

Strategy for co-existence

-genetically modified, conventional and organic crops-

Background

In the spring of 2002, the Danish Minister for Food, Agriculture and Fisheries initiated strategy work on the cultivation of authorised genetically modified crops in Danish agriculture. The aim is to produce a Danish model for the co-existence of genetically modified, conventional and organic crops in support of the free choice of consumers and to ensure development possibilities for new and existing production forms.

On the basis of section 13, subsection (3) of the Act on Environment and Genetic Engineering, the Minister for Food, Agriculture and Fisheries was required to “establish rules which shall, within the framework of EU legislation, substantially reduce the risk of dispersal to other fields, including organic fields.” Thus, the Danish model for co-existence is, within the framework of EU legislation, to be translated into rules. The strategy work on co-existence is to establish the basis for decisions and the framework for such rules.

The co-existence of genetically modified, conventional and organic crops involves agricultural as well as legal and economic problems in the primary production until the first distribution stage. With a view to providing the optimum basis for decisions, the Minister for Food, Agriculture and Fisheries set up three working group that were assigned the task of presenting the scientific and legal problems as well as drawing up a proposal for a Danish co-existence model.

The scientific analysis was conducted by an independent group of researchers and experts, the so-called “analysis group”. The analysis group includes Risø National Laboratory, Denmark; The Royal Veterinary Agricultural University, Denmark; National Environmental Research Institute, Denmark; Danish Research Institute of Food Economics; Danish Plant Directorate as well as Danish Institute of Agricultural Sciences. An inter-disciplinary project group under the auspices of the Ministry of Food, Agriculture and Fisheries was assigned the task of conducting the relevant legal analyses. Lastly, a so-called “strategy group” in the Ministry of Food, Agriculture and Fisheries has drafted a proposal for the strategy for co-existence.

In order to ensure maximum transparency and the possibility of dialogue, the draft report as well as the strategy proposal have been discussed with a number of organisations, which have participated in the so-called “contact group”. They are: Organic Denmark; the Agricultural Council of Denmark; Danish Society for the Conservation of Nature; Danish Agriculture; the Danish Seed Council; the Danish Food and Drink Federation and the Danish Consumer Council. Furthermore, the draft reports have been published on an ongoing basis on the website of the Ministry of Food, Agriculture and Fisheries and submitted to the *Folketing* (Danish Parliament).

The report presented by the analysis group

On 10 January 2003, the analysis group under the auspices of the Danish Institute of Agricultural Sciences presented its report on the co-existence of genetically modified, conventional and organic crops. The analysis group had been assigned the task of:

- conducting a scientific analysis of the sources of dispersal from genetically modified to conventional and organic production forms
- assessing the scope of dispersal as well as the need for measures to be taken
- identifying as well as assessing potential measures to secure the co-existence of genetically modified, conventional and organic production forms

In its report, the analysis group proposes a number of measures with a view to securing co-existence. They are:

- separation distance requirements, which means the distance between a GM crop and the closest non-GM crop that may cross-pollinate
- buffer zones, which means a marginal zone on the outskirts of a field to be cultivated and harvested separately
- cropping intervals, which means years in which the field carries other crops following a GM crop or a crop with GM admixture and until GM-free/organic cultivation of the same crop may again take place in the field. During the cropping interval, control of volunteer plants is expected to take place
- cleaning up of machinery and transport material
- mandatory courses in GM cultivation

The analysis group arrives at the overall conclusion that co-existence is possible for a number of crops. For oilseed rape, grass and clover seed there is a need for further analyses. Furthermore, the analysis group recommends supplementary economic analyses of the costs related to co-existence. The Minister for Food, Agriculture and Fisheries has called on the analysis group to continue work on these questions, and the analysis group has therefore set up a sub-working group. It is expected that this work will be completed in August. The contact group will be involved in this work. The analysis group is of the opinion that GM crops will not be cultivated to any great extent in Denmark within the next few years. The group identifies, however, some

crops which might be interesting to produce. They are genetically modified types of oilseed rape, maize and beet.

The analysis group's report is available at [www.fvm.dk/temaer og projekter/gmo](http://www.fvm.dk/temaer_og_projekter/gmo)

The legal project group

A legal project group under the auspices of the Ministry of Food, Agriculture and Fisheries and including participants from the Ministry of the Environment has conducted a number of legal analyses. The project group had been assigned the task of:

- examining the possibilities of issuing national rules for co-existence in relation to EU law and WTO law, including the possibility of issuing a general ban on the cultivation of GM plants in Denmark
- describing and assessing the range of application of section 73 of the Act of the Constitution regarding the inviolability of property in relation to regulation of co-existence
- assessing whether the analysis group's scenarios may be carried out within the framework of EU law, WTO law as well as Danish law. Furthermore, the project group is to assess the legal aspects of any problems which the work of the analysis group might otherwise give rise to
- describing any problems regarding the law of tort and the law relating to adjoining properties which co-existence might give rise to
- describing and assessing the scope of authority of the Act on Environment and Genetic Engineering to lay down rules for co-existence
- assessing any legal questions that might otherwise arise during the strategy work

The legal analysis was completed on 28 February 2003. It shows that it is possible to establish national rules for co-existence. Regard for intra-Community trade means that it is not possible to ban GM plants for which marketing authorisation in the EU has been granted. Similarly, regulation must not become so specific that it can be compared with terms and conditions for authorisation of the GMO concerned.

In order to cast light on the question of compensation and liability, the Ministry of Food, Agriculture and Fisheries has, furthermore, obtained a legal opinion from the Attorney to the Danish Government. The point of departure of the Attorney to the Danish Government is that rules shall be established to which the GM producer shall be subject. Against this background, the Attorney to the Danish Government finds that the GM producer may be held liable for any mistakes and violations which have inflicted financial loss on the non-GM farmer. Provided the GM farmer complies with the rules, he shall, by contrast, not incur liability.

The legal analysis is available at [www.fvm.dk/temaer og projekter/gmo](http://www.fvm.dk/temaer_og_projekter/gmo).

At the request of the contact group and the *Folketing*, the Danish Institute of Agricultural Sciences has drawn up a note that sets out the economic benefits and costs of a GMO-free Denmark. This note is, similarly, available at [www.fvm.dk/temaer og projekter/gmo](http://www.fvm.dk/temaer_og_projekter/gmo)

European regulation

Considerable regulation has already been implemented with respect to biotechnology and food production within the EU.

Thus, it is a fundamental principle that any GMO must be risk-assessed and authorised prior to being marketed and cultivated in the EU. It is a precondition for achieving a marketing authorisation that the GMO in question does not constitute a risk to the health of human beings or the environment.

During the Danish EU Presidency, the Member States reached political agreement on two proposals for rules regarding labelling and tracing of GMO products throughout the entire food supply chain. They are the proposals for a Regulation on traceability and labelling as well as a Regulation regarding GM feed and food. The proposals imply that feed and food which contain GMO or products derived from GMO must be labelled. However, a threshold has been fixed at 0.9 per cent for labelling so that products with an adventitious admixture of GMO below this threshold are not subject to labelling. Furthermore, enterprises that use GMO in their production must establish systems that ensure traceability throughout the production process.

With the forthcoming code on tracing and labelling, it will be the responsibility of enterprises that GMO feed and food meet the requirements of traceability and labelling. The enterprises will be subject to public control of whether they meet the established requirements. In practice, this implies that GMO-based feed and food will be kept separate from GMO-free feed and food throughout the entire processing procedure.

The codes will be fully harmonised. Thus, the Member States may not draw up supplementary national rules for labelling or separation in the processing procedure. The two proposals for Regulations are to be adopted under the co-decision procedure of the European Parliament and the Council. After the Council reached a Common Position, the proposals have been submitted to the European Parliament, which is now to conduct its second reading. A final adoption of the proposal may not be expected until the autumn of 2003 at the earliest.

Moreover, in February 2003, the Commission submitted a proposal for public control in the feed and food area covering the entire food supply chain from “farm to fork”.

The proposal is subject to the co-decision procedure of the European Parliament and the Council.

The Commission is, furthermore, preparing rules for the labelling of conventional seed with adventitious admixture of GMO. Suppliers of conventional seed will, thus, be required to label seed that exceeds a given threshold value for adventitious admixture of GMO. In addition, there will be a labelling requirement regarding seed produced through genetic modification. The Commission and the Member States are discussing a working paper with possible elements in a proposal, but so far the Commission has not presented any actual proposal. The forthcoming rules are to replace an existing voluntary plan of action.

Furthermore, there is today an organic code for the food supply chain from “farm to fork”. The code is based on the principle that organic goods must be produced separately from non-organic products.

Cultivation of genetically modified crops

Today, the question of co-existence is not regulated in the existing or forthcoming EU regulation. The rules governing the authorisation and marketing of GMOs, the future rules on traceability and labelling of GMO feed and food, the rules governing the labelling of conventional seed as well as the organic rules address the issue of handling, tracing and labelling genetically modified crops in the processing procedure. However, these codes do not decide on ways in which the cultivation of genetically modified crops may take place in agricultural production in co-existence with conventional and organic crops. These questions have, therefore, not been clarified. Thus, the Danish strategy work presents the first overall analysis and model for co-existence in Europe.

Against the background of the analysis group’s report and the legal analysis, three options emerge for handling the commercial cultivation of GM crops. In connection with the first option, no special initiatives are taken to secure co-existence, the second option endeavours to solve the problem by means of voluntary agreements and, lastly, the third option establishes actual regulation. The three options reflect an increasing degree of regulation.

”No initiatives”

The analysis group’s report shows that provided GM crops are cultivated without any requirements of cultivation distance, intervals or other measures, it will in some cases prove difficult to prevent the dispersal of genetically modified material to organic and other GMO-free production forms. Without any rules for co-existence, it will, furthermore, prove difficult to place legal responsibility in connection with potential dispersal.

”Voluntary agreements”

Another model opens up for concluding voluntary agreements under which farmers abstain from cultivating one or more GMO crops. It will, however, not be possible for public authorities to impose sanctions for breach of voluntary agreements.

”Co-existence based on regulation”

According to a third model, regulation is to be introduced to secure the co-existence of genetically modified, conventional and organic crops in Danish agriculture. Together with the forthcoming code on the tracing and labelling of genetically modified feed and food, rules for the labelling of seed as well as the organic rules, this regulation will provide the basis for the free choice of consumers and development possibilities for new and existing production forms.

The strategy for the co-existence of genetically modified, conventional and organic crops is a proposal for a Danish co-existence model, which is based on regulation.

Strategy for co-existence

Rules

The strategy for co-existence is based on the report and catalogue of measures presented by the analysis group. The objective is to draw up rules for co-existence, which “within the framework of EU law substantially reduce the risk of dispersal to other fields, including organic fields.” The rules are, furthermore, to support the free choice of consumers and ensure development possibilities for new and existing production forms.

The objective of the regulation is to secure co-existence between the production forms by implementing the analysis group’s catalogue of measures. The rules are to address the cultivation and handling of GM crops in agriculture. The exact drafting of the rules will await further analyses to be carried out by the analysis group on oil-seed rape, grass seed and clover seed. It is expected that these analyses will be finalised in August 2003. The report proposes, however, that the future regulation be based on the fundamental elements and principles set out below.

The rules governing co-existence must be crop-specific and determined on a scientific basis. The rules will establish a number of requirements directed at the cultivation of GM crops. It involves i.a. cultivation distances between GM crops and non-GM crops, buffer zones, cropping intervals, the control of volunteer plants etc.

The GM farmer will be subject to a duty of disclosure vis-à-vis neighbours and co-operators. Thus, he will have to inform his neighbours and co-operators that GM crops are cultivated at the farm concerned, and that machinery etc is used for the transport and handling of genetically modified crops. Furthermore, the GM farmer will be required to attend a course in the cultivation of GM crops. This will be sought

integrated in the education of farmers. Similarly, action should be taken to provide access for established farmers to supplementary training.

GM crops are new in Danish agriculture. It is, therefore, natural that the responsibility for complying with the rules on co-existence should rest with the person who cultivates GM crops. Consequently, it will be the GM producer who is to comply with the established requirements of separation distances and cropping intervals etc. This will ensure that the cultivation responsibility is placed clearly and unambiguously, which will give all parties the possibility of planning production in an expedient manner.

The rules governing co-existence will be based on the legal opinion of the Attorney to the Danish Government of 16 January 2003. Against this background, the rules governing co-existence will not contain separate provisions on liability. The point of departure is that the GM farmer may be held liable for any mistakes and violations whereby the organic or GM-free farmer has incurred a financial loss. Assessment of the question of liability will, subsequently, be left to the courts of law in accordance with the fundamental principles of liability in tort.

The principal aim of the future rules for co-existence is to prevent the dispersal of genetically modified material. Rules governing co-existence and the risk of law suits will give the GM farmer a strong incentive to comply with the established requirements and rules governing the cultivation of GM crops. It may not be ruled out, however, that disputes will arise between farmers who cultivate GM-free crops and GM farmers. Taking legal action will not always cover a financial loss, as it may not be possible to identify the person causing the loss.

In order to counter such situations, a supplementary compensation scheme is sought established within the framework of EU law. It will thus be possible for organic and GM-free producers to apply for compensation to cover any loss of income. It will be a precondition that the organic farmer or the GM-free producer is without any fault on his part. The scheme is proposed established as an administrative compensation scheme under the Danish Plant Directorate. Organic and GM-free producers may, subsequently, apply to the Danish Plant Directorate for the disbursement of compensation to cover their loss of income. For the purpose of sustaining the GM farmer's incentive to comply with the established rules and to reduce the risk, a specific assessment must be made of every single case on the basis of objective criteria. A condition for obtaining compensation will be, i.a., that the producer is able to document that he himself is not responsible for the dispersal.

The compensation scheme will, consequently, determine both the question of guilt or innocence as well as the fixing of compensation on an administrative basis. In continuation of the specific cases, the Danish Plant Directorate will decide whether there is a basis for initiating proceedings against a person alleged to have caused a loss. If so, the Danish Plant Directorate may conduct these cases, and the Plant Directorate

will also bear any costs in accordance with the general rules applicable to the area. The compensation scheme will be financed through a Budget appropriation.

The compensation scheme must be approved under EU state aid rules.

Control and monitoring

The rules for co-existence are to be subject to a public control scheme. The objective of the control is to ensure that established rules are complied with as well as to map out the cultivation of GM crops in Denmark. The control is to focus on GM farmers, and it is to be integrated in existing control schemes under the Ministry of Food, Agriculture and Fisheries. The control action is to be based on a duty to report as well as on physical checks carried out at farms and control visits to suppliers.

The control scheme for co-existence is to be established and to function concurrently with other Ministry of Food, Agriculture and Fisheries control schemes targeted at the primary production.

In order to benefit from future experience of the commercial cultivation of GM crops, a knowledge bank on co-existence will be set up. The objective of the knowledge bank is to map out how the cultivation of GM crops in Denmark develops as well as to collect Danish and foreign experience of co-existence.

Considering that co-existence is a new problem, the Danish model will be evaluated on an ongoing basis, the first time being 2 years after the adoption of the code governing co-existence. This will make it possible to revise the code against the background of Danish experience gained from the cultivation of genetically modified crops. The evaluation will be conducted on a scientific basis.

The need for good farm management

It is not sufficient to establish rules for co-existence. The co-existence of genetically modified, conventional and organic crops presupposes good farm management and due diligence among all producers. A key element of good farm management is good co-operation and exchange of information. All producers, including those who co-operate with or are the neighbours of GM producers, should demonstrate due diligence in the production.

European solutions

Throughout Europe, the cultivation of genetically modified crops will take place in the close proximity of conventional and/or organic production. For reasons of transparency for consumers and trade within the single market, it is in the common interest of all Member States to co-operate on solutions to secure co-existence between new and existing production forms. The Government will, therefore, work for the preparation of a European strategy for co-existence.

The Government will work for the collection of knowledge at European level on the

dispersal of GM crops to conventional and organic crops as well as on measures to safeguard co-existence. The Government will, furthermore, endeavour to obtain clarification on the question of responsibility for the dispersal of GM crops to other production forms. The Government is of the opinion that it would be fruitful for a European strategy to take its departure point in the experience gained from the Danish strategy work. The long-term objective of a European strategy for co-existence is to have common rules drawn up in the area.

The Government will take action to ensure that farmers in connection with the future rules for seed are ensured informative labelling and access to seed with the lowest possible admixture of GMO. The Government will, moreover, urge the Commission to submit its proposal to the Council for consideration.

Organic farmers must, to the greatest extent possible, continue to use organic seed. The organic Regulation prohibits the application of GMO in organic production and includes authority to lay down common rules defining the threshold for the application of GMO in organic production. This authority is, however, not used today, and the present state of the law in this area is therefore not clear in the EU. The Government will endeavour to have the state of the law for the application of GMO clarified through common rules and principles of control.

Research and conservation

Biotechnology holds many fine prospects for society and may contribute to increased growth and welfare. Biotechnological developments in the field of plants and foods should, as far as possible, take place in close interaction with society at large. In this connection, it is essential that biotechnology is applied and developed in ways that will benefit society. Public research in biotechnology in the plant and food area should contribute to this. The Government will, therefore, work for a strengthening of Danish research in the field of plants and foods.

It is important that the biotechnological developments in the plant and food area and other processing are followed up on by parallel efforts to conserve existing plant genetic resources.

In 1994, Denmark acceded to the Convention on Biological Diversity, which i.a. involves the conservation and sustainable use of plant genetic resources regarding both wild and domesticated species. Furthermore, in 2002 Denmark signed the FAO International Treaty on Plant Genetic Resources for Food and Agriculture. The objective of the FAO Treaty is to conserve the plant genetic resources which are applied or may be applied to foods and agriculture, and to make the plant genetic resources available to all the countries that accede to the Treaty. Denmark has ratified the Treaty.

Implementation of the Danish model

In the course of the 2003/2004 session of the *Folketing*, the Minister for Food, Agriculture and Fisheries will present a Bill on co-existence. The Bill will contain the framework for regulation to secure the co-existence of genetically modified, conventional and organic crops.

The Bill will set out in detail the rules which are likely to be issued in the form of Executive Orders. Furthermore, the *Folketing* will be briefed prior to the issue of Executive Orders.

Copenhagen, June 2003