ギニアとウガンダにおけるネリカ稲普及活動：笹川グローバル 2000 の経験から
NERICA Dissemination Activities in Guinea and Uganda
The Experience of Sasakawa-Global 2000

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要　約

SAA は、サブサハラ・アフリカ諸国の、主に天水農業を営む小規模農民の食糧穀物の生産性の向上を支援するために活動する国際 NGO である。プロジェクト対象国の公共の研究・普及機関を通じて、SAA は、優良な穀物生産性向上のための技術があれば、小規模農民は現状の農産技術と比べて、食糧穀物の収量を 2～3 倍に増やすことが可能であることを示してきた。ここでは、当会がギニアとウガンダで行ってきた NERICA の普及活動の経験を検証し、学んだ教訓を将来に活かすこととしたい。

ギニア

NERICA との関わりは、1998 年から WARDA の「農民参加型品種選択法」(PVS)への支援をすることから始まった。プロジェクト参加農民への実際の技術移転活動は 2000 年からで、2004 年までに、0.25～0.5ha の広さの NERICA 技術移転の圃場を 1 万箇以上実施し、適量の施肥と近代的農法を応用することによって、陸地条件で平均 3.0t/ha の収量を得てきた。

農業省によれば、1996 年には 30 万トンの米の輸入量があったが、2004 年には 5 万トンにまで減少したとのことである。

SG 2000 としての活動は 2004 年末で終了したが、NERICA を中心とした稲の普及活動への部分的支援は農業省内のリエゾン・オフィスを通じて現在も続いており、UNDP やアフリカ開発銀行の援助を受けて、ギニア政府は NERICA の技術普及を全国で続けている。

ウガンダ

ウガンダは長年に渡り、全人口を養うに十分な多彩な食糧を生産してきた。しかし最近までは、低収量と高い労働コストのため、稲作は盛んでなく、公的な関心もこの国では低かった。

SAA は 2001～2002 年に、ギニアから入手した数品種の NERICA の栽培試験を行った。その後、稲作は栽培環境が適した小規模農家の間に急速に広まった。NERICA はこの国では NARIC 3 および SUPARICA 2 の名で流通しており、SAA の参加農民は水成土壌条件下で平均 4.5t/ha の収量を得ている。

多くの農民が子供の教育費や生活必需品の購入のための換金作物として、稲を栽培しているのがこの国での特徴である。国の農業近代化計画（PMA）では、NERICA を食糧保障と同時に、零細農業から市場志向の科学農業へと変換させる所得創出のための戦略穀物として精力的に推奨している。

その他の国々

SAA はエチオピアとマリにおいても NERICA を含む稲の研究・普及活動を実施しており、陸稲、灌漑稲共に有望な成果が見えている。

教　訓

ギニア、ウガンダの農民はそれぞれ独自の違った理由で NERICA を選択している。NERICA には貧困削減の可能性がある。しかしサブサハラ・アフリカ全体の食糧保障を達成するには、トウモロコシ、ミレット、ソルガム、小麦、根菜などの全ての穀物を改良する努力が必要である。NERICA と米だけではアフリカ大陸を食べさせることはできないのだ。

NERICA Dissemination Activities in Guinea and Uganda: The Experience of Sasakawa-Global 2000

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Abstract

SAA is an international NGO that assists small-scale farmers in sub-Saharan countries to increase their staple food crop production mainly under rain-fed conditions. Working with and through public research and extension organisations, SAA proves that, given access to improved crop production enhancing technology, small-scale farmers are able to double or triple their staple food crop yields compared to conventional farming practices. Today, our experience in NERICA technology demonstration in Guinea and Uganda will be elaborated and lessons learnt for the future will be discussed here.

Guinea: SAA involvement started from 1998 through support of Participatory Varietal Selection (PVS) in association with WARDA. Actual technology transfer demonstration with participating farmers started from the year 2000 and up to the cropping season of 2004, SAA conducted more than 10,000 NERICA technology demonstration packages (0.25-0.5ha) and obtained average yield of 3.0t/ha with upland condition, applying adequate fertilizers and modern agronomic practice.

According to the national ministry, rice import was down from 300,000MT in 1996 to less than 50,000MT in 2004.

Although the project activities of SG 2000 officially came to a conclusion at the end of 2004, minor support to NERICA related activities are still continuing through the liaison office at the ministry of agriculture and such international organizations such as UNDP and AFDB assist the effort of Guinean government to disseminate NERICA technology throughout the country.

Uganda: Uganda has been producing a wide selection of food enough to feed its populace for many years. But up to recently, due to low yields and high labour cost, rice farming was not popular and public involvement was least in this country. During 2000-2001 cropping season, SAA tested a number of NERICA varieties imported from Guinea. Since then, rice farming has rapidly spread among small-scale farmers where agro-ecological environments were suitable for rice cultivation. NERICA varieties here are traded in the name of NARIC 3 and SUPARICA 2, and SAA participating farmers gain average yield of 4.5t/ha under hydromorphic condition.

One notable characteristic of this country is that most farmers grow rice as a cash crop to generate additional income to pay school fees, purchase household essentials, etc. The country's Plan for Modernization of Agriculture (PMA) vigorously promotes NERICA as a strategic crop for food security as well as for income generation to transform subsistence one to a market-oriented science based agriculture.

Other countries: SAA is conducting research and extension activities of various rice varieties including NERICA especially in Ethiopia and Mali. In both upland and irrigated conditions, the positive result has been visible.

Lessons learnt: Farmers in Guinea and Uganda select NERICA for their own different reasons. NERICA has potential to alleviate poverty, but to achieve overall food security in Sub-Saharan Africa, efforts should be made to improve all other major crops such as maize, millet, sorghum, wheat, and tubers. NERICA and rice alone cannot feed the African continent.

Introduction

Sasakawa Africa Association (SAA) is an international NGO for assisting small-scale farmers in sub-Saharan African countries to increase their staple food crop production mainly under rain-fed conditions. The project is titled as Sasakawa Global 2000 (SG 2000). SAA/SG 2000 work with and through public research and extension organisations under the ministry of agriculture in the host countries. The main objective is to demonstrate and prove that, given access to improved crop production enhancing technology available in sub-Saharan African countries, small-scale farmers are able to double or triple their staple food crop yields by applying adequate inputs such as improved seed and organic as well as inorganic fertilizer associated with appropriate farm management practices, compared to conventional farming methods. Farmers who participate in the project must purchase those necessary inputs either by credit or by cash basis before planting. Technology demonstration is always conducted in the farmer's own field assisted by public extension workers. Therefore, practicing the technology with their own hands in their own fields, farmers are able to recognize the advantages of modern farming technology and to gain significant economic return by increasing their yields.

First SG 2000 projects were started in 1986 in Ghana and Sudan. Up to the year 2006, 15 countries have benefited from the advanced technology enhancing project.

Recently, as demand and consumption of rice has been growing in a number of sub-Saharan African countries, SAA/SG 2000 has been trying to assist those countries who need to boost rice production in order to meet increasing national demands.

Guinea

Rice is the main staple cereal in this country. Its consumption of 90-100 kg/person/year is the highest in West Africa. According to FAO statistics, Guinea is producing over 700,000~800,000 MT of paddy rice a year. However, it is not enough at all. The country is importing 200,000~300,000 MT annually in order to meet domestic demand. 65% of rice has been grown under upland, rain-fed conditions with very limited use of modern inputs. Traditional method of "slash and burn" farming has contributed to soil degradation rapidly as population increases and land for agriculture becomes less available. Eventually, national average yield obtained is 1.5 t/ha at best.

SG 2000 Guinea started its activities in 1996. Its involvement in NERICA has started from 1998 cropping season by assisting Participatory Varietal Selection (PVS) in association with WARDA. Through PVS, farmers are able to select varieties they want to plant, and NERICA 1, 2, 3, 4 and 6 were chosen by Guinean farmers. SG 2000 also helped multiplying NERICA seeds available to farmers through assisting WARDA's Community-Based Seed Production System (CBSS). Actual technology demonstration programme toward rice growing small-scale farmers has started from 2000 in collaboration with Service National de la Promotion Rurale et de la Vulgarisation (SNPRV), Guinean national extension organisation. Standard NERICA technology component recommended by SG 2000 Guinea through SNPRV extension workers are as follows:

(1) Plot size: 0.25~0.5 ha.
(2) Seed rate: 60 kg/ha for drill sowing and 70 kg/ha for broadcasting.
(3) Fertilizer rate (kg/ha): N=40, P2O5=17, K2O=17.
(4) Land preparation: By hand and hand hoe.
(5) Weeding: By hand or if available by herbicide (5lt of thiobencarb+propanil/ha).

Tables 1 to 4 show the results of NERICA technology demonstration plots from the year 2000 to 2003. SG 2000 conduced more than 1,000 NERICA technology demonstration packages and participating farmers were able to obtain average yield of 2.0~3.0 t/ha with upland condition, applying adequate amount of fertilizers and modern agronomic practice. According to the national ministry of agriculture, Guinea imported 300,000 MT of rice in 1996, but the figure went down to less than 50,000 MT in 2004.

In the early 2000s, NERICA seed multiplied in Guinea was exported to other African countries for on-station and on-farm experiments and made a significant contribution to speed up NERICA diffusion in African continent. SG 2000 Guinea alone exported 14.8 ton of NERICA seed to seven countries up to 2004.

The project activities of SG 2000 Guinea has officially come to a conclusion at the end of 2004. But minor support to NERICA related activities are still continuing through the liaison office at the ministry of agriculture, and international organisations such as UNDP and African Development Bank strongly assist the effort of Guinean government to disseminate NERICA technology throughout the country.

However, some bottlenecks which prevents the country from boosting NERICA production should be mentioned. First of all, soil fertility depletion in upland area is serious due to "slash and burn" farming practice. Although the soil nutrient recovery is essential to improve productivity, fertilizer use in Guinea is still too low and the price is too expensive and not affordable to small-scale farmers. SG 2000 recommended rotation with such legumes as cowpea, soybean and Mucuna (green manure) for soil fertility restoration. Another problem is that there is no sufficient and updated statistics without which it is hard to design effective programme planning. For example, in the year 2000, the government claimed that about 20,000 farm families planted NERICA in 8,000 ha of rice farming areas of the country. But there was no supporting evidence of this figure. National statistics are usually unreliable and not readily available. Government policy is quite often inconsistent and overambitious. In 2002, the government announced that by the year 2005, 300,000 ha of rice farming area which consists of about one half of rice cultivating area of the country shall be covered by NERICAs. Obviously, it has not been achieved. In spite of being endowed with rich mining, in particular, bauxite, marine and forest resources, Guinea still depends too much on external financial assistances. Such dependence does not help to construct effective coordination and linkage among all stakeholders because many objectives are not realized simply due to lack of external financing.

From 1998 to the end of 2004, SG 2000 has demonstrated that Guinean small-scale farmers can easily double or triple their NERICA yields, given access to available inputs. What a single NGO can do is limited and the further effort of dissemination and expansion of NERICA technology shall be led by the Guinean government with international and national partners. Guinea has a great potential, and it must be fully exploited.

Uganda

Rice is not staple and has long been not important in Uganda. The country has been producing a wide selection of food enough to feed its populace for through many years. Uganda has two crop seasons, a major season from March to July/August, and a minor one from September to January/February. Subsequently, farmers can grow anything they want almost all the year round. There was no immediate need or incentive to expand rice farming. However, urbanization and changing food consumption habits has been increasing rice import at a pace of 45,000~50,000 MT a year, the urgent need to boost domestic rice production arouse. But local rice production was characterized as low yield and high labour cost, because little research attention was paid over a long term of years. For that reason, rice farming was not attractive and profitable to small growers up to recent years.

SG 2000 Uganda's involvement in NERICA has started in 2000 when NERICAs and other upland rice varieties developed by WARDA were brought from SG 2000 Guinea. In the same cropping season, on-station seed multiplication in a 1 ha of land was carried out. In the following season (first cropping season of 2001), 4,000 kg of seed was distributed to 100 farmers in three districts, Iganga, Tororo, and Jinja, and planted in 16 ha of farmers fields. Through on-farm trials, NERICA 4 and WABC 165 demonstrated their potential over local checks and the further farmer-to-farmer seed multiplication practice was encouraged. In the second cropping season of 2001, 105 farmers planted two selected WARDA varieties in 48 ha of plots. As shown in Table 5, average yield of NERICA 4 was a significant 4.9 t/ha, much higher than the yields in Guinea.

In 2002, two different institutes, one National Agricultural Research Organisation (NARO) and another NASECO, a private seed company, released new upland rice varieties under two different names - NARO released NARIC 3 and NASECO SUPARICA 2. Names were different, but NARIC 3 and SUPARICA 2 are the same NERICA 4, which created some confusion among all parties involved in rice promotion in the country. There could be many reasons why this confusion happened, most probable cause attributed to the result of mixing up of the original breeder seed at the initial stage when nobody clearly knew the characteristic of NERICA

seed. And both public and private sectors were too impatient and too eager for the hasty release. However, one should admit that enthusiasm of both public and private sectors made the rapid expansion of NERICA possible in Uganda.

Table 6 presents the yield result as well as technical details of SG 2000 NERICA demonstration plots conducted in the first cropping season in 2003. Within a short period of time, NERICA 4 has become very popular among the small-scale farmers in agro-ecological environments suitable for the rice cultivation.

One notable characteristic of rice farming in this country is that most farmers grow NERICA and other rice varieties as a cash crop to generate additional cash income to pay school fees for their children, to purchase household items and essentials, etc. rather than to use for their own consumption. Rice is a marketable commodity which creates income generating opportunity for farmers.

The national government's Plan for Modernisation of Agriculture (PMA) vigorously promotes NERICA as a strategic crop for household food security as well as for income generation to transform subsistence agriculture to a market-oriented science based one.

Other Countries

SAA/SG 2000 is conducting research and extension activities of various rice varieties including NERICA especially in Ethiopia and Mali. Ethiopia did not have a rice growing culture and it is still not popular. It is only recently that its potential to reduce chronic food shortage has been recognized and rice has been placed as number four - after wheat, maize and teff - food security crop for the next five years, by the government of Ethiopia. Rice can be prepared as local bread (Injera, Dabo, etc.) mixed with teff and wheat which will create tremendous market opportunity if well coordinated. Water management is the key for potential rice area expansion because the country is blessed with the wide variety of water resources such as lakes and rivers which maintain water most of the year. In collaboration with national research institutes, SG 2000 has been carrying out a multi-location trial of NERICA and other rice varieties.

In Mali, first generation of two irrigated NERICA from WARDA Sahel station in St. Luis, Senegal performed above average. WAS 161-B-9-2 with 5708 kg/ha and WAS-197-B-6-3-11 with 5689 kg/ha could do well in the Office du Niger irrigation system after one or two cycles of selection. SG 2000 Mali will grow both irrigated and lowland NERICAs and continue the field dissemination activities.

Way Forward

In many countries of sub-Saharan Africa, rice is not consumed as a main staple, but traded as a marketable commodity. Many countries are eager to reduce the import quantity by increasing domestic rice production. To reduce rice import, securing quantity is the first priority, but at the same time, quality of the product must be drastically improved. Market would not appreciate the final product if it is always contaminated with stones , dusts and other unidentified objects. Access to the wide market opportunity will be guaranteed only if the post harvest treatment of all stages involving threshing, cleaning, drying, milling, and storage is paid much attention. Centuries-old processing technologies should be replaced by much improved ones at each farming community level.

Importance of rice is rapidly growing in Africa. But we should not forget the fact that rice is still new to the majority of African population. NERICA and rice in general can certainly make a great contribution for poverty alleviation, but rice alone cannot solve overall food problems in the continent. Effort should be made to increase and improve productivity as well as quality of all other major food crops such as maize, millet, sorghum, wheat, and tubers. Continuous and concerted effort to improve all major food crops production technology is very crucial to the poverty alleviation and food self-sufficiency in sub-Saharan Africa.

Table 1 Guinea: NERICA technology demonstration result 2000

Location	Number of Plots	Area Total (ha)	Average Yield (t/ha)	Yield Range	Traditional Yield
Kindia	103	25.75	1.94	1.58-2.10	1.53
Mamou	46	11.50	1.36	1.20-1.88	0.95
Labe	170	42.50	1.64	1.32-1.97	1.16
Faranah	118	29.50	2.09	1.52-2.67	1.13
Kankan	70	17.50	1.89	1.45-2.24	0.95
Boke	126	31.50	2.19	1.66-2.72	1.19
Macenta	168	42.00	2.55	1.92-3.18	1.96
N'zerekore	165	41.25	2.80	1.99-3.50	2.20
Total	**966**	**241.5**	**2.06**		**1.38**

Table 2 Guinea: NERICA technology demonstration result 2001

Location	Number of Plots	Area Total (ha)	Average Yield (t/ha)	Yield Range	Traditional Yield
Kindia	27	6.66	2.70	1.90-3.50	NA
Labe	55	13.75	2.50	1.50-4.50	NA
Faranah	116	29.00	2.40	1.70-4.80	0.93
Macenta	116	29.00	2.30	2.07-2.54	2.54
N'zerekore	105	26.25	2.46	2.34-2.58	1.08
Total	**419**	**104.66**	**2.47**		

Table 3 Guinea: NERICA technology demonstration result 2002

Location	Number of Plots	Area Total (ha)	Average Yield (t/ha)	Yield Range	National Average
Kindia	82	20.5	2.7	1.9-3.6	
Labe	145	36.3	2.0	37,258	
Faranah	105	26.3	2.4	1.3-2.8	
Macenta	86	21.5	2.2	35,832	
Total	**418**	**104.5**	**2.3**		**1.61**

Note National Average of all rice produced.

Table 4 Guinea: NERICA technology demonstration result 2003

Location	Number of Plots	Area Total (ha)	Average Yield (t/ha)	Yield Range	National Average
N'Zerekore	30	35	2.5	1.5-3.5	
Mamou	30	25	2.2	35,552	
Labe	50	60	2.7	35,464	
Kindia	30	43	3.2	35,553	
Faranah	60	70	2.5	35,553	
Total	**200**	**233**	**2.6**		**1.71**

Note National Average of all rice produced.

Table 5 Uganda: The result of on-farm trial in the 2001 first cropping season

Location & (Condition)	Variety and Yield (t/ha)		
	NERICA 4	WABC 165	Local Check
Busemebatia (lowland)	6.50	4.60	2.50
Busemebatia (upland)	4.26	5.00	1.50
Bonkonte (upland)	3.49	5.00	1.00
Bonkonte (hydromorphic)	4.70	4.80	1.20
Bosolwe (hydromorphic)	5.02	-	-
Namadope (hydromorphic)	6.00	3.80	2.00
Namadope (upland)	4.60	3.50	1.80
Namadope (lowland)	5.45	4.00	2.20
Nagongera (lowland)	4.70	4.20	1.95
Paragang (upland)	4.30	3.80	1.00
Average Yield	4.90	4.30	1.68

Table 6 Uganda: NERICA technology demonstration result: 2003 first cropping season

Location	Number of Plots	Area Total (ha)	Average Yield (t/ha)	Traditional Yield (t/ha)
Kamuli	13	1.3	2.50	0.70
Luwero	18	1.8	5.22	1.09
Pallisa	34	3.4	4.50	1.92
	65	**6.5**	**4.07**	**1.24**

Technology component
Plot size: 0.1ha
Seed rate: 25kg with 30cm x 30cm x 2 (drilling)
Fertilizer rate: Urea 40kg, SSP 26kg, MOP 12kg
Weeding: Hand and/or thiobencarb+propanil (Satunil) 0.5lt/ha

NERICA 1 demonstration plot in Guinea, 2004

JICA expert and SAA rice director examine NERICA field in Uganda

Multi location trial at Ethiopian research station

Irrigated NERICA experiment in Mali

Rice drying in Guinean village. Vehicles run on the products.

NERICA Dissemination Activities in Guinea and Uganda:
The Experience of Sasakawa-Global 2000

Michio Ito, 20 October, 2006

Sasakawa Africa Association

Brief Introduction: What is SAA?

- Staple food crop production enhancing technology transfer through public extension.
- On-farm demonstration with inputs (seed, fertilizer) on credit and/or cash basis.
- Demonstration of proven technology available in sub-Saharan Africa which can dramatically increase the yields of staple food crops.
- From 1986 up to present, 15 countries have benefited.
- **Project is called "Sasakawa-Global 2000 (SG 2000).**

Rice in Guinea: Basic Facts and Figures

- Rice is the main staple food.
- Consumption 90-100 KG/person/year = Highest in West Africa.
- Producing over 700,000~800,000 MT/year of paddy rice.
- Average yield 1.5 t/ha. 65% produced under rain-fed upland conditions.
- Importing 200,000~300,000 MT annually.

SAA/SG 2000 in Guinea: NERICA activities from 1998 up to the present

- Participatory Varietal Selection (PVS) with WARDA from 1998 cropping season.
- NERICA 1, 2, 3, 4 & 6 selected in Guinea.
- Seed multiplication with SNPRV (public extension organization) from 2000.
- SG 2000 NERICA technology dissemination among participating farmers from 2000.
- **Collaboration between research and extension.**

Standard NERICA technology component recommended by SG 2000 Guinea

1. Plot size: 0.25~0.5ha
2. Seed rate: 60kg for drill sowing, 70kg for broadcasting
3. Fertilizer rate (kg/ha): N=17, P_2O_5=17, K_2O=17
4. Land preparation done by hand and hand hoe
5. Weeding done by hand or by herbicide (51 of thiobencarb+propanil/ha)

SG 2000 NERICA technology demonstration Crop year 2000 result

Location	Number of Plots	Area Total (ha)	Average Yield (t/ha)	Yield Range	Traditional Yield
Kindia	103	25.75	1.94	1.58-2.10	1.53
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N'Zerekore	30	35	2.5	1.5-3.5
Mamou	30	25	2.2	1.5-3
Labe	50	60	2.74	1.2-4
Kindia	30	43	3.2	1.5-4
Faranah	60	70	2.5	1.5-4
Total	**200**	**233**	**2.6**	

Major Achievements in Guinea

- Rice import down from 300,000 MT in 1996 to less than 50,000 MT in 2004.
- SG 2000 Guinea exported 14.8 tons of NERICA seed to 7 countries for on-station and on-farm experiments.
- SG 2000 and SNPRV attracted UNDP and AfDB support to continue NERICA diffusion.

Major Bottlenecks in Guinea

- Soil fertility depletion in upland area: Rotation with legume-cowpea, soybean and mucuna recommended.
- National statistics = unreliable and unavailable.
- Lack of political coordination = weak linkage among all stakeholders.
- Great potential, but not exploited enough.

Rice in Uganda: Basic Facts and Figures

- Rice is not the main staple.
- Little research attention.
- However, urbanization and changing food consumption habits increases rice import, 50,000/year.
- Local production characterizes as low yield and high labour costs = not attractive to grow.

SAA/SG 2000 in Uganda: NERICA involvement from 2000 to the present

- Brought NERICA and other upland rice varieties from SG 2000 Guinea in 2000 cropping season.
- On-farm trial in the same season selected NERICA 4 and WABC 165 as promising in upland, lowland and hydromorphic soils conditions. NERICA 4 gained 4.5 t/ha average yields with adequate fertilizer application and agronomy practice (drill sowing, weeding, etc.)
- Farmer to farmer seed multiplication spread through the country.

SG 2000 NERICA technology demonstration Crop year 2003

NERICA 4

Location	Number of Plots	Area Total (ha)	Average Yield (kg/ha)	Traditional Yield (kg/ha)
Kamuli	13	1.3	2,498	700
Luwero	18	1.8	5,220	1,093
Pallisa	34	3.4	4,500	1,920
Total	**65**	**6.5**	**4,073**	**1,238**

Technology for 0.1ha plot

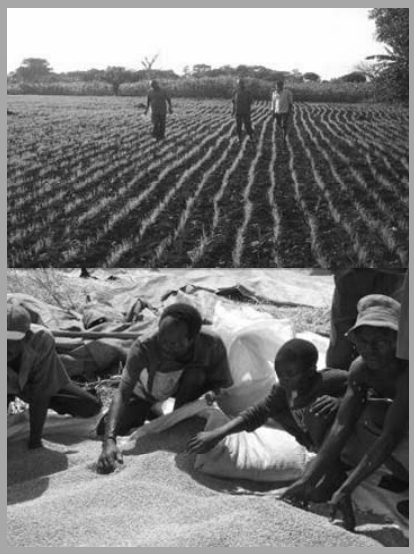
Seed 25 kg with 30cm x 30cm x 2 (drilling)

Urea 40kg, SSP 26kg, MOP 12kg

Hand weeding and/or Satunil (thiobencarb+propanil) 0.5lt

Rice as a marketable commodity in Uganda

- Favorable environment-two crop season/year.
- Farmers grow NERICA (rice) as a cash crop to gain additional income-school fees, house repairs, etc.
- GOU promotes NERICA to transform subsistence agriculture to a market oriented science based one.
- **Plan for Modernisation of Agriculture (PMA)**



Activities in other countries

Ethiopia

Mali

Lessons Learnt and the Future

- To access market opportunity, improvement of post harvest treatment is essential
- Quantity as well as Quality should be secured.


Lessons Learnt and the Future

- For food self-sufficiency and security in sub-Saharan Africa, all major food crops – maize, millet, sorghum, wheat, tubers, etc., should be improved.
- NERICA alone cannot feed African continent.


THANK YOU!!

質疑応答
Question and Answer Session

ギニアとウガンダにおけるネリカ稲普及活動
NERICA Dissemination Activities in Guinea and Uganda: the Experience of Sasakawa Global 2000

伊藤　道夫　Michio Ito
笹川アフリカ協会（SAA）東京事務局
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司会：松本　哲男　Chair person: Tetsuo Matsumoto
名古屋大学農学国際教育協力研究センター
Professor, ICCAE, Nagoya University

Matsumoto, Chair:

Do you have any questions or comments?

Asanuma:

In Guinea, you had trials of crop rotation using rice and cowpea.　How was the result?　Did you get the results?

Ito:

Since I myself am not an agricultural scientist, I completely depend upon what our Guinea office supplies to me.　So far as I understand, I don't have any statistical data on that, however, NERICA with Mucuna, that is green manure, showed impressing results improving soil fertility.　Farmers grow rice and cowpea to sell cowpea for getting cash flow.　And, farmers grow rice and soybean because their families eat soybean.　That is consumption for nutritional reasons.　That's how I understand.

Matsumoto, Chair:

Any others?

Yamauchi:

NERICA に関する様々な試験を色々な国で行われていますが、一番問題になっていること、例えば栽培上のことでも何でも結構なのですが、問題点は何だとお考えでしょうか？

Ito:

我々は実際に普及や実験で upland rice の NERICA の1～7までを、我々のプロジェクト対象国で色々試しています。例えばエチオピアではとても標高の高い所が多いので、NERICA の一番の特性である early maturity といいますか、90 日間で収穫できるというような特性が現れずに、110 日とか 120 日かかるということがあります。そういった特性が現れる場合、他の米や稲と比べても特に高い収量は得られないということがあります。どこの国でも NERICA が干ばつ耐性であるとか、早期に収穫できるというような特性が現れるわけではな

いので、すべての国で NERICA だけを勧めるのではなく、それぞれの国に合った稲の品種を勧めるのがいいのではないか、ということが挙げられると思います。

Yamauchi:

どうもありがとうございました。

Tokida：

Do you have any view about using urea rather than ammonium sulfate as a fertilizer?

Ito:

That completely depends on the availability of fertilizers, and in most of the South African countries where we are in operation, they don't depend on any fertilizers. Maybe they are grown without fertilizers. The availability of fertilizers is the factor we want to recommend.

Participant:

Thank you very much for your presentation on your NERICA dissemination activities. I have a question about perception of farmers in Uganda. You mentioned the local production characteristics, low yield and high developing cost for farmers growing rice. What makes such costs high? How is the perception of the farmers?

Ito:

I think that is comparison. In Ghana or Uganda, in their major states, I think people prefer plantain, banana, and maize. I think, in my limited knowledge, maize and plantain are very easy to grow. But rice, even upland rice, you have to pay much attention to it, and you have to care for the weeding and so on. You have to take much care of rice compared to other crops such as maize and plantain.

Matsumoto, Chair:

Nothing else? Thank you very much, Mr. Ito.

Profile

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1985 年、関西学院大学文学部英文学科卒業。同年より 1987 年まで、（社）アジア協会・アジア友の会に勤務。主としてブルキナファソの農村での飲料水用井戸建設の調整事業に従事。

1989 年、英国マンチェスター大学大学院開発学（経済）修士課程修了。1991 年より笹川アフリカ協会東京事務局員。現在に至る。笹川グローバル 2000 農業開発プロジェクトの管理・運営業務を担当。これまでブルキナファソ、コートジボアール、セネガル、マリ、ギニア、ガーナ、トーゴ、ベナン、ナイジェリア、南アフリカ、モザンビーク、マラウィ、エチオピア、ケニア、タンザニア、ウガンダにてプロジェクト関連業務に従事する。2005 年より東京農業大学非常勤講師（国際活動実践論）を兼任。

Academic career

Mr. Michio Ito received his Bachelor's degree in English literature from Kwansei Gakuin University, Japan, in 1985, and his Master's degree in development studies (M.A. Econ) from the University of Manchester, UK.

Professional career

After obtaining his first degree, Mr. Michio Ito joined Japan-Asian Friendship Society, Japan, and mainly engaged in a project for constructing drinking water wells in Burkina Faso. Since 1991, Mr. Ito has been working for Sasakawa Africa Association in its Tokyo Headquarters and responsible for management and coordination of Sasakawa Global 2000, an agricultural development project. Mr. Ito has often visited many African countries, for project related works, such as Burkina Faso, Cote d'Ivoire, Senegal, Mali, Guinea, Ghana, Togo, Benin, Nigeria, South Africa, Mozambique, Malawi, Ethiopia, Kenya, Tanzania, and Uganda. Mr. Ito also has been working as a part-time lecturer for Tokyo University of Agriculture since 2005 to teach practical analysis of international activities.

Mr. Michio Ito is currently an administrative and program officer for Sasakawa Africa Association (SAA), Tokyo Headquarters.