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AFSTA welcomes delegates to IFAJ 2025 congress

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The African Seed Trade Association (AFSTA) has welcomed delegates to the 2025 International Federation of Agricultural Journalists (IFAJ) World Congress. The congress that starts today in Nairobi, brings together agricultural journalists, researchers, and policymakers from across the globe to explore new developments, exchange ideas, and engage with industry leaders.

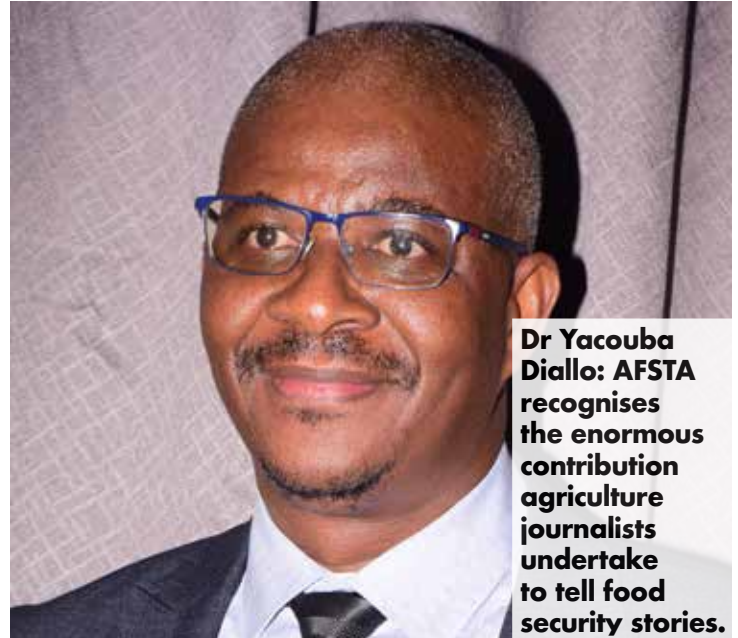
Speaking ahead of the congress, Yacouba Diallo, AFSTA Secretary-General said the association is delighted to host agricultural communicators in Kenya, a regional hub for agricultural innovation and transformation.

“We welcome all delegates to Nairobi and invite them to witness Kenya’s agricultural transformation firsthand. The seed sector continues to play a vital role in enhancing productivity, resilience, and food security across the continent,” said Diallo.

Held under the theme “Unlocking the Agricultural Potential in the Cradle of Mankind,” this a fitting reflection of Africa’s role as the birthplace of humanity and a region rich in untapped agricultural opportunities. Seeds, Diallo noted, are the cornerstone for realizing this potential of empowering farmers to produce more from less while safeguarding biodiversity and enhancing resilience to climate change.

According to him, seeds are the foundation of agricultural development and a key driver in unlocking Africa’s vast potential. By providing farmers with improved, climate-resilient, and high-yielding varieties, the continent can boost food production, create jobs, and strengthen its position in the global food supply chain.

“The continent’s progress in modern seed technology is a powerful story that needs to be told widely. Collaboration between journalists and seed experts is crucial to ensure that accurate, science-based information reaches farmers, policymakers, and the general public,” he added.



Dr Yacouba Diallo: AFSTA recognises the enormous contribution agriculture journalists undertake to tell food security stories.

AFSTA, which represents the interests of the African seed industry, has been instrumental in promoting access to quality seeds, harmonizing seed trade policies, and encouraging investment in research and innovation.

The association believes that well-adapted seed varieties will be central to achieving agricultural transformation across Africa. “We look forward to fruitful discussions and partnerships that will help bridge knowledge gaps and promote science-based reporting on agriculture,” he added.

Delegates attending the IFAJ Congress will visit key agricultural projects across Kenya, including seed research centers and climate-smart farms, to experience firsthand the innovations driving Africa’s agricultural growth.

They will also engage with local farmers, traders, and chefs to understand the journey of food from farm to table, and experience the diverse flavors of Kenyan cuisine.

This publication is supported by the African Seed Trade Association www.afsta.org the apex seed association in Africa with its headquarters in Nairobi

Congress director sets stage for farmers, culture to shine at IFAJ 2025

By Francis Mureithi
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Nairobi welcomes the world with a fresh story this October. From October 15–18, the Kenyan capital hosts the International Federation of Agricultural Journalists (IFAJ) World Congress 2025, the first time the global gathering lands in East Africa.

Nearly 170 delegates from more than 30 countries have arrived carrying pens, cameras, and a hunger for stories that stretch from food security to farmer innovation. For Daniel Aghan, the Congress Director, the moment is historic.

“Hosting the IFAJ World Congress is an accolade to Kenya,” he says with a wide smile. “It tells the world that Kenya is not just about safari and sunshine, it is also about farmers’ resilience, innovation, and hope.”

The congress’ theme, “Unlocking the Agricultural Potential in the Cradle of Mankind,” is deliberately powerful. Delegates have been visiting the landscapes where humankind began, and now, where agriculture pulses with life, whether in Limuru’s tea estates, Machakos’ livestock projects, or Naivasha’s research farms.

“Nairobi is one of the very few capitals where, within a hundred kilometers, you can visit dairy farms, greenhouses, flower exporters, poultry units, and conservation plots,” Mr Aghan points out. “Where else can you step out of a five-star hotel and be inside a working farm within an hour?” Unlike many conferences boxed inside hotel ballrooms, this is a “walking, talking, and writing congress.”

Aghan states: “We want our guests to get their shoes muddy and their



notebooks filled with farmer stories. The field events happen in the farmers’ own spaces, that’s the real heartbeat of this Congress.”

The programme is packed: Two plenary sessions, breakout discussions on topics like Artificial Intelligence in farming, and eight field excursions ranging from coffee and macadamia to pests, climate change, and action research. Beyond the farms, culture takes its turn.

Delegates sway to mwomboko, cheer Ramogi dancers, and clap along with Kayamba Africa’s rhythms. “These are the moments to savour,” Aghan says. “We want visitors to leave not only inspired about agriculture but also touched by Kenya’s soul.”

Pulling together a global congress has not been without hurdles. The budget is stretched, with a shortfall of about \$90,000. Still, Mr Aghan remains upbeat. “We have learned to cut our coat according to our size. What matters is not glitz, but the quality of dialogue and the impact on farmers.” Convincing local stakeholders has also taken persuasion.

“Many organisations worry that journalists only chase bad news,” he admits. “But this congress is about solution-driven stories; how farmers fight pests, how cooperatives build markets, how science shapes the sector. It is a congress of hope, not blame.”

Kenya’s strong media science community, particularly the Media for Environment, Science, Health and Agriculture (MESHA), has played a key role in securing the bid. Their credibility, Aghan notes, has reassured IFAJ that Nairobi will deliver.

The ripple effect is already visible. Nearly half of the delegates have signed up for pre- and post-congress tours that will showcase Kenya’s wildlife parks, heritage sites, and coastal beauty. That means tourism dollars for hotels, craft markets, and local restaurants.

For local journalists and farmers, the event promises priceless exposure. Reporters will network with editors from Europe, North America, and Australia. Farmers are showcasing their innovations to a global audience.

IFAJ Congress opens in Nairobi with a call for global collaboration

By Njeri Murigi
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The 2025 International Federation of Agricultural Journalists (IFAJ) World Congress opens in Nairobi last night, marking a historic first for East Africa. This global gathering has attracted agricultural journalists, researchers, and policymakers from more than 60 countries to deliberate on issues shaping the future of food security, sustainability, and climate resilience.

According to Steve Werblow, IFAJ President, the Nairobi meeting symbolizes how far the organization has come since its founding, with representation now spanning 61 member countries.

"What an honor to be in Nairobi for the 2025 IFAJ World Congress! Together we are celebrating this milestone, thanks to the dedication and hospitality of our hosts at MESHA and the partnerships they have built," said Werblow.

Hosted by the Media for Environment, Science, Health and Agriculture (MESHA), this is a landmark event for both the IFAJ and Africa, as it coincides with the federation's 70th anniversary.

The Congress has also brought together new and returning members such as the Kyrgyz Agricultural, Science and Environmental Journalists Association, and the Nigerian Association of Agricultural Journalists, reaffirming IFAJ's commitment to inclusivity and global collaboration.

"What a perfect representation of how IFAJ has grown to become the only global association dedicated to agricultural journalism and communications.

We have even expanded to include more members across Africa, in Asia, in Southern and Eastern Europe, and in Latin America, not to put dots on a map, but because that is how we have become truly global," he adds.

But what does this expansion mean? Werblow explains that in a world obsessed with borders and a time where many leaders seem more interested in picking fights over sovereignty or trade or culture wars, there is nothing more fundamental than feeding the world. That is a mission in which borders must fall away so information can flow.

This, according to him, underscores the importance of collaboration across borders in addressing shared challenges such as climate change, food insecurity, and sustainable production. He notes that agricultural journalists have a critical role to play in bridging the gap between research, policy, and farmers.

"The heart of agricultural journalism is helping people understand what is happening in the field, in the markets, and in the halls of government," he said.

He encouraged delegates to make the most of their time in Kenya, describing the Congress as a unique opportunity for learning and networking. The experiences, insights, and connections gained here, he notes, will go a long way in shaping the future of agricultural journalism globally.



The heart of agricultural journalism is helping people understand what is happening in the field, in the markets, and in the halls of government,"
Steve Werblow,
IFAJ President





Representing the plant science industry, CropLife's involvement at IFAJ congress 2025 aims to communicate about members' commitments to sustainability, agricultural productivity, and food safety.

CropLife teams to grace the 2025 IFAJ Congress

By Francis Mureithi
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The urgency for sustainable agricultural productivity is currently at the forefront of the global policy agenda, underpinning our collective need to address critical issues surrounding biodiversity, climate change, and food security.

And rightly so. Sustainably increasing food production on limited land must go hand in hand with access to innovative products and methods for farmers, as well as a value chain that is safe, responsible, resilient, transparent, accessible, and scalable. Industry's role here is crucial, combining R&D with capacity building on the ground, expanding the farmer's toolkit with scalable solutions adaptable to challenging environments.

In this spirit, CropLife International and CropLife Africa Middle East are proud sponsors of the 2025 International Federation of Agricultural Journalists (IFAJ) World Congress, to be held in Nairobi, Kenya, from October 15-18.

This event offers a unique platform to explore regional and global perspectives on these pressing issues. Representing the plant science industry, CropLife's involvement in this congress aims to communicate about our members' commitments to sustainability, agricultural productivity, and food safety.

The Congress showcases the achievements of the Sustainable Pesticide Management Framework

(SPMF) across Africa and the Middle East, demonstrating how it protects human health and the environment while enhancing agricultural productivity.

With insights into how agricultural policy unfolds on the global stage, along with case studies of agricultural innovation in action, CropLife is providing a fresh perspective on how today's R&D is transforming solutions for tomorrow's global challenges. A deep dive into the SPMF is available through the field trip proposed by CropLife on October 17. The trip involves visiting a farm and CropLife Kenya's partners near Nairobi.

This experience provides a valuable opportunity to assess the positive impacts of the SPMF on human and environmental health, as well as agricultural productivity in Kenya. Participants have the chance to engage directly with SPMF partners, who are essential for ensuring that the framework leads to long-lasting impacts and becomes a self-sustaining initiative beyond its initial five-year period.

CropLife recognizes the crucial role of journalism in shaping public perception and fostering positive change. Supporting this Congress enables us to engage with journalists, policymakers, industry leaders, and development partners, promoting a better understanding of innovative crop protection tools and sustainable practices.

The other partners include the University of St Andrews, the International Potato Center (CIP), and the International Centre of Insect Physiology and Ecology (icipe), as well as the Kenya Plant Health Inspectorate Service (KEPHIS) and Seeds2B.

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CropLife recognizes the crucial role of journalism in shaping public perception and fostering positive change.



Guests attending the congress will have a feel of Nairobi's warmth and lush scenery.

Nairobi, the cool waters with a beauty in and out

By Marc van der Sterren
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Kenya's capital Nairobi harbours many great places and a diverse neighborhoods. Yet this is not all; as the city's real beauty lies in the surroundings.

The landscape changes as soon as you exit the city centre, in whichever direction you take. From the lush green highlands to the golden grass of the savanna, the contrasts are striking within only a short drive.

Visitors arrive at Jomo Kenyatta International Airport, on the Athi Plains, once home to vast herds of giraffes, zebras, wildebeest and antelopes, and still rich in wildlife further South towards Kitengela and the Nairobi National Park.

To the East lies Machakos County, with a semi-arid climate, but which does not stop farmers from growing maize, beans, sorghum and mangoes, besides practising agroforestry.

To the West is Kajiado, hotter and drier, known for the Maasai who traditionally herded their cattle along the old wildlife corridors. On my last visit in 2022, I saw them again crossing the busy Ngong Road, migrating after four failed rainy seasons.

It was the Maasai who first called this place Enkare Nairobi, "the cool waters", long before the British built their railway depot here, a camp that later grew into the capital. The cool streams that gave Nairobi its name, still feed the wetlands around the city, vital for people, wildlife and agriculture.

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It was the Maasai who first called this place Enkare Nairobi, "the cool waters", long before the British built their railway depot here, a camp that later grew into the capital.”

Head North and within only about 200m of elevation you reach the cool, rainy highlands of Kiambu and Limuru, famous for tea, coffee, dairy and vegetables.

Further West the land drops dramatically into the Rift Valley, with sweeping views, wildlife, wheat and maize fields, and further on Lake Naivasha, the heart of Kenya's flower and vegetable farms.

So, to experience Kenya's different climates, you don't need to travel far. Just explore the surroundings of its capital. Nowhere else in East Africa do so many landscapes, climates and cultures converge so close together, making Nairobi a true crossroads of Kenya.



**Programme for Climate-smart Livestock Systems (PCSL) team retreat.
[Cattle at ILRI's Kapiti farm. ILRI]**

Kapiti fighting climate change with low-methane, resilient livestock

By Ruth Keah
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Kenya blends agricultural innovation, renowned research, and breathtaking scenery. Its capital, Nairobi, hosts world-leading research institutions including the International Livestock Research Institute (ILRI), World Agroforestry Centre, and the International Centre of Insect Physiology and Ecology (icipe).

This year, Kenya is hosting the International Federation of Agricultural Journalists (IFAJ) World Congress, offering delegates a unique opportunity to Africa's evolving agricultural landscape and a chance to engage with local researchers and institutions.

IFAJ equips its members with training, networking, and reporting opportunities to stay informed on the latest developments in the agriculture sector. The annual congress, organised by a global network of agricultural journalists, provides a platform for exchanging ideas, sharing stories and connecting with industry players in shaping the future of farming.

A major highlight of the 2025 Congress is the 13 field tours to different research institutions.

Located in Machakos County, about 60km from ILRI's main campus in Nairobi, Kenya, Kapiti Research Station and Wildlife Conservancy covers 13,000Ha and serves three major functions, namely research, conservation, and commercial livestock ranching.

To uplift the initiatives, the station embraces community engagement, public education, and farmer capacity building as enablers of the technologies.

Kapiti is equipped with a basic laboratory for sample processing, storing and simple analyses as part of ILRI's Clinical Research Facility (CRF), which is designed to conduct clinical animal research in line with Good Clinical Practice standards (VICH/GCP).

Research at the station involves collaborations with ILRI scientists, universities, and private sector partners.

Key research at Kapiti aims to enhance livestock productivity through improved animal health, genetics, feeds, and forages, which are part of ILRI's bioscience and integrated science programmes.

Delegates are learning how climate-smart practices and genetic improvements are helping livestock farmers adapt to climate change and tackle food insecurity.

The tour is further planned to demonstrate how ILRI's work is driving progress in sustainable livestock farming while balancing conservation needs.

The 2025 IFAJ World Congress has been hosted by Media for Environment, Science, Health and Agriculture in Kenya (MESHA), an association of journalists and communicators who specialise in environmental, agriculture, health, technology and development reporting.

MESHA's Secretary General Aghan Daniel, who also serves as the IFAJ Congress 2025 Director, has expressed pride in hosting the event as MESHA celebrates its 20th anniversary.

"This is a big milestone for MESHA," Mr Aghan told this writer. "Hosting the Congress is not only a celebration of our journey as an organisation, but also an excellent chance to showcase the crucial role of science in transforming agriculture for both smallholder farmers and large scale producers."

By Sharon Atieno
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Like many potato farmers in Kenya, Jesse Kamutu, a farmer in Kinangop, Nyandarua County, had struggled with low yields not knowing or understanding what was ailing his farm.

He made effort using fertilizers and other chemicals, which did not yield much results. The decline had been steady over the years, but when he harvested 30 bags of 100kg each from each of his several acres of land, it hit him that things were going from bad to worse.

"My production went down from 80 bags per acre to 30 bags, that's when I sought assistance. I thought maybe lack of a good fertilizer was the problem, later to discover that it was the soil," recalls Kamutu.

The assistance he sought led to soil samples from his farm being tested. The test results revealed that potato cyst nematodes (PCN) was the cause of the low yields.

According to Prof. Danny Coyne, a Senior scientist at the International Institute of Tropical Agriculture (IITA), PCN is a microscopic worm-like creature that feeds on potatoes and they infect the potato roots.

"They destroy the potato roots and stop it from feeding properly. They stunt the growth and get small potatoes, reduced size tubers and plants, and lower yield basically," he notes. Prof. Coyne observes that the soil-borne pests are widespread in the majority of potato growing areas in Kenya, with over 80 per cent of sampled farms being infested.

"In Kenya, we've discovered and found that the PCN densities in the soil are huge compared to anywhere else," he notes, adding that this is as a result of the dominant potato variety, which is susceptible, but also appears to be tolerant, hence the pests feed on it and continue to multiply because it is grown widely.

Also, the subtropical climate results in two to three seasons of potatoes per year in the same piece of land.

This means that the PCN can multiply and multiply on the same piece of land. "Cysts [the protective sac that carries the eggs] are abnormally large compared to the normal

Farmers to benefit from new pest resistant potato varieties



Seed harvesting of Glen and Malaika potatoes by Kisima Seeds in Timau, Meru county. [Sharon Atieno]

size of cysts that we get in Europe. So here in Kenya, they grow into giant cysts. We've gone from an average of let's say 500 eggs to about seven or 800 eggs," he notes.

According to Prof. Coyne, having varieties that are resistant to PCN will not only result in high yields but will also contribute significantly to improving soil health by reducing the level of pests in the soil.

It is against this background, that IITA in partnership with Scotland's James Hutton Institute and others have introduced new potato varieties that have proven resistant to PCN.

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Cysts [the protective sac that carries the eggs] are abnormally large compared to the normal size of cysts that we get in Europe.”

The new varieties, Malaika and Glen, were developed under a cross-breeding programme carried out by the James Hutton Institute. "They were among 12 varieties that had very low dormancy which were not suitable for Europe because we need to store our potatoes over winter," said Prof. John Jones, Senior scientist, the Hutton lead in the project.

"We knew what growers wanted in Kenya in terms of dormancy and cooking time and flavor and we thought they would be ideal. Not only do they have these properties but they are also resistant to PCN, which has become prevalent to Kenya."

The twelve different varieties were brought to Kenya and field trials were conducted. Working with farmers including youths and women groups they also carried out taste and grower tests. From these, Glen and Malaika were selected.

Malaika is named after Kamutu's daughter, due to their involvement during the field trials of the new varieties while Glen is named after the potatoes' Scottish origin.



Using innovative ways, the firm is changing the chicken rearing sector. [Courtesy]

How Kenchic is transforming poultry farming

By Njeri Murigi
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The popularity of chicken meat in Kenya has surged in recent years. According to data highlights from Bolt's 2022 year-end performance report, chicken topped the list of most ordered items on the Bolt Food platform, with more than 30,000 orders placed in 2022. It also held the same spot in 2021, reaffirming its status as one of Kenya's favorite dishes. This has apparently been fueled by a growing middle-class, the rise of fast-food outlets, and the health benefits associated with white meat.

As demand continues to rise, poultry producers face pressure to meet market needs while maintaining the highest standards of animal welfare, food safety, and affordability. Kenchic, one of Kenya's household names in poultry production, has embraced technology to power its operations. By automating the entire value chain, from breeder farms to broiler farms and processing plants, the company has successfully raised healthier birds, produced safer food, and ensured compliance with national and international welfare standards.

Automation is essential to animal welfare on KenChic farms. Advanced systems

continuously monitor vital conditions such as; temperature, wind speed, carbon dioxide concentration, and ammonia levels, ensuring that the birds are comfortable and free from respiratory stress.

Feeding and watering systems are also fully automated, ensuring that each bird receives its share within minutes. This automation not only improves efficiency but also ensures consistency in nutrition and hydration, which are critical for the growth and health of the birds. Evidently, bio-security measures have been strengthened through strict protocols designed to protect flocks from disease.

Farm visitors are kept to a minimum, and where entry is necessary, showers and disinfectant troughs are mandatory before anyone can access the housing units. Such measures have drastically reduced the risk of outbreaks, minimising the need for medication and ensured that poultry

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Feeding and watering systems are also fully automated, ensuring that each bird receives its share within minutes.”

products remain safe for consumers. Housing design is another area, with technology playing a key role. KenChic uses a deep litter housing system that adheres to global stocking density recommendations, with adequate space for birds to express natural behaviors. By prioritizing comfort and welfare, the company has enhanced both productivity and ethical standards in poultry farming.

At the processing stage, automation ensures food safety and humane handling. Birds are stunned before slaughter to minimise suffering, and automated blades perform precise cuts to maintain quality.

Temperature control systems regulate conditions throughout the plant, ensuring that every product from whole chickens to specialised cuts meet strict food safety requirements. Importantly, every product can be traced back to its source, reinforcing consumer confidence in quality and accountability.

Technology has also allowed KenChic to move away from outdated practices. The company does not use growth hormones and only administers antibiotics under veterinary supervision. Instead, day-old chicks are vaccinated against common diseases, ensuring flock health without compromising food safety.



Fishing industry has a potential of tackling one of the health challenges facing the continent.
[AI generated]

Hidden harvests: Fish raise ambitions for nutrition and livelihoods in Africa

By Asha Bekidusa
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When agricultural journalists from around the world gather at the International Federation of Agricultural Journalists (IFAJ) Congress 2025, a session on Hidden harvests: fish raise ambitions for nutrition and livelihoods in Africa, by Rahma Adam, Senior Scientist, and Sara Bonilla, Fellow from WorldFish is among the hottest topic. The discussion on fisheries promises to lift the curtain on a sector that quietly sustains millions but remains hidden in and discussed in low tones.

For decades, policymakers and global institutions have overlooked the contributions of small-scale fisheries. Small scale fishers are the lifeline for coastal villages and inland communities alike. They provide affordable protein and essential nutrients where food insecurity is most acute.

But as the 2012 Hidden Harvest study reveals, millions of metric tons of fish from the small-scale fisheries is hidden (unreported), with inland fisheries catch estimated to be underreported by about 70 per cent. Of the 120 million people that

depend on capture fisheries, 116 million work in developing countries. Of these, more than 90 per cent work in small-scale fisheries and 47 per cent of the workforce is women. This makes it very invisible and what is invisible in statistics often becomes invisible even in policy. This invisibility has left many struggling against climate change, unsustainable fishing practices and shrinking access to markets and finance.

With fish providing up to 25 per cent of daily protein needs in just a single serving, and offering higher bioavailability than many plant-based proteins, their role in addressing malnutrition is irreplaceable. According to the FAO, Africa's total fish production has increased in the past few decades reaching about 11.8 million tons of fish produced in 2017.

However, the contribution of African countries to total fish production varies greatly among countries due to their geographic locations and availability of water resources. For instance, some countries are coastal countries with access to marine fish resources and some countries are landlocked endowed with great lakes and river basins which are highly productive. South Africa, Nigeria, and Uganda are the top capture fishery

producers. One of the most compelling scientists in this session Rahma Adam, a Gender Impact Lead Scientist at WorldFish. Her research centres on reshaping how women are seen and valued within aquatic food systems. For Adam, the link between women's empowerment and better nutrition is direct and undeniable.

With her in this session is Sara Bonilla, a Fellow at WorldFish, who represents the future direction of fisheries research. Bonilla has been focusing her energy on the intersection of youth, innovation, and sustainability, urging the sector to bring younger voices into the conversation.

This discussion is just more than about fish and fisheries. It is about visibility, empowerment, and the fight for equity in food systems. It is about telling the stories of communities who, for too long, have remained invisible in global debates.

This discussion is about the future as the sector evolves every day. Thanks to the work of WorldFish, and the voices of leaders like Rahma Adam and Sara Bonilla, the "hidden harvests" of small-scale fisheries are finally stepping into the light.

Nature's defense: CABI, partners help farmers fight papaya mealybug

By Mesha Reporter

The papaya mealybug (*Paracoccus marginatus*) is currently a devastating pest, wreaking havoc across East Africa. Its presence is critically undermining food security and livelihoods by slashing yields and significantly reducing orchard productive lifespans.

Originating in Central America, the pest was first detected in Africa in 2010, reaching Kenya in 2016 and Uganda by 2021. Without intervention, potential crop losses can rise as high as 91 per cent, often reaching 100 per cent, representing an estimated annual loss of around £2,224 per hectare.

But a nature-based solution championed by CABI and partners across Kenya, Uganda, and South Sudan is helping farmers sustainably reclaim papaya crops by reducing papaya mealybug infestations, which has boosted grower numbers by 15 per cent and crop yields by 52 per cent.

Kenya: Expanding the front-line of biological control In Kenya, CABI, together with the Kenya Agricultural and Livestock Research Organisation (KALRO), the Kenya Plant Health Inspectorate Service (KEPHIS), and the National Museums of Kenya (NMK), is scaling up the fight against the papaya mealybug.

In Kenya, Uganda, and South Sudan, scientists from CABI's regional centre for Africa in Nairobi have deployed *Acerophagus papayae*, a tiny wasp that helps control the papaya mealybug naturally. The move builds on earlier success in managing the pest in Kenya's coastal counties.

Funded through the CABI-led PlantwisePlus programme and the Darwin Initiative project, the work is already transforming outcomes for smallholder farmers.

In the Kenyan counties of Mombasa, Kwale, and Kilifi, two years of field releases have yielded up to 75 per cent mortality of papaya mealybugs.



CABI and partners have developed a nature-based solution to check on the debilitating effects of the mealybug in Kenya, Uganda, and South Sudan. [Sylvan Thompson]

Further, the initiative has positively impacted papaya cultivation, productivity and profitability. Following a significant reduction in the papaya mealybug population, the number of papaya growers increased by 15 per cent, and crop yield saw a substantial 52 per cent rise.

The economic benefits were profound: farmers reported increased sales of 16 per cent to 18 per cent, resulting in a substantial profit rise of 105 per cent to 118 per cent, translating to approximately \$1,908-2,144 per hectare. These achievements came as part of integrated pest management (IPM) strategies that reduce reliance on chemical pesticides – allowing beneficial insects like *A. papayae* to thrive.

Research published in Crop Protection confirmed “strong evidence of exceptional efficiency,” with parasitism rates reaching as high as 72.89 per cent just four months after release.

According to Dr Selpha Miller, Scientist, ISM, CABI and lead scientist for the releases in Kenya, control can be achieved within six months.

“The papaya mealybug is a devastating crop pest with the potential to cause losses ranging from 53 per cent to 100 per cent,” she said. “But we have shown that *A. papayae* can be very effective as part of an IPM plan.”

To ensure the agent's availability at no cost to farmers, CABI mass-rears *A. papayae* at the Crop Protection Biological Control Laboratory located at the Kenya Agricultural and Livestock Research Organization (KALRO) campus in Muguga, Kenya.

Parasitoid “mummies” are distributed on cards that farmers staple under papaya leaves. *A. papayae*, the small parasitic wasp that attacks PMB by laying eggs in it.

How KALRO prowess in technology is shaping Kenya's agriculture future

By Sammy Waweru
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As Media for Environment, Science, Health and Agriculture (MESHA) hosts this year's International Federation of Agricultural Journalists (IFAJ) Congress in Nairobi, Kenya, the spotlight remains on how technological innovations can transform farming. The congress kicking off on October 15 to 18, 2025 has a focus on how modern technologies can help boost agricultural productivity amid the growing threats of climate change.

At the heart of these discussions is Kenya Agricultural and Livestock Research Organisation (KALRO), which is taking the lead in promoting digital and precision agriculture. The state-owned research institution is demonstrating how innovations such as Artificial Intelligence (AI) and smart data tools are reshaping farming across the country.

KALRO's most vibrant digital platform is the Kenya Agricultural Observatory Platform (KAOP), a mobile and web-based application that provides farmers with real-time weather forecasts.

The innovation allows users to access localised weather information to help them plan and make informed decisions. "The system can be downloaded from the Play Store and installed on any smartphone," explains Judy Wambugu, an ICT expert at KALRO.

"It has features that help farmers know the weather conditions in a specific area for up to 15 days ahead," she says, adding that with the unpredictable weather patterns caused by climate change, KAOP is a reliable companion for farmers.

"It is easy to use and accessible at the touch of a button. It helps farmers know the weather around their farms and plan their activities accordingly," says Ms Wambugu. The platform also provides data on temperature and precipitation, giving farmers a better understanding



KALRO staffer at the IFAJ Congress 2025. The research institute has a mobile and web-based application that provides farmers with real time weather forecasts. [Christine Ochogo]

of weather trends in their localities. According to Ms Wambugu, the system relies on satellite imagery for weather prediction, integrating data from all 47 counties in Kenya. Working alongside KAOP is another innovation, the KALRO Crop Selector App, which guides farmers and pastoralists on the most suitable crops, pastures, and livestock breeds for their specific areas.

Both digital tools are area-specific, allowing users to select their county, sub-county, and even ward to receive tailored agricultural advice.

"KALRO has developed more than 35 mobile applications that offer guidance on good agricultural practices, from planting to harvesting," Judy notes.

The institution also operates a 24-hour call center that connects farmers directly with experts who provide instant advisory support. "Professionals manning the center attend to calls from across the country, offering solutions to various farming challenges," she says.

With these digital innovations, KALRO is positioning itself as a key player in modernising Kenya's agriculture. During the IFAJ Congress, the organisation plans to showcase its digital tools and demonstrate how AI and precision agriculture can drive food security and resilience.

As the world increasingly turns to technology to address food security challenges, KALRO's innovations demonstrate how digital transformation can empower farmers, enhance productivity, and build climate resilience in Kenya's agricultural sector.

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**It is easy to use and accessible at the touch of a button. It helps farmers know the weather around their farms and plan their activities accordingly”
Ms Wambugu.**



George Njunguna Andermatt Kenya proudly showing his cabbage from Andermatt Kenya crop demo farm.

How Andermatt Kenya is driving Africa's sustainable farming future

By Agatha Ngotho
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As Kenya takes the global spotlight in its hosting of the International Federation of Agricultural Journalists (IFAJ) 2025 Congress for the very first time, hundreds of agriculture journalists from across the world gathering in Nairobi have their appetite whetted by the promise of engaging sessions and farm tours showcasing the country's agricultural innovations.

Among the most anticipated field visits is Andermatt Kenya's demonstration farm in Naivasha, Nakuru County, where delegates will experience how science and nature work hand in hand to transform farming in Africa. At the heart of Andermatt Kenya's work lies a simple yet powerful philosophy: "Healthy food and healthy environment, for all." The company runs a vibrant organic farm in Naivasha, producing vegetables, herbs, while also serving as a living trial site

for farmers.

Here, local crops are grown under real-life conditions and supported by Andermatt's biological solutions, offering farmers sustainable alternatives to conventional practices. Founded more than 30 years ago by Dr. Martin and Dr. Isabel Andermatt in Switzerland, the Andermatt Group started with a single innovation: a plant protection product based on baculoviruses.

Today, it has grown into a global leader in biological solutions for plant growth and protection, with a presence in eight African countries, including Kenya, South Africa, Namibia, Mozambique, Zimbabwe, Malawi, Zambia, and Eswatini, Tunisia, Uganda.

Andermatt's African vision goes beyond farming. It is about feeding the continent sustainably, boosting local economies through the export of high-quality, residue-free food, and ensuring food safety and security for future generations.

30 yrs

Founded more than 30 years ago by Dr. Martin and Dr. Isabel Andermatt in Switzerland, the Andermatt Group started with a single innovation.

Their approach is grounded in integrity, passion, and innovation, with a deliberate focus on improving soil health, plant vitality, and crop protection.

"Nature leads innovation," is the guiding principle that fuels Andermatt's work across Africa. As the world looks to reduce reliance on chemical pesticides, Andermatt offers biological alternatives such as microbial and macrobial products, beneficial insects, natural substances, and traps.

These tools are integral to Integrated Pest Management (IPM) programs, ensuring farmers can manage pests effectively while protecting the environment. The company's solutions are built around three pillars: Root Health with programmes designed to strengthen root systems, maximize nutrient and water uptake, and increase pest and disease resistance.

The second one is plant vitality. Biostimulants and natural supplements that boost growth, resilience, and productivity. Third is the Bio Crop Protection pillar, which offers products harnessing fungi, bacteria, viruses, and plant extracts to safeguard crops.

Together, these solutions promote nutrient-dense, high-yielding crops without compromising ecosystems or consumer health. For Andermatt, agriculture is not just about products, it is about creating a future where farming is sustainable, food is safe, and communities thrive. With a strong presence across Africa, the company is positioning itself as a partner of choice for farmers seeking innovative, science-backed, and environmentally friendly solutions. The Andermatt Kenya's showcase farm is a powerful reminder that the path to global food security lies not in more chemicals, but in solutions that are backed by science and loved by nature.

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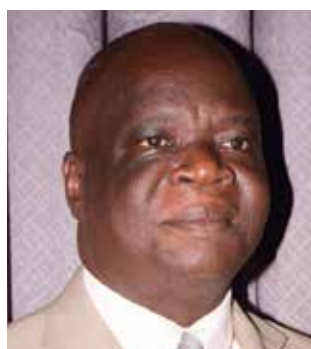
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AFSTA: How breeding consortia provide access to affordable seed

By Christine Ochogo
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Doing research for breeders and seed companies is an expensive affair and sometimes takes many years. In order to intervene and make sure that seed companies access germplasm for breeding companies, the African Seed Trade Association (AFSTA) as the apex of seed companies' association, has been collaborating with technology owners and seed companies to ensure quality and improved varieties.

Take the case of the African Vegetable Breeding Consortium (AVBC) which is a joint venture between the World Vegetable Centre and the African Seed Trade Association. The consortium offers a number of vegetable lines tailored to meet the needs of African farmers and consumers. Since its establishment in 2018, the consortium has aided breeders in keeping pace with seed market demands, benefiting its 20 member companies.

The consortium has set sight on introducing more and new improved varieties tailored to provide seed companies with better genetics.

Another important collaboration is the African Cereal and Legume Breeding Consortium (ACLBC), launched in 2024 and aims to strengthen breeding programs for cereals and legumes.

Established by AFSTA in partnership with Technologies for African Agricultural Transformation (TAAT), the Consortium is a unique public-private partnership, bringing together researchers, governments and seed companies with an aim to accelerate the development and delivery of improved, climate

smart and market-preferred varieties of cereals and legumes seeds for food sustainability in Africa. Speaking at the Kenya Agricultural and Livestock Research Organisation (KALRO), Food and Research Center in Njoro, Kenya, during a tour for seed breeders and seed multipliers, which was part of the 2025 annual workshop by the Consortium, AFSTA Secretary General, Dr Yacouba Diallo, said the event intended to demonstrate the performance of new seed varieties bred under smart innovations by KALRO under the consortium.

"We want to engage the private sector mainly seed companies to uptake the new varieties for business purposes by putting the new varieties in their portfolio, multiplying and selling to farmers. The innovative varieties will increase productivities and

contribute to Africa's food security," said Dr Diallo. The ACLBC Lead, Geoffrey Nsofon says the consortium which has over 30 registered members, is not just about taking new varieties and hybrids but it also builds the capacity of seed companies by helping them produce their own parental lines.

"Our intention is to accelerate the uptake of these varieties by seed companies and we hope that those who have identified the varieties will secure licenses in their different countries," he said, adding that they also promote collaboration between seed companies, breeders and scientists through the Consortium so that they can produce their own varieties.

"We work on demand driven approach where we produce what the seed companies want or seed companies collaborate with

us to produce what they want for their particular market," said Nsofon. Take an example of the Semi-Autotrophic Hydroponics (SAH) technology which is an innovative plant propagation and multiplication technique that allows for the rapid and large-scale production of healthy cassava planting materials.

This is one of the initiatives currently being promoted by the ACLBC which seeks to bridge the gap between research, seed companies and farmers.

The two consortia, AVBC and ACLBC are designed to strengthen crop breeding and seed systems in Africa.

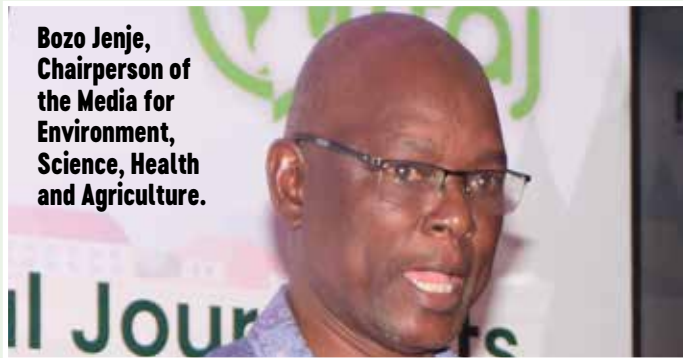
They not only increasing harvests, they also helping to fight malnutrition, create jobs, and strengthen food security across the continent.



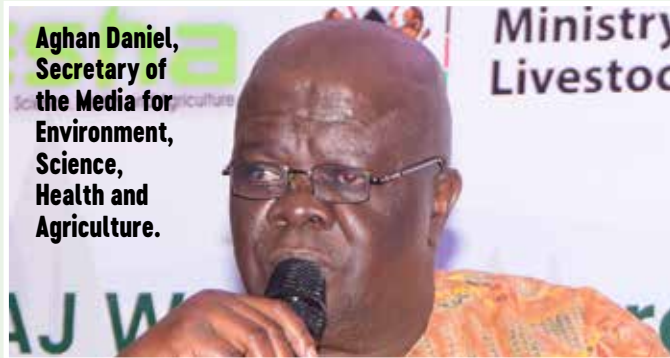
The consortia has set sight on introducing more and new improved varieties tailored to provide seed companies with better genetics: PHOTO/CGIAR

This publication is supported by the African Seed Trade Association www.afsta.org the apex seed association in Africa with its headquarters in Nairobi

Bozo Jenje,
Chairperson of
the Media for
Environment,
Science, Health
and Agriculture.



Aghan Daniel,
Secretary of
the Media for
Environment,
Science,
Health and
Agriculture.



Global agricultural journalists converge in Nairobi for historic IFAJ Congress

By **Agatha Ngotho**
angotho@gmail.com

Kenya has made history as the first East African country to host the International Federation of Agricultural Journalists (IFAJ) World Congress, bringing together more than 45 countries to celebrate global collaboration and explore how innovation, data, and storytelling can transform agriculture.

The 2025 Congress, held at the Ole Sereni Hotel, Nairobi, kicked off under the theme “Unlocking the Agricultural Potential in the Cradle of Mankind.”

It marks a major milestone for IFAJ as the organization approaches its 70th anniversary and celebrates the 20th class of IFAJ Alltech Young Leaders, a program nurturing emerging agricultural journalists worldwide. IFAJ President Steve Werblow said the event was a defining moment for the federation and its members.

“It is an honor to stand here tonight in Nairobi for the 2025 IFAJ World Congress,” Werblow said. “Together, we are standing on the threshold of our organisation’s 70th year and celebrating our first Congress in East Africa, thanks to the dedication and hospitality of our hosts at MESHA.”

He said that IFAJ has grown to represent 61 countries, with new members joining from Asia, Europe, Latin America, and Africa, reflecting its evolution into the world’s only truly global network for agricultural journalism and communication.

“In a world obsessed with borders, there is nothing more fundamental than feeding the world,” Werblow said.

“Ours is a mission where borders must fall away so information can flow. Climate change doesn’t stop at the border, and neither should knowledge.” He emphasised that journalists play a critical role in helping farmers access the right information to improve productivity and resilience.

“At the heart of our profession is an understanding of what’s happening in the field, in research facilities, in markets, and in the halls of government,” he said. “That’s what makes IFAJ priceless.”

Bozo Jenje, Chairperson of the Media for Environment, Science, Health and Agriculture (MESHA), described the Congress as more than just a gathering, calling it “a statement of intent.”

“Agriculture is more than an economic sector in Kenya, it is our heartbeat,” he said. “It puts food on the table, keeps families working, and drives our economy forward, even as it faces threats from climate

change and shifting markets.” Jenje urged journalists to be “translators of science and voices for farmers,” highlighting the power of storytelling in shaping agricultural transformation.

“When we tell stories of innovation, we turn data into hope. When we expose injustice, we plant the seeds of accountability,” he said. “If we do not tell Africa’s agricultural story, someone else will and they will not tell it right.”

Aghan Daniel, secretary of MESHA, reflected on the organization’s two-decade journey, describing the congress as the realization of a dream.

“When we formed MESHA 20 years ago, we never imagined we would one day host a global congress,” Daniel said. “Today, we’re proud to see agricultural journalism thriving across Africa.”

He said the event showcased the strength of African journalism and called for greater collaboration between the media, government, and development partners.

“The government cannot set the agenda for agriculture, science, and climate change without including the media,” he said.

“When the government gets it right, we will celebrate it. When it gets it wrong, we will point it out.”

The IFAJ Congress continues throughout the week, with field visits, workshops, and discussions focused on innovation, food security, and climate-smart farming in Africa.

Defining moment

- **The meeting showcased the strength of African journalism and called for greater collaboration between the media, government and development partners.**
- **Journalists should act as the translators of science and voices for farmers to boost Africa’s food production.**

CGIAR to journalists: Make science the story that saves our future

By Njeri Murigi
healthjournalist3@gmail.com

Science holds the key to solving some of the toughest challenges facing agriculture and food systems today.

This was revealed by Nicoline de Haan, CGIAR Science Program Director - Gender, Equality and Inclusion CGIAR's 2025-2030 Science Portfolio who spoke on Wednesday during the official launch of the International Federation of Agricultural Journalists (IFAJ) Congress 2025.

"Science delivers solutions that help build climate resilient food system, reduce poverty, safeguard our planet and lift millions out of hunger," she said.

According to her, for countries to achieve true transformation in their food systems, they must invest in science. She noted that science provides the evidence, tools, and innovations

needed to address the pressing challenges of our time from climate shocks to degraded ecosystems.

This is why at CGIAR, a global research partnership dedicated to food security, scientists are working across more than a dozen international centers and hundreds of partners to develop solutions that make food systems more productive, inclusive, and sustainable.

"Our 2030 research portfolio is built on one central idea: that food systems must be transformed to be more resilient, more productive, and more sustainable all at once," she said. "That transformation cannot happen without investing in the science that drives it."

The portfolio focuses on key challenges such as climate change, poor diets, rural poverty, and environmental fragility. Research teams are exploring innovations in soil health,

crop genetics, water management, and sustainable livestock systems—tools that not only improve productivity but also protect the environment.

She warned that underinvestment in agricultural research could have devastating long-term consequences, particularly in developing regions where smallholder farmers rely on rain-fed agriculture and are vulnerable to climate variability.

"Without consistent investment in science, we risk falling behind in innovation and losing our ability to respond to emerging threats such as new pests, diseases, and extreme weather patterns," she cautioned.

Evidence shows that every dollar invested in agricultural research delivers significant returns through improved productivity, food security, and livelihoods. Yet, global spending on agricultural R&D has stagnated in many parts of the world.

She urged governments, private sectors, and development partners to rethink their funding priorities and channel more resources into scientific research that supports sustainable agriculture.

"Science delivers solutions that help build climate-resilient food systems, reduce poverty, safeguard our planet, and lift millions out of hunger," she said. "It is the smartest investment any nation can make for its future."

While CGIAR's work has led to groundbreaking innovations in crop improvement and climate adaptation, Nicoline stressed the importance of bridging the gap between research and implementation.

"Science must not remain in journals or laboratories it must reach the people who need it most," she said. "That's why partnerships, knowledge sharing, and communication are crucial."

She highlighted the role of journalists and communicators in making science accessible to the public. She said that journalists have the power to shape perception and drive change.

"When you translate science into stories that people can relate to, you bring research to life and inspire action," she said.



**Nicoline de Haan,
CGIAR Science
Program Director -
Gender, Equality
and Inclusion**

“ Science delivers solutions that help build climate resilient food system, reduce poverty, safeguard our planet and lift millions out of hunger

Nicoline de Haan

MESHA secretariat stands out in African attire during IFAJ 2025 World Congress

By **Sammy Waweru**
sammywaweru87@gmail.com

As the International Federation of Agricultural Journalists (IFAJ) 2025 World Congress kicked off, the Media for Environment, Science, Health and Agriculture (MESHA) secretariat stole the show with their striking African-inspired attire. The Congress, which brings together agricultural journalists from across the globe, began on Wednesday, October 15, in the bustling capital of Kenya, Nairobi. The MESHA secretariat comprising journalists specialising in environment, science, health, and agriculture, turned heads with their choice of traditional African wear that vividly celebrated the continent's culture and identity. Black dominated their outfits, symbolising the pride and resilience of the African people. The women wore elegant black dresses accented with yellow stripes along the collars and sleeves, while the men donned matching shirts featuring the same design. The coordinated appearance exuded unity, professionalism, and a deep connection to

African heritage. When MESHA secretary, Daniel Aghan introduced the team during the Congress, their attire drew admiration from participants. "This is the team that has been working tirelessly behind the scenes to ensure the success of this Congress," said Mr Aghan, who also serves as Director of the IFAJ Congress 2025. Themed "Unlocking the Agricultural Potential in the Cradle of Mankind," the global event celebrates world and Africa's pivotal role in agricultural innovation and journalism. Kenyan journalist and MESHA member Agatha Ngotho, praised the secretariat's creative display, describing it as a proud expression of African identity. "I love it because it represents who we are as Africans. The colour combination shows our pride and excitement, especially as Kenya hosts the event for the first time," said Ms Ngotho. She added that the attire also aligns with President William Ruto's advocacy for promoting African culture and homegrown designs.

"Dressing in African attire at

a global event is not just about fashion—it's about selling our culture and products to the world," Agatha said.

Complementing the vibrant mood was Kayamba Africa, a renowned Kenyan music group famous for its "Neo-traditional" sound that blends indigenous rhythms with modern beats.

Dressed in equally colourful African outfits, the band entertained participants with captivating performances that further amplified the spirit of the continent.

This year marks a milestone for MESHA as it celebrates 20 years since its founding. Coincidentally, IFAJ also commemorates its 70th anniversary, making the Nairobi Congress a historic occasion for both organisations.

Reflecting on the journey, Mr Aghan expressed pride in MESHA's growth and its pivotal role in amplifying the voices of African journalists.

"When we began MESHA two decades ago, we never imagined we would one day host the IFAJ World Congress. This event is the realisation of a dream, bringing together agricultural journalists

from across the world," he said. He emphasised that journalists play a critical role in driving conversations around food systems, climate change, environment, health and agricultural development. "This shows how the media can collaborate with government and other partners to revamp and streamline the agricultural sector," he added.

Aghan also urged the government to strengthen its engagement with journalists to advance key national goals, particularly in addressing food insecurity and hunger.

"The government should see journalists as partners in development," he said. "Through storytelling and information sharing, we can inspire innovation and transformation in agriculture." The World Congress, attended by government representatives, media practitioners, researchers, and stakeholders from both public and private sectors, received sponsorship from the African Seed Trade Association (AFSTA). As the event entered its second day, the spirit of African pride and collaboration continued to shine brightly—symbolized by MESHA's bold and meaningful choice to wear Africa on their sleeves.



MESHA members led by Christine Ochogo, John Riaga, Agatha Ngotho, and Violet Otindo brings the African touch to the IFAJ 2025 World Congress

Ulan Eshmatov,
the Founding
member and
President of
the Kyrgyzstan
Agriculture,
Science and
Environmental
Journalists
Association



Learning and sharing through agricultural journalism: Kyrgyzstan's KAIEJA joins the global community

By Ulan Eshmatov
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I am Ulan Eshmatov, the Founding Member and the President of the Kyrgyz Agricultural, Science and Environmental Journalists Association (KAIEJA). The congress hosted by MESHA marks my fourth IFAJ Congress.

I attended the previous three as an independent freelance journalist, but this time round, I am proud to represent KAIEJA - a newly established non-profit organisation, founded in March 2025, with an aim to advance agricultural, science, and environmental journalism in Kyrgyzstan. KAIEJA is the first association of its kind in Central Asia.

Modelled as MESHA, KAIEJA is expected to become a full member of the International Federation of Agricultural Journalists (IFAJ) during this year's congress. Our organization believes that accurate, science-based reporting is crucial for sustainable development, informed decision-making, and raising public awareness on key agricultural and environmental issues. One of our core initiatives is EL ILM, the first popular science online magazine, published in the Kyrgyz language, where I serve as Founder and Editor-in-Chief.

Agricultural science is a major part of our coverage. EL ILM strives to make scientific knowledge accessible, engaging and relevant to a wide audience — fostering a culture of curiosity and understanding of science across Kyrgyzstan.

During the congress, I look forward to learning from MESHA's experiences, particularly the success of its Sayansi magazine.

The plenary sessions and field tours will provide valuable opportunity for me to observe how Kenya and the broader East African region are addressing agricultural challenges in the context of climate change and population growth - and how science and technology are shaping these solutions. As a journalist and as a representative of KAIEJA, I am eager to share stories of agricultural innovation and production practices from this region with our audiences back home.

Reporting on global agricultural trends is one of KAIEJA's key missions, a commitment we have upheld since our inception.

Today, drought and water scarcity represent the most pressing agricultural challenges for Kyrgyzstan and the entire Central Asian region. Governments and dedicated farmers are working tirelessly to maintain food security by adopting new technologies, particularly in the vital irrigation sector, to meet the demands of modern agriculture.

Through platforms like IFAJ and MESHA, we continue to strengthen international collaboration - sharing knowledge, experiences, and inspiration to build a more sustainable agricultural future for all.

Ulan Eshmatov is the President of the Kyrgyz Agricultural, Science and Environmental Journalists Association

2025

The year the non-profit organization was founded with an aim to advance agricultural, science, and environmental journalism



Prue Adams: The story of an award winning Australian broadcaster out to demystify Africa's agriculture narrative

A few days before the IFAJ World Congress of Agricultural Journalists opened in Nairobi, the MESHA team caught up with a veteran journalist from Australia. Below is her story...

She is an international award-winning agricultural journalist per excellence. A freelance videographer, podcaster, and the newly-minted Australian delegate to the International Federation of Agricultural Journalists.

Prue Adams, a journalist with more than four decades of experience in broadcast journalism, aptly puts it, "There is no industry more vital than agriculture; farming produces our most basic human needs of food and fibre... and yet urban populations everywhere overlook the sector's status."

And that is why, she intends to keep that connection alive-by continuing to show her home country what is happening in global rural sectors. Describing herself as a one-woman-band film maker, she has produced five long-form documentaries that have aired on the Australian national broadcaster, seen by over a million people - thereby introducing Australians to international agriculture issues.

Like many Australians, Prue knows very little about farming in Africa. However, that is poised to change when she landed in Nairobi, Kenya together with other 12 Australians attending the IFAJ 2025 Congress that commenced on October 15-18, 2025. She says the congress program is brilliant-informative and wide-ranging.

"The next few days will change that. I plan to play a part in informing my own nation - perhaps smashing some myths along the

way," says Prue adjusting her camera lenses and sound gear.

She urges journalists attending the congress to tell impactful stories about the evolving technologies and innovations driving Kenyan and African farming landscape.

"If each of us writes just one article about Kenyan farming or drafts a handful of Instagram/Facebook/TikTok/LinkedIn posts, imagine how much we can expand Australia's understanding of this East African country? And that can be replicated for every other attendant nation of agriculture reporters," she explains adding, "This is really what drives me."

"In a world where the edges of facts are fraying, let our group of trained communicators be the truth-tellers and the builders of accurate, science-based agricultural knowledge," she further explained.

Growing up with her mother and sister in South Australian cream-bricked suburbia, Prue wasn't destined to become an agricultural journalist.

Although she had developed interest in writing at an early age, she knew she wasn't going to be a farm writer. When she finished a Journalism degree in the mid-1980s and "went bush"-scoring her first job at a regional television station, she began to understand and respect people who grow food.

Her experience would further be shaped by more than a year of international travel, including a stint at a radio station and newspaper in a Californian ski resort. On returning home, she scored a television reporting role at the Australian Broadcasting Corporation, mostly covering news and

current affairs.

In 1995, she was approached to work for the ABC's hugely popular flagship rural television program Landline that gave her the opportunity to interact with locals.

"I could never have imagined the riches this role would bestow in terms of the places I went, the people I met, the stories I could tell," she nostalgically recalls.

"With a camera crew we travelled the length and breadth of our vast continent - from the Tropics to the desert to the mountains and the coast - reporting on all things farming."

One of her career highlight is winning IFAJ's Star Prize for Journalism in 2016 after producing a ground-breaking documentary on the zoonotic disease Q Fever; the report led to positive change in Australia's medical profession and changed the way rural-based companies protect their staff.

In the early 2000s, Prue combed the USA and Canada too, to produce a 3-part series on genetically modified crops - which were just beginning to make their mark in Australia.

That international award, presented at the Congress in Bonn, also introduced her to this most remarkable group - the IFAJ. Since then, Prue has attended five congresses including Germany, USA, Denmark, Canada and Switzerland.



Prue Adams (on the right) captured by Andrew Burch in rural Australia



Marie Hatlevoll from Norway take a photo of a cow during the Congress in Switzerland, 2024

A farmer's son turned storyteller: A 25-year adventure in telling agriculture stories



Mike Abram is a freelance journalist specializing in detailed agronomy-related feature stories

By Mike Abram
abramcommunications@gmail.com

Nearly 25 years ago, I fell into agricultural journalism. As a farmer's son, I was working for a company that sold agri-chemicals and other farm inputs to farmers, just like my Dad. For about eight years, I had been conducting field trials – it was interesting and I had learnt a lot about agronomy; but I was also getting bored. I saw an advert for a job on Farmers Weekly – the leading agricultural publication in the UK, and somehow, despite having no journalism or even writing experience, I secured the job, as a technical writer on its sister publication, Crops.

After a baptism of fire – at one point making it through the probation period was touch and go, I found my style and niche – writing detailed agronomy-related features. Fast forward, like many writers who started from in-house writing in the UK, I'm now a freelancer. I've forged a successful business writing for Farmers Weekly, Crop Production Magazine and Direct Driller in the UK.

I've always loved travelling and tried to take opportunities to tie that in with work when possible. There's been trips to the International Farm Management Conference in New Zealand, a sugar beet and potato farm tour of Chile, and most recently a trip to the World Agri-Tech Innovation Summit in San Francisco, that just happened to

coincide with a wedding my wife and I had been invited to. On each occasion, I've been lucky enough to find great stories to tell readers of the above magazines when I go back home.

That's what appeals me about IFAJ Congresses. I was lucky enough to be granted a Joe Watson Legacy Fund bursary to attend the 2023 Congress in Alberta Canada. Joe was a Scottish journalist, who loved attending the IFAJ Congresses. After he passed away at a much-too-early age just before the IFAJ Congress held in Scotland in 2014, a legacy fund was set up in his name to encourage first time attendees for future Congresses.

My experience in Canada was fantastic – it's not just the farm stories you access, but meeting other journalists and communicators from around the world that makes a Congress work so effectively.

I tacked on a three-farm stop in the US before arriving in Canada, and sold eight features into magazines on my return, one of which was selected as the runner up for the STAR prize for print journalism last year.

I always had Kenya on my radar for a follow-up visit to a Congress. There's a saying that goes, "once you visit Africa, it remains in your blood. I don't know how true that is, my first visit (to South Africa) was 25 years ago, and it's taken me years to return, at least to the main continent.

But I'm keen to repeat my Canadian experience – visiting interesting farms and meeting old and new Congress delegates. Like Canada, I've tacked on a visit ahead of Congress – heading up to the Mount Kenya region to tour some farms with a British agronomist David Jones, who's been advising Kenyan farmers for around 10 years.

And I'm looking forward to the tours organised by Congress. They might be a little outside my immediate comfort zone, growing crops that we don't grow in the UK, but that's half the fun. Hearing different farming stories is often the most interesting days out on farm and I hope to have so many audio recordings to take home to spin into new features, and maybe even future STAR prize winning articles.

EXPLORING AGRIBIZ STORIES

- **I've always loved travelling and tried to take opportunity to tie that in with work when possible**
- **I'm looking forward to the field tours organized by the Congress**

Intelligent food safety: Tackling aflatoxin risk in Africa's maize through technology

Ksh86.7b

The estimated amount of money that Africa loses annually in grain trade due to aflatoxin contamination

By Mesha Reporter

An innovative early warning system powered by artificial intelligence is poised to transform how Africa confronts a silent but deadly threat to its food supply: aflatoxin contamination in maize.

The Aflatoxin risk Early Warning System (A-EWS), uses machine learning and satellite data to predict and map contamination hotspots, offering a powerful new weapon in the fight for food safety. The tool was developed by the International Institute of Tropical Agriculture (IITA) and its partners, through the CGIAR Scaling for Impact Program (S4I) and the CGIAR Sustainable Farming Program (SFP).

The tool will be a highlight at the upcoming 11th African Grain Trade Summit in Zanzibar, a premier conference that brings together policymakers and leaders from the grain industry.

Aflatoxin, a potent mycotoxin produced by the *Aspergillus flavus* fungus, is an "invisible enemy" hidden in soils. It contaminates staple crops including maize, groundnuts, and sorghum, causing severe health problems such as stunted growth in children, immune system suppression, and liver cancer. Economically, aflatoxin contamination costs Africa an estimated Ksh86.7billion (\$670 million) annually in lost grain trade.

"There is limited information on the spatial distribution of aflatoxin risk at the farm level, though it is of critical importance for guiding spatial targeting of appropriate management interventions," explain the researchers behind the system.

Predicting risks

The A-EWS fills this information gap by applying geospatial artificial intelligence (GeoAI) to forecast pre-harvest contamination risk zones. The tool's machine learning models were trained on a vast dataset that integrates historical data from 907 unique pre-harvest

maize samples from farms in Kenya, Uganda, Malawi, and Tanzania collected between 2009 and 2022 and environmental variables on temperature, precipitation, humidity, elevation, and soil properties—key factors influencing fungal growth.

The system classifies aflatoxin risk into three internationally recognized categories: low (<5 ppb), medium (5–20 ppb), and high (>20 ppb).

According to the study results published recently in the *World Mycotoxin Journal*, among eight machine learning algorithms tested, the Gradient Boosting Model (GBM) demonstrated the highest accuracy on new data, achieving F1-scores of 67 per cent for low-risk, 45 per cent for medium-risk, and 41 per cent for high-risk predictions. Key drivers identified include precipitation in March, minimum temperature in March, and elevation. Specifically, risk is greatest at altitudes below 1,000 metres when March rainfall is under 200 mm, and soil temperatures range between 18°C and 27°C. The model shows that during drier seasons, high-risk hotspots expand widely, while wetter years see risks concentrate along coastal belts.

Practical tool

The findings are accessible through an interactive online dashboard, enabling stakeholders to visualise aflatoxin risk maps and make informed decisions. The East Africa Grain Council (EAGC), a vital partner and the regional voice for the grain sector, endorses the tool as a "useful platform for the grains industry." The council highlights its value in guiding grain buyers toward safer maize sources and generating location-specific advice on mitigation measures such as the Aflasafe® biocontrol product.

“

Using these maps... we can finally make aflatoxin visible

JANE KAMAU

This targeted, data-driven approach replaces broad, inefficient "blanket" recommendations with precise interventions.

"Using these maps... we can finally make aflatoxin visible," said Jane Kamau of IITA, underscoring the system's power to equip policymakers—who may otherwise be unaware of local risks—with clear evidence to take action.

Dr Francis Muthoni, a lead scientist on the project, emphasised the transformational potential of the tool: "Aflatoxin contamination has long been an invisible threat, difficult to monitor and manage at scale. Our AI-driven system changes that by providing clear, actionable risk maps that empower farmers, traders, and policymakers to act proactively rather than reactively." He added, "By integrating diverse data sources—satellite imagery, weather patterns, and historical contamination records—we've created a dynamic model that reflects the complexity of aflatoxin risk. This precision enables more effective targeting of interventions, saving crops, protecting health, and preserving market integrity."

Future developments

The project team emphasises that the AI model's accuracy depends on increasing the volume and quality of testing data. Next steps include wider dissemination of the tool to collect user feedback and developing a back-end application for partners to upload new, standardised data to refine predictions continuously.

Dr Nancy Kirimi of the Kenya Agricultural and Livestock Research Organization (KALRO) is leading the creation of a standardised protocol to ensure consistent, high-quality data collection.

With plans underway to extend the system's application to other vulnerable crops like groundnuts and sorghum, the initiative highlights a key message for the upcoming summit: strong partnerships are critical to deploying market-ready innovations that can transform Africa's food systems and enhance food safety for millions.

IFAJ Congress kicks off with renewed call for social inclusion

By Sharon Atieno
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Women play a significant role in Africa's agriculture, making up the largest portion (about 60 percent) of the labour force and performing crucial tasks in production, processing and distribution. Despite this, they often remain sidelined.

However, for agriculture to develop in the continent, social inclusion of both genders and recognizing the important role they play is crucial.

Risper Chepkonga, Chief Executive Committee member for Agriculture, Baringo County, said during the International Federation of Agricultural Journalists (IFAJ) Congress 2025 in Nairobi, Kenya.

"Though the women have been disadvantaged, we recognize the role of both gender in the development of agriculture.

After all, when agriculture develops, then it's the whole world developing," Chepkonga said.

She noted that failure to recognize women's participation in food security has often made them vulnerable especially in the face of climate change and disasters like conflicts.

This often has a ripple effect on the entire family particularly, children.

Chepkonga was giving a keynote speech at the Congress themed "Unlocking the agricultural potential of the cradle of mankind."



Delegates enjoy refreshments at a coffee farm near Nairobi.

The first of its kind in Eastern Africa, the Congress brings together some 150 delegates from 34 countries across the globe.

It focuses on strengthening global collaboration in agricultural communication, promoting innovation, and showcasing Kenya's leadership in sustainable farming and agri-tech development.

According to Nicoline de Haan, CGIAR Science Program Director-Gender, Equality and Inclusion, there is need to shift the narrative. Women should be portrayed as change agents and not only victims, especially, in the face of climate change.

"Stories can create or reinforce stereotypes, but they can also break them," de Haan said, calling on journalists to amplify leadership and voices of women, youth, and socially excluded groups.

"Our research shows that empowering women, youth, and socially excluded groups is essential for developing equitable and lasting solutions in food, land, and water systems."

Similarly, Kathryn Toure, International Development Research Centre (IDRC) Regional Director, Eastern and Southern Africa noted that it is crucial to use intersectional lens when investing in projects to avoid excluding some people.

According to Toure without using this approach "there is risk of recreating or perpetuating existing hierarchies of power, when we're really interested in inclusion and inclusive systems."

Besides social inclusion as a thematic area, the four-day Congress from October 15-18, is expected to focus on seed matters, agricultural innovations, research and finance in agriculture, climate change and resilience as well as action research and its impact on agricultural reporting.

The sessions will be led by national, regional and international organizations including Kenya Agricultural and Livestock Research Organization (KALRO), Ministry of Agriculture and livestock Development, IDRC, CGIAR, African Agricultural Technology Foundation (AATF), International Seed Federation (ISF), Alliance for a Green Revolution in Africa (AGRA) and CropLife International among others.

AFSTA: Powering Africa's biotech transformation

“

These varieties have undergone thorough research and have been developed using the tools of biotechnology over several years of continuous testing and revalidation,”
Professor Ado Yusuf,
CGIAR

Simon Muguro in his BT cotton farm. [NJERI MURIGI]

By Njeri Murigi
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Across Kenya, Ghana, Nigeria, and Malawi, local seed companies are taking a bold step towards transforming African agriculture, by embracing genetically modified (GM) seeds. With support from the African Seed Trade Association (AFSTA) and CropLife International, these companies are being trained and equipped to understand, produce, and commercialize GM crops such as Bt cotton and Bt cowpea technologies designed to boost yields and reduce pest losses.

Through the initiative, AFSTA and CropLife are helping demystify biotechnology and empower African seed producers to play an active role in the adoption and distribution of improved crop varieties. The program offers capacity-building workshops, technical training, and policy engagement to ensure

that local companies are well-positioned to meet both farmer needs and biosafety standards. “Empowering local seed firms is essential for sustainable agricultural transformation,” says Aghan Daniel AFSTA representative. “By giving them the tools and knowledge to handle GM seeds responsibly, we are ensuring that innovation reaches farmers safely and effectively.”

GM crops such as Bt cotton and Bt cowpea have already demonstrated their potential across Africa helping farmers cut down on pesticide use, improve productivity, and increase incomes. However, local seed companies have often been left out of the technology transfer chain. This initiative aims to close that gap by enabling African-owned firms to license, multiply, and distribute biotech seeds locally. Apart from training and equipping seed companies, AFSTA has also formed national Biotech Committees in countries

such as Malawi and Ghana. These committees, composed of local seed firms, serve as platforms for dialogue, knowledge exchange, and advocacy on biotechnology adoption. Members are trained to become spokespeople who bridge the gap between the seed sector, government, and the media—ensuring that farmers receive factual and practical information about biotechnology.

“It is now 12 years since AFSTA began its biotechnology awareness initiative in Africa, a program that has played a critical role in countering misinformation and providing balanced information about biotechnology across the continent’s seed sector,” he adds.

**This publication is supported
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Association www.afsta.org the
apex seed association
in Africa with its headquarters in
Nairobi**

Sustainable pest management framework transforming pest control

By Sharon Atieno

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Pests pose a significant threat to African agriculture accounting for up to 60 per cent of crop yield losses. Climate change is set to make the situation worse especially with the emergence of new pests which are exotic to the region such as the fall armyworm. As such, the use of pesticides remains pertinent to increase crop yield resilience. To ensure balance between agricultural productivity and environment protection, Croplife International has launched a sustainable pest management framework (SPMF).

"SPMF is an integrated implementation of the International Code of Conduct on Pesticide Management," said Margaux Rundstadler, Director Public Affairs and Communications, Croplife International Africa Middle East region. She was speaking at the IFAJ Congress 2025 in Nairobi, Kenya.

The Code lays out guidelines for the responsible use of pesticides to maximise its benefits without the adverse effects on human health and the environment.

The SPMF is being implemented across nine countries globally which include Kenya, Egypt, Morocco, Guatemala, Colombia, Chile, Vietnam, Indonesia and Thailand. According to Rundstadler, the SPMF is being guided by three pillars. The first one focuses on reducing reliance on highly hazardous pesticides (HHPs) by ensuring transparent risk management measures are in place where HHPs continue to serve essential needs. This entails clear and open disclosures of potential risks for the user to make an informed choice.

She notes that the SPMF focuses on increasing innovation. This includes supporting an enabling environment for new innovation to enhance the farmer tool box. Additionally, the Framework covers responsible and effective use of pest management products including reducing potential risks associated with pesticides through stewardship practices across their life-cycle. Rundstadler notes that the framework is coming

to address challenges such as the illicit trade of crop protection products, misuses, incidence cases, the low uptake of personal protective equipment (PPEs), the slow uptake of innovations such as biopesticides, legislation that are not necessarily enabling for innovate tools, unsafe disposal of pesticide containers and misinformation around the industry.

"Through the SPMF, we promote solutions tailored to local needs and the implementation of science and risk-based regulatory frameworks that promote innovations, which we believe are crucial to protect human health and the environment while increasing agricultural productivity," she said.

Many activities have been undertaken under the framework to set up measures against illicit trade and counterfeit products. Through partnerships and trainings with the authorities, customs, border officials, and farmers, several raids and seizures have been conducted in Kenya and Morocco.

“

AI is not just about technology. It's about connecting people, knowledge, and innovation to build a smarter, more food-secure future,”

**Margaux Rundstadler,
Director Public Affairs and Communications, Croplife International
Africa Middle East region**



"In Kenya, since January 2024, over 75 cases have been registered with seizures of over 100 tonnes of illegal pest control products while in Morocco, 30 tons of counterfeit pesticides were seized by the authorities in 2024," she observed.

The framework also promotes best practices for the use of drones in applying crop protection products. This reduces farmers' exposure, water use and ensures better application for increased crop yields.

There are activities including awareness campaigns going on in Kenya, Morocco and Egypt, either to promote adoption of drones by farmers or to develop guidelines for regulatory approvals. Additionally, under the SPMF, Croplife International is carrying out activities to fast-track biopesticide regulatory approvals as well as promote their uptake at farmers' level.

In Kenya, there has been an increase of biopesticides registration from five to 10 per cent in 2025 while in Morocco there has been an increase from five per cent in 2022 and by six per cent in 2024.

The organization has also increased farmers' training on sustainable pest management and responsible uses for efficient safe use of crop protection products. Through partnerships with the Cereal Growers Association and the Pest Control Products Board (PCPB) for instance, more than 1,000 spray service providers have been trained in Kenya. They have also undertaken activities to establish container management schemes for increased circular economy, reduced environmental and health risks associated with improper handling and the risk of counterfeit products.

"The SPMF has opened the way to new innovation to enable more sustainable practices such as inclusion of drones and biologicals, created lasting impact through governance infrastructures for container management but also incidence reporting and implemented best practices," she noted.

How AI is transforming agricultural sector

By Sammy Waweru
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Artificial Intelligence (AI) is transforming how the world revolves, and nearly all the major industries are adopting it for growth. The agricultural sector, which supports millions of livelihoods across Africa, is no exception.

In Kenya, for instance, the agricultural sector contributes between 21 to 22 per cent of the country's GDP, and technological innovations such as AI are expected to spur further growth. The agriculture sector is embracing the same technology to improve production, research, and market access.

At the ongoing International Federation of Agricultural Journalists (IFAJ) World Congress in Nairobi, the adoption of AI in agriculture was one of the topical issues that took centre stage in the discussions. Stephen Mutuvi, a Scientist from Artemis Project, underscores the crucial role AI can play in agricultural research, food production, extension services, and marketing.

"AI applications are driving new efficiencies, enhancing decision-making, and transforming how farmers access information," said Mutuvi. "It can help bridge the long-standing gap between research institutions, extension officers, and farmers on the ground."

He noted that although agricultural advisory services have traditionally been undervalued, they remain a critical link in helping farmers adopt new technologies and improve productivity.

Mutuvi says, "Most of the farming knowledge is generated by farmers themselves. They are researchers in their own right, testing new methods and varieties; season after season." "Such practical knowledge must be documented and shared widely through the AI."

With the rise of affordable smartphones and internet connectivity, Mutuvi stated that farmers are increasingly using digital tools to access extension services and market information.



A Kenya Agricultural and Livestock Research organisation staffer explains a technology to a journalist at the IFAJ Congress. The institute has created a weather prediction forum.

AI-powered platforms, such as chatbots and voice-based advisory systems, now enable farmers to receive timely updates on weather, pest outbreaks, and soil management practices in their local languages.

"Smartphone devices have become very helpful," Mutuvi observed, adding, that, not only connect farmers with agronomists and buyers but also provide a channel to collect and analyze data that informs better decision-making." The Kenya Agricultural and Livestock Research Organization (KALRO), through its Kenya Agricultural Observatory Platform (KAOP) weather prediction platform, is a good example of how AI can be harnessed.

The service is accessible via smartphones, computers, and laptops, allowing farmers to receive weather updates conveniently from anywhere in the country, as long as they have an internet connection. AI also plays a key role in the marketing and value chain segments of the food system. Through predictive analytics, farmers and traders can forecast demand and adjust production accordingly, reducing post-harvest losses and improving incomes.

The most important thing, Mbuvi said, is connecting people. "Information flow is vital — from the researcher to the extension officer, and from the farmer to the market." While AI offers immense promise, experts caution that its success depends on the quality of data fed into it. Inaccurate or incomplete data can lead to misleading insights and poor recommendations.

"We should not entirely rely on internet data, as some of it may not be accurate or contextually relevant," Mutuvi warned, emphasizing on the need to keep updating the information frequently. We need to capture what farmers are actually doing and create reliable databases from real farm experiences, he said. Such localised datasets can help tailor AI tools to specific regions, soil types, and climate patterns, making advisory services more relevant and practical.

"We need to contextualise AI systems so that they reflect local realities. That's how we will improve food production and make agriculture more resilient to climate change," Mutuvi emphasised. AI's integration into extension and advisory systems offers a scalable model for reaching millions of farmers who often lack access to traditional extension officers.

“Most of the farming knowledge is generated by farmers themselves. They are researchers in their own right, testing new methods and varieties; season after season,”
Stephen Mutuvi,
Scientist from Artemis Project



Fish in a pond for aquaculture farming. [AI Generated]

Blue aquaculture on the rise for nutrition and livelihoods

By **Bozo Jenje and Asha Bekidusa**
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Aquaculture fisheries volumes have boosted blue foods in the recent times to compliment the demand of fish consumption arising from the shortage from capture fisheries. To bridge the gap in Kilifi County in Kenya, Maxwell Mangi Kenga of Umoja Multipurpose self-help group are embracing mariculture to increase fish production to consumers.

According to Kenga, the group has 17 fish ponds with 48 members that include 36 women and 12 men. He said the group rears 4 marine species that comprises crabs, marine tilapia, sea cucumber and milk fish.

Kenga said their effort has helped the community to get employment and supply fish since the supply from capture fisheries is diminishing.

“The farmers need marine hatcheries that supply reliable and high quality seeds to avert the problem of getting fingerlings during seasons for consistency,”
Esther Magondu,
Worldfish Scientist

He said fish provide nutrition and livelihood to communities and the efforts of the government to support farmers through the blue economy program were yielding fruits.

“The fish harvested support homes and the families get protein and other minerals as a nutrition support system,” he said. Kenga said their challenges results from lack of quality fingerlings since there are seasonal and depend on the sea.

“There is no continuous supply of fish to the customers after 5 months harvest to their customers because fingerlings disappear in certain seasons,” Kenga said.

Another challenge he said was the cost of fish feeds were expensive and with a pellet machine at their disposal they can reduce the cost of feeds if they can manufacture their own.

On their ponds management, he said the water management depends on sea tides that take 2 weeks to refresh the water salinity.

“In case, the water evaporates and is not replenished the fish die because of water salinity and unfavorable environment”, he stated. A Worldfish Scientist Esther Magondu said to ensure the demand of fish is met there is a need to support farmers in marine fisheries through trainings.

“The farmers need marine hatcheries that supply reliable and high quality seeds to avert the problem of getting fingerlings during seasons for consistency,” the scientist said.

She emphasized that trainings and research were key for farmers to adopt regenerative aquaculture practices that includes fish farming, seaweed and shellfish farming.

To avert post-harvest losses, farmers are advised on making fish fillet and the use of solar power technologies to dry the fish. To actualize the success of fish farming Magondu stated that women and youth were taking the lead in the aquatic food systems. She attributed the success through initiatives put by the government and partners to better the infrastructure to reduce post-harvest losses and boost income.

“With new technologies that connect farmers to digital tools, they are able to use applications such as e-samaki to know the water quality, feeding rate, feed conversion rate and growth rate that make it ease to calculate their profits and loses,” she said.

Scientist Worldfish Sara Bonilla said a country like Kenya has opened the space to ensure that innovations are embraced in the fish sector as an opportunity.

ILRI: Fighting misinformation in agriculture and livestock

By Sammy Waweru
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Even as the world sharply adjusts itself to digital technological advancements, governments have been urged to closely work with the media, journalists, and key communication stakeholders to curb the growing threat of misinformation.

Speaking at the ongoing International Federation of Agricultural Journalists (IFAJ) World Congress in Nairobi, Michael Victor, the Global Head of Communications at the International Livestock Research Institute (ILRI), cited recent cases surrounding the adoption of agricultural biotechnology, genetically modified (GMO) crops, and Kenya's massive livestock vaccination campaign as prime examples of how misinformation can distort public perception and derail progress.

Earlier this year, Kenya launched a large-scale national livestock vaccination drive aimed at protecting millions of animals against deadly diseases such as Foot and Mouth Disease (FMD) and Peste des Petits Ruminants (PPR). The ambitious campaign targets the vaccination of 22 million cattle and 50 million sheep and goats, seeking to boost animal health and open doors for Kenyan livestock products in international markets.

The goal is to raise vaccination coverage from about 10 percent to 85 percent. Although the vaccines are being produced locally by the Kenya Veterinary Vaccines Production Institute (KEVEVAPI) and the government is working to make them affordable through subsidies and farmer education, the initiative was met with skepticism. Some critics questioned the authenticity and safety of the vaccines used, spreading unverified claims that sowed confusion among livestock keepers. The adoption of agricultural biotechnology, on the other hand, has been slowed down despite President William Ruto lifting the 10-year ban on GMOs in 2022, following a series of court cases.

"Kenya is a social media country and while social media can be a powerful tool for information sharing, it can just as easily become a breeding ground for misinformation—depending on how it's used," Victor told IFAJ 2025 World Congress participants.

Journalists at the 2025 IFAJ Congress: as an intervention against misinformation ILRI advocates for multisector collaboration between the media, scientists and government agencies.



He noted that during the vaccination rollout, a lack of proper coordination and communication created room for speculation and falsehoods.

In some areas, farmers who had no access to social media relied on word of mouth from relatives or friends, which at times worsened the situation when the information shared was inaccurate. Victor emphasized that politics often plays a big role in fueling misinformation, especially when influential figures use platforms to spread narratives that serve their interests rather than the public good.

"We need to create trust through leaders — political, local, and even religious," Victor explained. "When messages come from trusted community voices, they carry more weight and credibility." In today's digital environment, social media influencers are also emerging as important actors in shaping public opinion.

Victor acknowledged that some influencers have helped build trust by disseminating accurate information about agriculture, technology, and food safety. However, others with massive followings have been responsible for amplifying falsehoods, especially around sensitive issues like GMO foods, biotech crops, and milk safety. He warned that misinformation about food technologies can have far-reaching impacts on national development and food security. "When farmers fear vaccines or reject improved seeds because of what they read

online, productivity suffers," Victor stated, adding, "That's why transparent, evidence-based communication is key." To counter misinformation, ILRI advocates for multi-stakeholder collaboration between scientists, the media, government agencies, and local communities.

This includes timely dissemination of verified information, open dialogue with the public, and continuous training for journalists covering agricultural biotechnology and livestock issues. The IFAJ 2025 World Congress was hosted by the Media for Environment, Science, Health and Agriculture (MESHA).

The association's boss, Daniel Aghan, emphasised the need to engage journalists and communicators in capacity-building training to equip them with knowledge on topical issues. "They are not experts, and we need to train them," said Aghan, who also serves as the IFAJ 2025 World Congress Director, underscoring the importance of equipping journalists to specialize in their respective areas of reporting.

Victor, on the other hand, called for responsible digital communication, urging everyone—especially those in influential positions, to share only factual and verified information. "We all have a role to play. The fight against misinformation is not just about protecting science; it's about protecting livelihoods and the future of our food systems."

Clemens Breisinger,
from CGIAR. [Courtesy]



“

Aid funding develops dependency among beneficiaries, while investment in research empowers communities to create their own solution,”
Clemens Breisinger, CGIARs

co-financing models and public-private partnerships which leverage both local and global expertise.

“Unlike short-term aid, research builds foundational knowledge and technologies that ensure resilient, long-term success,” he added.

“Today’s farming approaches cannot keep pace with escalating global challenges. We must innovate or risk falling further behind.”

He warned that with 3.6 billion people living in vulnerable regions, pressure on food systems and natural resources is intensifying.

Without robust investment in research and development, these regions could face worsening poverty, malnutrition, conflict, and forced migration in the coming decades. CGIAR’s own legacy demonstrates the transformative power of agricultural research.

The organisation played a pivotal role in the Green Revolution, which spurred massive yield increases between 1965 and 2010 valued at over Ksh10.7trillion (USD 83 billion). CGIAR innovations currently influence crops grown on 544 million acres globally and generate around Ksh6.1trillion (USD 47 billion) in annual economic benefits.

Without such research, Breisinger said, GDP per capita in developing countries would be 17 per cent lower today. The CGIAR also continues to monitor global food markets, providing critical insights into disruptions such as those caused by the Russia-Ukraine conflict, which severely affected global grain supplies and prices.

Investing in research to build a food-secure future

By Asha Bekidusa and Bozo Jenjebozenje@yahoo.com & abekidusa@gmail.com

The global community shift in food security and poverty reduction should address the root cause of the hunger instead of depending on traditional aid funding, warns expert.

Through sustainable solutions and long-term investments in agricultural research and innovation to institutions governments will be able to deal with the problem of food insecurity.

According to Clemens Breisinger, Program Director of Policy Innovations at the Consultative Group on International Agricultural Research (CGIAR), the world must move away from short-term aid responses, crisis management and prioritise research that tackles the root causes of hunger and food insecurity.

Speaking on the sidelines at the ongoing International Federation of Agricultural

Journalists (IFAJ) Congress 2025 in Nairobi, Breisinger emphasised that while aid has played a role in addressing immediate humanitarian needs; it often fosters dependency rather than resilience especially in low-income countries. “Aid funding develops dependency among beneficiaries, while investment in research empowers communities to create their own solutions,” Breisinger said.

He noted that despite aid helping to reduce global extreme poverty from 2.3 billion people in 1990 to 831 million today, poverty remains concentrated in certain regions, especially Sub-Saharan Africa.

This, he said, proves that funding alone cannot solve poverty without strong, research-based policies to drive innovation and self-reliance. Breisinger called on governments and development partners to invest in research that delivers long-term value, job creation and technological advancement.

He emphasised that ownership and accountability are best achieved through

How locally sourced school meals could boost food security, livelihoods

By Ruth Keah
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At the ongoing International Federation of Agricultural Journalists (IFAJ) World Congress in Nairobi, Kenya, experts are calling for innovative food systems that not only nourish children but also empower local farmers. At a session chaired by the International Development Research Centre (IDRC) it explored how locally sourced school meals could boost both food security and community livelihoods.

Dr Daniel Kyalo from the African Agricultural Technology Foundation (AATF) in charge of Agribusiness department said Kenya's school feeding program is getting a major policy overhaul to ensure every child gets a healthy meal and that the food comes from nearby farms.

"No child should go to class hungry," Dr Kyalo emphasised. "It is our duty as a nation to make sure every learner, whether in urban or rural areas, has access to nutritious food every day."

He said Kenya's National School Meals Policy, now under public review, is the country's first comprehensive framework to regulate how schools acquire, prepare, and serve food. Dr Kyalo said the policy aligns with the ministries of health and agriculture and aims to create a transparent system where both students and farmers benefit.

"For years, school feeding in Kenya has happened without a guiding policy," he explained.

"Now we have a clear direction from how food is grown and procured to how it is delivered to schools," Dr Kyalo said currently, around 2.6 million children benefit from school feeding programs across Kenya, only about a quarter of all pupils.

He said the new "Home Grown School Feeding Model" seeks to expand coverage while sourcing food directly from local farmers. "Imagine the difference if the maize, beans, and vegetables our children eat at school were grown by farmers from



Dr. Daniel Kyalo from the African Agricultural Technology Foundation (AATF) in charge of Agribusiness, during an interview with journalists at the IFAJ Congress [Ruth Keah]

the same villages," Dr Kyalo said. "That money would circulate locally, improving livelihoods and strengthening our rural economies." He added that when schools buy locally, it encourages farmers to grow more food, creates jobs, and builds community resilience.

However, Dr Kyalo noted that many smallholder farmers still lack access to quality seeds, fertilizer, and training. "Farmers exist, but most of them are not producing enough," he said.

"We must empower them with the tools and knowledge to increase their yields and

meet school demand." The session also touched into biotechnology and its role in strengthening food and nutrition security.

Dr Kyalo said Kenya's researchers have developed maize varieties resistant to pests like the fall armyworm and stem borer, which destroy up to half of farmers' harvests. "Through biotechnology, farmers can reduce crop losses and produce more food," he said.

"Without adopting these innovations, Kenya could lose over 20 billion shillings in just five years, enough maize to feed 1.5 million people for a whole year."

"If every Kenyan child eats food grown by Kenyan farmers, we'll be one step closer to ending hunger," Dr Kyalo said with conviction.

"That is the future we are building." Johnes David, senior Food Technical Specialist from Fortified Whole Grain Alliance (FWGA), championed the nutritional and environmental benefits of using whole grain foods in school meals.

1.5million:

Without adopting these innovations, Kenya could lose over 20 billion shillings in just five years, enough maize to feed 1.5 million people for a whole year.



**[From left]
Jane Kamau, the
Director WanRich
Coffee and Gloria
Gummerus,
the Director of
Sakami Ranch
at the IFAJ 2025
Congress. [Craig
Stephen]**

The Trans Nzoia women changing the coffee farming narrative

By Sharon Atieno
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Women constitute up to 70 per cent of the labour in coffee production, performing much of the essential, hands-on farm work, including tending to plants and harvesting. However, a group of women in Trans Nzoia County is changing the narrative. Referred to as the North of the Rift Women in coffee (NORT), the women made up of smallholder coffee farmers have broken boundaries and forged direct trade connections with roasters across the Netherlands and Europe. \

NORT is composed of Sakami Ranches, WanRich Coffee, Chepsangor Hills Coffee, Rimo Coffee, Samwa Coffee, Sarini Coffee and Ziwa farm which focus on growing single origin Arabica coffee.

"We started our journey when one of us whom we call our trailblazer, Gloria Gummerus, got a partner who wanted to buy coffee in volumes. Being a single origin estate farmer, she was not able to meet the volumes. So, she looked for like-minded ladies," noted Jane Kamau, the Director of WanRich Coffee. "Initially she called 20 ladies to collaborate with her. But only five of us were courageous enough to walk the journey with her."

According to her, the successful delivery of the first consignment laid the groundwork for the formation of an association. The women wanted to change the way people perceived them shifting from being farmers to entrepreneurs. Also, they wanted to transform lives.

"The aim of the association is to empower women producers by creating opportunities where they can train, share best skills and also gain access to market," Kamau said, adding that their vision is to have a fully functioning and robust business entity for women in the coffee industry.

She was speaking during the International Federation of Agricultural Journalists (IFAJ) Congress 2025 in Nairobi, Kenya during a session titled "Coffee with a cause: Elevating female farmers in Kenya." For increased sustainability, the association is

keen on partnerships. "Most of the time when you tell people you're looking for partners, the first thing that comes in mind is only financial. However, in this case, we're looking up further into issues of climate change, innovation and technology as well as certifications in the whole value chain," noted Gloria Gummerus, Director, Sakami ranches.

"We are looking at a vision of moving ourselves forward not just as farmers but we want to be in the full value chain of coffee from being farmers to seed propagation to marketing and even value addition."

Already, NORT have signed a memorandum of understanding with BASF to improve their capacity through training and access to equipment. The women have received training on good agricultural practices, product stewardship, crop and farmer safety, quality control and value addition.

BASF has also supported them with a greenhouse which helps with open air drying. It maintains quality and ensures that there is no molding of the coffee.

Additionally, BASF is supporting the Association to acquire a milling warehouse which is going to have a coffee drying mill and a laboratory for traceability and quality check.

“

Most of the time when you tell people you're looking for partners, the first thing that comes in mind is only financial."

Gloria Gummerus, Director, Sakami ranches

From the blooming roses of Isinya to the global arena

By Sammy Waweru
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Kenya's flower industry is a global powerhouse, exporting millions of stems every year to markets in Europe, Australia, the Middle East, and beyond. Among the companies contributing to this success story is Isinya Roses, a family-owned enterprise that has grown from humble beginnings into a 120-hectare operation spread across Kajiado, Nakuru, and Narok counties.

The company's journey began in 2001 when a family of timber traders decided to convert their wooden greenhouses, originally built for vegetables, into flower-growing units after learning about the export potential of roses to Europe. "They started as a timber business, and with the extra timber, they built greenhouses," recalls Anantha Kumar, Head of Marketing at Isinya Roses. "After discussions with friends, they realised they could grow flowers in the wooden structures and supply to Royal Flora Holland in the Netherlands."

That simple experiment, Kumar says marked the birth of a flourishing enterprise. Today, Isinya Roses operates under a family group of three companies: PG Flora, PJ Flowers, and Isinya Roses, run by two brothers and their father, collectively managing over 120 hectares of flower farms. The Isinya unit alone, he told a delegation of journalists who toured the farm following the ongoing International Federation of Agricultural Journalists (IFAJ) World Congress, grows standard and spray roses, alongside summer flowers such as gypsophila, chrysanthemums, carnations, and eryngium.

Kumar stated that Europe remains the company's largest market, taking about half of its exports, followed by the Middle East, Australia, and parts of Eastern Europe, including Kazakhstan and Uzbekistan. About a quarter of Isinya's flowers are sold through Royal Flora Holland, while the rest go directly to buyers. The company, he observed that has also ventured into value addition by producing ready-made bouquets at source—an innovation that has helped it remain competitive in a price-sensitive global market. "In Europe, labour costs are very high, so supermarkets prefer to source



Anantha Kumar, Isinya roses Head of Marketing at the company's farm in Isinya, Kajiado. [Sammy Waweru]

2001

The company's journey began in 2001 when a family of timber traders decided to convert their wooden greenhouses, originally built for vegetables, into flower-growing units after learning about the export potential of roses to Europe.

bouquets directly from farms in Kenya or other producing countries," explains Kumar. "That's why we started the third farm in Narok to produce summer flowers used in bouquet making." This move has since created more local jobs and increased earnings.

The Isinya farm employs about 680 people, while the three farms combined provide livelihoods for over 2,800 workers. Maintaining international certification and sustainability standards is central to Isinya Roses' success. The farms are compliant with MPS-ABC, GlobalG.A.P., Fairtrade, and Kenya Flower Council (KFC) requirements,

which ensure responsible chemical use, fair labour practices, and environmental stewardship. "We are audited annually to ensure we don't use banned chemicals," Kumar said.

Still, the global flower trade is not without challenges. High air freight costs, particularly since the Covid-19 pandemic in 2020, remain a major concern. "Transportation is our biggest challenge," Kumar notes, adding, "During corona, freight rates increased and have remained high, making exports costlier."

To maintain quality, Isinya Roses relies on efficient logistics that ensure flowers reach Europe within two days of harvest, and Australia within four days. At the same time, innovation and sustainability continue to shape the company's operations.

This publication is supported by the African Seed Trade Association www.afsta.org the apex seed association in Africa with its headquarters in Nairobi

Healing the soils: How Andermatt is enhancing regenerative agriculture in Kenya



Hamish Ker, ce0 andermatt Kenya, displaying maize grown using regenerative farming in the Andermatt field in Naivasha, Kenya. [Sharon Atieno]

By Sharon Atieno
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Africa is still struggling with bridging the yield gap with farmers, reaching between 25 to 30 per cent of their potential. To address this challenge, interventions like regenerative agriculture are among the solutions being fronted. Regenerative agriculture is a holistic farming approach that aims to improve soil health and ecosystem beyond sustaining it. It focuses on principles such as top soil regeneration, increased biodiversity, improving water cycle, carbon sequestration and reducing chemical inputs.

According to Hamish Ker, CEO of Andermatt Kenya, this is an agricultural approach that involves understanding how to take the best of nature and incorporating it in the intensive agricultural space. While speaking during a field tour of the International Federation of Agricultural Journalists (IFAJ) 2025 Congress delegates to Andermatt Kenya in Naivasha, Ker said: "We're not talking about replacing the conventional chemistry, but how do we incorporate the best of your conventional practice and marry that together with the

best of biological so that you get a hybrid." He observed that having a healthy soil means that crops grown from it are going to be naturally more resilient to pest and disease pressure, but they're also going to be more productive. This results in more nutrient dense and healthier crops. "Andermatt Kenya believes in an integrated approach to sustainable agriculture. We combine niche products and proven management strategies to produce the best outcomes in terms of healthy, high-yielding, nutrient-dense crops," Ker said.

The company which forms part of the Swissbased Andermatt Group, global leaders in biocontrol industry, focuses on three main areas. These include root health, plant vitality and bio crop protection. Under root health, Andermatt Kenya focuses on vigorous, healthy root systems which maximize use of available nutrients and water. This enables stronger vegetative growth and increased resistance to pest and diseases. "We combine increased growth promoting microbes with nutritional support to optimise root health and development, nutrient uptake and disease suppression," he said. Plant vitality entails improving the overall health of the crop including stress tolerance, while supporting and

stimulating various stages of plant growth. It encompasses the use of biostimulants- growth promoting bacteria- which act in low concentrations, optimising plant growth and yields.

Biostimulants, Ker notes, drive the whole ecosystem that supports plant health, and do not just supply an individual nutrient or component to fill a single specific need. Bio crop protection or biological crop protection, involves using living organisms to control pests and diseases.

It is a sustainable alternative to synthetic pesticides. In this area, they have biofungicides, biobactericides, bioinsecticides and use of macrobials (natural enemies of pests).

"Nature has been here for generations. We look into nature and we take the best of nature and then we multiply that and are able to introduce those natural solutions to farmers," Ker stated. Biological seed dressing is the company's latest development, he notes, adding that it involves putting the best bacteria and fungi on the seed before planting. This improves the nutrient uptake of the crop, but also keeps diseases away from the crop.

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Nature has been here for generations. We look into nature and we take the best of nature and then we multiply that and are able to introduce those natural solutions to farmers,"
Hamish Ker, CEO of
Andermatt Kenya

Kenya races to Geo-Map coffee farms to meet EU deforestation rules

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Kenya has embarked on an ambitious exercise to geo-map all its 800,000 coffee farmers in a race to comply with new European Union Deforestation Regulations (EUDR), which require proof that exported coffee is not linked to forest destruction. The process, which began a few months ago, involves capturing satellite images and digital coordinates of each coffee farm to provide a clear record of where the beans are produced.

Elijah Kavivu, research scientist at KALRO Coffee Research Institute, about 44 per cent of the country's coffee farms have already been mapped, with teams expected to resume fieldwork in the coming days to complete the exercise. "Since 55 per cent of Kenya's coffee goes to the European Union, we have to meet their new standards," said Kavivu. "We are mapping every farmer to show the exact location of their farms, the number of coffee trees they have, and the types of indigenous or exotic trees growing on the same land."

Under the EUDR, which came into effect in 2023, companies importing coffee, cocoa, palm oil, soy, and timber into the EU must prove that these commodities are not produced on land that was listed as a forest but later deforested or degraded after 2020 to pave way for coffee plantation. Countries deemed "high risk" face stricter scrutiny and more frequent checks, but Kenya has been classified as a low-risk country due to its relatively small deforestation footprint.

Still, the new rules have triggered a sense of urgency within Kenya's coffee sector, which has long depended on the European market. Failure to comply could see exporters locked out of the lucrative EU market, where Kenyan coffee enjoys a premium reputation.

“
We are undertaking a mapping exercise to show the exact location of farms, the number of coffee trees growers have and the types of indigenous or exotic trees on the same land.”
Elijah Kavivu, research scientist at KALRO Coffee Research Institute

"Our goal is to provide the EU with full traceability. We are promising that our coffee will not come from deforested land."

The mapping effort also aligns with Kenya's broader push to digitise its agricultural value chains and promote sustainable farming. Once completed, the geospatial database will not only support compliance with international trade standards but also help policymakers and researchers monitor the effects of climate change, track production trends, and plan interventions for smallholder farmers.

Climate change has already taken a toll on Kenya's coffee sector. Once-thriving coffee zones are shrinking due to rising temperatures, erratic rainfall, and expanding real estate. In areas that used to be coffee estates, housing developments have taken over, reducing the acreage under coffee cultivation.

Despite these challenges, the government and private sector see geo-mapping as a key step toward safeguarding Kenya's position in the global coffee market while promoting environmental accountability.

"This is about securing the future of our coffee. The EU wants transparency, and Kenya is showing that it can produce coffee responsibly and sustainably."





Why African governments need science-based policies to boost seed sector

By Christine Ochogo
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African governments should develop science based policies and streamline regulations that encourage and protect technology innovation in the seed sector. This, experts add, will enable seed companies to enhance production thereby increasing access to quality seed by farmers to spur food and nutrition security.

Betty Kiplagat, Government Affairs Lead, Corteva Agriscience, stressed on the need by the governments to address the controversies that surround issues of Intellectual Property (IP) in the seed sector. She explained this will enable seed companies to invest more in research and development in the region. "When we have predictable regulations and policies that farmers know are science based and approved, it will remove some of the fears the farmers have about technology," said Kiplagat.

Speaking during a panel at the ongoing International Federation of Agricultural Journalists (IFAJ) Congress 2025 in Nairobi, Kenya, hosted by Media for Environment Science Health and Agriculture (MESHA), lawyer Betty said policy conversations have been lacking for

a long time and the policies currently in place lack farmers' voices who form critical players in agricultural production value chain.

"When we lock farmers out in this policy conversations we are failing to address the challenges that farmers are facing thus affecting yields," she added. The law maker mentioned the need to co-create inclusive seed ecosystems that go beyond making available quality seeds and include agronomic support and transparent information that help farmers get empowered.

Betty regrets the fact that the agronomic support that was being provided by agricultural extension officers in African governments is wanting and it was high time the governments re-introduced the services. "To make these extension services effective the governments should consider going to the retired researchers and scientists within the rural settings and empower them to be the extension providers because they have the expertise in the agricultural field," she explained.

"These retired scientists and researchers have been in the system and they do understand what the community needs, therefore through farmers' cooperatives or societies they can be empowered to

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When we have predictable regulations and policies that farmers know are science based and approved, it will remove some of the fears the farmers have about technology,”

Betty Kiplagat,
Government Affairs Lead,
Corteva Agriscience

become our extension providers and agronomic advisers.” She added that this can only be effected through good policies. In reference to quality seeds, Diana Orinda, East-West Seed, Country Manager Kenya and Uganda, recognised that quality seeds are a transformation of farmers lives in terms of production from subsistence to earning a livelihood.

“Most of our farmers in Africa depend on rain- fed agriculture and therefore, quality improved seeds which are early maturing and climate-smart, enable them increase yield sufficient for their household consumption thus improve nutrition and have surplus for sale,” she said.

Emmah Mwenda, country client manager for Kenya at Rijk Zwaan, stressed the importance of sensitising farmers on certified seeds and business skills in terms of market prices. “When farmers are endowed with correct information about the potential of certified seed and capacity building, they are able to make decisions that help them appreciate their efforts in agricultural production,” Mwenda noted.

Farmers adopt low cost seed testing method to boost yields

Njeri Murigi
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In Langanga, a quiet village in Nakuru County, Beatrice Wangoi Mwangi crouches over a few tins lined with damp serviettes. Carefully, she places 10 maize seeds in each tin before setting them in a warm corner of her house.

Each day, she anxiously checks the tins for signs of life. This isn't just curiosity, it's a survival tactic. Six days later, tiny green shoots pierce through the seed coats a sign of life and promise. It's a quiet reassurance that the seeds she has nurtured and saved still hold power. Because of the shoots, Wangoi knows she can plant with confidence, knowing her field will bloom not just with crops, but with the legacy of knowledge passed down through generations.

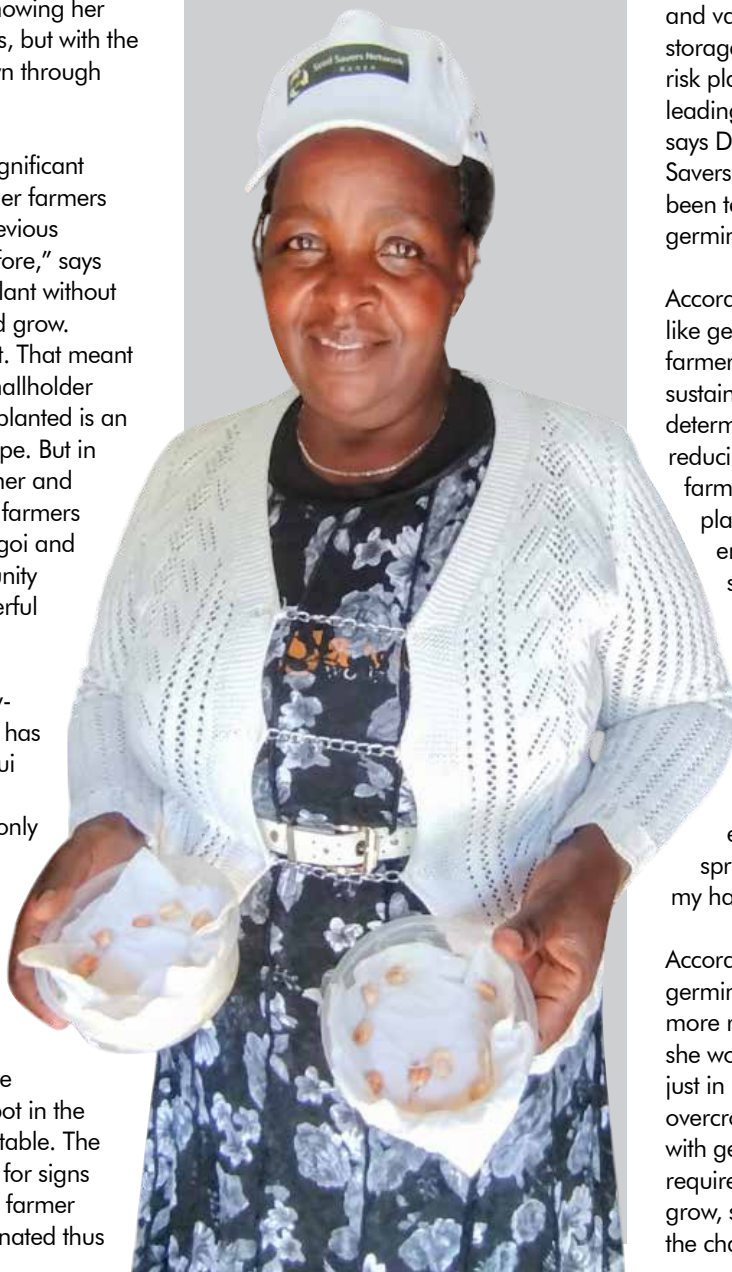
"Planting non-viable seeds is a significant problem, especially for smallholder farmers who rely on saved seeds from previous harvests. I have been a victim before," says Wangoi. Adding that "I used to plant without knowing whether my seeds would grow. Sometimes, nothing would sprout. That meant wasted land and hunger." For smallholder farmers like Wangoi, every seed planted is an investment of time, labor, and hope. But in recent years, unpredictable weather and poor seed quality have left many farmers devastated. To address this, Wangoi and dozens of farmers in her community have turned to a simple but powerful tool: the germination test.

Germination test, is a simple, low-cost and farmer-led process that has been helping farmers like Wangui who rely on saved seeds from previous harvests, to ensure that only viable seeds (seeds that are alive and capable of germinating under the right conditions) are planted. To perform the germination test, farmers start by placing a small number of seeds between moist paper towels or wet serviettes. These are then kept in a warm, sheltered spot in the house where the temperature is stable. The seeds are then checked regularly for signs of sprouting. Once they sprout, a farmer can count how many have germinated thus

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Planting non-viable seeds is a significant problem, especially for smallholder farmers who rely on saved seeds from previous harvests. I have been a victim before.”

Beatrice Wangoi Mwangi



Beatrice Wangui, a farmer from Nakuru County. [Njeri Murigi]

estimate the viability percentage of their seed batch. "Unlike certified seeds, Farmers adopt low cost seed which come with guaranteed germination rates and have undergone formal testing, saved seeds are unpredictable and vary widely in quality. Without proper storage and germination testing, farmers risk planting seeds that may not sprout at all leading to wasted land, time, and resources," says Daniel Wanjama, the Director of Seed Savers Network, an organization that has been teaching farmers on how to conduct germination tests.

According to him, mastering simple practices like germination tests is crucial for smallholder farmers who depend on saved seeds to sustain their livelihoods. This practice helps determine whether the seeds are still viable, reducing the risk of crop failure and allowing farmers to plan more effectively for the planting season. His organisation always encourage farmers to test at least 100 seeds from their batch before every planting season. If 80 or more sprout, the seeds are viable. If it's less, they should consider using different seeds. "Since I was taught on how to conduct a germination test, I no longer take chances. I test my seeds to avoid wasting time, energy, and land on seeds that won't sprout. It has made a big difference in my harvests," says Wangoi.

According to her, because of conducting germination tests before planting there are no more replanting and wasting seeds. Previously, she would plant several seeds in one hole just in case some didn't sprout, leading to overcrowding and reduced yields. Now, with germination testing, she only plants the required seed density as she knows they will grow, saving seeds and land while improving the chances of a healthy, productive crop.



A photo showing one of the fibre tanks which mimics a lake holding 5,000 fish. Inset: Blue Harvest Organic Plant Food fertilizer. [Ruth Keah].

World's first vertical lake rewriting aquaculture in dry Kajiado County

**By Ruth Keah and Asha Bekidusa
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In the heart of Kenya's semi-arid Kajiado County, an extraordinary innovation is redefining the future of aquaculture. The world's first Vertical Lake is proving that fish farming can thrive even in the driest of areas. This can be done with minimal water, zero waste, and maximum efficiency.

The concept, pioneered by Jack Oyugi who is the co-founder of the Vertical Lake, said it mimics the natural ecosystem of a traditional lake but with a twist. Instead of water flowing horizontally, it flows vertically through stacked tanks.

"We asked ourselves, if fish grow so well in lakes, why can't we recreate that environment outside the lake?" Oyugi explained. "So we built our own lake but vertically." Each unit consists of a series of tanks stacked upward, with water flowing from the top tank downwards through a gravity-driven bio filtration system. This system cleans and recycles the same water repeatedly, drastically reducing water use.

"The water in our system has been circulating for the last three years, and we only lose about two percent annually," Oyugi revealed. The two percent doesn't go to waste either. It is turned into Blue Harvest fertilizer, which is rich in nutrients.

The Vertical Lake system was first developed three years ago as a response to the growing challenge of food insecurity and water scarcity in Kenya's arid regions. The aim was to prove that fish farming is possible even in the driest areas. The facility currently hosts over 20,000 fish, primarily tilapia, grown in a closed-loop, solar-powered environment.

Each tank can host up to 10,000 fish, and new models are being developed to expand production further. The system is 15 times more space-efficient than traditional fish ponds. "This model is sustainable and scalable," he said.

"The sky is the limit we can stack as high as we want and still maintain healthy fish growth." Business Development Lead of the organization Wendy Cynthia said beyond sustainability, the Vertical Lake also introduces traceable and organic aquaculture. The fish are raised in controlled environments with no external pollutants, making them healthier and safer for consumption.

"Our fish are 100% organic and traceable," said Cynthia. "Unlike lakes or oceans, where pollutants are uncontrollable, we test our water every day to ensure it meets quality standards." Technology also plays a key role.

The system is equipped with IoT cameras and AI sensors that monitor fish behavior, water pH, and oxygen levels.



Wendy Cynthia



Jack Oyugi

"If the fish are stressed or water quality drops, we detect it immediately," explained Cynthia.

"It helps us manage disease risks and ensure optimal fish welfare." Every by-product from the farm is recycled from fish waste used to make fertilizer, to bones and skin that are processed into bioplastic packaging and collagen-based cosmetics.

"Nothing goes to waste here," she noted. While the technology is still new, the results are promising.

It takes about 6 to 8 months for the fish to reach market size. The fish is sold when it reaches a minimum of 500grams to 600 grams and more. As Kenya and other nations face climate change, innovations like the Vertical Lake may hold the key sustainable food production.

KALRO: How women and youth can power global agricultural innovation

By Sammy Waweru
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Women and youth are playing a central role in driving technological innovations in agriculture, a move experts say is vital to strengthening food systems and ensuring sustainability in the face of climate change.

This was the key message shared by the Kenya Agricultural and Livestock Research Organization (KALRO) during its presentation at the ongoing International Federation of Agricultural Journalists (IFAJ) 2025 World Congress in Nairobi. Speaking during a session themed “Gender-Responsive Communication in Agriculture: Empowering Women and Youth for Food Security”, Dr Florida Maritim, KALRO’s Director of Corporate Communications, emphasised that involving women and youth in research and communication is critical for the success of agricultural technologies.

“Any technology coming from KALRO, if you do not engage women and youths, there is a likelihood it may not work,” she said. She stated that KALRO leverages women and youths in disseminating technological innovations through field days, exhibitions, and public events. Dr Maritim noted that communication plays a pivotal role in the uptake of innovations. When KALRO established its agricultural call centre, the goal was to connect directly with farmers, agribusinesses, and traders, she said, but ensuring that information reached women and youth was equally crucial.

“Youths are tech-savvy, and they help in relaying agricultural information through digital tools, social media, and community networks,” she explained. “Women, on the other hand, form a large part of the farming population and act as multipliers of knowledge within communities.” KALRO, she added, is committed to ensuring that no one is left behind in accessing agricultural innovations. Through the Kenya Agricultural Observatory Platform (KAOP), the organization provides farmers with real-time weather forecasts and other advisory services.



Another innovation, the suitability app known as “KALRO Crop Selector”, employs the use of data to help farmers determine which crops are best suited for specific regions — and young people are key to implementing and promoting these digital tools.

To enhance inclusivity, KALRO has made deliberate efforts to involve women and youth in projects supported by partners such as the World Bank, particularly those focused on climate-smart agriculture.

Demonstrations of these technologies, Maritim observed, ensure the participation of both groups to make adoption more practical and relatable. “We intentionally engage vernacular radio and television stations to ensure local communities understand and adopt these technologies,” she noted.

2024 STUDY:

A 2024 study showed that most farmers in Kenya rely on vernacular stations for agricultural information

“A 2024 study showed that most farmers in Kenya rely on vernacular stations for agricultural information.” Beyond broadcast media, KALRO also uses print publications, exhibitions, and agricultural field days such as KALRO Mkulima Week, where farmers interact with experts, learn about climate-resilient inputs, and purchase certified seeds and other farm technologies.

Despite the progress, the state-owned organization acknowledges persistent challenges in achieving full inclusivity. These include limited training opportunities for women and youth, the high costs of implementing technologies, and underrepresentation in research and decision-making processes.

Dr Maritim, however, urged journalists to take a more dynamic approach in communicating agricultural innovations. “Journalists should not only use television and newspapers but also radio, podcasts, and digital platforms. Multimedia storytelling can make agricultural innovations more relatable to rural audiences,” she said. Women continue to play a dominant role in certain agricultural enterprises such as poultry farming, which is largely driven by women in Kenya. Dr Maritim observed that women are challenging long-standing cultural perceptions.

A photograph showing four women in a lush green field, likely a cornfield. Three women are in the foreground, and one is standing in the background. They are all looking at their smartphones. The woman on the left is wearing a red shirt and a dark skirt. The woman in the middle is wearing a purple shirt and a red headscarf. The woman on the right is wearing a yellow shirt and a yellow headscarf. The woman in the background is wearing a green shirt. The text "Agricultural sector has been previously affected by misinformation. [AI Generated]" is overlaid on the image.

Agricultural sector has been previously affected by misinformation. [AI Generated]

How Africa can unlock agricultural potential amid a cloud of misinformation, distrust

By Ruth Keah
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As the International Federation of Agricultural Journalists (IFAJ) World Congress unfolds in Nairobi, Kenya under the theme “Unlocking the Agricultural Potential in the Cradle of Mankind,” one of the most captivating presentations highlighted the complex role of information in agriculture today. Michael Victor, the global communications head at the International Livestock Research Institute (ILRI), spoke about “misinformation” and its significant effects on farming communities while reflecting on the hopes brought by the information technology revolution two decades ago.

“Back then, many believed that access to technology would democratise information making farming smarter, easier, and more sustainable, however, he said, information is a double edged sword, it can be powerful, but it can also spread falsehoods that threaten progress,” he said. While giving an example on the recent case from Kenya, a livestock vaccination

campaign launched in mid-2024 by President William Ruto. This campaign aimed to protect cattle and small ruminants from diseases like foot and mouth disease and Peste des Petits Ruminants (PPR), which threaten production and livelihoods.

He added that vaccination is vital for Kenya’s agricultural economy where livestock contributes up to 60 per cent of agricultural Gross Domestic Product. But the campaign which seemed a straightforward public health initiative, quickly spiraled into widespread mistrust and misinformation.

“Information is a double edged sword, it can be powerful, but it can also spread falsehoods that threaten progress.”
Michael Victor, ILRI

“Social media platforms, especially X(formerly Twitter), became battlegrounds with hashtags like “My Cow, My Choice,” rallying farmers against the vaccines, stirring fears of external control over Kenyan livestock,” he added. Victor explained the situation as a perfect storm fueled by timing, coming amid political changes, social media influence from a young tech-savvy generation, and a court’s conflicting decisions on related biotech issues like genetically modified organisms (GMOs).

Beyond the vaccine issue, Victor said misinformation is rapidly increasing in Africa, doubling or even tripling in frequency, according to their recent reports. “This not only affects agriculture but also public health and governance across the continent,” he noted.

Victor stressed the importance of trusted communication networks grounded in community ties. “People want first to care and trust before they want to know facts,” he said. He said ILRI’s response has been careful coordination with government bodies and local leaders to provide clear, science-based information, hoping to rebuild confidence from the ground up.

He highlighted innovative efforts like creating “farmer labs”, community driven hubs where farmers share success stories and reliable knowledge that locals can trust more than digital rumors. The goal is to build an ecosystem of voices that farmers respect, including religious leaders and local influencers, to bring lasting change.

AFSTA Congress 2026 set to advance the future of Africa's seed sector



**Amadou
Sarr: AFSTA
President**

By Aghan Daniel
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The 2026 African Seed Trade Association (AFSTA) Congress which opens in Cape Town, South Africa on March 23rd, 2026 comes hot on the heels of our 25th anniversary celebrated in Kigali last March.

This milestone presents a valuable opportunity to reflect on AFSTA's contributions and achievements over the past quarter-century in advancing the seed industry on the continent.

The Congress brings together seed industry players, regulators, scientists, and experts from various fields to discuss the critical importance and pivotal role of certified seed in ensuring food security in Africa.

According to Mr Amadou Sarr, the AFSTA President, the showpiece is an extremely important forum for Africa's seed sector.

While addressing this writer after chairing the association's October board of directors meeting, Mr Sarr said that the Congress will be extraordinary and further invited farmers, seed producers, media and the seed industry to be part of the monumental gathering.

Discussion on updated and operationalisation of Technical Committees, Working Groups such as those covering Plant Breeding Innovations, Biotechnology, Phytosanitary, Integrated Companies Working Group, Consortia among others.

Formed 26 years ago, AFSTA headquartered in Nairobi is known for its advocacy on certified seed in Africa and has presence in 27 African countries and across the globe. The association's secretariat is led by Dr Yacouba Diallo, a seed expert from Burkina Faso.

"Join us in Cape Town, South Africa and seize this opportunity to advance the future of Africa's seed industry through groundbreaking collaboration, interactive and engaging technical sessions, business opportunities, research insights and perspectives," said Yacouba.



**Clive
Mugadza,
Vice
President
AFSTA.**

"The Cape Town Congress is an opportunity to the industry players to discuss new innovations as well as changes in the seed industry," noted Clive Mugadza, Vice President AFSTA. In a statement made on the sidelines of the board meeting, Dr Kulani Machaba invited agricultural journalists to attend the Congress as it is going to be a great congress held at a great venue and a great place to do business.

The AFSTA board meeting which took place from October 16 to 17, 2025 in Nairobi, discussed among other things proposed amendments to the Constitution and by-laws;

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Media key in catalysing agricultural technology



Vitumbiko Chinoko, Project Manager at OFAB. [Vitumbuko Chinoko]

By Pilatos Pires
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Journalists play a crucial role in transforming agriculture by raising awareness on the importance of scientific innovation in the sector, an expert has said.

Speaking during the International Federation of Agricultural Journalists (IFAJ) 2025 Congress, Vitumbiko Chinoko, Project Manager at the Open Forum on Agricultural Biotechnology (OFAB) under the African Agricultural Technology Foundation (AATF) called for more robust and informed journalism focused on scientific advances in agriculture.

According to Chinoko, agricultural journalism should serve as a vehicle to disseminate knowledge about new technologies and sustainable practices, enabling African farmers to benefit directly from innovations that are shaping global agriculture.

The event, which took place in Nairobi, Kenya brought together experts, journalists, and policymakers to explore how science, technology, and policy are converging to improve productivity and food security not only across the continent but beyond.

Through OFAB, the AATF has been working tirelessly to support the use of biotechnology and other innovative solutions aimed at empowering African farmers and strengthening their resilience in the face of climate and economic challenges.

Chinoko believes that journalists have the power to bridge the gap between science and farmers by breaking down misinformation and fostering constructive dialogue on the benefits and potential impacts of new agricultural technologies.

The conference also included discussions on the importance of evidence-based journalism that not only informs, but also educates the public on how innovations like biotechnology can boost productivity, food security, and sustainability in African agriculture.

For Chinoko, collaboration between journalists, scientists, and policymakers is vital to ensure that accurate and timely information reaches smallholder farmers, particularly those in remote areas. The conference further highlighted key agricultural innovations, including Kenya's leadership in sustainable practices and improvements across agricultural value chains, while providing a platform for the exchange of ideas and experiences among journalists and other stakeholders in the agricultural sector.

"Responsible and ethical reporting can accelerate the adoption of agricultural technologies, contributing to a more prosperous and sustainable future for African farmers. Science cannot remain confined to laboratories: It must reach the fields — and journalists are essential to building that bridge," Chinoko said in conclusion.



Science cannot remain confined to laboratories; it must reach the fields — and journalists are essential to building that bridge."

Vitumbiko Chinoko
OFAB Project Manager, AATF

From diplomacy to dirt: Former ambassador finds a new calling in farming

By Sammy Waweru
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In the serene green hills of Central Kenya's Maragua, Murang'a County, a quiet revolution in agriculture is unfolding — one led by former Kigumo MP and Kenya's onetime ambassador to Germany, John Mwaura, and his wife, Grace Kanini Mwaura.

Mwaura has found renewed purpose in farming. The couple have transformed their 50-acre property into a thriving avocado and macadamia enterprise that is now catching the attention of the world, including a recent delegation from the International Federation of Agricultural Journalists (IFAJ), who toured the farm during the IFAJ 2025 World Congress in Nairobi.

"We bought this farm in 1986," recalls the couple standing under a canopy of lush avocado trees. Mwaura says, "I spent most of my life in public service, then politics. When I quit, I decided to retire here. We had no idea this land would become our life's best investment."

The journey, however, was not without struggle. The Mwaura's initially ventured into bananas and beans, but the returns were poor.

"We experienced losses after losses. At one point, we almost gave up," Grace told the IFAJ delegation, adding. Her intuition, however, proved pivotal. "I had planted five avocado trees years before, but my husband didn't take them seriously. Our workers used to tell us those trees could bring us money."

That changed everything," explained the soft spoken mother. By 2018, the couple shifted their focus entirely to avocado farming, followed soon after, by macadamia nuts. They planted 2,500 avocado trees on 25 acres and another 25 acres had macadamia, transforming their farm into a model of modern agribusiness.

Murang'a's temperate weather, fertile soils, and well-distributed rainfall make it ideal for avocado and macadamia cultivation. The county's soil is rich and the climate mild; not too hot and not too cold.

Next frontier

- They have transformed their 50-acre property into a thriving avocado and macadamia enterprises
- The couple plans to expand into value addition, including avocado oil and macadamia processing.

"That's why Murang'a has become one of Kenya's leading producers of both crops," Ambassador Mwaura stated.

The couple grow the Hass avocado variety, a global favorite due to its creamy texture and long shelf life. Their trees, now seven years old, yield up to 100 kilograms per tree annually, translating to roughly 100 tonnes of fruit per season.

Once they hit the peak, Mwaura is optimistic a tree will produce up to 1,000 tons. The fruits are graded on-site and sold to exporters serving the European and Chinese markets, where Kenyan avocados continue to gain traction. "Last year, we sold a kilo of avocado at around ksh 120," revealed Kanini, who has been managing the farm.

However, she stated that the prices fluctuate, but the market remains strong, especially from June onwards when global supply dips. At the heart of the Mwauras' operation is a commitment to sustainable, organic farming.

Instead of relying heavily on chemical pesticides, Kanini employs biological control methods - natural pest traps made from ripe bananas, sugar, and a dash of dish soap - an eco-friendly concoction that lures insects without harming the environment.

"We want to live in harmony with our land," she says, noting that their produce is not only fully organic, but void of any unnecessary chemicals.

European market has been keen on chemical residues level in avocado. The couple plans to expand into value addition, including avocado oil extraction and macadamia processing.



Mrs Grace Kanini, the wife to former Kigumo MP and Kenya's one-time ambassador to Germany, John Mwaura at their avocado farm [Christine Ochogo]

Greening Kajiado: The story of a farm sustaining its own restaurant with organic food



By Ruth Keah and Asha Bekidusa
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In the heart of Kajiado County, just a short drive from Kenya's capital city, Nairobi, stands a lush, green ranch that was once a bare, dusty stretch of land.

Today, Fred's Ranch and Resort is not just a restaurant or a farm, it is a living example of how patience, vision and hard work can transform dry land into a thriving, self-sustaining oasis.

The man behind the ranch is a veteran journalist in one of the leading media houses in Kenya, Fred Obachi Machoka, fondly known across the country as "The blackest man in black Africa." At 72 years, Uncle Fred speaks proudly of the journey he and his wife began in 1993.

"We were struggling in Nairobi, paying rent we couldn't afford. Our landlady got tired of us and kicked us out," he recalls with a chuckle.

"That is when we decided to find our own home, something permanent," he added.

Fred said farming is what took him and his siblings to school. So for him, it is more than a job. It is a lifelong passion.

Growing up in a humble rural background, he learned early that hard work on the land could open doors of education and opportunity. With the help of a loan from the Agricultural Finance Corporation, the couple bought 57 acres of barren land in Kajiado.

But things were far from easy. "We couldn't do much with it at first. For three years, all we had was a land. No trees, no crops, just dust," he narrated. Determined not to give up, they started planting trees. "Back then, there wasn't a single tree here. My wife and I, together with our children, planted every one of them you see here today," he said, pointing at the trees that have almost turned into a forest.

However, the family ran into financial troubles when the loan interest ballooned. To save the land from being auctioned, they sold part of it, keeping only 20 acres. "We built our home here, and that's when the dream of Fred's Ranch began," he explains.

Fred's ranch grows vegetables organically, herbs from the farm are used to prepare meals served at the on-site restaurant which started as small-scale tomato and cabbage farm.

What started as small-scale tomato and cabbage farming has grown into a full organic operation. The ranch now grows vegetables, fruits, and herbs, all used to prepare meals served at the on-site restaurant. "At Fred's Ranch, we grow what we eat and eat what we grow," says uncle Fred.

He said he has a total of 30 dairy cows that gives them milk, 5,000 chickens that lay eggs and provide meat, more than 40 goats, and other poultry.

At Fred's Ranch, nothing goes to waste. The farmers use rabbit urine to fumigate the plants, eliminating the need for chemical pesticides for the plants. The maize grown on the farm is used to feed the cows, and in turn, the cows' dung is used as fertilizer to enrich the soil.

The cow dung is also used to produce clean cooking gas, which he uses for domestic purposes. The ranch also serves as a learning center for young people. "We invite students to see where real food comes from. It's part of our mission to educate and inspire the next generation," he said.

Fred's Ranch now employs about 80 people from 17 different communities across Kenya. He said job creation is one of their biggest achievements.

While addressing more than 30 journalists from different parts of the world who attended the IFAJ Congress around the farm, Fred said greening the area wasn't easy, but with hard work and love for the land, they made it happen.

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For three years, all we had was land. No trees, no crops, just dust.

Fred Obachi Machoka
Founder, Fred's Ranch and Resort

Institute's project aims to boost poultry production

By Asha Bekidusa
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Over 60 per cent of rural households depend on poultry for their livelihoods. This is not only for eggs and meat, but also as a form of saving and employment. Every rural house in Kenya has some few chickens, either for their own consumption, or for commercial purposes. Being a precious part of a meal, a feast in a Kenyan home cannot be complete if a piece of chicken meat is missing from the menu.

However, for many years, the productivity of chicken has remained low. As a result, the country has been unable to meet the fast-rising national and regional demand for poultry products. With a demand of 648 million kilos for chicken meat and 9.72 billion eggs annually, only 110 million kilos of meat and 7.2 million eggs are supplied annually.

For decades, indigenous chicken or "kuku kienyeji" as popularly known have been the backbone of Kenya's rural economy. This is because they are hardy, disease-tolerant, due to their easy-to-adapt nature to the local environments.

Today, they account for 81 per cent of the national poultry population, serving as a vital source of food and income for millions. With this deficit, Kenya Agriculture and Livestock Research Organisation (KALRO) has been on a long-term research and breeding programme to increase the poultry population, and their efforts are already yielding results.

Through establishment of KALRO's own laboratory for developing chicken vaccines that ensures healthier and a more productive chicken species, flock for improved indigenous chicken has grown from an annual supply of 200,000 chicks in 2010 to over 800,000 in 2025. According to Dr. Anne Wachira who is in charge of the poultry project at KALRO Naivasha, there is a need to improve



production to meet this demand. The result is the development of three dual-purpose ecotypes that perform exceptionally well under both smallholder and semi-commercial conditions.

These improved birds reach a mature live weight of two kilograms at just four months, offering farmers faster returns on investment. On the egg front, the birds produce between 220 and 280 eggs per year, starting at only 4.5 months of age.

8%

Poultry demand in East and Central Africa continues to grow at an estimated 8 per cent annually, providing both a challenge and an opportunity for Kenya's farmers and researchers.

Each egg weighs between 50 and 60 grams, matching the size and quality of commercial eggs but with the hardiness of indigenous stock.

The gap between production and consumption highlights the importance of sustained investment in local breeding and feed efficiency. Poultry demand in East and Central Africa continues to grow at an estimated 8 per cent annually, providing both a challenge and an opportunity for Kenya's farmers and researchers.

However, challenges of cost of production and feeds continues to weigh heavily on farmers. This is threatening the profit margins and slowing expansion. Addressing these constraints requires continued research into affordable feed formulations and efficient production systems.

Even with these hurdles, the progress is undeniable. KALRO's efforts are giving new hope to smallholder farmers who can now rear chickens that grow faster, lay more eggs, and withstand local conditions.

Research institute embraces innovative technology to monitor livestock

By Ruth Keah and Bozo Bozo
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The International Livestock Research Institute (ILRI) Kapiti Ranch is taking a bold step into the future of livestock management through its innovative Digital Twin Research Project, a high-tech initiative designed to monitor animal behaviour, health, and movement using advanced sensors and real-time data.

Launched in 2024, the project aims to create a “digital twin” of selected animal’s virtual replicas that mirror their real-life physiological and behavioural processes. This innovation allows researchers and farmers to remotely observe and understand animal welfare and productivity with unprecedented accuracy.

“We’re basically recording footage of a selected group of animals and collecting data on their behaviour, movement, and physiological processes like rumination, breathing, and temperature,” explained Nelson Kipchirchir, the Ranch and Conservancy Manager at ILRI Kapiti. “It’s like having a live mirror of each animal, wherever

you are in the world,” he added.

At the core of the Digital Twin Research Project are smart sensors and rumen boluses, small electronic devices placed inside the cows’ stomachs. These tools track internal metrics such as temperature and breathing, while neck collars monitor movement and location.

The data is complemented by CCTV cameras installed around the bomas (animal enclosures) and grazing fields, enabling round-the-clock observation.

“Setting up the system required significant infrastructure, including installing surveillance cameras, building feeding and watering traps for the monitored animals, and creating a dedicated data collection center,” he said. Currently, the project involves 40 animals, half of which are equipped with the technology while the rest serve as a control group. The study is staggered, with smaller groups monitored in rotation every two weeks. The initiative, still in its baby stage, as Kipchirchir described, has already produced over 1.5 terabytes of footage and data for analysis.

The information collected not only helps scientists understand animal health but could also revolutionise livestock management across Africa. “Imagine a farmer in the United Kingdom or China being able to monitor their animals in Kenya in real time,” Kipchirchir noted. “It’s cost-effective and reduces the need for on-site labor. Instead of hiring ten people to observe animals, technology can do it more efficiently and accurately.”

While the project’s primary focus is animal welfare and data science, its implications extend to climate resilience and ecological monitoring. Researchers can track how animals respond to temperature fluctuations, droughts, and other environmental stressors, valuable insights for adapting livestock systems to changing climates. Though the exact duration the research is supposed to take is not defined, the long-term goal is to integrate the technology into other ILRI research programs, including the SLICK project, which also focuses on animal adaptation and productivity.

ILRI Kapiti, located in Machakos County, Kenya, continues to model coexistence between wildlife, livestock, and local communities, allowing a small margin for predation while promoting sustainable land use. As technology and agriculture converge, the Digital Twin Research Project stands as a beacon of innovation, illustrating how science, data, and compassion can combine to create a smarter, more sustainable future for livestock management.

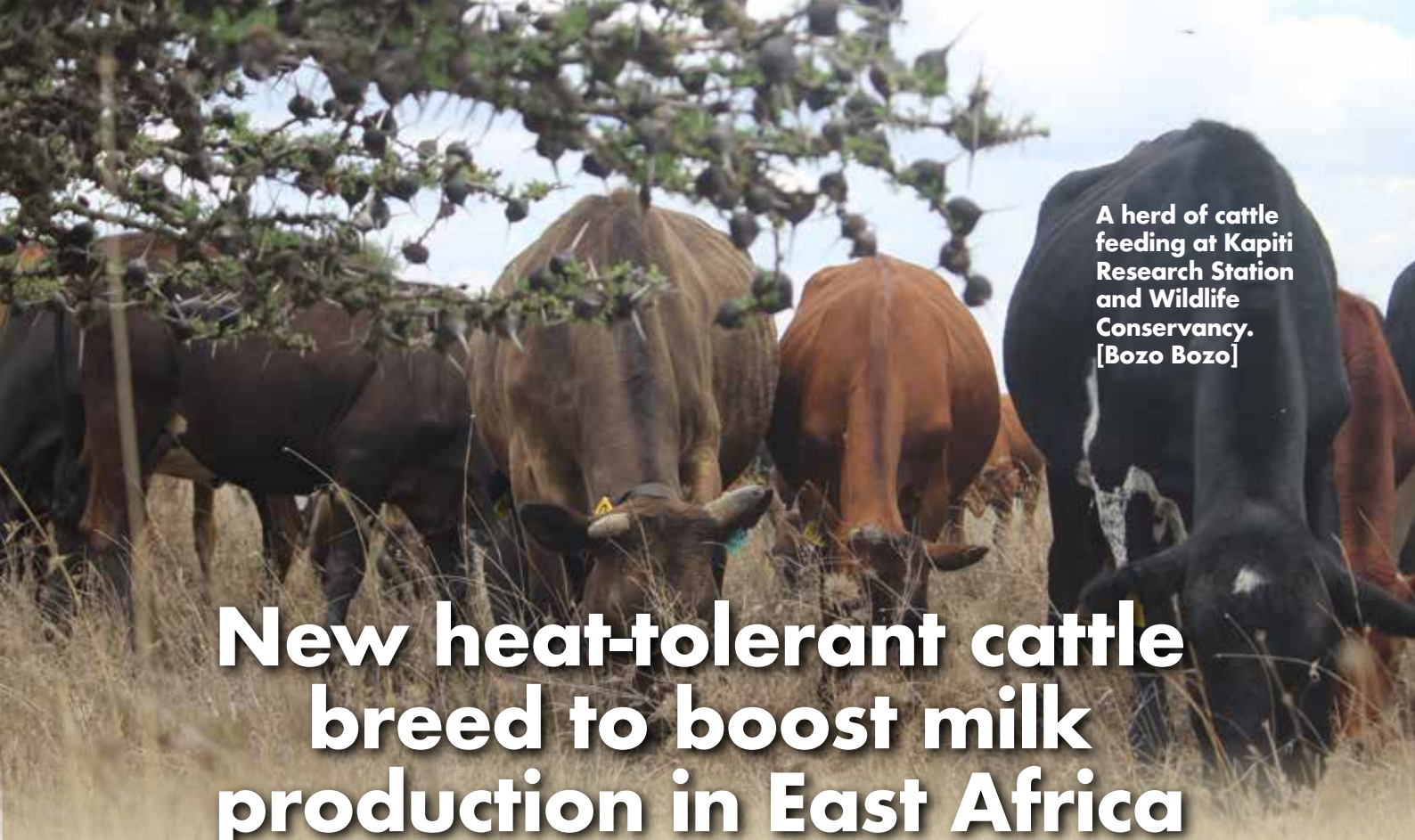
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Our Digital Twin project lets us monitor animals in real time, improving health and productivity while reducing on-site labour.”

Nelson Kipchirchir
ILRI Kapiti

The research institute is using high-tech sensors to monitor animal health, behaviour and movement in real-time





A herd of cattle feeding at Kapiti Research Station and Wildlife Conservancy. [Bozo Bozo]

New heat-tolerant cattle breed to boost milk production in East Africa

By Bozo Jenje and Ruth Keah
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Livestock farmers in East Africa are set to benefit from a cattle breed that is heat tolerant if the findings of an ongoing study are put into use.

In a study undertaken by International Livestock Research Institute (ILRI) and Livestock Improvement Company (LIC) to improve the quality of cattle breeds and quantity of milk production during extreme heat that organizations are undertaking at Kapiti Research Station and Wildlife Conservancy.

According to Nelson Kipchirchir, the Kapiti Research Station and Wildlife Conservancy Manager the research looks at providing solutions to increase the milk production as we mitigate climate change.

The veterinarian said the local breeds Freishan, Asia and Boran are artificial inseminated with a slick, a prolactin gene that regulates the temperature of the cattle in enclosures and free range.

"So far, about 40 cattle have been placed on trial in batches of 10 each," said Kipchirchir. "The animals are fitted with boluses and sensors that collect real-time data on their feeding behavior, movement, and body temperature." The setup at Kapiti includes feeding troughs and water traps, ensuring a

controlled environment for observation. At the same time, the collaboration with LIC is introducing semen containing the productive slick gene that allows cows to continue producing milk under heat stress.

"We are currently using Boran, Friesian, and crossbreeds from Kapiti. These are being inseminated with semen from LIC bulls, and so far, we have around 97 calves carrying the gene," He said. The first calves from the project were born between 2020 and 2021 and are now part of active milk yield, weight gain and temperature monitoring trials. The cows that have reached maturity and given birth are undergoing further trials on milk production, tick resistance, and weight gain.

The slick gene gives the animals a thinner, shiny hair coat that helps them stay cool even under high temperatures. This means they can continue producing milk efficiently despite heat stress. Researchers believe that once proven successful, this innovation could transform dairy farming in East Africa by introducing climate-resilient breeds capable of thriving in hot conditions where milk production usually drops sharply.

At Kapiti, the team currently manages about 2,000 cattle, mostly Boran, with several crossbreeds under study. Kipchirchir said they are now receiving more calves from the slick project, and once confirmed, they will undergo more tests before being released back to farmers.

The study's ultimate goal is to identify and breed cows that can produce more milk, tolerate ticks, and withstand extreme heat, helping smallholder farmers cope with changing weather patterns.

"This is a promising step towards sustainable livestock farming, if successful, these heat-tolerant cows will secure milk production and improve livelihoods across Africa," he said.

Further, the veterinarian said the program focuses on using digital tools to track animal's growth, health and feeds that are available. "This assists farmers to make fast decisions since the scientists plan to develop breeds that preserve the genetics of the livestock's and feed crops to improve both conservation and breeding," he said.

In the current research, the scientists target to develop breeds that are climate resilient and crops that are suitable to farmers under extreme climate conditions.

“

The slick gene helps breed heat-tolerant cows that sustain milk production, offering a path to climate-resilient livestock farming in East Africa.”

Nelson Kipchirchir, ILRI Kapiti

How technology is improving dairy farming in Kenya

By Asha Bekidusa
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Rising demand especially for meat, milk and eggs is phenomenal. This demand presents farmers with big new opportunities for provision of agricultural products and services. With the world continuing to embrace modern technology, a need for meeting this demand through better farming practices is reshaping how livestock especially cows are fed.

This change is also looking at how milk is produced, and how farmers earn their livelihoods. According to David Mbugua a social scientist at the Kenya Agricultural and Livestock Research Organization (KALRO) precision agriculture and modern feed management are driving dairy productivity to new heights.

Speaking during a tour to KALRO - Naivasha, Mbugua painted a picture of transformation, where data, soil science, and farmer training are combined to turn Kenya's dairy farms into models of sustainability.

At the heart of this transformation is a pivot irrigation system which covering 160 acres under lucerne (alfalfa) at the institution. Lucerne is a high-protein forage crop that forms the backbone of improved dairy feeding systems.

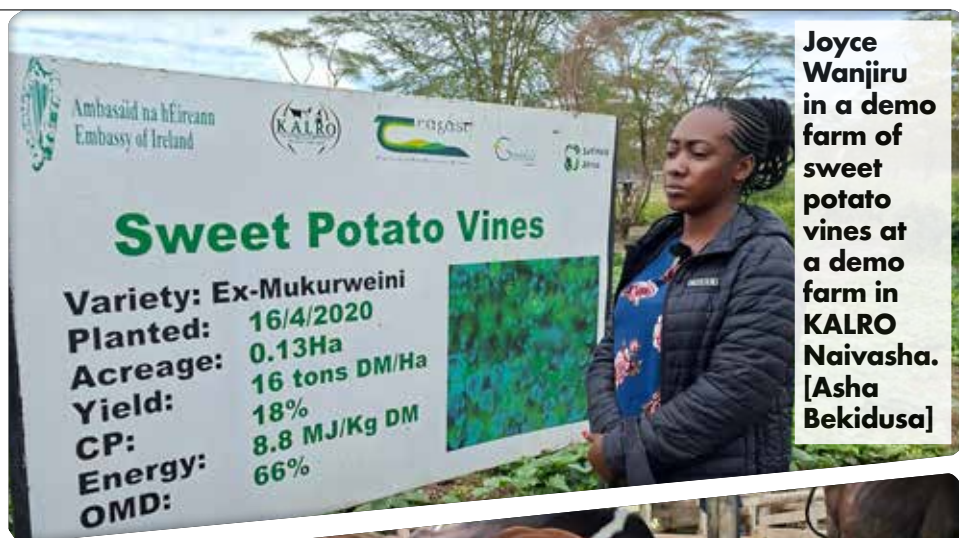
Mbugua explained that it is grown under controlled irrigation to ensure a consistent supply of nutritious fodder throughout the year. A few metres from lucerne, Napier grass also known as elephant grass is planted and forage sweet potato vines, creating a diverse and balanced feeding for dairy cows.

"We have seen that lucerne, when combined with Napier or silage from maize helps to stabilise milk production across the seasons," Mbugua said. The system ensures that even during the dry season; when most farmers struggle to find quality feed cows continue to produce milk steadily.

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We use the vegetative type for feeding because it remains green and nutritious even after storage

Joyce Wanjiru - the Unit manager in charge of dairy farming



Joyce Wanjiru in a demo farm of sweet potato vines at a demo farm in KALRO Naivasha. [Asha Bekidusa]



Photo showing a Sahiwal breed at KALRO Naivasha. [Asha Bekidusa]

The project, part of a Ksh 120 million investment, also includes a processing plant with the capacity to process 5,000 litres of milk per day. Depending on the type of cow some like Sahiwal X Friesian Crossbreds are able to produce up to 18 litres of milk per day.

He encourages farmers to use locally available resources to make silage and hay. He pointed out that forage sweet potato has two types, one with large tubers for human consumption, and another that is more vegetative, ideal for animal feed.

"We use the vegetative type for feeding because it remains green and nutritious even after storage," he explained. Joyce Wanjiru the Unit manager in charge of dairy farming at the institution said the system is highly practical for smallholder farmers. When properly chopped and stored, the feeds retain their quality for months, ensuring cows are fed consistently.

The process is largely manual farmers cut, chop, and mix feeds by hand.

"At the processing class, you will see the choppers we use," Wanjiru noted. Farmers are also taught the best time to cut lucerne before it becomes too stemmy and loses its leaf area.

"If you harvest too late, the forage becomes fibrous and less digestible. That reduces milk yield because cows refuse to eat the coarse parts," she explained.

Early cutting ensures the feed maintains its protein content, leading to better milk production and animal health. With every drop of milk counted, this ensures towards a food secured future.

A story of transformation is happening where farmers are learning to manage feeds scientifically, of crops grown with precision irrigation, and of livestock thriving on carefully balanced diets.

Preserving heritage: IFAJ delegates experience Kenya's indigenous seeds sector

By Rachel Kibui
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For decades, indigenous seeds have been the backbone of Kenya's food systems, passed down from one generation to the other marking a symbol of heritage, resilience, and culture. Often well adapted to local climates and soils, indigenous seeds have been at the center of communities' lives especially towards food diversity, nutrition, and cultural continuity.

However, over the years, indigenous seeds have increasingly come under threat of extinction due to changing agricultural practices, climate change, change in agricultural practices among others.

It is against this backdrop that delegates attending the IFAJ World Congress of Agricultural Journalists had a first-hand experience of Kenya's indigenous seeds sectors rebirth, thanks to a field tour at the Seed Savers Network center in Nakuru, Rift Valley.

Located on the shores of Lake Elementaita, the network is a national membership-based farmers' organisation working at the grassroots level with a mission to conserve agrobiodiversity by strengthening community seed systems for improved food and nutritional security.

During the visit, the journalists toured the organisation's gene bank, where numerous varieties of local seeds are preserved. They also explored various sections of the facility, including a food forest and a processing unit where organically grown indigenous vegetables are dried and packaged for sale.

In an engaging presentation and question-and-answer session, the Team Leader, Daniel Wanjama, and the Head of Communication and Advocacy, Tabitha Munyiri, discussed Kenya's seed laws and their implications for local farmers, particularly in relation to the

exchange and trade of indigenous seeds. A section of the delegates later visited Beatrice Wangui, a farmer affiliated with the Seed Savers Network, in a nearby village. Beatrice shared her inspiring journey, explaining, "When I settled here, I never thought I could farm because the land was too rocky."

However, under the Seed Savers Network, I was trained on land reclamation and the preservation of indigenous seeds. That was the beginning of my farming journey."

On her eight-acre plot, Beatrice now grows diverse crops using innovative techniques such as vertical gardens, water harvesting. As a seed ambassador and gender champion, she trains other farmers, especially women, on organic agriculture and seed saving, advocating for women's independence and dignity through access to seeds.

The visit offered journalists valuable insights into the importance of conserving indigenous seeds, promoting organic farming, and empowering rural communities, particularly women, towards achieving sustainable food systems.

Seed preservation

- During the visit, the journalists toured the organisation's gene bank, where numerous varieties of local seeds are preserved.
- The visit offered journalists valuable insights into the importance of conserving indigenous seeds, promoting organic farming, and empowering rural communities.

Julia Kamau (right), Seed Savers Network Programs Manager shows IFAJ delegates around the organization's gene bank. [Rachel Kibui]



Experts: Local feed production could double Kenya's milk output

By **Milliam Murigi**
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As Kenya pushes to double its milk production from the current 5.6 billion litres to 10 billion litres annually by 2030, experts say the country must first address one critical gap — fodder availability. According to Njeri Gatheca from Naiposha Dairy Farm in Naivasha, Nakuru County, consistent feed supply remains the biggest challenge facing the dairy sector, especially among smallholder farmers who produce more than 90 per cent of Kenya's milk.

"When it rains, milk supply shoots up, but during dry seasons production drops sharply," says Njeri. "That means farmers rely on what grows naturally around them instead of planning for year-round feeding. If we can fix fodder, we can fix milk production."

Njeri, who is part of a working group under the National Agricultural Value Chain Development Project (NAVCDP) — funded by the World Bank and implemented by the Ministry of Agriculture — says sustainable fodder systems must be at the centre of Kenya's strategy to increase production and employment in the dairy sector.

She believes that localising feed production is the only sustainable way to cut the high cost of dairy production and build resilience among farmers. Currently, the country imports most feed ingredients such as soya, maize germ, and sunflower from neighbouring countries, exposing farmers to fluctuating prices and supply disruptions.

"We can't continue importing what we can grow here," says Njeri. "Feed alone takes up nearly half of the cost of milk production. If we invest in local fodder and feed systems, farmers will earn more and remain productive all year round." At Naiposha Dairy Farm, Njeri and her team have adopted an integrated fodder management system, growing Rhodes grass, lucerne, oats, and maize for silage and hay.

The farm also trains nearby farmers on pasture establishment and silage making to help them remain productive during dry spells.

"We have learned that consistency in fodder production equals consistency in milk production," she says. "Even smallholders can achieve this with proper planning, training, and access to finance." To make this possible, Njeri is advocating for a cooperative-based financing model, where milk cooperatives can create revolving funds to support members in establishing and storing fodder.

"If every cooperative saved even fifty cents per litre of milk collected, that money could help farmers borrow at low interest to grow and preserve feed," she explains. "It's a practical and self-sustaining approach."

She also called on the government to incentivise local feed production through tax waivers on farm inputs and machinery, fodder seed subsidies, and investment in research to identify drought-tolerant fodder varieties suited to different ecological zones.

"You can't talk about doubling milk production without talking about feed," Njeri concludes. "Localising feed production is not just an option — it's the backbone of a sustainable dairy future for Kenya."

The visit to Naiposha Dairy Farm was part of the International Federation of Agricultural Journalists (IFAJ) Congress 2025, where delegates toured Kenyan farms to learn about innovations and challenges shaping the country's dairy industry.

Njeri Gatheca from Naiposha Dairy Farm in Naivasha, 100km west of Nairobi has urged the government to incentivise local feed production through tax waivers on farm inputs and machinery. [Milliam Murigi]





MESHA members shine at the IFAJ Star Prize awards

By Asha Bekidusa
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Media for Environment, Science, Health and Agriculture (MESHA) have once again made their mark on the global stage, scooping two of the five top prizes at the prestigious International Federation of Agricultural Journalists (IFAJ) Star Awards 2025 for agricultural journalism.

The awards, which recognise excellence in agriculture-reporting across print, photo, audio, video and digital media were presented at the closing ceremony of the IFAJ World Congress of Agricultural Journalists organised by MESHA. Each win carries a prize of € 500 and a certificate.

Under the audio category, Steve Mokaya won for his piece, How Maasai women are countering drought with beekeeping, which sheds light on pastoralist communities and alternative livelihoods. In the video category, Rahab Watari came tops with her video Agroecology revolution in Kenya.

Milliam Murigi who emerged second in print category for her story Little efforts to reclaim our farming glory is a respected science journalist based in Nairobi whose work spans across agriculture, environment and technology. She is also a volunteer at the MESHA Secretariat for nearly four years now.

Philippa Courtney from Australia was the winner of this category. Cortney was also recognized for Trade, Economics, Global Issues, the organization's honor for the best reporting on the theme of Trade, Economics, Global Issues in its worldwide competition.

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With this win it gets to show that Kenyan journalists are no longer just covering agr culture, but rather they are shaping how agriculture is seen locally and internationally

Aghan Daniel, MESHA Secretary

She was also declared the International Journalist of the year 2025. “The quality of these pieces shows how agriculture is the backbone of Kenya’s economy and food system. These journalists story telling skills dive deep into how farmers, communities and policymakers are making their contributions in their communities,” said Adrian Bell while presenting the awards at a Nairobi hotel.

The IFAJ Star Awards emphasise themes of innovation, sustainability, rural culture and trade in agriculture. The awards are global in scope and attract entries from dozens of countries.

The competition’s criteria emphasise not just technical proficiency, but storytelling that influences thought, policy or practice in agriculture. “With this win it gets to show that Kenyan journalists are no longer just covering agr culture, but rather they are shaping how agriculture is seen locally and internationally,” said Aghan Daniel, MESHA Secretary.

Other winners include US’ Katie Knapp who scooped first position in Technology Category with her story Checking Pivots; Emmanuel Bright Quaico with Farmer-Herder Feud: A weakened fight? in Rural culture category, Linda Grimstedt of Sweden took home the Innovation prize.

Meanwhile Juliet Akoth also a MESHA member was selected by the International Federation of Agricultural Journalists (IFAJ) to participate in the highly competitive Alltech Young Leaders Programme 2025.

The programme recognizes the leadership potential of young members from countries belonging to IFAJ, and supports their participation at an IFAJ congress through this award, designed to help offset travel and registration. Fellows participated in a unique boot camp at the Nairobi Congress 2025 that provided expert training and feedback through on-site writing or broadcasting assignments. It further develops young leaders’ skills through formal in-class training.

The ten Young Leaders will, like others before them, become tomorrow’s leaders and influencers. This, says Adrian Bell, IFAJ Secretary, continues IFAJ’s mission to support and expand a vibrant, professional and well-skilled agricultural journalism sector to an ever-increasing number of countries.

The ten 2025 Young Leaders included, Juliet Akoth, Kenya; Aizhan Rymbayeva, Kazakhstan and Türkiye; Ben Eagle, United Kingdom and Chelsea Dinterman, United States of America. Others were Johanna Fry, Germany; Keira Miller, Canada; Luiza Cardoso, Brazil as well as Nukanah Kollie, Liberia besides Rodrigo Bonazzola, Argentina and Victoria Ellis, Australia.

“The fact that our members at MESHA are winning these highly competitive prizes shows just how much quality we have within the membership,” said Bozo Bozo, MESHA Chairman, adding that, “We are indeed firmly at the global map.”

Kenyan Tea: Exports outweighing local consumption



International journalists at the IFAJ Congress 2025 visit an exhibition booth by Kenya Tea Development Authority.

By Sharon Atieno
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With a production rate of nearly 600 million kilogrammes, Kenya is among the world's leading producers of tea. It ranks third after China and India. Despite this, the country exports almost 90 percent, leaving the rest for local consumption.

Grace Mogambi, Manager specialty products, Kenya Tea Development Agency (KTDA) told a group of international journalists attending a field tour at Kagwe Tea Factory, Kiambu County. This is part of the International Federation of Agricultural Journalists (IFAJ) 2025 Congress hosted by the Media for Environment, Science, Health and Agriculture (MESHA).

"Both India and China consume about 80 percent of the tea they produce. They only export 20 percent, making Kenya the largest exporter of tea," Mogambi said. She observed that Kenyans consume more milk than tea. The biggest portion of tea serving consists of milk rather than tea. The beverage should be served as it is with only water- locally referred to as "*strungi*" but because of societal biases -often associated with poverty-most people don't consume it like that.

In 2024, tea exports earned Kenya Kshs. 181 billion, second only to foreign remittances by

Kenyans in the diaspora. Majority of the tea is exported to Pakistan, Egypt and the United Kingdom.

The crop contributes significantly to the country's global domestic product (GDP), accounting for two percent. Additionally, some 6.5 million Kenyans are supported by the tea value chain.

Kenya's tea is made up of different varieties. Kenya is the leading exporter of Black CTC (crush, tear and curl), majority being produced by KTDA. "All our 70 factories produce Black CTC," Mogambi said, "our black CTC as KTDA is a benchmark globally."

Black orthodox tea is also another leading variety, produced by 13 of KTDA's factories. Other varieties include green tea and white tea. Work is ongoing to make Kenya's green tea more palatable. "Most of the time when you take green tea because you are used to Chinese green tea and Japanese green tea, it has a smooth taste. But because our clones called *Camellia sinensis assamica*, are targeted for black tea, they are meant to give higher percentages of the flavones and the rubigines.

Thus, there is a bit of a bitterness in that. We're trying to see how to work around that to give you a very good cup of green tea," Mogambi said. She called on buyers to consider buying tea from KTDA, noting that the cooperative is made up of small holder farmers, about 700, 000, most of whom grow tea on 10 acres of land and below.

"Secondly, our bushes are also quite young and we hand pluck our tea. That gives you just two leaves and a bud which is considered to have the highest concentration of what you're looking for in tea," she said.

Mogambi also noted that because of the high altitude, most of the tea is pesticide free. Even if pesticides are present, the quantity is very negligible that it is considered to have no significant economic value.

Additionally, she noted that traceability from the farm to factory is also easy. This is because KTDA only sells tea from companies that belong to smallholder farmers. Besides smallholder farmers represented by KTDA, there are also middle-scale tea farmers -grow tea on more than 10 acres but less than 50 acres- and large-scale farmers who produce tea on more than 50 acres, mostly multi-national companies.



Grace Mogambi, Kenya Tea Development Authority specialty crops manager, explaining to international journalists about tea at a receiving point in Kagwe Tea Factory, Kiambu County near Nairobi, Kenya.



John Riaga, a senior MESHA leader led the members in welcoming the world to Kenya

MESHA leadership shine as IFAJ Congress concludes in Nairobi

By Juliet Akoth
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The International Federation of Agricultural Journalists (IFAJ) Congress which ended on October 18 in Nairobi was a resounding success.

The event made history as it was the only time it has ever been held in East Africa and only the third time on African soil.

For the Media for Environment, Science, Health and Agriculture (MESHA), hosting this global gathering was not just a crowning moment but also a celebration of two decades of relentless dedication to science journalism.

From October 15 to 18, delegates from across the world converged in Kenya's capital, drawn by the promise of new ideas, partnerships, and a deeper understanding of Africa's agricultural story. The congress provided a unique platform for MESHA to showcase its journey, its impact, and its vision for the future.

During the opening ceremony, MESHA's Board Chairman Bozo Jenje set the tone by reminding participants that agriculture is the heartbeat of Kenya and much of Africa.

He spoke of the sector's resilience in the face of climate shocks and shifting markets, and called on journalists to be more than just storytellers.

"We are translators of science and voices of the farmers," Jenje said, urging the media to focus on the youth, women, and small-scale producers who are driving transformation across the continent.

The spotlight then turned to MESHA Secretary Aghan Daniel, whose reflections on the organization's growth resonated with many in the audience. Aghan recalled the humble beginnings of MESHA in 2005, when a handful of journalists pooled their own resources to create a network that would break the isolation of science reporters. "When we formed MESHA twenty years ago, we had no idea that one day we would be hosting this global conference," he said.

"Back then, we didn't even know such a congress existed." Aghan's pride in MESHA's evolution was evident as he described how the association has become a force in African journalism. Today, MESHA boasts more than 120 members, has trained hundreds of journalists, and regularly supports its members with story grants ranging from twenty to four hundred dollars.

The association's monthly training programs and its ability to bring journalists to international events have helped build a vibrant, skilled community. "We have moved from a time when there were very few science journalists in Kenya to a point where many media houses now have dedicated segments for agriculture and science," Aghan noted.

In a one-on-one interview on the same evening, Aghan offered deeper insight into MESHA's journey. He explained that the association was born out of a need to end what he called "professional loneliness" among science journalists.

"Many times, a journalist would sit somewhere and find themselves unable to reach sources they needed. We wanted to fill that void, and that is the void we have filled," he said. The founders, determined to build credibility and independence, started MESHA without donor funding, relying instead on their own contributions.

"We came in and said we don't want any donor funding. We started by producing money from our pockets," he recalled, noting that the first chairman, Daniel Otunge, personally contributed to open MESHA's bank account.

Over the years, MESHA has grown into a respected guild with a strong reputation for delivering results. The association has organized six African Conferences of Science Journalists, facilitated participation in major international events, and built donor confidence through transparency and professionalism. MESHA now owns property, operates a functional secretariat, and has become a trusted partner for both local and international organizations.

Aghan also spoke candidly about the challenges MESHA has faced, from skepticism within the journalism community to limited support from government and corporate sectors.

Organizing the IFAJ Congress itself required years of preparation and fundraising, as many organizations were initially hesitant to back a journalists' event. Yet, MESHA's persistence paid off, and the congress became a testament to what African associations can achieve with determination and collaboration.

He emphasised that MESHA's greatest achievement lies in its ability to nurture talent and drive change in the media landscape. The association has played a major role in the rise of science and agricultural journalism in Kenya, with more journalists now specializing in these fields and producing stories that resonate with farmers, policymakers, and the public. "Our biggest achievement is that we are that association that does not pretend to do things. We do," Aghan said. "We have actually built skills in this space of journalism. We run our programs and give story grants to journalists."



Cassava and potatoes could secure Kenya's food future, experts say

By Agatha Ngotho
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When maize failed for the third consecutive season on his three-acre farm in Homa Bay County, farmer Samuel Ochieng decided to try something different. "I switched to cassava and sweet potatoes," he says.

"They don't need much rain or fertilizer, and even when the weather disappoints, I still harvest something to feed my family and sell in the market."

As Kenya grapples with rising food prices, erratic weather, and shrinking farmland, scientists say the country's next food security breakthrough could be root and tuber crops like cassava, sweet potato, yam, and Irish potato.

At the World Congress of Agricultural Journalists 2025 in Nairobi, Dr. Joyce Maru, Regional Director for Africa at the International Potato Center (CIP), said root and tuber crops are the "engines of resilience and economic renewal" for Kenya and the

wider African continent.

"Root and tuber crops are not just food security crops, they are engines for resilience, local supply chains, and economic growth," said Dr. Maru.

The congress, organized by the International Federation of Agricultural Journalists (IFAJ) and Media for Environment, Science, Health and Agriculture (MESHA), brought together experts and journalists to explore innovations that can make African farming more climate-resilient.

In 2022, the late Dr. Lusike Wasilwa, then Director of Crop Research Systems at KALRO, had urged Kenya to "de-maize" to diversify beyond the country's staple crop.

"We need to let farmers grow other crops like cassava and sweet potatoes that are nutritious, high value, and more climate resilient," she said in an interview.

In Kenya, cassava, potato, and sweet potato occupy about 61,000 ha, 185,000 ha, and 6,000 ha respectively. Yet, per capita consumption stands at only 20 kg for cassava, 33 kg for potato, and 18 kg for sweet potato,

according to KALRO data.

Demand outstrips production by at least 250,000 tonnes for cassava and 160,000 tonnes for sweet potato, showing significant room for growth.

"There is growing interest in cassava, partly due to the low yields in maize and changing consumer preferences," said Peter Aluoch, Head of Programmes at Self Help Africa.

"Some people are avoiding wheat because of gluten, and cassava offers a healthy, gluten-free alternative," said Aluoch. "You can use cassava flour to bake mandazi or chapati, it's nutritious and affordable."

According to the Comprehensive Africa Agriculture Development Programme (CAADP), root and tuber crops now provide over 40 percent of Africa's food supply, with production having more than doubled in the past two decades.

Yet, yields remain relatively low, averaging 8.4 tonnes per hectare, compared to the potential of more than 20 tonnes.

Dr. Maru said science and biotechnology are unlocking new opportunities to close that gap.

CIP and its partners have developed biotech potato varieties resistant to pests and late blight, a devastating disease that causes farmers to lose up to 70 percent of their yields.

"Late blight alone costs developing countries around USD 10 billion every year," she explained. "In Kenya, farmers spend nearly 12 percent of their production costs on fungicides to control it." By adopting disease-resistant varieties, Kenyan farmers could save millions of shillings in input costs and boost their productivity.

CIP projections show Kenya could gain KSh 1.1 billion (USD 8.2 million) annually from such adoption, while Rwanda could enjoy a 48 percent yield increase and annual benefits worth KSh 755 million (USD 5.9 million). "Reducing fungicide use not only lowers costs but also protects farmer health and the environment," said Dr. Maru. It's a win for the economy, the planet, and the people."

Root and tuber crops, she added, are naturally suited to Kenya's changing climate — tolerating drought, thriving in poor soils, and growing faster than most cereals.

Through initiatives like the Roots, Tubers and Bananas (RTB) Breeding Program, new genetic tools are helping scientists combat emerging diseases such as bacterial wilt, which is spreading due to global warming.

One of CIP's success stories is the UNICA potato variety, bred to perform well in lowland regions similar to many parts of Kenya.

Beyond farming, experts see vast opportunities in processing and value addition. With urbanization and shifting diets, products such as crisps, flour, starch, animal feed, and even bio-packaging materials from cassava and potato are gaining traction.

"The perishability and seasonality of these crops are not just challenges, they're business opportunities," said Dr. Maru.

She called for more investment in storage, mechanization, regenerative agriculture, and digital tools to reduce post-harvest losses and improve profitability.

The Bill & Melinda Gates Foundation, citing IFPRI Impact Projections (2022), estimates that between 2017 and 2050, the global value of production will reach KSh 11.1 trillion (USD 87 billion) for yams, KSh 2.9 trillion (USD 23 billion) for sweet potatoes, KSh 2.7 trillion (USD 21 billion) for cassava, and KSh 1.2 trillion (USD 9 billion) for other root and tuber crops.

"Investing in these crops is not just about feeding people, it's about transforming livelihoods and creating sustainable food systems," said Dr. Maru.

“

They don't need much rain or fertilizer, and even when the weather disappoints, I still harvest something to feed my family and sell in the market.

Samuel Ochieng



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for other chores

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The flies that offer alternative animal protein source



By Christine Ochogo
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Black Soldier Flies are a fantastic source of protein and oil for animal feed, addressing the challenges of the escalating prices of livestock feed in Kenya.

The high cost of livestock feeds is putting the profitability and sustainability of the livestock industry at risk as many farmers are not able to put up with the high cost of production.

An International Livestock Research Institute (ILRI) report from 2023 shows that Kenya's livestock sector contributes significantly to the national economy, supporting livelihoods and food security, while also facing challenges like high feed costs.

The sector contributes approximately 12 per cent to the national Gross Domestic Product (GDP) and 42 per cent to agricultural GDP. It is also the main source of livelihood to the people in the Arid and Semi- Arid Lands (ASALs), accounting for 90 per cent of employment and more than 95 per cent of family incomes in these areas.

Protein Masters, a Kenyan agribusiness located in Huruma Estate, Nairobi Kenya, venture in producing sustainable animal feed through rearing Black Soldier Fly (BSF) to bridge the gap in a more affordable and sustainable approach.

This innovative enterprise, established 8 years ago, breeds and processes BSF larvae to create high- quality insect protein and organic fertilizer, providing a cost-effective and eco-friendly alternative to traditional livestock feeds like fishmeal and soy.

Mr Fredrick Kim, Managing Director at Protein master, says the Black Solders Flies cuts down on the cost of livestock feeds by 50-60 per cent of the total production.

"Much of the traditional livestock feed produced by the \$ 370 billion industries is composed of crop such as corn or soy beans, which are expensive and compete for resources with human food, livestock accounts for 60 - 70 per cent of food production cost which a quite costly, in the last 10 years the prices have increased by 200 per cent, according to world bank data," he stressed"

Mr Kim maintains that by transforming organic waste into valuable feed ingredients, Protein Masters not only helps smallholder farmers access affordable feed options but also plays a vital role in waste management and environmental conservation.

Their efforts resonate with Kenya's increasing focus on circular economy. He added, "A part from offering alternative protein for feeds, at protein master, we also help keep the environment clean by educating our people to separate their waste."

We give them two colour bins, one for degradable waste and another for non-degradable waste. We then collect the degradable waste which we use to feed the BSF."

Mr Kim was addressing a battery of journalists who visited the farm during the International Federation of Agricultural Journalists (IFAJ) 2025 Congress in Nairobi organized by Media for Environment Science Health and Agriculture (MESHA).

Apart from offering affordable animal feed, black soldier flies larvae have the potential of improving organic waste into a rich free fertilizer thus promoting organic farming and smart agriculture.

Free fertilizer is nutrient rich, improves soil health and is eco-friendly. "We have trained over 6000 farmers in Kenya and over 400 from five other countries on how to do BSF farming as this tackles both the blue and green economy," Kim explained.

As Kenya strives for climate-smart and sustainable agriculture, BSF farming is becoming an essential part of ensuring food security, reducing feed costs, and encouraging green growth within the livestock value chain.



Mr Frederick Kimathi, Managing Director, Protein master, explains and demonstrates the importance of Black Soldier Fly (BSF) farming at their farm in Huruma estate, Kenya. Black Soldier Fly larvae is an alternative affordable protein source for livestock feed. [Christine Ocho]

Humans are not left out as they can too consume the black soldier fly larvae. However, it must be farmed and processed under strict hygienic and food-grade conditions.

"The Black Soldier Fly larvae can be dried and ground to form insect-based protein powder which can be used for baked goods or snacks, this is a source of future food for sustainable diets given the ever growing population and demand for protein nutrient, He stressed.

The black soldier fly (*Hermetia illucens*) is a fascinating insect celebrated for its incredibly nutritious larvae, packed with protein and fat.

While it originally thrived in tropical and warm climates, this species has now become a key player in waste recycling and animal feed production.

These larvae are remarkable at transforming organic waste like food scraps and manure into valuable biomass that can be used as feed for livestock, poultry, and fish.

Plus, they generate organic fertilizer (known as frass) as a bonus by-product. Due to their ability to recycle waste and lower feed costs, black soldier flies are increasingly recognized as a sustainable, cost-effective, and eco-friendly protein source, not just in Kenya but across the globe.



Embracing mother nature's solutions for residue-free crop production



Hamish Ker, Andermatt Chief Executive Officer explaining the benefits of Biological farming solutions

By Christine Ochogo
christawine@yahoo.com

Farmers and agricultural experts have been encouraged to embrace use of natural solutions in farming as a way of ensuring production of safe, healthy and eco-friendly food.

One such solution is the Biological control, often referred to as 'biocontrol', which involves using living organisms such as predators, parasites or pathogens to manage or reduce populations of harmful pests, such as insects, weed or plant diseases.

With the ever growing desire for safe and healthy food, Andermatt Kenya, a company that specializes in providing biological and nature-based agricultural solutions supports production of sustainable and residue-free crop production thus advocating for 'Healthy food, Healthy environment for all.'

Stephen Musyoka, Andermatt, Macrobia General Manager at Andermatt Kenya, explains that this integrated pest management system involves bringing in a natural enemy from the pest's home region to a new area where the pest has become a nuisance.

Musyoka alludes that adopting the biological solutions helps the farmer to manage resistance which is a risk that come with use of synthetics.

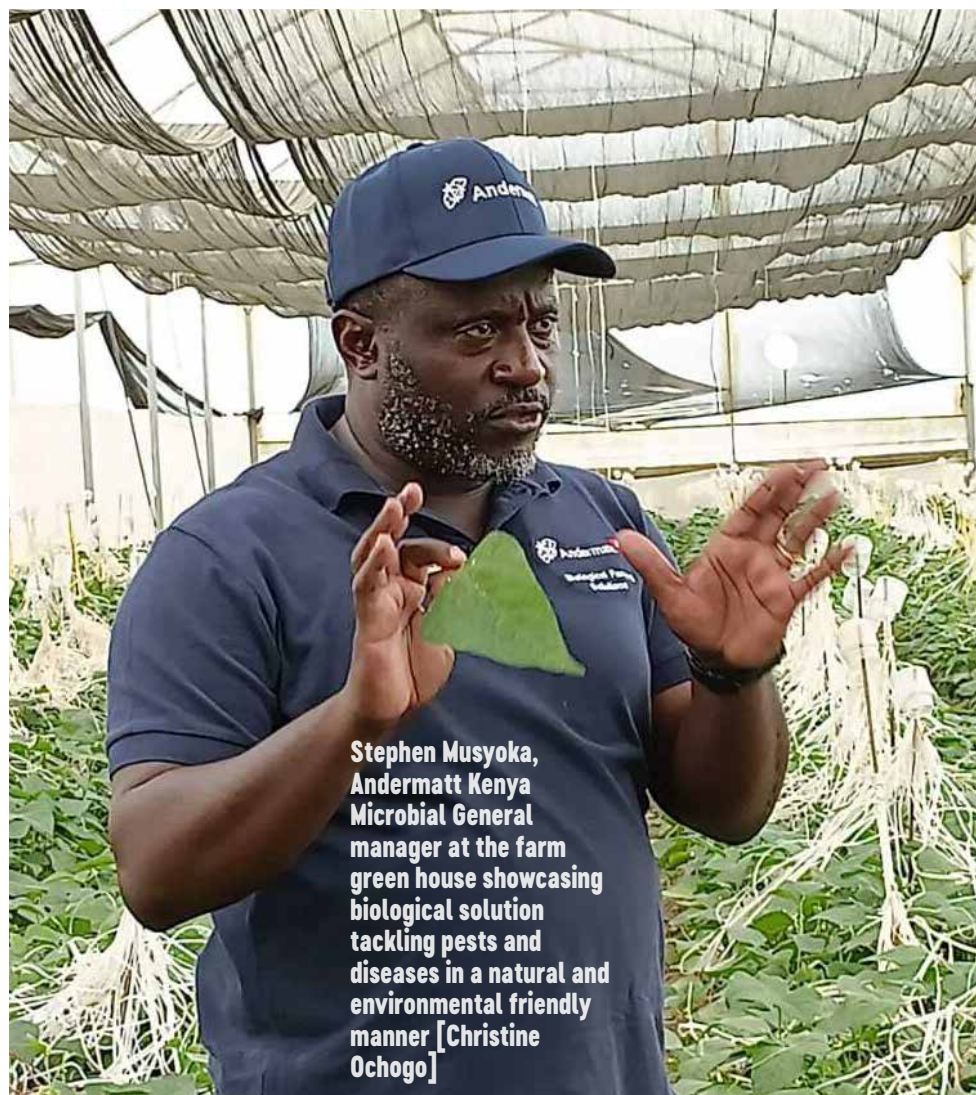
Besides this the technology is sustainable and environmentally friendly. It reduces the need for chemical pesticides and therefore farmers are able to produce crops that are free from harmful residues, safe for humans, animals, and pollinators and above all it helps maintain a healthy ecological balance.

"You go out and look for what is out there in mother nature and adopt the same for the management of the pest or disease without compromising the environment and food safety. A good example is introducing ladybugs to help manage aphid populations," Musyoka explained.

By opting for these natural alternatives, farmers not only secure sustainable yields but also play a vital role in strengthening agricultural systems and protecting the environment. Hamish Ker, Andermatt Kenya Chief Executive Officer, appreciates regenerative agriculture hence their focus on promoting Mother Nature's solutions for farmers.

"We supply and support the use of biological products that enhance plant health, manage pests and diseases and improve soil fertility, all while reducing chemical residues in food and the environment," he said. Through partnerships and field programs, Andermatt Kenya contributes to regenerative and climate- smart farming systems that align with global sustainability goals.

Agricultural pests and pathogens lower agricultural productivity by 18 percent and 16 percent, respectively, jeopardizing food security and farmer livelihoods globally. To tackle pests and pathogen related issues in a sustainable, environmentally friendly manner, Food and Agriculture Organization of the United Nations (FAO) endorses the use of integrated pest management (IPM).



Stephen Musyoka, Andermatt Kenya Microbial General manager at the farm green house showcasing biological solution tackling pests and diseases in a natural and environmental friendly manner [Christine Ochogo]

In FAO 2025 publication on 'Guidance on integrated pest management for the world's major crop pests and diseases' indicates that while synthetic pesticides are instrumental in securing copious food supplies and alleviating malnutrition, they also negatively impact biodiversity, undermine vital ecosystem services and raise the energy usage intensity (or carbon footprint) of agrifood production.

The journal further mentions that to alleviate this overreliance upon synthetic entrants and to resolve their social-environmental externalities, a myriad of alternatives have been developed, validated and promoted across the globe.

During the 1980s to 1990s, FAO's Farmer Field Schools (FFS) trained millions of farmers on pest management tactics such as biological control, and curbed pesticide use by 50—80 percent over extensive areas.

Such was achieved through the promotion of Integrated Pest Management (IPM), which is the tactical integration of all available control options including a conscious prioritization of biological, cultural and physical measures with a goal of reducing pest-induced losses at minimal (or zero) usage of synthetic pesticides. Indeed, under IPM, preventative non-chemical approaches are the 'first line of defence' while synthetic pesticides are treated as 'measures of last resort'.



Pictorial

The expansive Ngorongo Tea Farm in Kiambu, 30km to the north of Nairobi



Some of the IFAJ 2025 delegates listen to experts explain on what happens at a tea collection centre.



A delegate tries her hands at tea picking in a farm near Nairobi.



It's tea time, as International agricultural journalists sample Kenya's rich tea



Planting materials showcased at the IFAJ 2025 Congress exhibition.



It's a wrap at the IFAJ 2025 Congress, as delegates relive memories of Kenya's agricultural prowess and innovation.



A panel discussion during one of the breakout sessions organised by the International Seed Federation at the IFAJ 2025 Congress in Nairobi, Kenya.



MESHA member Juliet Akoth receives her certificate as part of the Young Leaders cohort trained during the IFAJ Congress.



John Riaga, MESHA Board member welcoming delegates to the IFAJ 2025 Congress in Nairobi, Kenya during the opening dinner.



Delegates follow a presentation during the IFAJ 2025 Congress.

An exhibitor at the Congress 2025 from Baringo County, 300km to the west of Nairobi, showcases how farmers are using innovative ways to prevent mealybug infestation.



Do it this way. IFAJ Congress President Steve Werblow (US) joins MESHA Secretary Aghan Daniel and other delegates at the dance floor during the opening plenary of Congress 2025.



A group photo of IFAJ 2025 Congress delegates during one of the field tours organised by MESHA.



Ms Angela Baiya of International Development Research Centre at the Congress where IDRC, AGRA organised a breakaway session on innovative models for food and nutrition security with a focus on locally sourced food for schools and other consumers.



A display of Kenya's tea during a tour to one of the field tours. [Craig Stephen]



Looks like you're a good student. A delegate aims for the best shot during one of the field tours.



IFAJ Congress 2025 delegates taken through the good agronomic practices that guarantees high yield at Kurunguru Coffee Estate during a Coffee field tour.



Agricultural journalists conducting interview at Naiposha Dairy Farm. [Milliam Murigi]



Kenya is the world's third-largest producer of macadamia nuts, with a 13% global market share, and the quality of Kenyan macadamias is ranked second globally. The industry supports over 200,000 smallholder farmers. Production was estimated at around 70,000 metric tons in 2022, with a projected increase to over 100,000 metric tons by 2025. [Christine Ochogo]



It's two leaves and a bud, a delegate learns the art of picking Tea at Tea farm during the field tours.



A section of IFJA Delegates tour De Ruiter East Africa. It is an International Rose Breeding Company in Naivasha, Kenya.



Ever heard of a vertical lake? Delegates at the congress learnt about this pioneering innovative, sustainable aquaculture by growing fish in stacked vertical tanks rather than traditional ponds. Founded by Jack Oyugi (in picture), the system uses recycled rainwater, solar power, and bio-filtration to produce healthy tilapia and catfish with minimal land use and water consumption, while also creating organic fertilizer from waste products. [Craig Stephen]



All about Kenyan coffee known for its bright acidity, full body, and fruity, berry-like notes (especially blackcurrant), a result of its high-altitude growth in volcanic soil and meticulous wet-processing. [Craig Stephen]



Deserved time for refreshments as agricultural journalists get a taste of Kenyan beverages ranked top in the world. [Craig Stephen]

Software engineer Abi Wairimu of iSDA makes a presentation at the Congress on how they are providing farmers with Virtual Agronomist which is AI service providing tailored, data-driven agronomic advice and nutrient plans via WhatsApp, using local knowledge and soil data. [Aghan Daniel]



Beatrice Wangui at her organic farm in Gilgil, Nakuru County explains a point to IFJA delegates. [Rachel Kibui]

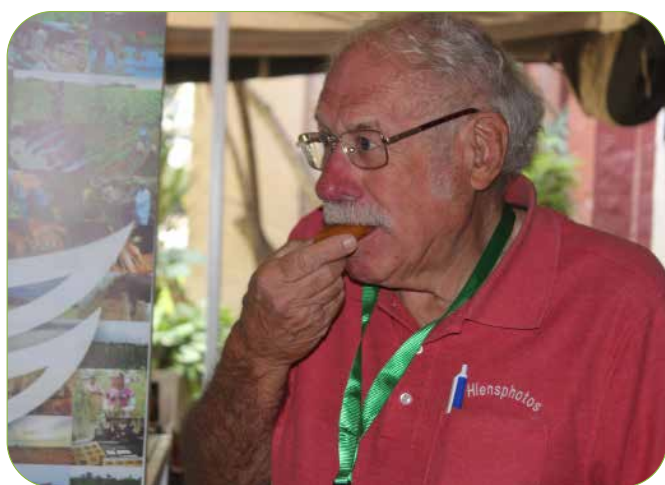




James Pursey, senior communication manager at the Consultative Group on International Agricultural Research (CGIAR) during the first day of the IFAJ World Congress 2025.



Ann Namusonge, a research scientist at Kenya Agricultural and Livestock Research Organisation-Tigoni in Kenya, demonstrating the rooted apical cutting technology for potato cultivation at the IFAJ World Congress Exhibition.



Harlen Persinger, a veteran journalist from the US captured at the Congress. He joined the American Agricultural Writers Association in 1976 and has never missed a single meeting of his guild nor has he missed the IFAJ Congress.



Lucy Mwaura senior research associate, International Potato Centre, serving a potato snack to Harlen Persinger from USA.



Gloria Wambugu, the Business Development representative from the Kenya Tea Development Agency, displaying tea at the IFAJ World Congress 2025 in Nairobi, Kenya.



Delegates registering at the IFAJ World Congress 2025.



Greg lamp tasting tea at Kenya Tea Development Authority (KTDA) stand.



Delegates dancing.



A group of Young Leaders pose with their certificates after being trained during the IFAJ Congress 2025



Kayamba group entertains a delegate showcasing his country's flag



MESHA Secretary, Aghan Daniel having a light moment with some of the delegates during the IFAJ Congress 2025 opening ceremony in Nairobi, Kenya.



[From L-R] Editors Guild CEO Linda Bach, IFAJ President Steve Werblow, Judith Chepkonga, MESHA Chairperson Jenje Bozo and MESHA Secretary Aghan Daniel cut a cake during the official opening of IFAJ Congress 2025

About MESHA

The Media for Environment, Science, Health and Agriculture (MESHA) is a not-for-profit organization founded in 2005 to advance journalism in agriculture, health, environment, technology, and development. MESHA brings together science journalists and communicators with a shared vision of creating an informed and empowered society across Kenya and the wider African region. Its mission is to promote science journalism through a collaborative approach involving journalists, researchers, and other stakeholders. Since its formation, MESHA has provided a vibrant platform for science journalists and communicators to exchange information and improve media coverage of science and development issues. It regularly convenes forums where journalists, scientists, and communicators share knowledge and best practices. Guided by the belief that science information must be effectively communicated to the public—highlighting both benefits and areas of concern—MESHA works to ensure consistent, innovative, and impactful coverage of emerging issues.

About IFAJ

The International Federation of Agricultural Journalists (IFAJ) is a global, non-political, nonprofit organization representing over 5,000 agricultural communicators in 60 countries. Its mission is to support free, fair, and independent agricultural journalism through networking and professional development. IFAJ's work is guided by three priorities: supporting member guilds and associations, developing an internet network, and engaging associations in countries without full press freedom. The Federation operates under a three-tier governance structure comprising the Delegate Assembly, Executive Committee and Presidium. The Delegate Assembly, made up of representatives from member associations, is the highest decision-making organ. It is responsible for electing the members of the International Federation of Agricultural Journalists (IFAJ) Presidium, in elections held every two years. It meets at least once a year, usually during the Annual Congress. The Executive Committee handles administration. It is constituted from one representative appointed by each full member country, plus the members of the Presidium. It meets at least twice a year. The Presidium-led by the President, Vice-President, Secretary and Treasurer - oversees day-to-day operations. Meetings of its officers are held every month by teleconference, with a physical meeting at least twice in every calendar year. Elections for the Presidium are held every two years. IFAJ's annual Congress remains its flagship event, bringing members together in different host countries to explore local agricultural practices, exchange knowledge, and set the organization's strategic direction.

THE TEAM

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