

SPECIAL REPORT

Showdown for Europe

The European Union is set to make a landmark decision on genetically modified crops, as **Alison Abbott** and **Quirin Schiermeier** report.

A mammoth bureaucratic battle is looming between senior European Commission officials and national governments that could affect the long-term prospects for the cultivation of genetically modified crops on the continent.

Late last month, the European Commission's environment commissioner Stavros Dimas said that he plans to reject applications from Syngenta and Pioneer Hi-Bred International for approval to grow two transgenic strains of maize (corn), on the grounds that the crops could adversely affect the environment.

Dimas's position has been welcomed by environmental groups and attacked by industry lobbyists. And researchers point out that it ignores the recommendation Dimas received from his own scientific advisers.

But the environment commissioner's move is far from the end of the matter. Behind-the-scenes battles are under way inside the commission, where a powerful faction wants Europe to accept genetically modified crops. That would avoid further conflict with the United States, which has complained to the World Trade Organization (WTO) that

European reluctance to approve the crops amounts to protectionism.

In particular, the commissioners who are respectively responsible for trade, industry and agriculture — Peter Mandelson, Günter Verheugen and Mariann Fischer Boel — are trying to overturn Dimas's decision.

Observers on both sides of the debate say that, when the dust settles, it is quite possible the European Commission will give the green light to Syngenta's Bt11 maize and Pioneer's 1507 maize, which are genetically engineered to be resistant to both pests and herbicides.

At present, only one transgenic crop can be cultivated in Europe: Monsanto's MON810 insect-resistant maize, which now comprises nearly 2% of maize grown in Europe, most of it in Spain and France (see 'Transgenic maize'). MON810 was approved before 2001, when the European Union (EU) agreed a directive setting out complex rules for the future approval of such crops.

Getting the directive agreed in the first place took several years, and came with the proviso that there would be no approvals for import or cultivation until water-tight mechanisms for

Genetically modified maize makes up almost 2% of the crop grown in Europe.

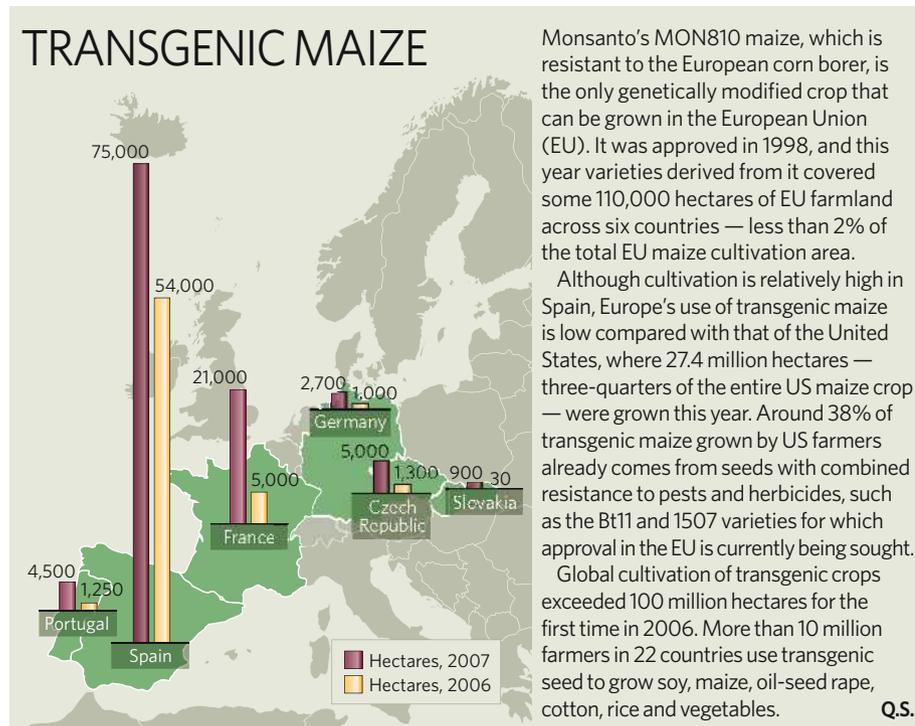
tracing the transgene, labelling transgenic seeds and governing the safe 'coexistence' of conventional and transgenic plants were in place. That took until 2004. Even as they voted for the directive, some countries — Austria, Luxembourg, Greece, France, Denmark and Italy — made it clear that they were still reluctant to allow the crops in, arguing that the directive should have explicitly taken into account public opinion, which they say is firmly opposed to their cultivation.

Under the directive, each candidate strain is assessed for its impact on animal and human health and the environment before a decision is made on whether to approve its cultivation.

If a company wants to grow or market a crop in Europe (as food, feed or a derived product), it must apply through a member state. That country can either perform a scientific risk assessment itself for the commission or pass the application to the European Food Safety Authority (EFSA) in Parma, Italy, which organizes an assessment through a panel of 21 outside scientists. The EFSA delivers a scientific opinion to the commission's health directorate within six months. Five applications for the import of transgenic maize and oil-seed rape have been approved by this route since 2004.

But if the application includes cultivation of the crop, a more extensive environmental risk analysis must be carried out, and this is incorporated into the final scientific opinion delivered to the commission's directorate for the environment.

The commission should make a decision within three months. And this is the point where Bt11 and 1507 maize have got stuck.





C. KINAPTON/SPL

EFSA scientific reports on both varieties concluded that neither would have “an adverse effect on human and animal health or the environment” in the contexts proposed. Both reports were ready by April 2005, and were updated in November 2006.

But it wasn't until last month that a draft decision was circulated inside the European Commission saying that neither crop should be approved for cultivation. It refers to 11 papers published since the EFSA's update that it says cast doubt on the crops' long-term environmental safety.

The publications include studies claiming that insecticidal molecules from the plant may persist in water or sediments draining from a cultivated field, and may disturb downstream ecosystems.

The environment commissioner did not ask the EFSA panel for an opinion on these additional papers. Garlich von Essen, secretary-general of the European Seed Association, says that this shows “disdain” for both the EFSA and its advisory system.

Marc Van Montagu, a plant geneticist and president of the European Federation of Biotechnology, says the commission has cherry-picked publications claiming possible dangers, and he questions the quality of the selected papers. Environment-commission officials respond that their risk-management process is supposed to reach beyond the EFSA's findings.

Once the commission's decision has been finalized, it will go to the Standing Committee on the Food Chain and Animal Health, which

comprises scientists and officials from member states.

The standing committee will vote on each proposal using a system — called the qualified majority vote — that reflects the size and population of each member state. If the voting is at odds with the commission's position, the dossiers are passed to the EU Environment Council of environment ministers of each member state, who must also vote on each case. But with populous nations such as Spain and the United Kingdom supporting approval, and Poland, Hungary and the Czech Republic joining some of the original dissenters, neither side is likely to obtain the two-thirds majority needed to decide the issue. If that happens, under EU rules the final decision will be thrown back to the commission itself.

On 26 November, the German agriculture minister Horst Seehofer proposed that this tortuous approval process should be abandoned and a regulatory authority be created with full responsibility for analysing the science and drawing conclusions.

“The reservations of the public are not being sufficiently considered,” he said. “Until such an authority is created, there should be a moratorium on granting new approvals.”

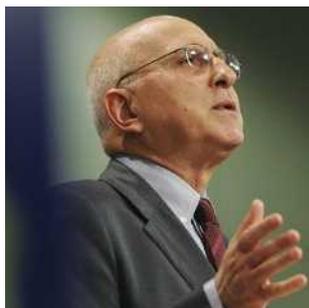
Such reservations are exemplified by the continued resistance of some nations to cultivating MON810 maize, which is grown in only six EU countries. Austria actually banned the import of the maize in 1997, and has since resisted strong pressure to lift the ban, which is illegal under the 2001 directive.

In October, France's president Nicolas Sarkozy announced a suspension of the cultivation of transgenic maize until new national rules have been worked out. Sarkozy, who has recently laid out plans for far-reaching

environmental improvements in France, seems willing to risk a dispute with the commission (and the WTO) over the issue.

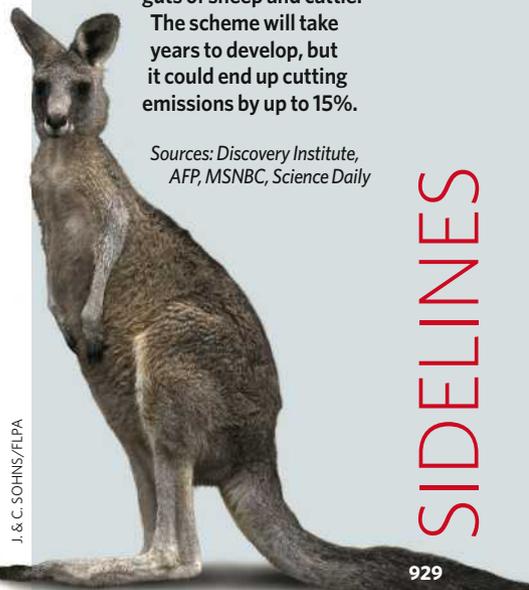
Meanwhile, the WTO is putting increasing pressure on the EU, giving it until 11 January to end national moratoriums. The commission says it expects to make its decision on the two maize varieties in January as well, although an exact date has not been set. “This is a real test case,” says Adrian Bebb, a Brussels-based campaigner for Friends of the Earth. “But we fear that Dimas's chances of winning are slim.”

See Editorial, page 921.



Environment commissioner Stavros Dimas plans to reject applications to cultivate two transgenic crops.

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J. & C. SOHNS/FLPA

ON THE RECORD

“I would have thought an intelligent person would have at least kept quiet until after tenure. Then you could advocate blowing up the Moon.”

Bruce Harmon, a physicist at Iowa State University, muses in a recently released e-mail about astronomer Guillermo Gonzalez, who promoted intelligent design while seeking tenure. Gonzalez was turned down in May and is now appealing against the decision on the grounds of discrimination.

SCORECARD

Coach potatoes
A year-long study finds that automated phone calls encouraging sedentary adults to exercise actually work.

Moon shots
Accusations that China faked photos from its Chang'e-1 Moon probe have proved to be false, but the investigation revealed flaws in the way the composite image was assembled, leaving the nation's space agency red-faced.

ZOO NEWS

Kangaroo flatulence
Kangaroos' farts are environmentally friendly. The marsupials' stomachs are home to bacteria that don't produce methane — a major greenhouse gas. This week Australian researchers unveiled a plan to transfer the green bugs into the guts of sheep and cattle. The scheme will take years to develop, but it could end up cutting emissions by up to 15%.

Sources: Discovery Institute, AFP, MSNBC, Science Daily