



# ACCOMPLISHMENT REPORT

# 2024

Building Innovation-empowered and Informed Communities

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ISAAA Inc. feeds the world with knowledge of biotechnology by supporting transformative technologies, fostering impactful partnerships, and facilitating the development of science-based policies toward food-secure communities.

# 2024 Milestones

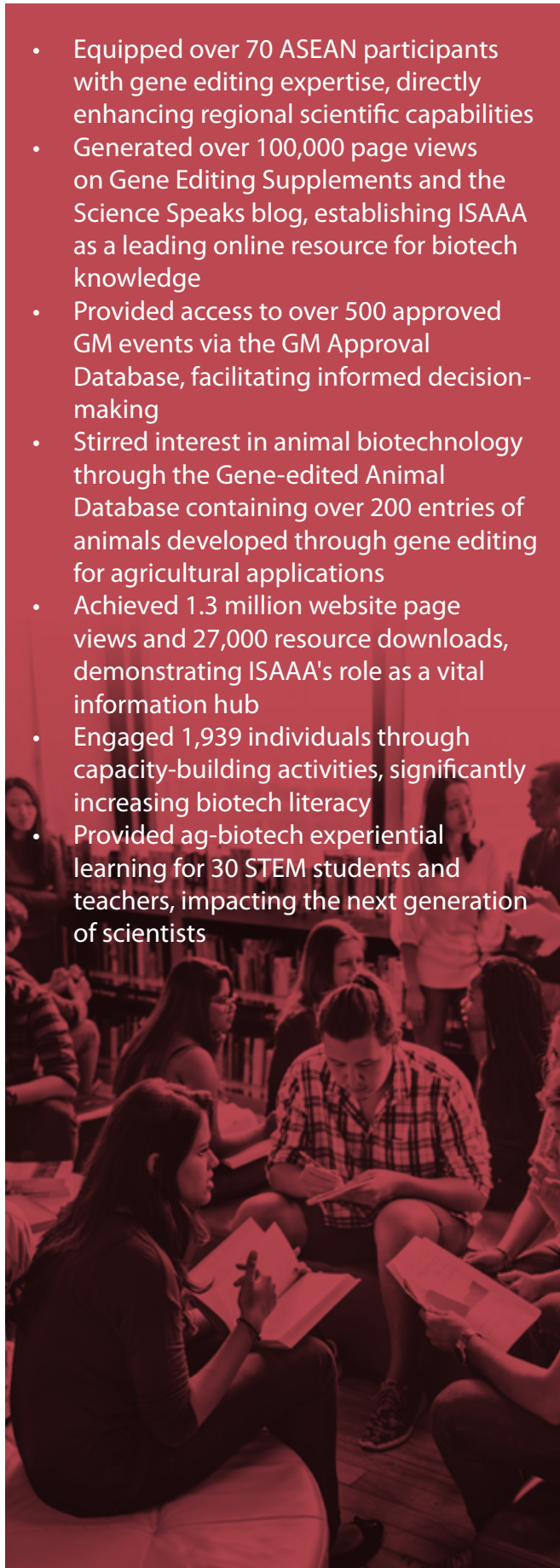
## Strategic Direction and Global Reach

- Launched a new 5-year (2024-2028) vision, mission, and goals, driving focus on transformative technologies and food security, setting a clear path for impactful global change
- Connected 45 international experts from 10 countries through ASCA7, fostering crucial global collaboration in agribiotechnology
- Reached over 20,000 subscribers in 173 countries with *Biotech Updates*, ensuring worldwide access to critical biotech information



## Knowledge Sharing and Capacity Building

- Equipped over 70 ASEAN participants with gene editing expertise, directly enhancing regional scientific capabilities
- Generated over 100,000 page views on Gene Editing Supplements and the Science Speaks blog, establishing ISAAA as a leading online resource for biotech knowledge
- Provided access to over 500 approved GM events via the GM Approval Database, facilitating informed decision-making
- Stirred interest in animal biotechnology through the Gene-edited Animal Database containing over 200 entries of animals developed through gene editing for agricultural applications
- Achieved 1.3 million website page views and 27,000 resource downloads, demonstrating ISAAA's role as a vital information hub
- Engaged 1,939 individuals through capacity-building activities, significantly increasing biotech literacy
- Provided ag-biotech experiential learning for 30 STEM students and teachers, impacting the next generation of scientists



## Policy and Advocacy Impact

- Published 3 policy briefs, directly influencing science-based regulations on biotech products, labeling, and novel foods
- Launched 15 new publications, reaching over 139,000 stakeholders and expanding the reach of vital biotech information
- Secured 172 signatories for the Declaration of Support to Biotechnology in the Philippines, demonstrating significant influence on national policy and public support.

## Enhanced Communication and Engagement

- Cultivated a strong social media presence with 58,700 followers, amplifying biotech awareness and engagement



## Message from the ISAAA Board Chair

Agriculture faces unprecedented challenges that come with the rapid growth of the global population. The demand for better food production amidst the effects of climate change and diminishing natural resources, continues to threaten agricultural productivity, especially for resource-poor farmers in developing countries like the Philippines. Addressing these challenges requires sustainable science-based solutions that could enhance food security and economic growth.

Biotechnology has been and will continue to be a powerful tool to enhance productivity, improve crop resilience, and promote sustainable farming practices. For over three decades, ISAAA has been a trusted partner for knowledge-sharing, capacity-building, and policy advocacy in agricultural biotechnology. ISAAA plays a vital role in delivering accurate, science-based biotech information to policymakers, farmers, researchers, and the public. Through its various engagements, ISAAA continues to empower communities, influence policies and public perceptions, and drive scientific advancements in global food systems.

Moving forward, we must strengthen partnerships and engage in multi-sectoral dialogues with the government, research institutions, and private sectors to align our efforts with the needs of farmers, consumers, and the general public. With the rapid advancements in genome editing, gene drive, and other emerging technologies, the ultimate goal of communicating biotechnology remains the same—to improve food security, promote sustainability, and uplift the lives of millions of people around the world.

ISAAA's commitment to advancing science-based agriculture paves the way for a future where innovation drives food security, sustainability, and resilience. This is a call on all stakeholders to continue championing responsible innovation, fostering collaboration, and supporting initiatives that drive agricultural transformation. Looking ahead, ISAAA will continue to be a reliable partner and platform that contributes to a sustainable and food-secure future.

**Dr. William D. Dar**  
Chair of ISAAA Board of Trustees

## Message from the Executive Director

After nearly three decades of continuously benefiting from products of biotechnology and genetic engineering, global food and agriculture scientists and economists recognize the need for a new wave of innovative technologies that will contribute to overcoming the challenges posed by increasing population, dwindling natural resources, and climate change, amid increasing pressures of wars and economic instability.

Thus, the advent of various new breeding technologies (NBTs) in crops and animals was welcomed enthusiastically because of the promise of bringing in more productive, efficient, sustainable, and cost-effective novel genetics. And, indeed, we witness the exodus of research and development and the availability of NBT products that would contribute to the solution of food and agriculture challenges.

In accordance to ISAAA's vision, our strategies will focus on feeding the world with knowledge of biotechnology by supporting transformative technologies, fostering impactful partnerships, and facilitating the development of science-based policies toward food-secure communities.

With our usual offering of biotech information resources and publication materials released on our ISAAA website and social media platforms, new information materials on bioscience topics are available for various stakeholders.

This Report expounds on the outcome of partnership and critical thinking in raising understanding and acceptance of bioscience innovation. New sections include the Gene-edited Animal Biotech Database, Animal Biotech Resources, and Biotech in the Philippines Resources. Inspirational quotes from Filipino biotech farmers and recognition of our Filipino biotechnologists are immortalized in new publications, all freely downloadable.

Capacity-building activities were conducted to strengthen knowledge on regulation, biosafety, and communication through our annual Asian Short Course on Agribiotechnology, Biosafety Regulation, and Communication and other training workshops in the region. Future endeavors will also focus on climate change solutions with the initial release of the publication "*Klima*".

Lastly, our excellent ISAAA Inc. team and I thank our partners. We seek to strengthen our collaboration with more like-minded institutions, making them confidently assured that knowledge sharing on biotech innovations is targeted, cost-effective, and purpose-driven.

Contact us at [knowledge.center@isaaa.org](mailto:knowledge.center@isaaa.org) for information on partnership and collaborative projects for our mutual interest.

**Dr. Rhodora Romero-Aldemita**  
Executive Director, ISAAA Inc.



# STRATEGIC PARTNERSHIPS



## ASEAN member states create collective effort to gain benefits of gene editing

A gene editing workshop, co-organized with the ASEAN Committee on Science, Technology, and Innovation (COSTI), the US Mission to ASEAN, and the US ASEAN Business Council, brought together over 70 participants from eight ASEAN member states to advance gene editing research, adoption, and policy development in the region. Building on a previous workshop, the event provided crucial information on the science, applications, and benefits of gene editing, while also offering insights into regulatory approaches from countries like Japan, Singapore, Australia, Canada, and notably, Thailand. Thailand's successful implementation of gene editing guidelines, driven by political will, served as a model for other ASEAN nations. The workshop fostered collaboration and knowledge sharing among scientists, regulatory experts, and ASEAN representatives, aiming to align regional policy frameworks, promote acceptance of gene-edited products, and ultimately highlight the potential of gene editing to address regional challenges.

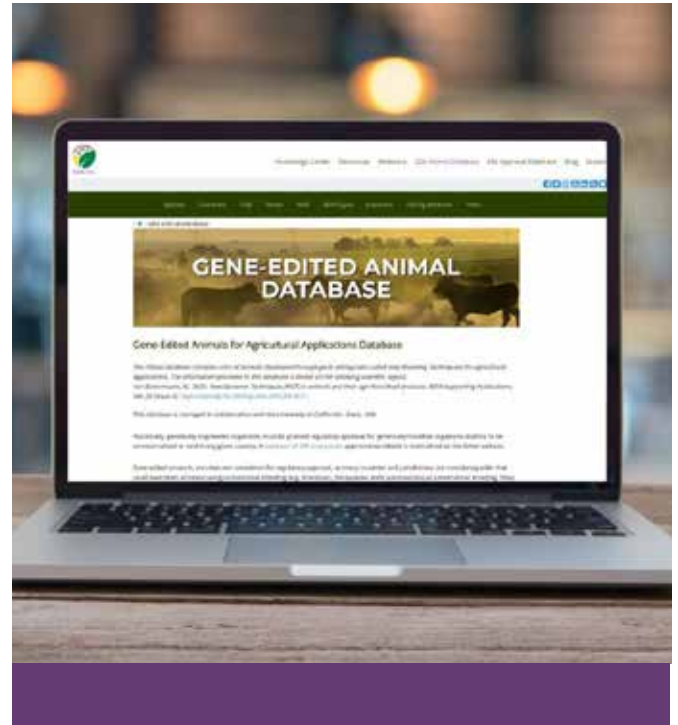
## ASCA trains over 200 biotech players on biotech regulation and communication

The 7th Asian Short Course on Agribiotechnology, Biosafety Regulation, and Communication (ASCA7) equipped over 40 participants from 10 countries with crucial knowledge and skills in agri-biotech applications, policy, and communication, impacting the landscape of biotech regulation and commercialization in Asia. Building on the success of previous ASCA runs, which have trained over 200 biotech professionals, ASCA7 fostered collaboration and provided a platform for networking among scientists, regulators, and stakeholders, with the help of co-organizers and partners such as Thailand's Department of Agriculture, Biotechnology Alliance Association, FuturaGene, Murdoch University, Corteva, Agriculture and Food Systems Institute, PtBio, US Soybean Export Council, US Grains Council, CropLife Asia, CropLife Philippines, and Centre for Agriculture and Bioscience International. The course, incorporating new topics like bioethics and risk communication, empowers participants to contribute to science-based regulations and promotes informed decision-making surrounding agri-biotech products, ultimately addressing food security and climate change challenges.



## Bridging the gap between branches of the government and science communicators

The "Decode Biotech: Communicating Biotechnology in the Philippines" workshop, organized by ISAAA Inc. and partners, significantly impacted 46 key stakeholders from the judiciary and legislature by enhancing their understanding of agri-biotech. Through expert briefings on the Philippine biotech landscape, regulatory frameworks, and effective communication strategies, the workshop addressed the critical need for informed public perception and science-based policy. Participants, initially possessing basic biotech knowledge, demonstrated improved comprehension post-workshop, gaining insights into navigating public concerns, utilizing media effectively, and deploying targeted communication strategies for biotech innovations like Golden Rice. This strengthened capacity to communicate biotech's benefits and address misinformation is crucial for fostering sustainable food production and public trust in science.



## Gene-Edited Animal Database advances access to information on animal biotechnology innovations

ISAAA partners with the University of California, Davis (UC Davis) to develop and maintain the Gene-Edited Animal Database (GEAD) which provides detailed information about animals developed through gene editing for agricultural applications. GEAD presents 16 entries of gene-edited animals that have undergone the regulatory process and 192 entries that have not gone through the regulatory process yet or are already in the later stage of research. Data, including the species, country, trait category, target gene, NGT used, SDN type, institute or developer, editing method, year, and foreign DNA, are made available on the ISAAA website. Since its launch in August 2024, the database had over 19,052 views and visits worldwide, demonstrating its growing impact as a vital resource for stakeholders globally.

## Leading agri-biotech dialogues and discussions

ISAAA Inc. provided a platform for over 670 individuals from the academe, industry, farmer groups, and the general public in discussions about product stewardship and emerging biotechnologies, such as gene editing and gene drives. ISAAA is also developing an e-learning platform for a training program, called Progressive Manpower Enhancement Program (PMEP), intended for researchers, scientists, regulators, and officers working at the Department of Agriculture and partner institutions to enhance and develop leaders in the fields of agri-biotech R&D, regulations, policy, management, and communication. The *Advancing Philippine Agri-biotech Capacity* project is in collaboration with the Philippine Agriculture and Fisheries Biotechnology Program of the Department of Agriculture (DA Biotech).



## Publications showcase rust-resistant soy and other biotech breakthroughs

ISAAA and the 2Blades Foundation have partnered to create a resource portal showcasing products developed using TALENs, a widely used gene-editing tool. Hosted on the ISAAA website, the portal offers a variety of content, including news articles, blogs, infographics, publications, and videos, and has garnered over 4,000 views since its launch. This collaboration also includes the development of publications highlighting 2Blades' research, particularly in developing rust-resistant soy and addressing mycotoxins in corn. The initiatives aim to promote a broader understanding and acceptance of biotechnology and pave the way for future product adoption.



## Accelerating adoption of biotech products in the Philippines

ISAAA Inc., through the *Pinoy Biotek* project with the Philippine Agriculture and Fisheries Biotechnology Program of the Department of Agriculture (DA Biotech), conducted a series of events and activities promoting biotech products in the Philippines. More than 400 individuals were engaged through the seminar organized by ISAAA to help disseminate homegrown technologies for possible adoption in the country. A policy forum, attended by over 100 policymakers, discussed strategies on how homegrown biotech products could be commercialized systematically and efficiently in the Philippines. As part of the project, ISAAA also released several information, education, and communication (IEC) materials intended to help increase Filipinos' understanding and appreciation of Philippine biotechnology. The publication materials, including the *Pinoy Biotek Magazine*, *Pinoy Biotek Digest*, and policy brief, were printed and distributed to various stakeholders, such as farmers, fishermen, academics, researchers, media, and government agencies.



## Empowering over 1.7 million individuals through accurate biotech information

Over 1,700,000 individuals were engaged through the *Know the Science* project of ISAAA Inc. in collaboration with the Philippine Agriculture and Fisheries Biotechnology Program of the Department of Agriculture (DA Biotech). The social media campaign made science more accessible by sharing key biotech information with the general public. With over 260 onsite participants, the capacity-building activities of the project showed improvements in knowledge, perception, and interest among target stakeholders, including students, researchers, consumers, farmers, media practitioners, and government officials.

ISAAA also released several publication materials covering topics, such as GM food labeling, novel foods, animal biotechnology, and climate change. The *Filipino Faces of Biotechnology* awardees and biotech corn farmers in the Philippines were also featured in a coffee table book and a monograph, respectively, and published by ISAAA in 2024.

The activities of the project helped fill knowledge gaps, strengthened existing partnerships, and fostered new collaborations, creating more opportunities for broader knowledge-sharing activities and engagements.

## Advancing agricultural sustainability through public-private partnerships

ISAAA Inc. and CropLife Asia collaborate to advance agricultural sustainability by disseminating scientific knowledge and facilitating technology transfer to developing nations through public-private partnerships. This partnership includes CropLife Asia's support for the *Biotech Updates* newsletter, featuring gene/genome editing news, translation of ISAAA materials into Simplified Chinese and Thai, the bi-monthly Gene Editing Supplement, and the Gene Editing Resource on the ISAAA website. In 2024, this collaboration produced over 100 *Biotech Updates* articles on gene editing and 26 issues of the Gene Editing Supplement. In September, CropLife Asia supported the participation of six individuals in ASCA7.



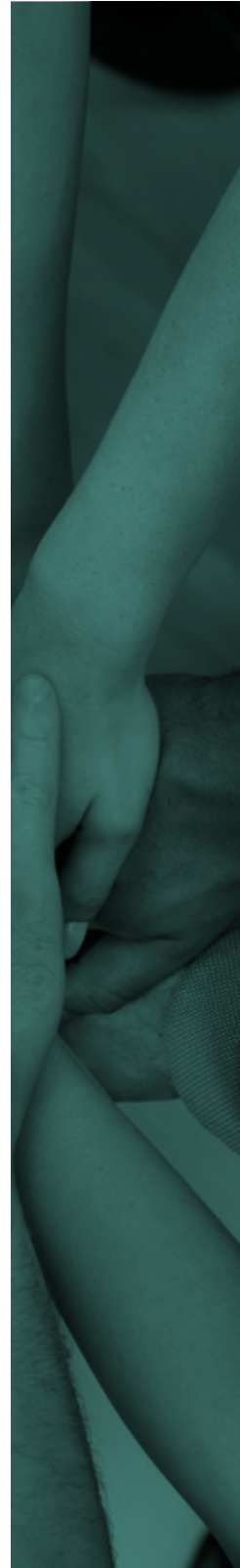
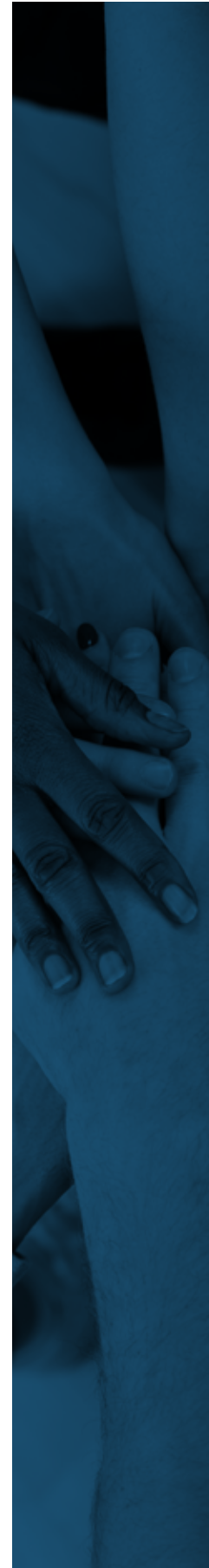
## Capacity building for science-based regulatory approaches in the Philippines

The webinar *Navigating the Landscape: A Look at Animal Biotech Regulations in Brazil and Canada* brought together 37 representatives from various agencies in the Philippines to explore policy and regulatory strategies to ensure the safe and responsible adoption of biotechnology products in the country. Regulatory experts from Brazil and Canada tackled their respective country's biosafety frameworks and risk assessment approaches. The webinar equipped attendees with the knowledge and skills to develop policies and regulations that are aligned with international standards. The webinar was organized by ISAAA and Winrock International through the Building Safe Agricultural Food Enterprises (B-SAFE) Project.



## Raising Filipino youth's awareness of gene editing

To raise awareness and appreciation among invited high school students and teachers about gene editing and its potential benefits for food and agriculture, the environment, and climate change, ISAAA Inc. and the Biotechnology Coalition of the Philippines conducted two webinars. The topics discussed in these webinars included gene editing, ongoing gene editing research in the Philippines, genetic modification of crops, and applications of gene editing in livestock and aquaculture. The webinars were attended by 91 participants from 34 schools across the Philippines. Participants strongly agreed that the sessions and topics were relevant to their roles as teachers and students.



# FLAGSHIP PRODUCTS

## Biotech Updates receive positive feedback from subscribers

ISAAA's *Biotech Updates* continued to deliver biotech-related news and discoveries to over 20,000 subscribers from 172 countries worldwide. In the latest survey, 95% of the subscribers who responded said that the weekly e-newsletter has been helpful for them. Around 70% of the respondents use *Biotech Updates* weekly and gave positive feedback on the newsletter's clarity and coverage. The free e-newsletter comes with a bi-weekly release of the *Gene Editing Supplement* and a weekly release of the *Science Speaks* blog.

*"I am being updated on international science and developments related to GMO/NGT and on approvals globally. A very helpful and useful newsletter."*



## 15 new publications delivered key information to over 139,000 stakeholders, facilitating informed decision-making

ISAAA has been at the forefront of feeding the world with knowledge of biotechnology for three decades. Each year, new publications are released to facilitate informed decision-making among various stakeholders. In 2024, a total of 15 new information materials in electronic and printed copies were distributed to over 139,000 individuals. An extensive review and infographics about countries approving GM crop cultivation were published in the *Science Speaks* blog, which were republished by *Business Mirror*, a newspaper in the Philippines with a print circulation of 82,000.

A total of 5 magazine issues were also released, focusing on homegrown Filipino biotechnologies, animal biotechnology and climate change. A storybook titled *Klima* tackled the relevance of innovations in mitigating the impacts of climate change. Two Pocket Ks were released to present the rust-resistant technologies of 2Blades and their partners. Infographics on the contributions of biotech to sustainability, rust-resistant soybean, and gene editing regulatory landscape were also released. Policy briefs on advancing agri-biotech, labeling, and novel foods were co-developed with experts to assist the Philippines in fostering science-based regulations.

## Expanding the reach of biotechnology knowledge using social media and blog

ISAAA Inc. effectively utilizes social media platforms—Facebook, Instagram, X, LinkedIn, and TikTok—to educate the public with science-based information on biotechnology. In 2024, targeted campaigns focused on gene editing, gene drives, science communication, food security, and empowering women in science. These initiatives resulted in 3,610 online mentions, reaching 732,579 individuals, and engaging a collective audience of 58,700 followers across all platforms. ISAAA Inc. maintains engagement through a diverse content strategy, sharing updates on biotech crop adoption and new breeding technologies, valuable educational resources, webinar announcements, and new biotech crop approvals.

Complementing these activities is ISAAA Inc.'s blog, Science Speaks. The blog publishes weekly articles on various topics written by ISAAA writers and contributors. In 2024, 50 articles were published in Science Speaks, with 215,532 page views. Some articles from the blog were republished on other websites and news sites.



## GMAD transforms access to information on biotech events

The ISAAA GM Approval Database (GMAD) comprehensively tracks and compiles information on genetically modified (GM) crops that have been approved for planting and importation for food and feed, and commercialization around the world. With over 51,039 page views per month, this database is a helpful tool for researchers, policymakers, professionals, and the public in providing detailed information about biotech events with a brief description, trait, developer, and year of approval for cultivation.

Feedback and suggestions were gathered from regular database users and contributors, where 50% of the respondents were faculty and academic staff. In a recent survey, 75% of the respondents said that GMAD was useful for them, especially in helping them find relevant information about different countries' approval of biotech traits. The database has been an excellent reference for reviewing the details of GM approvals around the world.

***"It helps me to find information and prepare lectures."***



## Message from AfriCenter Director

ISAAA AfriCenter remains committed to shaping Africa's biosciences landscape by fostering policy clarity, building public trust, and strengthening collaboration across sectors. Our initiatives continue to create meaningful impact, positioning Africa as a leader in agricultural innovation and environmental sustainability.

I am proud of our remarkable milestones in advancing biosciences across Africa over the years, including throughout a largely successful 2024. This year, we strengthened the bio-innovations ecosystem, championed science communication and diplomacy, and fostered regulatory clarity.

A key highlight was Kenya's High Court dismissal of a petition challenging lifting the 12-year ban on GMOs. Burkina Faso also rejoined the list of GM crop-adopting nations with the approval of Bt cotton hybrids. The Africa Science Dialogue portal, through which the public actively interacts with scientists, and the podcast hosted on the platform, played a crucial role in combating misinformation and driving informed decision-making across the continent.

We also expanded our reach through our signature publications and strategic training programs, empowering over 1,000 stakeholders across 14 countries. Our partnerships, including with Iowa State University and Beneficial Bio Ltd., created new opportunities for bio-entrepreneurs to learn and pitch their ideas during the World Food Prize.

Looking ahead, we anticipate an even more impactful 2025, with the African Biennial Biosciences Communication Symposium (ABBC 2025), which will be held in Ghana, expected to provide key solutions to rampant misinformation and disinformation across the continent.

I thank our dedicated team, partners, and supporters for their unwavering commitment. May the new year bring greater opportunities as we continue shaping Africa's biosciences' future together.

**Dr. Margaret Karembu, MBS**

Director, ISAAA AfriCenter

Chair, Africa Science Dialogue

# KEY IMPACTS

## More breakthroughs in Africa's biosafety landscape

*AfriCenter's* proactive engagement with policymakers and regulators has led to groundbreaking advancements in biosafety across Africa. Kenya witnessed a historic win when the High Court dismissed a petition against lifting the 12-year ban on GMOs. This victory was bolstered by *AfriCenter's* steadfast commitment to providing factual information through strategically convening multi-stakeholders, engaging legal professionals, and facilitating rapid response meetings to address the GMO court hearing. Additionally, Burkina Faso came back to the list of GM crop-adopting countries with approval for cultivation of Bt cotton hybrids.



## Advancing knowledge translation in biosciences

Recognizing the shifting biosciences landscape, *AfriCenter* broadened the scope and diversified efforts in 2024, achieving notable progress. The knowledge translation efforts led to the relaunch of the Africa Science Dialogue portal and podcast. *AfriCenter* continued to serve the information needs of diverse stakeholders through signature knowledge products, including the monthly e-newsletter the DrumBeat, short videos, information briefs, and journal publications. These initiatives ensured the timely dissemination of information to diverse audiences, enhancing accessibility and impact. *AfriCenter* started working towards reviving the signature Annual Brief on the status of biotech and biosafety in Africa in response to stakeholders' needs. *AfriCenter* plans to digitizing the region's biotech progress through interactive data-visualized formats in the coming year.

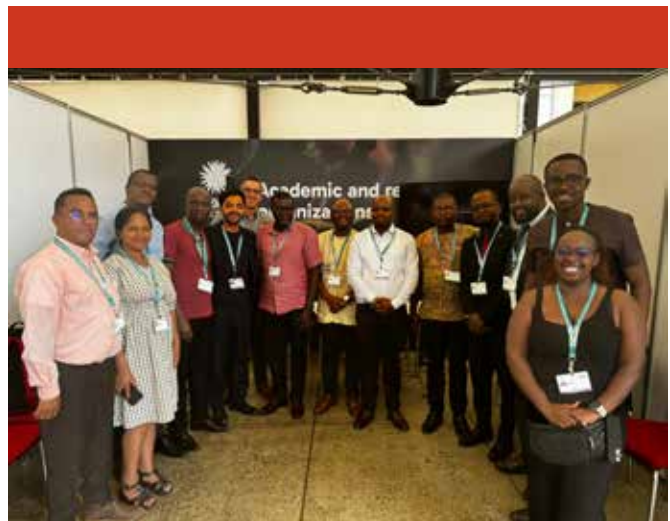
## Policy and regulatory clarity enhanced

*AfriCenter* reinforced policy and regulatory frameworks by fostering collaboration with regional bodies such as COMESA and providing advisory support to policymakers, including members of the East Africa Legislative Assembly and private sector stakeholders. These engagements are expected to strengthen predictable systems that build confidence in emerging bio-innovations across the continent.



## Strengthened science communication and diplomacy

*AfriCenter* trained over 1,000 stakeholders from 14 African countries, empowering early-career scientists to actively participate in global negotiations. *AfriCenter's* engagement at COP16, the World One Health Congress, and other key forums amplified Africa's voice in biosciences and One Health solutions, ensuring these remain top priorities on the global agenda. *AfriCenter's* role as a convener of multi-stakeholder dialogues expanded to include critical discussions on crop protection products and combating misinformation under the Africa Science Dialogue initiative. Additionally, a thematic webinar on International Women's Day 2024 highlighted the role of women in advancing biosciences.



## Growth of Africa's bio-innovation ecosystem

*AfriCenter's* commitment to empowering bio-entrepreneurs and advancing innovation saw the expansion of mentorship programs and platforms for innovators to pitch their ideas. The collaboration with Iowa State University (ISU) Startup Factory and Beneficial Bio Ltd facilitated the growth of the Enzyme Manufacturing Masterclass (EMM), which expanded in Kenya and was introduced in Ethiopia. A major highlight was a pitching event at a World Food Prize side event, where an ISU Startup Factory participant won recognition, demonstrating the tangible impact of international partnerships. These initiatives are building a robust bio-innovation ecosystem, and fostering job creation and economic growth.

## Increased media reach and public engagement

In 2024, *AfriCenter* maintained strong media engagement through over 20 media events across Ethiopia, Kenya, Namibia, and Zimbabwe, involving more than 250 journalists. The strategic media initiatives, including science-media cafés, seeing-is-believing study tours, and the OFAB media awards, led to over 80 million positive media impressions. These efforts contributed to increased coverage of biotech, One Health, and science diplomacy in Africa.





# MALAYSIAN BIOTECHNOLOGY INFORMATION CENTRE



The year 2024 has been a transformative one for the Malaysian Biotechnology Information Centre (MABIC), reinforcing our role as a driving force in biotechnology awareness, policy advocacy, and STEM education. Through bold initiatives and strategic partnerships, we continue to bridge the gap between science and society, ensuring that biotechnology remains a key enabler for sustainable development.

One of our most creative and impactful ventures this year was championing awareness of palm oil through an innovative approach—science communication via a cooking show. By merging culinary arts with scientific facts, we brought the benefits of palm oil to the forefront, debunking misconceptions and highlighting its nutritional and economic value. This initiative reflects MABIC’s unwavering commitment to making science accessible, engaging, and relevant to everyday life.

Education remains at the heart of our mission. In a significant step toward inclusivity, we introduced a four-page Tamil pull-out in *The Petri Dish*, reaching 525 Tamil



schools across the country. Beyond print, our engagement was hands-on—we visited dozens of Tamil schools, inspiring young minds to explore the limitless possibilities within STEM fields. By making science education more relatable, we are nurturing the next generation of scientists, engineers, and innovators.

On the policy front, MABIC played a pivotal role in shaping biosafety regulations. Our two white papers—one for the Malaysian Productivity Corporation advocating agile biosafety regulations and another for the International Life Sciences Institute (ILSI) addressing gene editing policies—demonstrate our expertise in driving informed policymaking. These contributions underscore our position as a key stakeholder in the biotechnology regulatory landscape, both nationally and globally.

MABIC’s international presence continues to grow, with my participation as a speaker at various global forums advocating for agricultural biotechnology. Representing MABIC and ISAAA, I had the privilege of engaging with policymakers, researchers, and industry leaders, reinforcing the importance of biotechnology in addressing food security and sustainability. Our partnership with ISAAA remains strong, further amplifying our impact on the global stage.

As we look ahead, MABIC remains steadfast in our mission—to champion biotechnology as a tool for progress. We will continue to push boundaries, spark conversations, and drive change, ensuring that science serves humanity in the best possible way.

**Dr. Mahaletchumy Arujanan**

Executive Director

Malaysian Biotechnology Information Centre (MABIC)



# NETWORK OF BIOTECHNOLOGY INFORMATION CENTERS

The ISAAA Network of Biotechnology Information Centers responds to specific information needs, promotes and advances a broader public understanding of crop biotechnology, localizes ISAAA information materials, and monitors the local agri-biotech environment.





CHINA

KOREA

JAPAN

PAKISTAN

EGYPT

THAILAND

VIETNAM

PHILIPPINES

UGANDA

KENYA

MALAYSIA

INDONESIA

SOUTH AFRICA

# WAY FORWARD

## Building Innovation-empowered and Informed Communities

Biotechnology made significant strides in 2024, with a focus on solutions that directly benefit the general public.

Norfolk Healthy Produce successfully developed and secured approvals for purple tomatoes, which have high antioxidants. Another research team from Spain developed biofortified golden lettuce with a 30-fold increase in beta-carotene, the precursor of vitamin A in the human body.

Plants are also engineered to produce meat proteins to address nutritional needs and minimize the harmful impact of animal food production on the planet and human health. Moolec has produced and received US approval for Piggy Sooy—soybeans with high levels of pork protein. Scientists from Yonsei University in Japan also developed cultured beef rice—rice grains with animal muscle and fat cells.


Aside from food products, biotechnology continues to address the other demands of consumers. For instance, a Paris-based start-up called Neoplants developed the first bioengineered pothos, which works as air purifiers through synthetic biology. This nature-based solution to fight indoor air pollution is a pioneering innovation for greener homes. In the Philippines, gene-edited bananas will be introduced to reduce food waste. These reduced browning bananas from Tropic Biosciences are projected to reduce CO2 emissions equivalent to removing 2 million cars from the road per year.

With the growing number of solutions offered by biotechnology, over 30 countries have granted cultivation approvals to genetically modified (GM) crops as of 2024. Three decades since the commercialization of biotech crops, biotechnology continues to be a sustainable tool to address global challenges such as food security and climate change.

Parallel to the continued breakthroughs in biotechnology, ISAAA has been instrumental in sharing the benefits of agricultural biotechnology with key stakeholders, particularly resource-poor farmers in developing countries, through knowledge sharing, support to capacity building initiatives, and partnerships.

At the end of 2023, experts from the fields of communication, research, and innovation reviewed the ISAAA initiatives and formulated recommendations to further improve ISAAA's role in advancing agricultural biotechnology.





Starting in 2024, ISAAA has been focused on its new vision of a world where accurate biotech information empowers farmers and consumers to drive food security amidst agricultural challenges through innovation. ISAAA strives to maintain its position as the leading global resource for accurate, reliable, and accessible information on agricultural biotechnology, empowering farmers and consumers to make informed choices and improving food and nutrition security, and environment sustainability amid climate change challenges, through innovative solutions.

By leveraging focused and interactive learning strategies, ISAAA will facilitate robust knowledge sharing and management, equipping priority stakeholders with critical biotechnology information.

Capacity building initiatives targeted at developing countries will be designed to cover research and development, regulation, and commercialization of biotech crops and animals. This includes learning and engagement opportunities for researchers, regulators, and other key stakeholders on regulatory and biosafety requirements, socio-economic impacts, and science communication.

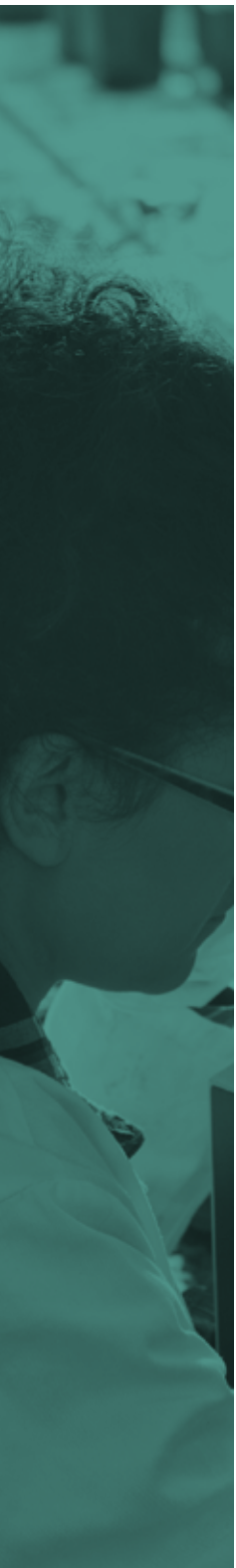
ISAAA believes that effective policy frameworks and regional/international regulatory cooperation are crucial for the adoption of biotech products. Thus, science-based and inclusive policy development will be promoted by equipping policymakers with knowledge on the impact of biotech crops. ISAAA Inc. also fosters stakeholder involvement through public engagement activities.

As ISAAA values inclusivity in creating impact, efforts to forge networks and partnerships in the public and private sectors remain high-priority activities.

All these efforts will be targeted to ensure that the message of biotechnology reaches and empowers farmers and their communities to help them grow more food with less, fostering economic growth and a sustainable future for our planet.



# PARTNERS AND DONORS



2Blades Foundation

Agriculture and Food Systems Institute

Asian Farmer's Regional Network

Association of Southeast Asian Nations  
Committee on Science, Technology, and  
Innovation

Biotechnology Alliance Association

Biotechnology Coalition of the Philippines

Centre for Agriculture and Bioscience  
International

Committee of Food Security of the Philippine  
House of Representatives

Corteva Agriscience Philippines, Inc.

CropLife Asia

CropLife Philippines

Department of Agriculture - Thailand

FuturaGene

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PtBio



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Food Enterprises



-  Biotech Updates: <https://isaaa.org/subscribe>
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