000 metric tons</td>
<td>0.44%</td>
</tr>
</tbody>
</table>

Source: Socicana, Kalaki, 2021
A producer’s choice of association is strongly influenced by the mill to which they deliver their sugarcane production since the associations share the activity of inspecting mills. The context of the profile of an association’s members and the region where it operates is relevant to understand each association’s objectives and ambitions as a representative entity.

**Socicana’s main objective is political representativeness** to defend the interests of its producers in the face of the demands of the sugar and ethanol sector, seeking to make its associates more competitive. The association also offers a portfolio of comprehensive TA services through six departments: the technical department, sucrose inspection laboratory, legal department, social assistance department, communication department, and department of projects and sustainability (Kalaki et al., 2020).

The association’s sustainability-related services are a highlight. Since 2004, Socicana has been working on this topic through pioneering actions in the sector. In 2010, it was the first Brazilian association to partner with Solidaridad to better structure their work on this topic and offer producers support to make the necessary socio-environmental adjustments. See the history of Socicana’s sustainability actions in Figure 6.

Socicana’s main objective is political representativeness to defend the interests of its producers in the face of the demands of the sugar and ethanol sector, seeking to make its associates more competitive.
Figure 6
EVOLUTION OF SOCICANA’S SUSTAINABILITY ACTIONS

- **2004**
  - First contact with the Bonsucro certification

- **2006**
  - Producers acquired knowledge about Bonsucro

- **2010**
  - Socicana–Solidaridad partnership

- **2011**
  - Meeting with partners: Socicana, Solidaridad, Unica
  - Sustainability pilot project

- **2014**
  - Development of Socicana’s sustainability department

- **2015**
  - Development of Socicana’s environmental protocol

- **2016**
  - Development of the Top Cana Programme

- **2017**
  - Bonsucro and RSB certifications
  - Preparation of the Socicana environmental management plan

- **2018**
  - Adherence of new producers to continuous improvement programmes

- **2019**
  - A review of the Top Cana Programme starts

- **2020**
  - Commercialization of Bonsucro credits and partnership with Sicoob Coopecredi for agricultural financing

- **2021**
  - Launch of the rural green credit programme and application of the new Top Cana standards

Source: Socicana Kalaki, 2021
Solidaridad’s support also includes two major programmes that are benchmarks of the entity’s performance in the sugarcane production chain: Top Cana and Muda Cana.

Top Cana is a continuous improvement programme created in 2016 by the Socicana–Solidaridad partnership and currently serves 120 producers. Offering its services free of charge to producers in a manner appropriate to their reality and voluntarily, the programme is present in a great variety of property profiles, from small to large farms, from family farmers to entrepreneurs. After enrolling in the programme, the strengths and weaknesses of the producer’s property are identified and included for them in an improvement plan, both designed to help them develop and qualify their technical, managerial, labor, environmental, rural construction and best agricultural practices, thus making them more competitive.

The programme was conceived and built based on the association’s demands, focusing on providing technical assistance directed to socio-environmental issues. Solidaridad provided support in structuring the programme’s team and the method used to provide services to producers, developing the socio-environmental requirements that would be addressed, providing digital tools for fieldwork, and obtaining financial resources – which were provided by the Sustainable Economic Development Department of the Ministry of Foreign Affairs of the Netherlands. Since 2019, Solidaridad has taken Top Cana’s management and operationalization entirely into its own hands, reviewing the criteria evaluated by the programme and incorporating aspects focused on RenovaBio and certifications (such as Bonsucro and SAI). Solidaridad was then able to complete its exit strategy successfully.

This experience was a precursor to the Muda Cana Programme, of which Socicana became one of the first participating associations. As Socicana is a large, well-structured association, the actions of the Muda Cana Programme for it were focused on improving the available structure so that it could offer...
its producers customized services.
Socicana represents a case in which comprehensive TA support focused on continuous improvement came first, and that intervention then generated a demand to strengthen the structure supporting those services. This is an example of the relevance of acting on both pillars of effectiveness (strengthened structure and comprehensive, resilient TA) to ensure that interventions are sustainable and cost-effective. As the programme progressed, the cycle of needs and actions alternated between these two fronts. The association strengthened its structure while continuously adding new services to its comprehensive TA.

The support actions taken on the structural front are detailed in Table 2. This path was followed during interactions with the association, and all proposed support actions in the second column were agreed upon between Socicana and the Muda Cana Programme team, which ensured the initiatives’ relevance and assured that they would be adopted.

TO LEARN MORE ABOUT SOCICANA AND THE TOP CANA PROGRAMME, CLICK HERE AND GO TO PAGES 181-197.
### Table 2

**ACTIONS TO STRENGTHEN THE ASSOCIATION – STRUCTURAL SUPPORT**

<table>
<thead>
<tr>
<th>Association’s needs</th>
<th>Organizational support actions</th>
<th>Results</th>
<th>Long-term objectives</th>
</tr>
</thead>
</table>
| Understanding existing processes in the association and optimizing them | Process mapping to identify the association’s areas of action and services  
Prioritization of critical areas and processes to be improved | Improvement of the association’s management index from 3.74/5 to 4.14/5  
Implementation with existing financial resources + support from the Muda Cana Programme | Opportunities for process digitalization and automation to increase and improve the association’s coverage  
Knowledge of how to manage staff and resources to meet producers’ needs within their financial capabilities based on management indicators  
A closer relationship with producers (visits, app, courses, training) |
| Understanding potential areas for improvement in the association | Analysis of key variables for managing the association |                                                                         |                                                                                      |
| Retaining affiliated producers and attracting new members | Additions to the service portfolio, including new services according to producers’ demands — Top Cana, Sugarcane College (Faculdade da Cana), and the Socicana App |                                                                         | Internalization of the Top Cana Sustainability Programme by the association          |
At the same time, actions were taken to improve comprehensive TA (detailed in Table 3). These actions reached beyond the pioneering producers participating in the Top Cana continuous improvement programme. With the support of the Muda Cana Programme, Socicana adapted to the context of the pandemic by providing remote TA and started to create videos to reach a wider audience of producers. The association also continues to promote its sustainability programme. Together, these measures significantly strengthened the resilience of the TA offered by Socicana.

The association’s management on this front also paved the way for a partnership with the local credit union Sicoob Coopecredi to provide credit lines with advantageous interest rates for producers participating in one of the association’s sustainability programmes — Bonsucro or RSB certification, or Top Cana. Thus, the TA provided by Socicana aims not only to improve practices, but also to reach a level that allows access to preferential credit. These green credits are an essential step for producers towards valuing the adoption of socio-environmental practices.

The partnership with Sicoob Coopecredi allowed Socicana to provide green credit lines, valuing sustainable practices in properties.
**Table 3**

**ACTIONS TO IMPROVE COMPREHENSIVE TA**

<table>
<thead>
<tr>
<th>Association’s needs</th>
<th>TA support actions</th>
<th>Results</th>
<th>Long-term objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developing a sustainability programme in the association</td>
<td>Creation of the Top Cana Programme and the association’s sustainability department</td>
<td>The Top Cana Programme supported 120 producers, representing approximately 15,000 hectares of sugarcane fields, with monitoring and help to adopt best practices.</td>
<td>Producers involved in the Top Cana Programme certified and with access to preferential credit (green credits)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>83% of the producers who participated in the programme had an increase in their sustainability levels.</td>
<td>Payment for environmental services in carbon credit markets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7% remained at the minimum level, while 37% reached the maximum sustainability level.</td>
<td>Producers implementing best agricultural and management practices on their properties</td>
</tr>
<tr>
<td></td>
<td></td>
<td>120 producers were trained and received individualized technical assistance. The increase in sustainability levels depends on the implementation of best practices aimed at: property management, environmental compliance, labor compliance, waste management on the property, and production practices.</td>
<td>Multiplier effect, raising other producers’ awareness regarding the importance of adopting best practices in the field</td>
</tr>
<tr>
<td>Transferring knowledge on best agricultural and management practices to producers</td>
<td>Mapping of agricultural, management, environmental and labor practices for the development of a protocol of best agricultural practices</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Specific training sessions and association services directed to the protocol of best practices created</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Development of a technical assistance model aimed at producers’ continuous improvement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conducting training during the Covid-19 pandemic</td>
<td>Financial support for the consolidation of Sugarcane College (Faculdade da Cana): a live remote specialization course with 17 modules and 32 hours of training focused on sugarcane production and management</td>
<td>19 producers, 26 children of producers, 16 workers, and 4 technicians were trained and acquired specific knowledge to improve their vision and implement best practices on farms.</td>
<td>Change in the relationships with producers and greater proximity to business successors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100% of the producers were satisfied with the programme.</td>
<td>New training model allowing expanded coverage</td>
</tr>
<tr>
<td>Association's needs</td>
<td>TA support actions</td>
<td>Results</td>
<td>Long-term objectives</td>
</tr>
<tr>
<td>---------------------</td>
<td>--------------------</td>
<td>---------</td>
<td>----------------------</td>
</tr>
<tr>
<td>Keeping associates engaged and providing them with access to relevant information related to the sector</td>
<td>Financial support for the creation of Sugarcane College (Faculdade da Cana) and for the development of an application through which producers can access relevant information: technical materials, price information, CanaTube (a play on YouTube and the Portuguese word for sugarcane), production reports, production costs, sustainability, etc.</td>
<td>Application developed with features of interest to rural producers</td>
<td>20% of Socicana associates having access to relevant information related to the sector through the application. Associations replicating the use of the application as a tool, supporting their producers and increasing engagement with them</td>
</tr>
<tr>
<td>Increasing the number of producers served by the field technical team</td>
<td>Financial support for the digitalization of technical training; 14 videos stored in the application with information on services that producers and their workers can implement on farms</td>
<td>348 producers (31% of Socicana’s associates) received the videos directly from the association. 9,196 views on YouTube. 8,001 views of the videos on social media (Facebook, Instagram and LinkedIn).</td>
<td>50% of Socicana’s producers having access to information on best practices, technical services, and legislation</td>
</tr>
<tr>
<td></td>
<td>Financial support to develop a digital tool to digitize technical services for sending reports automatically and managing information collected in the field</td>
<td>104 properties supported. 48 producers supported. 152 support responses and reports automatically generated for producers</td>
<td>Increase in the number of producers served by the field technical team. Construction of a database to create intelligence for the association</td>
</tr>
</tbody>
</table>
This impact in the field has been achieved over more than ten years of experience and joint learning between Socicana and Solidaridad. Besides the availability of time to bring about change, the success of this case also involves other important factors, such as the resilience of both organizations in pursuing a common goal to support producers in meeting their needs.

All this work has been fostering an increase in sugarcane producers’ sustainability through concrete actions on the three pillars related to this topic:

- **Environmental pillar**: The most significant gains are associated with the conservation of forests, soils, and water and the reduction of greenhouse gas emissions, mainly due to the rational use of pesticides.

- **Social pillar**: The improvements include better working conditions and income in rural areas and the adoption of measures aimed at improving the health and safety of producers and rural laborers.

- **Economic pillar**: There were improvements in property management, which is often reflected in cost reduction, and opportunities were created to access green credit line.

Besides the availability of time to bring about change, the success of this case also involves other important factors, such as the resilience of both organizations in the pursuit of a common goal to support producers in meeting their needs.
A great association, a great programme

Solidaridad's work with Socicana is a substantial success case in the sugarcane chain. The association has put the resilience of its comprehensive TA to the test several times, identifying needs based on the context and adapting its structure to meet demands.

Furthermore, this experience taught us important lessons on best practices for a programme to support associations. The success of the actions taken at Socicana resulted from a precise mapping of the association's needs and a transparent, constant dialogue over ten years of partnership.

This joint work led to the internalization of some initiatives by Socicana and the refinement of the Muda Cana Programme's strategy with associations.

The main initiative internalized by Socicana was the Top Cana Sustainability Programme, created in partnership with Solidaridad. This programme acquired great relevance for Socicana and is now one of the differential advantages.
of its service portfolio. The digital tools developed during the partnership are being put to good use by the association and are critical solutions within a strategy for the expansion of remote TA services.

The benefits will not be restricted to Socicana. It is likely that, in the near future, the strategy of remote TA will be embraced by other associations. The tools developed and the experience gained by the Muda Cana Programme during this process will help disseminate this digital line of service to producers.

The data management allowed by these tools can foster the development of incentives in the sector. The improved capacity to compile information allowed the organization to advocate with actors such as Sicoob Coopecredi to provide incentives adapted to particular conditions and situations. This experience also helped raise the market’s awareness about the relevance of sustainability through the creation of green credit lines.

Finally, the improvement in the management index shows that, even though Socicana is a sizeable, structured association, its work with the Muda Cana Programme allowed it to improve its organizational structure. This indicates that structural issues should be periodically revised to ensure that associations remain strong and representative, respond quickly to changes in a competitive environment and incorporate new emerging concepts.

The success of the actions taken at Socicana resulted from a precise mapping of the association’s needs and a transparent, constant dialogue over ten years of partnership.
3.2 AFCOP

AFCOP is one of the smallest associations affiliated with Orplana, its members being generally small farmers with a yearly production of up to 40 thousand metric tons. The association’s main objectives are to provide quality services, promoting continuous improvement and economic well-being, and to support socio-environmental development through sustainable practices and political representativeness to defend the interests of its producers in the face of the demands of the sugar and ethanol sector, seeking to make its associates more competitive. The association has a lean team composed of one manager and eight employees divided into four departments: the agricultural department, administrative department, legal department, and social department.

AFCOP’s partnership with Solidaridad began in 2017 with the pilot project of the Muda Cana Programme. The first action of the association was to complete an assessment of the adoption of socio-environmental practices guided by the content available in Rural Horizon (Horizonte Rural), a digital tool provided by Solidaridad. After that, the association began to expand its TA to topics related to continuous improvement as a service aiming to improve producers’ relationships with mills. In this first assessment, it was identified that an important group of producers had the same high-priority need: the correct disposal of pesticide containers.

By meeting a demand shared by several producers, AFCOP allowed the municipality of Valparaíso (São Paulo State) to create an initiative for the correct disposal of pesticide containers.
That problem needed technical support and a structural solution due to the absence of mechanisms for container disposal in the area. The volume of waste from associates was not high enough to warrant a permanent station to receive the material, but there were also no other practical alternatives in the area.

With the support of the Muda Cana Programme, the association engaged public and private stakeholders in the region and coordinated a movement to create an initiative for the itinerant collection of empty pesticide containers so that producers could properly dispose of them. Following the model proposed, the association identified a need, designed a collective solution adapted to its conditions, and implemented it using its operational structure and external resources available in its networks.

The initiative for the itinerant collection of empty pesticide containers has been held annually since 2018. This initiative has already allowed the correct disposal of more than 47,000 containers of hazardous waste, as shown in figure 7.

**Figure 7**

RESULTS OF THE INITIATIVE FOR ITINERANT COLLECTION OF EMPTY PESTICIDE CONTAINERS

---

**NUMBER OF PACKAGES RETURNED**

<table>
<thead>
<tr>
<th>Date</th>
<th>Number of Packages Returned</th>
</tr>
</thead>
<tbody>
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<td>3.149</td>
</tr>
<tr>
<td>04/07/19</td>
<td>7.112</td>
</tr>
<tr>
<td>05/12/19</td>
<td>5.341</td>
</tr>
<tr>
<td>04/12/20</td>
<td>3.178</td>
</tr>
<tr>
<td>29/07/21</td>
<td>8.171</td>
</tr>
<tr>
<td>03/12/21</td>
<td>3.050</td>
</tr>
<tr>
<td>21/07/22</td>
<td>10.712</td>
</tr>
<tr>
<td>08/12/22</td>
<td>7.157</td>
</tr>
</tbody>
</table>

**TOTAL PACKAGES RETURNED PER YEAR**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Packages Returned</th>
<th>Cumulative Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>3.149</td>
<td>Cumulative total</td>
</tr>
<tr>
<td>2019</td>
<td>12.453</td>
<td>15.602</td>
</tr>
<tr>
<td>2020</td>
<td>3.178</td>
<td>18.780</td>
</tr>
<tr>
<td>2021</td>
<td>11.221</td>
<td>30.001</td>
</tr>
<tr>
<td>2022</td>
<td>17.869</td>
<td>47.870</td>
</tr>
</tbody>
</table>

Source: AFCOP, 2021
With the engagement of some stakeholders in the region, the action gained relevance and, in 2019, became a law in the municipality of Valparaíso. Law # 2318/19, whose author was the municipal councilor and AFCOP-affiliated producer João Pedro Carvalho D’Avila Júnior, delegates to the municipality the responsibility of carrying out the itinerant collection of containers periodically. This was an example of successful coordination to promote public policies on topics of common interest. Figure 8 illustrates the structure and promotional material of the 2020 itinerant collection campaign.
This was the first major result obtained by the Sustainability Committee created by AFCOP with Solidaridad’s support. The committee is a group of stakeholders directly or indirectly involved in the sugarcane chain in the region and meets periodically to discuss and draw up action plans for common problems shared by many in the area.

The committee’s structuration began when Solidaridad fostered a stronger relationship between AFCOP and the energy sector company Raízen to work on themes shared between the Muda Cana Programme and Raízen’s continuous improvement programme, Ellos Raízen. Appropriate disposal of pesticide containers was the first challenge identified. Over time and as actions were consolidated, other stakeholders joined the committee, increasing its relevance. Today, the Sustainability Committee comprises AFCOP, Raízen, the sugarcane mill Usina da Mata, Orplana, and Valparaíso’s City Council and Municipal Department of Agriculture and the Environment.

Still in 2018, the association struggled with financial problems due to many producers leaving the association, and it almost had to shut down. Again, the support of the Muda Cana Programme was vital to restructure the association and allowing it to keep providing comprehensive TA services. AFCOP and Muda Cana conducted a financial analysis to understand the extent of the problem, identified possible actions and agreed on an action plan. By implementing these measures, the association was able to ride out the crisis and increase its liquidity and profitability ratios. In addition to the financial plan, the association also implemented actions to improve and consolidate the added value provided to its members. With a portfolio of TA services that responded to the needs of producers at each specific moment and a solid structure to deliver them, AFCOP increased its relevance and managed to retain most of its producers.
During this restructuring and review of its services, AFCOP submitted two project proposals to call for proposals issued by the Muda Cana Programme, both of which were selected. In 2020, the programme provided support for an initiative to structure services related to precision agriculture and geotechnology (systematization of areas, weed and failure mapping, among others), an innovative project using technology to maximize crop yields.

The association previously hired external actors to implement this service when required by its associates. Now it has the necessary knowledge to provide this service in-house, reducing costs and increasing the quality of service. AFCOP designed a model changing its organizational and cost structures, implementing an additional fee within the limits of its governance, and creating a source of revenue from unaffiliated users. Now the association aims to become a regional reference in offering these solutions and providing services to mills and cooperatives.

In the second call for proposals, the association hired a consulting company to structure a business plan to design, develop and implement strategies to promote the services it provides, train its team, identify new opportunities, create value, and establish a change in its vision in an attractive, competitive manner.

This project revised the services provided by the association and created the concept of the ‘AFCOP ecosystem’, as the association is now aware that it does more than simply provide services to its associates: it offers an ecosystem of support to sugarcane suppliers, acting together with numerous stakeholders throughout this process. The AFCOP ecosystem is represented in Figure 9, which shows the whole cycle of contact with sugarcane suppliers and partners, from planting to the post-harvest stage.

AFCOP aims to become a regional reference in offering these solutions, also providing services to mills and cooperatives.
This business plan was a structural action that favored the improvement of TA, which makes clear that both fronts of action are complementary and interdependent. The details of the actions taken at AFCOP related to structural support and comprehensive TA are shown in tables 4 and 5, respectively.
### Table 4
**ACTIONS TO STRENGTHEN THE ASSOCIATION – STRUCTURAL SUPPORT**

<table>
<thead>
<tr>
<th>Association’s needs</th>
<th>Organizational support actions</th>
<th>Results</th>
<th>Long-term objectives</th>
</tr>
</thead>
</table>
| Ensuring the association’s economic viability | Financial and budgetary analysis of the association  
Action plan for reversing budget deficits | Improvement in economic indicators:  
- Sale of assets used for the provision of medical and dental services  
- Cuts to the annual budget, turning deficits into surplus  
- Increase of 540% in the association’s liquidity index (current liquidity including investments) between 2018 and 2020  
- Increase of 345.45% (profit margin) and 285.71% (return on investment) in the association’s profitability indices between 2018 and 2020  
Behavioral understanding of the association’s governance and economic structure | Economic viability of the association |
<p>| Retaining affiliated producers and attracting new members | Strategy for communication with producers | 10% increase in the number of new members | Increase in the number of affiliated producers |
| | Strategic collaboration with partners | Mills recommend the association’s services to producers | |
| | Development of the association’s service portfolio | Portfolio of services offered (comprehensive TA) developed in 2017; Restructuring in 2020 with new services | |</p>
<table>
<thead>
<tr>
<th>Association's needs</th>
<th>Organizational support actions</th>
<th>Results</th>
<th>Long-term objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding potential areas for improvement in the association</td>
<td>Analysis of key variables for managing the association</td>
<td>The association’s management index rose from <strong>3.07/5</strong> to <strong>4.11/5</strong></td>
<td>Knowledge of how to manage staff and resources to meet producers’ needs within their financial capabilities based on management indicators</td>
</tr>
<tr>
<td>Reorganizing the association’s structure to improve service provision</td>
<td>Process mapping to identify the association’s areas of action and services</td>
<td>Association’s team and service providers were reorganized; 2 employees focused on service provision were added to the team</td>
<td></td>
</tr>
<tr>
<td>Attracting new customers for the association’s geotechnology services, contributing to its economic viability</td>
<td>Development of a strategic action plan to improve the association’s actions and increase its engagement with producers and regional organizations</td>
<td>Engagement with <strong>one</strong> mill that recommends the association’s services</td>
<td>Engagement with new affiliated producers, mills and other local organizations</td>
</tr>
</tbody>
</table>
### Table 5
**ACTIONS TO IMPROVE COMPREHENSIVE TA**

<table>
<thead>
<tr>
<th>Association’s needs</th>
<th>TA support actions</th>
<th>Results</th>
<th>Long-term objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transferring knowledge on best agricultural and management practices to producers</td>
<td>Assessment of producers’ socio-environmental practices using the Rural Horizon (Horizonte Rural) tool</td>
<td>Assessments performed for <strong>100%</strong> of producers, 29% completed by the association’s team</td>
<td>Improving production and management practices on properties and legal, environmental, and labor compliance</td>
</tr>
<tr>
<td></td>
<td>Training of the technical team to implement TA directed to production sustainability</td>
<td><strong>4</strong> technicians trained in TA activities directed to production sustainability</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>14</strong> producers receiving individualized technical assistance with periodic monitoring and action plans</td>
<td></td>
</tr>
<tr>
<td>Enabling correct disposal of pesticide containers in the region</td>
<td>Support in engaging stakeholders in the region interested in the topic</td>
<td><strong>5</strong> itinerant campaigns collected <strong>26,951</strong> pesticide containers</td>
<td>Providing structure for disposal of hazardous waste</td>
</tr>
<tr>
<td></td>
<td>Public-private coordination to promote the itinerant collection of pesticide containers</td>
<td>Public-private partnership established to enable annual collection campaigns with the enactment of municipal law # 2318/19, which created the Clean Countryside Day (Dia do Campo Limpo) to remove empty pesticide containers in the municipality’s rural area</td>
<td>Itinerant collection campaigns, including training on procedures for the correct disposal of pesticide containers</td>
</tr>
</tbody>
</table>
### Association’s needs
- Engaging stakeholders in the region to work on issues related to producer sustainability
- Expanding the association’s area of activity, number of members, and services, contributing to its financial viability

### TA support actions
- Support in engaging stakeholders in the region interested in the topic
- Financial support to obtain digital field tools to modernize the services provided

### Results
- Sustainability committee created and active, involving the main stakeholders in the region
- Before the project, the association needed up to 14 days to provide geotechnology services. Now it can provide in-house services in 2 days
- 51% decrease in the association’s costs to provide geotechnology services
- Engagement with one mill that recommends the association’s services
- Complete autonomy to provide geotechnology services to small and medium-sized producers who would not have access to these technologies

### Long-term objectives
- Expansion of the committee with government actors and other stakeholders related to sugarcane production (mills) for a comprehensive approach to the sector’s problems
- Association recognized as a regional reference centre in geotechnology and providing these services to more affiliated producers, contributing to better sustainability in the sugarcane chain
- Engagement with new affiliated producers, mills and other local organizations
The support actions carried out at AFCOP also have a general, positive impact on improving producers’ sustainability. The association’s actions on the topic of pesticides, for example, directly impact the three pillars of sustainability:

- **In the environmental pillar,** correct disposal of pesticide containers reduces the risk of soil or water contamination and the contamination risk for animals in the area.

- **In the social pillar,** correct handling and disposal of pesticides reduces contamination risks for producers and workers responsible for storing and applying these products.

- **In the economic pillar,** improved inventory control, combined with the application of pesticides following agronomic guidelines and the use of precision agriculture, can contribute to reducing cultivation costs.

### A stronger, more resilient association

Solidaridad’s work with AFCOP was another relevant step for consolidating a strategy for action in the Brazilian sugarcane production chain.

AFCOP also saw its resilience put to the test throughout the programme. Due to contextual changes, such as a mass loss of affiliated producers, or opportunities created by innovative technologies, AFCOP has had to learn how to mobilize its structure to adapt several times. That meant adding or cutting services while at the same time strengthening its structure to appropriately allocate its limited resources. Those actions contributed to allowing the association to keep operating in different contexts and improve the sustainability of its producers, who are working on essential topics such as the disposal of pesticide containers and the reduction of crop waste. Many results mentioned above for our work with Socicana are also applicable to the AFCOP case: mutual learning, win-win actions, and strengthening and improving the cost-effectiveness of comprehensive TA. However, the highlight...
of this joint work is the expansion of Solidaridad’s benchmarking to associations with a different profile.

Working with AFCOP, a small association located in a region without a strong tradition of sugarcane cultivation, was an opportunity to understand a different scenario with often structural challenges.

Examples of such challenges are the absence of suitable places for pesticide disposal and geotechnology companies operating in the region.

This means that the need for resilience is not restricted to the big players in the production chain. On the contrary, smaller actors must learn to be even more resilient to navigate the challenges posed by the situation.

One example is the financial fragility of a small association. With a small membership, the revenue of such an association suffers a much more significant impact if a few producers leave than would be the case in larger organizations. Keeping the association financially viable and relevant to producers is essential, especially for entities fitting this profile.

Gender is also an item that should be highlighted in AFCOP’s work. AFCOP is one of the few associations led by a woman, Ednéia Marchetti, and this female management has made a difference in making it a reference in this theme. Over time and through joint actions, it was possible to monitor Ednéia’s empowerment and the growing respect she received from the association’s team, stakeholders, and especially the AFCOP board. Her leadership was essential to achieving good results, as she was responsible for coordinating the implementation of several proposed actions. This is an example to be shared with other associations and an inspiration for other women in the sugarcane production chain.

The partnership with AFCOP gave Solidaridad an understanding of other needs associations and producers may have and taught us valuable lessons about the joint development of solutions to meet those needs. Today AFCOP is a reference in continuous improvement in small, female-led associations and a role model for other associations participating in the Muda Cana Programme.
4. Lessons learned

Offering high-quality technical assistance customized to meet the demands of rural producers is no easy task. Although associations stand out for the proximity and trust they have created with farmers over the years, large and diverse gaps in structural aspects remain, which hold back the performance of these organizations and their response to complex or unexpected situations. Solidaridad’s work with Orplana aimed to support associations in facing these challenges, strengthen them as organizations, and develop ways to understand and address these situations to provide high-quality, comprehensive TA.

The main lesson learned from this programme is that context and each association’s approach must be considered to determine effectiveness. One of the most relevant factors for the success of this approach, showcased by both cases presented here, is that the starting point for effectiveness is understanding the needs of each association and its producers was the secret of the success of the Muda Cana Programme.
producers. Respect for this premise was essential to the programme’s success.

In the six years since the project started, the Muda Cana Programme was able to be implemented in 23 of Orplana’s 32 member associations. We could not identify a single one of them that was exactly like another, even for associations in the same region and with the same producer profile. There are common challenges, but they occur in different contexts. This was an important lesson learned with the work of the Muda Cana Programme: **starting from the premise that a single approach can meet the needs of all associations is a bad idea.** Understanding associations’ and producers’ needs and customizing actions to meet those needs are critical factors for the cost-effectiveness of an intervention. For that reason, automatizing TA to replace the presence of technicians in the field, or believing that a single, one-size-fits-all solution can serve all producers equally are not reasonable approaches. Automation is an exciting alternative for collecting and systematizing data and information, which can help with upcoming work and direct the actions to be performed.

Mapping the needs of associations and producers was only possible with the engagement and commitment of all actors involved. **Reaching an understanding is a process that requires empathy, active listening, and above all, trust.** That trust was built upon a long-term relationship with the associations and Orplana’s encouragement. Today, Solidaridad is one of the few civil society organizations open to working with a segment as closed and conservative as the sugar and ethanol sector.

Another important lesson learned from the project was that strengthening associations is a requirement to improve their comprehensive TA and increase the

Offering high-quality technical assistance customized to meet the demands of rural producers is no easy task.
reach of its impact. We understand a strong association as one that has a well-defined organizational structure focused on serving producers, well-defined areas and roles, low turnover of affiliated producers, economic viability, and the ability to respond to the challenges and opportunities presented by the context. Acting to improve the comprehensive TA offered is impossible if an association cannot meet the producer’s needs and stay afloat. For that reason, the work of the Muda Cana Programme begins with structural support and the implementation of changes to improve comprehensive TA.

We identified that the comprehensive TA offered by associations may include various components depending on their producers’ profiles and needs. Supporting producers in their daily demands is more important for the TA than offering a broad portfolio of services. Furthermore, working with associations is also a cost-effective way to impact thousands of producers — without these organizations, they
would be dispersed, and it would hardly be possible to improve service delivery, especially to small farmers.

**Working with associations taught us important lessons that can be applied in Solidaridad’s work** and was an essential step for creating mechanisms that made sense for these organizations, since they directly participated in developing these mechanisms. This sense of ownership was also responsible for significant organizational and structural transformations.

However, it can be noted that associations’ and producers’ are slow to accept new technological, managerial, or cultural solutions. Still, the chances of success are more significant when the changes come from needs that the associations themselves identify. It is essential to respect this time needed for transformation and consider it when sizing project goals and deadlines.

Solidaridad intends to continue our partnership with Orplana and the associations in this joint work to support producers. This continued effort involves improving actions to assess the necessary level of structural support (see section 2.4), aiming to improve team professionalization and the quality of support offered to associations. We also intend to foster the engagement of other stakeholders interested in improving the TA offered by the Muda Cana Programme, such as sugar and ethanol buyers and the agricultural input supply chain. This engagement has the potential to contribute to continued structural support for associations and the provision of an increasingly comprehensive and relevant TA so that the sugarcane sector can maintain its position as a model of sustainability in Brazilian agribusiness.

Solidaridad intends to continue supporting associations and providing increasingly comprehensive and relevant TA so that the sugarcane sector can maintain its position as a model of sustainability in Brazilian agribusiness.