

ISAAA releases Top Ten Facts about Biotech/GM Crops in 2013, a Special Edition of Crop Biotech Update March 5 issue. We encourage you to translate and/or use the information therein to develop news articles for publication in tri-media in your own country, with proper attribution to ISAAA.



## Global Status of Commercialized Biotech/GM Crops: 2013

By Clive James, Founder and Emeritus Chair, ISAAA

*Dedicated to the late Nobel Peace Laureate, Norman Borlaug, founding patron of ISAAA, on the centenary of his birth, 25 March 2014*

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### TOP TEN FACTS about Biotech/GM Crops in 2013

**FACT # 1. 2013 was the 18th year of successful commercialization of biotech crops.** Biotech crops were first commercialized in 1996. Hectarage of biotech crops increased every single year between 1996 to 2013, with 12 years of double-digit growth rates, reflecting the confidence and trust of millions of risk-averse farmers around the world, in both developing and industrial countries. Remarkably, since the first plantings in 1996, an unprecedented cumulative hectarage of more than 1.5 billion hectares have been successfully cultivated, an area that is 50% more than the total land mass of China or the United States.

**FACT # 2. Biotech crop hectares increased by more than 100-fold from 1.7 million hectares in 1996, to over 175 million hectares in 2013.** This makes biotech crops the fastest adopted crop technology in recent times – the reason – they deliver benefits. In 2013, hectarage of biotech crops grew by 5 million hectares, at an annual growth rate of 3%. It is important to note that more modest annual gains, and continued plateauing, are predicted for the next few years due to the already optimal (between 90% and 100%) adoption rates for the principal biotech crops, leaving little or no room for expansion.

**FACT # 3. Number of countries growing biotech crops and stacked traits.** Of the 27 countries which planted biotech crops in 2013, 19 were developing and 8 were industrial countries. Stacked traits occupied 47.1 million hectares, or 27%.

**FACT # 4. For the second consecutive year, in 2013, developing countries planted more hectares than industrial countries.** Notably, developing countries grew more, 54% (94 million hectares) of global biotech crops in 2013 than industrial countries at 46% (81 million hectares). Successful public/private partnerships were established by several countries including Brazil, Bangladesh and Indonesia.

**FACT # 5. Number of farmers growing biotech crops.** In 2013, a record 18 million farmers, up 0.7 million from 2012, grew biotech crops – remarkably over 90%, or over 16.5 million, were small resource-poor farmers in developing countries. Farmers are the masters of risk-aversion and improve productivity through **sustainable**

**intensification** (confining cultivation to the 1.5 billion hectares of cropland and thereby saving the forests and biodiversity). In 2013, a record 7.5 million small farmers in China and another 7.3 million in India, elected to plant more than 15 million hectares of Bt cotton, because of the significant benefits it offers. In 2013, almost 400,000 small farmers in the Philippines benefited from biotech maize.

**FACT # 6. The top 5 countries planting biotech crops – deployment of the first drought tolerant maize and stacked HT/IR soybean.** The US continued to be the lead country with 70.1 million hectares, with an average ~90% adoption across all crops. Importantly, the first biotech drought tolerant maize was planted by 2,000 US farmers on 50,000 hectares. Brazil was ranked second, and for the fifth consecutive year, was the engine of growth globally, increasing its hectareage of biotech crops more than any other country – an impressive record increase of 3.7 million hectares, up 10% from 2012, reaching 40.3 million hectares. Brazil also planted the first stacked HT/IR soybean in a record-breaking 2.2 million hectare launch, and its home-grown virus-resistant biotech bean is ready for commercialization. Argentina retained its third place with 24.4 million hectares. India, which displaced Canada for the fourth place had a record 11 million hectares of Bt cotton with an adoption rate of 95%. Canada was fifth at 10.8 million hectares with decreased plantings of canola but maintained a high adoption rate of 96%. In 2013, each of the top 5 countries planted more than 10 million hectares providing a broad, solid foundation for future growth.

**FACT # 7. Status of biotech crops in Africa.** The continent continued to make progress with South Africa benefiting from biotech crops for more than a decade. Both Burkina Faso and Sudan increased their Bt cotton hectareage by an impressive 50% and 300%, respectively, in 2013. Seven countries (Cameroon, Egypt, Ghana, Kenya, Malawi, Nigeria and Uganda) conducted field trials, the penultimate step prior to approval for commercialization. Importantly, the WEMA project is scheduled to deliver the first biotech drought tolerant maize to Africa in 2017. The lack of appropriate, science-based and cost/time-effective regulatory systems continues to be the major constraint to adoption. Responsible, rigorous but not onerous, regulation is needed, particularly for small and poor developing countries.

**FACT # 8. Status of biotech crops in the EU.** Five EU countries planted a record 148,013 hectares of biotech Bt maize, up 15% from 2012. Spain led the EU with 136,962 hectares of Bt maize, up 18% from 2012 with a record 31% adoption rate in 2013.

**FACT # 9. Benefits offered by biotech crops.** From 1996 to 2012, biotech crops contributed to Food Security, Sustainability and the Environment/Climate Change by: increasing crop production valued at US\$116.9 billion; providing a better environment, by saving 497 million kg a.i. of pesticides; in 2012 alone reducing CO<sub>2</sub> emissions by 26.7 billion kg, equivalent to taking 11.8 million cars off the road for one year; conserving biodiversity by saving 123 million hectares of land from 1996-2012; and helped alleviate poverty for >16.5 million small farmers and their families totalling >65 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.

**FACT # 10. Future Prospects.** Cautiously optimistic with more modest annual gains expected due to the already high rates of adoption (90% or more) in the principal biotech crops in mature markets in both developing and industrial countries. Bangladesh, Indonesia and Panama approved biotech crop planting in 2013 with plans for commercialization in 2014.

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 46 “Global Status of Commercialized Biotech/GM Crops: 2013”, 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](mailto:info@isaaa.org).