FUTURE CROP

Rust-Resistant SOYBEAN

EARS OF CROP INNOVAT SAAA Inc

The Future Crops Series presents the biotech crops in the pipeline being developed for food security, climate change resilience, and sustainability.

SOYBEAN "gold from the soil"

By **2**

Though widely grown in North and South America, the greatest expansion of soybean cultivation today is happening in Africa.

soybean demand across Sub-Saharan Africa projection:

KENYA

has taken steps to create policies promoting increased domestic sovbean production

MORE THAN

Emerging threat: ASIAN SOYBEAN RUST

fast-moving, aggressive disease caused by the airborne fungus, Phakopsora pachyrhizi



can destroy up to

of soybeans within 3 weeks

SEARCH FOR SOLUTIONS



CROP PROTECTION The pathogen is rapidly adapting and building tolerance to chemical controls





BREEDING

Seven (7) resistance genes in soybean have been largely overcome by the pathogen



RESISTANCE GENES

2Blades and partners explored a broader pool of resistance genes among related legume species

PIGEONPEA GENE CcRpp1 introduced into soybean through biotechnology



CcRpp1 gene from pigeonpea



transgenic soybean plants with ASR resistance

DEVELOPING RESISTANCE THROUGH BIOTECH

one of the most durable and effective ways to thwart diseases like ASR

STRONG & EFFECTIVE PARTNERSHIPS



needed throughout the agriculture innovation chain to achieve the goal of delivering ASR-resistant soybeans for African growers

Source: ISAAA and 2Blades. (2024). Pocket K: Rust-Resistant Soy for Africa. <u>https://www.isaaa.org/resources/publications/pocketk/61/</u>

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