

HIGHLIGHTS

Global Status of Commercialized Biotech/GM Crops: 2012

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Dedicated by the author to the 1 billion poor and hungry people, and their survival

Biotech Crop hectares increased by an unprecedented 100-fold from 1.7 million hectares in 1996, to 170 million hectares in 2012

A record 170.3 million hectares of biotech crops were grown globally in 2012, at an annual growth rate of 6%, up 10.3 million from 160 million hectares in 2011.

2012 marked an unprecedented 100-fold increase in biotech crop hectareage from 1.7 million hectares in 1996 to 170 million hectares in 2012 – this makes biotech crops the fastest adopted crop technology in recent history – the reason – they deliver benefits.

In the period 1996 to 2012, millions of farmers in ~30 countries worldwide, made more than 100 million independent decisions to plant an accumulated hectareage of more than 1.5 billion hectares – 50% more than the land mass of the US or China; this demonstrates the trust and confidence of millions of risk-averse farmers in biotech crops which deliver sustainable and substantial, socioeconomic and environmental benefits.

Two new countries, Sudan (Bt cotton) and Cuba (Bt maize) planted for the first time in 2012. Germany and Sweden could not plant the potato “Amflora” because it ceased to be marketed; Poland discontinued planting Bt maize because of regulation constraints.

Of the 28 countries which planted biotech crops in 2012, 20 were developing and 8 were industrial countries; this compares with 19 developing and 10 industrial in 2011.

In 2012, a record 17.3 million farmers, up 0.6 million from 2011, grew biotech crops – remarkably over 90%, or over 15 million, were small resource-poor farmers in developing countries. Farmers are the masters of risk aversion and in 2012, a record 7.2 million small farmers in China and another 7.2 million in India, elected to plant almost 15 million hectares of Bt cotton, because of the significant benefits it offers.

For the first time, developing countries grew more, 52%, of global biotech crops in 2012 than industrial countries at 48%. In 2012, growth rate for biotech crops was at least three times as fast, and five times as large in developing countries, at 11% or 8.7 million hectares, versus 3% or 1.6 million hectares in industrial countries.

Stacked traits are an important feature – 13 countries planted biotech crops with two or

more traits in 2012, and encouragingly, 10 of the 13 were developing countries – 43.7 million hectares, or more than a quarter, of the 170 million hectares were stacked in 2012.

Brazil, for the fourth consecutive year, was the engine of growth globally, increasing its hectareage of biotech crops more than any other country – an impressive record increase of 6.3 million hectares, up 21% from 2011, reaching 36.6 million hectares.

The US continued to be the lead country with 69.5 million hectares, with an average 90% adoption across all crops. Impact of US 2012 drought for maize was 21% loss in productivity and in soybean, 12%. Canada had a record 8.4 million hectares of canola at a record 97.5% adoption.

India grew a record 10.8 million hectares of Bt cotton with an adoption rate of 93%, whilst 7.2 million small resource-poor farmers in China grew 4.0 million hectares of Bt cotton with an adoption rate of 80%, cultivating on average 0.5 hectare per farmer. India enhanced farm income from Bt cotton by US\$12.6 billion in the period 2002 to 2011 and US\$3.2 billion in 2011 alone.

Africa continued to make progress with South Africa increasing its biotech area by a record 0.6 million hectares to reach 2.9 million hectares; Sudan joined South Africa, Burkina Faso and Egypt, to bring the total number of African biotech countries to four.

Five EU countries planted a record 129,071 hectares of biotech Bt maize, up 13% from 2011. Spain led the EU with 116,307 hectares of Bt maize, up 20% from 2011.

From 1996 to 2011, biotech crops contributed to Food Security, Sustainability and Climate Change by: increasing crop production valued at US\$98.2 billion; providing a better environment, by saving 473 million kg a.i. of pesticides; in 2011 alone reducing CO₂ emissions by 23.1 billion kg, equivalent to taking 10.2 million cars off the road; conserving biodiversity by saving 108.7 million hectares of land; and helped alleviate poverty by helping >15.0 million small farmers and their families totalling >50 million people, who are some of the poorest people in the world. Biotech crops are essential but are not a panacea and adherence to good farming practices such as rotations and resistance management, are a must for biotech crops as they are for conventional crops.

The lack of appropriate, science-based and cost/time-effective regulatory systems continue to be the major constraint to adoption. Responsible, rigorous but not onerous, regulation is needed for small and poor developing countries.

Global value of biotech seed alone was valued at ~US\$15 billion in 2012.

Future Prospects - cautiously optimistic with more modest annual gains predicted because of the already high rate of adoption in all the principal crops in mature markets in both developing and industrial countries.

ISAAA is a not-for-profit organization, sponsored by public and private sector organizations. All biotech crops hectare estimates reported in all ISAAA publications are only counted once, irrespective of how many traits are incorporated in the crops. Detailed information is provided in ISAAA Brief 44 “Global Status of Commercialized Biotech/GM Crops: 2012”, authored by Clive James. For further information, please visit <http://www.isaaa.org> or contact ISAAA *SEAsia*Center at +63 49 536 7216, or email to info@isaaa.org.