

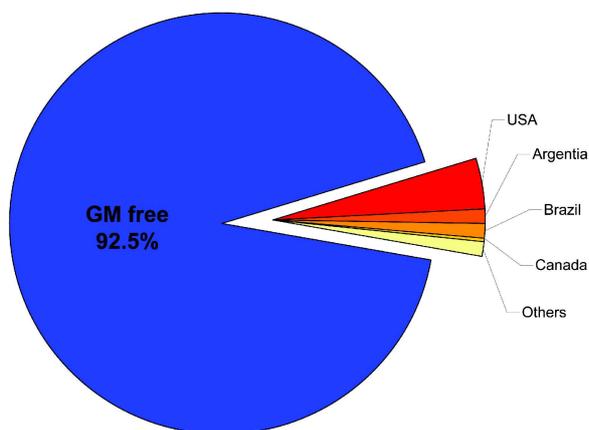
Facts and figures about genetically modified organisms

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Every year, an organisation funded by the genetic engineering industry called the International Service for the Acquisition of Agri-biotech Applications (ISAAA) publishes new figures and highlights the increase in the acreage of land planted with genetically modified organisms (GMOs) across the world¹.

These are the facts that the ISAAA does not put in its press release:

- 92.5% of arable land around the world is GMO free;
- Only four countries grow almost 90% of the total GM crops;
- 176 out of the 192 countries grow no GMOs at all;
- In over 10 years on the market, only four GM crops are grown in significant quantity – soya, maize, cotton and oil-seed rape (canola). These four crops represent 99% of GMOs sold;
- Virtually 100% of world acreage planted with commercial GM crops have one or both of just two traits: herbicide-tolerance and insect-resistance.



The four countries that grow 90% of GMOs worldwide are the US (53%), Argentina (18%), Brazil (11.5%) and Canada (6.1%).

Almost all GM crops currently released belong to four companies: Monsanto, Dupont, Syngenta and Bayer. Monsanto sells more than 90% of all GM seeds worldwide. In recent years it has stopped selling or developing GM wheat, tomatoes, potatoes and bananas. It has given up trying to sell GMOs direct to the public, and now focuses on commodity

crops which go straight from farmer to industrial processor.

A decade after GM maize was first marketed, six of the world's top 10 maize producing countries are 100% GM-free. Even in the US, GM maize represents less than half of all maize grown.

Worldwide, just 7.5% of farmland is planted with GMOs. The world map in the ISAAA report¹ shows countries where up to 50,000 hectares are planted with GMOs, failing to indicate that most of these countries plant only a few hundred hectares. Claims that Europe is alone in not planting GM crops are patently inaccurate.

In Europe, ISAAA stated a 77% increase in cultivation of GMOs in 2007, still only 0.119 % of agricultural land was planted with such crops. (This is how a very small increase in acreage can be made to look like enormous progress.) For comparison, in 2006 organic farmland represented 4% of EU agricultural land, covering an area larger than 6.8 million hectares managed by over 170,000 farms.

With these poor results, is it any surprise that US government representatives and agro-chemical lobbyists are putting such pressure on Europe and developing countries to accept GMOs?

The power of public relations over fact

In its heavily promoted reports, the ISAAA assumes that the entire population of any country where GMOs are grown benefits from GM crops. It calculates, for example, that 80 million people in Germany - the total population - benefit from GMO crops, even though the 23km² of German soil planted with GMOs could barely support 4,000 people, let alone 80 million.

Claims that GM crops increase yields are similarly exaggerated. The GM crops currently commercialised are either tolerant to herbicides or insect resistant. Herbicide-tolerant crops do not increase yields. Insect-resistant GM crops may increase yields in years of high infestation by the target pest, but this leads pests to develop resistance in the medium and longer term. Studies in Europe found that yield depend on the crop variety² rather than on the genetic modification applied. Studies have also found lower yields from GM insect-resistant maize compared to conventional non-GM maize.

Neither does planting GM crops reduce the use of chemical pesticides on farmland, despite what agrobiotechnological companies claim. In fact, from 1996 to 2004 parallel to increasing cultivation of GM crops in the US there was an observed 55,000,000 kg increase in pesticide use, a 4.1% rise.³

The target pest insects will inevitably develop resistance to the pesticides produced by GM crops.⁴ This will oblige farmers to apply both greater quantities and additional varieties of insecticide in the coming years. The main beneficiaries then become the companies that make pesticides, which are often the same companies that make GMOs.

Any perceived benefits of GM crops – such as increased yields in occasional years and reduced insecticide usage – are thus short-lived.

Meanwhile, various scientific studies have concluded serious and valid concerns on the effects of these crops on ‘non-target’ organisms such as butterflies and predators of the target pests.

Recently, the International Assessment of Agricultural Science and Technology for Development⁵ brought together 400 scientists, UN agencies, governments, non-governmental organisations, industry and farmer associations across the globe for a four-year scientific project. This is the equivalent for agriculture as is the IPCC report for climate change. The Synthesis Report, endorsed by 60 governments, concludes that genetically modified crops are not a solution for poverty, hunger or climate change.

References

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- 4 Tabashnik, B.E., Gassmann, A.J., Crowder, D.W. & Carrière, Y. 2008. Insect resistance to Bt crops: evidence versus theory. *Nature Biotechnology* 26: 199-202.
- 5 International Assessment of Agricultural Science and Technology for Development (IAASTD) 2008. Synthesis Report Executive Summary. <http://www.agassessment.org/>

