

# **GLOBAL STATUS OF COMMERCIALIZED BIOTECH/GM CROPS IN 2018:**

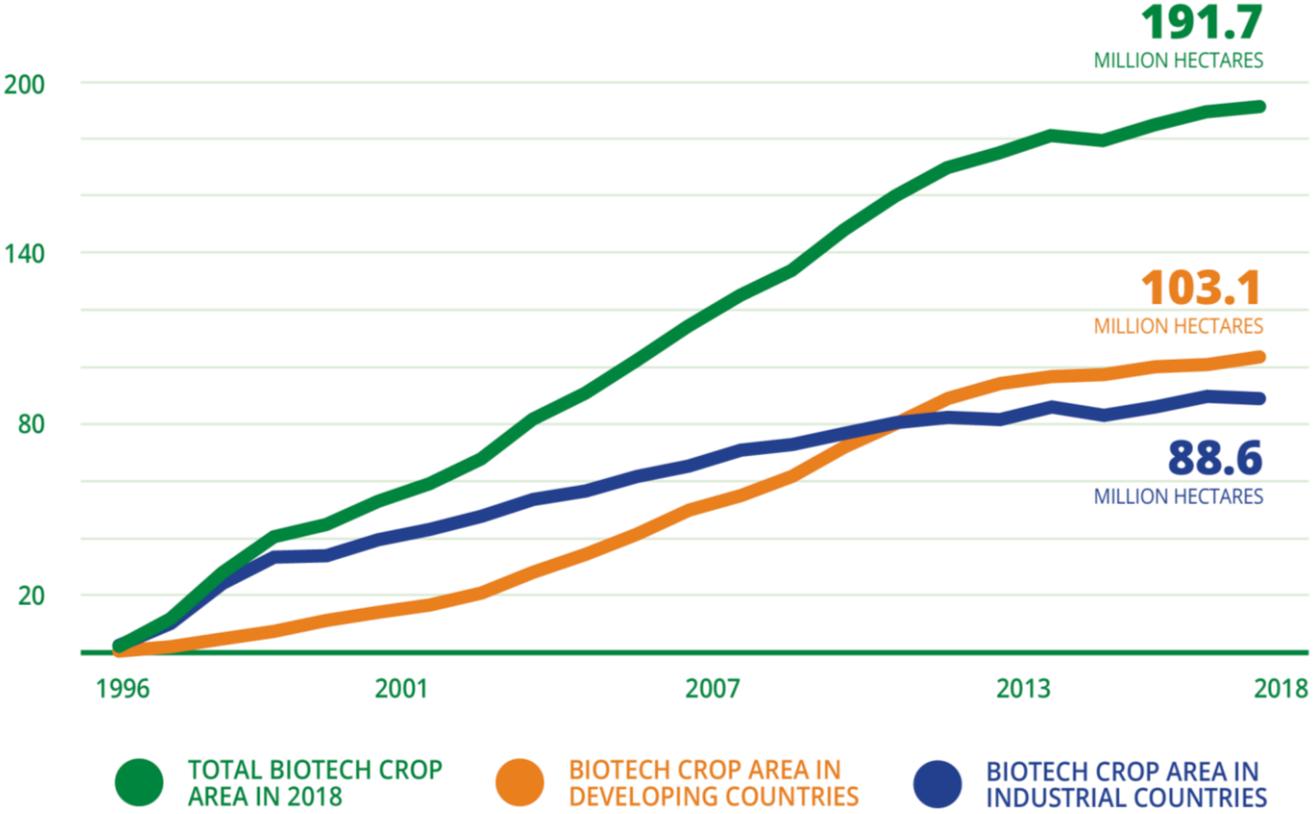
## **Biotech Crops Continue to Help Meet the Challenges of Increased Population and Climate Change**



ISAAA

INTERNATIONAL SERVICE FOR THE ACQUISITION OF AGRI-BIOTECH APPLICATIONS

# Global Area of Biotech Crops, 1996 to 2018: Industrial and Developing Countries

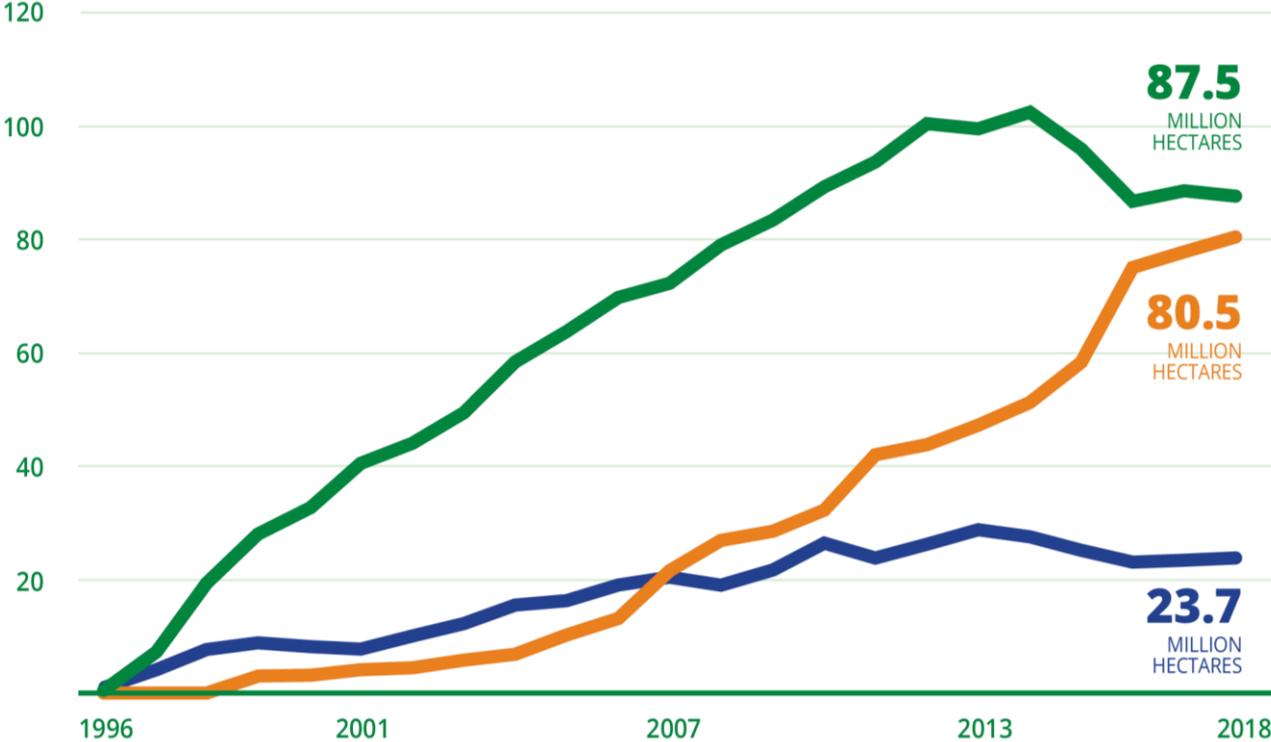


ISAAA, 2018

**54%** DEVELOPING COUNTRIES AND **46%** INDUSTRIAL COUNTRIES



# Global Area of Biotech Crops, 1996 to 2018: By Trait



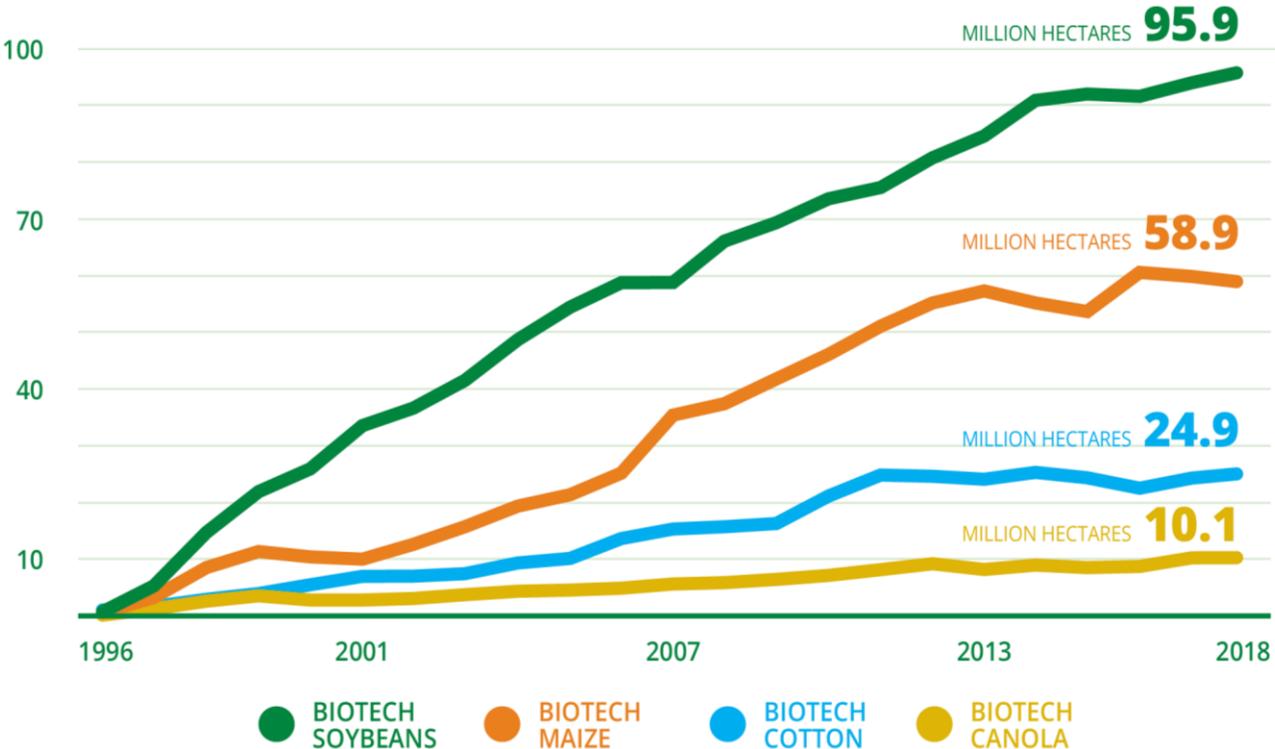
● HERBICIDE TOLERANCE    ● STACKED TRAITS    ● INSECT RESISTANCE

ISAAA, 2018

**STACKED TRAITS INCREASED TO 41%**



# Global Area of Biotech Crops, 1996 to 2018: By Crop

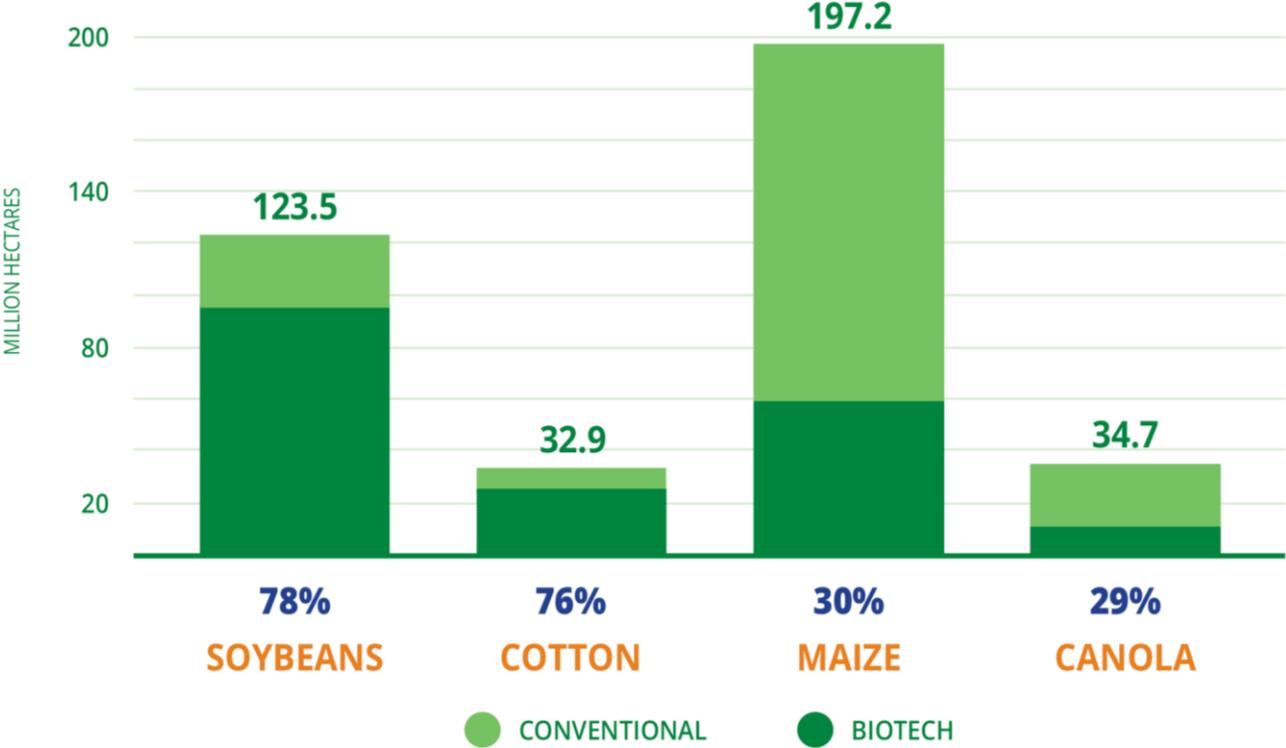


ISAAA, 2018

**BIOTECH SOYBEAN RETAINED 50% BIOTECH COTTON INCREASED TO 13% OF GLOBAL BIOTECH CROP AREA**



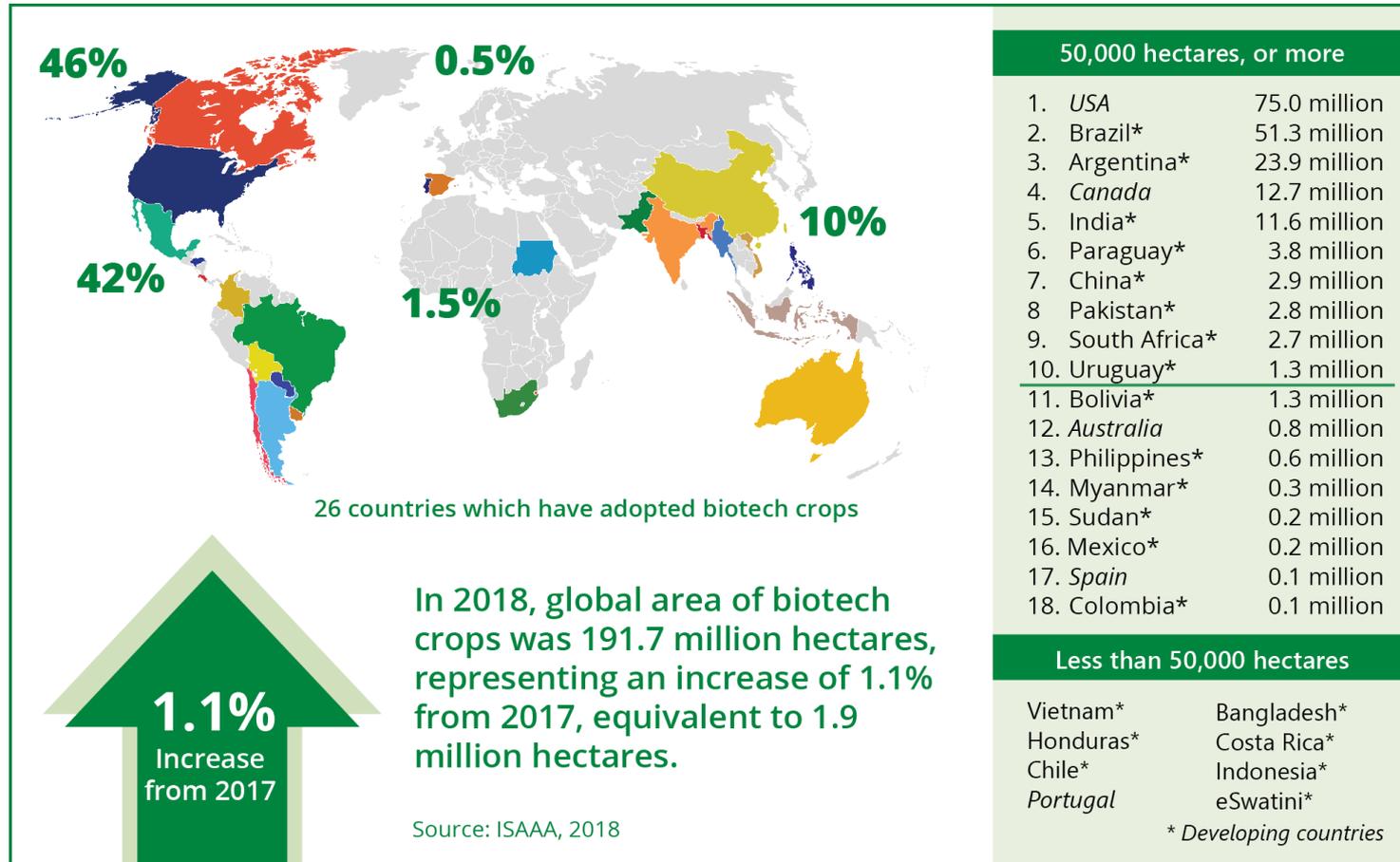
# Global Adoption Rates (%) for Principal Biotech Crops, 2018



ISAAA, 2018

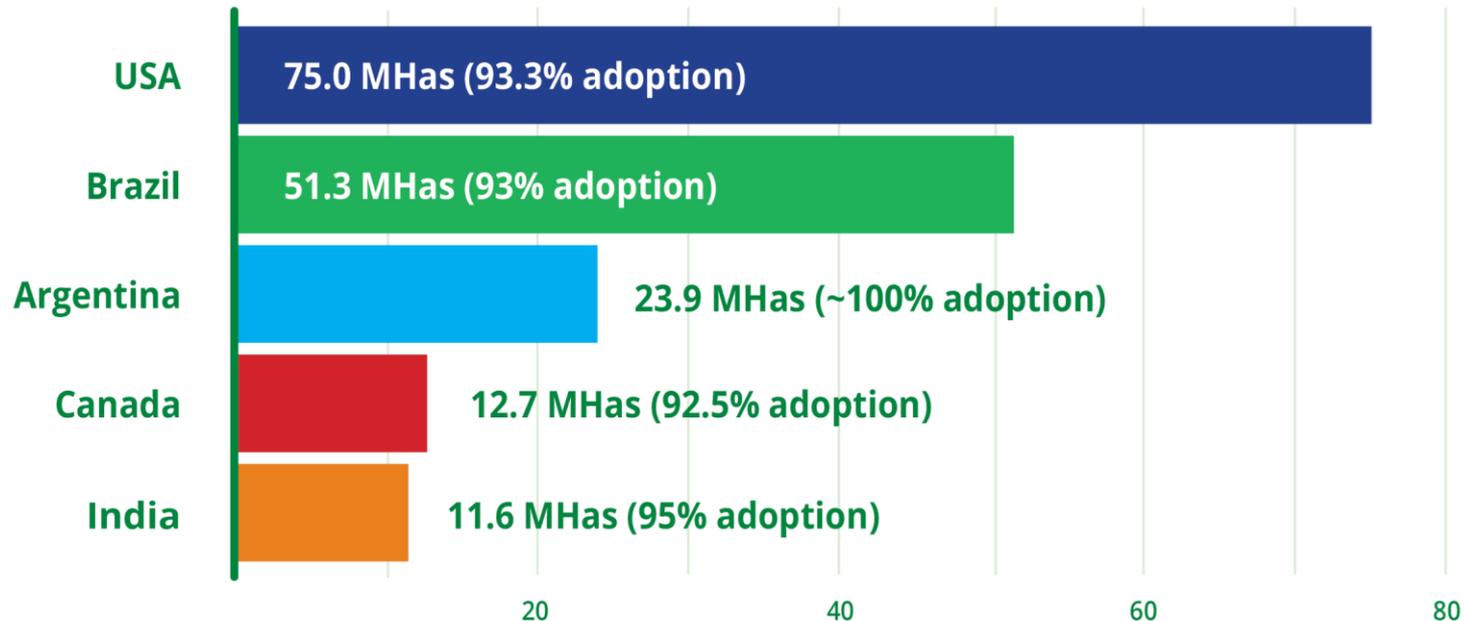


# Global Area of Biotech Crops, 2018: Regional Proportions and Country Areas



**10 Latin American, 9 Asia Pacific, 2 North American,  
2 EU, and 3 African countries**

# Top 5 Countries that Planted Biotech Crops in 2018 (Area and Adoption Rate)



ISAAA, 2018

**3 DEVELOPING COUNTRIES (BRAZIL, ARGENTINA, AND INDIA)**  
**2 INDUSTRIAL COUNTRIES (USA AND CANADA)**  
**GREW 91.3% OF BIOTECH CROPS IN 2018**

# STATUS OF APPROVED EVENTS FOR BIOTECH CROPS USED IN FOOD, FEED, PROCESSING, AND CULTIVATION



**70** COUNTRIES ISSUED



**4,349** REGULATORY APPROVALS FOR 27 GM CROPS SINCE 1992

**2,603** FOOD USE

**1,461** FEED USE

**825** CULTIVATION

**USA** HAS MOST NUMBER OF APPROVALS  
**544** APPROVALS



**MAIZE** HAS LARGEST NUMBER OF APPROVED EVENTS  
**137** APPROVED EVENTS IN **35** COUNTRIES



HERBICIDE TOLERANT MAIZE EVENT  
**NK603** HAS MOST APPROVALS  
**61** APPROVALS IN **28** COUNTRIES

Source: ISAAA, 2018

# CONTRIBUTION OF BIOTECH CROPS TO FOOD SECURITY, SUSTAINABILITY, AND CLIMATE CHANGE



## INCREASE CROP PRODUCTIVITY

**US\$186.1 BILLION**  
FARM INCOME GAINS  
IN 1996-2016 FROM  
BIOTECH CROPS

**CONSERVE BIODIVERSITY**  
SAVED **183 MILLION HECTARES**  
OF LAND FROM PLOWING  
& CULTIVATION



## PROVIDE A BETTER ENVIRONMENT

DECREASED HERBICIDE  
& INSECTICIDE USE BY  
**8.4% IN 1996-2016**

**REDUCE CO2 EMISSIONS**  
SAVED **27.1 BILLION KGS CO2**  
EQUIVALENT TO REMOVING  
**16.7 MILLION CARS** OFF THE  
ROAD FOR 1 YEAR



## HELP ALLEVIATE POVERTY & HUNGER

UPLIFTED THE LIVES OF  
**16-17 MILLION FARMERS**  
& THEIR FAMILIES TOTALING  
**>65 MILLION PEOPLE**

Source: Brookes and Barfoot, 2018