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Yam tuber weighing 7 kg harvested from single node vine seedling!

The planting of seed yam tubers for ware yam production can soon become a thing of the past! Single node yam vine seedlings from plants established in the aeroponics system (AS) are producing sizable ware yam tubers. The unexpected results may give rise to new horizons for yam production, exploration, and the development of the yam value chain in West Africa.

During the visit of executives of Iribov BV, Netherlands and D. Invitro Labs Ghana Limited on 24 July, a 450 m^2-portion of 1 ha of land planted with AS single node vine seedlings of improved variety TDr 95/19177 on 16 November 2017 was harvested as a demonstration. Despite the dark green leaves of the yam plants showing potential for more growth, a total of 1,457 tubers weighing 643.6 kg were harvested. The two biggest tubers weighed 7.0 kg and 5.95 kg.

Norbert Maroya, YIIFSWA-II Project Leader, shows off tubers from the harvest. Tuber (right) weighing in at 7kg.

Such field performance attests to the viability and potential of pre-rooted AS single node vine cuttings. According to Norbert Maroya, YIIFSWA-II Project Leader, the plausible reason for this performance is that "Plants in

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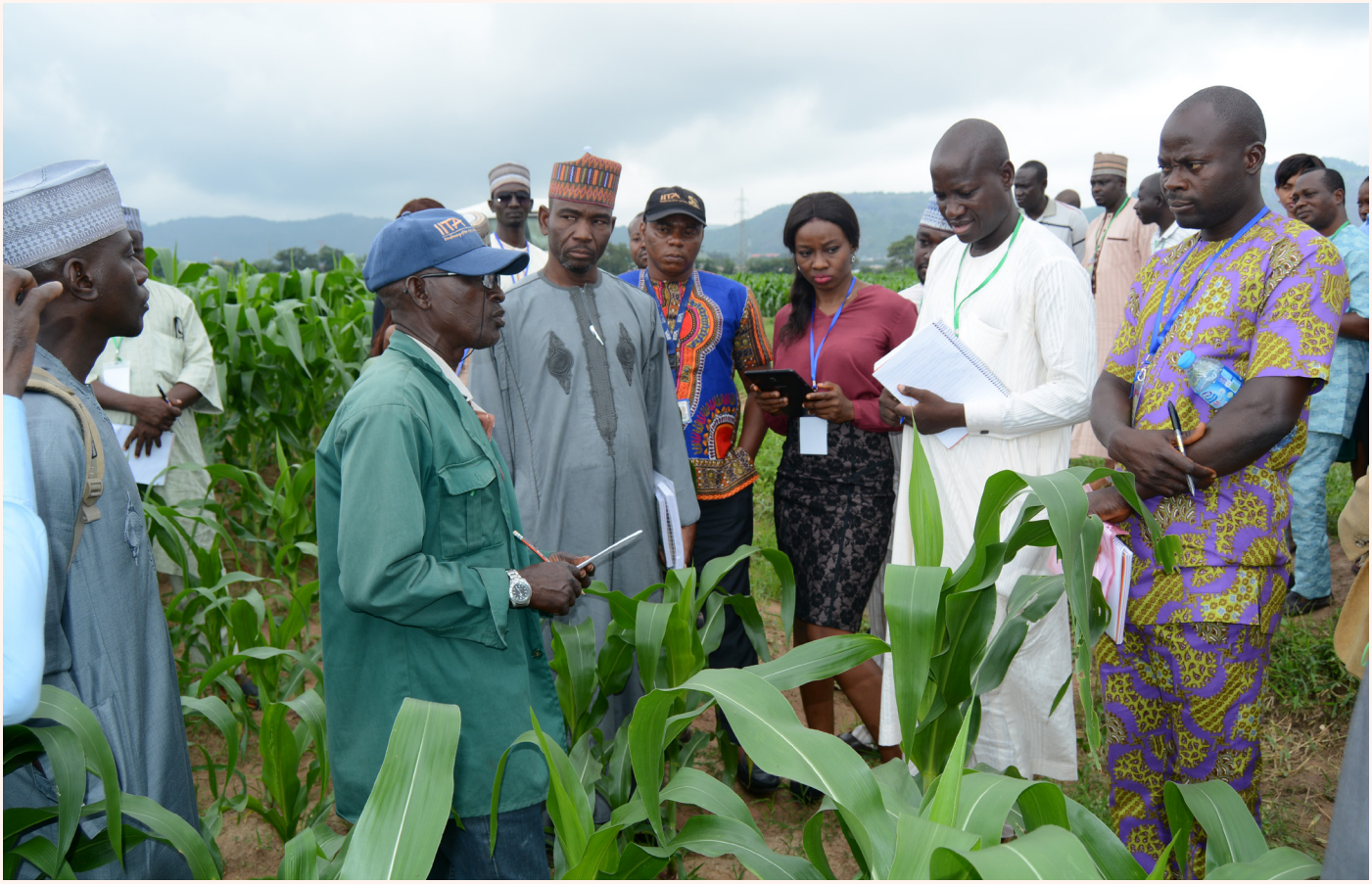
IITA Abuja staff attend Chinese training on improved agricultural technique

Six staff members from the IITA Abuja station joined other participants in Abuja for an "Overseas training course on agricultural techniques for Nigeria." The participants, numbering over a hundred, were drawn from national agricultural institutes, government ministries, the private sector, and academia. The IITA team that benefited from the training were Ben Ijie, Terngu Abur, Oluseyi Akpanika, Faith Omoruan, Samora Hamza, and Uchi Ekeshili.

The training, which focused on the value chains of rice, maize, sorghum, and general Chinese culture, is an annual technical support to Nigeria's agricultural system by China. It was put together by the Shandong Foreign Trade Vocational College with sponsorship from the Ministry of Commerce of the People's Republic of China. It is expected to increase participants' capacity and strengthen their efficiency using modern Chinese agriculture techniques.

In his remarks during the training, Project Officer of Shandong Foreign Trade Vocational College, Xhan Zhongbo said, "China is willing to share agricultural development experience, unselfishly, to transfer the traditional mode of production, improve added value of products, upgrade the competitiveness of agriculture, and promote the development of agricultural technology and trade in Nigeria."



Daniel Adekunle (in green cap) of Maize Breeding explaining about IITA's work on maize to participants.

Participants were also taken on a field visit to the IITA Station in Abuja as part of the hands-on learning activities. They were received by Head of Station, Gbassey Tarawali, who gave the visitors an insight into IITA's work across Africa.

Tarawali used the opportunity to express IITA's gratitude to the Chinese government for the all-expense paid training trip for three IITA youth to China, earlier in the year. The IITA youth were Ene Agada, Sini Luwa, and Samuel Magaji.

IITA's involvement in the training came as a result of the earlier partnership established with the Chinese Academy of Tropical Agricultural Sciences (CATAS).

Yam tuber weighing 7 kg harvested from single node vine... Continued from page 1

the AS accumulate nutrients in their cells and when taken to a fertile field, they begin to express vigor in shoot and canopy development. Through photosynthesis, the starch produced translocates (moves) from the canopy and accumulates in the tubers. The more rapid the tuber development, the greater its final size. So basically, the longer the plants stay in the AS, the better the productivity of the vine seedlings."

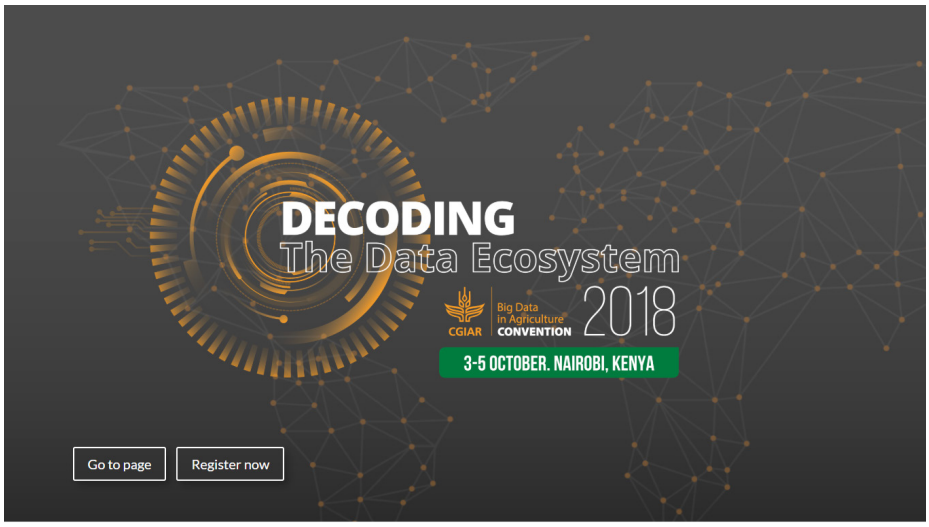
After 6 to 9 months of development in the aeroponics system, a plant can generate around 300 one-node vine cuttings. After 4 to 6 weeks in the nursery, they are transplanted to the field at a density of 1 m × 0.25 m where more than 92% of the rooted plantlets develop with vigor in the field and produce sizeable tubers in 6 months. So far, up to 30% of the tubers harvested of variety TDr95/19177 were above 1 kg.

"Our end goal is seed yam, but given the viability of the AS single node vine cuttings, some of our partners are rethinking the usefulness of planting single node seedlings in the field for ware yam production by influencing the duration in the field. Currently we are planting about 40,000 vine cuttings per hectare on ridges to attain a seed size and weight of about 250–300 g. With a high proportion of tubers weighing more than 1 kg, we are thinking of increasing the plant population to about 60,000 or 80,000 per hectare to control the size of tubers we are getting. We are also thinking of using the technique in potato by destroying foliage at 4 months after planting. With the AS vine seedling technology for seed yam tuber production we can, under irrigation, produce seed all year round," Maroya said.

The project is currently working towards establishing 5 ha of seed yam using AS single node vine seedlings to demonstrate the possibility and potential of the high ratio propagation technologies (HRPT) developed in YIIFSWA for commercial seed companies. So far 2.1 ha has been planted with single node vine seedlings.

Big data innovations challenge for impact

Aiming to increase the impact of agricultural development through the use of big data to solve development problems faster, better, and on a greater scale, scientists and digital agriculture practitioners in all CGIAR centers will convene at the campus of the World Agroforestry Center (ICRAF) in Nairobi, Kenya between 3 and 5 October, for the Big Data in Agriculture Convention 2018 tagged "*Decoding the Data Ecosystem*."



This year's Convention will take place at the ICRAF campus.

The convention, which will be co-hosted by ICRAF and the International Livestock Research Institute (ILRI), is now an annual fixture on the calendar of the CGIAR Platform for Big Data in Agriculture and aims to create an avenue to highlight data-driven approaches to multi-scale food systems analyses, landscapes, ecosystem services, and the special role of animal science in building resilient food systems worldwide.

Scientists will engage in action-based discussions to find commonalities across research institutes, governments, and private organizations to set the stage for a productive and data-driven year ahead.

In view of this, the platform is calling for entries to the Big Data platform Inspire Challenge where winners stand to win up to $350,000. The Inspire Challenge aims to ensure that gathered data results in impact. CGIAR is directing the challenge to partners, universities, and private sector players to use their data to create pilot opportunities that would project the power of big data analytics and ICT to provide unprecedented, multidisciplinary insights to researchers, delivering actionable information to farmers and inspiring others to use big data to create impact.

The initiative funds novel approaches that democratize data-driven insights to inform local, national, regional, and global policies and applications in agriculture and food security in real time; helping people, especially smallholder farmers and producers, to lead happier and healthier lives.

Furthermore, the preliminary assessment will be managed by the Inspire Challenge management team as the pre-assessment focuses on three key categories: Meaningful collaboration, Innovativeness of the proposal, and Data mobilization of underused or misused data. Finalists of this pre-assessment will be notified and invited to present their proposals to a panel of judges at the convention.

Youth cooperative sets pace in processing and marketing cornmeal in DRC

In the Democratic Republic of Congo, agribusiness is currently one of the drivers of job creation for young people and for the fight against food insecurity. As a result, young people and members of the Kinshasa Agripreneurs Cooperative (COPAKIN) [in French: Coopérative Agripreneurs Kinshasa] have embarked on income-generating activities, including the processing and marketing of yellow cornmeal.

Through these activities, these agripreneurs have found agribusiness to be a favorable way of creating wealth, strengthening food security, and contributing to reduced unemployment among young graduates.

The production of cornmeal in 25-kg bags is now a mainstay on the market

Two COPAKIN agripreneurs showcasing 25-kg bags of high quality semolina.

due to the ready demand as previous users come back for repeat business. The transformation of yellow corn into high quality semolina and its marketing at affordable prices have contributed to its consumption on a large scale. Extra value is added with the provision of a home delivery option.

The agripreneurs are constantly acquiring new skills to both improve maize processing and increase their income. The new technologies and skills also increase shelf life and product quality in warehouses.

Maize plays a key role in addressing food security as it is a staple food among the vast majority of Congolese households. With cornmeal, one can make pancakes, gratins, creams flavored with aromatic herbs or vanilla as well as cakes, cookies, and rolls, making it an increasingly important raw material for pastry production.

Being naturally gluten free, corn is appreciated for its nutritional qualities. Cornmeal is rich in vitamins A and B as well as other nutrients and, as a result, it can also be given to young children.

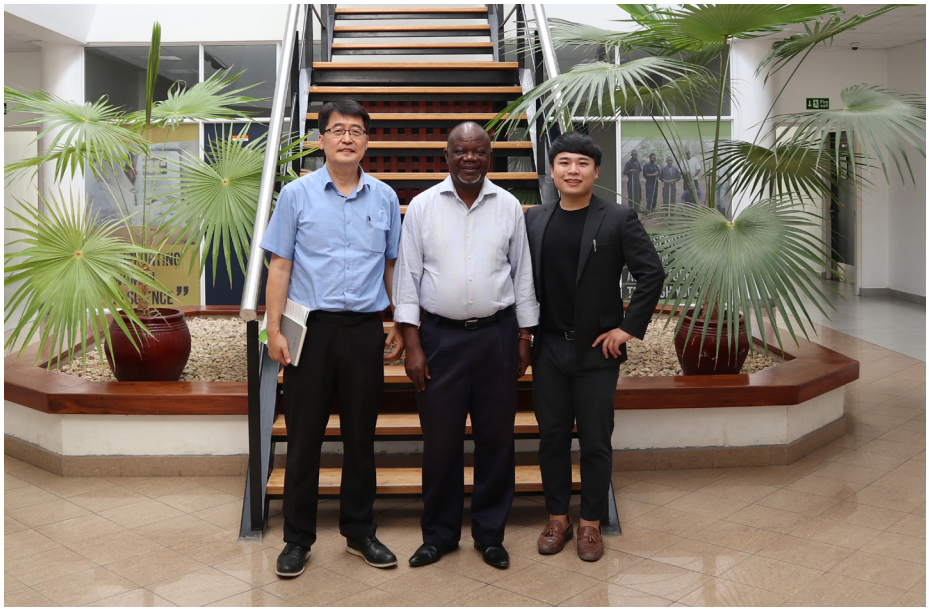
Following the success of cornmeal processing, these agripreneurs are now exploring other value chains such as the processing and marketing of cassava as fufu, white corn semolina, and the manufacture of other cassava and soy products such as bread, biscuits, milk, and waffles. They also plan to acquire more corn and cassava fields for production.

IITA Tanzania hosts representatives of South Korean biotech firm

Representatives from Bioneer Corporation, a private biotechnology company from South Korea, visited IITA Eastern Africa Hub offices on 22 July to explore partnership opportunities with the Institute. The team consisted of a former IITA staff member, D.J. Kim, who is now Bioneer's Director for Africa, and his colleague Roy Min, Regional Manager in the International Business Division.

The team was received by the IITA Director for Eastern Africa Hub, Victor Manyong, who took them on a tour of the facilities and explained about IITA's work in the region.

The visiting team expressed their wish to have an MoU with IITA, spelling out areas of collaboration.



IITA Eastern Africa Hub Director, Victor Manyong (center), flanked by the Bioneer representatives.

The team was in Tanzania as part of a delegation of potential investors from South Korea and was led by the country's Prime Minister Hon Lee Nak-Yon. The delegation held a one-day business forum with their Tanzanian counterparts led by Tanzanian Prime Minister, Hon. Kassim Majaliwa, on 23 July.

The forum was attended by over 400 representatives from private sector and government institutions from both countries to explore opportunities in health, infrastructure, construction, and agriculture. Hub Director Manyong represented IITA at the forum.

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