

# AFICAT Newsletter (Tanzania No. 2)

Issued on April 17, 2023

This newsletter presents the activities of the “Africa Field Innovation Center for Agricultural Technology” (AFICAT). In the second issue, we introduce the activities conducted by the Tanzanian government and Japanese companies in coordination with the AFICAT team from August 2022 to February 2023 in Tanzania.

## AFICAT Participated in Nane Nane

In August 2022, the AFICAT team participated in the agricultural festival, commonly known as “Nane Nane,” which was held for eight days from August 1 to 8 in eight locations in Tanzania. AFICAT selected the Arusha site because it is closest to the Kilimanjaro Agriculture Training Centre (KATC), which is AFICAT’s base in Tanzania. The Ministry of Agriculture (MoA) shared their space with AFICAT at Nane Nane Arusha and agreed that two officers who worked as focal persons of AFICAT would represent AFICAT at the eight-day exhibition.



*The AFICAT booth at Nane Nane Arusha*

Japanese companies provided their pamphlets and videos AFICAT in order to introduce their products and advanced technologies. Pamphlets were displayed and distributed, and video clips on Japanese products and technologies were played on a liquid-crystal display. The AFICAT team, including two officers of the MoA, introduced the

Japanese companies, their products, and advanced technologies to visitors.

Visitors asked questions such as “Where can I buy the products displayed here, and how much do they cost?” and commented that they wished to see the machines in person, not in videos or flyers.

The AFICAT team often heard people mention that “Japanese products are expensive.” However, if the durability and operability of Japanese products are considered, Japanese products and technologies such as power tillers and combine harvesters are rather cost-effective. The AFICAT team would like to continue supporting Japanese companies and local dealers to verify whether their products and technologies are a good fit for the Tanzanian environment. This will help ensure that these products and technologies can benefit people in Tanzania. Furthermore, the AFICAT team is eager to continue raising awareness of such Japanese products and technologies so that AFICAT can contribute to promoting the agricultural sector and agricultural mechanization in Tanzania. The AFICAT team hopes to introduce more Japanese products and technologies to Nane Nane in the following year.



*Honda Motor Co., Ltd., and its local dealer, Afritool, displayed their products at Nane Nane Arusha*

## Tanzanian Tour completed by Senior Advisors and the Media

The AFICAT team arranged a nine-day field trip to Tanzania from July 30 to August 7 to invite senior advisors of AFICAT and editors of Japanese newspapers to enable them to observe the current situation and needs of agricultural mechanization in Tanzania.

In 2019, JICA conducted a survey targeting 143 Japanese manufacturers of rice-related agricultural machinery and received feedback from around 112 companies. The survey found that only 11 out of 112 respondents (10%) intended to expand their business to Sub-Saharan Africa. One of the main reasons for this is that information on this region is limited. The purpose of this Tanzanian tour was to provide information on Sub-Saharan Africa and AFICAT to Japanese companies by allowing senior advisors, who are industry professionals, and the media to observe and report on the current situation in Africa and disseminate information to Japanese people. The below table lists the names of the senior advisors and editors of Japanese newspapers who participated in the tour.

AFICAT's senior advisors	
Organization/Designation	Name
<a href="#">Shin-Norinsha/President</a>	Yoshisuke KISHIDA
<a href="#">Japan Agricultural Machinery Manufacturers Association /Senior Managing Director</a>	Toshihiko TAMURA
<a href="#">Japan Agricultural Mechanization Association/Senior Managing Director</a>	Takashi FUJIMORI
<a href="#">Niigata University/Professor</a>	Hideo HASEGAWA*
<a href="#">JICA/Senior Advisor</a>	Tsuneo OISHI

\* Professor Hasegawa did not participate in the tour

Editors who participated in the tour	
Organization/Designation	Name
<a href="#">Nokei-Shimposha Co., Ltd. (Agricultural Machinery News)/ Director cum Chief Editor</a>	Kazumi ENDO
<a href="#">Kokusainouguyosha Co., Ltd./ Director</a>	Hirofumi SATO

\* In addition to the six persons listed above, three

Japanese experts and an AFICAT focal person (KATC's officer) were part of the tour



KATC paddy fields after direct puddling and leveling works



Discussion with farmers at the Bagamoyo irrigation scheme, Pwani Region

Excluding the travel days between Japan and Tanzania, the actual field trip in Tanzania lasted only five days. However, the tour participants participated in Nane Nane, visited five irrigation schemes in four regions, namely Arusha; Kilimanjaro; Tanga; and Pwani, held discussions with farmers' associations, and visited their fields and facilities to understand the current situation and needs of agriculture and agricultural mechanization in Tanzania.

When they visited the irrigation schemes, they observed the current status of the machinery and facilities that had been introduced by a World Bank project funded by the Japanese government in the 2010s. In some irrigation schemes, the machinery and facilities are being used effectively whereas in others, the broken machinery cannot be repaired and is no longer in use.



Repairing the rotary as the drive gear was missing



A combine harvester whose transmission could not be repaired, and hence, it was out of operation

After returning to Japan, the editors of Japanese newspapers published articles highlighting the current situation and needs of agriculture and agricultural mechanization in Tanzania as shown below.



Media coverage of the Tanzanian tour

Left: the article "Nokei Shinpo" (in Japanese)

<https://www.jica.go.jp/activities/issues/agricul/aficat/glkrjk000006300-att/20220815.pdf>

Right: the article "Rural News" (in Japanese)

<https://www.jica.go.jp/activities/issues/agricul/aficat/glkrjk000006300-att/20220823.pdf>

Furthermore, the AFICAT team and senior advisors reported their findings to Japanese companies and stakeholders at the JICA Platform for Food and Agriculture (JiPFA) seminar held on August 10, 2022 as described below.

### JiPFA Seminar held in August 2022

Findings of the Tanzanian tour were reported to the 2nd Africa Agriculture Subcommittee of the JiPFA, which was held online on August 10, 2022.

AFICAT senior advisors shared their impressions and ideas on the challenges and future prospects for agricultural mechanization in Tanzania, such as Tanzania's security and need for further agricultural mechanization, potential of the agricultural machinery market, and need for human resource development on the local side related to agricultural machinery. Honda Motor Co., Ltd. and Kett Electric Laboratory Co., Ltd., who have been working with AFICAT in Tanzania, also expressed their appreciation and expectations of AFICAT. The AFICAT team will continue to disseminate information on African countries and AFICAT activities to Japanese companies and stakeholders so that they gain more interest in African countries.



**【JiPFA Africa Agriculture Subcommittee website】**

[https://www.jica.go.jp/activities/issues/agricul/jipfa/africa\\_agri/20220810.html](https://www.jica.go.jp/activities/issues/agricul/jipfa/africa_agri/20220810.html)(in Japanese)

**A session at the annual conference of the Japanese Society of Agricultural Machinery and Feed Engineers (JSAM)**

“The Japanese Society of Agricultural Machinery and Food Engineers (JSAM)” was established in 1937 as the “Japan Society of Agricultural Machinery Engineers” to promote academic progress in agricultural machinery, agricultural facilities, and mechanization. Since then, it has promoted the mechanization and modernization of agriculture and has greatly contributed to the development of Japanese as well as global agriculture and food production. Today, the society has approximately 1,200 members. The scope of the society’s activities has expanded from research and development related to so-called agricultural machinery such as tractors, rice transplanters, and combine harvesters to the use of sensing technology, electronic control, and ICT as well as technological fields related to the environment, energy, and food production and distribution.



In 2013, the name of the society was changed to “The Japanese Society of Agricultural and Food Engineers of Japan (JSAM)” to promote academic development in these fields and to further revitalize the society’s activities.

At the annual conference held in September 2022,

Professor Hideo Hasegawa of Niigata University, an AFICAT senior advisor, served as the organizer of the session. Presentations and discussions were held on the theme of “the role of JSAM in AFICAT activities.” Professor Hasegawa revealed that universities often collaborate with Japanese agricultural machinery manufacturers to conduct research activities and that the network could be utilized by international students studying in master’s and doctoral programs, some of whom are local government officials in African countries. The AFICAT team considers universities and academic societies as important stakeholders and will continue to exchange information and opinions with them.

Website of JSAM: <http://j-sam.org/en/>

**Presentation at International Agricultural Mechanization Research Association**

**農機新聞**

Shin-Norinsha Ltd. is one of the most renowned publishing companies on agricultural machinery in Japan and has been publishing newspapers (weekly), monthly magazines, agricultural machinery yearbooks, and agricultural machinery price guides since its establishment in 1933. Mr. Kishida, the President of Shin-Norinsha, has been providing advice to the AFICAT team as a senior advisor.

Farm Machinery Industrial Research Corp, a subsidiary of Shin-Norinsha, also publishes “Agricultural Mechanization in Asia, Africa, and Latin America (AMA),” a quarterly journal that compiles English-language articles on agricultural machinery, with experts from around the world listed as cooperating editors. Its first issue was published in 1971, and the 50th anniversary was published in 2020.





Shin-Norinsha has been serving as the secretariat of the International Agricultural Mechanization Research Association that was established in 1968. The association regularly holds forums to exchange information and opinions with agricultural machinery manufacturers, university professors, research institutions, and other stakeholders. The findings of the Tanzanian tour were reported by the participants of the tour at the 538th forum held in October 2022. Agricultural machinery manufacturers also participated in the forum and discussed the market potential of Tanzania and other African countries by comparing the situation in Tanzania with that in Vietnam and other Southeast Asian countries.

AFICAT will continue to utilize various opportunities to disseminate information to a wide range of Japanese stakeholders.

Shin-Norinsha Co., Ltd.

<http://www.shin-norin.co.jp/english/>

AMA

[http://www.shin-](http://www.shin-norin.co.jp/english/07.html)

[norin.co.jp/english/07.html](http://www.shin-norin.co.jp/english/07.html)



Performance test at KATC

### Seminar by Kett at the Ministry of Agriculture, Dodoma on September 9, 2022



Kett's online seminar with a demonstration of their products in Tanzania was held on September 9, 2022 in a seminar room at the

Ministry of Agriculture (MoA), Dodoma. The previous seminar was held at KATC in May 2022 for the KATC staff and a few officers from the MoA's headquarters in Dodoma.

The seminar began with an opening remark by Eng. Anna G. Mwangamilo, Director of the Agricultural Mechanization and Value Addition Department of the MoA. It was attended by 24 participants, including 20 individuals from various departments under the MoA, three from the Tanzania Bureau of Standards (TBS), and one from the Tanzania Private Sector Foundation (TPSF). Most of them attended in the meeting room whereas others, including the Kett staff, participated online.

The TPSF is an organization whose members are associations for commerce and industry as well as private companies in Tanzania. This foundation is expected to introduce Tanzanian companies as potential partners of Japanese companies. The Director of TPSF, who attended the seminar, commented that he understood the usefulness of Kett's products and that TPSF would introduce Kett to potential local partners. After the seminar, the participants submitted feedback on the usefulness of the seminar and mentioned that they understood the importance of moisture management and traceability for the moisture

### Honda's Performance Test @KATC



Since September 2022, Honda Motor Co., Ltd. (Honda), together with the AFICAT team, has conducted performance tests of Honda's products such as tillers, backpack sprayers, water pumps, and brush cutters at KATC. This helped to collect data on the efficiency, cost effectiveness, and durability of Honda products when used in Tanzanian field conditions, for instance, after crop harvesting, so that Honda can share the results with government officials, extension workers, farmers, and others. Honda is currently planning future activities with AFICAT to improve the agricultural productivity of small farmers.

content of harvested grains. Some participants expressed expectations for further training.



*Kett Seminar held at the headquarters of the Ministry of Agriculture, Dodoma*

Corporate profile-Kett Electric Laboratory

[https://www.kett.co.jp/products\\_en/](https://www.kett.co.jp/products_en/)

[Kett Electric Laboratory - YouTube](#)

### Discussion between the Ministry of Agriculture and AFICAT on September 9, 2022

After the Kett seminar, a discussion between the MoA and the AFICAT team was held on September 9. The team shared the progress of AFICAT's activities in Tanzania and its future plans.

The AFICAT team proposed the establishment of an exhibition space inside the KATC for Japanese products and technologies as well as the rehabilitation of a warehouse to store agricultural machinery for AFICAT activities.

### AFICAT team visited the Wilmar/Satake Rice Mill Plant

The AFICAT team learned that Wilmar International Limited, Asia's leading agribusiness group headquartered in Singapore, owns a rice milling plant equipped with products from a Japanese company, Satake Corporation (Satake), in Tanzania. The AFICAT team requested Wilmar Tanzania Limited for a plant visit, and they kindly allowed the AFICAT team to visit their plant and interview them in September 2022.



*AFICAT team members Ms. IKEGAYA and Mr. Yamaguchi visited Wilmar's milling plant in Morogoro*

Wilmar's milling plant is located in Morogoro, a major rice-producing area in Tanzania. The AFICAT team enquired why they mainly used Satake milling machines and equipment and not machines from other countries. They said that "Satake is the leading company in the field of rice milling machines and equipment. Its products are user-friendly, adjustable, and efficient for milling rice." Wilmar's milling plant can now process 320 tons of paddy per day if operated for 24 hours. However, after completing the expansion of the plant, it will be able to process 1,200 tons of paddy per day, which will make them the largest rice milling plant as a single plant in Africa. Although taking photographs inside the plant was prohibited, the AFICAT team was allowed to take photographs with the General Manager in front of the plant.

MW Rice Millers Ltd., Morogoro

<https://www.youtube.com/watch?v=2dEEiUzgG70>

### JICA Regional Training at KATC

The Regional Training on "Rice Cultivation Techniques in Tanzania" was conducted by KATC and a consultant team assigned for "Data Collection Survey on Strengthening of Training System and Promoting Rice Cultivation Package in Tanzania (commonly known as TANRICE 2.5)" by JICA as a part of the survey.

From October 24 to 29, government officials from five African countries, namely Uganda, Kenya, Malawi, Zambia, and Rwanda, were invited to KATC for training on rice farming technology. The AFICAT team was provided adequate time to



introduce the concept of AFICAT and exchange opinions with the participants. Participants actively expressed their opinions, including that the technology to be promoted should be appropriate for local farmlands and conditions, that technology should meet farmers' needs and impact them, that an affordable price is needed to promote agricultural mechanization, and that the entire value chain should be covered. The AFICAT team appreciated their active participation and comments and will attempt to keep their comments in mind.



*Government officials from five African countries were invited to KATC to attend a training on rice cultivation*

A new JICA technical cooperation project, the Project for Strengthening Capacities of Stakeholders of Rice Industry Development (TANRICE3), was planned by JICA and the Government of Tanzania to be implemented with its base at KATC from 2023. JICA's forthcoming projects will include regional trainings, such as inviting government officials from neighboring countries.

The AFICAT team hopes that it will be able to present Japanese products and technologies on such occasions at KATC.

### EBARA Corporation's Project in Tanzania



**EBARA CORPORATION**

EBARA Corporation is a Japanese water pump manufacturer. EBARA pumps have often been introduced in African countries through irrigation

development projects supported by the Japanese government. For example, in the early 1990s, a water pump was introduced in the Bagamoyo Irrigation Scheme in Pwani Region, and it is still in operation according to the farmers there.

EBARA manufactures and sells a wide variety of pumps for industrial and agricultural uses. In addition to large-scale irrigation pumps, it has been seeking to sell deep-well pumps to individual farmers in Africa to support them. To verify and demonstrate their irrigation pumps, EBARA has been conducting demonstrations and verification tests of solar irrigation pumps for horticultural crops in collaboration with local farmers as well as the regional government in three locations in Pwani Region, Tanzania.

The pumps are powered by solar power. Water is pumped into tanks and then delivered to the fields through drip irrigation.



*EBARA aims to reduce the price of the pumps by combining solar panels, tanks, and other products that can be procured locally*



*Pumped water is stored in tanks and used for drip irrigation*

The AFICAT team is enthusiastic about reporting their progress in Tanzania in the near future.



JICA's training course "Promotion of Agricultural Mechanization for Africa" held in December 2022

The JICA Tsukuba Center started a training course named "Promotion of Agricultural Mechanization for Africa (PAMA)" for participants from African countries on October 24, 2022.

Seven English-speaking countries (Ethiopia, Ghana, Rwanda, Sierra Leone, Tanzania, Uganda, and Zambia), one Portuguese-speaking country (Guinea-Bissau; however, it participated in the English-speaking course), and six French-speaking countries (Benin, Cote d'Ivoire, Guinea, Madagascar, Senegal, and Togo) participated. A total of 17 government officials from 14 countries participated in this training. All 14 countries are among the 32 countries in the Coalition for African Rice Development (CARD), which is supported by the Japanese government.



Due to the impact of COVID-19, the first half of the training was conducted online, and the second half, from Monday, November 28 to Friday, December 16 was conducted in Tanzania as an overseas supplemental training. In Tanzania, participants attended lectures held by the MoA of Tanzania, the principal of KATC, and Japanese companies at KATC.

Japanese companies involved in agricultural machinery such as Kubota Corporation, Yanmar, Satake, Honda, Kett, Fujiken, and KiliMOL introduced their company profiles and products and actively exchanged information with the African participants.

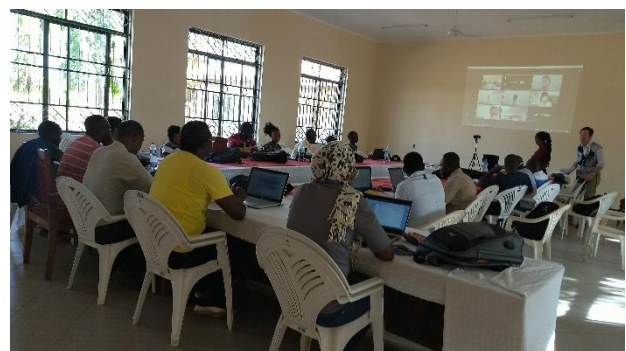
The AFICAT team introduced its initiatives in Africa. Participants showed a keen interest in

AFICAT's activities to contribute to the promotion of agricultural mechanization in their countries. Some expressed hope for collaborations with manufacturers in their respective countries.

After the lectures at KATC, participants visited farmers' associations, irrigation schemes, and JICA's Tanzania office and summarized and presented their action plans based on what they had learned during the training course.

For the PAMA participants, the training in Tanzania was a good experience as they were able to gain an insight into how Tanzania became one of the leading rice-producing countries in Africa. For example, they learned that it is important to improve irrigation to increase rice production, ensure water management, and perform mechanization planning. The fact that one of the farmers' cooperatives has established a rice farming system based on the use of machinery and has expanded its business as a service provider is a prime example for planning future mechanization promotion in their respective countries.

The JICA Tsukuba Center is planning to conduct PAMA in the next fiscal year in Tanzania. The AFICAT team plans to set up the exhibition space at KATC; hence, the AFICAT team expects that Japanese products and technologies can be displayed at KATC's exhibition space at that time. The AFICAT team will continue to discuss this plan with the JICA Tsukuba Center for improved coordination.



Online as well as face-to-face lectures and demonstrations were held at KATC





## Combine harvester training by Yanmar held in December



As the impact of COVID-19 decreased, Japanese companies resumed their activities in African countries. Yanmar, the second largest agricultural machinery manufacturer in Japan, sent engineers from Japan to Tanzania and conducted an eight-day training course from December 13 to 22 for the technical staff of ETC Agro Tractors & Implements Ltd. (EATIL), the local distributor, and others. During the training, the superiority of the product was explained, including its high engine performance, low harvesting loss, and large fuel loading capacity, which allows for a longer working time between refueling. The AFICAT team would like to thank Yanmar and EATIL for giving their valuable inputs for this interview despite their busy schedules.

## Niplo's products arrived at KATC for demonstration and verification



Matsuyama Plow MFG. Co., Ltd. (Matsuyama), headquartered in

Nagano Prefecture, Japan, manufactures implements and sells their products under the Niplo brand. Paddy field leveling is important for improving rice productivity. In most African countries, paddy field leveling is performed manually. The larger the paddy field, the more difficult the leveling work becomes. Consequently, paddy plots tend to be rather small to facilitate leveling operations. However, small plots make it

difficult for agricultural machinery to operate effectively in the field.

Niplo's Drive Harrow has a reputation for being an efficient paddy field preparation and leveling machine in Japan and has the largest share of the Japanese market in this category.

The Drive Harrow was shipped from Japan in early August 2022, arrived at the Dar es Salaam port in early September, and finally arrived at KATC in October after various formalities. After the Japanese experts returned to KATC in January 2023, the AFICAT team opened the consignment and confirmed that the products had arrived safely. The Drive Harrow was tested at KATC on February 7, 2023. A detailed report will be shared in English in the next issue of the AFICAT newsletter on Tanzania. The AFICAT team communicated with Matsuyama to plan for when and how the product would be demonstrated and validated in Tanzania.



*Test operation of the Drive Harrow held on February 7 at KATC*



Please see the below URL for more product information and videos

<https://www.niplo.co.jp/en/detail/harrow.php>

## Kubota Press announces their activities in Africa



Kubota Press, Kubota's web media introduced

Kubota's initiatives in Japan and abroad. Recently, Kubota updated its website and revealed the



current situation and their activities in Africa. World Bank data indicate that Africa's population is expected to increase from 1.36 billion in 2020 to 3.92 billion by 2100. This article also includes interviews with the principal of KATC in Tanzania and the general coordinator of the CARD Secretariat, allowing readers to learn more about their respective efforts.

- Empowering Africa through Paddy Farming and Japan's Rice Cultivation Technologies

<https://www.kubota.com/kubotapressjp/africanrice/index.html> (in English)

<https://www.kubota.co.jp/kubotapress/life/africanrice.html> (in Japanese)

## Editors' postscript

We hope that you have enjoyed our second newsletter on Tanzania and that you will continue to read our newsletters. We are preparing the next issue that will present AFICAT's other activities.

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