

Review of four recent European court of justice law cases on GM crops

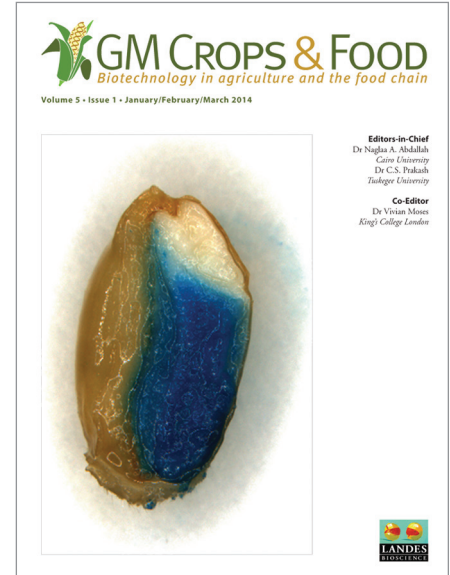
In this article, Dr Kershen, from the University of Oklahoma College of Law, reviews four recent decisions of the European Court of Justice (ECJ) on GM crops and discusses their general implications. The first two cases are about national bans on Monsanto's genetically modified maize (MON810). In 1998, the European Commission (EC) authorized the placing on the market of MON810. Despite this, nine member states have brought forward national bans, and these bans have been challenged in Italy and France. In Italy, the Minister of Agriculture, Food, and Forest Policies informed Pioneer Hi-Bred that the Italian government would not entertain Pioneer's application to sell MON810 to Italian farmers until after the Italian government and its regional governments had adopted rules for coexistence between conventional, organic, and genetically-engineered crops. In France, the Minister for Agriculture and Fisheries suspended the authorization for growing MON810, which was immediately challenged by Monsanto. In 2013, the court decided in favor of Monsanto.

In 2001, Pioneer Hi-Bred applied for authorization of its genetically engineered insect-resistant maize 1507 in Spain. After favorable consideration, the Spanish authorities passed the application to the European Commission. The Commission acted only after being forced to do so by the ECJ through a decision of September 2013, twelve and a half years after the application.

In another legal dispute, Hungary, supported by Austria, France, Luxemburg, and Poland, challenged the Commission's approval of the genetically modified potato (Amflora) from BASF. The Commission had gone through the entire legislative process, thereby giving the Commission the legal authority to grant approval. But before the Commission acted, it sought reassurance again from EFSA on the potato's safety. When EFSA responded anew that the potato was safe, the Commission granted approval. The Commission did not resubmit its approval to EU Committees and the EU Council for their actions and votes, taking into account this new EFSA opinion on safety. The General Court ruled in favor of Hungary for these procedural reasons. In response to this, BASF has moved its biotechnology division to the United States, stopped cultivation of the Amflora potato, and announced that it will no longer develop genetically engineered crops for the EU market. Concurrently, Monsanto has announced that it will no longer seek approval for genetically engineered crops in Europe. According to the author, Europe has thus deprived itself of scientific innovation and highly skilled human capacity.

Reference

Kershen DL. European decisions about the "Whack-a-mole" game. *GM Crops Food* 2014; 5:4-7; PMID:24561916; <http://dx.doi.org/10.4161/gmcr.27777>



The precautionary principle applied to the risk assessments of GM crops

In this commentary, two industry based scientists discuss the current regulatory hurdles for genetically modified crops.

The authors suggest that scientific evidence should take priority over expert opinion in the regulation of genetically modified (GM) crops, given that delayed introduction of nutritionally enhanced GM crops, such as “golden rice,” has resulted in both serious illness and even deaths as a result of malnutrition. The scientists focus on two examples, where expert opinion, in conflict with scientific evidence, leads to high regulatory hurdles: the requirement for crop composition studies for traits that are not expected to alter plant metabolic pathways

and the evaluation of potential horizontal transfer of plant transgenes to bacteria.

The authors argue that basic research interests in reducing uncertainty about GM crops should not guide data requirements for regulatory risk assessment, and that GM crop regulation should be conducted by risk assessment experts rather than specialists in other disciplines.

Reference

Herman RA, Raybould A. Expert opinion vs. empirical evidence: The precautionary principle applied to GM crops. *GM Crops Food* 2014; 5:8-10; PMID:24637724; <http://dx.doi.org/10.4161/gmcr.28331>



Conference report: “Surrogate species selection for assessing potential adverse environmental impacts of genetically engineered plants on non-target organisms”

Most regulatory authorities require that developers of genetically engineered insect-resistant (GEIR) crops evaluate the potential for these crops to have adverse impacts on non-target organisms (NTOs). In June 2012, the Center for Environmental Risk Assessment (CERA), ILSI Research Foundation, held a conference with the objectives to identify key criteria for surrogate species selection for laboratory, semi-field, and field NTO testing, and to ascertain best practices for surrogate testing, with a particular focus on facilitating

data transportability. This report summarizes the proceedings of the conference, including the presentations, discussions, and the points of consensus agreed to by the participants.

Reference

Carstens K, Cayabyab B, De Schrijver A, Gadaleta PG, Hellmich RL, Romeis J, Storer N, Valicente FH, Wach M. Surrogate species selection for assessing potential adverse environmental impacts of genetically engineered insect-resistant plants on non-target organisms. *GM Crops Food* 2014; 5:11-5; PMID:24637519; <http://dx.doi.org/10.4161/gmcr.26560>



Economic impact of GM crops: An update

Since 2005, the authors have conducted an annual assessment of some of the key economic impacts associated with the global adoption of GM crops.

Economic impacts on yields, key costs of production, direct farm income and effects, and impacts on the production base of the four main crops of soybeans, corn, cotton, and canola are examined. The analysis reveals that during the past 17 years, the adoption of crop biotechnology has delivered important economic benefits. The GM IR traits have

mostly delivered higher incomes through improved yields in all countries, whereas the GM HT technology-driven farm income gains have mostly arisen from reduced costs of production.

Reference

Brookes G, Barfoot P. Economic impact of GM crops: The global income and production effects 1996-2012. *GM Crops Food* 2014; 5:65-75; PMID:24637520; <http://dx.doi.org/10.4161/gmcr.28098>

