

Factsheet final findings Applied Research Fund Call 2



Ensuring Sustainable and Sustained food security by enhancing local parboiled rice value-chain Competitiveness in Gogounou and Banikoara areas in Benin (PARCR)

Summary

The ARF project 'Ensuring Sustainable and Sustained food security by enhancing local parboiled rice value-chain Competitiveness in Gogounou and Banikoara areas in Benin (PARCR)' had the overall objective to develop a national partnership on innovative practices promoting local rice, to contribute to ensuring market-oriented food security. More concretely, it aimed to increase the competitiveness of local parboiled rice of Banikoara and Gogounou communes in the Alibori department, in order to increase the revenues of the farmers and processors, resulting in food security in their households.

Four research questions were addressed, related to (i) the contribution of the best proven practices to the improvement of local rice productivity, (ii) the way to improve the quality of local parboiled rice in order to meet consumers' needs, (iii) the way to organize the local parboiled rice supply to ensure its access to households, and (iv) the contribution of dialogue frameworks to upgrade local parboiled rice competitiveness in Benin.

The method used is mainly based on a co-creation approach, firstly between the consortium members from project elaboration to direct implementation, and secondly with the beneficiaries according to their socio-economic and agro-ecological contexts.

Research findings

At the end of the project, there are many research findings which can be shared with the public and the practitioners of the local parboiled rice value chain:

- For production, some best practices of System of Rice Intensification (SRI) adapted to local context have been retained. They are about (i) the choice of seed, (ii) the treatment of seed before sowing, (iii) the sowing method adapted to the context of pluvial lowland rice, and (iv) the organo-mineral fertilization and the fertilization period.
- For processing, among the three main rice varieties in the two communes, the project together with the women processors, identified IR841 as the most appropriate variety for the parboiling. After that, to respond to a worry about the sticky aspect of IR841 after cooking, the project developed the appropriate cooking method for the parboiled IR841 variety.
- An innovation platform was found to be a relevant tool to strengthen dialogue between the actors in order to discuss applicable and durable solutions, essentially business links.

Outcomes achieved

The main outcome achieved in the framework of the project is the high adoption of the best practices of rice production on the one hand, and of the best practices of rice parboiling on the other hand. With the use of the best practices of rice production developed in the Farmer Field School (FFS), many farmers increased their yield from 2 tons/ha to 5 tons/ha. Which resulted thus in a high adoption of the practices. Also, with the best quality of parboiled rice, the price per kilogram passed from XOF 250 to 350 and sometimes 400, which increased their revenues. Women involved in rice parboiling also testified that at markets, people prefer their rice to parboiled rice processed the traditional way. When attending fairs, people are very amazed by the quality of the local parboiled rice, and this sometimes enabled to develop business links with

traders. With the establishment of business link between rice women processors and some traders/shops in the towns, local parboiled rice is more demanded by consumers. Thanks to the innovation platform, there are some arrangements between rice farmers and processors for supplying processors with rice.

Project messages to

A) Actors from private sector:

- To invest in the local parboiled rice chain by (i) providing appropriate parboiling materials/equipments to women processors, (ii) establishing a marketing relationship with the women processors in order to ensure better promotion of the local parboiled rice and to increase the volumes parboiled.

B) Civil society and practitioners organizations:

- To use the FFS approach in the technical support to farmers, in order of better uptake of the findings and innovations.
- To use innovation platforms as a tool to develop business links between the actors of the value chains.

C) Policy makers:

- To support rice production by investing in the adjustment of the lowlands where rice is produced.
- To develop a favourable environment for local rice promotion by (i) reducing the import of rice in Benin, (ii) establishing adapted mechanisms of financing of the entrepreneurs desiring to invest in rice processing.

Knowledge products

- [What variety of rice is the most appropriate for the parboiling in Gogounou and Banikoara districts in the Northern-Benin?](#) Journal of Applied Biosciences, Vol 135, 2019. It is mostly addressed to practitioners who give support to rice women processors groups.
- [Améliorer la compétitivité du riz béninois grâce aux plateformes d'innovations](#), dans : CTA, 2019. Innovation et promotion des chaînes de valeurs de produits agricoles locaux en Afrique. Série Capitalisation des expériences 10. Wageningen, Pays-Bas, CTA, pages 5-12. ISBN 978-92-9081-645-4.
- Ability of cooking of three parboiled rice varieties locally produced in Gogounou and Banikoara in the North-Benin. In process of publishing.

Knowledge networks

At the end of the PARCR project, DEDRAS and Woord en Daad developed another project on rice, called FairRice, in consortium with some factories processing rice to white rice. The farmers who supply these factories with paddy rice are trained on the best SRI practices developed in PARCR.

Knowledge co-creation

As consortium, each member responsible of a result proposed its strategies, so they could be discussed within the consortium.

For production, the project implemented the FFS approach. Some discussions with farmers enabled to define the key factors determining the yield and the problems they encountered related to these factors; the learnings in the FFS are based on these factors. New practices were presented to farmers and with the facilitation of the project advisors, adapted practices were chosen and tested, both in the FFS and by each farmer in his individual plot, and measurements are made during the season for analysis at the end of the season.

For the processing, women processors have been organized in groups to facilitate the learnings and the constraints to obtain good quality parboiled rice are identified. Some tests have been done using the traditional way and the improved way of rice parboiling, to identify the best practices, the bottlenecks and the solutions for better use of these new practices.

To develop durable and adapted innovations, the innovation platform has been implemented. This enabled better dialogue between the actors and co-designing of the solutions.

Consortium Partners

- [DEDRAS](#) (Benin)
- [Woord en Daad](#) (Netherlands)
- [INRAB](#) (Benin)
- Laboratoire d'Analyse et de Recherche sur les Dynamiques Économiques et Sociales - LARDES/UP (Benin)

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Project website

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