

GMO issues - Situation in Croatia

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Summary

Genetically modified organisms have opened a complex debate between scientific and public community in Croatia. On one side, Croatian Green Action in coordination with individual Croatian scientists has managed to recruit more than 70% of Croatian community to condemn commercial use of the food based on GMO. As a response to their nonprofessional way of presenting some aspects of the recombinant DNA technology, Croatian Association of Genetic Engineers, composed completely of specialists in genetic engineering, was founded. As a contribution that could relax boiled public debate on GMO, Croatian Association of Genetic Engineers strongly believes that case-by-case GMO analysis and evaluation would suit any involved party in the process of regulation of some public aspects of recombinant DNA technology products in Croatia.

Introduction

Genetically modified organisms (GMO) used for food production have opened complex and unexpected debate between scientific and public community. Although our food is safer now than it has ever been in human history, critics of modern biotechnology express the opinion that now when GMO have penetrated the human food chain, both health and ecological disasters are unavoidable and unpredictable. As a result, general public being emotionally alarmed has forced scientific community to carefully and non-technically explain its action and goals. In Croatia this process has developed into dramatic public round table fights between "green" activists and scientists using recombinant DNA technology.

Croatian GMO Public Opinion Makers and Users

Croatian public opinion on GMO subject has been tested several times and the results were published in influential daily newspapers (Večernji list, 20.01.2002 and 11.02.2002). Last opinion survey has shown that more than 70% of Croatian population is rejecting the idea of commercial use of GMO. One of the main reasons for such a high level of GMO non-supporters is the long lasting frightening policy of Croatian Green Action (CGA). That policy has been developed in a random or planned coordination of the CGA and individual Croatian scientists not specialized in genetic engineering who were first to present the idea of banning GMO in Croatia. That coalition between Croatian "green" movement and a part of the Croatian scientific community has delivered a situation where average consumer believes that there is a scientific reason for rejecting the recombinant DNA technology. However, none of the surveys has ever tested the minimal level of knowledge on GMO of the asked individuals.

Important factor that strongly influenced Croatian public opinion on GMO is lack of realistic information on possibilities, goals and achievements of the recombinant DNA technology. Also, the fear of health problems and new diseases connected with well known Western European food affairs and fear of world wide spread globalization processes helped the CGA and individual scientists, presenting themselves as saviors, to recruit the Croatian community to *a priori* reject GMO.

Croatian legislation – Proposition for Temporary Law on GMO

Croatia is one of the countries that signed the Cartagena Protocol on Biosafety and Croatian Parliament ratified the Convention on the Biological Diversity. This is the base on which Green Action has been accusing Croatian Government for not doing anything on GMO subject. However, on 27 November 1998 Croatian Parliament accepted a Conclusion that forced Government to form a Bioethical Committee and called on delivering a Law on GMO. In April 1999 Bioethical Committee was formed within the Ministry of Agriculture and Forestry. In the same year Croatian Parliament accepted a Strategic Plan for protection and preservation of Croatian biological and environmental diversity. This Act included obligation for delivering a final Law on GMO. In 2001 Croatian Government accepted a Conclusion that instructed the Ministry of Agriculture and Forestry to prepare a Law on GMO. Working Body was formed and the Government instructed the Ministry of Environment and Infrastructure to prepare a Law on Environment Protection. This Law was to include acts of the Protocol of Biological Safety. That was the problem! Namely, the proposed Law on Environment Protection had not regulated issues on export, labeling, handling and transport of GMO. A solution was proposed: Those issues are to be regulated separately within a Law on Food. Government instructed the Ministry of Agriculture and Forestry and the Ministry of Health to deliver a Law on Food. In the meantime, a temporary solution was accepted! Ministry of Health, Ministry of Agriculture and Forestry, Ministry of Environment and Infrastructure and Ministry of Science and Technology, having in mind possible risks connected with GMO, suggested delivering a Temporary Law on GMO.

Scientists Strike Back - Croatian Association of Genetic Engineers

Croatian Association of Genetic Engineers was founded as a direct response to the growing public hostility to GMO based on nonprofessional way of presenting some aspects of the recombinant DNA technology. The Association is independent, non-profitable, non-political and non-governmental organization within which work is on voluntary base. Its main characteristic is that it is composed completely of scientists and professionals using recombinant DNA technology in their daily routine. Entrance into the Association is restricted only to candidates who have practical experience in genetic engineering. We believe it is very important that people who are making decisions or giving public opinion on any GMO problem should be scientists or professionals with practical experience in this technology.

Association hosts 35 members among whom two academicians of the Croatian Academy of Sciences and Arts, five university full professors, one associate professor, three assistant professors, nine doctors, six masters of science and nine bachelors. Among them the Association is also hosting Professor Miroslav Radman, Croatian scientist whose French group first broke the genetic barrier by crossing two species of bacteria differentiating in DNA sequence by more than 20% (*Nature* 342: 396-401). Scientific affiliation of other members is variable, but more than half of them are biologists. The rest are divided among different professions such as biotechnologists, agronomists, medical and veterinary doctors.

The Association has two main goals. First is professional and objective presentation of the recombinant DNA technology to the general public. With the second goal the Association would like to make its members available as a source for professional help (expertise) to whichever party that is involved in GMO law making process in Croatia. Mentioned goals are intended to be fulfilled by the usual activities of the Association. We believe that informing the general public about recombinant DNA technology achievements through newspapers, radio and TV, organizing public recombinant DNA technology meetings, lectures, seminars, round tables and courses, will help meet the needs of the first goal. Additional activities as cooperation with Croatian and international associations of similar kind or/and especially with nature protection and preservation associations mixed with scientific and professional articles publishing would enrich our activities to more satisfy the first goal. Hard work on the issues of the first goal will perhaps help the Association to achieve the second goal.

Recent activities of the Association could be summarized as follows: 8 interviews for daily newspapers or weekly influential Croatian political magazines, 6 TV talks in specialized

round tables and educational programs, 2 radio talks in contact programs, 2 round tables organized by the Croatian Government officials, 1 round table organized by the US Embassy in Zagreb and 1 online article on WWW pages frequently visited by youngsters.

Croatian Association of Genetic Engineers took under consideration the proposed Temporary Law on GMO and found it highly restrictive and unacceptable. Even though not forbidden, GMO research with the proposed Law would be made very difficult. The lack of professionally explained possible GMO risks was evident and the Law was sporadically not functional, not specific enough and inconsistent. For instance, the Law proposed prohibition of all GMO imports, their use in food, feed or field tests but without clearly explained reasons exempted pharmaceuticals even though produced with the same technology. So the Association's opinion was that banning all GMO without any exception is recombinant DNA technology banning rather than prohibiting risky products. On the other hand, the proposed Temporary Law was fully accepted by the CGA and individual Croatian scientists.

However, very recently the Croatian Government has rested on delivering a Temporary Law on GMO. The Government has decided to allow commercial use of GMO derived products in Croatia if properly labeled. Nevertheless, all imported commercial food GM products are to be rigorously analyzed and evaluated on health and environmental biosafety by a Committee appointed by the Government. Croatian Association of Genetic Engineers, hoping that the Government Committee will be composed exclusively of experts, welcomed this rational decision of the Croatian Government.

Croatian Association of Genetic Engineers' Conclusive Message

Croatian Association of Genetic Engineers realizes the need of final Law on GMO in Croatia and supports that. The Association strongly believes that case-by-case GMO analysis and evaluation would suit any involved party in the process of regulation of some public aspects of recombinant DNA technology products in Croatia. We call upon Croatian scientific and political community to fully support our ideas of controlled acceptance of new technologies and their products. Also, we call upon Croatian Green Action and individual Croatian scientists to educate Croatian public on the subject of GMO instead of irrationally frightening common people.

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