
ABBC
2019
GENOME
EDITING
Join the
conversation

“

Rising Early Shortens the Journey.

– African Proverb

”

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. The African Union High Level Panel on Emerging Technologies (APET) has already identified advances in the technology as key in fast-tracking Africa's development and transformation process. The technology holds great prospects in the areas of food production, medicine and animal improvement.

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.

> Gene editing provides an opportunity to capture the tremendous potential for African scientists to develop home-grown solutions to food insecurity and climate change by producing high yielding seeds, disease and pest resistant crops with sound diverse nutritional base.

Prof Yaye Gassama

Chair of African Union High-level Panel on Emerging Technologies (APET) and Vice-chair of the National Science Academy of Senegal, Senegal

Genome editing holds great prospects for Africa and will create a new vista in biotechnology if adequately and safely applied. The African Union should give it political support and develop a blue print on its development and regulation.

Dr. Rufus Ebegba

Chair, Africa Union Biosafety Regulators Forum and Director General, National Biosafety Management Agency (NBMA), Nigeria

To get it right with genome editing, countries need to put in place relevant regulatory policies. They should then regionally harmonize these regulations, and move as a block in regard to trade or technical negotiations on the subject. African regulators may draw best lessons from countries that are already regulating this technology.

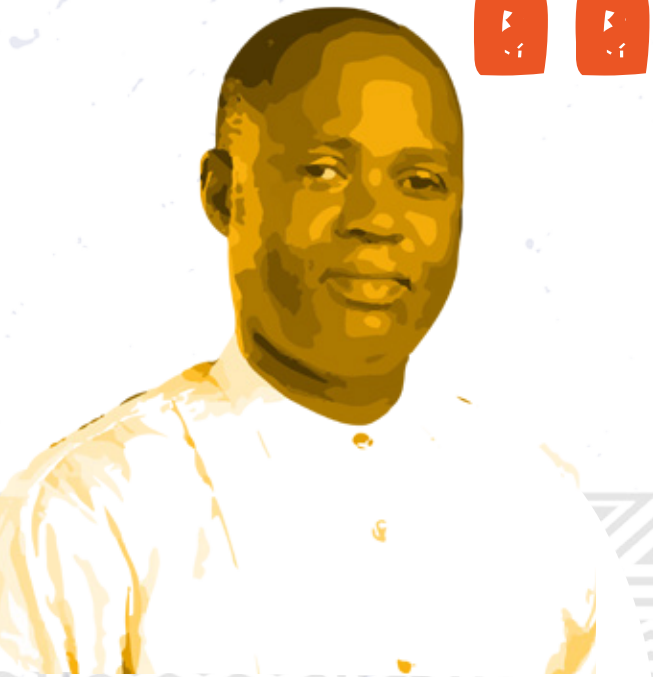
Hon. Andrés Murchison

Secretary, Food and Bioenonomy of the Federal Agro-industry Ministry, Argentina

> The global community must come together to have conversations about gene editing and its unlimited potential to solve the world's health and food challenges now. By engaging diverse perspectives and communicating in a way that earns public trust, the consumers will understand the importance of creating a sustainable food supply.

Ms. Amy te Plate-Church

Gene editing Outreach Project Leader, Centre for Food Integrity, USA



Genome editing, when adopted, will transform the agricultural sector, increase productivity, generate income and improve the livelihood of African farmers. My hope is that African governments will not bundle the technology's regulation under GMOs. To get it right, Africa must build capacity in this field, establish legislation that will favour the use and implementation, provide the necessary facilities and a conducive research environment, and avail funds to scientists working on this technology

Prof. Benjamin Ubi

Professor of Plant Breeding and Biotechnology, Dept.of Biotechnology, Ebonyi State University, Nigeria

Genome editing will enable scientists to address various agricultural challenges in an efficient and affordable manner. Our scientists must therefore rise to the occasion and use all platforms to engage the public on this technology. They can no longer afford to sit back and watch non-experts peddle half-truths, especially in this digital era.

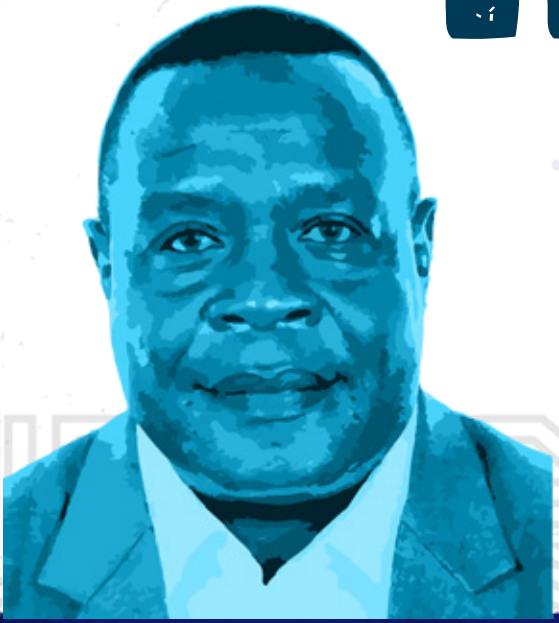
Mrs. Bibiana Iraki-Kipkorir

Program Officer, ISAAA AfriCenter, Kenya

Genome editing offers much promise to develop more productive, highly nutritious and climate-resilient African crops in an expedited manner, with less cost. An outreach campaign to explain the benefit and safety of this new breeding technique is vital.

Prof. Channa Prakash

Professor of Crop Genomics and Biotechnology at Tuskegee University, USA



Genome editing research requires early and sustained public dialogue and input to bolster public confidence and acceptance of the technology. The dialogue on gene editing must strike a balance between hope and fear. Africa needs to maintain public confidence in the ability of its scientists to make wise and ethical decisions about genome editing research.

Dr. Charles Mugoya

Chairman, National Biosafety Committee (NBC), Uganda

The world's ability to feed her people has been severely crippled by the rapidly changing climate, increased population growth and degradation of agricultural lands. Genome editing is one of the possible solutions that can forestall this crisis through provision of innovative options in agriculture.

Dr. Craig Cormick

Creative Director, ThinkOutsideThe, Australia

Genome editing is one of the latest tools that may be used to address some of the abiotic and biotic constraints in Africa's agricultural productivity. The technology has great promise since it offers a faster, more precise strategy for crop improvement. Africa needs to set out a clear criterion on which genome edited products should be excluded from regulation and those that must follow the GM crops regulatory processes.

Prof. Dorington Ogoyi

Chief Executive Officer, National Biosafety Authority (NBA), Kenya

Gene editing can offer possible future plant breeding solutions to farmers' challenges. It is important that regulators on an international basis work together to share their experience and approaches. Seeking common ground and compatible regulatory approaches will benefit everyone.

Mr. Doug McKalip

Senior Advisor, Biotechnology Regulatory Services, USDA-APHIS, USA

Genome editing will enable researchers to unlock the full potential of seed and democratize genome-based innovation. However, inaccurate risk perceptions could birth restricting policies leading to another missed opportunity for Africa. African researchers need to create products with tangible benefits to the consumer.

Dr. Hennie Groenewald

Executive Manager, Biosafety South Africa, South Africa

Genome editing is a rapid but precise method to combat pests and diseases that attack Africa's 'orphan' crops. These crops are endowed with sufficient nutritional value, but pests and diseases have minimized their utilization. Active knowledge sharing by scientists of the great benefits of gene editing will help build trust of the African community.

Dr. Jennifer Thomson

Emeritus Professor, Department of Molecular and Cell Biology, University of Cape Town and President, Organization for Women is Science for the Developing World (OWSD), South Africa

> I trust that genome editing will turn out to be as important to Africa's agriculture as conventional plant breeding, fertilizer and phone-based weather and marketing information. This is another tool for better crops, bigger harvests and prosperity for farmers.

Ms. Jill Kuehnert

Communications Consultant, Seed Stories, USA

In communicating technical subjects such as gene editing, the information from scientists is often like high voltage electricity. The journalists must be the step-down transformers that translate that immense power into usable domestic energy. Journalists must understand the science well enough for them to simplify it without making it simplistic or reducing its value.

Mr. Joe Ageyo

Editorial Director, Royal Media Services, Kenya.

Genome editing is an efficient, precise and powerful technology that can accelerate crop improvement in Africa. Africa needs to improve its R&D infrastructure, train its young generation in modern biotechnology, genome editing and other emerging technologies. Moreover, policy makers, regulators, researchers and the general public need to be well informed in order to properly manage and govern the technology for the benefit of the society.

Dr. Kassahun Tesfaye

Director General, Ethiopian Biotechnology Institute (EBTi), Ethiopia

The public acceptance and science-based regulatory paradigms will be critical to enabling gene-editing's use to solve real problems in agriculture. To get it right, there is a need for a transparent dialogue with a broad set of stakeholders to address their questions and listen to their concerns.

Dr. Kevin Diehl

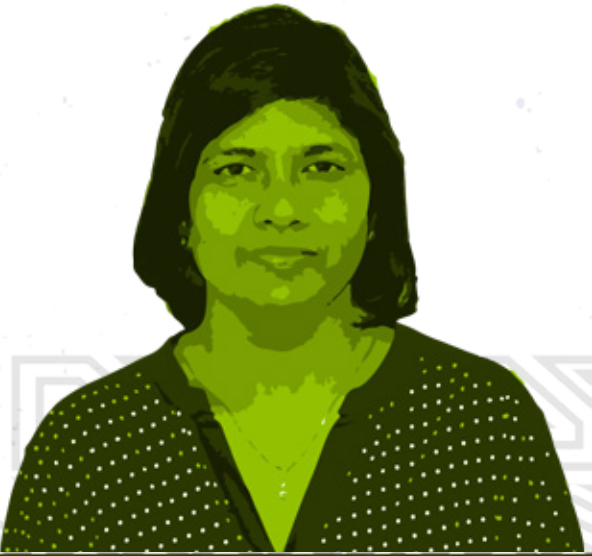
Director, Global Seed Regulatory Platform Director, Corteva Agriscience, USA

Access to advanced breeding technologies like genome editing will enable African farmers to access high-yielding varieties faster, to increase food production and alleviate food insecurity. Open communication between scientists, and consumers, and pragmatic regulatory frameworks on gene editing is required for Africa to get it right.

Dr. Kulani Machaba

Regulatory leader, Africa Middle East Region, Corteva Agriscience, South Africa

Gene editing is an emerging powerful tool which has potential to accelerate crop breeding by allowing precise, efficient and targeted modification of genes responsible for desirable traits.For Africa to efficiently develop science-based regulations and benefit from the technology, rigorous engagements with national competent authorities is needed.



Dr. Leena Tripathi

Principal Scientist, Institute of Tropical Agriculture (IITA), Kenya

Genome editing can be a crucial tool in the hands of scientists to help increase food security and combat hunger. It enables development of crops that are resistant to pests and tolerant to drought, thus becoming increasingly important in the context of climate change. African countries need to develop sound regulatory frameworks and work together in establishing the gene editing technology.

Dr. Liezel Gouws

Project Manager, Biosafety South Africa, South Africa

Gene editing technology can provide food and seed security in a developing continent like Africa. I hope that gene-editing technology will be used to improve the lives of all socio-economic groups in the region. For us to get it right we need to educate, don't over regulate and engage with the public.

Dr. Magdeleen Cilliers

Policy and Research Officer, South African National Seed Organization, South Africa

Africa cannot afford to miss genome editing like it missed green revolution and genetic modification. Gene editing is the perfect tool to arrest malnourishment, feed the growing population and cope with climate change. African countries should make decisions based on science rather than activism to avoid regulatory oversight.

Dr. Mahaletchumy Arujanan

Global Coordinator, ISAAA and Executive Director, Malaysian Biotechnology Information Center, Malaysia

Gene editing can be a key technology to help Africa in developing its own science and innovation-based agriculture. Gene editing technology should stay accessible and affordable to small and medium size enterprises in order to unlock its full potential for crops with smaller markets.

Dr. Marc Heijde

Program Manager, VIB-International Plant Biotechnology Outreach (IPBO), Belgium

Africa's chance to benefit from genome editing lies heavily on the ability to efficiently regulate and communicate its potential. When scientists shy away from communicating about their research, other entities will miscommunicate it on their behalf.

Dr. Margaret Karembu

Director, International Service for the Acquisition of Agri-biotech Applications (ISAAA) AfriCenter, and Chair, Africa Women for Biosciences (AWfB), Kenya

Genome editing can allow for faster improvement of agricultural and consumer interest traits in major and specialty crops. This will ensure the crops contribute immensely to national food security and economic growth. If adequately regulated, this technology can be commercially developed with regulatory budgets that are affordable for National Institutes of Agricultural Research, and small and medium enterprises (SMEs).

Dr. Martin Lema

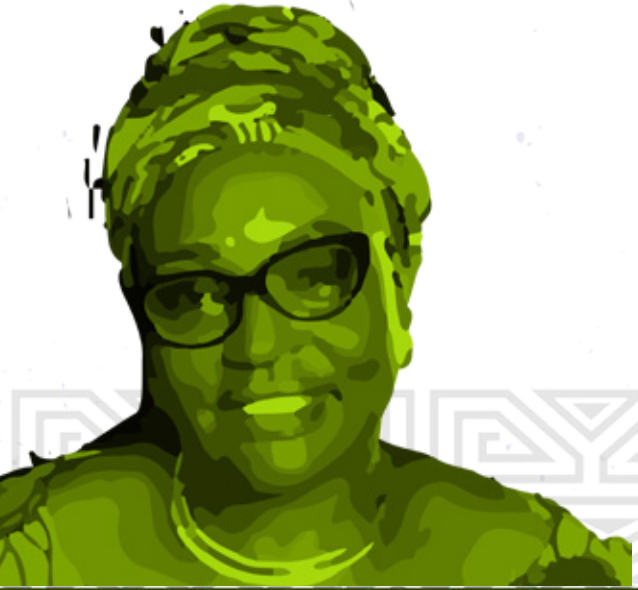
Director of Biotechnology, Ministry of Agro-industry, Argentina

Genome editing is a technology that should be leveraged to make Africa's crops more nutritious and resistant to diseases thus bringing about increased yields. This will be key in realizing a food secure continent whose farming population reaps a fortune from agriculture. Science and evidence should influence the process of making regulations that will guide adoption of genome edited products.

Patricia Nanteza

Cornell Alliance for Science Fellow and Communications Specialist, National Agricultural Research Laboratories (NARL), Uganda

Food production in Africa needs to match the rising population. Novel approaches such as gene-editing can contribute towards this need. The technology's precision and accessibility is crucial in getting policy makers buy in.



Dr. Rose Gidado

Deputy Director, NABDA & Country Coordinator, Open Forum on Agricultural Biotechnology (OFAB) in Africa, Nigeria

“The public has the right to be properly informed about the potential risks of gene editing technology. Scientists have a responsibility to convey clear but scientifically correct messages to the global community and let people build their own opinion based on real and objective evidence.

Dr. Serena Zacchigna

Group Leader, Cardiovascular Biology, International Centre for Genetic Engineering and Biotechnology (ICGEB), Italy

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