

Final report from the Laymen's Consensus Conference on Genetically Modified Food Products, November 2000.

A STEP TOWARDS MORE KNOWLEDGE

A follow-up of the report
"Fast Salmon and Technoburgers" from 1996

The follow-up conference on genetically modified food products
2000

The Norwegian Biotechnology Advisory Board
The Norwegian Board of Technology
The National Committees for Research Ethics

Introduction

The Panel has consisted of 15 persons between 22 and 77 years of age, 7 men and 8 women. When the Lay Panel were gathered for the first time (1996), it was a premise that the members of the Panel should not have close connection to occupations or organisations with a pronounced policy in the field. This situation has now been altered. Because of previous participation, many of the members of the Panel have continued to engage themselves in the matter. Some have also chosen studies that bring them into closer contact with the topic. When the organisers in this case have chosen to arrange a short version of a (Laypeople-) Consensus Conference, it is natural that such a follow-up builds on knowledge about the topic that the members have developed earlier.

This time the Lay Panel had no preparatory meetings, but the material has been sent to them and has been gone through individually. Based on this the participants of the Panel formulated questions individually. The experts tried to answer these questions in their lectures and the Lay Panel followed up with additional questions. This has formed the basis for the recommendations of the Lay Panel in this report. Differing from the last conference, the laymen got clear aims and objectives for the conference this time:

- The conference is to give a summary of important features of the development regarding the research and use of genetically modified food products since the Laymen's consensus conference on the same topic in 1996.
- The conference should result in a final document from the Lay Panel with advice to the political authorities as to whether a moratorium on sale and import of genetically modified food ought to be introduced, and possibly on other current questions in connection with genetically modified food.

- The conference should contribute to strengthening the importance of lay perspectives in technology assessment and the introduction of technology.

General waiting period (Moratorium) until the criteria are fulfilled.

The Lay Panel have evaluated several variations of a moratorium, including a case-by-case approval. The Precautionary Principle has been our point of departure and has formed the basis of the discussion. We have evaluated the present practice of case-by-case approval and arrived at the conclusion that a moratorium will give us more time.

Time to get new knowledge. Time to co-ordinate and improve laws and rules. Time to understand long-term consequences.

The moratorium includes: Prohibition against all cultivation of gene food and gene fodder, with the exception of release into the environment of genetically modified organisms in experimental field-studies. Prohibition against import and sale of genetically modified food and genetically modified fodder.

The Lay Panel realise that there may be minimal, unintentional quantities of GMO in a food ingredient. The Panel are of the opinion that the moratorium in principle should not apply to unintentional GM-ingredients in food. In such cases the administration will contact the importers.

Based on the above we have arrived at a recommendation of a moratorium with certain claims. Before the moratorium can be cancelled, the Lay Panel think that a set of claims must be fulfilled.

The claims are as follows:

- More knowledge in order to understand the long-term effects on environment and health. We are faced with a technology with obvious positive and negative aspects. To be able to choose correctly it is necessary that we are aware of the real possibilities of choice.
- Co-ordination of laws and rules nationally and internationally.
- Increased concentration on supervision, control and traceability.

We think that with an introduction of a moratorium a broadly constituted group ought to be set up, with representatives from independent research milieus and different professional fields, state bodies of control, the food industry and consumer organisations. The task of the group is to elaborate these criteria and arrive at a decision as to when these claims are fulfilled.

The Lay Panel are fully aware of what a strong signal it gives going in for a moratorium. We wish to use this to focus on the need for doing something with the general uncertainty attached to long-term consequences.

Health and environment

Health:

We cannot, when using earlier research results as a point of departure disregard the possible serious health consequences. As we understand it, the “Walløe panel” [i.e. a group of experts appointed by the Norwegian government; cf. NOU 2000:29; the editors] does not either, even if the majority of the panel think that they do not have a sufficiently strong scientific basis to argue for a moratorium on health risks alone. In our evaluation of the aspects of health, we think, however, that it is important to see health risks not only as a basis of a possible moratorium, but also put these risks up against utilitarian value of our demands on the application of new technology.

It is claimed that traditional food is not safe either. This is not an argument for saying 'yes, please' to GM-products without any reserve. We have the responsibility of putting into action the increased rate of risk that we experience with GM-food in particular.

The prospects of the positive aspects of GM-products that were held out to us four years ago, for example increased nutritional content and food favourable to the allergists, have not been developed so far. On the other hand we have not seen any acute allergies or other immediate unfavourable medical consequences as a result of GMO.

Even if we at present do not have a need for GM-food in Norway, we are open for the possibility that the technology may be used positively in other places of the world and/or at a later time, for example with a view to increasing the nutritional content. We think that a thorough clarification of the consequences should in any case always precede the release of GMO into our natural environment or the marketing of such products.

Environment.

It looks as if there is a general consensus among the experts that we know very little of the environmental effects of using GM-plants. This gives us a strong signal that research in this field ought to be given high priority. Commercial research gives little priority to environmental research. In addition to this we find it problematic that few questions are asked as to how this technology affects our relation to nature and ourselves. In our opinion, such ethical questions ought to be given more weight.

As per today there are no unquestionable results that show that the use of pesticides and herbicides has been reduced and the crop increased by the use of GM-plants.

We see that at present gene technology contributes to increased use of mono-culture and large-scale agricultural production, which is unfortunate.

During the conference, examples of how genetically modified organisms may disturb the ecological balance have been presented to us. By this we are thinking of, as an example, effects on the nutritional chain that one cannot control. In this connection we are also talking of irreversible consequences.

We see the need for research on ecology and environmental effects of GMO as highly urgent. A consideration of the environment is an important responsibility, and we

desire that such research should be given much higher priority than previously. In their report the Walløe Panel deal only with aspects of health. We consider this as a weak point of the mandate and envisage a similar panel being established to focus on the environment to be established.

The Lay Panel pointed out four years ago that there seemed to be more scepticism among ecologists than among bio-engineers as regards the effects on the environment/ecology. We were then of the opinion that it was natural to attach greater importance to the opinions of the ecologists. This is even more obvious to us today.

Market

Problems of developing countries:

Four years ago prospects were held out to the Lay Panel that gene technology was to benefit developing countries in particular. We cannot see that there has been any development of importance to developing countries as regards the use of and access to GM products. Agriculture based on GM plants is based on mono-culture and large-scale production. We doubt that such a development is of any advantage to developing countries.

The amendment of law.

In 1996 it was illegal to sell GM food in Norway. An amendment of law of 1999 makes this legal on application. There are at present several applications for the import of several products. In March 2000 it was decided by an amendment of law that GM food with genes resistant to antibiotics should not be legal any longer.

Consumers' attitudes:

Scepticism to GM food has increased among consumers, both nationally and internationally. This has led to the fact that many sales organisations refuse to import and sell GM food. The Norwegian Farmers' and Smallholders' Union is of the opinion that we ought not to start using GMO in food production in view of today's knowledge. The Federation of Norwegian Food and Drink Industry is positive to start using GM food as long as this takes place within Norwegian laws.

Genes resistant to antibiotics:

In 1996 there was extensive use of genes resistant to antibiotics as marker genes at the production of GM food. Today the use of such genes is less extensive than previously. The experts expressed the opinion that these genes are on their way out internationally, and furthermore that they are out of GM food of 2nd generation. The Lay Panel consider it positive that this development has taken place.

Labelling:

Increased scepticism among the consumers and respect for the consumers' freedom of choice have enforced a set of rules which demands the labelling of GM food when containing more than 2 % GM raw material.

Even with the present set of regulations without any GM products having been approved of for marketing in Norway, there are still several examples of unlabelled GM food appearing on the shelves of shops. The Lay Panel envisage great challenges in the development of methods securing traceability and demonstration of GMO in nutrients.

Regulations and supervision:

The Cartagena Protocol on Biosafety [2000] is an international agreement that has been negotiated under the UN Convention on Biological Diversity, and which is until now signed by 78 countries. It regulates transport of genetically modified organisms across the borders to prevent GMO from reducing the biological diversity or representing a health risk to people. The Cartagena Protocol also sets out specific claims of risk evaluation and approval in advance of genetically modified organisms before they can be exported or imported.

Norway and the EU were among the first to sign the protocol, while Bulgaria is still the only country that has also ratified the agreement (included in the protocol of the country's set of regulations). The Norwegian authorities are striving to achieve ratification.

Norway also participates in the European committee of standardisation CEN, which is a committee aiming at an approval of common standards of analysis.

Codex Alimentarius, a UN body, works out standards and guidelines to protect the consumers against hazardous food. In this body Norway has the right to full participation, to set forth proposals and to vote, in contrast to the EU, where we only have the right to speak. Labelling standards, health risk and tools of analysis on GM food are on the agenda in Codex.

Practical supervision of GM food relevant for the Norwegian market is carried out by the Federation of Norwegian Food and Drink Industry and the National Veterinary Institute.

These examples show that there is a positive development towards increased and improved international sets of regulations.

We will, however, point out that we envisage a great need for co-ordination of laws and guidelines both nationally and internationally. The Ministry of Environmental Protection administers the Norwegian Genetechnology Act [1993], which deals with living organisms. The Norwegian Act on Food products, which deals with refined products, is administered by the Ministry of Health and Social Affairs. The Genetechnology Act also includes considerations concerning sustainable development, social utility and ethical aspects.

"The Precautionary Principle" is already in use today in the administration, for example when Norway in March 2000 passed a general prohibition against marker genes that involve resistance against antibiotics. "The Precautionary Principle" is taken care of in the Genetechnology Act.

Our opinion is that the present systems and tools used to find out if a product contains particles of GMO are not satisfactory. There is a need of resources for research, tools of analysis, supervision and control.

Research

In the report from the Laymen's Conference in 1996 we mentioned that the focus of research should be turned towards possible environmental consequences and consequences of health, and also research to bring forth GMO food with improved nutritional qualities.

On the basis of the expert opinions that were expressed at the follow-up conference in 2000, we do not see that the factors of uncertainty connected with the fields of environment and health have changed considerably during those four years. Disagreements among the experts are still fairly great - different conclusions are being drawn from the available research results.

As regards research on plants and improved nutritional combinations, we envisage an interesting development in future when we hope to see more products with, for example, increased vitamin contents.

If a moratorium is to be introduced, this must build on the clear condition that there will be more official support of research on GM products. By this we are specifically thinking of:

- More resources to independent GM research being done outside the internal research environments of the GM industry. This research ought to be directed in particular to possible long-term health and ecological effects of GMO
- Systematic collections of information of all research being done in the field, both nationally and internationally (for example in a centre of documentation, or a research bank).
- More research on products that have primary user value for the consumer, not one-sidedly for the producer or the industry.
- More research on methods of tracing GM products from the primary producer to the consumer.
- More research on methods to discover GM ingredients in food.

The Lay Panel 2000.

