Global Status of Commercialized Biotech/GM Crops: 2016

International Service for the Acquisition of Agri-biotech Applications(ISAAA)

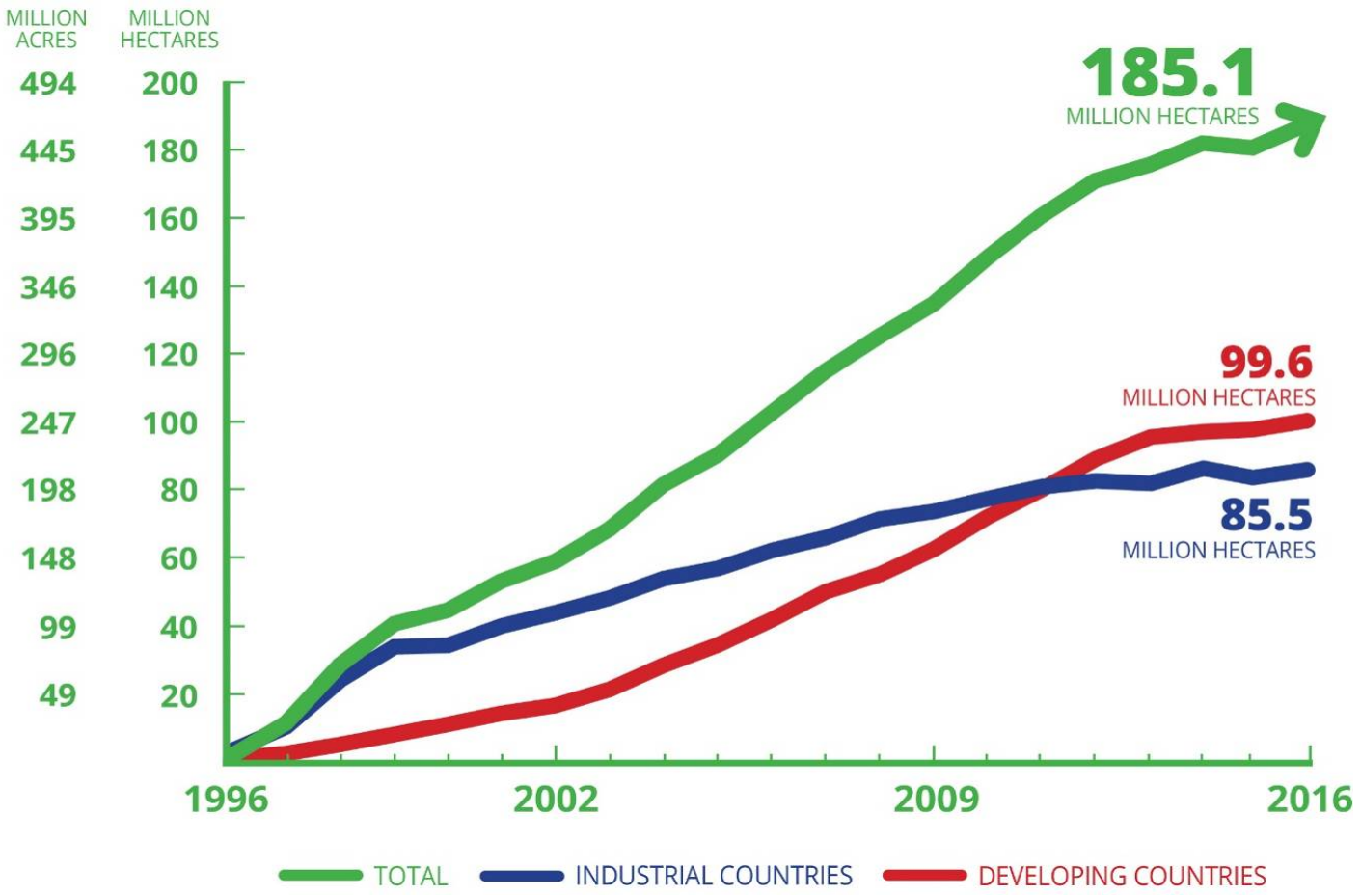
ISAAA

US registered, Not-for-Profit Charity, co-sponsored by public and private sector organizations

Mission of ISAAA:

- Share knowledge on crop biotechnology so that the global community is more well-informed about the attributes and potential of the new technologies
- Contribute to poverty alleviation by increasing crop productivity and income generation, particularly for resource-poor farmers, and to bring about a safer environment, through crop biotechnology.
- For more information, visit: http://www.isaaa.org

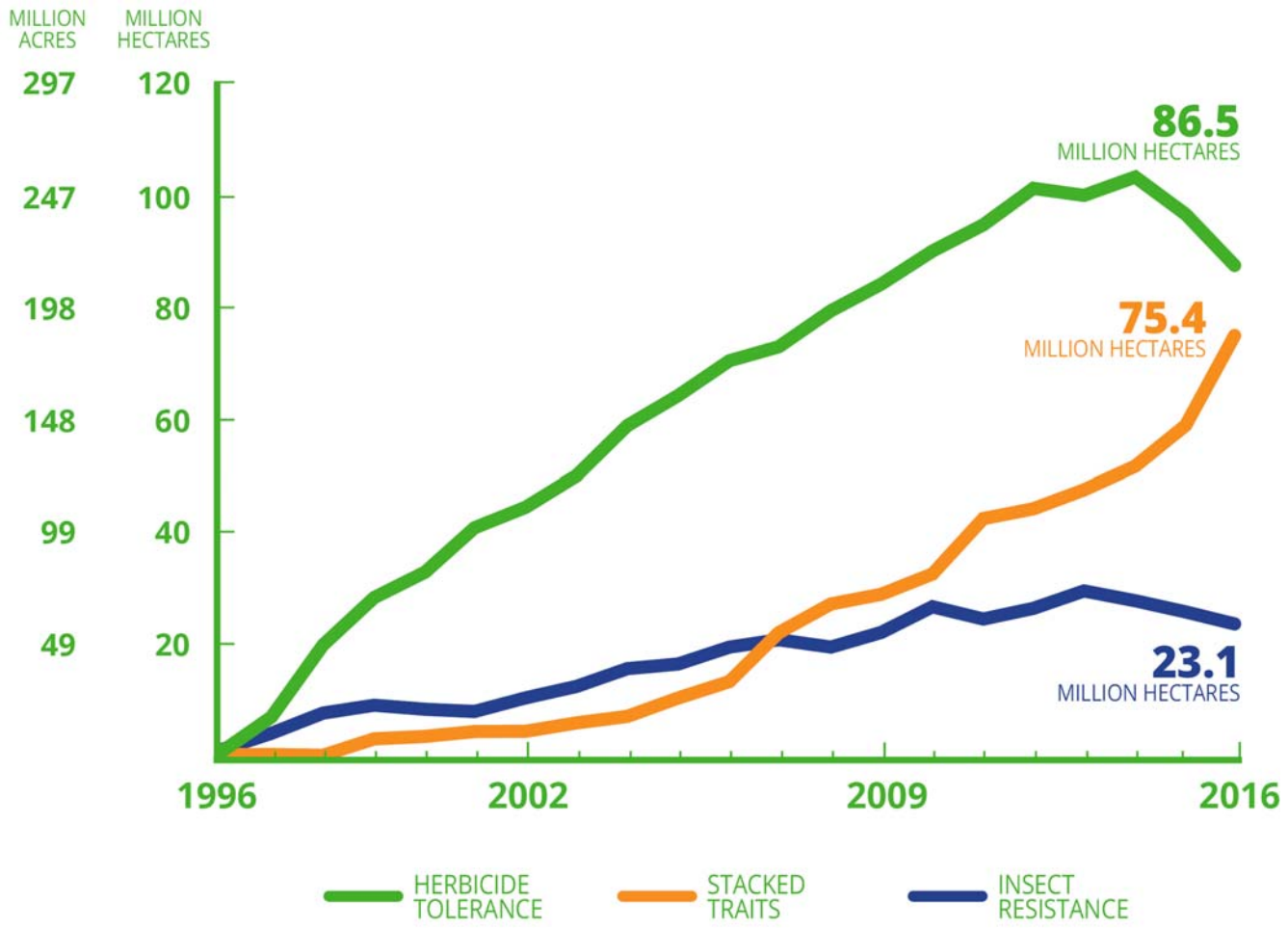
Global Area of Biotech Crops, 1996 to 2016: Industrial and Developing Countries (Million Hectares, Million Acres)



- Resumes high adoption at 185.1 million hectares
- ~110-fold increase from 1996
- 2.1 billion accumulated hectarage

ISAAA, 2016

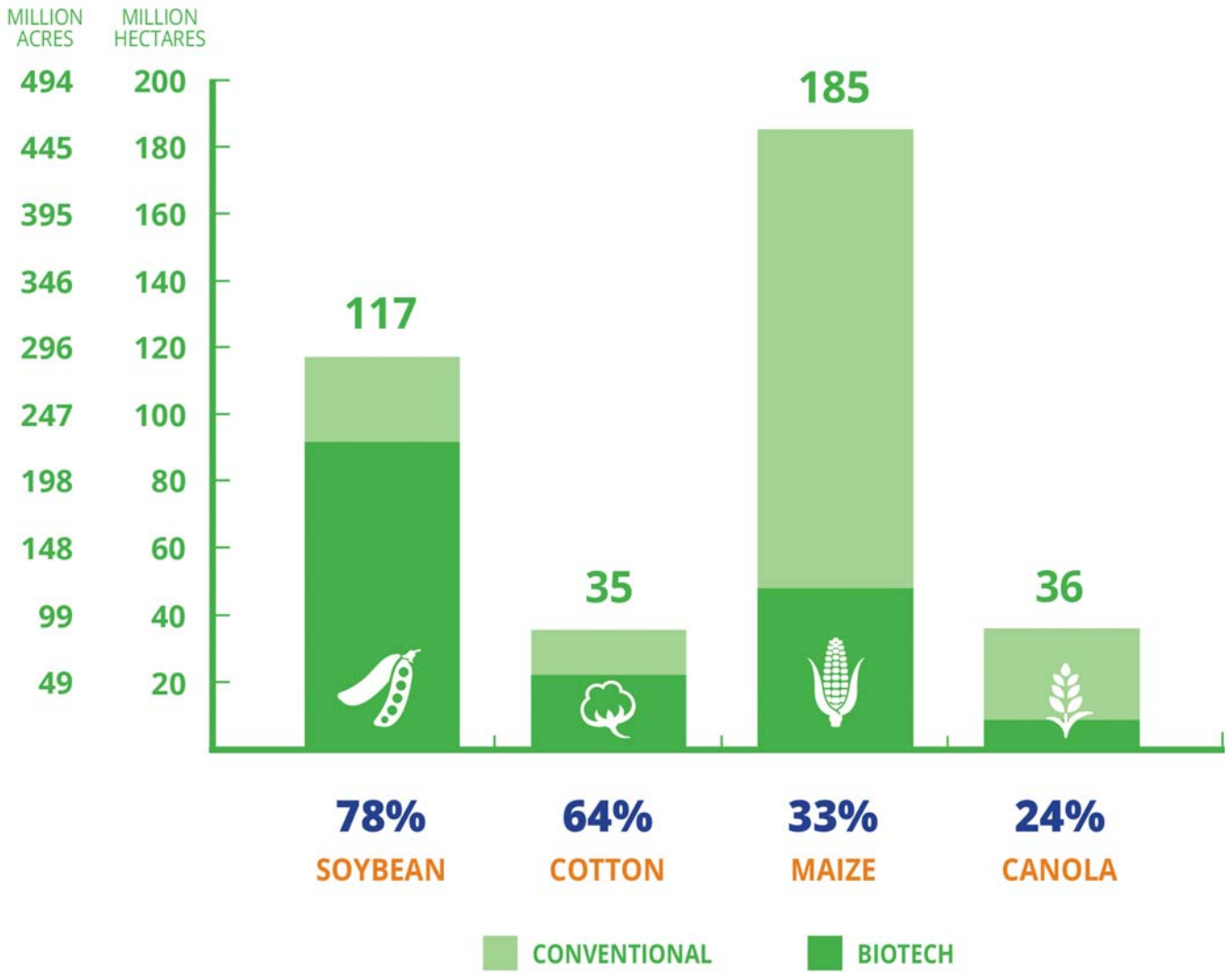
Global Area of Biotech Crops, 1996 to 2016: By Trait (Million Hectares, Million Acres)



- Herbicide tolerance at 47% and
- Stacked traits occupied 41% of the global hectarage

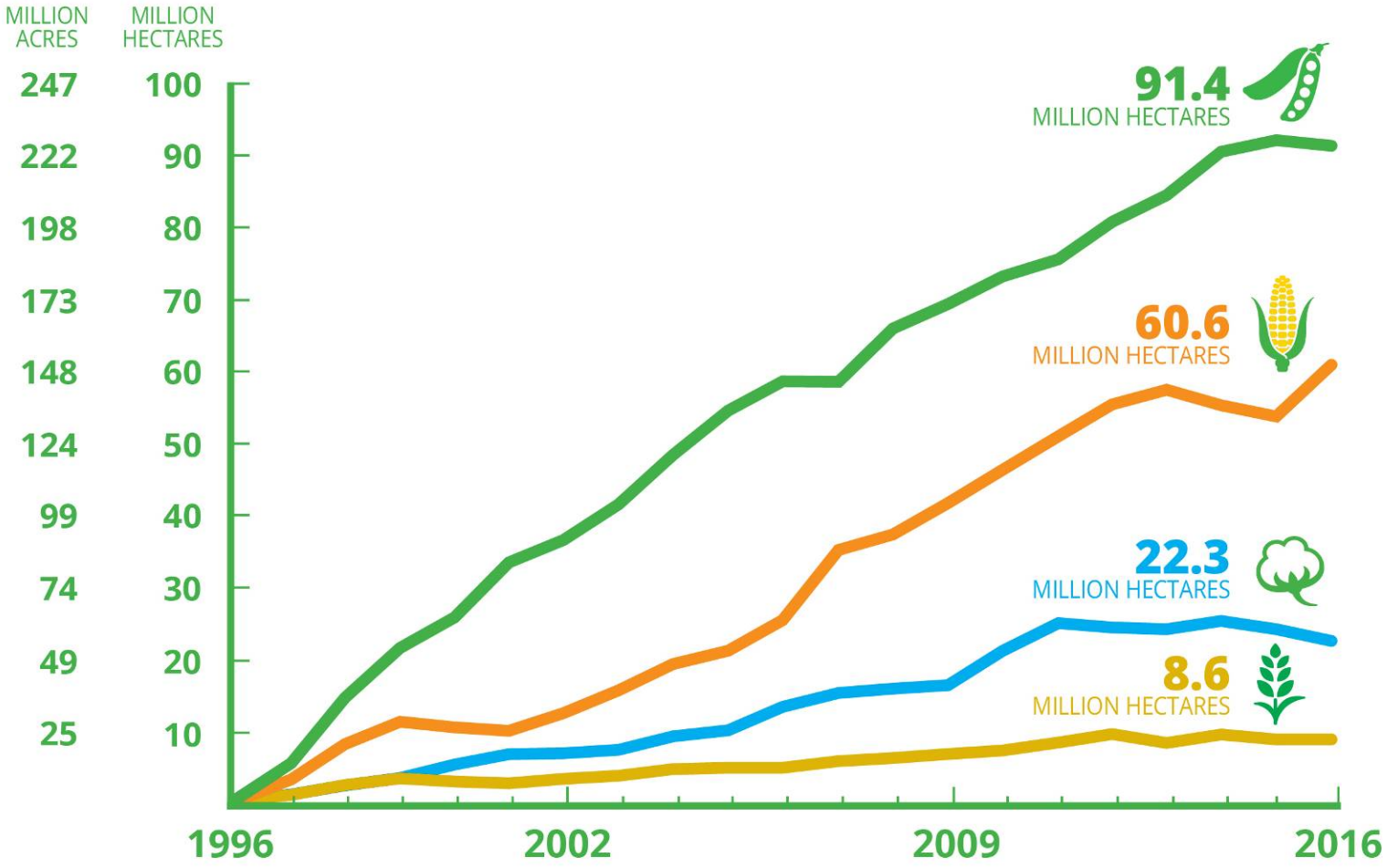
ISAAA, 2016

Global Adoption Rates (%) for Principal Biotech Crops (Million Hectares, Million Acres), 2016



ISAAA, 2016

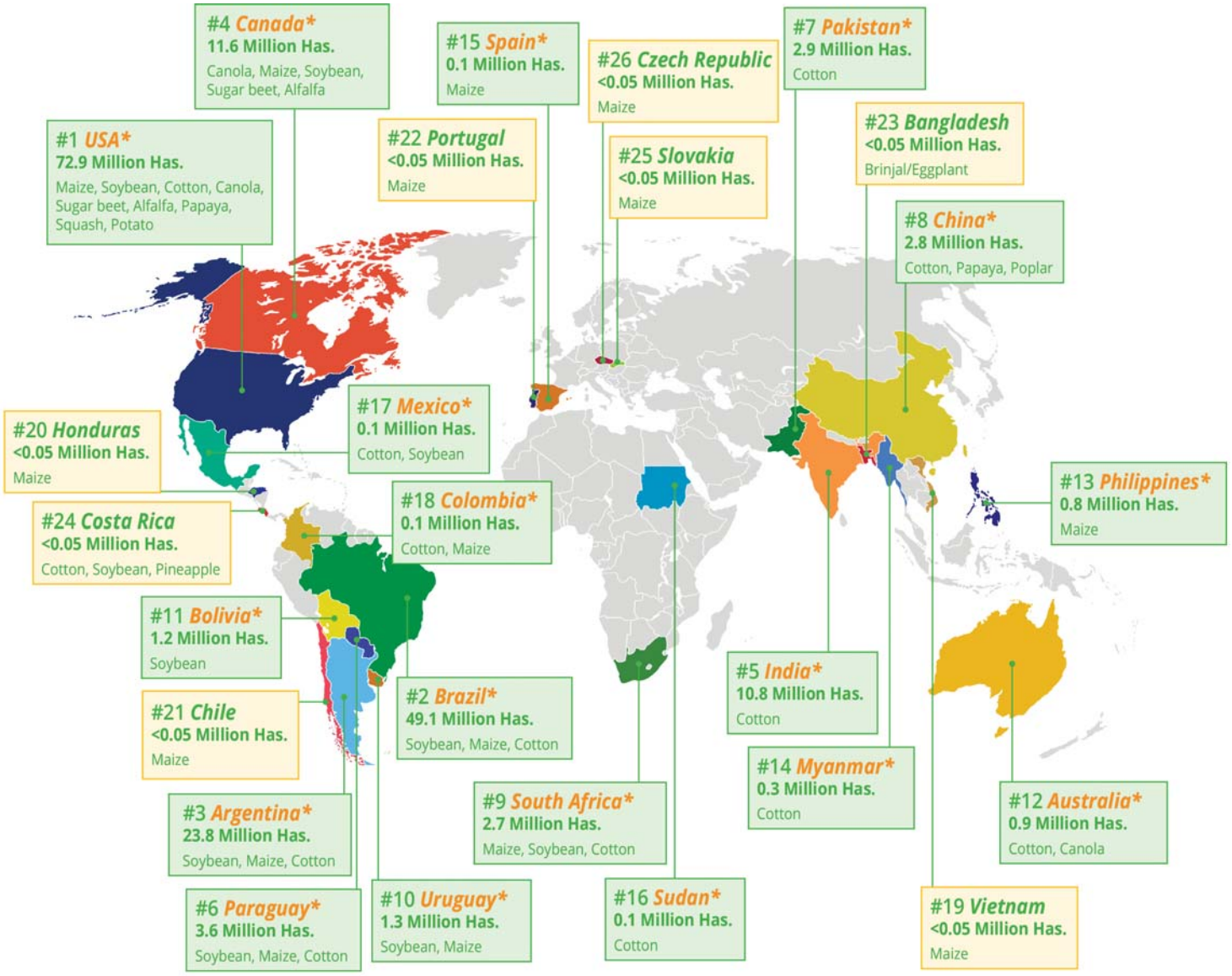
Global Area of Biotech Crops, 1996 to 2016: By Crop (Million Hectares, Million Acres)



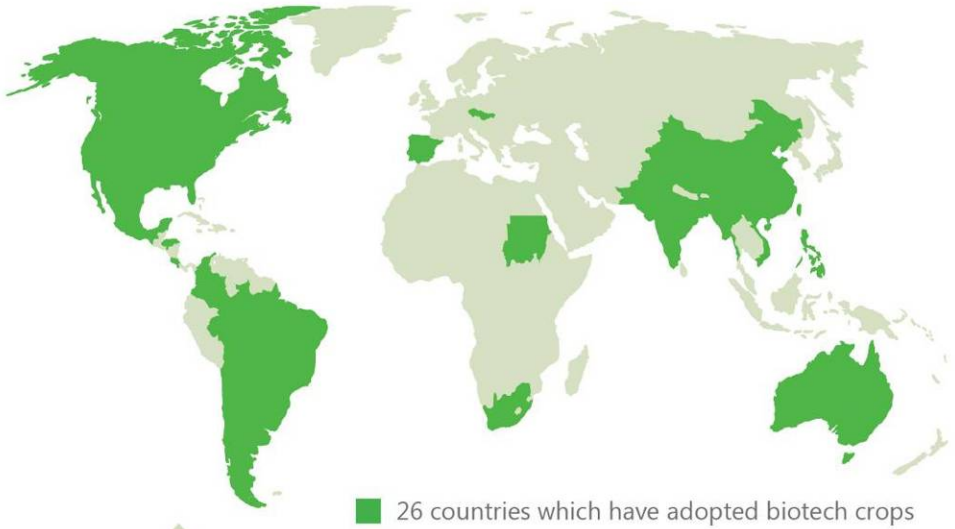
ISAAA, 2016

- Biotech soybean reached 50% of global biotech crop hectarage

Biotech Crop Countries and Mega-Countries*, 2016



Global Area of Biotech Crops, 2016: By Country (Million Hectares)



26 countries which have adopted biotech crops

3%
Increase from 2015

In 2016, global area of biotech crops was 185.1 million hectares, representing an increase of 3% from 2015, equivalent to 5.4 million hectares.

Source: ISAAA, 2016.

50,000 hectares, or more

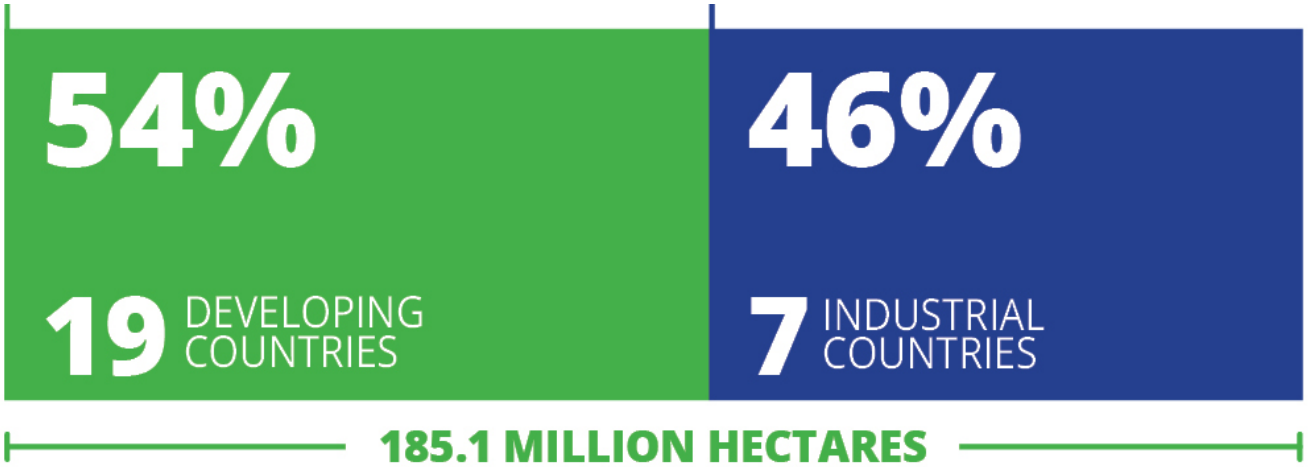
1.	USA	72.9 million
2.	*Brazil**	49.1 million
3.	*Argentina**	23.8 million
4.	Canada	11.6 million
5.	*India**	10.8 million
6.	*Paraguay**	3.6 million
7.	*Pakistan**	2.9 million
8.	*China**	2.8 million
9.	*South Africa**	2.7 million
10.	*Uruguay**	1.3 million
11.	*Bolivia**	1.2 million
12.	Australia	0.9 million
13.	*Philippines**	0.8 million
14.	*Myanmar**	0.3 million
15.	Spain	0.1 million
16.	*Sudan**	0.1 million
17.	*Mexico**	0.1 million
18.	*Colombia**	0.1 million

Less than 50,000 hectares

*Vietnam**	*Bangladesh**
*Honduras**	*Costa Rica**
*Chile**	Slovakia
Portugal	Czech Republic

** Developing countries*

- **Top five countries: 3 Developing countries (Brazil, Argentina, & India) and 2 Industrial countries (USA & Canada) grew 91% of biotech crops**



DISTRIBUTION OF BIOTECH CROPS IN DEVELOPING AND INDUSTRIAL COUNTRIES IN 2016

Source: ISAAA, 2016

- **Developing countries: 99.6 million hectares**
- **Industrial countries: 85.5 million hectares**