



## Regulatory Harmony in the GE World?

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For the last 10 years, the economic value of transgenic crops has grown steadily. Every year, more land is used to grow commercial transgenic crops than the year before, and more countries take their first tentative steps into the genetically engineered (GE) world<sup>1</sup>. After a decade of hostility, particularly within the European Union (EU), people are talking more about the socioeconomic and environmental benefits of transgenic plants<sup>2</sup>. The boogeyman under the bed is losing the ear of the public.

Now that the public at large is more open to considering the benefits of transgenic technology, we can at last turn our attention to a problem that is stifling development and ensuring that the discoveries of today take a long, long time to reach the field. This problem is not technical, not logistical, not agricultural, but political—there is a distinct lack of harmony among international regulations that relate to research, biosafety, and to the trade and use of transgenic crops<sup>3,4</sup>. The EU is particularly fussy, and its inflexible system amounts to a moratorium on applying transgenic technology within its own borders. Furthermore, the conflict between EU and US regulations means that the import and export of commodities derived from transgenic plants is fraught with difficulties<sup>5</sup>.

Nowhere is this more apparent than in the laws and regulations governing the tolerance levels for GE material in non-GE food and in the labeling and traceability of GE products<sup>3,4</sup>. The definition of what is considered GE and non-GE food varies from country to country, with the EU in particular demanding precise tolerance targets while other countries have more relaxed rules or no rules at all. In the US, Canada, and Japan, food and feed can be classed as non-GE even if it contains up to 5% GE material. In contrast, Australia, New Zealand, South Africa, Brazil, and China set the limit much lower, at 1%. The EU is even stricter, with most non-GE food required to contain less than 0.9% GE to qualify, and an even stricter 0.5% limit applied to GE organisms that have yet to be approved, but which have received favorable risk assessments.

The disharmony with regard to tolerance limits reflects two different mindsets<sup>6</sup>. The European mindset is based on the concepts of precaution and the consumer's right to know. Stringent approval, labeling, and traceability standards apply to any food produced from or derived from GE ingredients. In contrast, the North American mindset is based on differences in the end product, and includes a voluntary safety consultation and voluntary labeling guidelines for GE food. Most other developed countries have introduced regulations that share features of both the EU and North American systems. A recurring problem is that developing countries often base their regulatory frameworks on models promoted by developed nations. But they do this without considering the potential socioeconomic impact of their decisions, i.e., the decisions are political rather than scientific, and they do not consider the impact on the health and well-being of their own populations.

The consequences of global regulatory disharmony become acute when considering imports and exports, particularly when food is imported from a country with relaxed laws into a country that is very strict. Such conflicts have already occurred with US imports into the EU, resulting in food and feed being impounded<sup>5</sup>, and are bound to get worse as more countries start growing transgenic crops. The potential for conflict is compounded by disharmonious regulations concerning the labeling and traceability of GE food. The USA, Canada, Mexico, Argentina, The Philippines, and South Africa have voluntary labeling practices, whereas the EU, Australia, New Zealand, China, Chile, Brazil, and Taiwan require the mandatory labeling of GE produce<sup>4</sup>. Still other countries, including Bangladesh, Egypt, and Kenya, have no requirements for labeling at all.

As the prevalence of GE crops continues to grow, we foresee real problems with the trade and use of food and feed if the regulations are not harmonized on a global level. US food exporters and biotech companies have already complained about the EU's slow and obscure approval process, and unjustified and illegal bans by individual EU countries on GE products approved by the EU as a whole, often in response to unfounded claims by 'pressure groups'. This ongoing dispute has been intensified by the EU's introduction of mandatory labeling. The role of the World Trade Organization's legal framework regarding trade in GE products (the Sanitary and



Phytosanitary Agreement, and the Agreement on Technical Barriers to Trade) has played a significant role in stifling the opportunities offered by GE products<sup>3</sup>. Strict labeling, identity preservation and import requirements impose additional costs and reduce public confidence, which in turn affects trade.

The decline in US corn exports to the EU has been blamed on the EU's strict approval and labeling requirements, with some EU countries banning GE products all together, even after they have been approved by the European Food Safety Authority (EFSA), the EU's own regulatory agency. Developing countries have also been dragged into this dispute as both sides try to win their support. Many developing countries have banned GE products due to consumer and environmental concerns, only to find themselves excluded from markets and refused financial support from industrialized nations to conduct research and build human capital for biotech activities<sup>7</sup>.

In the decade since GE crops were first adopted, it is estimated that farmers have earned \$27 billion from the technology, split almost equally between developed and developing countries<sup>1</sup>. As well as direct economic benefits, GE crops reduce pesticide use, and reduce the use of fossil fuels in agriculture<sup>2</sup>. These benefits could be lost, or curtailed, if the regulations in different parts of the world are not brought into line, or at least made mutually compatible. It is also important to base the global regulations on scientific principles rather than unrealistic expectations of risk avoidance<sup>3</sup>. Currently, many countries have in place regulations that erect unnecessary hurdles to the further development of the technology, especially developing countries where the benefits are most needed. One approach to circumvent this problem is 'mutual recognition', where countries agree to recognize each other's regulations<sup>5</sup>; for example, the US and EU could agree to allow imports of each other's products (GE and conventional) produced and marketed under home regulations, giving consumers on both sides of the Atlantic the choice.

Perhaps if Europe and the US were to show such leadership, this type of compromise could be rolled out globally. Whatever the case, as more and more countries cultivate GE varieties, and national and international bodies continue to promulgate diverging regulatory approaches, there is little doubt that a more harmonious future for GE food and feed regulation would be in the interests of all.

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#### Further reading

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