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The GMO Stalemate in Europe

IN SEPTEMBER 2012, EUROPE WAS SHOCKED BY A PUBLICATION, FROM CAEN UNIVERSITY IN FRANCE, claiming that rats fed for 2 years with transgenic herbicide-resistant corn suffered from tumors. Even though the results have been criticized as flawed,* this research continues to be hailed as a confirmation that genetically modified organisms (GMOs) are intrinsically dangerous.

The European Union (EU) differs from most of the world in its strong opposition to the use of genetic modification in agriculture. This position has worsened over the past 15 years. Field trials of new GM varieties have declined since the late 1990s. Nearly the entire EU commercial acreage of 100,000 ha consists of Bt corn, altered to express a toxin from *Bacillus thuringiensis* that is poisonous to insect pests; no other GM crop is allowed, apart from a high-starch potato. The corn is grown mostly in Spain, the only European country in the top 20 GM crop-growing countries worldwide. Once the European Food Safety Authority has produced a positive “final opinion” concerning the suitability of a new GM crop, final authorization must come from the European Commission (EC) and the member states that vote on approval. Over a dozen GM crops are stuck somewhere in this pipeline, some stalled for years, either because of the absence of support from a majority of member states or a failure of the EC to submit the case to a vote. Attempts to break the deadlock have included seeking an agreement that would allow an individual member state to block the cultivation of a particular GM crop on its own territory, based on safety issues, while allowing other EU nations to make a decision about growing it. Unfortunately, such efforts to ease acceptance of genetic modification have failed.

Respected independent institutions in Europe have provided evidence that GM crops can contribute to sustainable food production, especially when bred for insect and disease resistance, and that they do not carry risks beyond those of conventional varieties.† In 2011, the EC stated that the authorization procedure is dominated by preconceived ideas that prevent a fair revision of procedures to evaluate, approve, and control GMOs. However, in reaction to the flawed Caen study, the EC has opted for further delay, seeking more research on the long-term effects of GM feed. Yet 39 GM crops are currently allowed into the EU as food or feed, with many new requests expected. Europeans and their livestock are already consuming GM foods on a substantial scale.

Europe’s lack of trust in GMOs reflects a wider distrust of science. Similar attitudes prevail concerning shale gas and nuclear power. The irony is that the generations who have benefited most from scientific progress are now the most suspicious of science. Europeans tend to romanticize the pre-modern past, unaware of the suffering and food scarcity associated with low crop yields. This European distrust of science affects R&D investments and may have harmful effects elsewhere. In Africa, European donors and nongovernment organizations (NGOs) unnecessarily delay the introduction of disease-resistant GM plants, such as the cassava needed to counteract the growing famine caused by brown streak virus.‡

A change in European attitudes will not arise quickly. Nevertheless, this year’s negotiations for the renewal of the EU Common Agricultural Policy for 2014–2020 may provide an opportunity, if the revision of subsidies is coupled with support for innovations, including GMOs that promote sustainable agriculture. Only political courage, as shown last year by the British government’s request for the EU to make it easier to grow GMOs, can break the ideological stalemate between NGOs, producers, consumers, and scientists.

– Louise O. Fresco

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*European Food Safety Authority, *EFSA J.* **10**, 2986 (2012). †Swiss National Research Program, *Benefits and Risks of the Deliberate Release of Genetically Modified Plants* (2012), www.nfp59.ch/e_index.cfm; The Royal Society, *Genetically Modified Plants for Food Use and Human Health—An Update* (2002), http://royalsociety.org/uploadedFiles/Royal_Society_Content/policy/publications/2002/9960.pdf; A. C. Franke *et al.*, *Sustainability of Current GM Crop Cultivation* (2012), <http://edepot.wur.nl/166665>. ‡H. Vanderschuren *et al.*, *PLoS ONE* **7**, e45277 (2012).



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