

Background of a decision: Moratorium on genetically modified crops in Hungary

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Introduction

Genetic engineering took its first steps in the 1980s, and the first exotic bacterium was followed by modified version of our everyday crops very soon. Many – scientists and lay people – acclaim this technology as a revolution in plant (and animal-) breeding, while others are afraid of its consequences (concerns seem to address ecologic, economic and health issues) or stand against it on a moral or ethical base.

The first generation of GM plants offers advantages to farmers, like cost effective and environmentally clean production, according to the communication of biotech companies. On the other hand, sceptics say that real motivation behind spreading of GM technology is merely to gain return on the invested assets, by all means necessary, resulting in total dependence of farmers and even governments. The heated quarrel on market issues of GM crops led to a battle of trade between the United States and the European Union, which peaked in a WTO dispute. In the meaning of a preliminary decision in this case, the moratorium applied by the European Commission on biotech products was not supported by satisfactory scientific data. Meanwhile, several types of GM crops (especially corn) have been granted marketing rights by the Commission, which was accepted by disagreement of many member countries. So called GMO-free regions and settlements proclaimed resistance to GM food.

The Decision (Moratorium on GM crops)

Joining a number of other European countries, Hungary announced a moratorium on national level from 20th January 2005 in respect of GM crops. On 31st January 2006 this decision had to be re-approved by the Environmental Committee of the Parliament, on the base of new scientific data. Hungarian researchers have found that bt. corn conveys 3-4000 times more toxin to the cultivated area than normal agrotechnology does. Furthermore, they found that decomposition of this toxin takes longer time (sometimes as long as 300 days), when getting under the ground surface. All parts of the GM plant contain toxin, including those of being in the soil, or ploughed into it, while in conventional agrotechnology, bt. toxin was sprayed on the plants. This unusual persistence raises some questions regarding possible side effects primarily on soil bacteria flora or invertebrates.

Before the decision, media brought many arguments pro and contra into our homes. After a while, it seemed to be doubtful that the scientific evident really played a crucial role in shaping the background of the decision, taken by the Committee. We suspected that it was serving only as a reference, and the real intentions came from a robust social resistance.

Our hypotheses:

I. In fact, scientific data played lesser importance among the reasons, which the decision have been based on, in spite of it's central role in official explanations. In other words it served only as an excuse for the decision.

II. Majority of the society is against production of GM crops, therefore the outcome of the decision was presumable.

Our goal is to draw some kind of conclusion about the validity of Hypothesis I, on the base of having Hypothesis II. justified. If Hypothesis I. is testified, we would have a clearer view of Hungary's stance and could predict future decisions of law makers – *ceteris paribus*.

Methods

In the first phase, we have conducted a content analysis based on a media study to identify key players of the national debate. For our media study, we have collected all reachable online communications in a year's period in advance of the second decision of the moratorium (focusing on the sites of leading „hardcopy” newspapers and the most significant non-thematic news sites). After reviewing all communications, we counted frequencies of certain communication sources, and identified the most common communication panels, using content analysis. In the next step, we defined seven „opinion groups” based on the communication panels they used to build up their arguments (Table 1). Then we described each group on their relations to different key questions. In the final phase of the survey we contacted at least one (but preferably more) of the dominant actors of each group and – through interviews – asked them to comment, complete or correct the characterization of their own groups. Short summaries are presented hereby under the name of each group.

1. Biotech industry

In their understanding, there is a need for GM crops in Hungary, which could significantly ease the life of farmers.

Direct and indirect advantages are both tangible:

Direct advantage is that farmers could achieve higher yields and cost reduction
 Indirect advantage is that the whole society could benefit from the environmental friendly production technologies and reduced chemical residues in food products.
 Another interviewee, after personal and organisational anonymity was granted, revealed a personal opinion. This person (highly ranked corporate employee) doubts that there would be sufficient demand for Hungarian GM crops.

2. Environmental organisations

Our interviewees have strongly opposed the introduction of GM crops. They refer to biotech companies as exclusive beneficiaries.

In spite of our anticipation, they are concerned more about the possible economic consequences than ecologic side effects. They emphasize the presumptive disadvantage for Hungarian seed and crop production, as output markets prefer products of Hungarian origin because of their GM free attribution. Concerning consumers, they argue that no benefit can be delivered for them via present GM technology.

3. Agribusiness sector

The main argument of representatives of the agribusiness sector is that GM crops are practically useless under present Hungarian conditions, as there is no added value beyond normal hybrids. According their account, the modified features of GM types provide protection against insects that pose insignificant threat in Hungarian plantations. They would accept more likely a type, which would resist more malignant pests. They are worried about upcoming coexistence directions, that they are perceive as non sufficient, and such this, as serious danger for export opportunities.

4. Academic Institutions I.

The first branch of academic institutions presume that introduction of GM crops would be beneficial mostly for biotech companies.

They refer planned coexistence directions as impossible to keep, and even if kept, impossible to work out in nature the way it is described.

They suppose that export of Hungarian crops would suffer damages after introduction of GM technology.

There is no agreement on certain topics within the opinion group. Some representatives of these institutions consider possible ecologic side effects less harmful and irreversible than others.

5. Academic Institutions II.

These institutions present spectacularly contrasting stances to Academic institutions I. They emphasize that it would be a great chance to Hungary to join GM supporter countries as soon as possible to gain advantage over other European countries. They argue that behaving this way would raise the country again among the greatest seed exporters.

They refer GM technology as cutting edge in R&D, and consider resistance as „economic suicide”, because it will be ultimately spread through Europe as well, as any other places in the World.

They believe that advantages of the second and third generations of GM plants will convince those who still resist.

Note that all of these institutions have already signed contracts on research cooperation with Monsanto.

Biotech industry

Monsanto Trading Ltd. 11 12,94%
12,94%

Institutes of authority

Ministry of Agriculture and Rural Development 10 11,76%
 Ministry for Environment and Water 6 7,06%
 Hungarian Office for Food Safety 6 7,06%
 National Institution for Food Safety and Nutritional Sciences 1 1,18%
27,06%

Environmental organisations

Greenpeace Hungary 9 10,59%
 Oltóárs Foundation – environmental group 3 3,53%
 Élklánc (environmental political formation) 3 3,53%
 International environmental organisations 5 5,88%
23,53%

Academic Institutions I.

Institution for Plant Protection of the Hungarian Academy of Sciences 4 4,71%
 Association of Hungarian Plant Breeders 1 1,18%
5,88%

Academic Institutions II.

Biological Research Center of the Hungarian Academy of Sciences 3 3,53%
 Agricultural Research Institute of the Hungarian Academy of Sciences 2 2,35%
 Agricultural Biotechnology Center 2 2,35%
8,24%

Agribusiness sector

Organic farmers and their associations 2 2,35%
 Association of Hungarian Farmer Groups and Organizations 1 1,18%
 Hungarian Association of Crop Processors, Feed Manufacturers and Traders 1 1,18%
 Association and Chamber of Seed Producers 1 1,18%
5,88%

Consumer representatives and consumer studies

Authority for Consumer Protection 1 1,18%
 Hungarian Association for Consumer Protection (NGO) 1 1,18%
2,35%

The seven groups cover 85,88% of all media communications

Table 1. Opinion groups (based on similar communication panel usage) and their relative media coverage weight

6. Institutions of authority

Official institutions handled the question with considerable distance keeping. We could find definite opinions very rarely, if at all. Nonetheless comments revealed certain concerns from perspective of authorities:

- Economic concerns (coexistence, possible reduction of export potential)
- Ecologic concerns (gene leaking, biodiversity)
- Concerns about controllability (keeping limit values, detectability, consumer choices)

7. Consumer representatives and consumer studies

Notion of „GM crops” is well known amongst Hungarian consumers (85% has heard it before). Their attitudes is well preferably by the consumer survey reports of the Central Food Research Institute and Corvinus University of Budapest*.

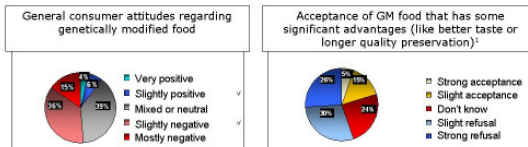


Figure 1. Consumer attitudes regarding genetically modified food ²

Conclusions

The results of our survey suggest that a significantly consistent and strong opposition can be sensed in the background of the decision on the moratorium. 5 out of the 7 opinion groups expected the Committee to maintain the initial standpoint of Hungary. Furthermore, we experienced during our media survey and making of the interviews that there were no remarks at all on that specific scientific data that served to justify the moratorium (except Academic institutions I.). **Therefore, we consider our second hypothesis being confirmed, and thus, we are able to draw our conclusions: we suppose – based on our results – that Hungary will maintain the moratorium on biotech products as long as legally possible (ceteris paribus).**

*So called „second generation GM plants”, which would deliver benefits to the consumer too, not just the farmer
 *Bárány, D., Kasza, Gy. (2003): Biotechnológia: A magyar fogyasztók és szakemberek élelmiszer-biztonsági kódázásbeszélése. Business Class Publishing, Budapest

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