

Brazil Becomes a Major Force in Genetically Modified Farming

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Farmer demand has driven annual double-digit increases in biotech crop adoption since the crops were commercialized a decade ago. In 2005, four new countries and a quarter million more farmers planted biotech crops.

They contributed to an 11% increase in global biotech crop area, according to a report released Wednesday, January 11, authored by Dr. Clive James, chairman and founder of ISAAA, the International Service for the Acquisition of Agri-biotech Applications.

Since initial commercialization in 1996, global planted area of biotech crops has soared by more than fifty-fold from 4.2 million acres in six countries to 222 million acres in 21 countries in 2005.

The 8.5 million farmers planting biotech crops in 2005 also marked a significant milestone as the 1 billionth cumulative acre, or 400 millionth hectare, was planted.

Herbicide-tolerant soybeans continue to be the most widely adopted trait, accounting for 60 percent of the total global area. Varieties with stacked traits are growing in popularity, accounting for 10 percent of the global area.

In 2005, 247 million "trait acres" were planted, which better quantifies those acres planted to varieties with multiple biotech enhancements.

"Farmers from the United States to Iran, and five EU countries demonstrate a trust and confidence in biotech crops, as indicated by the unprecedented high adoption rate of these crops," said Dr. James, chairman and founder of ISAAA.

"The continued expansion of countries growing biotech crops also bears witness to the substantial economical, environmental and social benefits associated with these crops."

Notably, in 2005 Iran grew its first crop of biotech rice, the first biotech planting of this important food crop globally. The Czech Republic planted Bt maize for the first time, bringing the total number of EU countries growing biotech crops to five with Spain, Germany and the Czech Republic being joined by France and Portugal, which resumed planting biotech maize after four and five year gaps, respectively. This could signal an important trend in the EU.

Two-thirds or 14 of the 21 countries growing biotech crops achieved "mega-country" status by planting 125,000 acres or more in 2005, including the United States, Argentina, Brazil, Canada, China, Paraguay, India, South Africa, Uruguay, Australia, Mexico, Romania, the Philippines and Spain.

In the United States, farmers grew more biotech crops than any other country - 123 million acres or 55 percent of the world's biotech area. That represents an increase of 5.4 million acres.

Nearly 20 percent or 23.6 million acres are now planted with multiple or stacked biotech traits. U.S. farmers also planted the first triple-stacked variety in 2005 on about 1.24 million acres.

Brazil experienced the most significant growth, increasing its biotech soybean area by 88 percent to reach a provisional 23 million acres in 2005.

India displayed the largest proportional growth, nearly three-fold, by planting 3.2 million acres of Bt cotton in 2005 compared to 1.24 million acres in 2004.

When biotech crops were first commercialized, critics suggested the technology would never be valuable in the developing world. Now, resource-poor farmers in developing countries account for 90 percent of the 8.5 million growers who benefit from biotechnology, while developing nations represent more than one-third of 2005 global biotech area.

"Biotech crops have increased the income of 7.7 million resource-poor farmers in China, India, South Africa, the Philippines and seven other developing countries, helping alleviate them from abject poverty," James said.

"The broader commercialization of biotech rice, the most important food crop of the world's 1.3 billion poor and the 850 million hungry and malnourished, can further this effort. Biotech rice could make a substantial contribution to the formidable U.N. Millennium development goal of reducing poverty, hunger and malnutrition by 50 percent by 2015."

James indicated the future looks promising for continued increases in adoption levels in the next decade.

"I am cautiously optimistic the stellar growth experienced during the first decade of commercialization will not only continue, but will be surpassed in the second decade," he said.

"The number of countries and farmers growing biotech crops is expected to grow, particularly in developing countries, while second-generation input and output traits are expected to become available."

According to the report, other indicators of continued growth include China's expected near-term adoption of biotech rice, more nutritional biotech food and feed, products and the anticipated introduction of novel crop products used as renewable resources for more sustainable and affordable production of biofuels. ISAAA projects the global value of the biotech crop market to increase from \$5.25 billion in 2005 to \$5.5 billion in 2006.

The International Service for the Acquisition of Agri-biotech Applications (ISAAA) is a not-for-profit organization with an international network of centers designed to contribute to the alleviation of hunger and poverty by sharing crop biotechnology applications.

Clive James, chairman and founder of ISAAA, has lived and worked for the past 25 years in the developing countries of Asia, Latin America and Africa, devoting his efforts to agricultural research and development issues with a focus on crop biotechnology and global food security.

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