

A woman in a pink shirt is shown from the chest up, looking down at a plant with white flowers. She is holding a branch of the plant. The background is a bright, cloudy sky. The image is partially obscured by a large orange and red geometric overlay on the right side.

# TOWARDS THE CROWNING MOMENT



ISAAA AFRICENTER  
ANNUAL REPORT 2020



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## AFRICENTER'S MANDATE

### VISION

A food secure Africa free of hunger and poverty.

### MISSION

To share knowledge on agricultural biotechnology and biosafety through strategic communications and outreach for informed policy and choice.

## APPROACH



### Communication and Knowledge Sharing

To improve awareness and knowledge on crop biotechnology



### Capacity Building

To strengthening capacity for effective science communication



### Policy Engagement

To create a favourable environment for crop biotechnology development



### Media Engagement

To enhance more balanced and accurate reporting on agri-biotechnology and biosafety



### Communication on Emerging Gene Technologies

To encourage constructive dialogue and facilitate informed dialogue on emerging gene technologies in Africa



### Strategic Partnerships

To facilitate a coordinated approach in optimizing crop biotechnology resources

# Message from the Director



**Dr. Margaret Karembu**  
**Director, ISAAA AfriCenter**

“

We believe that a successful journey begins with the end in mind. For us, that end represents changing the fortunes of African farmers by delivering the benefits of biotechnology tools.


There is an African proverb that says “however long the night, the dawn will break.” This adage manifested itself within Africa’s biotechnology and biosafety landscape in 2020. After years of several challenges and set-backs, the continent led progress among regions of the world in GM crop adoption. Africa doubled the number of countries planting biotech crops from three in 2018 to six in 2019. Indeed, the tides are changing, and the region is at its tipping point.

These changes can be attributed to our dedication, resilience and resolve to keep forging ahead despite the hurdles. We believe that a successful journey begins with the end in mind. For us, that end represents changing the fortunes of African farmers by delivering the benefits of biotechnology tools. We refuse to lose. Even when the journey seems insurmountable, we stay in it to win it, not because it is easy, but because it is necessary.

The fighting spirit we have built over the years came in handy in the face of COVID-19. As the world grappled with how to settle into this “new normal”, we quickly shifted gears and adjusted our mode of operation to virtual engagements. Because of this, we were able to hold more than 20 webinars, reaching close to 3000 people, from over 100 countries in a span of 6 months. The webinars that focused on genome editing, animal biotechnology as well as the global status of biotech crops, undoubtedly provided a valuable knowledge base that will encourage constructive dialogue.

We continued to strategically share knowledge on crop biotechnology, and intensified engagements with policy and decision makers in an effort to build a favourable policy environment for gene technologies. AfriCenter also continued to build the capacity of those who contribute towards shaping public opinion on biotech and biosafety, and engaged various key influencers that play a fundamental role in ensuring society benefits from science. Despite the extraordinary working conditions, we were also able to forge new partnerships for a better Africa.

Undoubtedly, 2020 was a difficult year for everyone. It required us to tap into our strengths, purpose and vision more than before, to activate our promise to African small-holder farmers. We are not fully there yet, and we will not relent. Our desire for this continent remains consistent: to deliver appropriate agricultural technologies into farmers’ hands. To those that stood by us during these trying times, and those who continue to walk with us despite the uncertainties, we thank you. Above all, special appreciation to the Kenyan President for conferring me a state honour – the Moran of the Order of the Golden Spear (MBS), a big boost towards pursuing our dream of making science count for Africa.

A stylized illustration of a woman with dark curly hair, wearing a white long-sleeved shirt and a green vest, shouting into a green and white megaphone. The background is a dark green with a halftone dot pattern, transitioning to a lighter green on the right side.

# Communication and Knowledge Sharing

AfriCenter strives to increase knowledge and awareness on agricultural biotechnology in Africa. Our goal is to share credible information to diverse audiences in order to facilitate informed policy and choice. The Center's knowledge sharing initiative is driven by a strategic communications and policy outreach strategy. In this regard, the Center serves the information needs of different stakeholders and quenches the developing world's thirst for science-based information and knowledge. Through these efforts, we have managed to positively change perceptions and build the public's trust in biotechnology. The following activities were carried out:

- Virtual launch of the Global Biotech Report - Brief 55
- Development of knowledge products
- Publication of the DrumBeat, a monthly e-newsletter
- Biotech sensitization forums and study tours
- Social media campaign in support of agri-biotech

## Launch of Brief 55

The report on Global Status of Commercialized Biotech/GM Crops, popularly referred as the Brief, is ISAAA's flagship product for knowledge and information sharing. The Brief is an annual review on the global status of commercialized biotech crops and their positive economic, environmental and humanitarian impacts. The report is unique and has become the standard reference for biotech crops by popular media, academia and governments. It is launched every year in different countries around the world. Given its positive impact, AfriCenter has played a critical role in launching the Brief across the continent and scaling out its reach and use.

- The latest report (ISAAA Brief 55) was launched in Africa in November 2020 via a webinar broadcast from Nairobi.
- The report shows Africa doubled the number of countries planting biotech crops from three in 2018 to six in 2019, leading the progress among the regions of the world in GM crop adoption.
- The highlights of the report were captured in eight mainstream media outlets, mainly in Kenya and Nigeria

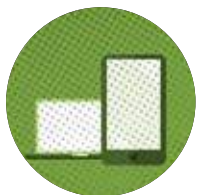
### KEY IMPACT



The highlights of the report were amplified in eight mainstream media across Africa garnering a record 11 million media impressions.



The increased adoption of biotech crops in Africa boosted confidence about the technology and served as a reminder that the continent cannot be left behind in reaping the benefits of crop biotechnology.

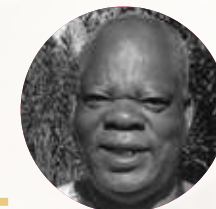


The virtual launch provided a platform for different stakeholders to understand and appreciate the benefits of biotech crops.

“

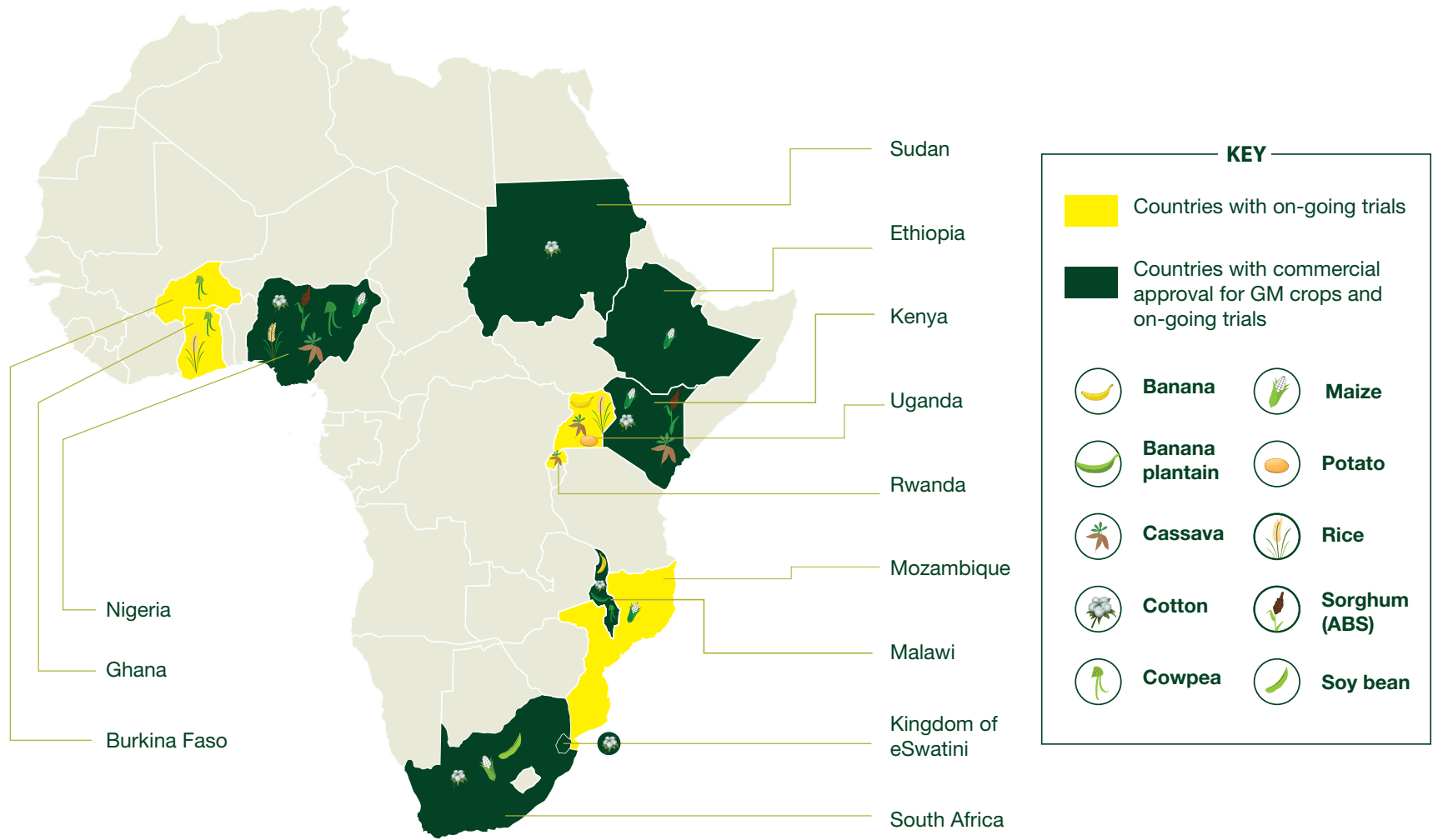
One challenge hampering research and development of Bt cotton in Africa is low public awareness about agricultural biotechnology. ISAAA has played a key role in enhancing awareness and demystifying the Bt cotton technology especially in Malawi.

*Prof. James Bokosi, Principal Investigator, Bt Cotton Research in Malawi*



# Africa Biotech/GM Research and Commercialization Status by 2020


**10** CROPS | **12** COUNTRIES | **16** TRAITS













# Crop Traits Under Various Stages of Research in Africa by 2020






## Kenya

-  **Maize** ..... Insect resistance (TELA)
-  **Cotton** ..... Insect resistance
-  **Cassava** ..... Cassava Brown Streak Disease (CBSD) resistance
-  **Sorghum (ABS)** ..... Biofortification


## Nigeria

-  **Cowpea** ..... Insect resistance to maruca pest
-  **Sorghum (ABS)** ..... Biofortification
-  **Rice** ..... Nitrogen Use Efficiency (NUE)
-  **Rice** ..... Nitrogen Use Efficiency, Water Use Efficiency and Salt Tolerance stacked events (NUWEST)
-  **Maize** ..... Drought tolerance and insect resistance stacked events (TELA)
-  **Cotton** ..... Insect resistance
-  **Cassava** ..... Delayed postharvest starch deterioration
-  **Cassava** ..... Biofortification





## Uganda

-  **Banana** ..... Banana bacterial -Xanthomonas Wilt (BXW) resistance  
Banana parasitic nematode resistance  
Biofortification
-  **Cassava** ..... Cassava Brown Streak Disease (CBSD) resistance
-  **Rice** ..... Nitrogen Use Efficiency (NUE)
-  **Rice** ..... Nitrogen Use Efficiency, Water Use Efficiency and Salt Tolerance stacked events (NUWEST)
-  **Potato** ..... Late blight disease resistance


## Rwanda

-  **Cassava** ..... Cassava Brown Streak Disease (CBSD) resistance


## Malawi

-  **Cotton** ..... Insect resistance
-  **Cowpea** ..... Insect resistance
-  **Banana** ..... Bunchytop virus resistance
-  **Banana plantain** ..... Bunchytop virus resistance




## Mozambique

-  **Maize** ..... Drought tolerance and insect resistance stacked events (TELA)


## Kingdom of eSwatini

-  **Cotton** ..... Insect resistance

## South Africa

-  **Cotton** ..... Insect resistance/ herbicide tolerance multi-stacked events
-  **Soy bean** ..... Insect resistance/ herbicide tolerance multi-stacked events
-  **Maize** ..... Insect resistance multi stacks event (TELA)




## Ethiopia

-  **Maize** ..... Drought tolerance and insect resistance stacked events (TELA)


## Sudan

-  **Cotton** ..... Insect resistance

## Ghana

-  **Rice** ..... Nitrogen Use Efficiency (NUE)
-  **Rice** ..... Nitrogen Use Efficiency, Water Use Efficiency and Salt Tolerance stacked events (NUWEST)
-  **Cowpea** ..... Insect resistance to maruca pest

## Burkina Faso

-  **Cowpea** ..... Insect resistance to maruca pest

# Development of Knowledge Products

Knowledge is critical in accelerating adoption of agricultural innovations. AfriCenter is alive to the fact that access to relevant and credible scientific information will play a key role in the acquisition of agri-biotech applications. Over the years, the Center has developed information, education and communication (IEC) materials that address the needs of different stakeholders. These IEC materials are repacked into simplified easy-to-use knowledge products that are reflective of and responsive to local cultures.

The following products were produced:

- Frequently Asked Questions (FAQs) about GM Cassava in Kenya
- Top Ten Facts about VIRCA Plus Project in Kenya
- Kenya Top Ten Facts about Agri-Biotech and Biosafety
- Infographics on GM Food Safety Assessment in Kenya
- Ten Short impact videos on crop biotechnology



## FAQs about GM Cassava in Kenya

This booklet provides basic information on disease resistant GM cassava developed by the Kenya Agricultural and Livestock Research Organization (KALRO). The booklet addresses frequently asked questions about the GM cassava.



## FAQs about Bt Cotton in Africa

This booklet provides basic information on Bt cotton in Africa and addresses some of the frequently asked questions on the genetically modified cotton.



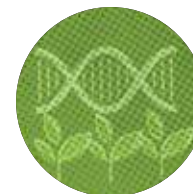
## Africa Top Ten Facts about Agri-Biotech and Biosafety

The booklet provides key information on Africa's agri-biotech and biosafety status, and records milestones the continent has made towards adoption of biotech crops.

## KEY IMPACT



Enhanced public understanding and appreciation of the research project as a result of impactful short videos, infographics and FAQs that unpack complex science into simple language.



Increased confidence in the adoption of agricultural biotechnology in the continent as a result of factual information about the technology.



Cultivation of positive attitudes about GMOs through the IEC materials that address stakeholders' concerns and background conversations.



## Publication of the DrumBeat

The DrumBeat is a monthly e-newsletter that tells the African bioscience story. Science often takes a backseat in policy formulation and implementation in Africa. The DrumBeat aims to address this problem by amplifying bioscience development in the continent in a way that can attract the attention of policy makers.

- In 2020, AfriCenter published and shared 12 publications of The DrumBeat.
- It has over 4,000 subscribers comprising policy makers, media, development partners, scientists and academia.

### KEY IMPACT



Improved understanding on the benefits of bioscience technologies in Africa

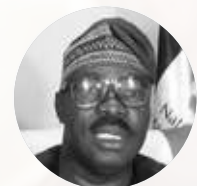


Bioscience agenda, especially crop biotechnology discussion, has attracted the attention of African policy makers.



**The DrumBeat has brought Africa's biotechnology progress from oblivion to limelight and it has created confidence in the adoption of agricultural biotechnology in the continent.**

*Dr. Rufus Ebegba, Director-General/CEO, National Biosafety Management Agency, Nigeria.*





## Biotech Sensitization Forums and Study Tours

Public and stakeholder sensitization through forums and tours has instrumentally increased knowledge and appreciation of agricultural biotechnology in Africa. The forums have instilled confidence and facilitated adoption of biotech crops. Seeing-is-believing study tours to biotech crop fields has provided agri-biotech and biosafety stakeholders with experiential opportunities to learn the benefits of biotech crops. Key stakeholders that include legislators, journalists and farmers have benefited immensely from these study tours.

AfriCenter facilitated the following forums and study tours:

- A biotech convo was held in Nairobi in March. The convo aimed at facilitating constructive dialogue about agricultural biotechnology and biosafety among stakeholders that included top government representatives, scientists, regulators and journalists.
- A biotech forum was virtually held in June 2020 to share updates on the progress of Genetically Modified (GM) cassava research under VIRCA Plus project.
- A seeing-is-believing study tour of RIVATEX East Africa Limited held in October 2020. The tour comprised farmers, journalists, editors and county leadership.

### KEY IMPACT



Acknowledgement of the importance of delivering Bt cotton to Kenyan farmers in order to bolster the county's textile and apparel sub-sector.



County Governments pledged to commit budgets for Bt cotton seed cotton, cassava and maize value chain actors reaching out for biotech IECs.



**In the entire road to commercialization of Bt-Cotton, ISAAA Africenter was very instrumental in facilitating effective communication on the processes and imparting knowledge to stakeholders. They organized local, regional and international study tours that helped to unlock the doors in many cases that eventually led to commercialization of Bt-Cotton.**

*Dr. Charles Waturu, Lead Scientist, Bt cotton, Kenya.*



# Social Media Campaign in Support of Agri-biotech

AfriCenter carried out a three-month social media campaign dubbed #FarmShujaaz to remind the public that biotech crops are developed with care and come with immense benefits. The campaign, coinciding with the World Food Day (16th October) and Kenya's Mashujaa Day (20th October), was driven by meaningful conversations celebrating Kenyan community leaders, farmers, scientists, policy makers, men and women tirelessly working to improve the way we produce our food. The overall goal of #FarmShujaaz was to build an understanding of what biotech crops are and why people need them.



“

With the advancement of science and technology such as Bt cotton, opportunities now exist for roll-out of interventions that can turn the sector around quickly. We must therefore move with speed to quickly rekindle the great fortunes of cotton industry and create real jobs and wealth for our farmers.

**Hon. Peter Munya**  
*Cabinet Secretary, Ministry of Agriculture, Livestock, Fisheries & Cooperatives, Kenya*

#FarmShujaaz



# Capacity Building for Effective Agri-biotech and Biosafety Communication

AfriCenter has invested heavily in capacity building programs for partners who play a role in shaping public opinion on agricultural biotechnology and biosafety. The need to strengthen partners' capacity has been informed by the fact that trusted sources remain slow in addressing issues of agri-biotech and biosafety. Well-trained and informed partners are critical in shaping public perception of agricultural biotechnology.

In 2020, the Center and her partners virtually conducted four science communication trainings for close to 130 participants from 21 countries. The trainings targeted scientists and journalists from various agricultural research institutes and media organizations. The following capacity building training sessions were held:

- Technical Workshop and Science Communication Training under the Virus Resistant Cassava for Africa (VIRCA) Plus Project
- Communication Training on Effective Science Blogging
- Africa Short Course on Agro-biosciences (AFSCA) Early Career Professionals
- Science Communication Training for Research Fellows at the International Livestock Research Institute (ILRI).

## Technical Workshop and Science Communication Training under VIRCA Plus

AfriCenter, in collaboration with VIRCA Plus project, hosted a science communication workshop at KALRO-Alupe in February 2020. The workshop brought together **28 experts** in food/feed and environmental safety, socio-economists, as well as medics and nutritionists. It aimed at preparing the experts to confidently engage the media during public outreach and sensitization for genetically modified (GM) cassava as they champion the course towards commercialization of the GM crop in the country.

## Communication Training on Effective Science Blogging

AfriCenter, in collaboration with KALRO, held a virtual training on effective blogging for scientists in May 2020. The objective of the training was to equip VIRCA Plus scientists with effective blogging skills thus building a critical mass of scientists capable of engaging online audiences about the project. It also aimed at enhancing the scientists' capacity to effectively communicate science by writing expert opinions and blogs that appeal to the human feeling. **Twenty-five (25) scientists attended the training.**

## Africa Short Course on Agro-biosciences (AFSCA) Early Career Professionals

The training, conducted in November 2020, targeted early career professionals on modern biotechnology. The objective of the training was to raise awareness about historical perspectives on agri-biotech and biosafety, and how they impact the national context. It was also meant to enhance the capacity for strengthening communications and synergy across sectors involved in agricultural biotechnology (agriculture, health and environment). Additionally, the training aimed at making a contribution towards growing a young African professional group that can inform and enhance policies on application of agro-biosciences for meeting Africa's ST&I agenda. Over **30 young scientists** from nine different countries including Cameroon, Ghana, Kenya, Ethiopia, Nigeria, Africa, Tanzania, and Uganda participated in the training.

## Science Communication Training for Research Fellows at ILRI

The objective of the training, held in December 2020, was to equip science fellows at ILRI with skills in communicating with non-technical audiences for policy influence. To achieve this objective, the training familiarized participants with the principles of effective science communication, and equipped them with effective media relations skills. **Twenty (20)** fellows took part in the training.

## KEY IMPACT



Improved confidence by the experts in engaging the mass media as demonstrated through mock media interviews and pressers.



Strengthened synergies and research networks across various realms of crop research in Kenya as the experts vowed to work together in driving the narrative on application of science, technology and innovation for national development.



Led to a unified voice by scientists in support of GM cassava application for environmental release in Kenya.



A network of young professionals was formed to articulate biotech and biosafety aspirations in regional and international levels.

“

Science communication training conducted by ISAAA has sufficiently equipped me with critical skills to communicate my research findings to the public. In most cases, we are good in communicating research findings within the scientific community yet the impact of these findings usually focuses on communities.

***Dr. Adey Desta, Asst. Prof. Addis Ababa University, Ethiopia***





# Policy Engagement for Evidence-based Decision Making

Fostering a favorable policy environment for crop biotechnology is key in accelerating research, development and commercialization of biotech crops. Policy makers are critical actors that facilitate formulation of enabling policies. Empowering them with credible and factual information on agri-biotech and biosafety forms a strong basis for creating a sustainably favorable policy environment for agri-biotech. It is for this reason that AfriCenter engages policy and decision makers to ensure they are well-versed with agri-biotech and biosafety advancements, both locally and globally.

In 2020, the Center engaged key decision makers through the following forums:

- Convo on agricultural biotechnology and biosafety.
- Policy outreach to secure public support for an application for environmental release and placing on the market of CBSD-resistant GM cassava in Kenya.
- Virtual meeting with County Executive Committee Members (CECMs) of Agriculture from 15 cassava growing counties in Kenya.



*Kenya's Cabinet Secretaries of Agriculture and Irrigation preside over the launch of Bt cotton planting in the country in March 2020*

## **Convo on Agricultural Biotechnology and Biosafety**

AfriCenter, the Open Forum on Agricultural Biotechnology in Africa (OFAB) Kenya Chapter and partners held a biotech convo in Nairobi in March 2020. The convo, happening for the first time, aimed at facilitating a constructive dialogue about agricultural biotechnology and biosafety among stakeholders that included top government representatives, scientists, regulators and journalists.

Speaking at the event, Bt Cotton Taskforce chairperson Rajeev Orora said Kenya's Agriculture Cabinet Secretary has already commissioned his taskforce whose mandate would be to manage regulatory issues on Bt cotton commercialization. He told stakeholders the Government has prioritized Bt cotton in the revival of textile and apparel industry as the country targets to produce 50,000 tons of cotton against the current 7,000 tons. The taskforce chair exuded confidence that Bt cotton commercialization is key in improving livelihood and food security situation among smallholder farmers in Kenya.

## **Virtual meeting with County Executive Committee Members (CECMs) of Agriculture**

AfriCenter and KALRO, in June 2020, held a virtual sensitization session for County Executive Committee members (CECMs) for Agriculture and Directors of Agriculture, Environment, Health and Trade from 15 cassava-growing counties. The objective of the meeting was to share updates on the progress of disease-resistant cassava research under VIRCA Plus project, and the biosafety assessment process applied. The meeting was also aimed at raising awareness on importance of cassava as a food security and industrial crop in the attainment of counties' development agenda, and sharing details on how county government officials can take part in the public participation process.

## **Policy Outreach on CBSD-resistant Cassava**

AfriCenter and KALRO engaged a number of policy makers and updated them on the status of the application for environmental release and placing on the market of CBSD-resistant GM cassava in Kenya. The policy makers were requested to participate by sending their comments on the application to the National Biosafety Authority (NBA).

## KEY IMPACT



Brief highlighting policy overlaps in Kenya was developed and efforts to address the challenges kick-started.



Amplified farmer demand for biotech crops got the attention of Kenyan policy makers when the Society for Biotech Farmers of Kenya made a submission to parliament enquiring about the policy overlaps that have delayed access to improved crops.



Unwavering policy makers' support for CBD-resistant cassava in Kenya.



Africa doubled the number of countries planting biotech crops from three in 2018 to six by 2021.



Sustained progress in biotech crop research, regulation and acceptance in Africa with Rwanda becoming the latest country to commence research into biotech crops.

“

Indeed, any discussion on biotechnology is sensitive in Kenya. Credit goes to agricultural biotech researchers for advancing research and development into climate resilient crops, and a breakthrough came with approval of Bt cotton for commercialization.

*Hon. Mary Nzomo, Chairperson, County Agriculture CECMs' Caucus*



# Media Engagement for Increased Coverage of Agri-Biotech and Biosafety Issues

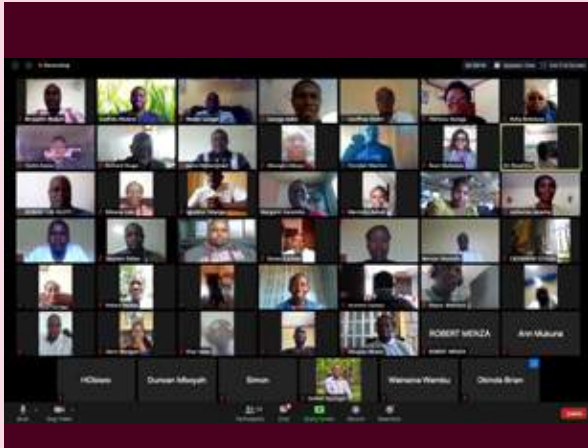
The media forms an integral part in research, development and adoption of biotechnology crops. It sensitizes and educates the public on biotechnology hence stimulating dialogue on its effective utilization. AfriCenter continues to engage media practitioners through various awareness creation and outreach activities. Through these efforts, a critical mass of journalists and editors armed with factual knowledge on agri-biotech and biosafety has been built. These engagements are key in sustaining more balanced and accurate reporting on agricultural biotechnology and biosafety.

The Center conducted the following media engagement activities in 2020:

- Virtual training on biotechnology and biosafety communication for radio journalists
- Sensitization session for radio and print media journalists on disease resistant cassava.
- Virtual science café graced by Kenya's Trade and Industry Cabinet Secretary.
- Media editors' seeing-is-believing tour at Bt maize National Performance Trial site in Kenya.
- Media awards gala to celebrate exemplary science journalism.



*Journalists interview Prof. Alex Agba, CEO National Biotechnology Development Agency (NABDA)*



## Virtual Training on Biotechnology and Biosafety Communication for Radio Journalists

Held in conjunction with the Open Forum on Agricultural Biotechnology in Africa (OFAB) Kenya, the objective of this training was to provide updates to radio journalists on the progress Kenya has made in adopting Bt cotton, including its biosafety assessment. The training also aimed at providing a context for radio journalists in communicating biotechnology and biosafety. The training was held in April 2020 and was attended by nineteen (19) radio correspondents.



## Sensitization Session for Radio and Print Media Journalists on Disease Resistant Cassava

The session, held in May 2020, focused on raising awareness about the disease-resistant cassava and the importance of cassava as a food security and industrial crop in the attainment of Kenya's economic agenda. Specifically, it aimed at providing a context for journalists to report factually about the VIRCA Plus project regulatory phase. VIRCA Plus is a collaborative program between KALRO and other partners. The project's goal is to develop disease-resistant and nutritionally enhanced cassava varieties that will empower African smallholder farmers and improve consumers' health status.



## Science Café with Kenyan Journalists and Other Stakeholders

The science café was held in August 2020 via a Zoom webinar and was attended by journalists, policy makers, private sector, academia and other stakeholders. Graced by Kenya's Cabinet Secretary for Trade and Industrialization, the café explored the implications of Free-Trade Agreement negotiations between Kenya and the US, and how commercialization of Bt cotton will impact textile and apparel trade under African Growth and Opportunity Act (AGOA). Sixty-six (66) journalists from various media organizations in Kenya virtually attended the café.



## Media Editors' Seeing-is-believing Tour at Bt Maize National Performance Trial Site

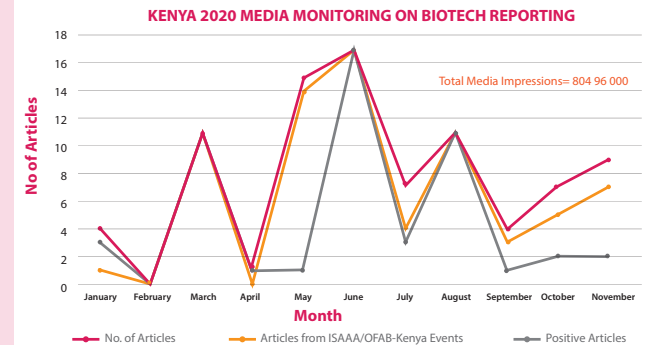
In October 2020, ten(10) editors from leading media houses in Kenya were sensitized through seeing-is-believing tour at Bt maize NPT site in the western part of the country. The aim of the tour was to familiarize the media editors on agricultural biotechnology activities in the country. This is in an effort to build appreciation of the country's capacity to conduct agri-biotech research and development as well as the biosafety measures in place. The tour also provided updates on the progress the country has made towards delivering insect-resistant TELA Bt Maize and other biotech crops to farmers. The tour highlighted the opportunities and benefits that TELA Bt maize offers towards attainment of the national economic agenda.



## OFAB-Kenya Media Awards (OMAS2020)

AfriCenter and OFAB Kenya held the annual media awards gala, popularly known as OFAB-Kenya Media Awards (OMAs), in November 2020 in Nairobi. The objective of the event, presided over by Chief Administrative Secretary in the Ministry of Trade and Industrialization, was to celebrate exemplary science journalism and recognize media's contribution in promoting agricultural biotechnology. Three journalists in television, radio and print were feted for their consistency in reporting and promoting public awareness about agricultural biotechnology. The winning journalists were also invited to participate in the OFAB Africa Media Awards (OMAs) that happened in December 2020.

## Media impressions graph



*Continuous engagement has contributed to increased and balanced reporting with over 80 Million media impressions*

## KEY IMPACT



Continuous media engagement has contributed to increased and more accurate reporting with over 80 million media impressions.



Establishment of stronger linkages and networks between journalists and other stakeholders that include scientists and policy makers.



Improved understanding and confidence in media reporting of agri-biotechnology and biosafety.

“

I'm very grateful and feel honored to be recognized as one of the winners of the OFAB-Kenya Media Awards. I thank ISAAA AfriCenter and OFAB-Kenya for recognizing and appreciating my work as a journalist. This will serve as an inspiration for me to work even harder in reporting on science and development especially in the area of agricultural biotechnology.

*Leopold Obi, Daily Nation (Overall Winner, OMAS-Kenya 2020 and OMAS-Africa).*





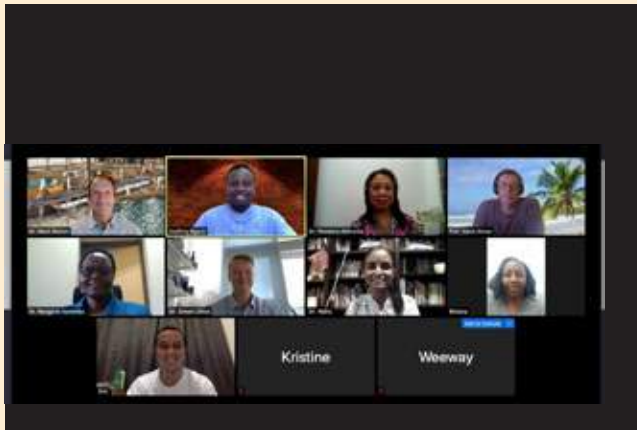
# Communication on Emerging Gene Technologies

Emerging genetic technologies such as genome editing enable faster, efficient and more precise gene modification in order to confer desirable characteristics. The technologies hold great prospects in the areas of food production, medicine and animal improvement. The African Union High Level Panel on Emerging Technologies (APET) has already identified advances in gene technologies as key to fast-tracking Africa's development and transformation process. The continent's chance to benefit from these technologies lies heavily on its ability to efficiently communicate its potential. AfriCenter is taking the lead in communicating and encouraging constructive dialogue about gene technologies in Africa.

In 2020, the Center spearheaded the following gene technology initiatives:

- Webinar series on animal biotechnology
- Genome editing webinars
- Genome editing stakeholders' workshop





## Webinar Series on Animal Biotechnology

ISAAA AfriCenter co-hosted the fourth International Animal Biotechnology Regulatory Perspectives conference which ran as virtual series from September 2020. The conference provided a platform for exchange of information, experience share, and enhanced cooperation towards animal biotechnology regulations among countries who are either working on or implementing their respective guidelines. Exciting developments shared included: Food safety regulations for genetically engineered animals, genome editing regulatory approaches for animals and status of environmental and contained use regulations of genetically engineered animals.



## Genome Editing Webinars

AfriCenter introduced Genome Editing 101 conversation series aimed at bolstering understanding and appreciation of the potential that precision breeding tools can offer. Ten webinars were co-hosted by AfriCenter and SEAsia Centers reaching over 60,000 stakeholders in 90 countries globally.



## Genome Editing Stakeholders' Workshop

Held in December 2020 in Nairobi, this workshop was a follow up of the Africa Biennial Biosciences Communication (ABBC) symposium held in Pretoria in 2019. A key outcome from the symposium was a resolution by African country members to establish an African Coalition for Communicating about Genome Editing. Thus, the workshop in Nairobi brought together stakeholders with an interest on genome editing including scientists, regulators, policy makers, media and industry players to activate the formation of the Coalition, thus actualising the ABBC2019 resolution.

## KEY IMPACT



Amplified conversations around the contribution of animal biotechnology in addressing the challenge of food security.



The African Communication and Consultative Forum on Genome Editing- otherwise known as the African Coalition for Communicating about Genome Editing - was initiated.



Enhanced understanding and appreciation of the great potential that genome editing holds in food production, health and economy.

“

Genome editing presents the scientific community with tools at a relatively low cost for innovation in medicine, agriculture, environment, and industrial biotechnology. The technology is being explored in developing gene therapies to prevent and treat diseases in humans.

*Coumba Toure, Professor of Microbiology at Cheikh Anta Diop University, Senegal.*



# Forging Strategic Partnerships for a Better Africa

AfriCenter continues to partner with like-minded credible institutions in the agricultural biotechnology and biosafety sector. These partnerships seek to ensure a coordinated approach to optimize resources, synergies and expertise. AfriCenter has demonstrated impressive policy engagement and communications record. It is for this reason that partners frequently contract the Center to undertake communication and policy engagement activities in support of their projects.

Key areas of partnership include:

- Development of communication and knowledge products.
- Conducting biotechnology and biosafety trainings and sensitization through seeing-is-believing study tours.
- Development of communication outreach strategies.
- Provision of policy outreach support.
- Enhancement of scientists' capacity to effectively communicate about their research.
- Communication about emerging gene technologies.



*Margaret signing an MoU with ASARECA*

## New Partners on Board

The Center expanded its rich pool of partners in the year. The United Nations Educational, Scientific and Cultural Organization (UNESCO) and Imperial College London are our new partners.



With UNESCO, we conducted a knowledge and information needs assessment on COVID-19 in Africa. The study will inform the nature of COVID-19 interventions and types of pandemic-related media stories to be commissioned.



With Kenyatta University and the University of Nairobi, AfriCenter kick-started the first-ever government-funded research project on Synthetic Biology in Kenya. The project, funded under the country's National Research Fund (NRF), will employ synthetic biology innovations in addressing intractable challenges in food security and healthcare by developing low-cost diagnostic kits and biosensors for improving disease surveillance. Synthetic biology has been taunted as one of the new ST&I horizons for the 4th industrial revolution. Imperial College London is providing technical backstopping in the project.

# Our Partners:

- African Agricultural Technology Foundation (AATF)
- Alliance for Commodity Trade in Eastern and Southern Africa (ACTESA) of COMESA
- Bayer Kenya - Crop Science
- Biosafety South Africa
- Donald Danforth Plant Science Center
- Ethiopian Biotechnology Institute (EBTi)
- ILSI Research Foundation
- Imperial College London
- International Livestock Research Institute (ILRI)
- IPBO – Ghent University
- Kenya Agricultural & Livestock Research Organisation (KALRO)
- Kenya National Academy of Sciences (KNAS)
- Kenyatta University
- Ministry of Agriculture, Livestock and Fisheries Kenya
- Ministry of Industry, Trade and Cooperatives Kenya
- National Biosafety Authority, Kenya
- National Commission for Science, Technology and Innovation (NACOSTI)
- New Partnership for Africa's Development (NEPAD) Agency
- Program for Biosafety Systems of International Food Policy Research Institute (IFPRI)
- The Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA)
- The United Nations Educational, Scientific and Cultural Organization
- United States Department of Agriculture
- VIB-International Plant Biotechnology Outreach (IPBO)

## Challenges

1. There is an overlap of biosafety regulations in Africa, a situation that negatively affects GMO research, development and deployment process on the continent.
2. Co-ordinated and well-funded anti-GMO activism in Africa continues to hamper speedy commercialization of GM crops on the continent.
3. Though there was remarkable biotech progress in Africa in 2020, biotech policy implementation is still fragmented and slow.
4. Myths, misinformation and limited public knowledge and awareness on agricultural biotechnology on the continent are still a big concern.

## Opportunities

1. Africa has made remarkable progress in embracing crop biotechnology. The continent doubled the number of countries planting biotech crops from three to six in just one year. This progress signals that Africa is ready to embrace climate resilient GM crops as a viable option to bolster her food security status and improve livelihoods.
2. Increased policy support for crop biotechnology, for instance the unwavering support for CBSD-resistant cassava in Kenya, fuels optimism and opens a favorable environment for more research, adoption and commercialization of biotech crops in Africa.
3. The creation of the African Coalition for Communicating about Genome Editing places the continent in a prime position to reap big from the benefits of genome technologies especially in areas of food production, medicine and animal improvement.
4. There is increased focus on the use of animal biotechnology in improving resilience and maintaining diversity in livestock. AfriCenter co-hosted experience-sharing dialogue series around this technology. Animal biotechnology holds a great potential to improving animals' suitability for agricultural, industrial, and pharmaceutical applications.
5. Africa is also warming to explore untapped opportunities in synthetic biology to address intractable challenges in food security and healthcare. In Kenya, AfriCenter is leading a project that aims at harnessing the power of synthetic biology to provide viable solutions to delayed disease surveillance and intervention.

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