



# Conf2025

## REPORT

**Winning the race against food insecurity, malnutrition,  
and climate change through genetic innovation.**



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## Executive Summary

The African Plant Breeders Association (APBA) hosted the fourth edition of its conference at Elephant Hills Resort in Victoria Falls, Zimbabwe, from October 6–8, 2025, with pre- and post-conference activities held on October 5 and October 9–10, 2025 respectively.

Under the theme “*Winning the Race against Food Insecurity, Malnutrition, and Climate Change*,” the conference brought together leading plant breeders, researchers, policymakers, and stakeholders from across Africa and beyond to address some of the continent’s and the world’s most pressing challenges.

The program included an opening ceremony, seven keynote presentations, four high-level panel discussions, parallel sessions (oral and poster presentations), and eleven side events hosted by various institutions.

During the conference, APBA presented awards to outstanding contributors to the field. Dr. Donn Cummings, Founding Member of the National Association for Plant Breeding (NAPB), received the Capacity Building and Mentorship Award in recognition of his exceptional efforts in nurturing the next generation of plant breeders and extending the Borlaug legacy in Africa.

Prof. Eric Danquah, Founding Director of the West Africa Centre for Crop Improvement (WACCI) and inaugural president of APBA, was honored with the Meritorious Service Award, acknowledging his pivotal role in shaping the foundation of the association and championing scientific excellence.

A major highlight of the conference was the launch of the African Journal of Crop Improvement (AJCI). The conference concluded with a business meeting during which new executives were elected to lead the association for the 2026–2027 term. Nigeria successfully bid to host the next APBA conference in 2027, following careful consideration by the APBA Executive Committee.



## Opening Ceremony

The fourth African Plant Breeders Association (APBA) Conference was officially launched on Monday, October 6, 2025, at the Elephant Hills Resort in Zimbabwe. The three-day event brought together over four hundred and fifty in-person participants, including distinguished leaders, dignitaries, researchers, and students from 61 countries across Africa and beyond.



### **Welcome Address by Dr. Casper N. Kamutando, Co-Host, Chair of the Local Organising Committee, and President of Zimbabwe Plant Breeders Association**

In his welcome address, Dr. Casper N. Kamutando officially opened the Fourth APBA Conference and extended a warm welcome to all participants. He acknowledged the sponsors and partners whose support made the event possible.

Dr. Kamutando noted that the conference, themed “Winning the Race Against Food Insecurity, Malnutrition, and Climate Change through Genetic Innovation,” aims to showcase advancements in plant breeding technologies and practices, promote collaboration among researchers, policymakers, and industry leaders, and develop strategies to combat food insecurity and malnutrition. He further highlighted the importance of strengthening climate-resilient agricultural systems and enhancing capacity building and knowledge sharing in plant breeding.



He expressed gratitude to the APBA Executive Committee for granting Zimbabwe the opportunity to host the conference making it the first Southern African country to do so. Following successful editions in Ghana, Rwanda, and Morocco.

Dr. Kamutando also commended the Zimbabwe Plant Breeders Association (ZPBA) for submitting the winning bid, with special recognition to the Ministry of Lands, Agriculture, Fisheries, Water, and Rural Development for its invaluable support.

**Address by the Guest of Honor- Hon. Dr. Anxious J. Masuka, Minister of Lands, Agriculture, Fisheries, Water and Rural Development, Zimbabwe**

In his address, the Minister of Lands, Agriculture, Fisheries, Water and Rural Development, Dr. Anxious Masuka, described the conference theme, “Winning the Race Against Food Insecurity, Malnutrition, and Climate Change,” as both timely and highly relevant. He underscored the realities of climate change evident in increasing droughts, extreme heat, and floods and stressed the need for effective mitigation and adaptation strategies across Africa.



Dr. Masuka highlighted Zimbabwe's Agriculture, Food Systems and Rural Transformation Strategy, which prioritises climate-smart agriculture through the Pfumvudza/Intwasa model, agro-ecological tailoring of crops, and accelerated irrigation development. He noted the country's target of achieving full adoption of the Pfumvudza/Intwasa model by 2026 and expanding the area under irrigation from 175,000 hectares in 2020 to 496,000 hectares by 2030, with 27% of this target already achieved.

He emphasised that agro-ecological crop tailoring must be supported by robust breeding and crop improvement approaches. Dr. Masuka commended the conference programme for its comprehensive focus on advancing innovations in plant breeding, ranging from the genetic improvement of key crops such as wheat, maize, cassava, and legumes to the application of artificial intelligence, drone technology, and citizen science in strengthening seed systems.

The Minister further outlined Zimbabwe's strategic vision under its 2026–2030 plan, anchored on ten pillars, notably Research, Innovation, Technology and Modernisation, and Climate Adaptation, Mitigation and Resilience Building—both of which align closely with the objectives of the APBA Conference.

Dr. Masuka commended the APBA for organising a conference that promotes collaboration, knowledge sharing, and capacity building among African plant breeders and agricultural



stakeholders. He expressed optimism that the insights and outcomes from the discussions would contribute meaningfully to sustainable agricultural transformation across the continent.

In conclusion, he applauded the organisers, sponsors, and delegates for their commitment to advancing plant breeding innovations in Africa and officially declared the Fourth African Plant Breeders Association Conference open.

### **Address by the APBA President Prof. Julia Sibiya**

Prof. Julia Sibiya, President of the APBA, in her welcomed address, provided a brief overview of the Association's journey and growth since its establishment in 2019, highlighting its evolution into a vibrant continental platform of over 500 scientists from 58 countries. Since its inception, APBA has successfully held three conferences in Ghana, Rwanda, and Morocco and established a Graduate Student Wing, a functional Secretariat, and a monthly webinar series that fosters research exchange and professional collaboration across continents.



Prof. Sibiya noted that the African Union has entrusted APBA to lead the Working Group on Plant Genetic Resources Management, which will present the African Vegetable Biodiversity Rescue Plan (2025–2035) a strategic blueprint to conserve and utilise Africa's vegetable genetic diversity for improved health and climate resilience. She also announced the launch of the African Journal of Crop Improvement (AJCI), a platform for African plant breeders.



She highlighted key initiatives, including the International Borlaug Scholars Program, launched in partnership with NAPB to mentor the next generation of plant scientists, and the Post-Conference Data Hackathon, supported by the Novo Nordisk Foundation, aimed at strengthening young scientists' capacity for data-driven decision-making.

This year's conference, she stated, "features 11 side events organised by longstanding partners such as AGRA, NAPB, and CGIAR centres (CIMMYT, ICRISAT, and IITA), Cornell University, and MarCCI, as well as new partners including the Kirkhouse Trust and the Vision for Adapted Crops and Soils (VACS) initiative". She acknowledged the support of sponsors and partners, including the Government of Zimbabwe, PABRA, the Alliance of Bioversity and CIAT, AOCC, the World Vegetable Center, Bayer, SeedCo, AGRA, WACCI, UKZN, Thermo Fisher Scientific, and the Novo Nordisk Foundation, among others.

Prof. Sibiya expressed deep gratitude to the Government and people of Zimbabwe for their support and partnership in hosting the conference. She concluded by urging members to strengthen national plant breeding associations, foster collaborations, and invest in the next generation of scientists to ensure that research has a tangible impact for farmers and communities.

## **Goodwill Message from Partners**

### **Dr. Donn Cummings, National Association of Plant Breeders (NAPB), USA**

Delivering a goodwill message on behalf of the National Association of Plant Breeders (NAPB), Dr. Donn Cummings reaffirmed NAPB's commitment to fostering global collaboration in plant breeding. He described NAPB as an inclusive professional home for all individuals impacted by or contributing to plant breeding including educators, researchers, industry partners, administrators, regulators, and policymakers.



He emphasised that plant breeding must deliver measurable benefits to those it serves and highlighted the need to leverage all available tools to maximise impact, noting that “our most limiting resource is time.”

Dr. Cummings also reflected on the long-standing partnership between NAPB and APBA, underscoring the importance of their shared mission to advance plant breeding globally. He announced a new travel grant and mentoring programme, jointly launched by NAPB and APBA, with an inaugural cohort of six mentees, aimed at nurturing the next generation of plant breeders through mentorship and international exchange.

### **Dr. John Hickey, Head of Corn Product Design, Bayer, USA**

Delivering a goodwill message on behalf of Dr. Phani Chavali, Dr. John Hickey expressed Bayer’s appreciation for participating in the 4th African Plant Breeders Association (APBA) Conference. He noted that the conference theme aligns closely with Bayer’s mission of “Health for All, Hunger for None” and emphasised the importance of collaboration among the diverse stakeholders represented at the event.



Dr. Hickey reaffirmed Bayer's long-term commitment to supporting agricultural transformation in Africa, commending the Government of Zimbabwe for its ambitious vision for agricultural growth, particularly through expanded irrigation development. He stated that Bayer shares this ambition and aims to reach 100 million smallholder farmers by improving access to innovative technologies that enhance productivity and climate resilience.

He further highlighted Bayer's long-standing partnerships across Africa and sustained investments in crop breeding programmes on the continent. He concluded by reiterating Bayer's commitment to being a trusted, long-term partner in advancing sustainable agriculture and food security in Africa.

### **John Makoni, Chairman, Zimbabwe Seed Traders Association**

Mr. John Makoni, Chairman of the Zimbabwe Seed Traders Association, congratulated the leadership of APBA for convening a successful event that brought together participants from across Africa. Representing Zimbabwe's formal seed sector, which comprises 30 member companies, he highlighted the Association's role in linking agricultural research with farmers.





He commended plant breeders and researchers for their contributions to developing improved crop varieties but emphasised the need to bridge the gap between research outputs and on-farm performance, particularly in terms of yield outcomes. He noted that closing this gap is critical to translating scientific innovation into measurable impact for farmers.

Mr. Makoni concluded by reaffirming the seed industry's commitment to working closely with researchers, noting that while scientists generate innovations, seed companies play a vital role in delivering these solutions to farmers' fields.

### **Launch of the African Journal of Crop Improvement (AJCI)**

The African Journal of Crop Improvement (AJCI) was officially launched by Prof. Julia Sibiya, President of the African Plant Breeders Association (APBA), on behalf of Dr. Damaris Odeny, Chair of the Science and Publications Subcommittee.

Prof. Sibiya noted that the idea of establishing a dedicated scientific journal for African plant breeders was first conceived in 2024, as part of APBA's commitment to promoting scientific research, knowledge sharing, and innovation across the continent. In partnership with the CABI, the AJCI aims to serve as a premier platform for publishing high-quality research in plant breeding and crop science both from Africa and beyond.

She explained that scientific journals play a crucial role in validating, communicating, and amplifying research, and the AJCI will provide an avenue for African scientists, students, and practitioners to share their work on global and regional stages. The journal also seeks to address the common challenge faced by African researchers whose high-quality studies are often deemed suitable only for the audiences of some journals.

Prof. Sibiya acknowledged the Science and Publications Committee, led by Dr. Odeny, for their dedication to ensuring quality in scientific communication. She further indicated that some of the high-quality abstracts submitted for the 4th APBA Conference would be considered for publication in the inaugural issue.

In her remarks, she encouraged all delegates to support the journal by submitting their work, reading, and citing published research, as this will strengthen its credibility and elevate African agricultural science. The launch of the AJCI marks a significant milestone — opening a new chapter in Africa's agricultural research and innovation.

The scope of the journal, along with the Advisory Board and Associate Editors, was also unveiled during the ceremony.

## **Keynote Address 1: Winning the race against food insecurity, malnutrition and climate change – Breeding and Deploying Transformative Mindsets**

**Facilitator:** Xavier Mhike, MC

**Speaker:** Abdou Tenkouano, Director General and CEO, The International Centre for Insect Physiology and Ecology (ICIPE), Nairobi, Kenya

Dr. Abdou Tenkouano delivered the first keynote address of the conference, focusing on the pivotal role of plant breeders in addressing food insecurity, malnutrition, and climate change. He underscored that plant breeding is not only a scientific endeavour but also a social responsibility that demands transformative thinking to drive sustainable food systems.

Highlighting the current state of global food systems, he described them as broken, affected by armed conflicts, changing consumption patterns, environmental degradation, climate change, and health crises.

Dr. Tenkouano stressed the urgency for plant breeders to translate research into tangible results that improve livelihoods, noting that communities are increasingly demanding solutions that address their immediate realities. He called for a re-examination of genotype-by-environment interactions, advocating for approaches that maximise the performance of varieties within their specific ecological contexts.



He further urged the agricultural community to reframe its narrative linking agricultural productivity to health outcomes rather than focusing solely on food production. Dr. Tenkouano observed that, globally, funding flows are increasingly directed toward health-related initiatives, while agriculture, despite being fundamental to human survival, continues to receive comparatively limited support. To address this imbalance, he proposed that agricultural scientists and plant breeders emphasise how their work directly contributes to improving public health — by ensuring access to safe, nutritious, and diverse diets.

He noted that positioning agriculture as a driver of better health outcomes could attract more investment and policy attention, aligning food systems research with the broader human development agenda.

In conclusion, Dr. Tenkouano emphasised that winning the race against food insecurity, malnutrition, and climate change requires not only innovation in plant breeding but also a shift in mindset. He called for collective action, increased investment in research, and alignment between science, sustainability, and human well-being to achieve resilient and equitable food systems across Africa.



## **Keynote Address II: Plant breeding programs in the genomic selection era**

**Facilitator:** Pangirayi B. Tongoona, Plant Breeding Consultant

**Speaker:** John Hickey, Head of Corn Product Design, Bayer, USA

Dr. John Hickey delivered a keynote address on the future of plant breeding programs in Africa from now until 2030. He emphasized that while plant breeding can be complex, its core mission remains straightforward to generate high-quality germplasm efficiently and to ensure its rapid dissemination through effective seed systems and supply chains.



He noted that the biggest opportunity, and often the greatest challenge, lies not in developing superior varieties but in ensuring that these improved seeds reach farmers in a timely and accessible manner.

Dr. Hickey discussed emerging technologies in plant breeding, highlighting advances that allow breeders to measure, predict, and optimize plant performance with unprecedented precision. He underscored the importance of preserving genetic diversity while leveraging cutting-edge tools to enhance productivity and resilience across African crops.

He also outlined key principles for strengthening plant breeding programs in Africa, stressing the need for innovation, efficiency, and stronger alignment with farmer realities.

In conclusion, Dr. Hickey reaffirmed Bayer's commitment to advancing breeding innovation and capacity development in Africa, emphasizing that technology, collaboration, and practical implementation will be central to transforming the continent's agricultural future.

### **Keynote Address III: Progress in Developing an Integrated and Sustainable Pathway for Breeding and Seed System Operations in Africa**

**Facilitator:** Ranjana Bhattacharjee, IITA, Nigeria

**Speaker:** Mercy Diebiru-Ojo, IITA, Nigeria



In her keynote, Dr. Mercy Diebiru-Ojo highlighted significant progress in integrating breeding and seed systems for vegetatively propagated crops (VPCs), using her cassava research at IITA as a case study. She emphasized that these crops, which are critical to food security and commercialization in sub-Saharan Africa, face unique challenges, including low multiplication rates, bulky planting material, and high susceptibility to disease.

Dr. Diebiru-Ojo underscored how coordinated initiatives such as BASICS and other regional programs have helped address these constraints by linking breeding programs with seed delivery channels, value-chain actors, and regulatory institutions. This integrated approach has shifted cassava improvement from research-driven to demand-led breeding, ensuring that varieties reflect farmer preferences, processing needs, and market opportunities across diverse agro-ecologies. As a result, varieties that once remained within research stations are now reaching farmers through structured delivery pathways and new early-generation seed enterprises.

Dr. Diebiru-Ojo emphasized that sustainable agricultural transformation in Africa depends on well-integrated seed systems, digital innovation, private-sector partnerships, and continuous feedback between breeders and end-users.

The cassava experience, she noted, demonstrates how aligning research, markets, and delivery systems enables crop innovations to move efficiently from the lab to farmers' fields, strengthening productivity, resilience, and food-system sustainability across the continent.

## **Keynote Address IV: What Will Climate-Resilient Agriculture Look Like, and How Will You Breed for It?**

**Facilitator:** Casper Kamutando, ZPBA, Zimbabwe

**Speaker:** Kevin Pixley, Dryland Crops Program Director (DCP), CIMMYT

Dr. Kevin Pixley delivered a keynote on the urgent need to redesign breeding strategies in response to accelerating climate change. He highlighted that, rising temperatures, shifting rainfall patterns, and increasing production risks require breeding programs to be forward-looking rather than reactive.

While climate change is critical, Dr. Pixley stressed that poverty and persistent food and nutrition insecurity remain the most pressing challenges in Africa. He noted that the current pace of genetic gain is insufficient to keep up with rapidly changing environments.

Dr. Pixley observed that many breeding programs focus primarily on increasing speed rather than rethinking priorities. He proposed reverse design thinking—starting with a vision of future agricultural systems and working backward to identify key bottlenecks. He illustrated potential scenarios ranging from intensive rooftop farming to multi-crop rural systems, emphasizing traits such as rapid maturity, enhanced nutrition, and crop compatibility within diverse systems.





He highlighted the potential of underutilized crops, such as fonio, to provide high-value livelihood opportunities if breeders and food technologists jointly address constraints like low yield, lodging, and processing challenges.

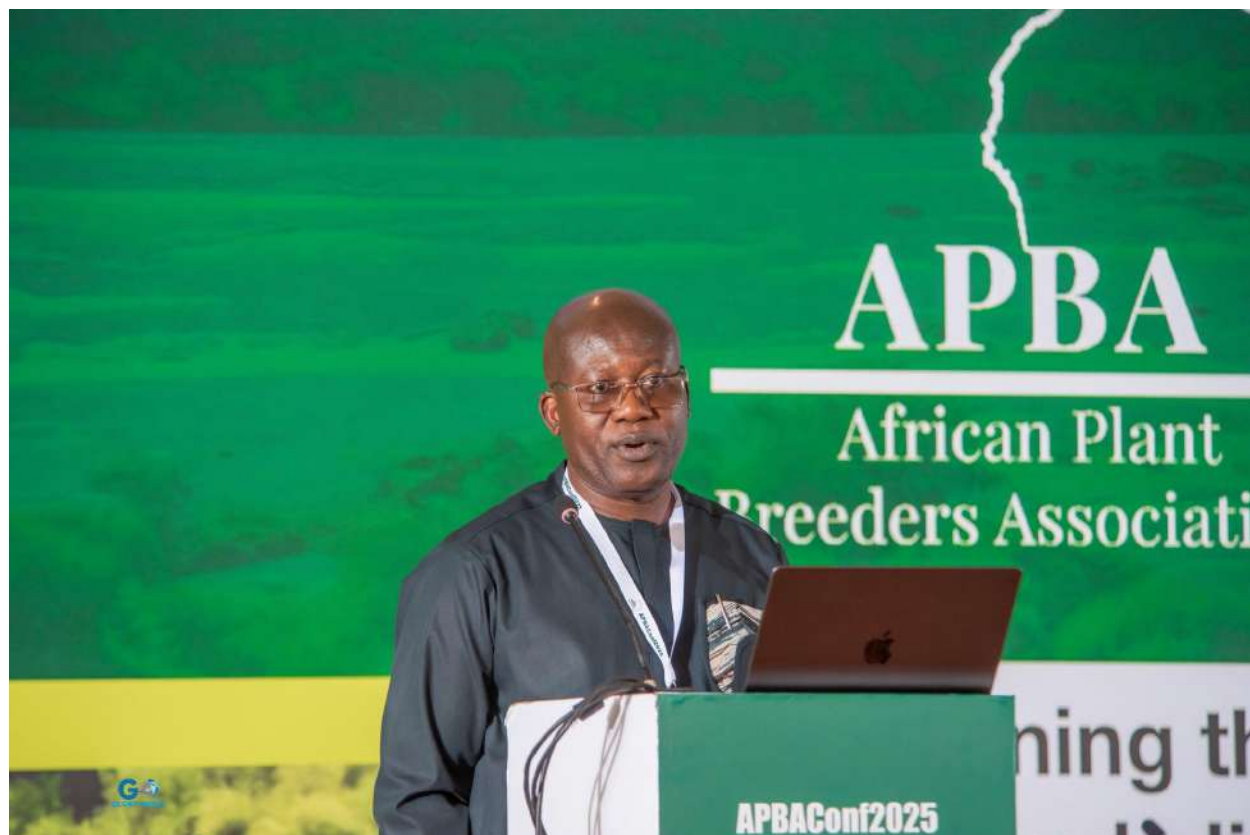
Dr. Pixley concluded that achieving climate-resilient agriculture requires a holistic approach: breeding crops for adaptability, nutrition, and integration within diverse cropping systems, while linking innovations to agronomy, food processing, markets, and farmer livelihoods.

## **Keynote Speaker V: Reimagining Capacity Building and Education in Crop Improvement in Africa**

**Facilitator:** Julia Sibiya, President, APBA

**Speaker:** Eric Y. Danquah, WACCI, University of Ghana

Prof. Eric Y. Danquah delivered a keynote address on reimagining capacity building and education in crop improvement in Africa. He emphasized that revitalizing higher education is central to the continent's agricultural transformation, noting that strong and well-resourced universities are essential for driving innovation, building human capacity, and sustaining long-term development.



He explained that current capacity gaps in African agriculture are rooted in the structural adjustment programmes of the 1980s and 1990s, when international financial institutions encouraged governments to deprioritize higher education in favour of basic education. This historical neglect, he argued, created both moral and technical crises, weakening Africa's ability to train scientists, innovate, and respond to its own food security challenges.

Drawing on the success of the West Africa Centre for Crop Improvement (WACCI), which has trained over 120 PhD plant breeders from 20 African countries, Prof. Danquah demonstrated that African-led institutions can deliver world-class scientific training when adequately supported.

He called for bold, reparative investments to rebuild Africa's knowledge systems, including the cancellation of debt tied to higher-education projects, long-term endowment funding for African universities, and the establishment of an African Talent Fund for Plant Breeding. He urged African governments and global partners to commit to sustained support for national research funds and regional centres of excellence to ensure stability, autonomy, and long-term impact.

Prof. Danquah concluded by reaffirming that Africa's food security depends on restoring and strengthening the human and institutional capacity needed to drive agricultural innovation across the continent.

## **Keynote Address VI: An introduction to the Novo Nordisk Foundation – a new actor in sub-Saharan Africa**

**Facilitator:** Damaris A. Odeny

**Speaker:** Erik Alexandersson, Novo Nordisk Foundation, Denmark

Dr. Erik Alexandersson delivered a keynote highlighting the Novo Nordisk Foundation's emerging role in promoting sustainable agri-food systems in sub-Saharan Africa. He emphasized the Foundation's commitment to advancing agri-food research, strengthening nutrition, and fostering sustainability across the food value chain.



Dr. Alexandersson outlined the Foundation's history, strategy, and global expansion. Established over a century ago, the Foundation has recently expanded its focus beyond health to include sustainability, climate-smart agriculture, and sustainable food systems, reflecting its strategic priorities for 2030.

He explained that the Foundation operates on three main pillars: health, life sciences ecosystems, and sustainability, with particular attention to sustainable and high-yield agriculture, nutritious food, and climate change technologies. He also highlighted key initiatives of the Foundation in Africa.



Dr. Alexandersson emphasized the Foundation's data-driven approach, leveraging advanced computational tools, supercomputing, AI, and genomics to support research and innovation.

He concluded by reiterating the Foundation's mission to use science, technology, and partnerships to transform agri-food systems, enhance sustainability, and improve nutrition and health outcomes in sub-Saharan Africa.

## **Keynote Address VII: Developing and Delivering Impactful Crop Varieties to Address the Challenges of Food Insecurity, Malnutrition, and Poverty**

**Facilitator:** Mr Edmore Mtetwa, Head, Seed Services, Zimbabwe

**Speaker:** Chris Ojiewo, Inclusive Delivery lead of CGIAR, Breeding for Tomorrow

In his keynote address, Dr. Chris Ojiewo highlighted that a major challenge in addressing food insecurity in Africa is translating plant breeding innovations into tangible benefits for farmers and communities. He stressed that plant breeders must ensure new varieties reach farmers to effectively combat food insecurity, malnutrition, and poverty.





Dr. Ojiewo emphasized the importance of co-developing varieties with public and private partners including seed companies, farmers, and consumers and engaging these stakeholders early in on-farm trials. This approach ensures that new varieties are farmer-preferred, market-relevant, nutritious, and perform well under real-world conditions.

Dr. Ojiewo also gave an overview of the CGIAR Breeding for Tomorrow (B4T) program, which integrates product design, accelerated breeding, and shared breeding resources to support the entire pipeline from variety development to on-farm adoption. He explained how B4T is transforming crop breeding by accelerating the development of climate-resilient and market-responsive varieties.

He concluded by stating that the ultimate measure of success is not the number of varieties released, but the extent to which they are adopted, improve livelihoods, and address pressing challenges. Through integrated breeding, co-development, and inclusive delivery, plant breeding can play a pivotal role in tackling food insecurity, malnutrition, and poverty across Africa.

## High-level Panel Discussions

### High-Level Panel Discussion: Winning the Race against Food Insecurity, Malnutrition, and Climate Change

**Moderator:** Xavier Mhike, MC

**Panelists:**

- Abdou Tenkouano, The International Centre for Insect Physiology and Ecology (ICIPE)
- Stanford Blade, DDG-R, ICRISAT
- Chiedozie Egesi, Executive Director, National Root Crops Research Institute, Nigeria
- Nadine Dushimiyimana, Bayer, Head of Regulatory Science – East Africa
- Claid Mujaju, Director of the Seed Services Division in the Ministry of Lands, Agriculture, Fisheries, Water and Rural Development, Ministry of Agriculture Zimbabwe

The panel explored Africa's capacity to address food insecurity, malnutrition, and climate change, highlighting strategies to enhance resilience and develop sustainable food systems.

Dr. Abdou Tenkouano emphasized the need to realign agricultural priorities by linking food production with health and nutrition outcomes. While advanced tools such as artificial intelligence and genomic data can enhance productivity, he noted that technological innovation must be guided by strategies that balance profitability, sustainability, and long-term impact. He also stressed the importance of mentoring young scientists and fostering stronger collaboration between international and national research systems.

Dr. Stanford Blade called for plant breeders to go beyond developing new varieties by strengthening seed systems, delivery models, and partnerships to ensure innovations reach farmers. He noted that the impact of released varieties depends on closing the gap between research, seed supply, and on-farm adoption. He also urged broader breeding goals that address the priorities of farmers and governments, including producing high-quality livestock feed to support integrated agricultural systems.

Prof. Chiedozie Egesi highlighted the importance of demand-led breeding to ensure crop improvement programs meet the needs of farmers, consumers, and markets. He stressed that breeding success requires capacity building and stakeholder engagement, noting that most African staple crops are produced by smallholder farmers with limited private-sector investment.

He encouraged public institutions to lead breeding efforts while adopting private-sector efficiency and market-oriented approaches. He also praised regional training programs such as ACCI, WACCI, MARCCI, and the African Plant Breeding Academy for developing the next generation of plant breeders.

Dr. Claid Mujaju discussed the progress and challenges in harmonizing seed systems and regulatory frameworks across Africa. While efforts to align regulations and establish regional seed catalogues have enabled cross-border registration and marketing of varieties, he emphasized that implementation remains the main challenge. He highlighted the need to translate policies into practical action and to engage breeders in international treaties governing access and benefit-sharing of genetic resources.

From the private-sector perspective, Nadine Dushimiyimana, noted that Africa has strong regulatory and policy frameworks, but inconsistent implementation and differing requirements across agencies and neighboring countries create delays and unpredictability in seed movement.

She emphasized that successful innovation depends on a predictable, science-based regulatory environment and harmonized systems. Highlighting the importance of public–private partnerships, she described Bayer’s commitment to linking research and development with local implementation to ensure innovations reach farmers.

In conclusion, the panelists called for coordinated efforts to bridge the gap between innovation, policy, and practice, ensuring that research, regulation, and implementation work together to advance Africa’s food systems.

## High Level Panel Discussion: Making Agrifood Systems Sustainable in Africa

**Moderator:** Ranjana Bhattacharjee, IITA, Nigeria

**Panelists:**

- Mercy Diebiru-Ojo, IITA, Nigeria
- Sieg Snapp, Program Director, Sustainable Agrifood Systems Program (SAS), CIMMYT
- Mercy Lung'aho, Lead - Food Security, Nutrition, & Health Program · International Institute of Tropical Agriculture (IITA)
- Wilson Nkhata, Common Bean Breeder and Southern Africa Bean Research Network Coordinator Pan-Africa Bean Research Alliance (PABRA) and the Alliance of Bioversity International and CIAT
- Donn Cummings, Founding member of the NAPB

The panel addressed key issues related to making agrifood systems in Africa more sustainable, resilient, and inclusive, focusing on farmer-centered innovation, environmental sustainability, nutrition, financing, and partnerships.

Mercy Diebiru-Ojo emphasized that agrifood system innovations must be designed with farmers to ensure relevance and adoption. She highlighted barriers faced by smallholder farmers, including high costs, limited access to credit, weak extension services, and poorly adapted technologies. She stressed that sustainable transformation requires integrated approaches linking breeding, seed systems, markets, nutrition, and policy.

Sieg Snapp underscored the need to balance food production with environmental protection, noting the challenge of meeting food and nutrition needs while remaining within planetary boundaries. She advocated for systems-based approaches that integrate soil health, crop–livestock interactions, and agroforestry, and emphasized locally adapted solutions that combine productivity with long-term sustainability.

Mercy Lung'aho highlighted the role of nutrition-sensitive interventions, distinguishing commercial fortification from biofortification. She noted that while commercial fortification benefits urban and formal markets, it often fails to reach rural communities. She emphasized that biofortification delivers essential nutrients through seed and planting material, provided nutrients are bioavailable and retained after processing, and requires close collaboration among breeders, nutritionists, and food scientists.

Wilson Nkhata addressed financial and policy challenges, emphasizing the need for concessional financing, debt restructuring, and public–private partnerships to scale seed systems and food production. Drawing on Malawi's experience, he illustrated how co-investment between government and the private sector expanded bean production and strengthened food system outcomes.

Donn Cummings stressed the importance of multi-stakeholder collaboration, effective leadership, and youth engagement in driving innovation. He also highlighted the need for systems-based solutions to reduce food loss and waste, including improved post-harvest technologies and storage.

In closing, the panel emphasized that sustainable agrifood systems in Africa require coordinated action across research, policy, finance, and markets, supported by strong partnerships, inclusive approaches, and systems-level thinking.

## **High Level Panel Discussion: Capacity Building and Education in Crop Improvement**

**Moderator:** Julia Sibiya, APBA President and Vision for Adapted Crops and Soils (VACS) Capacity Development Lead, CIMMYT

### **Panelists:**

- Klaus Koehler, Advancing Professional Growth and Industry Excellence, Corteva Agriscience & NAPB
- Rufaro Madakadze, Lead, Capacity Building and Technical Support, Alliance for a Green Revolution in Africa (AGRA)
- Mawulawoe Awity, Senior Plant Breeding Researcher, WACCI
- Allen Van Deynze, Director of the Seed Biotechnology Center and Associate Director of the Plant Breeding Center at University of California
- Eric Danquah, Founding Director of the West Africa Centre for Crop Improvement (WACCI) at the University of Ghana.
- John Derera, Senior Director, Plant breeding & Pre-breeding, Collaborative Breeding Leadership Program (CBLP), IITA

The session focused on strengthening education and capacity building for plant breeding in Africa, emphasizing the need for dynamic training systems, strong partnerships, and sustained investment in people.

Rufaro Madakadze highlighted AGRA's long-standing role in developing a skilled plant breeding workforce and supporting seed system actors. She emphasized that Africa still faces a shortage of highly trained scientists capable of developing and delivering technologies suited to climate change. Madakadze stressed the importance of continuous, adaptive capacity building that blends technical training with mentorship, industry exposure, and practical experience through partnerships with NARS, CGIAR centres, and private seed companies.

Building on this, Allen Van Deynze underscored lifelong learning as essential for breeders to remain effective and relevant. Through the African Plant Breeding Academy, he noted that targeted professional development equips breeders with hands-on skills that enhance the performance of national programs. He added that curricula should be updated regularly to reflect



scientific advances, while maintaining flexible structures that allow graduates to adapt to new demands.

Mawulawoe Awity emphasized that capacity building must be holistic—linking technical competence with creativity, adaptability, and interdisciplinary learning. She urged universities to reform curricula to encourage critical thinking and innovation. Awity also pointed to challenges faced by students, including limited funding, weak industry linkages, inadequate mentorship, and the additional barriers women face balancing academic and family responsibilities.

John Derera reinforced the need to broaden training beyond technical skills. He argued that modern plant breeders must be strategic leaders able to anticipate climate, market, and policy shifts. Competencies such as communication, project management, and understanding socio-economic contexts, he noted, are increasingly essential.

Eric Danquah stressed that African universities must keep training programs dynamic and aligned with global standards. Drawing from WACCI's experience, he emphasized the value of international accreditation, regular curriculum reviews, and visiting scientists who deliver specialized modules to ensure graduates stay current and industry ready. He concluded that Africa's long-term progress depends on sustained investment in people and stronger multi-institutional partnerships.

Klaus Koehler added a private-sector perspective, underscoring the need for continuity in funding, stronger product development pipelines, and deliberate talent management. He highlighted mentorship—both individual and group models—as a key tool for developing future leaders in plant breeding. Koehler also encouraged deeper public-private collaboration and proposed professional-skills workshops and technical symposia to strengthen breeder competencies across the continent.

In closing, the panel agreed that capacity building in plant breeding is a shared responsibility requiring coordinated action from universities, research institutions, governments, donors, and the private sector. They underscored the essential role of organizations such as APBA in driving policy advocacy, fostering partnerships, expanding mentorship opportunities, and promoting continuous learning to build a strong and sustainable plant breeding workforce for Africa.

## High Panel Discussion: Innovative fundraising for crop improvement

**Moderator:** Damaris A. Odeny, Principal Scientist - ICRISAT and Chair, Scientific Committee, APBA

### Panelists:

- Erik Alexandersson, The Novo Nordisk Foundation, Denmark
- Evelyn Lusenaka, Centre of Excellence for Seed Systems in Africa (CESSA), Alliance for a Green Revolution in Africa (AGRA)
- Young Wha Lee, Gates Foundation, USA
- Tom Pircher, GIZ, Germany
- Honourable Vangelis Peter Haritatos, Deputy Minister of Lands, Agriculture, Fisheries, Water and Rural Development, Zimbabwe

The panel examined the growing challenge of financing crop improvement in Africa, emphasizing the need for innovative approaches to sustain breeding programs, strengthen seed systems, and ensure improved varieties reach farmers. Panelists highlighted financial constraints facing governments, donors, and research institutions, while exploring opportunities to mobilize new funding streams.

Hon. Vangelis Haritatos underscored the critical role of R&D as the foundation of food and nutrition security, noting that resilient and high-yielding varieties rely on sustained investment. He highlighted the government's commitment to international benchmarks—allocating 10% of the national budget to agriculture and 1% of agricultural GDP to R&D—while acknowledging ongoing resource limitations. He emphasized the importance of strong public–private partnerships and support from development partners, including CGIAR centers, to strengthen R&D investment and ensure agricultural innovations reach farmers.

Young Wha Lee observed that declining Official Development Assistance has created funding gaps that traditional sources can no longer fill. She explained that the Gates Foundation is now prioritizing initiatives with clear, measurable pathways to farmer impact. With limited resources, breeding programs must be more strategic, guided by Target Product Profiles (TPPs) to focus on varieties with strong farmer demand and demonstrable benefits, thereby strengthening the case for continued investment.

Tom Pircher highlighted GIZ's long-standing support for global agricultural research. He stressed that meaningful impact in crop improvement requires coordinated investment across the entire value chain, linking breeding with seed systems, markets, and farmer adoption. Breeding alone, he noted, cannot achieve impact if downstream delivery systems remain weak.

Evelyn Lusenaka highlighted persistent gaps in African seed systems, particularly in commercialization, distribution, and farmer adoption. She emphasized that innovative financing, including blended approaches that combine donor funding with private-sector capital, is essential to attract investment and strengthen the seed sector.

Erik Alexandersson encouraged African research institutions to actively pursue competitive grant opportunities and support investigator-driven research. He noted that the Novo Nordisk Foundation is committed to long-term investment and can complement other donors by supporting research infrastructure, data-driven approaches, and sustainability-focused innovations.

Addressing concerns that many improved varieties remain underutilized, panelists agreed that delivery systems must receive equal attention alongside breeding. Impact occurs only when varieties are produced, distributed, and adopted at scale. Lusenaka and Lee highlighted the importance of involving private companies early in the product design process to ensure new varieties meet commercial requirements and farmer demand.

The panel suggested that APBA could support its members in accessing funding by using platforms such as the African Journal for Crop Improvement to engage global stakeholders. Members working on opportunity crops could leverage the Gates Foundation's country offices to identify collaborative opportunities that align their work with both the Foundation's priorities and national government goals.

### **Presentation of awards to Dr. Donn Cummings and Prof Eric Danquah for Outstanding Contributions to Plant Breeding and Support to the APBA**

During the conference, APBA presented awards to outstanding contributors to the field. Dr. Donn Cummings, Founding Member of the National Association for Plant Breeding (NAPB), received the Capacity Building and Mentorship Award in recognition of his exceptional efforts in nurturing the next generation of plant breeders and extending the Borlaug legacy in Africa.

Prof. Eric Danquah, Founding Director of the West Africa Centre for Crop Improvement (WACCI) and inaugural president of APBA, was honored with the Meritorious Service Award, acknowledging his pivotal role in shaping the foundation of the association and championing scientific excellence



***Prof. Eric Danquah**, Founding Director of the West Africa Centre for Crop Improvement (WACCI) and inaugural president of APBA, honored with Meritorious Service Award,*



***Dr. Donn Cummings**, Founding Member of the National Association for Plant Breeding (NAPB), receiving the Capacity Building and Mentorship Award*



## APBA Business Meeting & Executive Elections

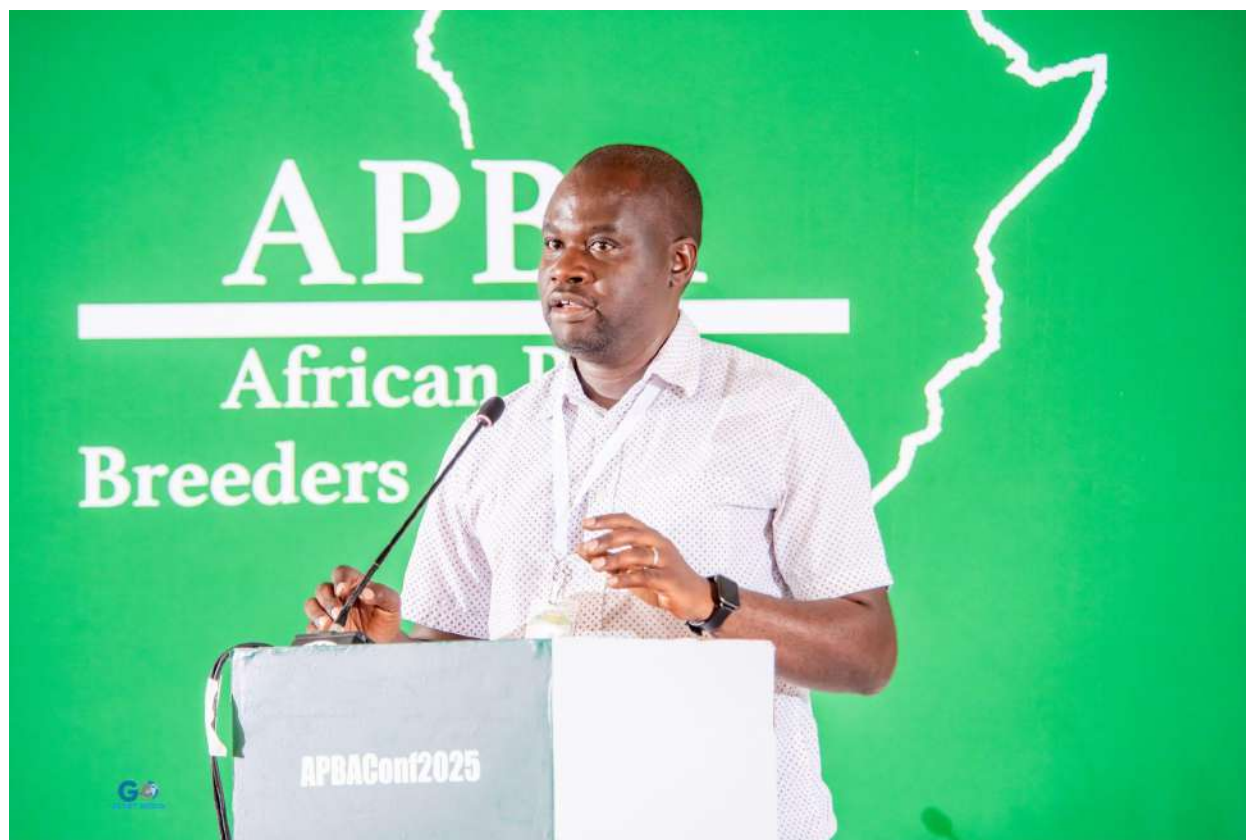
### Opening and Welcome



The meeting commenced with opening remarks and a warm welcome from Professor Julia Sibiya, President of APBA. She expressed her gratitude to the new members who joined the association this year, as well as to long-standing members who have supported APBA since its inception.

Professor Sibiya commended the dedication of the APBA Executive Committee, emphasizing that the association's progress would not have been possible without their commitment and teamwork. She offered special thanks to the Immediate Past President, Professor Eric Danquah, for his continued guidance, and to the APBA Secretariat for their tireless efforts in sustaining the association's activities and ensuring the smooth organization of the conference.

## Narrative Report from the APBA



The General Secretary of APBA, Dean Muungani, presented a comprehensive report on the status and progress of the association over the past two years. He began by reaffirming the vision and mission of APBA and highlighting key achievements, conference outcomes, challenges encountered, and lessons learned.

A major milestone celebrated during this period was the launch of the African Journal for Crop Improvement, a long-awaited deliverable since APBA's establishment in 2019. The journal will be partnering with CABI, and members were encouraged to support it through manuscript submissions. The report also noted APBA's strengthened collaboration with the National Association of Plant Breeders (NAPB) in the United States, including reciprocal participation in annual meetings.

Membership growth was highlighted as a significant success. From 101 members in 2019, APBA now boasts 518 active members, including over 170 female members. The association also held 48 Executive Committee meetings since inception, and in 2025, convened six informative webinars, and published two newsletters. APBA continued to expand its visibility through its digital platforms, including X, YouTube, and LinkedIn.

One of the most notable achievements was that the 2025 conference was funded primarily by participants, marking APBA's first fully organic, cost-recovery-based meeting. With over 420 registered participants, this approach demonstrated the association's growing sustainability and reduced reliance on donor funding.

The scientific program of the conference featured five major thematic sessions, including keynote presentations, panel discussions, side events, parallel sessions, and poster sessions. Abstract selection was conducted rigorously by the Scientific Committee to ensure high-quality content aligned with the conference themes. Although APBA initially intended to host a hybrid event, high operational costs—particularly for internet infrastructure—led to a fully in-person format.

Despite logistical constraints, including limited space for poster displays in a high-cost venue, the conference achieved impressive participation: over 200 organizations, attendees from 61 countries, 34 separate events, 16 side events, 179 presentations, 200 poster displays, 49 oral presentations, and seven keynote speakers. Overall attendance exceeded 450 participants, surpassing the 2023 conference and setting a new record for APBA.

Beyond the scientific sessions, the conference provided valuable networking opportunities, including cultural activities at the Boma dinner and dedicated social hours for participants to connect.

In closing, General Secretary Muungani expressed deep appreciation to the APBA Executive Committee, the Local Organizing Committee, the Zimbabwe Plant Breeders Association, and the APBA Secretariat, whose dedication ensured the successful delivery of the conference. He also extended sincere thanks to all sponsors and partners for their continued support of APBA's mission.

## APBA Financial Report



Dr. Agyemang Danquah, Treasurer of APBA, presented the financial report, offering an overview of the association's financial status from its inception to 2025. He reported that total receipts amounted to USD 782,803, while total expenditure stood at USD 755,139.77. He noted that some outstanding payments were not reflected in the figures, and therefore the values represented the current state of the accounts at the time of reporting. The available cash balance stood at USD 38,337.95, with the expectation that APBA would remain in a positive financial position after all pending payments were finalized.

Dr. Danquah highlighted the financial performance for 2025, noting that membership dues generated nearly USD 12,000, sponsorships exceeded USD 100,000, and conference registrations contributed close to USD 140,000, bringing total receipts for the year to over USD 260,000. Expenditure included conference-related payments amounting to approximately USD 256,000, and Secretariat and administrative costs totaling just over USD 9,000, bringing total payments to USD 265,800.42.

He expressed appreciation to all partners and sponsors who supported APBA's activities and reaffirmed the association's commitment to prudent financial management.

Following the presentation, questions and comments were invited from the floor.



## **Questions and Comments**

A participant inquired about the cost of establishing the African Journal for Crop Improvement and the potential for revenue generation, such as through subscriptions.

In response, Damaris clarified that the primary objective of the journal was to enhance the visibility of African scientific output rather than generate significant revenue in the short term. The focus is on providing African researchers, especially early-career scientists, with a platform for increased recognition and leadership in scientific publishing. Future revenue opportunities may be explored once the journal is fully established.

Another participant asked about membership growth strategies and how APBA is working to attract more members across disciplines.

The Secretary highlighted that APBA's main value proposition is the biennial conference, which continues to grow in quality, size, and scientific output. The association also provides platforms such as monthly webinars, regional engagement and collaborations such as NAPB, Novo Nordisk Foundation for capacity building of its members. These initiatives strengthen APBA's visibility and appeal to breeders, researchers, and related professionals across the continent.

## **Poster session awards**

The APBA Graduate Students' Wing organized a poster competition for graduate students participating in APBAConf2025. Three students were recognized for presenting the most outstanding posters: Evalyne Nyawira Gichuki received the award for Best Scientific Poster, Sylvia Monica Kalemera was recognized for the Most Innovative Poster, and Innocent Unzimai won for Best Visual Communication. The awards, sponsored by the New Phytologist Foundation, carried cash prizes of 500 euros, 300 euros, and 200 euros, respectively.

Ms. Mawulawoe Awity, President of the Graduate Students' Wing, expressed her appreciation to all students who submitted posters for the conference.



### **Election of APBA Executives**

A call for nominations for new APBA executives was announced prior to the conference. The APBA Electoral Commissioner, Dr. Rufaro Madakadze, explained the election process. The election was held online, and only members in good standing were permitted to vote. At the conclusion of the election, Dr. Madakadze announced the results to the members.

The newly elected executives are:

- *President:* Dr. Damaris A. Odeny
- *Vice President:* Dr. Casper Kamutando
- *Secretary:* Dr. Happy Daudi
- *Treasurer:* Prof. Daniel Dzidzienyo
- *Publications, Information, and Fundraising Officer:* Dr. Ranjana Bhattacharjee



## President Elects Address



Dr. Damaris Odeny began by expressing her heartfelt gratitude to all APBA members for entrusting her with the role of President. She extended special thanks to the outgoing President, Prof. Julia Sibiya, and the Executive Committee for their dedication and guidance.

Dr. Odeny acknowledged the hard work of the APBA Secretariat, highlighting their tireless efforts in managing communications, organizing events, and supporting members. She encouraged members to be actively involved in the association, emphasizing that APBA's success depends on collective engagement, positive feedback, and collaboration.

She called on members to support initiatives aimed at growing membership, strengthening networks across African countries, and promoting the visibility of plant breeding research. Dr. Odeny concluded by reiterating her commitment to serving the association with dedication and integrity, and to working with partners and members to maximize APBA's impact across the continent and globally.



## Host of the 2027 APBA Conference



The former President of the Nigerian Plant Breeders Association, Prof. Chiedozi Egesi presented Nigeria's successful bid to host the next APBA conference in 2027 on behalf of the Association. He highlighted the country's strong research infrastructure, including numerous frontline agricultural research institutes, and emphasized Nigeria's strategic importance in advancing crop improvement in Africa.

Prof. Egesi provided an overview of the proposed conference venue in Abuja, including hotels and potential event locations, showcasing the city's capacity to host a large, international gathering.

Following the presentation, Nigeria was officially announced as the host country for the 2027 APBA Conference.

## Closing Remarks



Prof. Tongoona, Honorary Member of ZPBA, delivered the closing remarks. He expressed his gratitude for the strong attendance and the enthusiasm demonstrated throughout the conference, highlighting the active participation in sessions, presentations, and the poster competition.

He extended his appreciation to all partners, institutions, and individuals whose support and contributions made the conference a success.