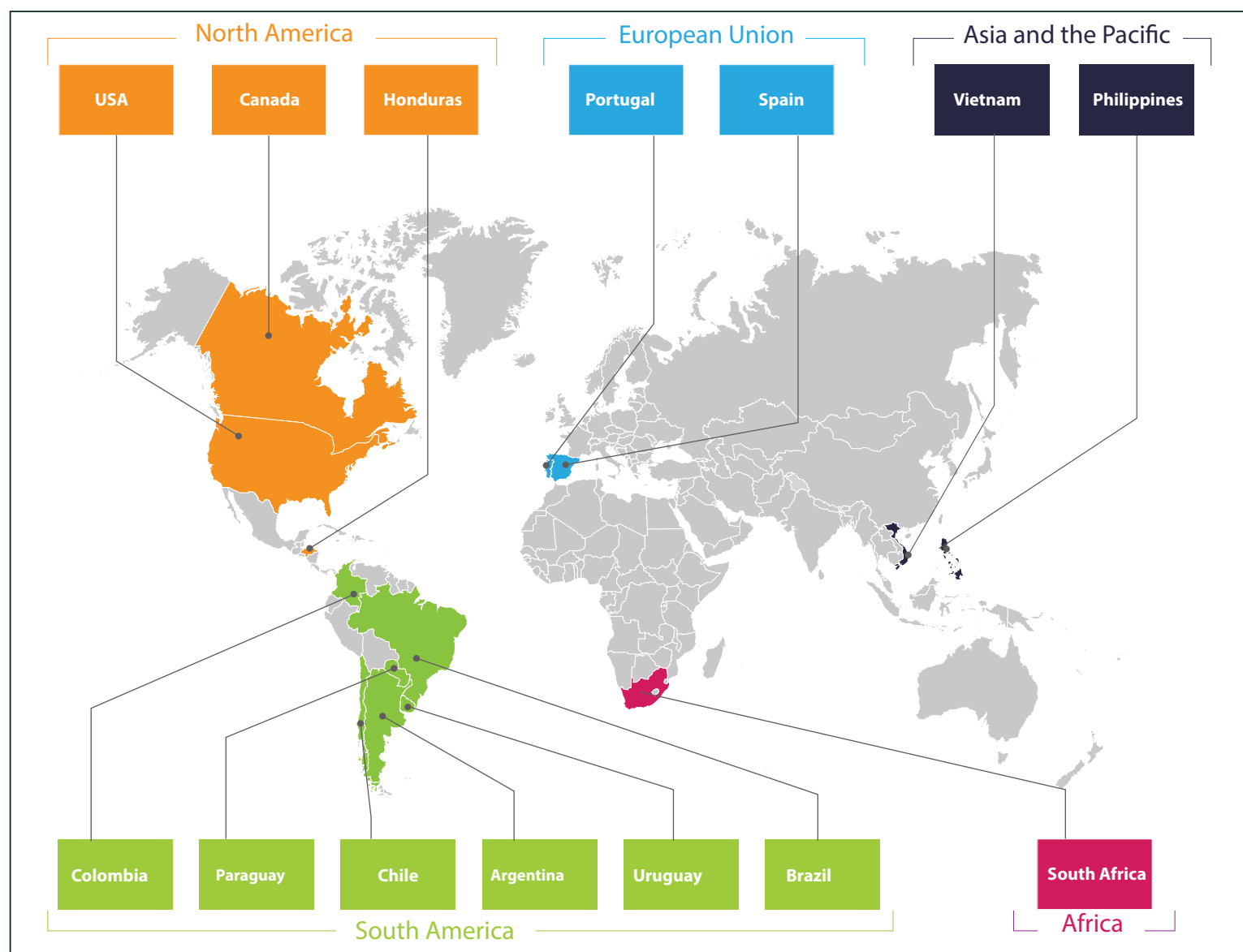


GLOBAL STATUS AND ECONOMIC BENEFITS OF BIOTECH MAIZE PRODUCTION BY 2019

Maize is the
2ND
most adopted biotech
crop globally after
soybeans

Maize is planted on
60.9
MILLION
hectares occupying
32% of the global
biotech crop area.

14 Countries Planted Biotech Maize in 2019



Biotech Maize Adoption by Country



Maize was the most planted biotech crop

33.17 million hectares

covering

46% of the biotech area in the country



Maize was the second most planted biotech crop in Brazil.

16.3 million hectares

representing

31% of the country's biotech area.



Philippines planted

875,000 hectares



Vietnam planted

92,000 hectares



Maize was the second most planted biotech crop in Argentina.

5.9 million hectares

In the European Union, Spain and Portugal continued to plant biotech Bt maize at

111,883 hectares



Spain planted

107,130 hectares



Portugal planted

4,753 hectares

Maize Traits Under Various Stages of Research in Africa by 2019

Ethiopia

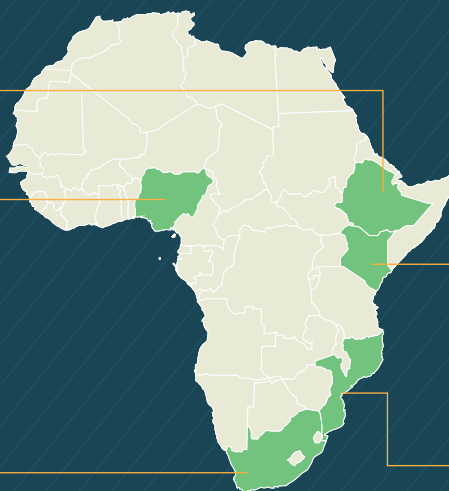
Drought tolerance and insect resistance stacked events

Nigeria

Drought tolerance and insect resistance stacked events

South Africa

Insect resistance multi stacks event



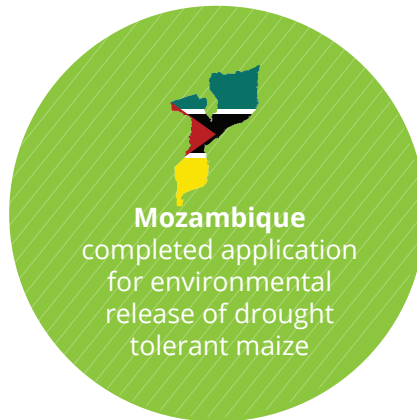
Kenya

Insect resistance

Mozambique

Drought tolerance and insect resistance stacked events

Biotech Maize Approvals and Authorizations In 2019



New biotech maize trait(s) approved:

IR/pyramided HT (glyphosate, glufosinate, dicamba, 2,4-D) and intermediates in maize,

IR pyramided (for coleopteran, hemipteran, and lepidopteran)/HT (glyphosate, glufosinate) and intermediates in maize.

Status of Approved Events for Biotech Maize

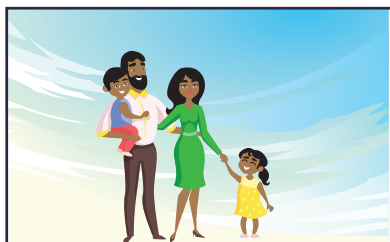
Maize has the most number of approved events

**146 events
in 35 countries**

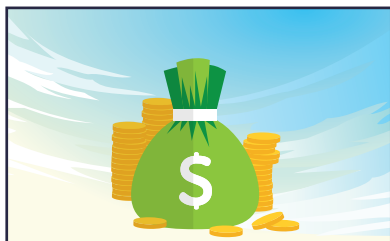
Herbicide tolerant maize event NK603 has the highest number of approvals globally (61 approvals in 28 countries + EU 28 as one).



Socio-economic Benefits of Biotech Maize



Biotech crops have enormous benefits to the environment, health of humans and animals. Biotech crops contribute to the improvement of socio-economic conditions of farmers and the general public.



Global economic gains contributed by biotech crops in the last 23 years have amounted to US\$224.9 billion 16 to 17 million farmers, 95% of whom come from developing countries.

Biotech maize, together with other biotech crops, contributed to food security, sustainability, and climate change solutions by:

iii. Providing a safer environment by

Saving on 776 million kg. a.i. of pesticides in 1996-2018 and by 51.7 million kg in 2018 alone from being released into the environment;

Saving on pesticide use by 8.3% in 1996-2018, and by 8.6% in 2018 alone;

Reducing EIQ (Environmental Impact Quotient) by 18.3 % in 1996-2018, and by 19% in 2018 alone

ii. Conserving biodiversity - by saving 231 million hectares of land in 1996-2018; and 24.3 million hectares of land in 2018 alone

i. Increasing crop productivity - by 822 million tons valued at US\$224.9 billion in 1996-2018; and 86.9 million tons valued at US\$18.9 billion in 2018 alone

iv. Reducing CO₂ emissions in 2018 by 23 billion kg, equivalent to taking 15.3 million cars off the road for one year

v. Helping alleviate poverty through uplifting economic situation of 16-17 million small farmers, and their families totalling over 65 million people.

