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3 Japanese Authorities on Rice Visited Sudan

The Project invited 3 Japanese Authorities on Rice; **Mr. Tatsushi Tsuboi, Dr. Ryoichi Ikeda, Dr. Kunihiro Tokida**, from September to October 2014. They visited

State Ministries, Rice Cultivation Fields, ARC, Private Sectors, etc. Their visit was a valuable opportunity for Rice Sector Development in Sudan. Each of them provided valuable advice and suggestion based on their long time experience and dedication to upland rice cultivation and research activities in Africa. In this edition of newsletter, advice and suggestion from 3 Authorities are elaborated.



Mr. Tatsushi Tsuboi



Dr. Ryoichi Ikeda



Dr. Kunihiro Tokida

Mr. NERICA, Final Visit to Sudan

Mr. NERICA is a name for Mr. Tatsushi Tsuboi, one of the best rice cultivation experts in Japan. His first visit to Sudan was in 2009. He found great potential to produce rice in Sudan and recommended to start a new project to support rice cultivation in Sudan. Then, this Project was launched in 2010. He belongs to JICA Uganda "Promotion of Rice Development (PRiDe) Project". Since 2010, the Uganda Project accepted total 138 Sudanese extensionists to train rice cultivation technique and knowledge.

This visit might be a final visit of Mr. NERICA because of his retirement. Ministry of Agriculture, extensionists and the Project should follow his advice and develop rice cultivation in Sudan.

Date	Topic
Sep 12th (Fri)	- Arrive to Khartoum
Sep 13th (Sat)	- Meeting: Project Team
Sep 14th (Sun)	- Meeting: Federal MoA (DG of ICI) - Move to Gezira - Meeting: Gezira State MoA (DG) - Visit Experiment Site - Lecture on experiment plan and content
Sep 15th (Mon)	- Visit Demo Site and Advice - Move to Gedaref - Visit Demo Site and Advice (Meeting with DG on site)
Sep 16th (Tue)	- Move to Sennar - Meeting: Sennar State MoA (Minister) - Visit Demo Site and Advice - Move to Khartoum
Sep 17th (Wed)	- Move to River Nile - Meeting: River Nile State MoA (DG) - Visit Demo Site and Advice
Sep 18th (Thu)	- Visit Demo Site and Advice - Move to Khartoum - Meeting: JICA
Sep 19th (Fri)	- Departure from Khartoum

Main Technical Advice from Mr. Tatsushi Tsuboi

- Experiment site in Gezira State is improved a lot in terms of technique and management. To the next step, it is more important to accumulate data which can be implemented in farmer's field.
- There are several fields where rice doesn't grow well. The fundamental cause might be due to alkalinity. It is necessary to compare the result of use of Ammonium sulfate (acid) and Urea (neutral). If it is difficult to obtain Ammonium sulfate, NPK is alternative.
- It is not good solution to sow more than 20kg/feddan even if there were missing hills. Especially in the latter half of the growth period, rice competes with other rice to get water. Too much sowing is the cause of bad growth and in the end, the yield will be small.
- As for missing hills, sowing should be more appropriate.
- Especially in Rive Nile State, a symptom of leaf top drying (grayish white) appears. This is a typical symptom of lack of water. It is important to conduct more appropriate irrigation.
- A symptom of dark brown leaf is observed in some fields. This might be excess of iron. If it appears, stop irrigation and supply oxygen.
- The important thing is an attitude to learn from rice growth itself. If problems happen, try to solve problems through actual cultivation.



Mr. Tsuboi gave technical advice in Gezira State.



Mr. Tsuboi visited demo site with DG in Gedaref State.



Mr. Tsuboi visited demo site with Minister in Sennar State.



Mr. Tsuboi gave technical advice in River Nile State.

Dr. Ikeda, Cooperation with ARC

Ex-Professor of Tokyo University of Agriculture (2009 - 2014) , ex-Head of Biological Resources Division of WARDA (Africa Rice Center, Benin, 2002 - 2007) visited Sudan at the first time. **Dr. Ryoichi Ikeda** is a researcher and academician of plant breeding especially in rice.

In his first week, he visited rice cultivation sites in Gezira, Gedaref, Sennar and River Nile State with Mr. Tatsushi Tsuboi to grasp character of rice cultivation in Sudan. In his second week, he visited 3 experiment sites of ARC to discuss with researchers and he also conducted a lecture on Rice in Africa, NERICA, Seed Production and Rice Breeding in ARC Headquarters. Aside from his lecture, he strongly advised to researchers that it is indispensable to get know-how of growing upland rice so as to get proper data from research experiment.



Dr. Ikeda (the left) observed the rice growth with Mr. Nakagaki (the middle) in ARC HQ site. The right is Mr. Hanada, mission from JICA HQ.



Dr. Ikeda (the middle) visited the site of ARC White Nile and discussed with researchers. The left is Mr. Nakagaki.



Dr. Ikeda conducted a lecture at ARC Headquarters.



Same as the left.

Date	Topic
Sep 13th (Sat)	- Arrive to Khartoum - Meeting: Project Team
Sep 14th (Sun) - 18th (Thu)	< Same as Mr. Tatsushi Tsuboi >
Sep 19th (Fri)	- Visit local market and Reporting
Sep 20th (Sat)	- Visit local market and Reporting
Sep 21st (Sun)	- Meeting: Federal MoAI (DG of ICI) and JICA - Move to Gezira - Visit Arab Sudanese Seed Company
Sep 22nd (Mon)	- Move to Gedaref - Meeting: ARC (Rahad Research Station) - Visit ARC Site and Advice - Visit Demo Site and Advice - Move to Gezira
Sep 23rd (Tue)	- Meeting: ARC HQ - Visit ARC Site and Advice - Lecture <Rice in Africa, NERICA, Seed Production and Rice Breeding> for researchers
Sep 24th (Wed)	- Move to White Nile - Meeting: ARC (White Nile Research Station) - Visit ARC Site and Advice - Move to Khartoum
Sep 25th (Thu)	- Departure from Khartoum

Dr. Tokida, on Rice Mechanization

Dr. Kunihiro Tokida is a Chief Advisor of JICA Uganda "Promotion of Rice Development (PRiDe) Project". His specialty is Agricultural Mechanization.

For 5 days, he visited actual upland rice cultivation sites, Ministry of Agriculture in Gezira, Sennar and Gedaref State, and Private Sectors (CTC and Crown Company) and discussed with them about mechanization for rice sector development in Sudan.

He recommended establishing "Rice Mechanization Model" in Sudan. His main technical advice is summarized as a table right-hand side. These precious advice should be considered for the development of upland rice in Sudan.

Main Technical Advice from Dr. Kunihiro Tokida

- It is necessary for extensionists who promote rice to farmers to acquire operation of agricultural machine. Training for operation is needed.
- "Rice Mechanization Model" should be established and proposed in order to develop rice sector in Sudan. Federal and State Ministries of Agriculture have a very important role to materialize it.
- OJT (on the job training) is necessary for extensionists who is in charge of operation and maintenance of Rice Milling Machine.
- It is not enough to access utilization of agricultural machine for small scale farmers. "Rice Mechanization Model" is urgently needed.
- It is expected that JICA Project pushes forward the activity for mechanization with long term view. Mechanization is necessary for rice sector development in Sudan. It is important for Federal and State Ministries of Agriculture to adopt a policy of mechanization to facilitate access to agricultural machine for farmers.

Date	Topic
Sep 28th (Sun)	- Arrive to Khartoum - Meeting: Project Team - Move to Gezira - Visit Experiment Site
Sep 29th (Mon)	- Meeting: Gezira State MoA (Director) - Visit Demo and Seed Site and Advice - Lecture <Rice Mechanization: Situation in SSA and Possibility in Sudan> - Meeting: CTC (Medani Branch Manager)
Sep 30th (Tue)	- Move to Sennar - Meeting: CTC (Sennar Branch Manager) - Meeting: Sennar State MoA (Minister) - Visit Demo Site and Advice - Move to Gezira
Oct 1st (Wed)	- Move to Gedaref - Visit Demo Site and Advice - Observe Rice Milling Machine and Advice - Move to Gezira - Observe Rice Milling Machine and Advice - Move to Khartoum
Oct 2nd (Thu)	- Meeting: Crown Company (Executive Director) - Meeting: JICA
Oct 3rd (Fri)	- Departure from Khartoum



Dr. Tokida checked installation of rice milling machine and gave advice in Gezira State.



Dr. Tokida conducted a lecture in Gezira State MoA.



Dr. Tokida checked a sowing machine and discussed with extensionists in Gedaref State.



Dr. Tokida checked agricultural machines in CTC Sennar Branch.

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