

An impossible coexistence: Transgenic and organic agriculture

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The study was carried out by researcher Rosa Binimelis of the UAB Institute of Environmental Science and Technology. Binimelis is working on the European project ALARM (Assessing Large Scale Risks for Biodiversity with Tested Methods) and analyses the application of the concept of coexistence between Genetically Modified Organisms (GMOs) and conventional organic agriculture in the European Union. The results of the research have been published in *Journal of Agricultural and Environmental Ethics*.

Since GM cultivation was introduced in Spain in 1998 it has been surrounded by controversy, and in the past few years has evolved into a debate over the concept of coexistence between transgenic and conventional organic agriculture. This concept was introduced in 2002 by the European Commission with two objectives: to deal with the emerging concerns derived from the admixture of different cultivations, since organic farmers are committed to not using GMOs, and to make it easier to lift the existing "de facto" moratorium - which is not officially recognised - within Europe so as to introduce new transgenic cultivations. Thus the concept of coexistence, after applying technical measures, should make it possible to operate freely in the market while reducing the political conflicts linked to GMOs. The European Commission is planning this year to evaluate how the policy of coexistence has been implemented in the past ten years.

Before GMOs were introduced previous studies in this area were carried out using modelling or experimental cases, due to the lack of commercial

fields in most European countries. Researcher Rosa Binimelis however analyses the situation in Catalonia and Aragon, where the commercial cultivation of transgenic crops began in 1998. This research is therefore unique and especially relevant to the European Commission's assessment scheduled for this year and involved qualitative techniques by means of 51 in-depth interviews and participant observation (twenty-two interviews with farmers while the remaining were held with key political figures, including government representatives, scientists, academics, as well as NGO members and other organisations and platforms).

The situation of both types of cultivations in 2007 was the following: the surface used to plant transgenic maize in Catalonia and Aragon was respectively 23,000 ha and 35,900 ha, which represent 55% and 42% of the total surface used to cultivate this crop. The variety of maize grown is the Bt corn, which is designed to ward off the European corn borer and is used mainly for feed production. The maize production process is integrated in cereal cooperatives, which cover the entire production chain from the sale of seeds and inputs to commercialisation, including technical advice. This system involves numerous infrastructures, which makes it difficult and expensive to segregate GM from organic and conventional production. There are no specific silos for organic maize while only a minority of cooperatives in the region restricts the use of GMOs. In parallel, organic agriculture is in expansion in Spain, increasing in the number of producers and hectares. However, this trend is reverted for the case of maize.

The author's analysis reveals a social confrontation between proponents and opponents of GM technology regarding the consequences it can have and the measures to be taken in regulating and taking responsibility for any cases of admixture. Confrontation also exists when trying to define technical measures that would guarantee this coexistence since there are many doubts about its objectives. Finally, the study analyses the difficulties organic farmers would face in order to claim compensations

if admixture took place, due to technical uncertainties in measuring the level of "contamination" or its origin, but also because of possible social confrontations and doubts about how the GM technology was introduced. In addition, many farmers who could sue for damages prefer not to in order to avoid any local confrontations in small villages.

As a result, the area devoted to organic maize was reduced by 75% in Aragon from 2004 (year in which the first analyses were carried out) to 2007 and by 5% in Catalonia between 2002 and 2005. The percentage in Catalonia is lower because the only available data come from the first years of the analyses, when the cultivation of GM maize was not as widespread as it is today. The trend was confirmed by organic certification bodies for the following years. This will lead to even more difficulties in obtaining local organically grown maize.

Given this context, the research concludes that both the concept of coexistence and different implementation proposals have generated new problems instead of solving existing conflicts. By making farming models and the interpretation of their impacts an individual choice, the only issues taken into account in the system of compensation are individualised and economically valuable aspects. The results until now point to the promotion of genetically modified farming over any other alternative.

Source: Universitat Autònoma de Barcelona

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