



Testimonial n ° 1 CajùLab

1. Title (6 words maximum)

Digital technology in Benin's cashew sector

2. Subtitle (9 words maximum)

Opinions and expectations of the CajùLab project's beneficiaries

3. Introduction (max 40 words)

Benin aims to more than double its production of cashew nuts to 300,000 tons/year by 2021. Emerging digital technology can help ensure that this growth supports biodiversity and improves the resilience of small farms through the adoption of climate-smart practices.

4. Paragraphs 1 to 2 - context / presentation of the question

The increase in world demand for cashews has led to increased interest in the crop among farmers and the government of Benin, which has set the goal of producing 300,000 tons/year by 2021. To accomplish this, the government forecasts that cultivated area must increase to 60,000 hectares. It is therefore essential that stakeholders in the sector develop and implement policies and strategies aimed at ensuring that this increase is environmentally sustainable. If the wrong strategy is adopted by the cashew sector stakeholders, the growth of in production may not generate net environmental benefits and could actually reduce biodiversity and have a negative impact on marginalized populations.

Climate-smart agriculture is an effective approach to achieve sustainable farming systems. Unfortunately, little is known about the extent to which Benin's cashew farmers use climate-smart practices or how the increase in cashew plantations has changed land management in the country in recent years. Without appropriate information, promoting policies and targeting extension services that encourage sustainable growth in cashew production will remain a major challenge for the government of Benin and other stakeholders in the sector. In this context, it is important that farmers have the capacity to simultaneously maximize productivity and environmental benefits.

5. Paragraphs 3 to 4: Solutions and ideas / how the project contributes.

The CajùLab project, funded by Wehubit and implemented by TechnoServe, in collaboration with stakeholders in the sector, uses local expertise to harness emerging technologies like drones and machine learning in order to sustainably increase cashew production. Drones equipped with advanced imaging technology will be used to carry out the aerial mapping of cashew farms. An





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algorithm will be developed to automate the classification of cashew trees, the evaluation of the state of health of the plantations, the agricultural practices adopted by the farmers, the state of the soil, etc.

This information will improve the targeting of farmers and help determine the content of training modules given to farmers to promote climate-smart farming techniques. The project will facilitate the training of about 10,000 farmers on CSA. The methodology developed within the framework of the project will be made available to partners, so that it can continue to drive impact after the program's close.

6. Paragraphs 5 to 6 - How does this have a positive impact? Quotes and images

As part of the implementation of this project, TechnoServe organized a session to present the CajùLab project to cashew farmers and partner organizations in the sector, including the Agence Territoriale de Développement Agricole 4 (ATDA4) /MAEP, the National Federation of Cashew Producers of Benin (FENAPAB) and its branches, and the National Federation of Certified Cashew Nurserymen of Benin (FeNaPAC-Benin).

This session was held on December 5, 2019 in Parakou (North of Benin). Among other objectives, this session aimed to involve farmers and their associations in the implementation of the project, as well as to collect their expectations and impressions on the expected results.

This session allowed the farmers and the various support structures present to express their excitement about the CajùLab project. In addition, the participants expressed their eagerness and desire to see the results of the project achieved. For them, this project will have a remarkable and lasting impact on the cashew sector in Benin. Some farmers and leaders of support organizations expressed their opinions on the expected results of the project. Below are the impressions and expectations of some stakeholders on CajùLab project and its expected results:



Sahadatou ATTA
KAKAYATCHI, farmer and
President of FENAPAB

The CajùLab project is welcome in this digital age, as it is integrated in the agricultural sector in general and in cashew sector in BENIN in particular. As a beneficiary, we would like to be closely associated and contribute to the project, so that the objectives are effectively reached by taking into account the problems on our farms.

As concrete contributions, we expect support from this project in terms of knowledge and strengthening of production capacities.



The CajùLab project, whose introduction we have just seen, is innovative and interesting in that it will bring added value to the cashew sector.

Siaka KODJO, Director of Programs/ Territorial Agency for Agricultural Development Pole 4 (ATDA4).



YOKOU Daré Aubin, Capacity Building Director/ATDA4.

It is easy to see after this briefing, that the CajùLab project is a new project for mapping cashew farms, generating statistics on the area, and analyzing the condition of plantations and soils. At the end of the CajùLab project, we will have methodological tools and training topics related to the action plan, validated statistical data, and tools and materials for mapping and digitizing actions.



Alex NOUGBODOHOUE, Head of Monitoring-Evaluation and Capitalization Unit/ FENAPAB

After this presentation, I can say that CajùLab is a relevant project for developing a precise directory of cashew farms.

So, at the end of the project, a reliable database would exist, because currently, it does not really exist. With the CajùLab project, Beninese agriculture will have taken a step forward in the technological field for cashews. I therefore salute the donors and TechnoServe, which is implementing this project in the cashew sector in BENIN.

As part of the project presentation workshop, a farm visit was carried out. The farm of Sabiwo TABE, presented below, clearly illustrates the merits of the CajùLab project.



***Field visit after the presentation session of the CajùLab project: Visit of the plantation of Mr. Sabiwo TABE. He is explaining how he works to the team. (below)
Parakou, December 5, 2019.***

Typical case for the intervention of the CajùLab project: Mr. Sabiwo TABE, a cashew farmer in the village of Gounin in Parakou (North Benin), owns a 3-hectare cashew farm that was planted 15 years ago. When the cashew trees were planted, Mr. TABE did not follow the recommended spacing guidelines, because he had not received training on good agricultural practices. Fifteen years later, he declared that he still does not have the knowledge necessary to take good care of his farm and obtain satisfactory results. As a result, the farm is in poor health (there is yellowish color to the plants), and the cashew trees are intermingled and produce less. In addition, Mr. TABE does not know how many cashew trees are on his farm. Speaking of the expected results of the CajùLab project, he says:

"If I benefit from the CajùLab project, it will allow me to increase my yields and production, and will also motivate me to take better care of my farm in the future."

The project will thus allow many farmers like Mr. TABE to be better targeted, better trained by taking into account their real needs, which will allow them to increase their production sustainably.

Images



*Mr. Arsène AGOSSADOU, CajùLab project Coordinator giving details of the project to the stakeholders in cashew sector (ATDA4- FENAPAB-FeNaPAC-URPA-Producers).
Parakou, December 5, 2019.*



Mr. Jérémie GNIMADI, Chief of Monitoring-Evaluation of BeninCajù project, explaining the contours of data collection to the participants of the presentation session on the CajùLab project. Parakou, December 5, 2019.



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7. Paragraphs 7 to 8 - Looking to the future: What is the next step for the project? What challenges / lessons learned to overcome?

The next step is to start aerial drone collection activities in the cashew plots of the targeted farmers. This activity showed the importance of the inclusive approach to successfully achieved the results of the project.

8. In short:

Brief summary of key figures.

- Benin has an estimated population of 11.5 million.
- The population is increasing rapidly with an annual average of 2.8%.
- Cashew nuts: Second-largest export crop
- Benin: Second-leading African cashew producer (average 2013-2017, FAO, 2019)
- Duration of the project: 2019-2021
- Funding: Wehubit, USDA.
- Budget: 388,053 euros