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Ghost of 'Frankenfood' Haunts Europe

By PAUL VOOSSEN of [Greenwire](#)

Second in a five-part series about genetically modified crops. [Click here](#) for the first part.

Europe could have been the world leader in genetically modified (GM) crops.

The research was there in the 1980s, when Belgian scientists pioneered the introduction of foreign genes in plants. So much was still to be discovered, said Marc Van Montagu, an emeritus professor at Ghent University who is one of the architects of modern plant biotechnology.

"Belgium was the place," said Van Montagu, who received the prestigious Japan Prize, which honors science and technology, in 1998 for his biotech work. "There were 50 different field trials."

Then came the fear, the cries of "Frankenfood" and the public backlash against the European Union's approval of its first biotech crop, a pesticide-freighted corn known as "Bt maize," in 1998. Fresh from scares about mad cow disease, the public was in no mood to tackle more food safety issues, true or not. No GM crop has been approved for growing since.

Scientists failed the public utterly back in those days, Van Montagu contends. Convinced that opposition to the crops lacked merit, they ceded the debate to environmental groups. The science became politicized and, to this day, a majority of Europeans remain opposed to GM crops.

"Now it's a real question," Van Montagu said. "How to rebuild it?"

One way to start, some say, is to restore the integrity of science.

Just as other scientific issues, such as climate change and evolution, faced politicization in the United States, some European countries have politicized scientific evaluations of GM crop safety. Trying to ban the politically unpopular crops, the countries have invoked a science-based protection clause using what some scientists, policymakers and businesses say is flimsy evidence.

Six countries -- Austria, France, Greece, Hungary, Germany and Luxembourg -- have banned GM crops by deploying a clause meant to protect environmental and human safety. But when the evidence they presented for the ban is scrutinized, it does not hold up, said Jaap Satter, a senior policy adviser at the Dutch Agriculture Ministry.

"You cannot say anymore that there is a scientific reason to be against genetic modification," Satter said.

In Germany, the government banned Bt maize earlier this year, partially as a concession to the now just-passed elections. But scientific publications used to justify the ban are not sound enough to say that the crops present a health risk, said Gerhard Rühl, a German crop scientist. The exposure levels are all off, not reflecting actual consumption, he said.

"If you just ate [plain] potatoes for eight weeks, you'd probably also get a stomachache," Rühl said.

European regulators have left these countries little recourse but to invoke the clause -- it was one of the few legal routes they had to keep Bt maize out, said Maria Lee, a law professor at University College London who has written extensively on European GM regulations.

"It's problematic, because everyone has to play that game," Lee said. "And you can see why they're playing that game, because they don't think they'll win otherwise."

Countries need to be honest, and then real debate can begin, Satter said.

"Come out and say that it's not science, but we have socioeconomic reasons," Satter said. "Why can't that be a reason?"

Neighbors divided

Above all, the European Union is an economic pact, known for its striving toward a single market, with industries like telecommunications, transportation and even electricity operating fluidly from Belfast to Bucharest. But when it comes to crop coexistence, as E.U. officials have discovered, all agriculture is local.

Few issues tear at the seams of the European project, as it is sometimes loftily known, more than GM crops. Authority is fractious, split between European officials in Brussels and national governments. Neighbors are divided: Poland, with its vast collection of tiny farms, fiercely opposes the crops, while the neighboring Czech Republic is one of the few growers of Bt maize.

The divisions, most agree, can be chalked up to cultural values or farming practices: The specialty olive groves of eastern Crete are unlikely to have the same needs as Britain's large-scale grain farms. Even internally, some nations remain sharply split on the issue.

For example, the two dominant regions of Belgium, Flemish-speaking Flanders and French-speaking Wallonia, have each gone about devising their own policies for the introduction of GM crops. While Flanders, with its clutch of biotech companies, is friendly to the idea, Wallonia could not be more opposed, according to Cindy Boonen, a policy adviser at the Flemish Agriculture Department.

"Wallonia is very negative on [GM crops] in general," said Boonen, who is Flemish but lives in Wallonia, which is a forested, rural region. "They put very stringent measures to avoid any contamination."

The differing rules being implemented by Flanders and Wallonia for GM crops represent a compromise struck by the European Commission, the European Union's executive arm. Facing uproar from E.U. countries that oppose its ability to approve GM crops for general use, the bloc has devised a set of loose policies that it says will allow organic, GM-free and GM crops to coexist.

These coexistence policies set rules for how much distance is required to isolate GM crops (and their pollen), notification systems and how the economic liability of GM contamination of organic or GM-free crops is handled.

However, since these standards are sliding scales -- the required buffer for maize could be 25 meters (in Holland) to 300 meters or more (in Wallonia) -- the rules in effect allow regions to make the use of GM crops so easy or burdensome that, even if approved, farmers would not choose to use them.

"You can say, more or less, coexistence is sometimes used and abused," Boonen said.

The chemical companies that make GM crops approve of the European Union's coexistence policies in general -- anything to get their products on the market -- but are wary that the policies will be used to reject

their crops, according to Hilde Willekens, a governmental affairs director for the seed firm Syngenta AG.

"The whole [coexistence] discussion is about segregation and separation," Willekens said. "It's not about tolerance at all anymore. It's more the black-and-white discussion that you can have with sentimental people in many areas."

Many of the companies have a special ire for the European Commission, which has not moved forward any GM crop for approval in a decade. It has acted in other respects -- implementing mandatory labeling for GM products and, under heavy pressure from the United States, allowing GM imports like soy -- but the *de facto* moratorium on cultivation has continued, Willekens said.

There is just no political will there to clear new GM crops, added Nathalie Moll, director of agricultural biotechnology at EuropaBio, which represents the European biotech industry.

"We have a birthday card that we made this year because we have been waiting 10 years" for new crop approvals, Moll said.

The European Commission is currently nearing the end of its five-year term, with E.U. nations jockeying as to who will lead influential divisions like agriculture and environment. Some firms lay the delay in growing approvals at the feet of Stavros Dimas, the European Union's environment commissioner, who likely does not want to return to his native Greece as the man who opened Europe to GM crops.

However, with a majority of the European population opposed to GM crops -- 58 percent, according to the most recent survey -- crop authorizations are unlikely to come soon, even with a new commission.

Indeed, the problem with coexistence that many states have is more about its single underlying assumption: that GM crops should be planted at all.

"The difficulty is [that coexistence] is about socioeconomic and consumer choice, but the assumption is that's in a context where we have GM crops," Lee said. "The assumption is there will be widespread cultivation of GM crops."

Going Dutch

The Netherlands, Europe's most famously pragmatic nation, thinks it has the answer to the GM question -- one that will both restore scientific integrity and allow nations wary of the crops to resist their planting.

Regulators have been too narrow in what they weigh when approving the crops, the Dutch say. Space must be hollowed out of the European Union's single market principles to allow variations based on social and economic considerations, and consideration given to granting the bloc's 27 nations the right to a "second opinion" on crops.

Earlier this month, the Netherlands Commission on Genetic Modification presented a report outlining the country's broadened view of criteria. The report included the usual suspects -- human safety and biodiversity -- but also highlighted areas like "cultural heritage" and economics.

The Dutch, who will host a conference touting these principles next month, hope that by acknowledging and factoring in social and economic concerns, combined with coexistence policies, farmers who seek to use GM crops can move forward.

"We are in a process of finding a way we can give [GM crops] their proper place," said the Agriculture Ministry's Satter.

The irony of the Dutch initiative, however, is that such considerations are already a part of the E.U. law on biotech crops, a revised version of which was passed earlier this decade. The law makes reference that "other legitimate factors," like social or ethical concerns, should be considered in regulating GM products, Lee said.

"At the rhetorical level, they accept that it's not just about risk, it's not just about science," Lee said. But despite this law, the European Commission has continued to only focus on findings from the European Food Safety Authority for guidance, she said.

"When it comes to it, the legal structures are such that it's extraordinarily difficult to not explain the issue on risk or science," Lee said.

The regulatory use of societal concerns has long been sought by environmental groups opposed to the current generation of GM crops, which are largely herbicide-resistant or designed to produce pesticide.

"In principle, [the Dutch proposal] is absolutely a very good thing that we've called for quite a long time," said Marco Contiero, the European GM policy director for the environmental group Greenpeace.

"The problem we see in the Dutch initiative is a problem of substance, not a problem of form," Contiero added.

The Dutch have placed too much emphasis on the benefits of GM crops -- reduced pesticide and herbicide use, at least in the short term, being paramount -- without talking enough about the drawbacks, Contiero said. Those drawbacks, he said, could include increased use of severe chemicals as weeds develop further herbicide resistance or economic damage from GM pollen contamination.

Van Montagu, the Belgian scientist, has a special store of wrath for Greenpeace, which was a strident opponent to GM crops in the 1990s, mentioning "Frankenfood" at every turn. The advocacy group is trying to move past that image.

"We haven't used the word 'Frankenfood' in many years," Contiero said. But it is "still attached to us. We're trying with all our means to have a broader debate and a more serious debate."

The debate could finally come next year, as the rest of the European Union's 27 member nations present their proposals on the socioeconomic effects of GM crops to the new commission, which will then contemplate revised policies based on the proposals. Then we will see if the debate will have a tangible effect, Contiero said.

All Greenpeace wants, he added, is "to see the current existing legislative framework correctly applied."

Scientists like Van Montagu and the biotech industry may criticize how political the GM issue has become in Europe, but it is the job of politicians to make decisions on what are societal goods, Contiero said.

"When we have a science that doesn't have definite answers," he said, "when it is very young and very complex ... we can't just leave decisions to be made by parts of the scientific community."

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