

January- March 2022

# CAT NEWS

Promoting smallholder farmers' diversification  
and increased agricultural production



*The CAT-Bunda Smart Farm in Lilongwe where agricultural stakeholders come to learn about diverse technologies such as the drone technology captured above.  
Photos credit: Land O'Lakes Venture37/CAT*

**Land O'Lakes Venture 37 leads the implementation of the CAT through a consortium of four leading agricultural development and academic institutions:**

## FROM THE EXECUTIVE DIRECTOR'S DESK



We welcome you, our dear reader, to the first edition of this quarterly newsletter from the Centre for Agricultural Transformation (CAT). We urge you to join us as we share news and stories of change in this newsletter going forward.

The CAT is a five-year project implemented by Land O'Lakes Venture37 that was launched in 2019 to be an inclusive centre of excellence for science, technology, and innovation aimed at helping tobacco-dependent farmers diversify their production, increase their incomes and improve their livelihoods.

We do this by providing data-driven solutions to challenges farmers face on the farm. The CAT achieves this mission through programs under two core areas: Science, Technology and Innovation (STI), and Business Incubation and Commercialization (BIC). The project is implemented through a consortium of four leading agricultural development and academic institutions: Land O'Lakes Venture37, leading project implementation, University of Minnesota in USA, Stellenbosch University in RSA, and Malawi University of Science and Technology (MUST) in Malawi.

In this issue, you will get a feel of our work with partners at our two Smart Farms located at the Bunda and NRC Campuses of the Lilongwe University of Agriculture and Natural Resources (LUANAR) as well as appreciate the incredible work of our agribusiness partners under the BIC portfolio. Of particular importance to mention is that we have also included stories of events we implemented in 2021 for purposes of knowledge management and to preserve our legacy. At this juncture, let me thank our donor partner – the Foundation for a Smoke Free World through the Agricultural Transformation Initiative (ATI) – for the support they are providing to the project's success. Additionally, thanks to the Government of Malawi for the evergreen support they are rendering to the project. Mention also goes to our stakeholders, too numerous to mention for lack of space. We appreciate your support and collaboration.

We are grateful for the collaborative effort of our partners and consortium members for their contributions to this edition. We welcome and appreciate your feedback. If you have any comments to improve this newsletter to meet your information needs, please do so by emailing [MChipalasa@landolakes.com](mailto:MChipalasa@landolakes.com).

Enjoy the read and see you again in the next edition!

Macleod Nkhoma

EXECUTIVE DIRECTOR

# CAT AWARDS US\$1M

## TO 13 AGRIBUSINESSES TO PROMOTE VALUE ADDITION



*Nkhoma: We looked for potential in value addition*

The CAT has awarded US\$1million to a second cohort of 13 partners to promote value addition in agricultural products, with funding from the Foundation for a Smoke Free World (FSFW) through Agriculture Transformation Initiative (ATI). The 13 partners are: Hortinet Foods, Going Green, MAAG Farms, MCM Investments, My Munda, Perisha Agro Dealers, Kena Investments, Mtengo waku Munda, Theophilus Investment, Market Link, Paanachi Seeds, Ndatani Feeds, and African Agricultural Holdings.

In his remarks, CAT Executive Director Mr. Macleod Nkhoma said the first criterion that was used in identifying the selected agribusinesses was their potential in value addition, adding that grants to individual businesses ranged from US\$30,000 to US\$100,000.

*“These resources are meant to incubate business proposals on value added products where local farmers are going to benefit greatly while diversifying to other crops as an alternative to tobacco farming,”*

“These resources are meant to incubate business proposals on value added products where local farmers are going to benefit greatly while diversifying to other crops as an alternative to tobacco farming,” noted Nkhoma. On his part, CAT Advisory Committee Chairperson, Dr. Albert Changaya, called for implementation of the incubated businesses for the benefit of local farmers’ economic transformation, while encouraging them to work hard and quickly get down Riz Khan, Program Manager at ATI, noted that while demand for tobacco is declining globally and creating vulnerability of the Malawi economy which depends on the tobacco cash crop, his organization was supporting identification of alternative value chains and economic opportunities. “We need to be able to fully utilize these agreements with companies of value-added products and be part of the solution to address value addition and marketing challenges smallholder farmers face in Malawi,” said Khan.



*Khan: Be part of the solution*

One of the awardees, Sphiwe Mauwa of Shami Sunflower Cooking Oil (MCM Investment) based at Mpingu in Lilongwe, explained how the US\$30,000 boost will be essential in supporting sunflower oil production value addition. Mauwa was confident that with the grant, her firm would be able to increase sourcing of sunflower from 50 farmers to 3,000 farmers in Mzimba and

Mangochi districts. She said that farmers would be given seed for sunflower through contract farming, as the produce is the key ingredient for cooking oil. “Most smallholder farmers have been growing tobacco and maize because there is a market for them, so as Shami Sunflower Cooking Oil, we have come with a readily available market to buy the sunflower from the farmers. We will be providing the sunflower seed to the farmers for them to grow the crop. Once they produce the sunflower, we will be buying from them,” explained Mauwa. Following the call for proposals for the second cohort of businesses, CAT received 120 applications that went through a vigorous assessment, with 19 agribusinesses competing in pitch session to identify the final 13 partner businesses.

# PRESIDENT CHAKWERA

## VISITS THE CAT PAVILION DURING ANNUAL NATIONAL AGRICULTURE FAIR AND BRIEFED ON CAT INTERVENTIONS AND STRATEGIC GOALS



*President Chakwera (in red tie) and his wife (in blue top) at the CAT pavilion*

Excitement was the prevalent mood when Malawi President Dr Lazarus Chakwera visited the CAT pavilion to appreciate a range of technologies the centre displayed during the 17th National Agriculture Fair (NAF) held under the theme “Building the Agriculture Sector Back and Better in a Covid-19 Environment.” The NAF brought together farmers, agro-processors, civil society organizations, researchers and government representatives, among others. CAT Executive Director, Mr. Macleod Nkhoma, welcomed the President and briefed him on what CAT had on offer at the stand as well as its strategic goal of helping smallholder farmers diversify their production and increase incomes through science and technology, viable businesses, and commercial ventures to improve their livelihoods. Accompanied by the First Lady Mrs. Monica Chakwera and Agriculture Minister Hon. Lobin Lowe, M.P., the President was also shown the structural design of CAT’s planned Centre of Excellence which will be constructed at LUANAR’s NRC Campus. Mr. Nkhoma extended an invitation to the President for the Centre’s launch once completed. Additionally, the President appreciated CAT’s drone technology, ground sensors, water and soil quality testing kits, and seed technologies displayed by six CAT partners and impactful videos depicting CAT’s activities on the ground.

# FARMERS UNION OF MALAWI

## CHIEF EXECUTIVE OFFICER VISITS CAT-BUNDA SMART FARM TO APPRECIATE TECHNOLOGIES ON DISPLAY FOR FARMERS' ADOPTION



*Nyirongo: Impressed with drone technology*

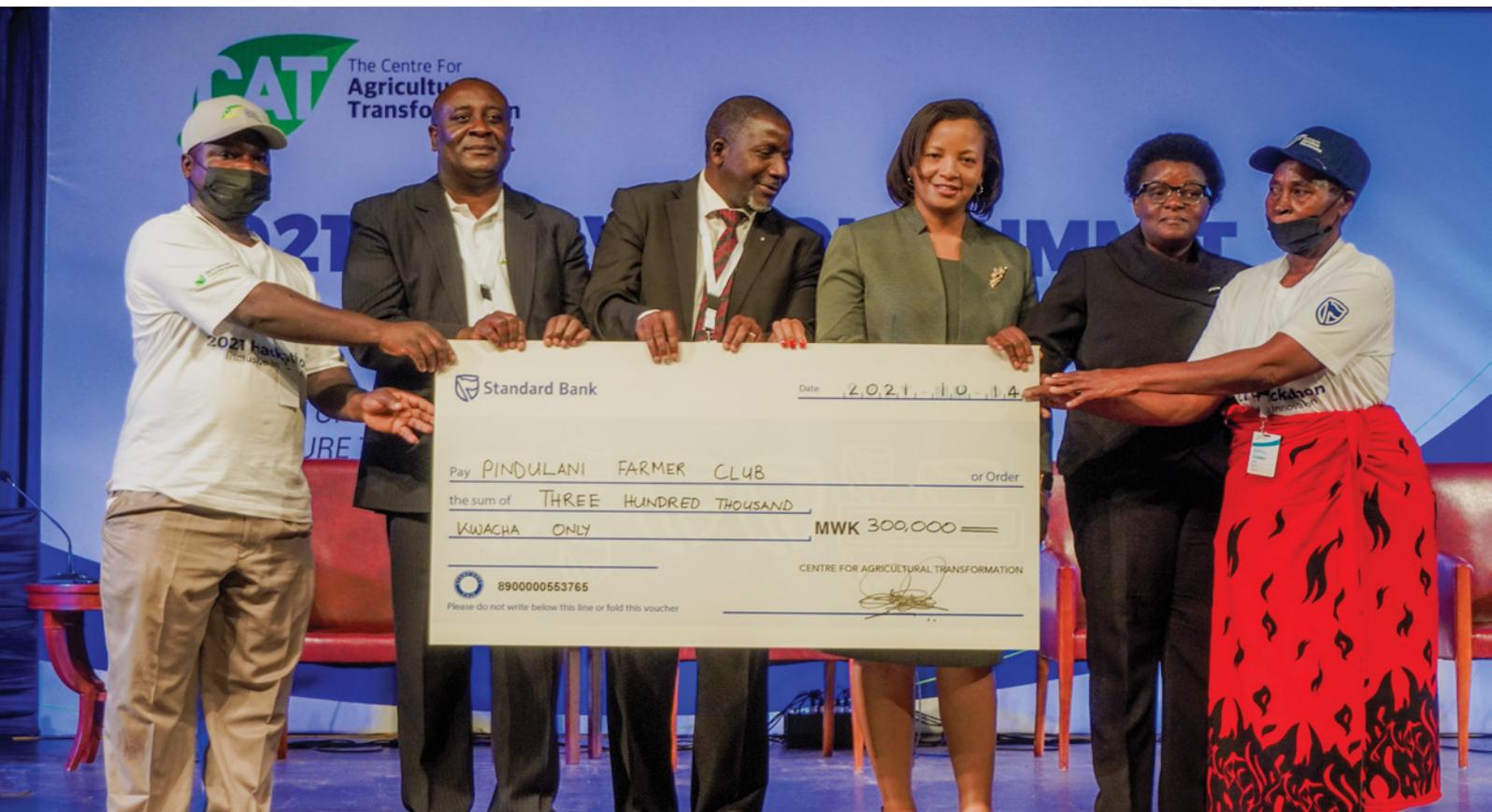
*“I’m quite impressed with the different technologies that are being displayed”*

Farmers Union of Malawi (FUM) Chief Executive Officer Mr. Jacob Nyirongo, alongside his Management Team, visited the CAT-Bunda Smart Farm on 8th March 2022 to get a feel of services the Smart Farm offers to small-holder farmers and other players in the agriculture sector.

“We came to the smart farm to appreciate the farm, what it is offering, the services that are here and technologies that are being displayed,” he said. “I’m quite impressed with the different technologies that are being displayed and the beauty about the farm is the diversity of actors that are actually displaying their technologies here because there are seed companies and other companies that are displaying their technologies here,” Nyirongo added. In terms of the benefits of his visit, Nyirongo noted:

“It is a real opportunity for the Farmers Union of Malawi, as a union of farmers, to look at what services are here and look at opportunities for strengthening our partnership with CAT and see how those can be scaled up through Farmers Union of Malawi systems, with our network of farmers across the country.” According to Nyirongo, the FUM works with cooperatives, associations and medium scale farmers, cooperative farmers that are managing larger farms. “I have been impressed actually with the drone technology, how it can detect disease incidences and look at estimating yields,” he said. He added: “When we are thinking of what services the Union can provide to members; these are medium to large scale cooperatives, maybe the drone technology can be one of those we can have a more in-depth discussion to look at what business we can incubate around that. We think this was a timely visit, and an important visit for us as a Union and we will be following up on the action points that we have generated through this short meeting we have had.”

# CAT HOLDS INAUGURAL AGRICULTURAL INNOVATION SUMMIT TO RECOGNIZE AND PROMOTE INNOVATIONS



*Prize ceremony for best innovators*

The CAT held its inaugural Agricultural Innovation Summit in Lilongwe under the theme “The role of entrepreneurship and innovation in driving agricultural transformation” and was presided over by former Deputy Minister of Education Hon. Madalitso Kambauwa, M.P. and former Secretary for Agriculture Ms. Erica Maganga on 13th and 14th October 2021, respectively. The Summit aimed to stimulate private and public sector interventions to support and commercialize the innovation ecosystem in Malawi.

A panel discussion on the role of entrepreneurship and innovation was held and moderated by CAT Executive Director, Mr. Macleod Nkhoma, with panelists drawn from various partner institutions such as the Ministry of Education, Standard Bank, National Planning Commission, and Office of the President and Cabinet (Directorate of Science, Technology and Innovations. To harness the potential of youth in technology and innovation, CAT challenged the Hackathon and AgTech participants to design technologies and innovations that would turn farm waste into energy in the form of biogas, briquettes and candles. During the event, there were displays of technologies mounted by participants from the Hackathons and AgTech Challenges organized by CAT throughout 2021.

Partner institutions such as FUM also mounted their displays at the event. Top innovators were awarded cash prizes and trophies to promote a spirit of entrepreneurship.

# **GUEST:**

## **LAND O'LAKES**

### **SENIOR VICE PRESIDENT**

### **JOHN ELLENBERGER**

The Senior Vice President of Land O'Lakes Inc. and Executive Director of Land O'Lakes Venture37, John Ellenberger, visited Malawi in March 2022 to hold meetings with stakeholders in the agriculture sector to enhance effective partnerships. Land O'Lakes Venture37 leads implementation of the CAT and is a leading global agricultural development organization with offices across the world. In a brief chat with CAT News, he explains how CAT is making progress in a number of areas. Excerpts:

#### **EFFECTIVE PARTNERSHIPS ARE KEY FOR AGRICULTURAL TRANSFORMATION - JOHN ELLENBERGER**



## ***Q: What's the purpose of your visit to Malawi?***

I came to Malawi to do some work planning with the Agricultural Transformation Initiative (ATI) who is our partner in the CAT – The Centre for Agricultural Transformation. Also, while here, I have been meeting with leaders of Cooperative Development Activity 4 (CD4) program in Malawi, which is one of our programs funded by USAID in Washington D.C. Our discussions have focused on helping agricultural cooperatives thrive in doing a number of different points around governance, management, leadership and a number of other areas and so, really, it's been very rewarding.

## ***Q: You visited CAT Smart Farms at Bunda and NRC campuses located at the Lilongwe University of Agriculture and Natural Resources (LUANAR). What's your impression of the work you saw there?***

Having last been in Malawi in 2019, it is very rewarding to see the work that the CAT team here has done both at Bunda and NRC campuses to see how what started as an idea of what a Smart Farm could look like is now turning into reality, especially at Bunda where the crops are advanced and are more ready to demonstrate some of the different technologies that we are promoting through the work of the CAT. The mission of the CAT is to help farmers become less dependent on tobacco farming to find newer, more high value, more attractive crop to diversify into.

## ***Q: Talking about climate change, how can we help smallholder farmers patronizing the smart farms and other farmers across Malawi withstand climatic disasters such as Cyclone Ana which has really destroyed vast crop fields lately?***

I think that one area which the CAT and the country can help with is really around diversification or helping farmers to find crops that are more diversified, more resilient to adverse climate conditions and changes. This is important because they give the smallholder farmers a better chance at being able to have a saleable crop, a profitable income despite the challenges of climate change. I think that through our partners, there must be deliberate efforts to have a range of products and approaches that are oriented towards climate change mitigation and adaptation to help smallholder farmers thrive despite the challenges that they face. Already, this is what the CAT is doing at the Smart Farms to show that this is doable and possible.

## ***Q: You just mentioned the issue of partnerships. Why does it matter?***

I think partners are the key to what we are doing as an organization and the same applies to many other organizations in Malawi. For us as Land O'Lakes Venture37, we have a range of partners like private sector partners, commercial entities that are in business to try to serve farmers. We also work through a consortium of four partners: namely, Malawi University of Science and Technology (MUST), Stellenbosch University, University of Minnesota, with Land O'Lakes Venture 37 as the lead partner, with support from the Foundation for a Smoke Free World-Agricultural Transformational Initiative (ATI). Our partnership also extends to LUANAR who have generously given us 70 hectares of land for our work. Besides, the Government of Malawi is also our key and strategic partner in terms of policy and regulation in the agriculture sector. I think the idea of partners is important because of what they bring in and what they can take out.

## ***Q: The government of Malawi is also a key strategic partner for the CAT. What's your message to the Government of Malawi?***

First of all, I would like to say thank you to the Government of Malawi for the enormous support towards the work we are doing in the CAT. We want to encourage that spirit of partnerships to continue, and we appreciate the support the government is giving to the CAT because I think that we are all in the same challenge here which is how do we help Malawi become a more self-sufficient thriving country. And, with agriculture being so important to the success of the country, finding new ways to help smallholder farmers to be successful is critical. We can do that with effective government participation we have received so far and which we look forward to continuing.

## **Q: In the context of the Malawi vision 2063, what do we need to do as a country to drive the agricultural transformation agenda?**

The first thing is we have got to continue to do the kind of work we are doing at the CAT, which is finding effective partnerships of all types. I think finding ways to provide the needed financing to allow farmers make a change in what they are doing so that they become effectively diversified agricultural nation is key. This is where the private sector comes in through effective partnerships. For the CAT, we have seen that already through Standard Bank plc which has partnered with us on innovation programs for the youth in tertiary institutions, particularly at MUST and LUANAR. We hope other private sector organizations can emulate the example of Standard Bank plc so that together we help transform the agricultural sector and achieve the intended gains as encapsulated in the Malawi 2063 Vision. It's a tall order but I think there is nothing important to the future of Malawi than helping this agricultural transformation succeed.

## **Q: And your last words?**

I am very excited about what we will be doing both in the CAT program in 2022 and the work Land O'Lakes Venture37 is doing with USAID and the Cooperative Development Program in Malawi. It's always a pleasure to come to this country and I look forward to the next visit.

### **Key activities of the CAT include:**



*Awarding grants to emerging and established agricultural entrepreneurs, businesses, and research institutions, with a focus on incubating and commercializing innovative ideas that fulfill market needs.*



*Serving as a hub for science, technology, innovation and business incubation, where entities with inclusive business models and the community at large can experiment, use data, exchange ideas, participate in hackathons, develop business plans, and create partnerships to advance new livelihood opportunities for smallholder farmers.*



*Providing customized technical assistance to grantees, including mentorship, business development support, and connections to networks to help scale and commercialize products, practices, and technologies.*

# CAT DEEPENS PARTNERSHIP WITH THE MALAWI UNIVERSITY OF SCIENCE AND TECHNOLOGY FOR AGRICULTURAL INNOVATION



*Drone technology CAT uses at the Smart Farms*

■ The CAT is supporting the Malawi University of Science and Technology (MUST) to develop an “Innovation Garage” aimed at helping young innovators produce agricultural innovations that will assist farmers to diversify their livelihoods. CAT is currently supporting the training of five top innovators who have been enrolled in the MUST Innovation Garage, to build skills in concept writing and budgeting in the innovation process. The five innovators will soon begin developing and testing prototypes of their respective innovations in the coming months.

■ CAT is building capacity of the teaching staff and students at MUST in food science and technology, renewable energy, data science and solutions. In total, CAT is offering support to 11 students, with seven of them studying at the MSc level and four at the PhD level. An additional staff member will be trained in Institutional Management at the PhD level to ensure that MUST become competitive in this area. For most of the MSc students, they will be completing their studies by the end of 2022 and returning to MUST in early 2023. For PhD students, it is expected that they will return in 2024/2025. All MSc and PhD students are studying at five African universities of Stellenbosch, Nairobi, Kenyatta, Rwanda, and Botswana.

■ CAT has also supported MUST in the development of a Food Science and Technology (FST) curriculum. The first cohort of 19 students have been selected for the program with the goal of producing qualified food and science professionals for the food industry in the country.

# DATA-DRIVEN PROJECT

## TO PROMOTE EQUITABLE ECONOMIC GROWTH AND DIVERSIFICATION OF MALAWIAN AGRICULTURE



*SU Faculty members and students of Stellenbosch University*

The new Centre for Agricultural Transformation (CAT) Data Lab at Stellenbosch University (SU), in South Africa was launched on 6 December 2021 to promote equitable economic growth and diversification of agriculture in Malawi. It forms part of the Agri Data & Innovation Hub@Stellenbosch University initiative, an ongoing broader collaborative effort between Stellenbosch University (SU), the University of Minnesota (UMN) and partners to strengthen digital and data sciences in African agriculture and that of Malawi in particular.

Prof Danie Brink, Dean of the Faculty of AgriSciences at SU, said the partners in this innovative endeavour wanted to help catalyse Malawi's agricultural growth and diversification. "The CAT Data Lab is forging integrated research-to-impact pathways. Ultimately, we hope our efforts contribute to fostering diversified, resilient, and healthy smallholder households in Malawi, particularly those transitioning from tobacco farming to alternative livelihoods," he explained.

On his part, Prof Philip Pardey, Director of the GEMS [Genomic, Environmental, Management and Socioeconomic] Informatics Centre and a Professor in the Department of Applied Economics at the University of Minnesota, said: "The GEMS informatics platform is a data and analytical system. It facilitates the integration of many public and privately sourced data sets and purpose-built analytical tools spanning the

Genomics, Environment, Management (experimental and farm) and Socioeconomic communities."

"The GEMS platform and its data exploration, secure sharing and analytical capacity is being used by the CAT, Agricultural Transformation Initiative (ATI) and other ATI partners to drive transformative change in Malawi," he added. The CAT Data Lab and related initiatives form part of the larger AT), launched in 2019 with financial support from the Foundation for a Smoke Free World (FSFW). Partners agree that reliable, robust public and private data could be instrumental to agricultural transformation in Malawi, and that it will support the country's drive toward tobacco diversification and inform policy.

Mr. Macleod Nkhoma, Executive Director of the Land O' Lakes Venture37 managed CAT in Malawi, noted that "we cannot transform agriculture in Malawi alone." He added: "The CAT project wants to facilitate the development of new technologies helping farmers improve their productivity and develop partnerships that will benefit them. It wants to develop income opportunities for farmers through diversification into other value chains so that they achieve economic success in the coming years."

Dr Candida Nakhumwa, FSFW Country Director for Malawi, said: "farmers should have access to credible data on which to base their decisions on both pre- and postharvest activities."

Staff from the GEMS Informatics Centre at the University of Minnesota set up an informatics platform and associated databases at SU that form the core of the data-driven CAT hub. It provides ready access to existing and newly generated relevant agricultural production, environmental and socioeconomic data to researchers to analyse or use as part of their projects. The ATI is funding the studies of nine postgraduate students at Stellenbosch University; six from Malawi, who all completed their undergraduate training at the Malawi University of Science and Technology (MUST), and three South African students. For full article, go to: <https://agric.sun.ac.za/blog14.html>

# CAT HOLDS FIELD DEMO TOUR FOR SMALLHOLDER FARMERS, YOUTH AND MEDIA

The CAT, in collaboration with partners, organized a Field Demo Tour for winter crops at Bunda CAT Smart Farm at the end of 2021. The objective of the event was to demonstrate the added value of winter cropping and showcase various technologies and benefits of drip irrigation systems. Partners who showcased technologies included Bayer Malawi (Maize & crop protection products); Seed-Co Malawi (Maize & horticultural crops); Global Seeds (Maize and legumes i.e., groundnuts, soybean and beans); ASSL-Yara (Horticultural crops, crop protection and Plant nutrition); Agri Trust Limited (Drip irrigation kit); ICRISAT (Groundnuts); CIP (Sweet potato & potatoes) and Hortinet (Banana). A total of 244 people participated in the winter field demonstration tour, and these included 126 farmers; 23 students; 7 Agricultural Extension workers; 13 members of the press and 75 representatives from government ministries, LUANAR, departments, agencies and institutions, representatives from local and international NGOs, private institutions, and development partners.

CAT Executive Director Mr. Macleod Nkhoma said CAT's aim was to see smallholder farmers realizing tangible benefits from their labour hence, the tour was meant to showcase technologies which were available for them to diversify into. "We are showcasing maize, bananas, legumes and irrigation technologies that have already proven viable and suitable in line with the farming season we are in. We would like to see more smallholder farmers taking interest in technologies to improve their production and incomes," said Nkhoma.



Dr Kananji (in reflector above) welcoming participants while below is Mr. Washon of Hortinet Ltd (standing middle) explaining the banana value chain

Farmers like these need access to modern farming technologies and practices



**Nakhumwa:** "Farmers need the right information to spur adoption"

In her remarks, Country Director for Foundation for a Smoke Free World - Agricultural Transformation Initiative (FSFW-ATI), Dr. Candida Nakhumwa, applauded companies for working tirelessly to improve farming systems in the country by devising and making available technologies aimed at helping farmers grow their crops during winter seasons. "The partnership that they [CAT] have with various partners will help to give farmers the right information that they need in terms of technologies hence, farmers themselves need to have interest in adopting these systems rather than now where the country is importing crops like bananas which in the recent past used to be grown right in the country," said Nakhumwa.

Director at Lilongwe University of Agriculture and Natural Resources (LUANAR) – NRC Campus, Dr. Moses Chinyama, hoped LUANAR students would benefit from the new farming technologies which they learn at school and smart farms and help in changing the



# CAT PLANTS 300 TREES

## FARMERS GET ADDITIONAL 200 TREE SEEDLINGS TO PLANT IN THEIR AREAS

In a quest to improve ecosystem services of water quality like purification and water security, smallholder farmers livelihoods, including mitigating and adapting to climate variability, CAT organized last year an ecosystem restoration activity at its CAT-NRC Smart Farm in Lilongwe.

The ecosystem restoration activity aimed to contribute to the conservation and sustainable use of biodiversity as well as creation of social, economic, and environmental benefits. It drew 102 participants who included local leaders and farmers around NRC, as well as CAT and ATI staff members. A total of 300 trees were planted, with 200 trees distributed to farmers to grow in their respective areas. According to Dr. Emmanuel Vellemu, CAT Post-Doctoral Fellow, there is an observable 100 percent survival rate for the trees, following due care which was given to the trees after planting.

The CAT has received a P4 Multispectral drone which is specially designed for agricultural missions. The drone has since been assembled and calibration work was done, now awaiting registration with the Department of Civil Aviation (DCA) and getting the necessary training requirements for licensing for drone operations to meet necessary legal requirements. CAT is collaborating with LUANAR, which is offering laboratory space for some of the experiments to be undertaken.

“We plan to employ drone technology to map areas that need ecological restoration, plant more trees in degraded areas, biomonitoring of agroecological zones, and ecotoxicological research,” said Vellemu.

*Planting of trees is key to ecosystem restoration.  
Photo source: Internet*



# AGRIBUSINESSES

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# MULIKO

## LIVESTOCK SERVICES

### *Scaling up provision of artificial insemination and dairy products*



*Calf born using artificial insemination technology offered by MLS*

Although dairy farming offers a good livelihood option for smallholder farmers in the face of non-performing tobacco production, there are many challenges the dairy sector is facing. Muliko Livestock Services (MLS) in Mzuzu is one of the companies trying to address challenges dairy farmers face. This dairy company specializes in providing livestock production support services such as artificial insemination, livestock management training, feed formulation, and livestock business development in Mzuzu.

Following a US\$35,000 award from CAT, with support from the Foundation for a Smoke Free World through the Agricultural Transformation Initiative (ATI), MLS intends to scale its operations in the provision of Artificial Insemination services and other dairy farmer groups' initiatives in the Mzuzu milk shade area.

For the 18 months (January 2021- June 2022) period, CAT will also provide technical support that will enable MLS to provide artificial insemination services and improved animal health as well as milk production trainings targeting 1,000 dairy farmers by June 2022.

By August 2021, however, MLS had already achieved a number of milestones in the partnership agreement with CAT as revealed by a performance evaluation report on the company.

"For example, MLS has trained 804 farmers on dairy breeding; 101 farmers and three farmers organizations have accessed livestock inputs; and MLS conducted a refresher training for 11 artificial insemination technicians, most of whom were trained over 10 years ago," says Gilbert Banda, MLS Managing Director.

"Through the support that Muliko Livestock Services received from the CAT, we acquired Liquid Nitrogen Flasks that are critical for semen cold chain maintenance. The flasks are used by 8 artificial insemination technicians that the business works with," Banda added.



*Banda: MLS Managing Director*

According to Banda, the company's customer base for the artificial insemination services grew from around 13 farmers in February 2020 to 36 farmers in November 2021, with potential to increase and enhance access to dairy production equipment especially for items that are not readily available on the market.

"The future prospect of the business is bright, this is evidenced by the growing demand for the artificial insemination services, feed supplements, mineral supplements and other veterinary products. The grant will be used as a springboard to take the business to the next level. The business would like to have shops (outlets) in all the three regions especially in the districts where there are more dairy activities," he explains.

# ENVIRONMENTAL INDUSTRIES LIMITED



*CAT Bunda Smart Farm in Lilongwe where the company showcased its Bionitrate fertilizers*

## **Promoting cultivation of value crops with Bionitrate Fertilizer**

Environmental Industries Limited is a private firm based at Area 25 in Lilongwe which produces organic fertilizer called Bionitrate as well as organic food products like Moringa-based foods. The company aims to promote organic farming in Malawi for improved crop production and enhanced soil fertility through reduced farmer dependency on chemical fertilizer for crop production. The company is working with CAT's Science, Technology and Innovation (STI) work stream to showcase a variety of technologies at the CAT Smart Farm to improve productivity and increase smallholder farmers' adoption of bionitrate fertilizers.

The company's Managing Director, Goodfellow Phiri, said his firm is targeting to produce 1,000,000 liters of Bionitrate per month and establish three production sites of Bionitrate by 2030 as well as promote cultivation of high-value crops with Bionitrate fertilizer, particularly soya beans, chilies and industrial hemp, for improved productivity and market value. "We are currently engaged in product promotion of Bionitrate fertilizer as a new product in Malawi agriculture, therefore, annually we establish demonstration gardens that are producing and packaging the liquid fertilizer for sale, digital marketing with websites, social media, as well as seeking finances for scaling up the business. So far, we are serving farmers in Mchinji, Lilongwe, Neno and Salima," Phiri added.

During the 2021 summer rain-fed cultivation demonstration at the CAT Smart Farm, the company managed to showcase Bionitrate fertilizer to high level stakeholders such as the Minister of Agriculture who came during field day in April 2021. "Through the field day, we have learnt that we can diversify Bionitrate to high-value crops such as industrial hemp rather than showcasing maize only," says Phiri.

He adds: "The benefit has been that our product image has gained trust and grown among potential consumers and stakeholders. Farmers should take the interest to try the new technologies themselves, not just visit the showcase plots for amusement."

"We need CAT to take a step towards commercializing some of the technologies that are ready to grow with resources, and also recommend these technologies for additional resources and support from interested stakeholders," says Phiri.



We are running a competition for you readers to come up with a catchy and creative name for this Newsletter.

Instead of CAT NEWS as a name, what other name should we give to this Newsletter instead?

Send your innovative ideas to

[MChipalasa@landolakes.com](mailto:MChipalasa@landolakes.com)

and win a CAT branded golf shirt.





## NEW STAFF MEMBER LUMBANI KAUNDA, DATA SOLUTIONS MANAGER

***Q: Congratulations on joining the CAT team! Tell us your name and position***

A: My name is Lumbani Kaunda, Data Solutions Manager for Land O'Lakes V37 – Centre for Agricultural Transformation (CAT) based here in Lilongwe, Malawi. I joined the organization on 2 February 2022.

***Q: What does your job entail?***

A: The Data Solutions Manager is part of the Science Technology and Innovation team and is responsible for the successful development, coordination and execution of data solutions projects at the CAT; lead the identification of opportunities to apply CAT Data Solutions tools to real-world challenges in agricultural diversification and commercialization; and seek to grow the CAT's network with partners who have a shared interest in applying data-driven solutions to challenges in the agriculture sector. The Data Solutions Manager also coordinates with experts at consortium partner institutions, namely the University of Minnesota, Stellenbosch University and the Malawi University of Science and Technology (MUST), and with other team members based in Lilongwe.

***Q: What's your background?***

A: I am an ICT4D professional with 10+ years' experience in the development, implementation and management of cost-effective digital technology projects and information management. I have worked with Techno Brain, Business Management Systems International, United Nations Development Program, United Nations Office for Project Services, UN – Millennium Villages and most recently Triggerise.org. When I left my private sector position almost 11 years ago and voluntarily took a significant pay cut to join UN system, I did it because I believed in the mission and the potential for how information and communication technologies (ICTs) could help empower communities. The digital tools I have developed in that time have accelerated system operations and represented a way forward, keeping us focused on the primary goal of helping our villages and country to take better care of themselves. I have contributed to the drafting of the National ICT4D Policy, the National Cyber Security Act and the Electronic Transaction Cyber Security Act. I then was able to support the implementation of these policies, by designing and facilitating user-centric workshops for the promotion of data demand and use by farmers, Extension Workers, and farmer clubs in various target districts.

***Q: How do you feel joining the CAT team and what change do you want to see?***

A: Joining CAT is an exciting feeling. We want to provide training and expertise to farmers and agribusiness officials on the use and development of information management tools and platforms. We are now deploying Ground Sensors and data platforms that will increase transparency on market prices, weather forecasts and agricultural tips. We will next be training farmers, agribusiness officials, government, and development projects on how they can use our digital tools. We want to overcome challenges faced by farmers driven by the under-utilization of data. In general, we hope to see more adoption of ICTs in the agriculture sector by farmers and partners with the delivery of simple, effective and low-cost digital solutions. We are working with government, farmers' clubs, co-operatives and Farmers themselves and other local partners in finding answers to key questions about the state of ICT use in agriculture. We will also establish partnerships in the private sector and other NGOs that are already working on ICT in agriculture.

***Thank you for your time and all best!***

A: Thank you for having me.

# *General CAT Q & A*

## ***When will the CAT open and where will it be located?***

The Centre for Agricultural Transformation will be headquartered in Lilongwe, Malawi and plans for its construction are currently underway.

## ***Why Malawi?***

Malawi is one of the worlds' most and heavily tobacco dependent economies. Tobacco accounts for over 60% of the country's total annual earnings and 13% of Malawi's economy, as measured by gross domestic product (GDP). The CAT will support the economic diversification agenda the Government of Malawi is already pursuing. Diversifying the economy is not as simple as switching to another crop. An entirely new set of economic drivers and market systems must be created, and a data driven case must be built for the structured investment required to make these new systems realistic and effective.

## ***How are the Foundation for a Smoke-Free World, the Agricultural Transformation Initiative (ATI) and the CAT related?***

The Foundation for a Smoke-Free World is an independent US-based non-profit organization with the purpose of improving global health by ending smoking in this generation. The Agricultural Transformation Initiative, a core pillar of the work of the foundation, is focused on preparing for a future of reduced tobacco demand by working with smallholder farmers to facilitate the development of complementary structured value chains. The goal is to make the agriculture sector in Malawi and the southern Africa region competitive. The Foundation, through ATI, makes grants to implement programs to achieve these objectives. The grants to create and operate the CAT is the one of these programs.

*Land O'Lakes Venture37 is implementing the CAT for a five-year period from 2019 to 2024 with support from the Foundation for a Smoke Free World through the Agricultural Transformation Initiative (ATI). The goal of the CAT is to transform Malawian agricultural systems and the lives of Malawian tobacco-reliant smallholder farmers by giving them access to inclusive innovation in agricultural science and technology through a range of commercialization channels*



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