



Highlights of the Global Status of Commercialized Biotech/GM Crops: 2008

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This summarizes the 2008 biotech crop highlights, comprehensively reviewed in ISAAA Brief 39 (<http://www.isaaa.org>). As a result of consistent and substantial economic, environmental and welfare benefits, a record 13.3 million large, small and resource-poor farmers continued to plant significantly more hectares of biotech crops in 2008. Progress was also made on several other important fronts in 2008, with a notable increase in the number of countries planting biotech crops globally; substantial progress in Africa where the challenges are greatest; increased adoption of stacked traits; and the introduction of a new biotech crop. These are very important developments given that biotech crops contribute to some of the major challenges facing global society including: food, feed and fiber security; lower price of food; sustainability; alleviation of poverty and hunger; and mitigation of some of the challenges associated with climate change.

The number of countries planting biotech crops soared to 25 – a historical milestone – a new wave of adoption of biotech crops contributed to broad-based global growth.

Progress in Africa – number of countries increased from one in 2007, South Africa, to three in 2008, with Burkina Faso (cotton) and Egypt (maize) planting biotech crops, for the first time.

Bolivia (RR[®]soybean) became the ninth country in Latin America to adopt biotech crops.

Global hectareage of biotech crops continued its strong growth in 2008 for the thirteenth consecutive year – a 9.4%, or 10.7 million hectare increase, reaching 125 million hectares, or more precisely, 166 million “trait hectares”, equivalent to a 15% growth or a 22 million “trait hectare” increase. The 74-fold hectare increase since 1996 makes biotech crops the fastest adopted crop technology.

In 2008, for the first time, the accumulated hectareage of biotech crops, for the period 1996 to 2008, exceeded 2 billion acres (800 million hectares) – it took 10 years for the 1st billionth acre in 2005, but only 3 years for the 2nd billionth acre in 2008. Notably, of the 25 countries planting biotech crops, 15 were developing countries versus only 10 industrial countries.

A new biotech crop, RR[®] sugar beet, was first commercialized in the USA and Canada in 2008.

Five countries, Egypt, Burkina Faso, Bolivia, Brazil and Australia introduced, for the first time, biotech crops that have been commercialized in other countries.

Stacked traits are an increasingly important feature of biotech crops. Ten countries planted approximately 27 million hectares of stacked traits in 2008 and at 23% growth, they grew faster than single traits.

The number of biotech crop farmers increased by 1.3 million in 2008, reaching 13.3 million globally in 25 countries – notably, 90%, or 12.3 million were small and resource-poor farmers in developing countries.

Biotech crops have improved the income and quality of life of small and resource-poor farmers and their families, and contributed to the alleviation of their poverty – case studies are cited in Brief 39 for India, China, South Africa, and the Philippines.

Five principal developing countries: China, India, Argentina, Brazil and South Africa, with a combined population of 2.6 billion, are exerting leadership with biotech crops, and driving global adoption – benefits from biotech crops are spurring strong political will and substantial new investments in biotech crops in several of these lead countries.

Notably, all seven EU countries planting Bt maize increased their hectareage in 2008, resulting in an overall increase of 21%, to reach over 107,000 hectares.

The impressive contribution of biotech crops to sustainability is reviewed: 1) Contributing to food, feed and fiber security including more affordable food (lower prices); 2) Conserving biodiversity; 3) Contributing to the alleviation of poverty and hunger; 4) Reducing agriculture's environmental footprint; 5) Helping mitigate climate change and reducing greenhouse gases; 6) Contributing to more cost-effective production of biofuels; and 7) Contributing to sustainable economic benefits worth US\$44 billion from 1996 to 2007. In summary, collectively these seven thrusts are a significant contribution to sustainability and the potential for the future is enormous.

Of the economic gains of US\$44 billion during the period 1996 to 2007, 44% were due to substantial yield gains, and 56% due to a reduction in production costs (including a 359,000 tonne a.i. saving in pesticides); the production gains of 141 million tons, would have required 43 million additional hectares had biotech crops not been deployed – a land-saving technology.

In agricultural-based and transforming developing countries, biotech crops are an engine of rural economic growth, which in turn can contribute substantially to national economic growth.

More than half (55%) the world's population live in the 25 countries, which planted 125 million hectares of biotech crops in 2008, equivalent to 8% of the 1.5 billion hectares of all cropland in the world. In 2007, biotech crops saved 14.2 billion kg of CO₂ equivalent to 6.3 million less cars.

There is an urgent need for appropriate cost/time-effective regulatory systems for biotech crops that are responsible, but not onerous, and affordable for developing countries.

Twenty-five countries have approved planting of biotech crops and another 30 countries have approved import of biotech products for food and feed use for a total of 55 approving countries.

The global value of the biotech crop market in 2008 was US\$7.5 billion with an accumulated historical milestone value of US\$50 billion for the period 1996 to 2008.

Future Prospects. Outlook for the remaining seven years of the second decade of commercialization of biotech crops, 2006 to 2015 looks promising – the 2005 ISAAA prediction that the number of biotech crop countries, hectareage and beneficiary farmers would all double between 2006 and 2015, is on track. Rice as a crop, and drought tolerance as a trait, are expected to be pivotal for future growth. Brief 39 includes a special feature on drought tolerant biotech maize, expected to be commercialized in the USA in 2012, or earlier, and in Sub Saharan Africa in 2017.

Detailed information is provided in Brief 39 Global Status of Commercialized Biotech/GM Crops: 2008 by Clive James. For further information, please visit <http://www.isaaa.org> or contact ISAAA SEAsiaCenter at +63-49-536-7216, or email to info@isaaa.org.