APPLICATION FORM FOR JAPAN'S TECHNICAL COOPERATION

1. **Date of Entry:** Day **22** Month **Aug** Year **2005**
2. **Applicant:** The Federal Ministry of Agriculture and Rural Development (FMA&RD), Abuja, Nigeria.
3. **Project Title:** Sustainable Rice Production Using Sawah (*Suiden*) based Rice Technology Systems in Four Agro-Ecological zones of Nigeria.
4. **Implementing Agencies:** National Cereals Research Institute (NCRI) in Collaboration with Watershed Initiative in Nigeria (WIN 2001) and the Agricultural Development Project in the zones.

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5. **Background of the Project**

Rice is a major cereal crop of immense value and popularity in Nigeria. It has become a major staple food for the household in both urban and sub-urban areas of the country. Thus, the rapid increase in demand for rice in the past three decades in the country is due to rapid population growth, increased urbanization and people's preference for rice as a conventional food among others. Increased consumption has generated national demand estimated at 5 million metric tons

of milled rice. Consumption of rice has grown from 3kg per capita in the 70s to over 25kg currently. Current domestic production is estimated at 3.2 millions metric tons thereby creating a deficit of about 1.8 metric tons of the rice demand. To fill the gap, annual importation of rice is estimated to cost the nation about US$700 million in foreign exchange annually.

Nigeria has all the ecological zones for rice production with about 5 million hectares. These include the flood plains, inland valleys and the upland ecology. Although the Federal Government of Nigeria has put in place several policies to tackle rice production problems over the years, the inconsistency in the policies has made the desired results unattainable. The few achievements are hampered by inappropriate crop management practices and weak-extension services, couple with the fact that traditional farming practice (hoes and cutlasses), will not be capable of meeting the increasing need for rice production. Some identified production constraints include drudgery involved in the production system and poor water control practices. There is therefore, a need for intermediate appropriate technology in rice production that will alleviate these identified constraints.

Sawah (*Suiden*) is an appropriate technology to improve water control and soil conservation in rice production that can lead Nigeria to self-sufficiency in rice production.

In view of the above the Watershed Initiative in Nigeria (WIN 2001) a Non Governmental Organisation (NGO) started a Sawah based rice production with farmers around Emikpata watershed near Bida, Niger state. With the grass-root grant from the Japanese Embassy in Nigeria, four (4) power tillers were

purchased in 2002, and used in our pilot sites. By 2004, 10 hectares of Sawah based rice fields had been established in 4 villages near Bida. In 2003 planting season using only two power tillers due to lack of trained operators about 3.5 ha were puddled and levelled. These SAWAH farmers got from their fields rice yield of between 3 to 5 tons per ha. In collaboration with other stakeholders this can even be extended and expanded further.

6. Outline of the Project

(1) Overall Goal

To increase the yield of rice production in a sustainable form in the five agro-ecological zones of Nigeria namely: North Central, North Western, North Eastern, South Eastern and South Southern by introducing SAWAH (*Suiden*) based rice production system.

(2) Project Purpose

To train the trainers, that is extension staff from the Agricultural Development Projects (ADPs), National Special Programme on Food Security, (NSPFS), Fadama II, African Rice Initiative (NERICA Project) and selected farmers on Sawah based rice production methodologies, operations and maintenance of appropriate farm machineries, in order to increase the yield of rice in inland valleys in the five agro-ecological zones of Nigeria. This should achieve the following:

i) Reduce drudgery in the rice production systems.

ii) Undertake integrated management practices in the inland valleys

iii) Improve the characteristics of rice production systems.

(3) Outputs

i) ADP extension agents, selected farmers and other stakeholders will master the Sawah based rice production technology.

ii) ADP extension agents, selected farmers and other stakeholders will acquire the skills of preparing Sawah fields with simple farm machineries.

iii) Methods of efficient extension of Sawah based rice production technology will be established.

iv) Enhance production capability of rice farmer and reduced drudgery in rice production systems

v) Develop skills and capabilities of the trained extension workers and farmers in operating, maintenance and the ability to repair intermediate farm machines – Power tillers

vi) One hectare Sawah field would had been established in each agro-ecological zones as demonstration plots.

(4) Project Activities

- Identification of participants from the ADPs.
- Construction of water management structures
- Basic mechanical knowledge of labour saving devices
- Handling operation and maintenance of farm machineries
- Effective extension strategies for rice production
- Benchmark survey of the current production system
- Agronomy of rice and rice based farming systems practices
- Problem soil management
- Pests and disease management

(5) *Input from the Recipient Government*

i) Training facilities – Venue, secretariat, and logistics etc

ii) Four Power tillers belonging to WIN 2001 donated by the Japanese Embassy in Nigeria will be used for the training.

iii) Wages of staff from NCRI, ADP and WIN 2001 would be borne by their organizations.

iv) Training Coordinator: I. O Fatoba, NCRI. He is responsible for the coordination of all technical matters relating to the timetable, schedules and ensuring that all course notes and practical handouts are ready and distributed to the participants. He will liaise with the course coordinator to contact and select participants for the training.

v) Course Coordinator: O. O. Fashola, (Ph.D.), WIN. 2001 – He is responsible for the coordination of all technical matters relating to the co-ordination of the inputs from the resource persons, conducting the field practicals and other logistics.

vi) Resource Coordinator: M. E. Abo, (Ph.D.), NCRI, He is responsible for the logistics of personnel and overseeing the participants' well being throughout the program.

vii) Administrative Assistants: Computer work, venue organization, logistics, etc. Onolapo K. A. (NCRI) and Joshua, Aliyu (WIN. 2001)

viii) Resource Persons: They shall come from the following institutions listed below.

Department of Agricultural Sciences (DAS), Federal Ministry of Agriculture and Rural Development (FMA&RD)	2
National Cereals Research Institute (NCRI)	3
Watershed Initiative in Nigeria (WIN 2001)	1
National Agricultural Extension Research and Liaison Services (NAERLS)	1
Agricultural Mechanics and Machinery Operators Training Center (AMMOTRAC)	1
National Center for Agricultural Mechanization (NCAM)	1
Obafemi Awolowo University, Ile-Ife (OAU)	1

(6) **Input from the Japanese Government**

i) Expert in Sawah (*Suiden*) based small scale irrigation and water management (preferably a Ph.D. holder)

ii) Expert in Sawah (paddy) field development and construction – Engineer in small farm machinery (M. Sc. or Ph.D.)

iii) Provision of funds for the in country training in Nigeria

iv) Provision of funds for the purchase of 15 more power tillers

Estimated Budget:

(A) For the training and demonstration field expenses a total sum of ~~₦~~4,410,000 would be required per year, the summary as follows:

Trainees cost	N1,830,000
Resource persons	N929,000
Transportation	N150,000
Training materials	N260,000
Tea / Refreshments	N351,000
Administration	N275,000
Stationeries	N45,000
Logistics and others	N570,000
Total for A	**N4,410,000**

(B) Cost of fifteen (15) additional power tillers at $ 5000 each. US$75,000

Grand total = A + B (33,413 + 75 000) = US$108,413

7. **Implementation Schedule**

Month __**May**___ Year ___**2006**__ to Month __**October**__ Year __**2006**_

The same period in each year 2007 and 2008

8. **Implementing Agency**

The National Cereals Research Institute (NCRI) is one of the 15 agricultural based Research Institutes in Nigeria. The mission is to contribute to food security and poverty alleviation through research partnerships and policy support on rice – based systems and based on environmentally sound management of natural resources. NCRI has the national mandate for rice and is the only rice research Institute charged with the genetic improvement of rice and rice based farming system in the middle belt zone of Nigeria.

NCRI is moderated by Federal government selected board members but it is headed by an Executive director, and in conjunction with the management team oversee all its activities. It has over 700 staff members with 9 sub-stations across Nigeria. The Federal government of Nigeria mainly funds NCRI with an annual budget of about US$150,000 excluding capital funds. However, International collaborators also fund specific projects of interest to them.

Watershed Initiative in Nigeria (WIN 2001) is a Non Governmental Organisation started in 2001. It has 5 active members but works in collaboration with NCRI, NSADP and other stakeholders in the promotion of sustainable rice production. It's funded through grants from the Japanese government and other sources. Its annual budget is about US$50,000.

The Agricultural Development Projects (ADPs) are the official government organ for all extension activities in the state. It is funded solely by the state government.

9. **Related Activities**

A train the trainer workshop on Sawah (Suiden) based Rice Production, Operation and Maintenance of Simple Farm Machines was conducted from 3 – 9 July 2005 at NCRI headquarters, Badeggi, Niger State. The training was planned to address production constraints in lowland rice production systems and enhance the skills and capabilities of the Subject Matter Specialist (SMS), Agricultural Superintendents and Rice Farmers. The opening ceremony was attended by top Government functionaries and JICA Country Representative. The good response of dignitaries and participants to the training is a clear indication that it is relevant and important towards alleviating poverty among rural farmers in Nigeria. All the participants submitted that the training has increased their knowledge, sharpen their skills and was well organized. They all agreed that the training should be extended to cover all the six agro-ecological zones of Nigeria. The target should also include staff of Fadama II, National Special Programme for Food Security (NSPFS), Rice Farmers Association of Nigeria (RIFAN) and African Rice Initiative (ARI). It was suggested that power tillers should be purchased for the collaborating institutions while other agencies should be guided to buy their own.

The Japanese Expert was fully involved as a resource person during and after the training.

10. **Gender Consideration**

Initial focus is the male farmers but the indirect effect to the household comes in the effect, which would be the increased production. The females are the custodian of the processing and the table rice.

11. **Environmental and Social Considerations**

(Please fill in the attached screening format) - Not Applicable.

12. **Beneficiaries**

The four agro-ecological zones of Nigeria namely: North Central – Taraba, Benue, Kogi, Plateau Niger, Kwara, Nassarawa and FCT; North West – Kaduna, Kano, Katsina, Bauchi, Gombe, Kebbi, Jigawa, Sokoto and Zamfara; South East and South South – Ebonyi, Akwa-Ibom, Anambra, Abia, Beyelsa Cross-River, Delta, Edo, Rivers, Imo and Enugu . This constitutes about 90% of the area to which rice is grown.

13. **Security Conditions**

Since the return of Nigeria to democracy relative peace with improved security had subsisted which gave rise to collaborative activities being undertaken with the international agencies and institutions in the country.

14. **OTHERS**

In the year 2006 human involvement would be 60 participants from 4 states, NSPFS, ARI, 10 resource persons; 3 coordinators and 2 assistants. The training would be for 7 days.

The 2006 training would be conducted in Taraba State covering North Central zone, while in 2007 it will be in Kaduna State covering North Western and 2008 in Ebonyi State (Abakaliki) covering South Eastern and South Southern zones.

In the 3 host states Taraba, Kaduna, Ebonyi (Abakaliki), one hectare Sawah demonstration field will be established before the training.

The Japanese Experts should be available for at least 3 months. The following is the tentative schedule for the two experts:

Arrival in May 2006 and in subsequent year.

Interaction and visits to WIN 2001 project sites

Interaction with National staff and farmers in the rice growing regions in the agro-ecological zones.

Tour of rice growing areas in the agro-ecological zones.

Visit to other agencies in Nigeria.

Participation in the training the trainer by end of June, 2005

Follow up of the trainees and monitoring the 1 ha demonstration field being used by the Power tiller giving to the ADPs and NCRI

Departure early October, 2006 and subsequent years