



TOP 10

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

Photo credit: *Gabriel's house of photography*

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.

