EU decision process hinders use of genetically modified trees

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Just like other crops, trees can also be genetically modified in order to introduce new, useful characteristics. Although such trees offer many socio-economic and environmental benefits, complex and unpredictable EU procedures are hindering their introduction to the market. This is the conclusion reached by researchers in a joint text drawn up as part of a European Cooperation in Science and Technology (COST) project about genetically modified trees. The researchers state that Europe is lagging behind in worldwide GM developments and call for a more scientifically substantiated decision process. René Custers, Regulatory & Responsible Research Manager at VIB and Prof. Wout Boerjan (VIB/UGent) contributed to the text.

Genetically modified trees can be used as an efficient raw material for renewable products or bioenergy, which could in turn promote the transition to a sustainable, CO2-neutral economy. However, Europe imposes a comprehensive risk assessment and authorization procedure on the development and use of genetically modified crops.

René Custers, Regulatory & Responsible Research Manager (VIB): "The European Food Safety Authority (EFSA) has drawn up written guidelines on this. Many of the criteria also apply to GM trees. These mainly relate to environmental issues, such as the question of whether modified trees could spread into the natural environment and what the possible consequences of this might be for other crops, people or animals."

Complex and expensive risk analyses

Trees have a huge number of interactions with their environment, so an enormous amount of data needs to be collected to draw up a risk analysis.

Trees also have a long growth cycle, so study of the long-term consequences through field tests takes a very long time.

Prof. Wout Boerjan (VIB/UGent): "It's also difficult to predict exactly how detailed the risk analyses need to be. This all means that the risk-analysis process for GM trees in Europe demands a huge amount of time and money. More clarity on the data required and the use of predictive models is needed."

Politicized decision process

The European decision process is not only complex, but also unpredictable. After the risk analysis and a scientific conclusion from EFSA, it is still by no means certain that a European approval will follow. The fact that individual EU Member States can restrict or prohibit the cultivation of GMOs on their territory for reasons having nothing to do with substantiated risks further increases this uncertainty.

Prof. Wout Boerjan (VIB/UGent): "This is in sharp contrast to the introduction of conventionally cultivated, non-European trees and other cultivated crops. Although these also interact differently with their environment, a prior risk analysis is not required for this."

Europe lagging behind

Genetically modified poplars are already being planted in China and it

looks like the green light will also be given in North and South America.

René Custers: "Just like with other GM crops, the commercial developments in the field of GM trees are taking place outside Europe. The question is whether that can be scientifically substantiated. After all, more than twenty years of experiments and commercial application have shown that genetic modification poses no inherent risks. There is no reason to assume trees would be different. Europe should learn from the experience we have built up with GM technology and base its decisions more on scientific facts. Today the decision process is politicized and dogmatic and the environment itself could end up being the biggest victim of this."

More information: René Custers et al, EU Regulations Impede Market Introduction of GM Forest Trees, *Trends in Plant Science* (2016). DOI: 10.1016/j.tplants.2016.01.015

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