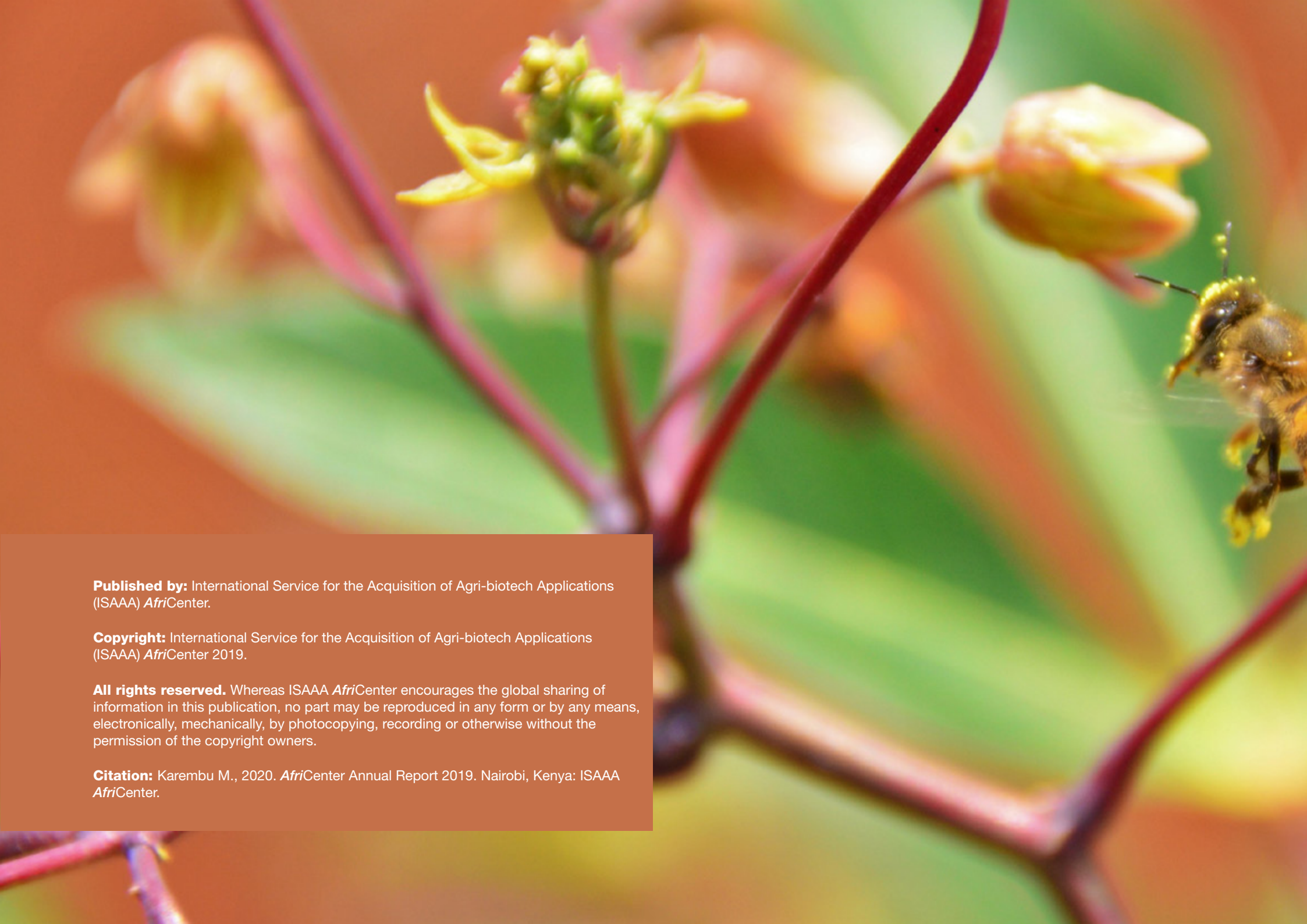




NOTHING
WILL
WORK
UNLESS
YOU DO

ISAAA AfriCenter
Annual Report 2019



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AfriCenter at a Glance

Knowledge that Transforms

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



COMMUNICATION AND KNOWLEDGE SHARING



CURRENT ISSUES

- Misinformation
- Few biotech crops to demonstrate impact
- Aggressive activism against biosciences



OUR INTERVENTION

- Simplified knowledge products and Africa launches of ISAAA Brief
- Seeing-is-bellieving biotech study tours to countries growing biotech crops
- Grassroots outreach to share credible information



IMPACT

- Informed dialogue; retained position as one-stop source for credible biotech and biosafety information in Africa
- Positive change in perceptions about bioscience potential
- Increased demand for bioscience products



CAPACITY BUILDING



CURRENT ISSUES

- Poor communication skills by those tasked with engaging the public on bioscience and biosafety
- Low participation of African party states in international biosafety negotiations



OUR INTERVENTION

- Effective science and biosafety communication trainings
- Synergize partners to prepare and coordinate participation of African party states



IMPACT

- Improved communication skills and enhanced delivery of messages to diverse stakeholders
- Enhanced preparedness and improved participation by African party states



POLICY ENGAGEMENT



CURRENT ISSUES

- Policy makers face the challenge of making evidence-based policy decisions on highly technical issues



OUR INTERVENTION

- Policy makers sensitization platforms
- Seeing-is-believing biotech/biosafety study tours



IMPACT

- Increased positive policy pronouncements
- Improved political support for an enabling environment for biotech development



MEDIA ENGAGEMENT



CURRENT ISSUES

- Poor relationship between scientists and journalist
- Inaccurate and sensational coverage of agri-biotech and biosafety stories



OUR INTERVENTION

- Establishing good working relationship with the media through various capacity building initiatives
- Scientists-journalists pairing program
- Strengthening media networks



IMPACT

- More balanced and accurate coverage of agri-biotech and biosafety issues in Africa
- Biotech recognized as a public agenda issue



STRATEGIC PARTNERSHIPS



CURRENT ISSUES

- Limited resources and duplication of efforts
- Weak inter-institutional collaboration



OUR INTERVENTION

- Forming strategic partnerships that seek to optimize resources and synergies expertise
- Working with allies and leveraging



IMPACT

- Enhanced coordination to outreach with minimal duplication
- Increased networking among partners and optimal impact towards shared goals



Dr. Margaret Karembu
Director, ISAAA
AfriCenter

Director's Remarks

Africa witnessed remarkable progress in 2019, starting with Nigeria that approved Bt cowpea for commercial planting. Ethiopia and Malawi planted Bt cotton on a commercial scale while Kenya approved Bt cotton farming. Other countries like Rwanda are positioning themselves to move fast in getting products like potatoes and cassava that are of priority in the country. Niger in Francophone West Africa approved their national biosafety Law.

This progress means that Africa has already taken off, with more than 10 countries actively racing to get products to farmers. Of special note in 2019 was initiation of conversation on genome editing through the Africa Biennial Biosciences Communication (ABBC) Symposium, 2019 that was held in South Africa. The symposium brought together regulators, scientists, editors and science communicators to discuss how best to frame the genome editing narrative. Co-organized by ISAAA AfriCenter, ABBC2019 interrogated regulatory options for application of genome editing, how to optimize traditional and digital media when communicating about genome editing, and how to manage stakeholder complexities in the engagement process. In a joint declaration, the competent and diverse experts resolved to work together in preparing the continent for inclusive dialogue and adoption of genome editing tools. A declaration to establish an African coalition on communicating about genome editing was adopted. Other areas the coalition will focus on are Synthetic Biology and Animal Biotechnology among others.

In line with our mandate, ISAAA AfriCenter facilitated a Science Media Café for GM crop projects' communication teams and journalists in Nigeria. The aim was to establish linkages and strengthen networks between journalists and project teams, for increased media coverage of crop biotechnology in a more balanced and accurate manner. This fostered partnership, where all GM crop projects in Nigeria pledged to work in partnership and synergize farmer outreach and journalists' trainings.

In Ethiopia, the Center conducted a Science Communication workshop for women scientists to empower them with the skills to engage with the public about their research. The training was under the auspices of the African Women for Biosciences. The network, hosted by AfriCenter, enhances the voice of African women with passion for biosciences to advocate and impact policy for public and private sector investment in biosciences for a healthy and prosperous society. It envisions transformed lives through biosciences and the trained members pledged to advance this course for Africa.

Most significantly in Kenya, the Center initiated the National Dialogue series, providing opportunities for stakeholders with diverse perspectives to interact and resolve long-standing misinformation about agricultural biotechnology. As a result, stakeholders (regulators, policy makers, faith-based groups and researchers) are now working together towards seamless transition of agri-biotech research into products for Kenyan farmers. This conducive environment will ensure successful commercialization Bt cotton, approved for planting by the Kenyan Government in December 2019.

Moving into 2020, we are very optimistic that the progress witnessed in 2019 will continue. ISAAA AfriCenter will support this through our science communication modules that have been repackaged to include emerging technologies. Secondly, our various knowledge products will continue to highlight Africa's content and place more emphasis on gendered approaches to biosciences. Finally, you can count on us to keep you informed about Africa biosciences trends through our monthly e-Newsletter the Drumbeat.

To all our partners who supported us throughout 2019, receive our heartfelt appreciation. We welcome those who believe in the course for biosciences to benefit African farmers, join us for together we'll move far!



**Dr. Mahaletchumy
Arujanan**

Global Coordinator, ISAAA

Executive Director
Malaysian Biotechnology
Information Centre (MABIC)

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Change of Guard

ISAAA *AfriCenter* welcomes Dr. Mahaletchumy Arujanan, the New ISAAA Global Coordinator. Maha is also the current Executive Director, Malaysian Biotechnology Information Centre (MABIC)

She has a PhD in Science Communication and Masters in Biotechnology from University of Malaysia and a degree in Biochemistry and Microbiology from University Putra Malaysia. Maha is listed as one of the world's 100 most influential people in biotechnology by Scientific American Worldview 2015 and is internationally recognized in the agricultural biotechnology communication.

AfriCenter wishes her the best and undivided support in the new role.



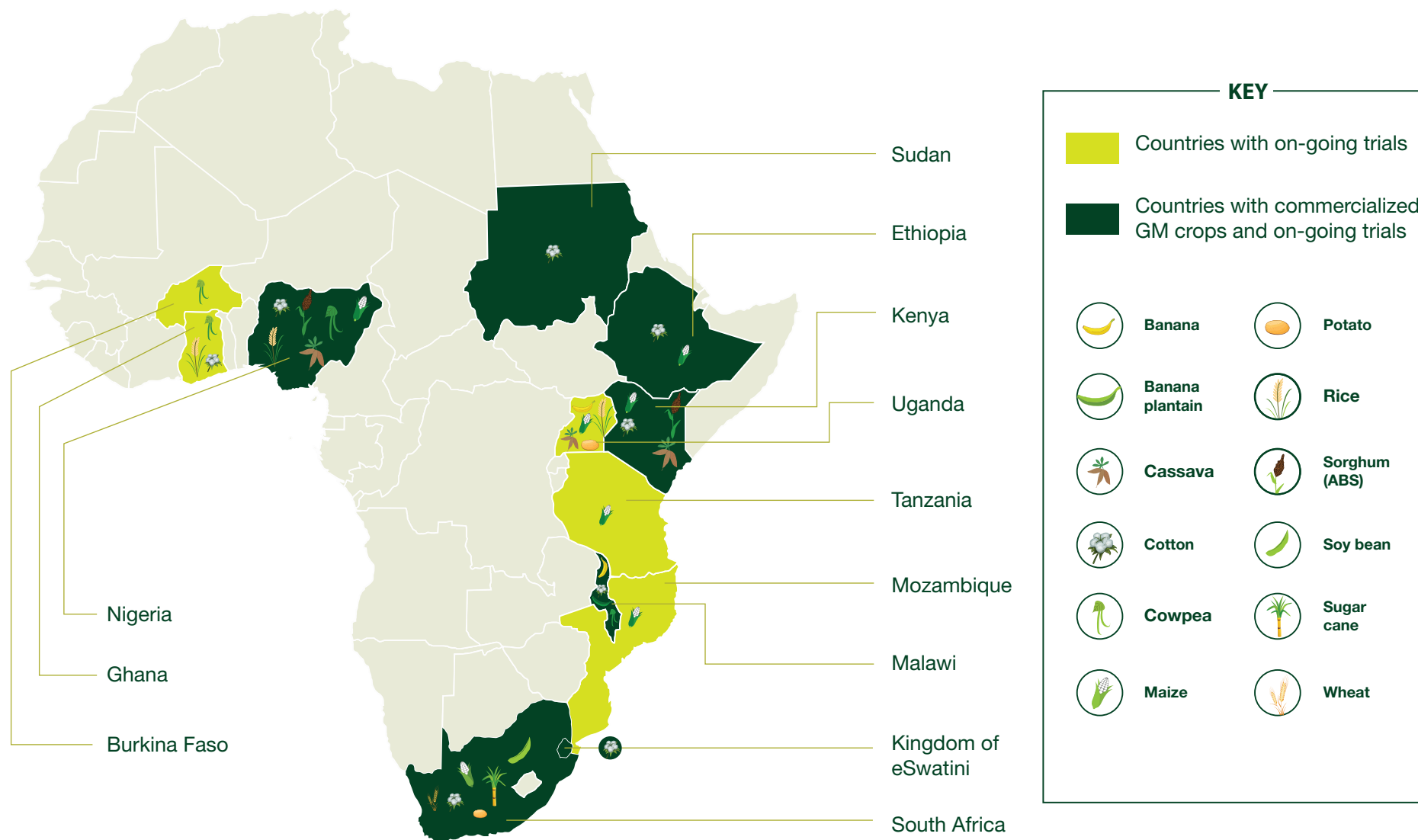
ISAAA AfriCenter team

Africa Biotech/GM Research and Commercialization Status by 2019

12 CROPS





12 COUNTRIES

13 TRAITS









Crop Traits Under Various Stages of Research in Africa by 2019



Kenya

-  **Maize** Drought tolerance and insect resistance stacked events (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, Water Efficiency and Salt Tolerance (NUWEST)
-  **Maize** Drought tolerance and insect resistance stacked events (TELA)
-  **Cotton** Insect resistance
-  **Cassava** Delayed postharvest starch deterioration


Ethiopia

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





Uganda

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

Tanzania

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

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-stacks
-  **Soy bean** Stacked trait with modified fatty acid composition
-  **Maize** Drought tolerance and insect resistance stacked events (TELA)
-  **Potato** Insect resistance
-  **Sugarcane** Insect resistance
-  **Wheat** Insect resistance

Sudan

-  **Cotton** Insect resistance

Ghana

-  **Rice** Nitrogen use efficiency/water use efficiency and salt tolerance
-  **Cowpea** Insect resistance to maruca pest

Burkina Faso

-  **Cowpea** Insect resistance to maruca pest



“

We have to prepare Kenyans for the future. GMO is yesterday. Synthetic biotech is coming. We will facilitate conversations and public awareness. It is our patriotic duty.

Prof. Hamadi Boga,
Principal Secretary, State
Department of Crops and
Agriculture Research,
Ministry of Agriculture,
Livestock, Fisheries and
Irrigation, Kenya.

Communication and Knowledge Sharing

AfriCenter's work on knowledge sharing is inspired by the need to transform the agri-biotech discourse. The Center's goal is to share credible information to diverse audiences in order to facilitate informed policy and choice. This information is shared in a structured and systematic way that cultivates public trust. In this regard, the Center managed to serve information needs of different stakeholders through the development and dissemination of various knowledge products, as well as various targeted outreach engagements.

Key Outcomes



Clarification of concerns about biotech crops amongst government officials and members of the public



Enhanced public participation in research direction and policy formulations on genome editing



Increased awareness on biotech crops and potential contribution to the agri-food sector and socio-economic growth



Increased awareness among the policy and decision-makers on genome editing



Appreciation of the need to use facts and science-based evidence in making policy decisions on biotech crops





March, 2019

500 STAKEHOLDERS ENGAGED

Biotech Exhibition at the 6th Annual Devolution Conference

The Open Forum on Agricultural Biotechnology in Africa (OFAB) Kenya Chapter hosted by *AfriCenter*, participated in the Annual Devolution Conference in central Kenya on March 4 – 8, 2019. The exhibition booth provided a one-stop-shop for biotech information and collection of public perceptions on biotech crops. The national event organized by the Council of Governors was attended by government officials, county leadership and members of the general public. Over 1,000 copies of biotech information material were shared out.



April, 2019

150 STAKEHOLDERS ATTENDED

National Dialogue on Genetically Modified (GM) Crops in Kenya

OFAB Kenya Chapter and partners hosted a National Dialogue on Genetically Modified (GM) crops on April 24, 2019 at the University of Nairobi. The dialogue aimed at promoting public awareness on agricultural biotechnology, addressing public concerns on GM crops, and correcting misinformation, myths and misconceptions around GM crops. 150 Biotechnology experts, agriculture sector players (including farmers, processors and traders), health professionals, environmentalists, policy makers, students and the media fraternity took part in the event.



June, 2019

50 WOMEN SENSITIZED

Forum on Impact of GMOs on Women's Food Security

AfriCenter took part in a gender forum organized by the Route for Food Initiative on June 25, 2019 in Nairobi to discuss the impact of GMOs on women's food security in Kenya. *AfriCenter*'s Bibiana Iraki Kipkorir (far right), a panelist emphasized that commercialization of GM technology in Kenya will significantly empower women farmers by giving them access to high quality farming products. She explained that GM crops will be instrumental in ensuring the country becomes food and nutrition secure.



August, 2019

September, 2019

October, 2019

4 AFRICA
LAUNCHES

120 MILLION
MEDIA IMPRESSIONS

Africa Launches of Brief 54 (Global Status of Commercialized Biotech/Genetically Modified (GM) Crops in 2018)

ISAAA Brief 54, a report on the global status of commercialized GM crops by 2018, was launched in four African countries – Kenya, Nigeria, Rwanda and South Africa. The report highlighted Africa's steady progress in the adoption of biotech crops with Nigeria becoming the first country in the world to approve biotech cowpea, thus, adding a new biotech crop to the global biotech basket. The report was launched on August 22 in Abuja (Nigeria), August 27 in Pretoria (South Africa), September 26 in Nairobi (Kenya) and on October 3, 2019 in Kigali (Rwanda). *AfriCenter* was able to engage over 300 policy makers, scientists, regulators, journalists and communication officers. This attracted 48 media houses with a remarkable media impressions of 120, 624, 661 across Africa.

August, 2019

16
COUNTRIES

120 STAKEHOLDERS
PARTICIPATED

Africa Biennial Biosciences Communication (ABBC) 2019

ABBC 2019 symposium, held in Pretoria, South Africa on 29-30 August 2019, provided an Africa-based and African-led platform to interrogate best communication practices that will facilitate informed dialogue and decision making on genome editing in the region. The symposium attracted over 120 participants, representing the academic and research community, lawmakers and policy advisors, civil society, the media, and other stakeholders drawn from sixteen (16) countries across the world. After the two-day deliberations, participants in a joint communique resolved to;

- (i) Work together in improving bioscience communication, including the use of new and emerging strategies to ensure effectiveness.
- (ii) Foster open and transparent dialogue with all stakeholders, including those with divergent views on genome editing, in an effort to build consensus and common understanding.
- (iii) Encourage public participation in research direction and policy formulations on genome editing.
- (iv) Create awareness among the policy and decision-makers on genome editing.
- (v) Establish an African coalition for communicating about genome editing and emerging strategies to ensure effectiveness.

A close-up photograph of a hand holding a peeled banana. The banana is white and curved, with the brown peel removed. The hand is dark-skinned and positioned on the right side of the frame. The background is a soft, out-of-focus green, suggesting an outdoor setting. A green hexagonal graphic with a dotted border is overlaid on the left side of the image, containing text and a quote icon.

“

Genome editing offers an opportunity for African scientists to develop home grown solutions to food insecurity and climate change by producing high yielding and resilient seeds, integrating stress tolerance and pest resistance characteristics, and ensure a sound and diverse nutritional base.

Prof. Yaye Kene Gassama,
Chair of African Union High
Level Panel on Emerging
Technologies (APET) and
Keynote Speaker, ABBC2019

Capacity Building for Effective Science Communications

ISAAA believes that building public trust is a prerequisite to acceptance of complex scientific messages. This is because both the message and the messenger combine to shape public opinion. Consequently, the Center empowers trusted sources with adequate skills to deliver credible information in a compelling manner.

The Center conducts capacity-strengthening activities on science and risk communications, message development, effective media relations, communicating science through new media and stakeholder mapping.

In 2019, the Center conducted eight capacity-building activities for close to 350 participants. The trainings targeted communicators, regulators and biosafety experts, as well as researchers from national agricultural research systems.

Key Outcomes



A laid down framework for the development of a roadmap on cassava prioritization as a food security crop in Kenya



Through simulated media interview sessions, women scientists demonstrated improved skills and confidence to build relations with the media and enhance trust and credibility with the public



Enhanced confidence and skills among researchers when relating with the media



Increased stakeholders' understanding of safety considerations of genome edited products



Trainees able to develop a visual NetMap (with actors, linkages and levels of influence), using a social network analysis software





February 2019

Improved Cassava Stakeholder Committee Induction Meeting

On February 13 -14, 2019, *AfriCenter* in collaboration with VIRCA Plus and Kenya Agricultural Livestock and Research Organisation (KALRO) held an induction meeting for the newly initiated Kenya's Improved Cassava Stakeholder Committee. The committee is expected to assist in mitigating policy and regulatory hurdles and champion for an enabling biotech environment, and represent the VIRCA Plus project in non-technical platforms.



March, 2019

Science Communication Training for University Research Chairs

AfriCenter held a science communication training workshop for researchers under Kenya University Research Chair Program from March 4-8, 2019 at Egerton University in the Rift Valley. The program, implemented by the National Commission for Science, Technology and Innovation (NACOSTI) in partnership with the International Development Research Center (IDRC), seeks to strengthen the capacity of Kenyan Universities to drive purposive research and innovation in the country. The four-day training facilitated drafting of policy briefs outlining the contribution of research chair projects' to national socio-economic development.



March, 2019

CFT Data Transportability Workshop in Uganda

ISAAA *AfriCenter* participated in a Confined Field Trial (CFT) Data Transportability Workshop held in Addis Ababa, Ethiopia, on March 12-13, 2019. The workshop was organized by ILSI Research Foundation, with an aim to introduce a tool to facilitate data transportability of CFT data for use in regional risk assessment within COMESA countries. *AfriCenter* played a critical role in enhancing the realization of the workshop goal through provision of relevant training materials. In her presentation, the Center's Director Dr. Margaret Karembu painted Africa's regulatory context for approval of genetically engineered (GE) crops



April, 2019

Training Workshop on Genome Editing Technologies in Kenya

On April 25 - 26, 2019, *AfriCenter* joined key biotechnology stakeholders in a workshop at Nairobi's ILRI Campus to discuss aspects relating to genome editing. The workshop provided an opportunity to help Kenya's National Biosafety Authority (NBA) Secretariat in identifying key elements to be considered in the drafting of genome editing guidelines. Dr. Karembu, our Center director facilitated one of the sessions.



May, 2019

Science Communication Workshop for Women Bio-scientists in Ethiopia

AfriCenter, in collaboration with the Ethiopian Biotechnology Institute (EBTI) and the African Women for Biosciences (AWfB) held a science communication workshop for Ethiopian women bio-scientists from May 8-9, 2019 in Addis Ababa. The training equipped Ethiopian women scientists with improved skills and confidence to build relations with the media and enhance trust and credibility with the public.



May, 2019

VIRCA Plus Rapid Response and Reputation Management Training for GM Cassava CFT Staff

On May 23, 2019, *AfriCenter* and the Virus Resistant for Africa (VIRCA) Plus project held a Rapid Response and Reputation Management Training for the project's field staff working at GM cassava confined field trials (CFT) site located at KALRO-Alupe, western Kenya. The CFT staff were trained on site response policy, rapid response and reputation management concepts.



October, 2019

NBMA Genome Editing Workshop in Nigeria

ISAAA *AfriCenter* participated in a training workshop on genome editing for the National Biosafety Management Agency (NBMA) in Abuja, Nigeria, on October 28-29, 2019.

AfriCenter shared outcomes from the Africa Biennial Biosciences Communication (ABBC) 2019 Symposium held in South Africa from August 29 - 30, 2019, as well as recommendations on how to #GetCRISPRight through effective communication.



Nov, 2019

Netmapping Training for ACIAR Alumni

ISAAA *AfriCenter* conducted a stakeholder netmapping training for the Australian Centre for International Agricultural Research (ACIAR) Alumni on November 25-26, 2019. The workshop, held in Nairobi Kenya, brought together 21 research fellows from six countries: Kenya, Uganda, South Africa, Malawi, Ethiopia and Botswana. Certified by the International Food Policy Research Institute (IFPRI) to conduct Netmap training, *AfriCenter* offers this service to organizations seeking to trace power and influence within complex stakeholder networks.

“

The Bt gene in GM cowpea (SAMPEA 20-T) has no negative influence on the nutritional composition of both grain and fodder. More so the protein and nutrient contents is similar to other conventional varieties.

Prof. Mohammad Ishayaku,
Principal Investigator,
Pod -borer Resistant
cowpea project, Institute
for Agricultural Research,
Ahmadu Bello University,
Nigeria



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

Media shapes public opinion, thus perceptions on GMOs are largely based on the type of coverage they get. It is imperative then to have a team of dedicated journalists and editors armed with factual knowledge on agri-biotech and biosafety. The Center continuously engages media practitioners through various awareness creation and outreach activities, including seeing-is-believing biotech study tours and sensitization workshops. These engagements enable the Center to sustain balanced media coverage.

In 2019, the Center carried out the following activities specifically targeted for the media among others;

- Media Luncheon on GM crops commercialization Update
- Science Café with Nigerian GM Crop Project Communication Teams and Journalists
- Science Café with Kenya Scientists and Journalists
- 2019 OFAB Media Awards

Key Outcomes



More journalist-expert linkages established as journalists and biotechnology scientists exchanged contacts



More scientists keen to give expert views through the media in form of columns and commentaries



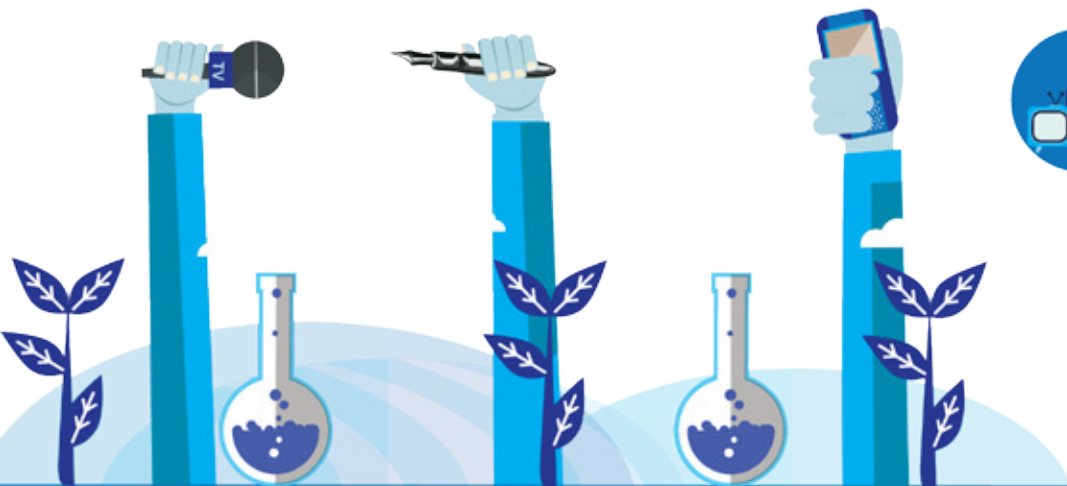
Appreciation for regular fora for scientists and journalists to interact and share updates



African science journalists committed to continue informing the public through balanced reporting on agricultural biotechnology



Identification of diversified communication approaches such as radio and television talk shows, television programs and translation of communication materials into local languages for more impactful communication





June, 2019

Special OFAB Media Luncheon on GM Crop Commercialization Update

OFAB Kenya held a Media Luncheon on June 14, 2019 in Nairobi. The luncheon provided an opportunity for journalist-expert linkages and intensified calls for a speedy resolution on policy challenges curtailing commercialization of GM crops in Kenya.



August, 2019

Science Café with Nigerian GM Crop Project Communication Teams and Journalists

ISAAA *AfriCenter* held a Science Café in Abuja, Nigeria on August 22, 2019. The café brought together journalists and heads of communication teams working in all GM crop projects in the country (Bt cotton, Bt cowpea, Bt maize, GM cassava and NEWEST Rice). Project teams appreciated the need to carry out regular media trainings to improve understanding on crop biotechnology among Nigerian journalists.



August, 2019

Science Café with Kenya Scientists and Journalists

The café, held in Nairobi under the theme 'Bridging the Gap between Scientists and Journalists', brought together agricultural scientists, editors and journalists to discuss strategies that can effectively help address challenges of science communication from both the media and scientists' perspectives. The café then explored how these strategies could be optimized for increased and more accurate reporting about the importance of cassava as a food security and industrial crop. Scientists resolved to work closely with professional media associations such as the Media for Environment, Science, Health and Agriculture (MESHA). This will help scientists identify the right journalists to engage in their projects.



September, 2019

2019 OFAB Annual Media Awards

Attended by over 150 participants, the award ceremony brought together science journalists, researchers and policy makers in recognizing journalistic excellence in agricultural biotechnology. OFAB Kenya 3rd annual media award was organized in collaboration with African Agricultural Technology Foundation (AATF), National Commission for Science, Technology and Innovation (NACOSTI) and Kenya Agricultural and Livestock Research Organization (KALRO).



November, 2019

2019 OFAB Annual Review and Planning Meeting and Media Awards

ISAAA *AfriCenter* in collaboration with the African Agricultural Technology Foundation (AATF) hosted the 2019 OFAB Annual Review and Planning Meeting and regional media awards from November 18 - 21, 2019. The meetings, held in Mombasa Kenya, brought together representatives of OFAB Africa chapters from seven countries; Kenya, Uganda, Tanzania, Ethiopia, Ghana, Nigeria and Burkina Faso and like-minded agricultural biotechnology partners. OFAB's Kenyan Chapter is hosted by ISAAA *AfriCenter*. The climax of the meeting was the Media Awards gala to recognize African journalists who have consistently been reporting and sensitizing the public on agricultural biotechnology. Gabriel Kudaka, a Kenyan journalist, was feted as the OFAB Journalist of the Year.





“

**Agricultural
biotechnology offers
a great option in
developing climate
resilient crops
for food and feed
production**

**Hon. Dr. Wilberforce
Oundo, Kenya
Member of Parliament**

Policy Engagement for Evidence-based Decision Making

Timely policy engagement is key to adoption and application of crop biotechnology in Africa. Policy and decision makers need to be well versed with the current factual information on agribiotech and biosafety advancements to make informed decisions. To facilitate this in 2019, *AfriCenter* carried out a number of policy outreach activities as listed below;

- Biotechnology and Bt cotton consultative meeting with the Kenya Presidential Delivery Unit (PDU)
- Consultative meeting with Presidential Policy and Strategy Unit (PASU), relevant ministries, regulatory agencies and biotechnology stakeholders to discuss progress of Bt Maize National Performance Trials
- Biotech stakeholder's meeting with Kenya's Ministry of Environment and Natural Resources
- Consultative meeting with select parliamentary committees on Kenya's agricultural biotechnology progress

Key Outcomes



Increased support for commercialization of Bt cotton in Kenya



Clarification of safety of Bt cotton and harmonization of voices from regulatory agencies in Kenya



Key line ministries committed to working together in facilitating progress with Bt maize research in Kenya



Clarity between various regulatory agencies that was needed to address various issues stalling the approval for Bt maize NPTs



Consensus to consolidated and harmonize all legislations on GMOs cutting across relevant regulatory agencies during a review of the Biosafety Act



Appreciation by policy and decision makers on need to use validated data to guide policy formulation instead of relying on hearsay





March, 2019

Biotechnology/Bt. Cotton Consultative Meeting with the Kenya Presidential Delivery Unit (PDU)

OFAB Kenya organized and participated in biotechnology and Bt cotton consultative meetings on March 15 and 19, 2019 respectively. The two meetings, hosted by the Kenya Presidential Delivery Unit (PDU), brought together 25 biotechnology stakeholders in preparation for commercialization of Bt cotton in Kenya. The team led by the Principal Secretary State Department for Agricultural Research in the Ministry of Agriculture, Livestock, Fisheries and Irrigation agreed to work together in preparing the country for Bt cotton and other biotech crops in the research and development pipeline.



June, 2019

Biotech Stakeholders' Meeting with Kenya's Ministry of Environment and Natural Resources

OFAB Kenya hosted a meeting with biotech stakeholders and key officials from Kenya's Ministry of Environment, Natural Resources and Regional Development Authorities to discuss a legislative matter affecting agricultural research and modern biotechnology application in the country. The meeting that took place on June 4, 2019 sought to resolve a miscellaneous regulation categorizing "major developments" in biotechnology including introduction of new crops, animals and testing of genetically modified organisms" as "high risk", requiring submission of environmental impact assessment study reports. Participants resolved that all legislations on GMOs cutting across all relevant regulatory agencies be consolidated and harmonized during the review of the Biosafety Act.



June 2019

Consultative Meeting with Select Parliamentary Committees on Kenya's Agricultural Biotechnology Progress

OFAB Kenya in collaboration with Kenya's Presidential Advisory and Strategy Unit (PASU) and the Government led Bt cotton task force held a consultative meeting with Members of Parliamentary Committees on June 11, 2019 in Nairobi. The Parliamentary Committee members were updated on the on-going agricultural biotechnology research initiatives in Kenya and more specifically the progress on Bt Cotton National Performance Trials. The meeting was chaired by principal secretaries from State Department for Agricultural Research, Ministry of Agriculture, Livestock, Fisheries & Irrigation, and Investment and Industry, Ministry of Industry, Trade and Co-operatives.



“

Without appropriate communication strategies, diffusion of safe biotech products and development would be difficult, leading to huge opportunity costs to society.

Dr. Kassahun Tesfaye,
Director General, Ethiopian
Biotechnology Institute
(EBTi)

Expanding and Strengthening Partnerships to Leverage Skills and Expertise

AfriCenter works with like-minded institutions in the agricultural biotechnology and biosafety sector. The Center has gradually expanded this network to maximize impact, optimize resources and expertise in communicating agricultural biotechnology and biosafety. This aims at creating a facilitative policy environment for safe and responsible use of biotech crops.

The support offered includes:



Policy outreach including development of political strategies



Media engagement including trainings on effective science reporting



Science and biosafety communication trainings for scientists and regulators



Netmapping and development of communication strategies

In 2019, the Center partnered with and or offered policy engagement and communication services to the following projects and organizations:

- | | |
|--|---|
| <ul style="list-style-type: none"> • African Agricultural Technology Foundation (AATF) • Alliance for Commodity Trade in Eastern and Southern Africa (ACTESA) of COMESA • Alliance for Science - Cornell University • Australian Centre for International Agricultural Research (ACIAR) • BASF Corporation • Bayer Kenya - Crop Science • Biosafety South Africa • Biosciences eastern and central Africa (BecA-ILRI Hub) • Biotechnology Society of Nigeria (BSN) • CropLife International • Donald Danforth Plant Science Center • Environmental Affairs Department, Malawi • Environmental Institute for Agricultural Research - Burkina Faso (INERA) • Ethiopian Biotechnology Institute (EBTi) • Federal Ministry of Science and Technology, Nigeria • ILSI Research Foundation • International Livestock Research Institute (ILRI) • IPBO – Ghent University • Kenya Agricultural & Livestock Research Organisation (KALRO) • Kenya National Academy of Sciences (KNAS) • Kenyatta University | <ul style="list-style-type: none"> • Michigan State University (MSU) • Ministry of Agriculture, Livestock and Fisheries Kenya • Ministry of Industry, Trade and Cooperatives Kenya • Ministry of Innovation and Technology, Ethiopia • Ministry of Science, Technology and Innovation Uganda • National Biosafety Authority, Kenya • National Commission for Science, Technology and Innovation (NACOSTI) • New Partnership for Africa's Development (NEPAD) Agency • Pioneer Hi-Bred RSA (PTY) Ltd • Program for Biosafety Systems of International Food Policy Research Institute (IFPRI) • Ram and Rashmi Charitable Foundation of the St. Louis Community • Science for Democracy • Society of Crop Agribusiness Advisors of Kenya (SOCAA) • The African Seed Trade Association • The Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA) • U.S. Agency for International Development (USAID) • United States Department of Agriculture • VIB-International Plant Biotechnology Outreach (IPBO) |
|--|---|



Feb- April, 2019

Biotechnology Stakeholders Strategy Meeting

OFAB Kenya convened strategic meetings for biotech stakeholders on February 26 and April 2, 2019. The meetings helped in creating synergy and collaboration in biotech outreach and advocacy activities among the various stakeholders.

May, 2019

Pesticides Use in Agriculture Workshop

AfriCenter participated in a consultative workshop on the use of pesticides in modern agriculture held in Naivasha, Kenya from May 29-30, 2019. The workshop, convened by the Kenya National Academy of Sciences (KNAS) in collaboration with the Pest Control Product Board (PCPB) and National Commission for Science Technology and Innovation (NACOSTI), aimed at re-examining the impacts of agricultural pesticide use on the environment and human health and developing an advisory on pesticide use in Kenya. It brought together more than 60 stakeholders from the agri-food sector comprising of academicians, researchers, policymakers, agronomists, regulators, agro-chemical dealers, and farmers.

June, 2019

United Kingdom (UK)-Kenya Synthetic Biology Workshop

ISAAA *AfriCenter* participated in the international synthetic biology conference (SynbiTECH2019) and an experience-sharing workshop in London, UK, between June 24 and 28, 2019. The two meetings hosted by UK Innovation & Knowledge Centre for Synthetic Biology (SynbiCITE) of Imperial College in collaboration with the National Commission for science, Technology and Innovation (NACOSTI), hosted 13 delegates from Kenya. The collaboration explored avenues of synthetic biology research, development and applications in Kenya. The discussions also set in motion a lasting relationship between UK and Kenya policymakers in strategic investment in bioeconomy and policy engagements.

July, 2019

Kenyan Agricultural Biotechnology Stakeholders Luncheon

AfriCenter hosted a consultative meeting with Kenya's agricultural biotechnology stakeholders on July 17, 2019 in Nairobi, Kenya. The stakeholders included the Presidential Advisory and Strategy Unit and farmer representatives. The stakeholders renewed their support for adoption of biotech crops to address key food production challenges in Kenya.



July, 2019.

Field Visit by Kenya's Religious Leaders to Cotton Farms and Bt cotton NPT Site

AfriCenter supported a field visit by religious leaders to cotton farms and Bt cotton NPT in Kenya on July 18, 2019. This came as follow up to a consultative meeting with the clergy hosted by the Presidential Advisory and Strategy Unit (PASU) on June 20, 2019, where the religious leaders requested to see the difference between conventional and Bt cotton. The clergy also interacted with cotton farmers who are registering huge losses every season due to the African bollworm infestation, having to spray up to fifteen times per season.



December, 2019

Courtesy Visit to COMESA Secretariat on Biotechnology and Biosafety Program

On December 10, 2019, ISAAA *AfriCenter*, PBS and Kenya's National Biosafety Authority (NBA) organized a courtesy meeting with COMESA Secretary General delegate in charge of Finance and Administration Dr. Dave Haman. The meeting, held in Lusaka (Zambia), brought together four Biosafety CEOs from COMESA member states – Kenya (leading), Malawi, Uganda and Zambia, and the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA). The Member States were keen to revive a biotechnology and biosafety policy implementation plan, validated in 2015 by the Council of Ministers. From the meeting, It was agreed that implementation of the regional risk assessment process will start in phases. This will be effectively achieved through working with progressive countries and those having political goodwill and/or regional influence. These countries are Ethiopia, Eswatini, Kenya, Malawi, Rwanda, Sudan, Uganda and Zambia.



November, 2019

Stakeholders' Validation Workshop for the Genome Editing Guidelines

The workshop, held on November 28 - 29, 2019 in Nairobi, aimed at reviewing Kenya's Genome Editing guidelines which are currently at a draft form. ISAAA *AfriCenter* took part in the workshop that brought together regulators, researchers and private sector companies who came prepared to give their comments. During the workshop, the Kenya's National Biosafety Authority (NBA) informed the participants that currently Genome editing was being regulated as GMOs and hence there is a need for the guidelines to be finalized and operationalized.



May, 2019

ISAAA Board Chair, Professor Paul P.S. Teng, Ph.D., Hon. D.Sc. and AfriCenter Director, Dr. Margaret Karembu, pay a courtesy visit to Dr. Kassahun Tesfaye, Director General, Ethiopian Biotechnology Institute (EBTi).

June, 2019

Rob Wager, Faculty Member of the Biology Department at Vancouver Island University, Canada, pays a courtesy visit to ISAAA AfriCenter Director.

June, 2019

Hon. Fred Bwino, Hon. David Mutebi, Hon. James Kasigwa, (Uganda Parliamentarians from the Science, Technology & Innovation committee) Dr. Godfrey Asea, Director, National Crops Resources Research Institute (NaCRRI) and Joshua Muhumuza, Communication Officer, National Crops Resources Research Institute (NaCRRI) pay a courtesy visit to Director, ISAAA AfriCenter.

September, 2019

Mr. Otula Owuor, Mr. Havard Bergo, Ms. Katrina Rojas and Doris Wangari (far right) a team from OFAB-PBS/BIORAPP Alliance review team pay a courtesy visit to Director, ISAAA AfriCenter.

November, 2019

Dr. Moses Rugutt, Director General, National Commission for Science, Technology and Innovation and Dr. Margaret Karembu, Director, ISAAA AfriCenter renew memorandum of understanding between the two organizations.

Challenges and Opportunities

Challenges

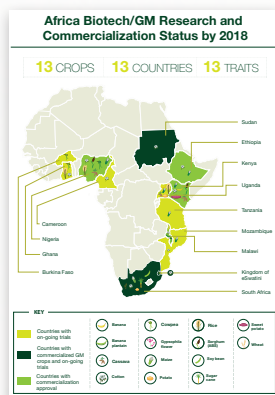
- i. The slow and unpredictable regulatory approval process of GM crops on the continent hampers the crops' adoption in more African countries.
- ii. Anti-GMO activism in Africa continues to hamper speedy commercialization of GM crops on the continent.
- iii. Lack of political goodwill in Uganda, and anti-GMO activism working behind the scene, has ensured the country's Genetic Engineering Regulatory Bill makes no progress towards becoming a law. In 2019, President Yoweri Museveni for the second time refused to sign it into law.

Opportunities

- i. In December 2019, Nigeria and Kenya made landmark approvals of Genetically modified Bt cowpea and Bt cotton respectively. Nigeria approved commercialization of a biotech cowpea variety resistant to pod borers. In Kenya, the decision to approve commercial planting of Bt cotton heralds a new dawn for the almost collapsing cotton farming in the country.
- ii. In October 2019, Niger approved its National Biosafety Law. The new law will provide safety measures in research and development with respect to modern biotechnology and for transboundary movement of living modified organisms (LMOs) as well as products thereof.
- iii. Plans to develop and operationalize genome editing technology in Africa have begun in earnest with a number of countries initiating development of the technology guidelines. Kenya and Nigeria have taken the lead. **AfriCenter** is positioning itself to spearhead an African Coalition for Communicating about Genome Editing.
- iv. Ethiopian Government strongly supports GM crop research and development in the country. The government is banking on biotechnology to improve the efficiency of various sectors and propel the country to middle income status by 2025.
- v. More women and girls in science joined the African Women for Biosciences (AWfB) platform to advocate for public and private sector investment in biosciences. This development served to strengthen the capacity of African women to engage and participate in biosciences and policy dialogue for sustainable livelihoods.



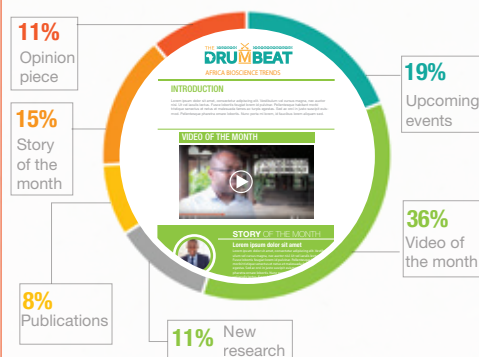
Knowledge Products



ISAAA Brief 54-2018: Infographics

Biotech crops continue to help meet the challenges of increased population and climate change. According to the Global Status of Commercialized Biotech/GM Crops in 2018 (Brief 54) released by the International Service for the Acquisition of Agri-biotech Applications (ISAAA), a total of 70 countries adopted biotech crops through cultivation and importation in 2018, the 23rd year of biotech crop adoption.

DRUMBEAT VIEWS/CLICKS



DrumBeat

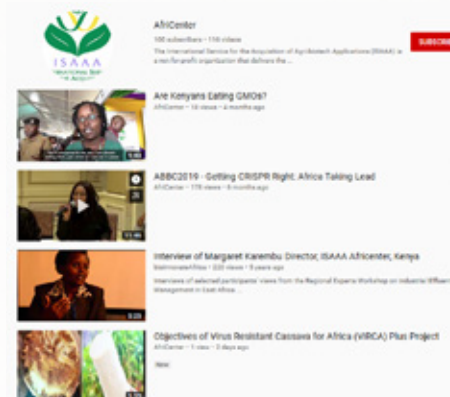
DrumBeat, produced by AfriCenter, is a monthly e-newsletter that keeps you up to date on latest trends in Africa biosciences.

The video of the month remains the most popular section of the DrumBeat, taking up 36% of the views/clicks. This is followed by the Upcoming events and the Story of the Month. These are closely followed by the Opinion Piece and New Research section. Feel free to share your opinion, research work, innovation with us to get featured.



GENOME EDITING: Join the conversation

From green revolution to gene revolution, the world is in a technological advancement trajectory. With this reality in sight, many countries are now positioning themselves to embrace gene technologies. Africa has not been left behind. Genome Editing: Join the Conversation is a collection of thoughts and quotes on the technology from scientists, regulators, policy makers and science communicators in Africa and beyond.



Videos

Visit and subscribe to *to ISAAA AfriCenter's* YouTube Channel for the most reliable information on bioscience around Africa in video format.



Courses & Services We Offer

At ISAAA *AfriCenter*, we offer various courses to diverse organizations, particularly focused on enhancing smooth translation of agricultural research into products. The courses are structured in one and two-days training modules rich in hands-on experience, that are tailored for specific agricultural research groups.

Science Communication (SC-1)

Communications Support course covers a range of science communication topics including fundamental principles of science communication, message development, story-telling and pitching. The course is suitable for scientists seeking to communicate research findings to non-technical audience.

Advanced Science Communication (SC-2)

This course builds on fundamentals of science communication offered in SC-1 above. It covers contemporary topics including social media engagement, effective media relations and development of effective communication strategies.

Stakeholder Net-mapping and Engagement

Net-mapping is a tool for research and strategic network planning. Net-map analysis builds understanding of multistakeholder governance by gathering in-depth information about governance networks, goals of actors, their power and influence. This allows researchers and development partners to be more strategic about how to act in complex networks, where to invest, while encouraging optimal use of advocacy and communication resources.

Policy Engagement and Communications (PEC)

This policy engagement and communications (PEC) support service is aimed at creating a facilitative political environment for acceptance and adoption of the partner's project eventual product. The support entails; outreach to policy makers and media practitioners through seeing-is-believing study tours, packaging and dissemination of the project's IEC materials, capacity building workshops as well as pairing of scientists with journalists to ensure accurate and balanced reporting of the beneficiary project. Essentially, the *AfriCenter* develops a tailor made communications strategy that serves as a blueprint for the project's PEC goals.

For more information and inquiries on any of the above courses, contact Dr. Margaret Karembu, Director ISAAA *AfriCenter* at mkarembu@isaaa.org.

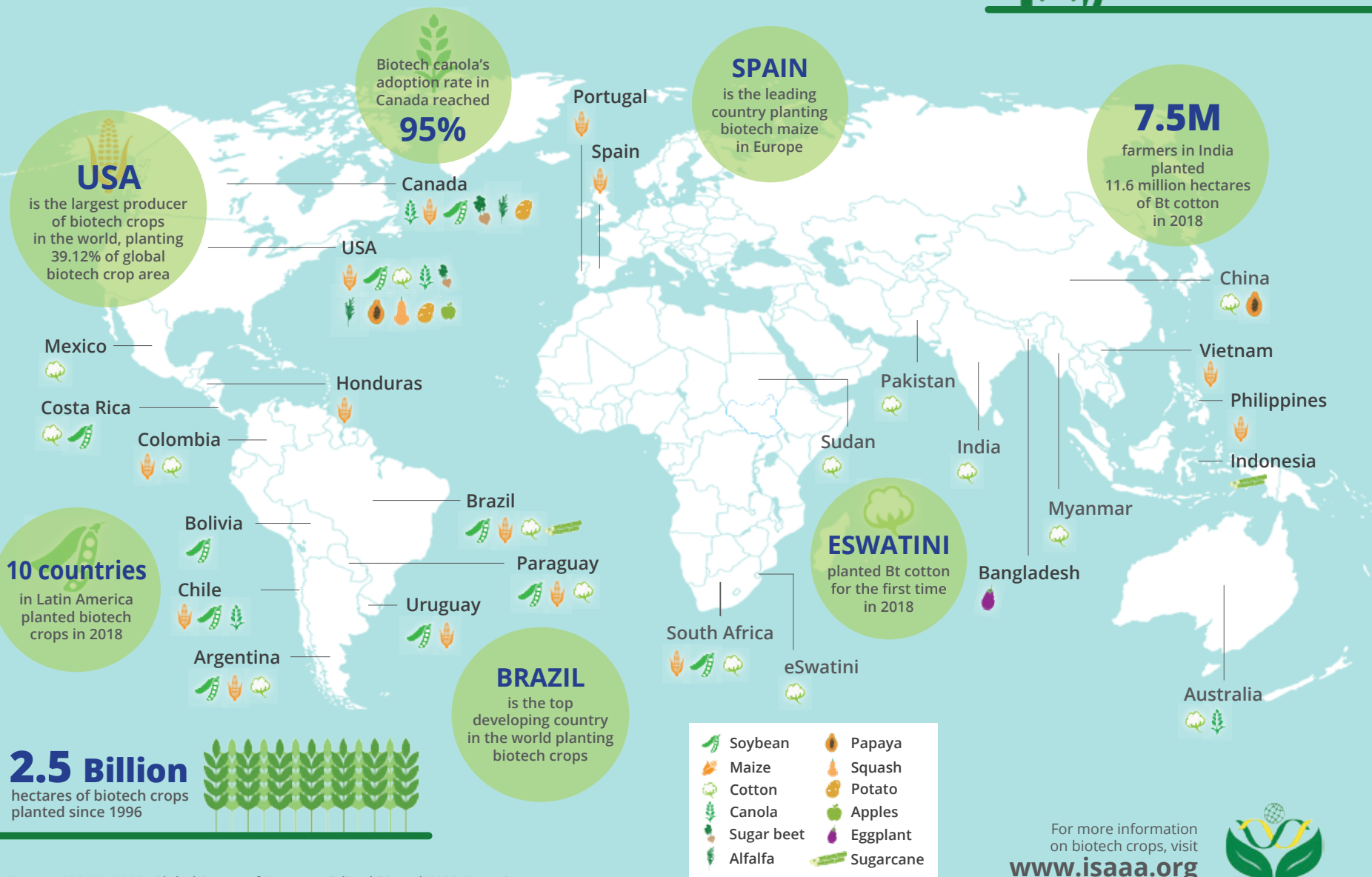
Do you know where biotech crops are grown?

More than 30 countries have planted biotech crops since 1996. See where they were grown in 2018.



17 Million

small, resource-poor farmers benefited from biotech crops in 2018



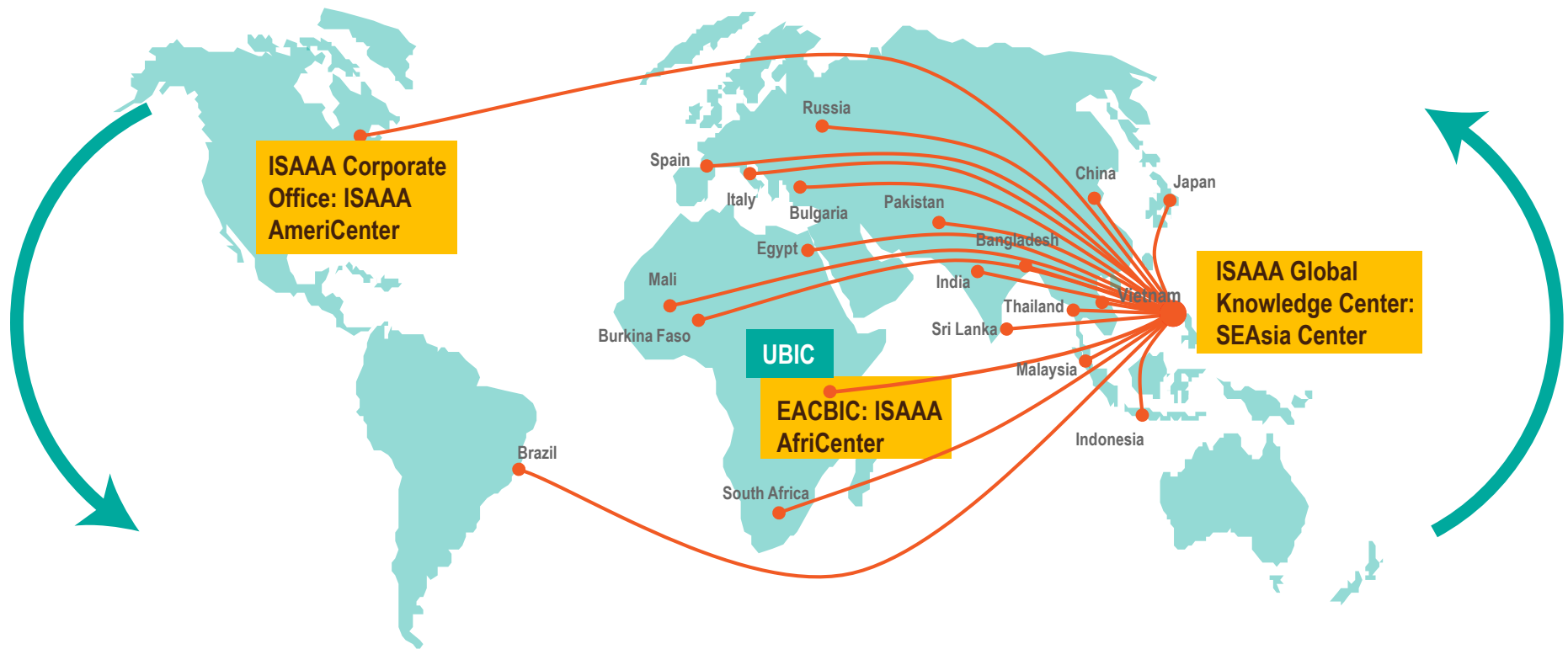
Source: ISAAA. 2018. Global Status of Commercialized Biotech/GM Crops in 2018. ISAAA Brief No. 54. ISAAA: Ithaca, NY.

For more information on biotech crops, visit www.isaaa.org



ISAAA Offices and Affiliate Biotech Information Centers

Network of 26 Biotech Information Centers-BICs



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