

A photograph of two women, likely farmers, smiling and holding up stalks of sorghum. The woman on the left wears a purple headscarf and a patterned orange and purple shirt. The woman on the right wears a red headscarf with a yellow and black pattern and a purple shirt. They are standing in front of a blue sky with white clouds. The sorghum stalks are green and have small, round grains.

# TOP 10

**Facts about the Feed the Future  
Striga Smart Sorghum for Africa  
(SSSfA) Project**



# FACT 01

**SSSfA Project  
aims to improve  
sorghum harvests  
and contribute to  
increased food and  
nutrition security  
in its primary  
countries, Kenya  
and Ethiopia**



1. Sorghum, a climate-resilient crop, is the second most important cereal on the continent with over 300 million people in sub-Saharan Africa (SSA) relying on it as a key part of their diet and nutrition source.
2. *Striga*, a parasitic witchweed, is a serious threat to sorghum production in SSA, infesting up to 50 million hectares of cropland.
3. SSSfA project is building durable *Striga* resistance in sorghum that will empower African smallholder farmers, many of whom are women, and improve their livelihoods.

# FACT 02

**SSSfA project uses  
new breeding  
techniques to  
improve sorghum  
for *Striga* resistance**



1. SSSfA researchers are using genome editing, a tool that has diversified the scientists' toolbox, enabling targeted precise changes at particular locations in the plants' genome.
2. The resultant *Striga*-Smart Sorghum from the project will not contain foreign genetic material and will be similar to conventionally bred sorghum varieties.
3. Genome editing has been used to develop a broad range of products, with the tool being applied in close to 50 different crop species, addressing both market-oriented and consumer-facing traits.



# FACT 03

**SSSfA project  
will significantly  
contribute to  
Africa's development  
blueprint, Agenda  
2063, and the United  
Nations Sustainable  
Development Goals  
(SDGs)**



1. Use of new breeding tools aligns with Africa's aspiration to consolidate modernization of African agriculture by expanding introduction of modern agricultural systems, technology and practices.
2. Striga resistant sorghum can immensely contribute to increased food security in line with Agenda 2063 and SDG 2 on zero hunger.
3. Sorghum is a potential industrial crop and could contribute to SDG goal 9 on promoting inclusive and sustainable industrialization, as well as Agenda 2063's call for transformation of economies through manufacturing, industrialization and value addition.



# FACT 04

**SSSfA project  
embraces  
team work and  
cross-sectoral  
collaboration**



1. SSSfA project is a collaborative program between the International Service for the Acquisition of Agri-biotech Applications (ISAAA) AfriCenter, Kenyatta University, Addis Ababa University, Ethiopia's Bio and Emerging Technology Institute (BETin), and the African Agricultural Technology Foundation (AATF).
2. The project comprises multidisciplinary and multi-sectoral teams with members coming from biological, environmental and social sciences, as well as communications and law.
3. The private sector, through Corteva Agriscience and Beneficial Bio, are working closely with the project team through a public-private partnership.



FACT

# 05

**SSSfA project will establish a self-reliant model for commercialization of *Striga*-Smart Sorghum in Kenya and Ethiopia**



1. The model integrates scientific knowledge, public values, and factors market needs, as a way of creating acceptance and sustainability of SSSfA products.
2. Capacity development for biosciences research and innovation will be incorporated to ensure routine genome editing in self-sustaining plant biotechnology laboratories.
3. The project's theory of change approach will facilitate monitoring, evaluation and context specific learning processes, enabling adaptive changes.



# FACT 06

**SSSfA project will develop capacity for research and commercialization of genome edited products by establishing centers of competence dubbed Africa Biosciences Hubs (*AfriBIOHubs*)**



1. *AfriBIOHubs* will be modelled around the Open Bioeconomy Lab concept that recognizes proprietary models of ownership, market consolidation and lack of access to knowledge and research tools such as improvised equipment and reagents.
2. These *AfriBIOHubs* will be founded on the principles of incubation and commercialization and will therefore have a clear path to self-reliance.
3. An eastern Africa regional hub will initially be established in Kenya, then gradually cascaded into Ethiopia. The regional hub will be fully accessible to Ethiopian partners and personnel beyond the project.

FACT

07

**SSSfA products  
will adhere to  
all regulatory  
requirements  
before they are  
released to farmers  
in Kenya and  
Ethiopia**

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1. Kenya has approved genome editing guidelines that determine the regulatory process of genome editing techniques in the country. The SSSfA project has made an application to the National Biosafety Authority for determination of regulation.
2. The Kenyan guidelines provide clarity on which products should be regulated under the Biosafety Act, 2009, and what would be regulated as conventional varieties under Acts that govern other relevant regulatory authorities.
3. Ethiopia has developed genome editing guidelines that have gone through a stakeholder review process and are awaiting approval by the Environmental Protection Authority (EPA).



FACT

# 08

**The SSSfA project  
will create and  
sustain an enabling  
environment for  
genome editing in  
Africa**



1. Key players, including policy and decision makers, will be identified through a stakeholder analysis and net-mapping exercise, ensuring the right individuals likely to drive positive change are engaged.
2. A replicable data-driven advocacy and communication strategy will be developed to support and advance the *Striga*-Smart Sorghum throughout relevant phases of product life cycle.
3. Peer-to-peer learning and practical case studies will be used to expose relevant decision makers to global best-bet practices for governing genome edited products.

# FACT 09

The SSSfA project  
incorporates gender  
inclusivity and  
public participation



1. Public engagement activities will be carried out with farmers, community and faith-based leaders, women and youth, policy and decision makers, processors, traders as well as all key value-chain actors.
2. Key actors will be sensitized about *Striga*-Smart Sorghum through suitable awareness platforms and field visits to experimental sites in areas where the project is being implemented.
3. Participation in all SSSfA activities will ensure gender equity at all times, in line with the Gender Equality and Social Inclusion (GESI) principles.



# FACT 10

## ***Striga*-Smart Sorghum varieties will be accessible to farmers**



1. *Striga*-Smart Sorghum evaluation will be carried out in farmers' fields using a farmer-led gender responsive participatory approach to select preferred varieties.
2. Select lead varieties will advance to National Performance Trials (NPTs) and subsequent release will be done in line with government variety assessment and registration by regulators and relevant authorities.
3. Seed multiplication and distribution will follow existing seed delivery systems and will be readily available at a comparable cost to current sorghum varieties.



**Citation:** Iraki, B., Runo, S.M., and Karembu, M. (2023). Top Ten Facts about the Striga Smart Sorghum for Africa Project. ISAAA AfriCenter. Nairobi, Kenya.