

Benefits Drive Adoption

Global Adoption Over Nine Years

According to [ISAAA](#), over the last nine years (1996-2004) the accumulated global biotech crop area was 951 million acres (385 million hectares).

- 951 million acres is equivalent to approximately 40 percent of the total land area of the United States or China, or 15 times the total land area of the United Kingdom.
- Biotech crop plantings have expanded 47-fold from 1996, when 4.25 million acres (1.7 million hectares) were planted, to 2004 when 200 million acres (81 million hectares) were planted.
- Double-digit growth in biotech crop plantings globally has been achieved for nine consecutive years since 1996, including an average growth rate of 15 percent per year over the past five years.
- In 2004, 14 countries planted more than 50,000 hectares of biotech crops with the largest planted area in the United States, followed by Argentina, Canada, Brazil, China, Paraguay, India, South Africa, Uruguay, Australia, Romania, Mexico, Spain and the Philippines.
- Biotech crops were also planted in three additional countries: Columbia, Honduras and Germany.
- 8.25 million farmers chose to plant biotech crops in 2004, an increase of 18 percent from the prior year when 7 million farmers made the decision to plant biotech crops.
- 90 percent of the farmers planting biotech crops are resource-poor farmers from developing countries.
- In 2004, farmers chose to plant 56 percent of all soybeans, 21 percent of cotton, 19 percent of canola, and 14 percent of corn with biotech traits on a global basis.
- Of the 284 million hectares globally planted to soybeans, corn, cotton and canola, farmers have chosen to plant nearly 30 percent of those acres to biotech crops (James, 2004).

Adoption of Biotech Crops in Developing Countries

According to [ISAAA](#), more than one-third (34 percent or 27.6 million hectares) of the 2004 global biotech crop area of 200 million acres (81 million hectares) was grown in developing countries*.

- For the first time, the absolute growth of biotech crop area was higher for developing countries (7.2 million hectares) than for industrial countries (6.1 million hectares).
- India had the highest percentage year-on-year growth in 2004 with a 400-percent increase in Bt cotton hectares over the previous year.
- India increased the area planted to Bt cotton from 100,000 hectares in 2003 to 500,000 hectares in 2004, grown by 300,000 small farmers.
- Other developing countries experienced substantial growth in the planted area of biotech crops in 2004, including: Uruguay (200 percent increase), Brazil (66 percent increase), China (32 percent increase), South Africa (25 percent increase) and Argentina (17 percent increase).
- ISAAA notes that in 2004, "...90 percent of the farmers benefiting from biotech crops were resource-poor farmers from developing countries, whose incomes from biotech crops contributed to the alleviation of poverty."
- 11 of the 17 countries adopting biotech crops are developing countries.
- ISAAA projects five of these developing countries will exert leadership on the adoption of biotech crops globally. These five countries are China and India in Asia, Brazil and Argentina in Latin America, and South Africa on the continent of Africa. Collectively, these countries:
 - Have a combined population of 2.6 billion or 40 percent of the global population;
 - Maintain agriculture as the primary occupation for 1.3 billion (50 percent) of their people; and
 - Generate almost \$370 million aggregate GDP from agriculture (James, 2004).

One Billion Acres in 2005

In 2005, farmers will plant and harvest the one billionth acre (equivalent to 400 million hectares) of biotech crops on a cumulative basis.

- One billion acres is equivalent to approximately 60 percent of the Amazon rainforest or the entire land area of the European Union's 25 countries (World Factbook, 2004).
- To plant and harvest one billion acres of these crops exclusively in a single country, one would be required to plant the entire arable land area of:
 - Japan for 87 consecutive seasons,
 - Zambia for 75 consecutive seasons,
 - the United Kingdom for 70 consecutive seasons,
 - Kenya for 86 consecutive seasons,

- Thailand for 26 consecutive seasons,
 - France for 22 consecutive seasons,
 - Poland for 28 consecutive seasons, or
 - Mexico for 15 consecutive seasons (World Factbook, 2004)
- [ISAAA](#) projects 15 million farmers will grow biotech crops on up to 375 million acres (150 million hectares) in 30 countries by 2010 (James, 2004).

* Developing countries as defined by ISAAA.