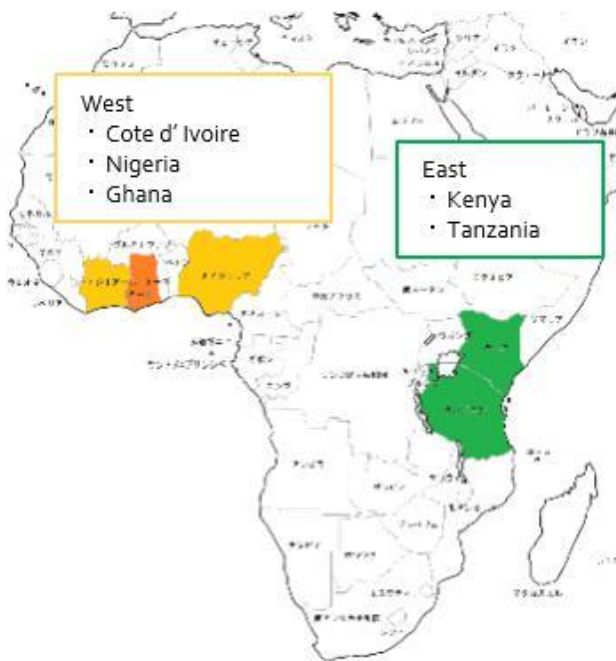


# AFICAT Newsletter (Tanzania No. 1)

Issued on August 18, 2022

This newsletter presents the activities of the “Africa Field Innovation Center for Agricultural Technology” (AFICAT). In this first issue, we introduce AFICAT and the activities conducted by the Tanzanian government and Japanese companies under the coordination of the AFICAT team from March to July 2022 in Tanzania.

## What is AFICAT?



Map depicting the five countries in West and East Africa in which AFICAT aims to operate

### 1. Background of AFICAT

AFICAT is officially the “Africa Field Innovation Center for Agricultural Technology”, whose establishment was proposed during a public-private business dialogue co-chaired by the late Shinzo Abe, former Prime Minister of Japan (at the time), and Mr. Abdel-Fattah El-Sisi, the Chairperson of the African Union (at the time) (current president of Egypt) at the 7<sup>th</sup> Tokyo International Conference on African Development (TICAD7) held in August 2019. From 2020 to 2021,

the Japan International Cooperation Agency (JICA) conducted a survey on establishing and operating AFICAT in the following five countries: Tanzania, Kenya, Ghana, Cote d'Ivoire, and Nigeria, which have potential for rice production and collaboration between the public and private sectors by facilitating the participation of the Japanese private sector, which has advanced and excellent technologies and products. A subsequent survey since February 2022, which includes preparatory work for the AFICAT operation and pilot activities for a period of two years, has been conducted.

### 2. Basic concept

The objective of AFICAT is to improve agricultural productivity and the quality of agricultural products and to empower farmers in Africa through collaboration with the Japanese private sector, which has advanced technologies and products.

The basic concepts are as follows:

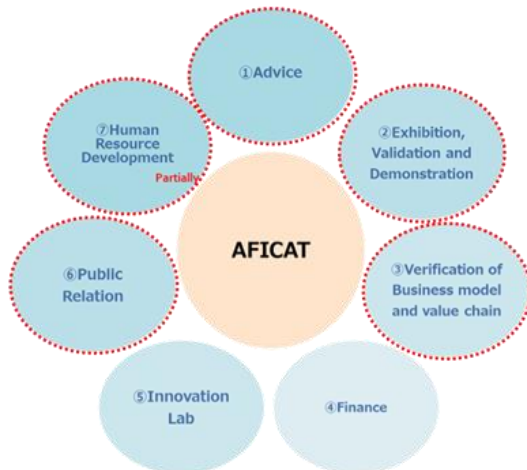
- 1) AFICAT is operated and managed based on Japan–Africa Public–Private Partnership.
- 2) Instead of building a new “center,” the necessary functions are added to the existing facilities and organizations.
- 3) AFICAT covers a wide range of agricultural machinery and materials for various agricultural products but mainly focuses on agricultural machinery for rice production and processing during the pilot activity period.

### 3. Seven functions

AFICAT will have seven functions (as shown in the below figure) directed to the existing facilities and organizations to promote agricultural mechanization by utilizing the technologies and products of the Japanese companies that may be suitable to the local conditions of the five target countries in Africa. The pilot activity period will focus on agricultural machinery, mainly for rice



cultivation, and the following five out of the seven functions will be the main focus: ① Advice; ② Exhibition, Validation, and Demonstration; ③ Verification of Business Model and Value Chain; ⑥ Public Relation; and ⑦ Human Resource Development (partially).



*Schematic representing the seven functions that AFICAT uses to support Japanese companies in bringing their products and technologies to African countries*

As stated above, pilot activities will be conducted as part of the JICA survey. Based on the experiences and lessons from the pilot activities, the AFICAT team will propose a medium- to long-term implementation policy and an activity plan for agricultural mechanization through private-sector participation.

**Activities have started in Tanzania!**

From mid-March to mid-May 2022, the AFICAT team conducted its first field activity in Tanzania, and discussed and agreed with the Ministry of Agriculture (MoA) and relevant agencies that AFICAT would be based at the Kilimanjaro Agricultural Training Center (KATC) under the MoA in Moshi, Kilimanjaro; each party was assigned roles and cost sharing under the AFICAT operation, and thus officially launching the activities of AFICAT in Tanzania.



*Photograph of a field in KATC. KATC has a wealth of resources, including agricultural machineries, human resources, and farm fields, due to many years of JICA support.*

AFICAT also plans to work in the Lower Moshi Irrigation Scheme as a demonstration field, which is adjacent to the KATC and has an irrigated area of 2,300 ha, of which 1,100 ha is under rice cultivation.

**On-site activities by HONDA**



**1. On-site observation**

In March, Honda Motor Co., Ltd. (Honda), the largest motorcycle manufacturer globally, entered Tanzania as the first Japanese company to deploy AFICAT. Under the arrangement of the AFICAT team, Honda visited two rural areas surrounding Moshi, where they presented their products, including a power tiller, to the farmers' groups and interviewed them about the demand for agricultural machinery and their perception of Honda's products.



Image of the local newspapers, Mwananchi (in Swahili) and Citizen (in English), featuring activities of AFICAT, including Honda's on-site observation

[For more information on the newspapers]

<https://www.jica.go.jp/tanzania/english/activities/agriculture.html>

The farmers' groups expressed strong interest in Honda's products. The visit, along with other AFICAT activities, was widely reported in local Tanzanian newspapers, Mwananchi (in Swahili) and Citizen (in English), dated April 4, 2022, which provided an opportunity for people in Tanzania to widely recognize the activities of AFICAT.

## 2. Demonstrations and seminar

In April, a demonstration and seminar were held by Honda in the KATC field with the following participants: two members from the MoA, one from the Center for Agricultural Mechanization and Rural Technology (CAMARTEC), 11 from KATC, one agricultural extension officer, and four farmers from the Lower Moshi Irrigation Scheme. Staff from Honda and their local distributor, Afritool, presented four products: a power tiller, power-driven backpack sprayer, water pump, and brush cutter.

The participants, who actually tilled the field with

a tiller equipped with a 6-hp gasoline engine, were impressed with the performance of the machine and stated, "I had some doubts about its ability to till deeply because of its small horsepower, but it works well." The machine is relatively small and easy to handle. Thus, women can operate it as well, and it is easy to use in small areas that a tractor cannot access.



Photograph of the demonstration, wherein some of the participants experienced the operation of the tiller in the KATC farm field

During the event, the participants discussed and exchanged opinions about the features of Honda's products. The Honda staff commented, "Honda engines are characterized by high durability and low fuel consumption. By installing Honda engines in various types of agricultural operating machines, it is possible to eliminate the loss of work time due to engine breakdowns and to reduce repair costs. We would like to solve such problems of agricultural workers with our engines." The tiller used in the demonstration is expected to be less expensive than those with a diesel engine from other manufacturers, and the participants voiced their expectations for Honda's product, stating that it would be an affordable machine for people who were unable to purchase such large machines because of high costs.



Photograph of the discussion between the Honda staff and participants in KATC

Thereafter, using the network established through the event as a foothold and with the support of the AFICAT team, Honda conducted a demonstration in the area under the Lower Moshi Irrigation Scheme at the end of May and is actively deploying local activities, including discussions with relevant organizations for future collaboration.

### Activities by Kett



Kett Electric Laboratory Co. Ltd. (Kett) is a Japanese manufacturer of agricultural measuring instruments, such as

moisture testers for grains, wood, paper, and other materials. Measuring and controlling the moisture content of rice and other crops are very important for quality control of the crops. Kett products are characterized by their ease of use and ability to accurately measure the moisture content of a wide variety of grains.

In May, a seminar with an online demonstration was held for the local participants, which included one member from the MoA and ten from KATC, at the KATC facility, by connecting Japan and Tanzania via Zoom. Three types of grain moisture testers, one type of rice whiteness tester, one type of rice polishing (whitening) machine, and one type of automatic paddy husker were introduced and used for the demonstration.



Photograph of the participants using the Kett products with the instruction of Kett staff via Zoom

After the introduction of the products and explanation of the importance of traceability in grain moisture measurement by the Kett staff, the participants used the products to check the moisture content and whiteness of rice. During the question-and-answer session, one participant commented, "In Tanzania, harvested rice is generally spread on a sheet and dried directly in the sun. The moisture content of the dried rice is checked by chewing it or rubbing it with the palm of the hand because the use of a moisture meter is costly." In response, the Kett staff commented, "We understand that the use of moisture testers is not yet common in Tanzania. However, we believe Tanzania will need accurate moisture measurement technology when the amount of exported rice increases in the near future." The staff also added, "We would like to contribute to improve the quality of rice throughout Tanzania including the exported products. In this process, the technology for moisture measurement should be improved at first under the initiative by the Government, and then accurate measurements in the various regions would be implemented."

The event was introduced on the Facebook page of JICA Tanzania Office.

<https://www.facebook.com/JICATanzaniaa>



Photograph of the questions-and-answers session between the Kett staff in Japan and participants via Zoom

### Kubota's combine harvester in Mombo

## For Earth, For Life Kubota

DC70 is among the most popular combine harvesters in Tanzania because of its durability and efficiency, with few impurities being added when used for harvesting. The durability of a Kubota combine harvester is crucial to avoid breakdowns during the harvest season and to avoid impacting the capability of the machine. It is manufactured by the Kubota Corporation, the third largest agricultural machinery manufacturer globally. The local distributor of Kubota's machinery is Agricom Africa Ltd., which is based in Tanzania and also serves neighboring countries.



Photograph of Kubota's tractor in the Agricom Africa Ltd. showroom

Another JICA Survey on the Strengthening of the Training System and Promoting Rice Cultivation (TANRICE2.5), which is ongoing in Tanzania,

conducted training for agricultural machinery in Mombo, Tanga region, in May; the DC70 combine harvester was used for demonstration. Participants from the Ministry of Agriculture Training Institute (MATIs) and other institutes were invited to learn about the basic operations, safety measures, adjustments, maintenance, and handling of machine breakdowns.



Kubota's combine harvester during training in Mombo

DC70 used for JICA training was owned by the farmers' cooperative in the Mombo Irrigation Scheme. In 2015, they received two combine harvesters through the Policy and Human Resources Development Fund (PHRD) Technical Assistance Grants Program of Japan to Support Africa Rice Research and Productivity Development Program, administered by the World Bank and Japan. One of the combine harvesters is the Kubota product. The Kubota combine harvester performed well and offered hiring services. The farmers' cooperative in the Mombo Irrigation Scheme procured two more Kubota DC70 combine harvesters, one of which was used in the training program, through a loan from the Tanzania Agricultural Development Bank (TADB).

### Tromso's rice husk briquette machine



Tromso Co., Ltd. is a Japanese company that manufactures rice husk briquette machines using special metal processing technologies used in the shipbuilding industry in Japan.



Photograph of Tromso's rice husk briquette machine introduced in 2017

The AFICAT team visited the Kilimanjaro Industrial Development Trust (KIDT) in Moshi to examine the rice husk briquette machines introduced by Tromso through a past JICA program. The units previously delivered are still in operation by technicians who were trained earlier, and husk briquettes are sold to government agencies, private companies, hospitals, etc., while devising maintenance measures, such as the local procurement of parts. The husk briquette machine is expected to contribute to the growth of job creation by adding value to the rice industry and to environmental conservation and decarbonization efforts by converting husks to fuel, which otherwise have no effective use.

### Yanmar's combine harvesters have arrived



Yanmar is a famous Japanese manufacturer of agricultural machinery. Twenty units of Yanmar's combine harvesters (Model: YH 700) were first introduced in Tanzania by their local distributor, ETC Agro Tractors and Implements Ltd. (EATIL). EATIL conducted its demonstrations in rice harvesting areas, such as Mbarali and Majimoto, at the beginning of May. Out of the 20 units, three were already delivered to customers in Mbarali and Mpanda, and they were highly satisfied with the superior performance of the Yanmar product and associated finance and maintenance services offered by EATIL. The users of the YH 700 combine harvester are quite impressed with its unique

features, such as the Maru handle, which enable smooth and comfortable operation of the machine, higher ground clearance that enables the machine to work in deep wet fields, double rotor mechanisms, and efficient and accurate sorting, with minor grain loss even in high-speed operation.



Photograph of YANMAR's combine harvester, YH700

The AFICAT team with the MoA, KATC, and other related institutions in Tanzania will continue to support Japanese companies to conduct demonstrations, verification of adaptivity under different conditions, and so on in order to introduce appropriate technologies and products for development of agriculture sector in Tanzania.

### Editors' postscript

We hope that you have enjoyed our first newsletter. We are preparing the next issue that will present the further activities of AFICAT and hope that you will continue to read our newsletters.

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