

Country Name	Rice Post-Harvest Processing and Marketing Pilot Project in Nasarawa and Niger States
Federal Republic of Nigeria	

I. Project Outline

Background	Nigeria was the country with the highest rice production in Africa, however, the quality of domestic rice was generally low. Inadequate drying and milling resulted in a high rate of broken grains. Also pebbles that were mixed during harvesting and drying were not removed during the rice polishing process. As a result, the price of domestic rice became low, reducing the willingness to expand rice production, and the post-harvest loss rate reached 15 to 20%, which hindered the improvement of the income of farmers and rural people engaged in production and processing.		
Objectives of the Project	Through identifying measures to promote distribution of high quality domestic rice, developing and improving rice grading standards for domestic rice, and capacity development of counterpart agencies and small-scale rice millers, parboilers, rice farmers and traders, the project aimed at improving the quality of domestic rice in the target areas, and thereby contributing to the improvement of the quality of domestic rice in the target states.		
	1. Overall Goal: Quality of domestic rice is improved in the target states. 2. Project Purpose: Quality of domestic rice is improved in the target areas.		
Activities of the project	1. Project site: Lafia in Nasarawa State and Bida in Niger State 2. Main activities: 1) Identification of measures to promote distribution of high quality domestic rice, 2) development and improvement of rice grading standards for domestic rice, 3) enhancing capacity of Agricultural Development Program (ADP) staff regarding training implementation on marketing, post-harvest and business management, and 4) enhancing capacity of small-scale rice millers, parboilers, rice farmers and traders on post-harvest, marketing and business management. 3. Inputs (to carry out above activities) Japanese Side 1) Experts: 11 persons 2) Training in third countries: 12 persons 3) Equipment: Office equipment, De-stoners, Rice millers, Parboiling tank, Test equipment 4) Construction of incubation plants 5) Operation cost: training cost, monitoring cost, travel cost, materials/equipment for training, etc. Nigerian Side 1) Staff allocated: 59 persons 2) Project office (Agri-Business and Marketing Department, Nasarawa State, Niger State) 3) Operation cost: running cost, staff salary, cost for training venue, etc.		
Project Period	July 2011 - April 2016 (Extended Period: August 2015-April 2016)	Project Cost	(ex-ante) 413 million yen, (actual) 610 million yen
Implementing Agency	Federal Ministry of Agriculture and Rural Development (FMARD) Agri-Business and Marketing Department (ABM), Nasarawa State Agricultural Development Program (NADP), Niger State Agricultural and Mechanization Development Authority (NAMDA)		
Cooperation Agency in Japan	IC Net Limited		

II. Result of the Evaluation

<Constraints on Evaluation>

- Due to COVID-19 pandemic, interstate movement was banned during the period of information collection for the ex-post evaluation and so site visit could not be conducted to collect information. Therefore, the information was gathered through questionnaires, telephone interviews and online meetings.

<Special Perspectives Considered in the Ex-Post Evaluation >

- Indicators for the Overall Goal. Although “At least 2.5% of rice traders in the target States handle quality domestic rice satisfying Grade A level of Rice Grade Standard developed by the Project” was set as an indicator to measure the Overall Goal, the project proposed to use alternative indicators as it is difficult to collect any official data for “Grade A” rice. At the time of project completion, the project regarded the rice of “Grade A”, if 1) the rice is parboiled with the false bottom, and 2) the rice parboiled using the false bottom has gone through the de-stoner, both of which are the technologies recommended by the project. This ex-post evaluation uses the alternative indicators based on this measurement approach.
- Continuation of the Project Purpose is analyzed as a factor for achieving the Overall Goal.

1 Relevance

<Consistency with the Development Policy of Nigeria at the Time of Ex-Ante Evaluation >

The project was consistent with the development policy of Nigeria. Improvement of post-harvest loss was prioritized policy documents such as the “Nigeria Vision20: 2020”, the “National Agricultural and Food Security Strategy” (2010), the “National Rice Development Strategy: NRDS” (2009).

<Consistency with the Development Needs of Nigeria at the Time of Ex-Ante Evaluation >

The project was consistent with the development needs of Nigeria for improvement of rice post-harvest processing, as the quality of domestic rice was low as mentioned above (“Background”).

<Consistency with Japan's ODA Policy at the Time of Ex-Ante Evaluation>

The project was consistent with Japan's ODA policy to Nigeria. "Agriculture and rural development" was one of the prioritized areas under the policy dialogue between Nigeria and Japan in 2007¹.

<Evaluation Result>

In light of the above, the relevance of the project is high.

2 Effectiveness/Impact

<Status of Achievement of the Project Purpose at the time of Project Completion>

The Project Purpose was partially achieved at the project completion whereby over 2.5% of target groups handled quality domestic rice (indicator 1), while the amount of Grade A traded rice was less than 2.5% (indicator 2) and this was because destoners had not been affordable for small rice processors and it has not been easy to provide subsidy for de-stoners. However, false bottoms introduced which were relatively affordable and accessible resulted in significant improvement of quality of rice and additional value and thus suggested that the quality of rice handled can be significantly improved through increased adoption of false bottom technology.

<Status of Continuation of the Project Effects>

The effects of the project partially continued. As mentioned above, the status of continuation of the project effects at the time of ex-post evaluation was verified as the part of the verifiable indicators of the Overall Goal and the factors affecting the achievement levels of the verifiable indicators of the Overall Goal. Throughout the capacity development of NADP and NAMDA, the project has developed and improved rice grading standards for domestic rice, and such technique has continuously expanded in other areas after the completion of project. So far, it has contributed to achieve the Overall Goal

<Status of Achievement for Overall Goal at the time of Ex-post Evaluation>

The Overall Goal has been achieved by the time of ex-post evaluation because the results show that above 2.5% of local parboiled milled rice was destoned (indicator 1) and above 16% of local parboiled rice was processed using improved method (indicator 2) in Nasarawa and Niger States.

As for the indicator 1, based on a randomized sample survey at the time of ex-post evaluation (of users of the incubation plant), 100% utilization of destoners has been observed in Nasarawa state due to support of NADP with destoners by the Embassy of Japan and thus many processors have access to destoners. In Niger state, utilization of destoners has not been up to 100% because of the high cost of destoners which were also not locally fabricated. However, due to provision of destoners through subsidy provided by NAMDA and development partners such as International Fund for Agricultural Development (IFAD)/Value Chain Development Program (VCDP), more than 2.5% of the processors can process their rice using destoners.

As for the indicator 2, an adoption rate higher than 16% has been obtained because the false bottoms are affordable, accessible and locally available. In Niger state, provision of false bottoms to parboilers on credit also allowed them to easily adopt the improved parboiling method (the procedure to steam rice with false bottom and lid). In Nasarawa State, the adoption rate has been less than 50% because the parboilers have used a traditional method (a big tank) to parboil rice. It has been more difficult to fabricate the false bottom to fit into the tank than one for the small pots.

<Other Impacts at the time of Ex-post Evaluation>

Positive impacts have been observed. As a result of the success of the project, especially the technologies developed which have markedly improved the quality of rice, there has been a widespread dissemination and adoption of the parboiling technologies by stakeholders. As of March 2020, the Improved Parboiling Technology (IPT) has been disseminated to 27 other states in Nigeria with 27,968 parboilers trained and 16,679 of them have adopted the technology in collaboration with FMARD, JICA and other Development Partners. In addition, trainings of paddy grading standard and paddy quality checking methods have been conducted in nine states. So far 571 extension agents and 776 farmers/processors have been trained.

Some good impacts have been observed from the gender perspective. According to NADP and NAMDA, the technologies promoted by the project helped women acquire new skills and increase job opportunity. As the result of quality rice, women earn more money than when they use the conventional method.

There have been no negative impacts on environment according to NADP and NAMDA.

<Evaluation Result>

Therefore, the effectiveness/impact of the project is high.

Achievement of Project Purpose and Overall Goal

Aim	Indicators	Results
(Project Purpose) Quality of domestic rice is improved in the target areas.	Indicator 1: At least 2.5% of rice traders of the target groups in the target areas handle quality domestic rice satisfying Grade A level of Rice Grade Standard developed by the Project.	Status of the Achievement: achieved (Project Completion) More than 2.5% of rice traders of the target groups in the target areas have handled quality domestic rice, satisfying Grade A level of Rice Grade Standard developed by the Project.
	Indicator 2: At least 2.5% of total quantity of rice handled by rice traders of the target groups in the target areas is Grade A level of Rice Grade Standard developed by the Project.	Status of the Achievement: not achieved (Project Completion) Based on the sample survey, the ratio of domestic rice satisfying Grade A which is handled by the target groups is calculated as follows: 1) Lafia association, Nasarawa State: 28.1 t/15,800 t = 0.17% (Reference value) 2) Taimako/Haske association, Niger State: 8 t/43,200 t = 0.02% 3) Rural areas of Niger State: 7.6 t/3,200 t = 0.23% The amount of Grade A rice traded did not reached 2.5%. However, with

¹ Source: ODA Databook 2011

		regard to the false bottom, the adoption ratio was very high. The adoption ratio in Nasarawa State reached 80%; in Niger State, it is 21%. It exceeded the tipping point (16%) and was at the brink of an escalation in the adoption.			
(Overall Goal) Quality of domestic rice is improved in the target states.	Alternative Indicator 1: At least 2.5% of local parboiled milled rice processed by small-scale millers and handled by traders in major rice growing areas of both states is de-stoned.	(Ex-post Evaluation) achieved			
			Total milled rice trade per week of samples (kg)	Total traded milled rice de-stoned of samples (kg)	Percentage
		Nasarawa state	166,600	166,600	100%
		Niger state	54,800	31,350	57%
	Alternative Indicator 2: At least 16% of local parboiled milled rice processed by small-scale millers and handled by traders in major rice growing areas of both states is parboiled utilizing an improved method.	(Ex-post Evaluation) achieved			
			Total milled rice trade per week of the samples (kg)	Total traded milled rice of the samples which utilized the improved method (kg)	percentage
		Nasarawa state	166,600	58,600	35%
		Niger state	54,800	53,300	97%

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Nasarawa state	166,600	58,600	35%
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Source : NADP and NAMDA

2) Number of samples: 30 in Nasarawa State and 27 in Niger State

3 Efficiency

Therefore, the efficiency of the project is fair.

4 Sustainability

There has been policy support to disseminate the technologies under the project; however, financial backup to implement policies has been limited in both states. NAMDA mainstreamed the RIPMAPP² dissemination plan in the Annual Work Plan and budget at the time of ex-post evaluation. NADP also made plans such as “False bottom (Improved parboiling technology)” (2016-2019).

<Institutional/Organizational Aspect>

Both also established a system to lease the incubation plants in order to train operators and to generate the revolving funds from leasing fees for further RIPMAPP activities. However, since there have been still some issues in the leasing system such as inability to find appropriate operators, the future prospects are uncertain.

<Technical Aspect>

<Financial Aspect>

NADP has received funds from the state government annually, which has been used for maintenance of the rice incubation plant.

Overall, the future prospects for securing fund are not certain in both states.

<Evaluation Result>

5 Summary of the Evaluation

² RIPMAPP is a name of the project which stands for Rice Post-Harvest Processing and Marketing Pilot Project in Nasarawa and Niger States

The project partially achieved the Project Purpose at the project completion, as the target values on the percentage of target groups who handled quality domestic rice handled reached the target. The Overall Goal was achieved because above 2.5% of local parboiled milled rice was destoned and above 16% of local parboiled rice was processed using improved method in Nasarawa and Niger States. As for the sustainability, the improved technology has been adopted in various states including target states and is highly evaluated. However, some problems have been observed in terms of the policy, institutional and financial aspects of the implementing agencies. As for the efficiency, both project cost and project period exceeded the plan.

Considering all of the above points, this project is evaluated to be satisfactory.

III. Recommendations & Lessons Learned

Recommendations for Implementing Agency:

- NAMDA is strongly recommended to follow up FMARD through official channels and also organize a high-level meeting between the Commissioner of Agriculture, Niger State and Permanent Secretary, FMARD to obtain approval for utilization of the funds domiciled in the revolving fund account. Access to these funds would allow NAMDA disseminate RIPMAPP technologies to other parts of Niger State.
- NAMDA and NADP should review the leasing plan of the incubation plant to ensure that the terms and conditions are attractive to prospective operators and opportunities to lease the plant is open to other qualified operators residing in locations outside the states where the incubation plants are located.

Lessons Learned for JICA:

- Introduction of simple, affordable and easily accessible technologies to small scale processors allows for easy adoption of the technologies. In the case of IPT, since it is simple, cheap and locally available materials can be used, it facilitated the widespread adoption of the technology.
- In order to ensure the widespread dissemination of technologies, it is important to share the positive outcomes to other stakeholders intervening in other areas. Due to sharing of the positives of IPT with development partners and other stakeholders at various fora, they were able to integrate IPT into their dissemination plan targeting small scale processors in their intervention states.



Women rice processor group in Doko, Niger State supported by the project conducting parboiling utilizing the improved method



1.5ton/hr modern rice mill installed by the project in Lafia, Nasarawa State