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MULTI-STAKEHOLDER VARIETAL INNOVATION PLATFORMS

A SOCIOTECHNICAL PARTNERSHIP RESEARCH SCHEME ASSESSED IN BENIN

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Résumé — La recherche participative en amélioration des plantes butte généralement sur la question de la diffusion et du changement d'échelle de résultats dont la validité est très localisée. Le dispositif de plateforme d'innovation variétale cherche à résoudre cette difficulté en s'assurant que le point de vue des personnes impliquées dans l'évaluation est représentatif d'un large groupe d'intérêt et que les résultats de l'évaluation seront validés et relayés par une organisation. Chaque plateforme est conçue comme un dispositif socio-technique qui comporte un comité de pilotage de 5 membres (CP), un club constitué par 25 utilisateurs et experts locaux (CUEL), une parcelle commune d'expérimentation variétale et un réseau d'environ 15 à 20 parcelles chez les agriculteurs. Elle vise à décrire, évaluer et diffuser des variétés adaptées à un groupe cible d'acteurs partageant un même jeu de contraintes environnementales, agronomiques et socio-économiques. Le partenariat entre tous les acteurs est constitué, organisé et géré suivant six principes déclinés dans une charte : légitimité, compétence, efficacité, démocratie, solidarité et transparence. Deux plateformes expérimentales ont été créées dans les communes de Zé et Tori-Bossito, au sud du Bénin, dans l'intention d'évaluer des variétés de plantain proposées par le

Centre africain de recherche sur le bananier et le plantain. Elles ont fait l'objet d'un suivi et d'une enquête environ 20 mois après leur création. Les deux plateformes ont réalisé toutes les activités programmées par leur CP et quatre variétés ont été identifiées comme intéressantes par les CUEL. L'enquête montre que (i) les conditions favorables à la diffusion et au changement d'échelle sont réunies dans les projets de valorisation formulés par les membres des CP et des CUEL, (ii) les projets des CP reposent sur la diffusion du dispositif alors que ceux des CUEL reposent sur la diffusion des variétés et (iii) le projet de Tori est plus collectif que celui de Zé. Notre interprétation se fonde sur le respect et l'écart aux principes de la charte. Elle montre que les principes de légitimité, de compétence et de solidarité sont les meilleurs facteurs de réussite.

Mots clés : plateformes multi-acteurs, innovation variétale, recherche en partenariat, Afrique, sélection participative, évaluation participative, banane plantain, changement d'échelle, innovation

Abstract — Participatory plant breeding research may be hampered by the fact that results that have been obtained in very specific localized settings cannot be disseminated and scaled. Varietal innovation platforms aim to overcome this problem by ensuring that the viewpoints of people involved in assessments are representative of broad interest groups and that assessment results will be validated and disseminated by an organization. Each platform is designed as a sociotechnical scheme consisting of a five-member steering committee (SC), a club with a membership of 25 local users and experts (CLUE), a common varietal test plot and a network of around 15-20 on-farm plots. The aim is to describe, evaluate and disseminate improved varieties to target groups of stakeholders faced with the same environmental, agricultural and socioeconomic constraints. Partnerships between all of these stakeholders are set up, organized and managed according to six principles outlined in a charter—legitimacy, competence, efficiency, democracy, solidarity and transparency. Two experimental platforms were set up in the villages of Zé and Tori-Bossito, in southern Benin, to assess plantain varieties released by the *Centre africain de recherche sur le bananier et le plantain* (CARBAP). These platforms were monitored 20 months following their creation. The survey showed that the two platforms had successfully carried out all of their initially planned activities. The CLUEs identified four interesting varieties. The survey focused on the future plans made by SC and CLUE members to tap the benefits of knowledge acquired during 18 months. It showed that: (i) their plans provided conditions favorable for varietal dissemination and scaling, (ii) SC plans were based on transfer of the platform scheme whereas the CLUE plans were based on varietal dissemination, and (iii) the Tori plan was collective while the Zé plan was more individually focused. Our analysis highlighted that the respect of the legitimacy, skill and solidarity principles was most required to expect successful dissemination of the results obtained on the platforms.

Key words : multi-stakeholder platforms, varietal innovation, partnership research, Africa, participatory plant breeding, participatory assessment, plantain, scaling, innovation

INTRODUCTION

Different systems have been designed to enhance synergy between researchers and farmers, as notably exemplified with participatory forage barley breeding in arid Mediterranean regions (Ceccarelli *et al.,* 2001), with upland rice breeding in Nepal (Sthapit *et al.,* 1996) and, to a more general extent, with the *Comites de Investigacion Agricola Local* in Latin America, which are research groups managed by farmers for the benefit of their communities (Ashby *et al.,* 2000). In Benin, Lançon *et al.* (2004b) conducted a cotton breeding experiment aimed at formalizing a form of partnership between research institutions and farmers' organizations (FOs).

All of these schemes combine field research and more or less formal discussions between researchers, extension agents and farmers. Farmers are often selected on the basis of their proximity, sometimes their expertise, know-how or familiarity with local conditions. There is seldom a formal link between the group participating in initiatives and the broader group of potential beneficiaries. People involved in the scheme management are thus generally those who also participate in the experiments and who, above all, could obtain compensation for their personal investment. In such conditions, it is hard to disseminate the innovation beyond the 'project group', which hinders scaling-up (PRGA, 2003). As recently pointed by Sangiga *et al* (2009), we feel that this is a major shortcoming of the most common participatory research systems.

To overcome this barrier, a scheme—called a varietal innovation platform and inspired of Faure *et al* (2010) —was set up in April 2006 within the framework of a project called INNOBAP to assess new plantain varieties bred by the *Centre africain de recherche sur la banane et le plantain* (CARBAP). Four countries (Benin, Cameroon, Gabon, Guinea) have participated in this experiment by each setting up two platforms designed (Lançon *et al*, 2009) around two complementary foci: a governance authority whose organization-representative members are especially responsible for policymaking, and a club of experts representatives of all of the subsector, production and marketing know-how, responsible for assessing germplasm. This scheme provides an interface between research institutions and users. We consider that it is conducive to innovation since it is designed to host, test and develop inventions within a scaling framework while, on the other hand, providing information and questions to researchers.

In this study, we focused on assessing the two platforms set up in Benin, with the aim of gaining insight into the relevance and shortcomings of the platforms. The scheme, composition of the platform bodies and their achievements are first described and then the results of a survey on the involvement of the different members in the joint venture and compliance with the management principles *a priori* set down in the charter by the partners are analysed.

1. CONCEPT UNDERLYING THE PLANT BREEDING PLATFORM AND ITS MANAGEMENT PRINCIPLES

A varietal innovation platform (Lançon *et al*, 2009) brings together all potential users, i.e. commodity channel stakeholders, in the germplasm assessment process. This includes a discussion component, which formalizes the partnership between researchers and users, and a field scheme to monitor and evaluate germplasm.

The discussion component includes two authorities, *i.e.* a steering committee (SC) and a club of local users and experts (CLUE). First, the project members draw a charter (2-3 days workshop), in which they specify the operational conditions, the commitments of all parties and the set of environmental, farming system and market constraints to overcome. These identified constraints are those for which genetic improvement solutions are possible—they are identified through initial assessments carried out by researchers and are confirmed by other SC members. Table 1 presents the set of constraints of the two platforms in Benin.

Table 1. Set of plantain cropping constraints for the Zé and Tori-Bossito platforms.

	Zé	Tori-Bossito
Germplasm	Plantain	Plantain or dessert banana
Agronomy	Semi-intensive cropping system Mixed crops High pest and disease pressure: weevils, nematodes, black leaf streak	Low productivity extensive cropping system Mixed crops High pest and disease pressure: weevils, nematodes, black leaf streak
Farm management	Family labour	Mainly family labour
Socioeconomic and market factors	Relatively remote urban market Consumed as chips and *aloko*	Periurban region High land pressure Dominant urban market Eaten raw of processed into chips, *aloko*, doughnuts

The SC consists of representatives of project partner bodies (FOs, NGOs, research institutions, development organizations, *etc.*). While ensuring that the charter signed by all members is properly applied, it manages the platform, sets the goals, adopts and implements the financing plan, makes strategic decisions to ensure that the operations are carried out properly, manages the operations, and finally disseminates the results.
The SC members *a priori* define the criteria to which the members of the CLUE must fulfil, for example:
- be a banana grower, landowner and serious worker;
- readily accept innovations;
- participate in activities of the *Centre communal de promotion de l'agriculture* (CECPA);
- be willing to share experience with others.

The CLUE is responsible for germplasm assessment. It makes effective use of the expertise of professional stakeholders of the commodity channel (farmers, nursery gardeners, processors, restaurant owners, sellers, researchers, extension agents, etc.).
The field scheme is designed according to the 'mother–baby' model (Snapp, 1999). It consists of a common reference plot (CRP) and a network of individual plots (NIP). The CRP pools all varieties to be tested, which are cultivated according to a crop management sequence tailored to the set of prevailing constraints. The selected site should be easily accessible for hosting meetings and assessment workshops. The network of individual assessment plots is set up by all CLUE farmers, who voluntarily evaluate the performance of a few varieties under field conditions.
The platform is managed by a partnership involving researchers and other subsector stakeholders. The partnership definition that we took as reference (Lançon and Hocdé, 2006) was "a group of formally linked stakeholders who pool their resources to benefit jointly designed programmes so as to achieve shared objectives". We specified this definition according to the following six charter principles (Table 2):

1. Legitimacy. This principle shapes the steering committee. SC members are thus legitimate individuals, i.e. representing the interests of their source organizations while devoted to ensuring that the platform is managed so as to achieve the common goals.
2. Competence. The club of local users and experts (CLUE) consists of skilled stakeholders who are recognized by their peers as able to conduct a complete and relevant assessment of varieties.
3. Efficiency. SC members are committed to fulfilling all activities required to achieve the common goals established when the platform was founded. They have to show that they are capable of collaborating to make joint decisions while also bearing the consequences.

4. Democracy. To ensure a long-standing partnership, no member should feel excluded and all members should have the impression that they are recognized and respected. Moreover, the decision-making authority should not just be in the hands of a few members. It is also essential to ensure that all the members have good access to information.
5. Solidarity. The partnership is based on the commitment of all partners to jointly strive to meet a mutual objective. In practice this commitment involves a contribution to the common resources (land, expert network, facilities, labour, etc.). The partners accept to share the risks in the hope that there will be a potential benefit, and in this way they strengthen the autonomy of the collective scheme.
6. Transparency. The participants can hope to reach specific objectives, corresponding to personal or institutional expectations. The probability of conflicts arising between partners may be reduced if such expectations are specified and debated at the beginning, when partnership is building.

Table 2. The steering committee and the club of local users and experts are affected differently by the six management principles of the platform.

	Steering committee	Club of local users and experts
Legitimacy	++	na
Competence	+	++
Efficiency	++	na
Democracy	++	na
Solidarity	++	+
Transparency	++	++

++ application of the principle essential, + favourable application, na unsuitable application.

2. SURVEY MATERIAL AND METHODS

2.1. Study environment

The two studied platforms are located on Allada plateau, southern Benin, in the villages of Zé and Tori-Bossito. The economy on this plateau is mainly based on family farming. The rural village of Zé (6° 45'N, 2° 18'E) is located around 15 km from the road between Cotonou, the capital of Benin, and the city of Allada. Its agricultural area includes many lowlands that are suitable for banana cropping. The periurban village of Tori-Bossito (6° 30'N, 2° 10'E) is closer to Cotonou and is located alongside of the road between the villages of Allada (30 km) and Ouidah (20 km). Its agricultural area is on a plateau with "terre de barre" or lateritic degraded soil. It is subjected to high land pressure and is less suitable for plantain cropping.
Plantain is not a major food crop in Benin, but it is now being cropped to an increasing extent. It is mainly grown in lowland areas in rotations with vegetable or rice crops. It is a festive food commodity that is chiefly sold on local and urban markets in Cotonou. There is high market demand for plantain varieties in this Cotonou region.

2.2. Survey conditions

Carried out in November 2007, the field survey was aimed at gaining insight into how members of the Zé and Tori-Bossito platforms viewed the scheme. Two semidirectional interview grids were prepared and tailored to the three categories of individuals surveyed: people involved in field activities, in governance, and external people.

The interviews were conducted at the interviewees' homes or on the survey plantation, in the Fon language or French. The survey data were supplemented by informal observations and discussions that took place outside of the formal interview framework. The interviewers also returned to the field to record the GPS coordinates of the farmers' houses and collect

supplementary data. Finally, the conclusions of this study were shown to the interviewees for validation.

2.3. Stakeholders interviewed

The survey focused on two categories of platform members—CLUE and SC, including 22 people at Zé and 29 people at Tori-Bossito (Table 3). At each site, the interviewers also questioned two people not associated with the platforms, i.e. a local elected representative and a person with close relations with a CLUE member.

Table 3. People interviewed in the varietal innovation platforms at the villages of Zé and Tori-Bossito, and outside of these platforms.

		Zé		Tori-Bossito	
	Field or function	Men	Women	Men	Women
CLUE	Production	10	3	14	4
	Propagation	1		2	
	Selling		1		1
	Processing				1
SC	President	*		1	
	Vice-president	1		1	
	Secretariat	1		1	
	Other members	2		1	
Outside	Extension	1		1	
	Neighbours	2		2	
Total interviewees		18	4	23	6

SC: steering committee; CLUE: Club of local users and experts

* : person who left for long-term training after the beginning of the project

3. RESULTS AND DISCUSSION

3.1. Composition and organization of the two platforms

The Zé and Tori-Bossito platform SCs were set up in April 2006. They each consisted of five members who were representatives of the project partner organizations (Table 4). The Zé platform CLUE had 22 members while the Tori-Bossito platform CLUE had 25 members, with a minority of female members (Table 5).

Table 4. Composition of the Zé and Tori-Bossito varietal innovation platform steering committees.

	Zé	Tori-Bossito
President	UPS coordinator	GERME coordinator
Vice-president	UCP president	UPS/UCP coordinator
Secretary	INRAB researcher	INRAB researcher
Member	GERME coordinator	PSSA coordinator
Member	CeCPA director	CeCPA director

CeCPA: Centre communal de promotion de l'agriculture; GERME: Groupe d'appui, d'encadrement et de recherche en milieu rural (NGO); INRAB: Institut national des recherches agricoles du Bénin; UCP: Union communale des producteurs; UPS: Union des producteurs du Sud; PSSA: Programme spécial pour la sécurité alimentaire

Table 5. Composition of the Zé and Tori-Bossito platform clubs of local users and experts.

	Zé		Tori-Bossito	
	Women	Men	Women	Men
Production	3	17	4	16
Propagation		1		2
Selling	1		2	
Processing			1	
Total	4	18	7	18

From a geographical standpoint, Zé platform farmers were slightly less dispersed than those of the Tori-Bossito platform. Tori-Bossito farmers were living further from their CRP than Zé farmers (mean distance 2 km, or 4 km round trip), so it took them 1 h more for each round trip to the plots on foot. Moreover, the mean distances between farmers' homes were greater at Tori-Bossito (5.5 km) than at Zé (4 km).

3.2. Activities and achievements of the two platforms

The initiatives planned at the beginning of the project and included in the charter were completely fulfilled by the two platforms. Varieties grown on the CRP were assessed 6, 9, 12, and 17 months after sowing. At each assessment meeting, farmers growing the same varieties on their plots exchanged their experience. Tasting sessions were organized by CLUE members. Finally, five of the eight assessed varieties were highly appreciated, but no representative of Cotonou urban market participated.

Activities that had not been planned initially were also included at the request, and to the great satisfaction, of CLUE members: technical training (rapid shoot propagation, management of a micropropagated plantlet nursery, plantation management), distribution of a plantain cropping handbook, and visits between farmers of each platform.

For both platforms, the same funding or cutting supply problems were encountered and solved in the same way by the SCs, in close collaboration with researchers. Similar decisions were made after discussions between certain members of the two committees.

3.3. Member involvement

CLUE farmers were committed to planting and monitoring new disseminated varieties and participating in meetings to share their results. Most of them (13 Tori-Bossito farmers and 10 Zé farmers) considered that they had complied with these commitments, but two Tori-Bossito farmers and three Zé farmers had pulled out before completion for various reasons (illness, discouragement, remoteness). At Zé, four other farmers also had not received plants because they were living in remote and relatively inaccessible regions. These farmers were therefore never involved in the assessment workshops or in the information exchange sessions.

At Tori-Bossito more than at Zé, the 'leaders' took initiatives and created an upbeat atmosphere in the workshops. Six SC members out of the eight interviewed felt that the Tori-Bossito platform was more dynamic than the Zé platform—CLUE members were more involved and there was a better atmosphere—as also confirmed by the assessment workshop participation statistics (Table 6). Members of both CLUEs were also interested in knowing which was the 'best' platform, but the motives were more apparent at Tori-Bossito and included tight solidarity between members. For instance, farmers with access to rabbit manure regularly offered some to other CLUE members to fertilize their plantations. These farmers were always available to guide the interviewers to their colleagues' plots.

Table 6. Rate of participation of CLUE members in workshops held in the Zé and Tori-Bossito platforms.

	Zé	Tori-Bossito
Rate of participation in the four workshops (%)	29	50
Rate of participation in at least two workshops (%)	66	88

Tori-Bossito CLUE members more readily made future plans—during the survey, 41% of them had already thought about ways to take maximum advantage of the acquired experience, as compared to only 20% at Zé. At Zé, farmers wanted to limit dissemination of the results just to their group or to neighbouring farmers. Their priority was to increase the size of their plantain plots, to continue the meetings and to be regularly supported by a technician from the Centre communal de promotion de l'agriculture (CeCPA). At Tori-Bossito, CLUE members were striving for more, since they wanted to develop a plantain commodity channel. They thus planned to found an association open to all stakeholders, with the aim of increasing plantain production and marketing. The Tori-Bossito SC members supported this idea, but they also felt that this initiative should be managed by the farmers themselves. The head of the CeCPA at Tori-Bossito was ready to help set up the administrative files, while the NGO GERME would provide support by seeking funding.

3.4. Compliance with the principles and analysis of deviations

Our analysis was focused on the six main principles, on recording the main deviations from these principles, and on the possible impact of these deviations on the platform results.

3.4.1. Legitimacy principle

When the Zé and Tori-Bossito platform SCs were founded, the SC members met the legitimacy criteria outlined in the theoretical model through their initial level of responsibility and personal involvement, regardless of whether they were representatives of research institutions, GERME, FOs or extension services. However, only research and GERME representatives offered a formal commitment from their organizations, thus confirming their clear intention to fulfil their mandated responsibilities. During the project, FOs gradually withdrew because they did not have a very strong local representation or stakes with respect to plantain cropping. Moreover, since there was no professional organization representing the commodity channel stakeholders (nursery gardeners, sellers, processors, restaurant owners, etc.), there were finally no SC members who could expect potential benefits from new varieties.

3.4.2. Competence principle

Compliance with the CLUE membership criteria was quite well fulfilled at Tori-Bossito, but to a lesser extent at Zé where some farmers were selected just because they owned a lowland field. For both of these platforms, CeCPA agents had a major role in selecting farmers for membership. The FO representatives also offered advice on the candidate farmers. After the preselection, the researcher visited each candidate and finally around 20 farmers were selected per platform.

It turned out to be hard to select representatives of other professional categories in the subsector (nursery gardeners, sellers, haulers, processors) because the plantain commodity sector was not very developed. This was a handicap for the platform.

3.4.3. Efficiency principle

The two SCs fulfilled most of the commitments set out in the charter—they efficiently managed the platform and organized the planned activities, and regularly debriefed the authorities. However, we noted a lack of information exchange between members of each SC, and between the platforms and the CARBAP, which had supplied the plantain varieties. Each member's role was outlined and contractualised via the charter, thus avoiding misunderstandings that commonly arise in informal schemes (Floquet *et al.,* 2006). Platform

activities could be tailored to the actual field conditions and to participants' requirements by decentralising the management of each platform.
The personal investment of each member of both SCs varied. FO and CeCPA members were relatively unaware of how the platforms functioned or their activities, and they were not very involved in the workshops. Conversely, the national coordinator, i.e. an INRAB scientist and member of the Tori-Bossito SC, had an overriding position—he decided on the workshop dates, invited other members and he also coordinated the workshops, including those held at Zé, even though he was not a member of the Zé SC. Both platforms thus benefitted from his expertise, but he was careful not to influence the assessments conducted by both platforms.
On the other hand, the Zé and Tori-Bossito CLUEs had separate organizations. At Zé, the SC had the support of the CeCPA extension service technician in transferring information to all CLUE members. As many CLUE members did not have a cell phone, this technician visited them individually to keep them informed. The farmers had little interaction with the SC. The approach differed at Tori-Bossito: the extension service had no technician available, so the SC decided to organize interactions with the CLUE in a collaborative rather than consultative way (Sperling *et al.*, 2001) and to pass the responsibility on to the farmers by making them 'area representatives'. In each area or quarter, a reliable middleman who could be easily reached by telephone was designated by other CLUE members living in the same area. These intermediaries were directly contacted by a SC member who conveyed the dates and meeting places, and the middleman in turn disseminated the information to participants in his area. In this scheme, Tori-Bossito CLUE members felt they had the confidence of their SC and were satisfied as to how they were involved in the project. These observations highlight the extent to which a management decision can influence the adoption of a platform by its stakeholders, and their capacity to take initiatives and make future plans.

3.4.4. Democracy principle

The democracy principle was not always respected. During meetings, decisions were democratically made (one member = one vote), but some members did not participate in this process because they were often absent. Moreover, SC members were not always all present for decision making. Sometimes the researcher took the initiative, e.g. for deciding on a tasting session date when the plantain bunches were ripe. He thus held a dominant organizational and decision-making position. He also had greater decision-making power than the other members since he was responsible for the budget. These operational conditions finally seemed to be suitable since no participants were excluded from important decisions and most of them did not wish to be more involved.

3.4.5. Solidarity principle

In the charter, all partner bodies were committed to providing the platform with access to their resources. The research institution had to supply the platform coordinators, their plantain production and propagation expertise, and the project funding. The extension service (CeCPA) had to provide the meeting facilities and, where possible, technicians and resources to which they had access through large-scale extension programmes. The NGO GERME was supposed to contribute through its good overall knowledge of the environment and skills in the efficient management of assessment activities planned via the platforms. Finally, the FOs were supposed to assemble a group of voluntary experimental farmers and pinpoint a field for the CRP.
All partner structures at least partially fulfilled these commitments. FOs were involved in the selection of farmers, but they were unable to select a sufficient number amongst their members or to supply a CRP. CLUE farmers were generally not FO members, there were no links between these two groups, and FO representatives never clearly understood the challenges for their organization—they gradually withdrew their full commitment to the project.

3.4.6. Transparency principle

SC members stated that they had specific institutional expectations, but these differed depending on the source organization (Table 7).

Table 7. Institutional expectations noted by the Zé and Tori-Bossito SC members.

Research institution	Test, validate, improve and promote an innovative research scheme, including a partnership with the main stakeholders Generate knowledge on plantain varieties Develop peer-approved participatory research methods Transfer knowledge to participants on plantain cropping and, on a larger scale, on varieties and the platform
GERME NGO	Acquire new expertise on the crop and platform Acquire experience and nurture the partner network
Farmers' organization	Assess the platform as a site for discussion with researchers and a subsector structuring tool Strengthen the organization by recruiting new members or by fulfilling the needs of current members

Theoretically, this range of expectations was in line with the mutual objective, which was to identify good plantain varieties. For the research and GERME representatives, fulfilling the mutual objective helped to validate the scheme and therefore the acquired expertise, but the situations were not as clearcut for the other partners. FO representatives were naturally devoted to promoting farmers' needs, i.e. higher yielding varieties better tailored to the market. However, they were not devoted to fulfilling the mutual objective and readily deferred their priorities—hence the Zé platform president quit in the middle of the project and was not replaced, and FO representatives in the Tori-Bossito SC also gradually withdrew from decision making and assessment activities.

CLUE members put forward many reasons for their personal involvement, and their motives were more diversified at Tori-Bossito than at Zé (Table 8). The main reason was the hope of improving their income and their level of knowledge of the crop.

Table 8. Initial motives of the Zé and Tori-Bossito CLUE members (in number of citations, many responses possible).

	Zé		Tori-Bossito	
	Women	Men	Women	Me
Increased income	2	8	2	
Curiosity (new varieties)	0	7	1	
Increased knowledge	1	2	1	1
Belonging to a group	0	0	1	
Recognition in family and local circles	1	0	1	

This diverse range of motives of CLUE members reflects their occupational diversity. All of them were seeking to boost their income: farmers, by using higher yielding varieties and learning to cultivate plantain better; nursery gardeners, by mastering new propagation techniques; sellers and processors, by producing plantain themselves in order to sell more, by boosting the size of their plantain producer network, and gaining privileged access to credit. Twenty months after launching the platform, it was still the group participation in the project more than the prospect of substantial profit that motivated nursery gardeners, sellers and processors involved in the scheme.

CONCLUSION: LEARNING FROM THE DIFFERENCES IN APPROACHES AT ZÉ AND TORI-BOSSITO

From a technical standpoint, both platforms achieved similar results. They managed to implement the elements of the theoretical plan and the initially planned activities. The same funding and cutting supply problems were encountered and solved in a similar way by the SCs in close collaboration with the researcher.

Both platforms encountered similar difficulties in complying with the three founding principles of the scheme, i.e. the legitimacy of the SCs, the competence of the CLUEs, and the transparency of the individual expectations. Links between the individual CLUE farmers, plantain producers overall, and the farmers' organizations were yet not based on a real community of interest. The other professions were also not sufficiently well represented in the CLUE. Finally, all participants were not completely devoted to fulfilling the mutual objective since their personal (institutional or individual) expectations were not always in line with the success of the collective project.

The survey also showed marked differences between Zé and Tori-Bossito CLUEs with respect to member involvement, autonomy and dynamism. Tori-Bossito CLUE members were more involved in activities, they felt a tight solidarity within their group and decided to jointly oversee the development of a plantain commodity channel. The Zé CLUE did not seem to be as unified. Their vision of the future was very individualistic and just an extension of their past experience. The common scheme of both platforms was therefore not sufficient to create conditions favourable for sustainable collective action of Zé CLUE members.

This difference between the two CLUEs could be explained by the participants' experience or personality and the random nature of the initial choices. However, the members' geographical situation, especially their remoteness, was not a negative factor since the residences of Tori-Bossito CLUE members were more scattered than those of Zé. We consider that these differences were mainly due to the organizational choices of the two SCs.. At Tori-Bossito, the area representatives turned out to be leaders and played a major role in developing the collective project. The Tori-Bossito CLUE, which is now formed and united, planned to create a legitimate farmers' group to democratically manage the SC.

The platform was designed to promote the scaling and dissemination of the technical results obtained to stakeholders beyond the group of participants. After 2 years, we obviously could not measure this dissemination, but it seemed to us that the scaling conditions were at least partially fulfilled. Most participants actually considered that they were co-owners of the results of the assessments carried out within each platform and, consequently, were responsible for the dissemination of these results and of the assessed varieties. They were striving to preserve the scheme that enabled them to have first-hand access to research outcomes, while also benefiting from their investment in this activity. The SCs and CLUEs were more focused on seeking funding and income-generating activities, but the SC and CLUE approaches differed. Research institution and NGO members of the SCs sought to take advantage of the expertise that they had acquired as platform managers. However, CLUE members wanted to promote their involvement through propagating and disseminating the assessed varieties. The two groups were geared towards scaling, but the focuses differed, i.e. platform management for the SC group and variety dissemination for the CLUE group. This divergence was predictable since the SC had no professional stakeholders of the subsector as members. It is quite likely that in the short term there will no longer be any further interaction between the two groups, and also that the overall scheme will be modified since new stakeholders are required to oversee the dissemination projects of the two CLUEs. Reorganization of the partnership with stakeholders concerned by the assessed variety dissemination phase will be necessary for two reasons: first, it involves products derived from the collaboration with public research institutions and, secondly, these institutions must disseminate these products while sidestepping the problem of excessive privatisation, which would hamper full public access to a resource that has been co-developed with a public organization. For the dissemination phase, structures should be developed to promote interactions between legitimate representatives and all benefitting groups. When collective

action fails, it is likely that individual strategies will prevail to ensure small-scale dissemination of the most valued varieties.

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