Food and Agriculture Organization of the United Nations (FAO) Nigeria Country Office

Empowering small scale rice farmers in Benue State

Rice is a major staple crop for the people of Agatu and neighboring Apa Local Government Areas of Benue State. However, the lack of knowledge about the new technology of low land rice production involving nursery preparation and management and transforming the vigorous seedlings to the rice plot after 21-30 days has thwarted the realization of the full potentials of the crop. This is until the arrival of an FAO-driven project in the area that promises a conservative yield of three tons per hectare and two crops of rice a year.

The Project "Smallholder Agro-based Industrial Production: Demonstration and Training of Farmers For Improved Rice Production in Benue State", (UFT/NIR/055/NIR) was an intervention programme by FAO to address the immediate constraints faced by small scale rice farmers in Agatu LGA of Benue State. FAO collaborated with UNIDO in the implementation of the project, with FAO focusing on agronomic issues while UNIDO was to support value addition and processing. As farmers were not aware of new technologies for lowland rice production which involve nursery preparation, transplanting of seedlings to fields and better crop management, rice farmers in Benue State faced low crop yields of 1.0-1.5ton/ha due to; low-adoption of improved agronomic/crop husbandry practices and; low availability of high quality seeds, fertilizer, herbicides and insecticide.

The FAO components, therefore, sought to address these issues in order to improve yields. To support value addition, UNIDO constructed a rice mill costing $500,000 to provide a ready market for the paddy. The beneficiaries of the project were the 360 small scale rice farmers who are members of Ehowodu Cooperative Society comprising of 146 men, 72 women and 152 youth.

Outcomes of the Project

To build ownership within the communities, traditional rulers in the five project sites of Oweto, Okpanchanyi, Obagaji, Adagbo and Okokolo, were fully involved in the sensitization meetings with the executives and members of the cooperative society, to explain the project, the benefits to the community and solicit support and cooperation. A total of five (5) rice nurseries were established, one in each of the project sites. Seedlings from these nurseries were used to establish 0.5 ha demonstration plots to serve as laboratories for training of the farmers on improved agronomic practices and crop husbandry.

Farmer training was conducted:

(1) For 360 members on recommended lowland rice production practices covering nursery preparation and management, fertilizer, herbicide and insecticide application, control of pests and diseases of rice and economics of rice production.

(2) For 150 members on post harvest operations covering harvesting, threshing, bagging, preservation and storage of rice paddy for

Following the training, farmers were provided with inputs; high quality rice seeds of the improved rice varieties Faro 44 and Faro 52 and fertilize sufficient to establish 0.5ha rice plot. The

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A collaboration project with UNIDO and funded by the Government of Nigeria.

technology for lowland rice production – nursery preparation and transplanting of the vigorous rice seedlings to the field after 21-28 days - was successfully transferred to the 360 project beneficiaries. Adoption rate was high as a result of knowledge and skills gained from the demonstration plots. Similarly, given the higher yields of the improved lowland rice varieties over their local variety (better response to fertilizer application, tillering ability, non-shattering, resistance to pests and diseases etc) the farmers appreciated and fully acknowledged the benefits of the improved varieties (Faro 44 and Faro 52) as seen below from the demonstration plots. With improved management practices and improved varieties, average rice yields increased from a maximum yield of 1.5 ton/hector to 3.16 tons/hector.

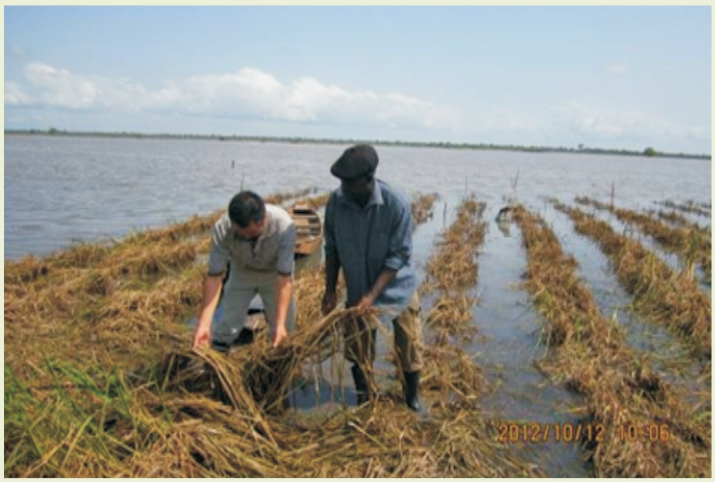
Variety	**Faro 44**	**Faro52**	**Combined yield**
Location	ton /ha	ton/ha	ton / ha
Obagaji (11.0ha)	3.45	3.11	3.35
Okpanchenyi (10.5ha)	3.20	2.93	3.10
All Locations (26 .2ha)	**3.26**	**2.98**	**3.16**

Average rice yields on farmers' plots in Obagaji

Field Days were also organized for the 360 project beneficiaries to share experiences, and create further awareness on the benefits of the new rice technologies the project promoted. A clear demonstration of the success of the project was seen in 70 non-members of the Cooperative Society applying to join the Society. In addition, seven (7) rice growers requested for specialized training on rice seeds production. There was also significant knowledge transfer to the beneficiaries as they learnt how to prepare their fields before transplanting the seedlings from the nurseries. Farmers went on to establish their own nurseries using the seeds provided by the FAO, this is in clear contrast to the seed broadcasting practice previously used by the farmers.

A Chinese Technician (*under the SSC)* assisting a farmer to examine his upland rice farm before harvest.

Farmers in Benue and many states in the country however suffered a serious setback during the 2012 cropping season as result of the floods. The five (5) project sites which are all along the bank of river Benue were flooded when it overflowed its banks in August, 2012. The flood waters remained in the rice fields up to early November, thus destroying all the rice plots established in the lowland (fadama) farms. Nothing could be harvested from the fadama farms during that season.



A Chinese Technician (*under the SSC)* assisting a farmer examine the remains of his rice farm submerged by flood.

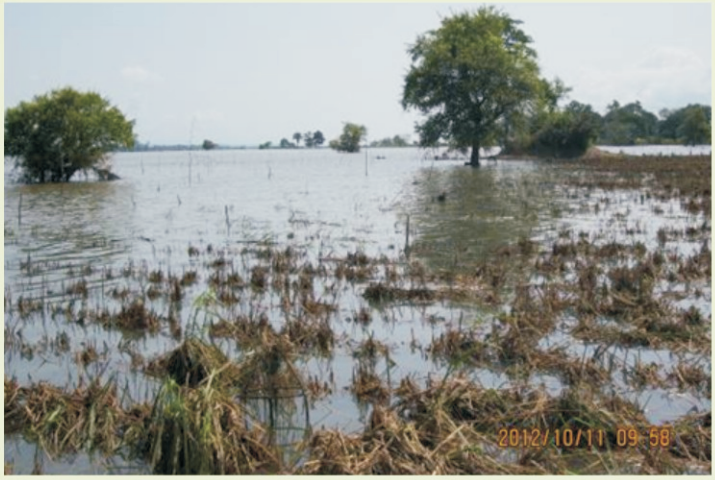


Figure 1a Remains of flooded rice farm in Obagaji.

As a result of this intervention, government is currently working with FAO, the International Water Management Institute (IWMI) and IFPRI in a joined effort to support the development of water management solutions, for flood recession and dry season farming. This will provide opportunities to convert floods into more productive farmland, especially to support dry season farming thereby turning what would otherwise be a tragedy, into an opportunity for many smallholder farmers.

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