



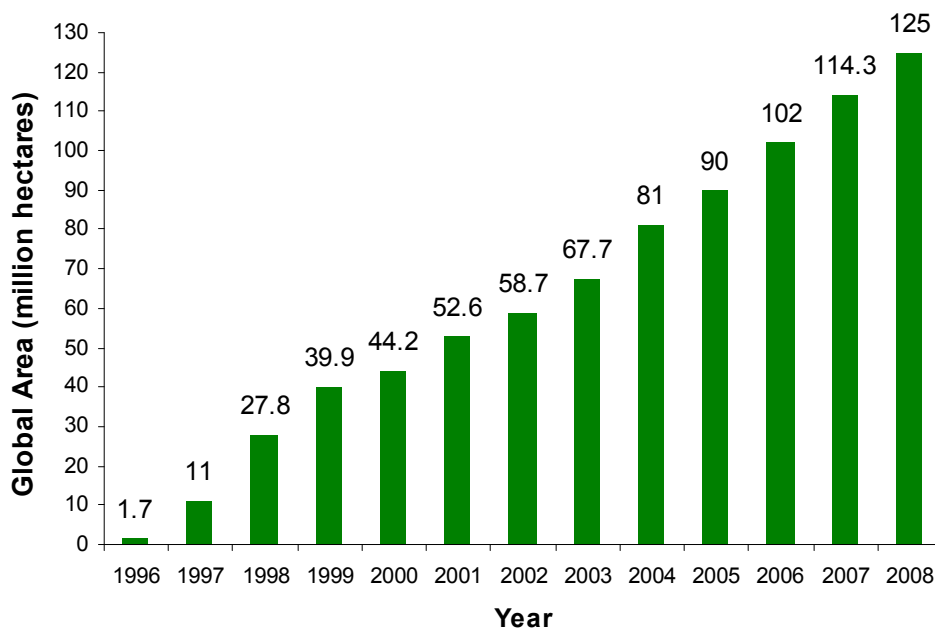
## GM CROPS - THIRTEEN SUCCESSFUL YEARS OF COMMERCIALISATION

The global uptake of genetically modified (GM) crops continued to grow in 2008 according to an annual report released by the International Service for the Acquisition of Agri-biotech Applications (ISAAA).

Over 13 million farmers grew GM crops in 2008 compared to 12 million in 2007. Three new countries, Burkina Faso (cotton), Egypt (corn) and Bolivia (soy), planted GM crops for the first time, bringing the total number of countries growing GM crops to 25.

According to the report, significant progress was made in 2008 with (a) two new countries in Africa adopting GM crops for the first time, (b) an increased adoption of stacked traits, and (c) the introduction of a new GM crop (sugar beet). An additional 10.7 million hectares of GM crops were planted in 2008 bringing the total figure to 125 million hectares.

**GLOBAL AREA OF GM CROPS 1996 - 2008**



As shown in the graph, since the commercialisation of GM crops 13 years ago, the global area of GM crops has increased from 1.7 to 125 million hectares.

### COUNTRIES AND CROPS

The African countries of Burkina Faso and Egypt began growing cotton and corn respectively in 2008. According to ISAAA, Africa is the continent with the greatest and most urgent need for the technology. As indicated in the table below the United States of America (USA), Argentina, Brazil, India and Canada continued to be the principle adopters of GM crops.

A new GM crop, Roundup Ready sugar beet, tolerant to the herbicide, glyphosate, was commercialised in both the USA and Canada. Additionally, five countries, Australia being one, introduced GM crops that had already been commercialised in other countries. In 2008, 108 farmers planted GM canola in Australia (New South Wales and Victoria) for the first time.

## TOP EIGHT GM COUNTRIES

	Country	2007 hectares (million)	2008 hectares (million)	GM crops
1.	United States of America	57.7	62.5	Alfalfa, canola, cotton, corn, soybean, squash, sugar beet, papaya
2.	Argentina	19.1	21	Cotton, corn, soybean
3.	Brazil	15.0	15.8	Cotton, corn, soybean
4.	India	6.2	7.6	Cotton
5.	Canada	7.0	7.6	Canola, corn, soybean , sugar beet
6.	China	3.8	3.8	Cotton, papaya, petunia, poplar, sweet pepper, tomato
7.	Paraguay	2.6	2.7	soybean
8.	South Africa	1.8	1.8	Cotton, corn, soybean

## CROPS AND TRAITS

Genetically modified soybean continues to be the main crop grown in 2008, making up 53 per cent of the global GM area. Thirty per cent of the total GM crop area was grown to corn, with cotton (12 per cent) and canola (five per cent) making up the remainder.

For 13 years, herbicide tolerance has consistently been the dominant trait. In 2008 herbicide tolerant GM crops, (soybean, corn, canola, cotton and alfalfa) made up 63 per cent of the global GM market. Stacked double and triple traits occupied 22 per cent of the GM crop area and insect resistant varieties made up the remaining 15 per cent.

## GM CROP BENEFITS

Genetically modified crops could contribute to some of the major challenges around the world. According to the report, food security and cost, sustainability, poverty and hunger could all be helped by the use of GM crops. Further to this, GM crops could help mitigate some of the challenges associated with climate change.

The report states that GM crops have already:

- Contributed to food security and more affordable food
- Conserved biodiversity
- Contributed to the alleviation of poverty and hunger
- Reduced agriculture's environmental footprint
- Mitigated climate change and reduced greenhouse gases
- Contributed to the cost-effective production of biofuels
- Contributed to sustainable economic benefits.

The global market value of GM crops was valued at \$US7.5 billion (up from \$US6.9 billion in 2007). The market value of the global GM crop market is based on the sale price of the GM seed plus any technology fees that apply. Since the introduction of GM crops in 1996, the accumulated global value of GM crops is estimated at \$US50 billion. The global market value of GM crops is expected to rise to \$US8.3 billion in 2009.

## THE OUTLOOK - 2006 TO 2015

The ISAAA expects that 15 or more countries will plant GM crops from now until 2015, bringing the total number of countries planting GM crops to 40. Asia, eastern and southern Africa, West Africa, North Africa and the Middle East are estimated to be the new adopters of GM crops. Countries in Eastern Europe and Latin/Central America may also adopt GM crops.

Several new GM crops are expected between now and 2015, one being GM rice. The ISAAA states that pest and disease resistant rice is awaiting approval in China and Golden Rice, which could help curb deficiencies such as Vitamin A, is expected to be available in 2012.

For further information, including the ISAAA report, see [www.isaaa.org](http://www.isaaa.org)